

2018-2019 ANNUAL REPORT



3880 HULEN STREET, SUITE 650
FORT WORTH, TX 76107



817-916-0020



INFO@AMERICANPECAN.COM



WWW.AMERICANPECAN.COM

TABLE OF CONTENTS

I. Introduction & Overview

- 4 Message from Executive Director
- 5 Message from Chairman of the Council
- 6 Brief History of the FMO
- 10 Council Members
- 12 District Map
- 13 APC Staff
- 15 Statement of Financial Position

II. Strategic Planning

- 27 Interim Review of Findings with Council
- 47 Working Group Meeting #2
- 77 Working Group Meeting #3

III. 2018 – 2019 Consumer Marketing

- 111 Committee Summary
- 112 2018 – 2019 Marketing Highlights
- 124 Marketing the Original Supernut

TABLE OF CONTENTS

IV. 2018 – 2019 Fiscal Year Industry Relations

- 147 Committee Summary
- 148 Uniting and Equipping the American Pecan Industry
- 149 Updates and Communications – In A Nutshell
- 196 Industry Toolkit and Resources
- 198 Training and Collaboration
- 199 Look Ahead to 2019 – 2020

V. Grades & Standards

- 203 Committee Summary
- 204 Updated Grades & Standards
- 211 Quality Assurance Program

VI. Data & Statistics

- 217 Year – End Inventory & Pecans Handled Throughout the Year
- 218 Pecan Position Reports
- 233 Pecan Production
- 238 American Pecan Council Acreage & Age Survey
- 279 Economic Benchmark Model and Analysis of the Effects of the Chinese Tariff on the U.S. Pecan Industry

VII. Find Us Here



Message From the Executive Director

The 2018 – 2019 year for the American Pecan industry saw lows and highs for the industry. From hurricanes in the east, to floods in the central and fires in the west, the industry was challenged from all fronts thanks to mother nature. Additionally, the industry saw challenges on the global trading front with retaliatory tariffs from China to proposed trade agreements with Japan and Mexico. All these activities impacted the pecan industry. Despite these challenges, the American Pecan industry saw some leaps forward with a successful completion of a strategic plan that covered five critical areas for the industry, marketing programs that successfully increased consumption and awareness, and a major step in unifying the industry across 15 states.

At the beginning for the American Pecan Council's fiscal year, the Council voted unanimously to move forward with a strategic plan. The concept of the plan was to have a non-biased, outside consulting firm to analyze the industry and look at the areas that the Council should focus on with its limited resources. The result was a finalized plan that focuses on five areas. These include: Winning its fair share of tree nuts; Leading among global suppliers; Strengthening our infrastructure; modernizing the industry; and uniting the pecan stakeholders. The results of these activities have been exceptional.

A few highlights of the results based on the activities of the APC include: a strategic plan for the next five years that sets a course for the industry while providing measurements for the APC's activities; an increase of 12 percent consumption since the inception of the APC and over 33% in one year since the implementation of the strategic plan and APC marketing programs; increase in top of the mind awareness; the formation of the Pecan Congress (the assembly of all 21 Pecan organizations for the first time in industry's history); the signing of the APC and US Pecan Growers Council (USPGC) unification document in which both organizations are working together to increase awareness, consumption, and shipments for top

export markets; educating the industry on new transaction models that will assist the industry in modernizing the industry; mapping states of pecan acreage in an effort to get accurate pecan acreage and developing forecasting models; developed an early economic model that will assist the industry in pecan economics for the industry; and looking to incorporating voluntary grades and standards that will assist the American industry in showcasing its premium product to consumers, just to name a few of the activities.

Please find enclosed a summary of the American Pecan Council's activities for the 2018 – 2019 year. On behalf of the American Pecan Council and its staff, I would like to thank the industry for the opportunity to continue to serve the industry and its 15 states. We look forward to successful year and any suggestions and input from you the growers, shellers and accumulators that make the industry successful. Please do not hesitate to contact the Council office should you have any questions.

High Regards,

Alexander J. Ott

EXECUTIVE DIRECTOR



Message From the Chairman of the Council



A true story is told about the legendary college football coach, Abe Martin, and one of his All-Star quarterbacks during their times together at TCU in the 1950's. On a crisp fall Saturday afternoon during a game at Amon Carter Stadium in Fort Worth, the Horned Frogs were backed up inside their opponents 5-yard line. The situation was dire. Coach Martin called time out and summoned his QB to the sidelines for a strategy session. With his arm around his star player's shoulder, the coach felt that his options were few. Calmly, he instructed his QB to punt the ball in an attempt to improve the team's field position. The QB reentered the game. He lined up in punt formation. The ball was snapped. The crowd was tense. Upon receiving the football, the QB then confidently ran and dodged from his own 5-yard line for 95 yards and a touchdown. In a moment of joy yet concern, Coach Martin called his disobedient player to the sideline and said, "Chuck, I told you to punt." The QB matter-of-factly replied, "But, Coach, you didn't say when."

I relate to that story. The U.S. pecan industry has been backed up on the 5-yard line for some time now. Most of the reasons involve circumstances for which we did not foresee nor have much control over. I will not list them here because they are known too well to all of us. The real decision for those of us "in the pecan arena" is what do we do from here.

The American Pecan Council has wisely invested our assessment dollars. The goal has been and will continue to be to increase the demand for pecans. The intended result of that objective is to return sustained profitability to all segments of the industry. Although sometimes difficult to detect in the economic and policy turmoil of the times, progress has been made. Since inception of the Federal Marketing Order, the domestic consumption of pecans has measurably and markedly risen. Less progress is identifiable in international markets, but efforts continue on that front as well.

The good news is that we, as pecan stakeholders, have an organization in the APC that is in the marketplace daily doing our bidding. Our state and regional pecan organizations are also active on our behalf, and the recently formed National Pecan Federation is effectively representing our interests in Washington. The collective voice for pecans is being heard more so than at any time in our history.

Back to the football story and the question "What do we do from here?" Without a crystal ball, particularly regarding events and circumstances over which we have no control, I say that we "stay the course." I also am fully confident that our efforts will pay dividends, and a "touchdown or score" will come. Like the coach and the QB, the "when" is a matter of conjecture. But also, like the QB, I do not intend to punt.

B. Michael Adams

CHAIRMAN OF THE COUNCIL

Our Roots:

A BRIEF HISTORY OF THE FMO

The American Pecan Council (APC) is a Federal Marketing Order (FMO) established under the Agricultural Marketing Agreement Act of 1937. It was established by a vote of the growers in November 2016. Every five years, the growers can vote to continue the APC, making it one of the purest forms of a local government the industry has at its disposal.



1846

The pecan trees were successfully planted at the Oak Alley Plantation in Louisiana, which started the process of growing improved varieties or cultivars from native pecan trees.



1886

First published recipe for pecan pie.



1919

The pecan tree was declared the official state tree of Texas.



1982

Alabama designated the pecan as the official state nut.



2008

The pecan was declared the official nut of Arkansas.



2016

American Pecan Council was established as the USDA approved a Federal Marketing Order for pecans.



The APC is only one of 29 FMOs in the U.S. FMOs are voted in by the growers, and Council members are elected by the industry. The Council votes for its assessments, policies, standards, marketing, research, and budget. After five years, the growers, and only the growers, have the ability to vote to continue the FMO. Other government bodies do not have this type of local government aspect. The APC provides direct grower and industry input for the industry.

Conversely, the APC is also an extension of the US Department of Agriculture (USDA). Meaning, we have a level of oversight that USDA provides in order to ensure certain aspects of the industry do not take advantage of other members of the industry.

It also allows USDA to provide supervision, to ensure that the industry is following all necessary "government speech" rules and regulations. Additionally, by allowing shellers to sit on the board, the APC can collect assessments from the handlers, placing less burden of paperwork on the grower while providing a surveillance mechanism to ensure that shellers are reporting the industry information properly and accurately. Failure to report correctly may result in penalties. This system of uniting growers, shellers, and accumulators makes the American Pecan Council the largest and broadest pecan body in the U.S. Additionally, with USDA oversight, it makes the APC government and provides the industry with a powerful tool.

...SO WHAT EXACTLY CAN THE APC DO?

THE JOB DUTIES OF AN FMO



There are specific items that FMOs may do. The American Pecan Council is allowed to conduct the following activities:

- Domestic and International Promotion and Marketing
- Research
- Grades & Standards
- Compliance
- Data & Statistics

These activities are permissible and required under the Federal Marketing Order. However, it should be noted that all activities, including promotion and messaging must follow all USDA rules and regulations and must be approved by the USDA. The Council sets priorities for each of these five areas and then establishes a budget for each section. All activities, once approved by the Council, move to USDA review and approval to ensure that a specific group does not directly benefit solely on the activities approved or funded and that the activities meet both the FMO requirements and USDA rules and regulations. This oversight, as mentioned earlier, is the extra check and balance for the industry in order to ensure that the Council does not overstep its authority.

ACTIVITIES APC CANNOT DO



There are specific activities that the American Pecan Council may not conduct. These include:

- Set prices
- Lobby
- Buy or sell product
- Promote one company over another

These activities are not permissible under the FMO and will not be approved by USDA. However, other entities, associations, or "tools" have these abilities. Thus, they should be handled by other pecan organizations.

As mentioned earlier, FMOs are one critical tool in the toolbox. Without the FMO, standards, marketing and promotion, research, and data would go away. These activities that are now being conducted, are establishing for the first time, an opportunity for the industry to have transparency, and ultimately, have data to make critical marketing decisions. The FMO provides an opportunity for everyone to play by one fair set of rules for standards. Furthermore, the FMO provides an opportunity to unite the industry under one organization and one message, paving the way for everyone to work together toward a common goal: Increasing awareness and demand for pecans.



**"TO INCREASE DEMAND
FOR AMERICAN PECANS
AND PROVIDE INDUSTRY
WITH A PATH TO
SUSTAINABLY GROW
PROFITABILITY ACROSS
THE VALUE CHAIN."**

APC'S STRATEGIC VISION

COUNCIL MEMBERS

AMERICAN PECAN COUNCIL

Marketing Order No. 986
4-Year Term Ending July 31, 2020
2016-2020

EXECUTIVE DIRECTOR:

Alexander J. Ott

CHAIRPERSON:

B. Michael Adams

GROWER REPRESENTATIVES

MEMBERS	ALTERNATES
Eastern Region	
Buck A. Paulk	Angie S. Ellis
Trent Mason	Randy Hudson
Molly Willis	Claire Powell
Central Region	
Mike Adams	Jennifer Ivey
Michael L. Spradling	Lalo Medina
Billy Scott Landgraf	Mike Montgomery
Western Region	
Louie J. Salopek	Frank P. Salopek
G.L. Straley	Leslie L. Daviet II
Phillip Arnold	John Heuler

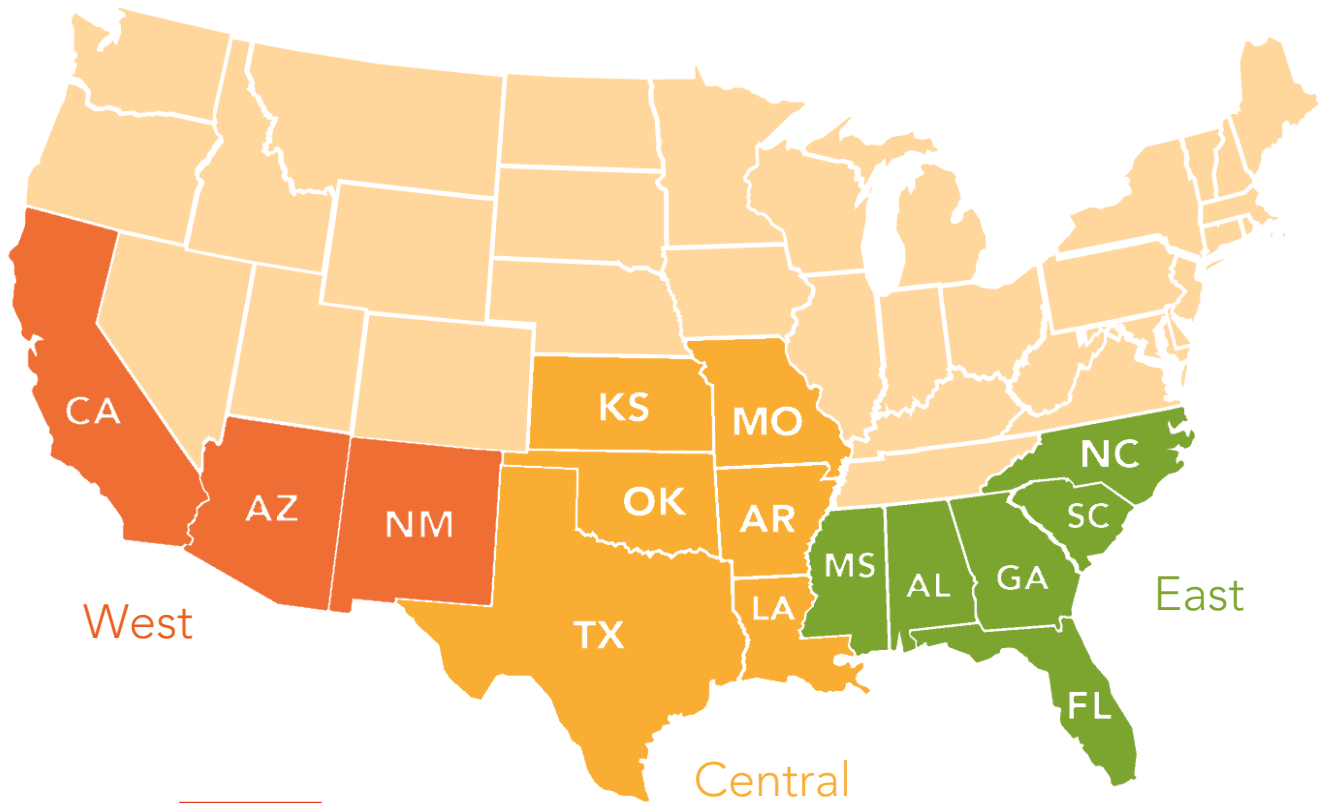
SHELLER REPRESENTATIVES

MEMBERS	ALTERNATES
Eastern Region	
Jeff Worn	Adam C. Harrell
Lawrence Willson	Kenny Tarver
Central Region	
Daniel J. Zedan	Steve Zaffarano
William D. "Dan" York, Jr.	Rickey Jones
Western Region	
Bruce Caris	Deborah E. Ralls
Sonja Roeder	Blake Houston

AT-LARGE MEMBERS

MEMBERS	ALTERNATES
Accumulator	
J.B. Easterlin	Chad Selman
Public Member	
Vacant	Ronald P. Hays

DISTRICT MAP



3

REGIONS



15

STATES

APC STAFF

EXECUTIVE DIRECTOR

Alexander J. Ott
aott@americanpecan.com

OPERATIONS MANAGER

Deborah Barnett
dbarnett@americanpecan.com

DIRECTOR OF MARKETING & REGULATORY AFFAIRS

Jeff Smutny
jsmutny@americanpecan.com

DIRECTOR OF INDUSTRY RELATIONS

Emma Garner
egarner@americanpecan.com

ASSISTANT DIRECTOR OF MARKETING & INDUSTRY RELATIONS

Julianna Keck
jkeck@americanpecan.com

INDUSTRY RELATIONS SPECIALIST

Courtney Smith
csmith@americanpecan.com



STATEMENT OF FINANCIAL POSITION: FISCAL YEAR ENDED SEPTEMBER 30, 2019

ASSETS

Current Assets:

Cash and Cash Equivalents	\$5,398,557
Accounts Receivable	\$252,655
Prepaid Expenses	\$5,558
Total Current Assets	\$5,656,770

Fixed Assets:

Property, Plant, and Equipment	\$47,289
Less: Accumulated Depreciation	(\$17,638)
Total Fixed Assets	\$29,651

Other Assets:

Security Deposit	\$2,400
Total Other Assets	\$2,400

TOTAL ASSETS: \$5,688,821

LIABILITIES

Accounts Payable	\$777,403
Payroll Liability	\$4,901
Total Current Liabilities	\$782,304

TOTAL LIABILITIES: \$782,304

NET ASSETS

Without Donor Restriction	\$4,906,517
Total Net Assets	\$4,906,517

TOTAL LIABILITIES AND NET ASSETS \$5,688,821

STATEMENT OF EXPENSES: 2018-2019

EXPENSES

General Administrative	\$1,131,400
Compliance	\$145,508
Industry Relations	\$295,799
Marketing	\$5,560,269
Standardization	\$192,505
Research	\$434,995
Strategic Planning	\$1,100,000
TOTAL:	\$8,860,476



REVENUES	\$8,262,632
-----------------	--------------------

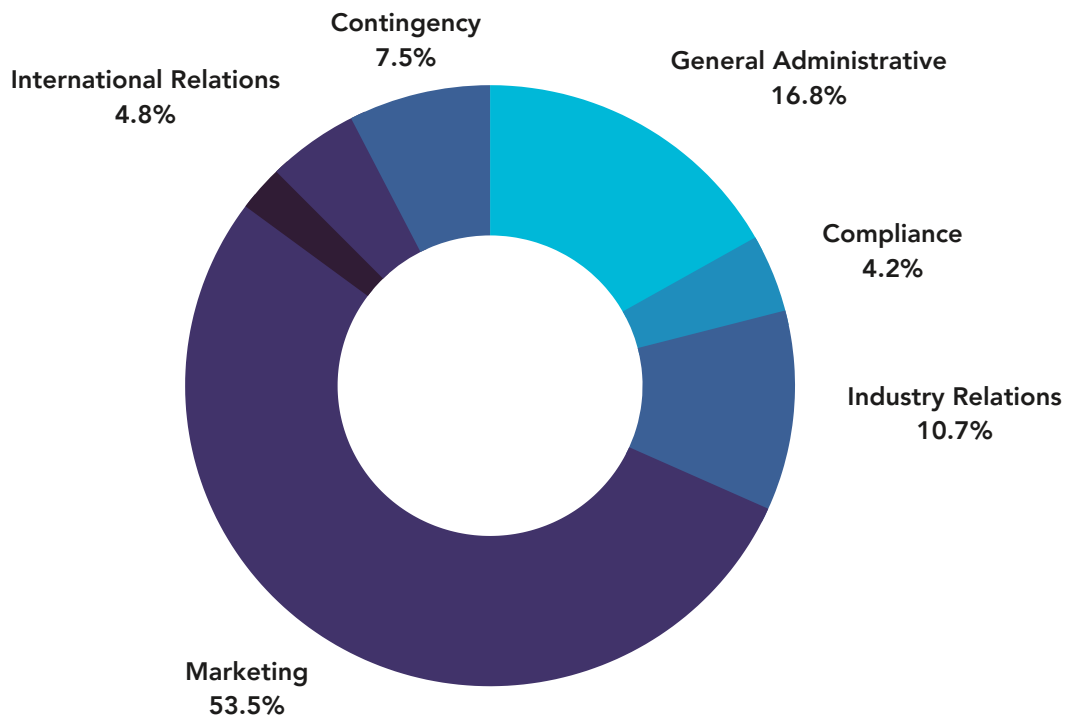
EXPENSES	\$8,860,476
-----------------	--------------------

NET ASSETS ENDING	\$4,906,517
--------------------------	--------------------

APPROVED BUDGET EXPENSES: 2019-2020

EXPENSES

General Administrative	\$1,387,700
Compliance	\$346,000
Industry Relations	\$888,000
Marketing	\$4,420,000
Standardization	\$202,000
International Relations	\$400,000
Contingency	\$623,000
TOTAL:	\$8,258,000



REVENUES

\$8,265,000

EXPENSES

\$8,258,000

PROJECTED NET ASSETS ENDING

\$4,913,517

STRATEGIC PLANNING



WORKING GROUP SUMMARY

The American Pecan Council (APC) completed a 3-month process developing a long-term strategic plan and vision for the future of the Pecan industry. The depth and breadth of topics covered over the course of this effort were wide-ranging and based on significant research and analysis as well as numerous stakeholder discussions and interviews. The program provides an industry outlook over the next 1, 3, 5 and 10 years, while examining activities and opportunities for the APC and industry. This program is critical for the pecan industry as it identifies where the industry should most effectively put their dollars to “move the needle” for pecans. The strategic plan establishes a comprehensive view of the state of the American Pecan industry, which will help identify priorities that will directly address the problems and challenges identified along with solutions that benefit the industry, for the long term. The overall vision from the strategic plan is to increase demand for American pecans and provide industry with a path to sustainably grow profitability across the value chain. For additional information, please contact the APC office.

Working Group Chair

Mike Adams

Committee Members

- Bruce Caris
- Trent Mason
- GL Straley
- Buck Paulk
- Molly Willis
- Jeff Worn
- Mike Spradling
- Louie Salopek
- Phillip Arnold
- Dan Zedan
- Sonja Roeder
- Lalo Medina
- Deborah Walden-Ralls
- Jennifer Ivey





Summary of American Pecan Council 2018 Strategic Planning

The American Pecan Council (APC) completed a 3-month process developing a long-term strategic plan and vision for the future of the Pecan industry. The depth and breadth of topics covered over the course of this effort were wide-ranging and based on significant research and analysis as well as numerous stakeholder discussions and interviews. This whitepaper summarizes the analyses, findings, and recommendations, which are organized into 3 sections:

- A. Outside-in analysis of current state of the industry & key learnings (“Case for Change”)
- B. Strategic plan to address challenges & opportunities for the Pecan industry
- C. Next steps for APC & industry as a whole

A. Outside-in analysis of current state of the industry & Case for Change

The first phase of work focused on establishing a fact base for the Pecan industry. To better understand the current state of the industry, we embarked on two paths of research and analysis. The first path was connecting with stakeholders to learn about the industry from their perspective. The second path was an objective, data-driven analysis of industry dynamics using proprietary data, research reports, and insights from similar industries. This path involved three specific areas of research: an analysis of industry economics across the value chain, a deep-dive into marketing & demand strategies, and a forecasted evolution of global supply. From these efforts, we uncovered several issues inherent in the Pecan industry:

- Pecans are more expensive to grow relative to other tree nuts (e.g., almonds and walnuts).
- US growing and shelling costs are higher than Mexico’s, putting pressure on American firms, who are struggling to compete.
- Pecans have historically transacted in a cash-driven model, leading to pain points for both growers & shellers.
- A longstanding association with desserts and confectionery items has hindered pecan demand growth, as they have been unable to ride the tailwinds of healthy snacking trends led by almonds.
- Despite having similar health benefits to other tree nuts, pecans are unable to leverage nutritional claims in marketing given a lack of supporting scientific research.
- Without action, the global pecan market will have an excess supply by 2027.
- Historically, the industry has struggled to unify around collaborative action given the diversity of regions and stakeholders across the value chain.

These existing challenges were amplified in 2018. Hurricane damage, a trade war with China, and the looming threat of increased foreign supply made for a difficult year, and highlighted the need for a paradigm shift to best position the pecan industry for the future.

Connecting with stakeholders - Belief audits & stakeholder survey: To capture industry sentiment, our strategic planning began with hundreds of hours of belief audits, and a survey of over 150 industry participants. When asked about challenges, some key themes emerged:

- Price volatility and unpredictability is a persistent concern.
- The lack of cooperation and collaboration between growers & shellers has created pain points that permeate the entire pecan value chain.
- Single-market dependency has led to headwinds in export demand.
- Low-cost suppliers pose a threat to higher-cost U.S. supply.

When asked about the role of the APC, there are several areas where stakeholders want leadership to step in. Above all else, industry participants want the APC to provide a single, unifying voice (“north star”) for the Pecan industry. Stakeholders are also looking to the APC to grow pecan demand among consumers. Finally, the APC can lead the way forward by promoting uniform, simplified, and trustworthy standards as well as improving data and transparency throughout the industry.



Analysis of industry dynamics - Industry economics & dynamics across value chain: A number of legacy tensions underpin the US pecan industry, inhibiting progress. Limited data availability and transparency in the marketplace, coupled with a historical lack of collaboration between growers & shellers, has exacerbated several challenges that the strategic planning process brought to light.

- Overall, pecans are 10-50%+ more expensive to grow relative to other tree nuts.ⁱ Within pecans, there are variations in growing costs across and within regions that determine growers' ability to shoulder price fluctuations.
- Pressure from low-cost Mexican shellers is making it difficult for US shellers to compete, and as a result many are struggling to stay in business.
- US growers face similar pressure, becoming increasingly reliant on the Chinese market to sustain in-shell prices and suffering price declines when that market reduces its purchases.
- The industry has typically transacted on a cash-upfront basis, which has strained relationships, concentrated risk and upside, and misaligned incentives.

Both growers & shellers are struggling, and a lack of collaboration has led both parties to perceive the industry as a "zero-sum" situation, where one party's "win" is automatically a "loss" for the other.

Analysis of industry dynamics - Insights on marketing & demand strategies: Understanding and addressing demand generation was a priority, seen as both the main responsibility of the APC and a win for the entire pecan value chain. Through research, interviews, and analysis, several challenges were identified which are currently restricting pecan demand growth.

- Pecans are associated with indulgence and tend to be consumed in desserts (e.g., ice cream and pies) that are eaten with little regularity. Despite several health benefits, pecans are not considered particularly nutritious, and a lack of nutrition research has limited the ability to market health claims.
- In contrast, other nuts such as almonds have managed to create a perception of health, leveraging decades of nutrition research to emphasize health benefits in marketing & messaging.
- This perception of health has allowed other tree nuts to gain share of "snacking occasions," which can be as many as 20 times per week for some consumers.ⁱⁱ The shift to snacking has bolstered demand for competing tree nuts. For example, domestic almond consumption has grown over 70% in the ten years between 2006 and 2016, whereas pecan consumption growth has been flat (0%) to declining.ⁱⁱⁱ

Analysis of industry dynamics - Evolution of global supply: Although pecan supply originated in the US, other countries have recently developed significant production capabilities and the future pecan supply landscape is increasingly global. Through a combination of market interviews, research, analysis, and forecasting, the magnitude of the impact of low-cost supply from South Africa and China became apparent.

- Global supply is forecasted to grow at ~6% per annum over the next 10 years, with global demand currently projected to grow at only 4-5% per annum.^{iv}
- The US is slated to lose share as a global supplier, as South Africa and China lead much of the industry's growth.
- China and South Africa may eventually preclude western supply in North America from accessing eastern markets such as Europe and Asia.
- Without action, supply outpacing demand could lead to a gradual oversupply of up to 15% by 2027, which may have a negative impact on prices.^v

B. Strategic plan to address challenges & opportunities for the Pecan industry

After establishing a comprehensive view of the state of the American Pecan industry, our goal was to create a strategic plan directly addressing problems with solutions that benefit the industry as a whole, for the long term.



The resultant plan encompasses 5 industry challenges and the corresponding strategic priorities aimed at addressing them.

1. Pecans are not growing as fast as other tree nuts because they are not associated with high-growth consumption categories such as health, nutrition, and snacking.
 - Strategic priority #1: Win fair share of tree nuts by aggressively marketing health benefits to grow everyday use of pecans. Focus marketing on nutrition and snacking, message health benefits to key influencers (e.g., nutritionists, doctors, business-to-business customers), accelerate nutrition research to expand messaging of pecan health benefits, and modernize packaging with snack-sizes and differentiated labelling.
2. Global demand for pecans is underdeveloped today, with consumption concentrated in a few markets and limited coordination of international marketing efforts.
 - Strategic priority #2: Lead amongst global suppliers through data-driven prioritization of international markets and coordinated international efforts. Market directly to consumers in Western Europe & Canada, where similar healthy snacking campaigns will appeal. APC will lead coordinated marketing efforts with other pecan associations, and focus limited APC resources on the highest return export markets and activities.
3. The US Pecan industry's "infrastructure" is less developed than that of other tree nuts, with unreliable data, outdated standards, and conflicts over grading practices inhibiting industry growth.
 - Strategic priority #3: Strengthen our infrastructure by making better data & uniform standards/grading available to all. Simplify and publish standards for industry-wide adoption and usage, establish an option for third-party grading, ensure standards are applied equally across domestic and international product, and track and publish pecan data for all stakeholders to access.
4. The Pecan industry is one of the only remaining markets where transactions require upfront cash payments between growers and shellers, creating pain points, weakening value chain relationships and hindering growth.
 - Strategic priority #4: Modernize the industry by educating stakeholders on options for improving the way growers & shellers transact. Research best practices from other industries and aid in learning & revision of alternative pecan transaction models, which industry participants can choose to adopt.
5. A lack of transparency and visibility across stakeholder groups leads to limited cooperation, fragmented and duplicated efforts, and inefficiencies in the pecan market – the industry has never had a uniform strategic vision before.
 - Strategic priority #5: Unite pecan stakeholders through regular communications and clarity around the APC strategic plan. APC will provide ongoing communications about its strategy and progress and encourage partnership and coordination with other industry associations to maximize impact. The APC will help unite the industry behind one common goal of growing pecan demand.

C. Next steps for APC & industry as a whole

As the strategic planning phase wrapped, APC prepared for immediate and comprehensive action to move forward with these priorities. APC has assembled working teams comprised of leadership from the APC staff, council members, and volunteers from the industry. Initiatives have assigned owners, who are accountable for progress and meeting milestones. The goal is for each of the five initiatives to move the Pecan industry toward a future state wherein:



Priority	Current State	Future State
Win fair share of tree nuts	Seasonally consumed, “indulgent” ingredient nut that lags growth of other tree nuts	Differentiated, nutrition-oriented, everyday “snacking” nut capturing fair share of growth
Lead amongst global suppliers	Trade-show based, “push” export strategy with resources spread across many markets and limited common messaging	A consumer-driven export marketing strategy that adopts domestic messaging and focuses on a few markets with the highest potential
Strengthen our infrastructure	Limited, unreliable data and non-uniform standards that are enforced inconsistently	Reliable, accessible data sources that support decision making, reinforced by implementation of uniform standards
Modernize the industry	One cash-only transaction model that prevents value chain partnerships and inhibits market growth	A modernized, diversified set of transaction models informed by well-researched best practices that educate industry on sharing risk & upside to promote stability & efficiency
Unite pecan stakeholders	Fragmented stakeholders acting in their individual interest with limited collaboration	Unified stakeholder base with a commons strategy, working together to benefit the American Pecan industry

ⁱ Almond Board; UC Davis; USDA; Market Interviews

ⁱⁱ Weber Shandwick / Mintel

ⁱⁱⁱ INC Statistical Yearbooks

^{iv} Supply data estimated using a variety of primary sources and proprietary analysis. Sources include: USDA FAS/GATS, SIAP-SAGARPA, Comenez, SAPPA, Industry Interviews, APC Stakeholder Survey. Demand data is based on historic pecan consumption growth globally.

^v Based on difference between projected supply and demand, growing over 10-year period. Number reflects a theoretical imbalance, not necessarily actual predicted consumption

Confidential DRAFT - for discussion



APC Strategic Plan

Interim Review of Findings with Council

18 DECEMBER 2018

Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

Introduction to BCG



Who is BCG?

- **Premier advisors on strategy:** Top-ranked management consulting firm in operation since 1963
- **Global presence:** Employees in 90+ offices across 50 countries
- **Vast resources & deep expertise:** 16,000+ employees with 900+ partners, 20,000+ alumni globally

1. Europe, Middle East, Africa, and South America
 Note: Most engagements include multiple functional topics
 Source: BCG case experience, 2008 - Aug. 2018

BCG covers the agribusiness landscape across all sectors



- Fertilizers
- Mining and minerals processing
- Agricultural chemicals
- Trading of commodities
- Seed production
- Agricultural equipment
- Irrigation
- Biofuels
- Food ingredients
- Food processing and production

>1,500 association & co-op engagements in the last ~10 years on a broad spectrum of topics

	N. America	WESA & CEMA ¹	APAC	Total
Strategy	87	255	49	391
Corporate Development	55	247	44	346
Operations	37	155	28	220
Marketing, Sales & Pricing	18	113	25	156
People and Organization	28	101	13	142
Digital Strategy / AI	57	154	33	244
Total	282	1025	192	>1,500

Deliverables: High level deliverables for APC strategic planning effort



Clear APC vision and strategy that will enable *sustained pecan industry profitability*



Consistent fact-base with a *quantitative evaluation* of markets, competitors, & customers



Top priority strategic focus areas (3-5 critical initiatives) *that all APC stakeholders agree to* and support



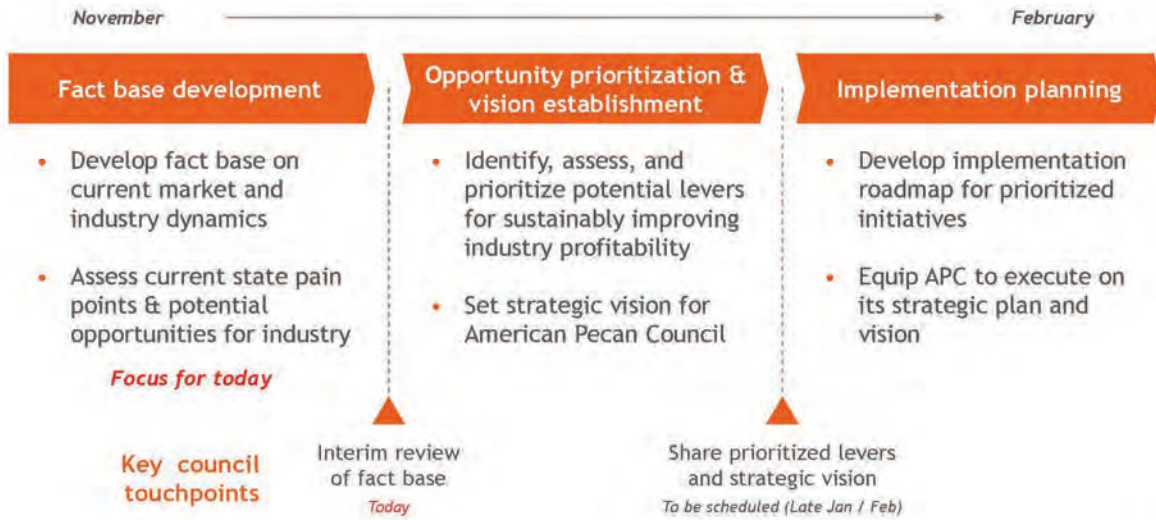
List of detailed sub-initiatives and a *collaborative process* to align on these actions



Implementation plan with org structure, capability requirements and *check-ins after the project ends*

Timeline: Approach for APC strategic planning effort

Today, we are sharing findings from our 'fact base development' and are seeking input to shape our future work



Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

② Belief audit themes & stakeholder survey

Key messages for today

Belief audits of 25+ stakeholders & web survey of 140+ respondents confirm strategic planning effort focused on right priorities

- Survey analysis on responses from November 9-25th, 2018
- Still collecting responses; welcome contact info of people we haven't yet reached

Price volatility and lack of transparency cited as greatest challenge stakeholders facing - a shared pain point amongst growers & shellers

- APC cannot control price, but can help with data transparency

APC can meet stakeholder needs by addressing key marketing challenges and confronting longstanding issues in pecan industry

- Stakeholders see APC as marketing organization first & foremost
- Many view APC as well-positioned to influence export priorities

7

Interim findings: Emerging themes from belief audits of 25+ stakeholders

Stakeholder input on where APC can create value...

Provide single voice or "north star" for industry

“APC needs to take on the role of the industry's voice, become the go-to entity for research, marketing, and issues.”

“APC can be that unified voice on the direction we're going from a nutritional / research stand point. We need that constant.”

Shift the story on pecans to grow demand

“[Other nuts] are all about heart health, health studies, etc. Pecans have been left out because we haven't been organized.”

“We need to get the word out that pecans are more than just ingredients for ice cream, cookies and pies.”

Institute uniform, simplified standardization

“We need better standards around uniformity to have a good product. Standardization exists, but...there's a lot of variability.”

“If there was a third party entity that was in charge of grading pecans, that would be great. Everyone could be on the same page.”

Improve industry data and transparency

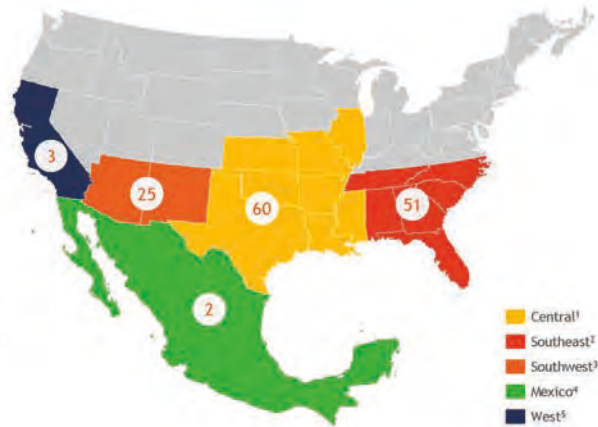
“We need to bring transparency, and I think APC is doing that. We had no industry stats; now we're required to report data.”

“The biggest advantage almonds and walnuts have are their statistics and market analysis, and their ability to act on those reports.”

Source: Interviews with pecan industry stakeholders

8

Stakeholder survey: 141 respondents representative of the pecan industry's different stakeholder types and geographic skews

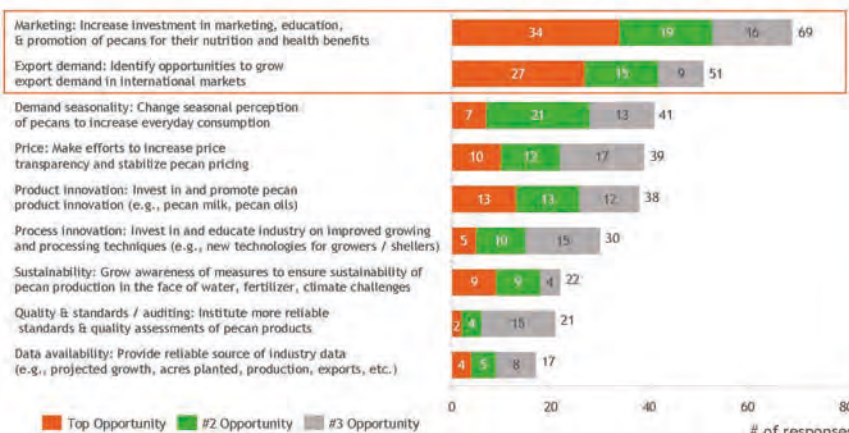


1. Arkansas, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Texas, Illinois; 2. Alabama, Florida, Georgia, North Carolina, South Carolina, Tennessee;
 3. Arizona, New Mexico; 4. Mexico; 5. California
 Note: "Multiple roles" identifies respondents who indicated they play multiple roles, such as grower and sheller, grower accumulator, or custom harvester or cleaner, etc.

Opportunities: Stakeholders believe improved marketing and export demand are greatest opportunities for the pecan industry

Total survey responses

Number of responses: 141



Key takeaways:

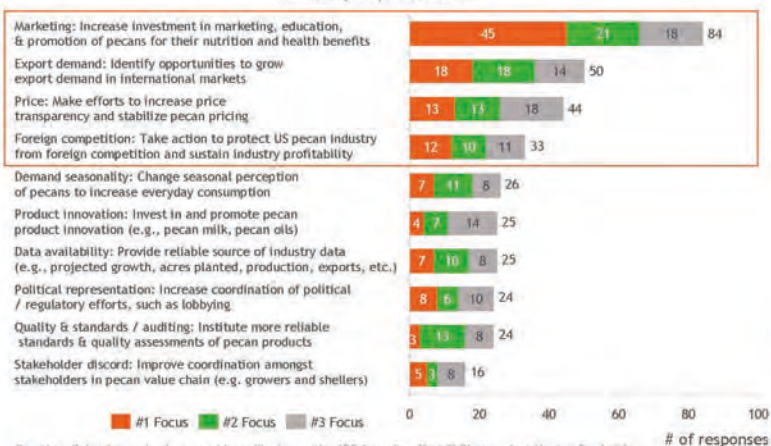
- Most stakeholders emphasize the importance of creating a strong foundational demand for pecans through marketing, education, and promotion around nutritional and health benefits
- Current trade environment with China likely driving high emphasis on export demand and trade challenges

Questions: As a pecan industry stakeholder, what do you see as the greatest opportunities for the pecan industry for the future? Please rank your top 3, with #1 being most important
 Source: 2018 APC Grower Sheller Accumulator Survey (GSA), BCG analysis
 112 responses went to other categories. Other includes: Risk management tools, political representation, etc. For full list of options see appendix.

APC Focus: Stakeholders see APC's primary purpose as marketing, but want support on exports & price

Total survey responses

Number of responses: 141



Question: Going forward, where would you like to see the APC focus its efforts? Please select the top 5 priorities, with #1 being most important. Source: 2018 APC Grower Sheller Accumulator Survey (GSA), BCG analysis. 72 responses went to other categories. Other includes: Risk management tools, competition from non-nut products, etc. For full list of options see appendix.

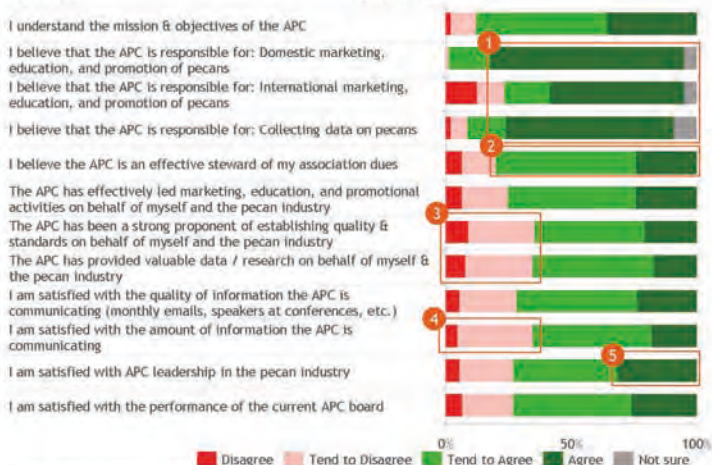
Across all stakeholders, respondents agree that marketing and demand generation should be the #1 focus for the APC

Addressing other issues like export demand, price volatility, and foreign competition also a means to respond to stakeholder needs

APC performance: Stakeholders generally satisfied with APC to date, though highlight a few areas for potential improvement

Question

Overall | N = 141



Source: APC 2018 GSA Survey, BCG analysis. Note: Only 3 of the above questions allowed for "Not-Sure" response

Takeaways

- 1 Role of APC:** Respondents see the APC as playing a major role in domestic promotion, export marketing and data collection
- 2 Effectiveness:** Stakeholders see the APC as a worthwhile investment of their dues
- 3 Deliverables:** Respondents are eager for the APC to move forward with tangible changes; they see APC as capable of leading important initiatives for quality & standards and data & research
- 4 Communication:** People want to hear from the APC; there is opportunity to provide even more transparency into what the council is doing
- 5 APC leadership:** Stakeholders are satisfied with APC leadership, which is a testament to the APC team's progress and a strong foundation for driving future change

Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

13

③ Industry Economics

Key messages for today

Confidential DRAFT - for discussion

Pecan industry has historically been challenging

- Lack of coordination across a fragmented base of growers
- Tensions between growers and shellers for many years
- Periods of margin compression across value chain
- Volatile prices, and lack of transparency and information

Many obstacles are grounded in nature of the pecan market

- Substitute tree nuts (almonds, walnuts) can outcompete pecans on price given lower growing costs per pound
- Shelling requires significant fixed costs and high utilization

Our collective task is to identify creative ways to combat these challenges, potentially including:

- Establishing simple and robust standards
- Implementing third-party grading
- Facilitating greater price visibility
- Changing contracts to better share risk and upside

Goal for today is to understand key drivers - not to solve them

- Must identify largest issues with opportunities to fix

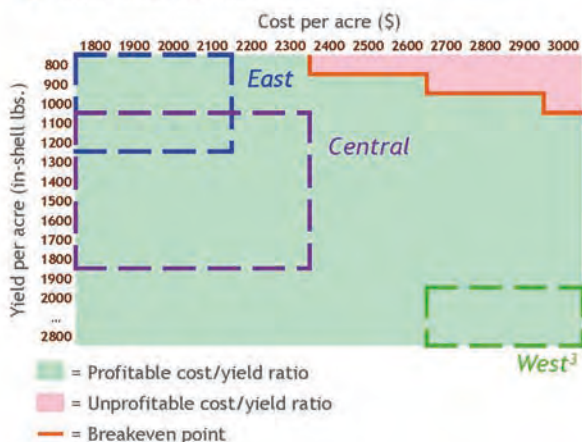
14

In-shell price declines particularly painful for Eastern growers given lower yield

Higher-cost Eastern growers require prices of ~\$2.00-\$2.50 per in-shell lb. to break even

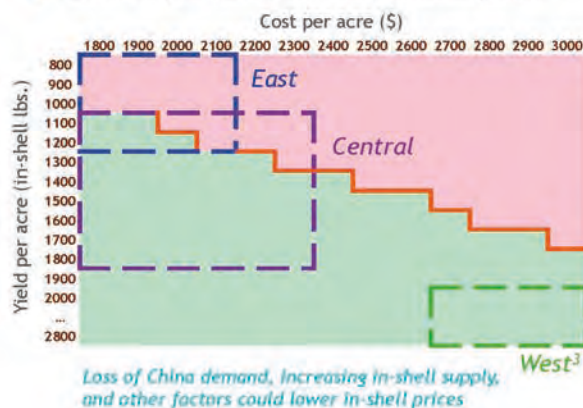
Profitability at market price of **\$3.00** per in-shell lb.

- Approx. 2017 max price¹



Profitability at market price of **\$1.75** per in-shell lb.

- Approx. 10-year low (ex. recession; inflation-adjusted)²



1. Price / in-shell lb., paid by China of ~\$2.93 in 2017 2. Inflation-adjusted price of US average in-shell of \$1.73 in 2012 3. "West" includes West Texas
 Source: Nature's Finest Foods; USDA; UC Davis; UGA; Market Interviews

Pecans can't compete on price against close substitutes

Regardless of region, pecans generally cost more to grow vs. other tree nuts given lower yield per acre

	Pecans		Almonds			Walnuts		Pistachios	
	Representative East	Representative West	Almond Board	UC Davis	Expert interview	UC Davis	Expert interview	UC Davis	Expert interview
Growing cost (\$/acre)	-2,000	-2,500	-4,900	-4,700	-3,300	-3,750	-3,200	-3,900	-3,750
In-shell yield (lbs/acre)	-1,000	-2,000	-	-	-	-6,000	-5,000	-2,800	-2,600
% meat	-45%	-55%	-	-	-	43.5% ¹	43.5%	50%	50%
Meat yield (lbs/acre)	-450	-1,100	-2,950	-3,000	-2,200	-2,600	-2,200	-1,400	-1,300
Meat growing cost (\$/lb)	-4.40	-2.30	-1.70	-1.60	-1.50	-1.40	-1.45	-2.80	-2.90
	-\$3.10-\$3.60 Weighted Average								

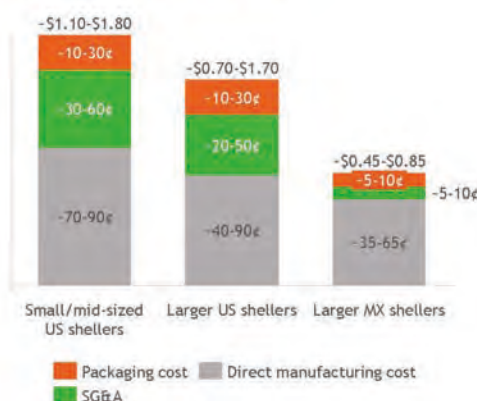
UC Davis estimates—based on very small farms—likely conservative/overstate costs

1. Based on USDA ERS "Fruit and Nut Tree Yearbook" average walnut kernel yield
 Note: Growing cost per acre excludes amortization of land and tree/establishment investments. Almond figures reported in meat yield basis only.
 Source: Almond Board; UC Davis; USDA; market interviews

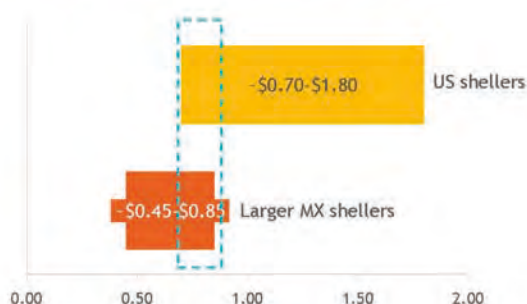
Scale and investing in automation and efficiency is needed to compete with Mexican shellers that benefit from lower labor costs

Directional cost estimates; excludes carrying and transportation costs

Shelling costs (\$ / meat lb.)



Ranges of total shelling costs (\$ / meat lb.)



With right processes / investments, and tailwind from lower transport costs, some US shellers competitive with MX shellers

Source: Market Interviews

17

For discussion: Ways for APC to mitigate pain points across pecan value chain

Marketing strategy



Drive demand for pieces to prevent underpricing of pecan meat



Market pecans as a premium nut to garner higher prices versus other tree nuts (to be researched)

Capability investment



Build robust database for tracking and publishing price information



Sponsor R&D initiatives targeted at increasing pecan yield (long term)

Contracts and financing



Promote easier access to financing / improve financing terms



Pilot collaborative contracts / partnerships between growers and shellers (and end customers?)

We will explore these options in more detail in our continued work

18

Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

19

Confidential DRAFT - for discussion

Global supply 4

4 Global Supply and Demand

Key messages for today

Global supply expected to continue growing 6% annually and reach 1.2B+ lbs by 2027

- Currently U.S. and Mexico represent 90-95% of global volume
- In the future, 3-4 players will have volumes in excess of 100M lbs, with US and Mexico representing 75-80% of volume
- U.S. must shift perspective from "volume leader" to "differentiated global supplier" and "marketing leader"

U.S. consumes ~8% more pecans than the 270M lbs produced in-country; non-US supply is needed to sustain our consumption today

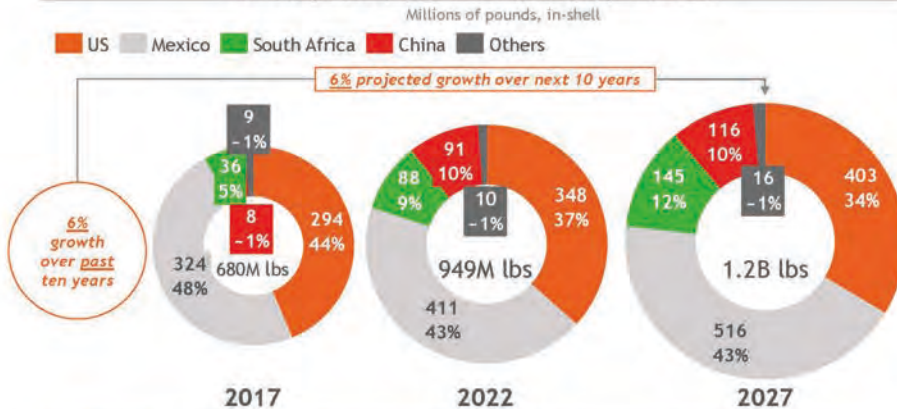
- U.S. has trended toward net importing pecans in recent years
- Other major producing countries are net exporters (S. Africa, Mexico export 60-90%+ of crop) and also supply China

Significant need to boost demand both domestically and internationally to grow in-line with expected supply increase

20

Supply: Est. 6% annual growth, driven by S. Africa & China, leading to more fragmented supply landscape in 10 years

Annual pecan production across top markets



Future supply could be larger due to increased hormone usage and additional South African production

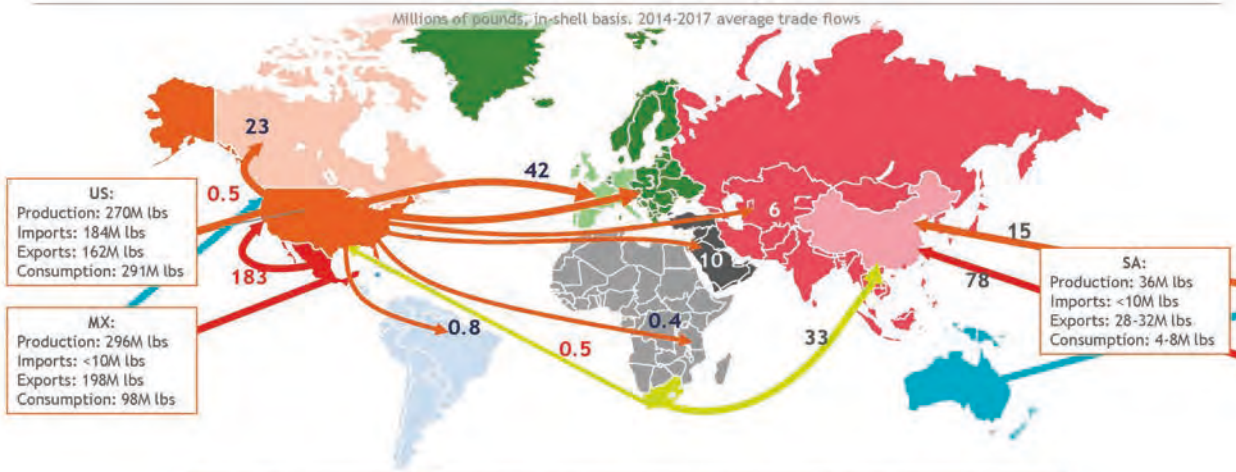
Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenue; SAPP; Industry Interviews; Stakeholder survey; BCG Analysis. Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as directional approximation

Key Takeaways

- Production to diversify away from 2 producers to 4 global producers
- China may produce up to 5-10% of global pecan supply; may affect U.S. imports
- South Africa to continue rapid growth, comprise >10% of world supply in ten years - well suited to meet Chinese demand

Trade: Current global trade flows are mainly driven by US and Mexico

Annual trade flows of pecans globally



As more foreign production comes online, competition in export markets will increase

Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenue; SAPP; Industry Interviews; BCG Analysis

Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

23

Confidential DRAFT - for discussion

Domestic demand & marketing 5

5 Domestic demand & marketing

Key messages for today

The US is the largest global consumer of pecans, yet presents an untapped opportunity to further boost pecan consumption

Domestic tree nut consumption has grown 3% per year over last decade, with almonds and walnuts gaining share during period of growth

- Pecan share of volume has been slowly declining over same period, a key driver for the establishment of the American Pecan Council

Traditional pecan ingredient segments are stable but low-growth (1-2%); categories tied to healthy snacking growing at much faster rates (3-10%+)

- Tree nuts well positioned to take advantage of macro diet and wellness trends underpinning outperformance of healthy snacking
- Potential for pecans to better capitalize on consumer health trends

As pecan industry strives to raise awareness, almonds provide a helpful roadmap of how to strategically market differentiating qualities

- Almond growth driven by continuous targeted health research, and strong marketing teams capitalizing on findings to encourage new consumption occasions (e.g., snacking)
- APC can leverage some tactics to create unique marketing approach rooted in health & wellness, but customized for higher price of pecans

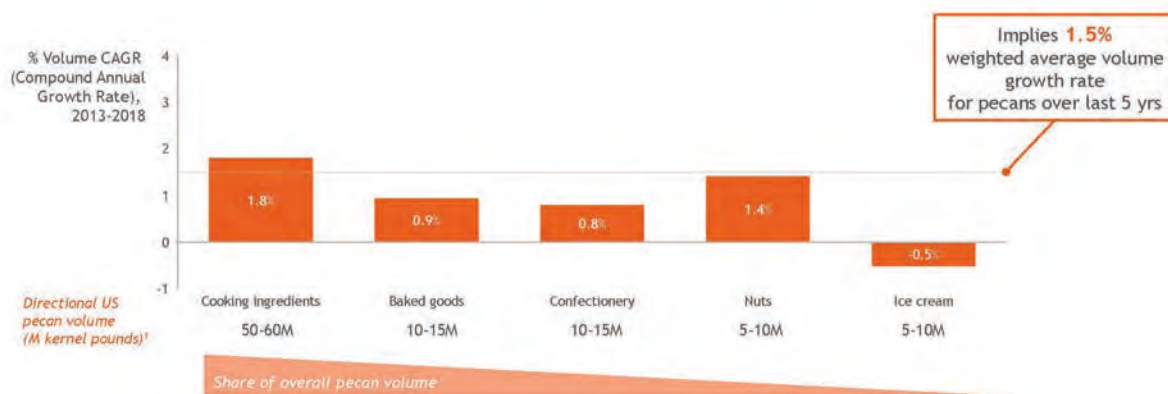
24

Share: Almonds - and walnuts to an extent - have been increasing share of tree nut market while pecan share has been slowly declining



25

Category growth (I/II): Non-snacking ingredient categories, which make up ~85% of global pecan consumption, have seen stable to moderate 1-2% growth

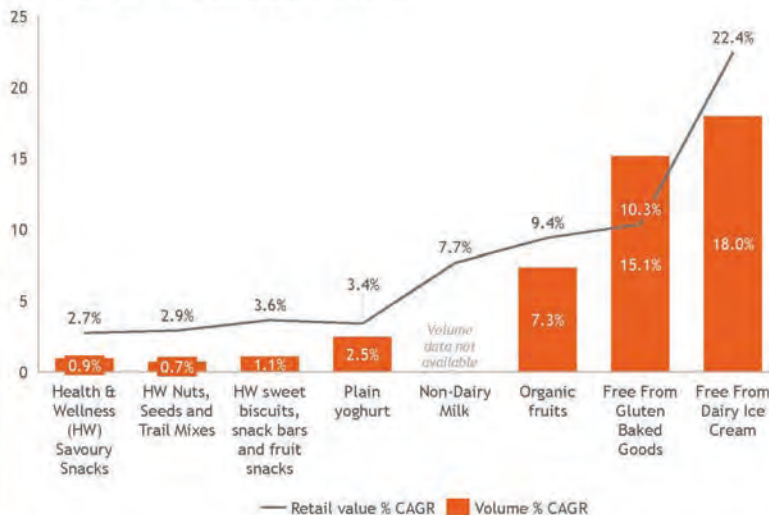


1. Directional estimate; figures based on market interviews & BCG analysis; cooking ingredients includes mass retailer & grocery volume. Pecan shelled sales from NASS USDA 2013-2017
Note: Bar is % Volume CAGR (000 tonnes, except for ice cream in millions of litres) for 2013-2018; 2018 data includes some estimates. Fresh nuts excludes peanuts and coconuts; numbers differ slightly from INC.
Source: Euromonitor, USDA, market interviews, BCG analysis

26









Category growth (II/II): Pecans could ride the tailwinds of fast-growing snacking & health-forward categories by increasing demand for new occasions

% CAGR (Compound Annual Growth Rate) over 5 years



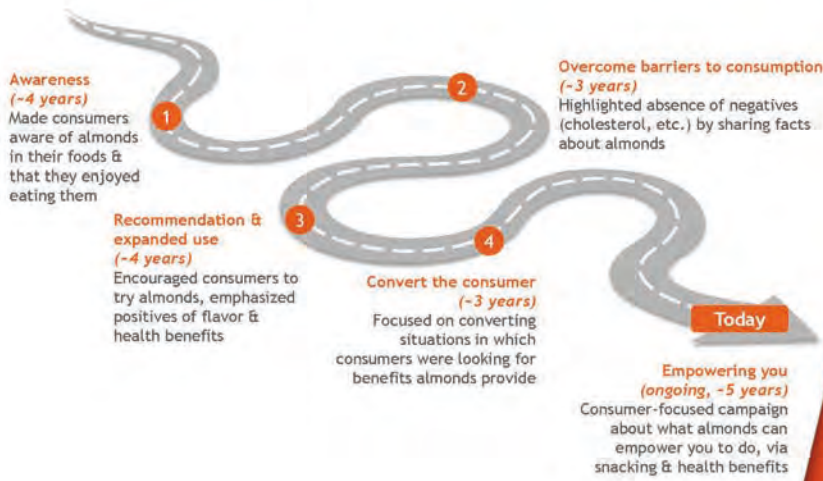
Note: Bar is \equiv Volume CAGR (000 tonnes, except for ice cream in millions of litres) for 2013-2018; \equiv Value (RSP) = Sales growth; 2018 data includes some estimates.
Source: Euromonitor, USDA, market interviews, BCG analysis

Macro trends: Key consumption trends align well with tree nut characteristics

 <p>More snacking between meals 17.9 total weekly snacking occasions reported in 2017, up from 14.7 in 2014¹</p>	 <p>Protein and satiation High in protein is the number 1 health benefit sought in snacks²</p>	 <p>Vegetarian/vegan foods 600% increase in people identifying as vegans in the US in the last three years³</p>	 <p>Healthy fats Ketogenic (high-fat) diet food market is expected to grow 4%+ in next 5 years⁴</p>
 <p>On-the-go convenience and meal supplement 62% of snacking occurs in mid-morning or mid-afternoon, away from traditional meal table⁵</p>	 <p>Plant-based proteins 24% increase in in-home plant based protein consumption since 2015²</p>	 <p>Gluten & dairy-free ("free-from") foods 9.9% growth per year in "free from" positioning over last 5 years⁵</p>	 <p>Healthy new product innovations Major CPGs turning to new product innovation as primary means to spur growth⁶</p>
<p>When: Between meals, on-the-go</p>		<p>Why: Energy, satiation</p>	
<p>What: No meat, healthy fats, free-from, healthy foods in new product formats</p>			

1. ABC State of Snacking in the US, 2017. 2. PreparedFoods.com 3. Food revolution network. 4. FoodDive. 5. Euromonitor 6. Mordor Intelligence

Benchmarking: ABC marketing strategy phased over 20+ years to build to today's health-focused messaging



APC can consider taking a similar phased approach in its marketing strategy, though process will likely take less time due to current health halo of tree nuts

Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

⑥ Export market prioritization

Key messages for today

Export markets have played a growing role in recent years

- Increased demand of in-shell pecans from China
- Growing pecan demand in other regions (Europe, etc.)

In process: APC's strategic plan can help focus international marketing efforts for pecans...

- Recent efforts span many markets, emphasize trade shows
- Future efforts could adopt a more targeted approach, emphasizing synergies with APC marketing messages

...with the overarching goal of growing total exports of and international demand for pecans overall

In process of evaluating potential markets across four criteria

- 1) Current size, 2) Historic & projected growth, 3) Economic feasibility, 4) Cultural considerations

Early view: Developed, "Western" markets present attractive, untapped opportunities to grow demand in the short-term

- EU & Canada most attractive regions in short term
- Other developing regions (e.g. India) are potential long-term export markets to consider

31

Methodology: Evaluating market attractiveness on four criteria



Current Market Size



Potential for Growth



Economic Feasibility



Cultural Considerations

Review quantitative attractiveness across broad list of markets

Deep-dive on most favorable markets

32

Four criteria to use to determine most attractive export markets



33

Initial findings: Developed markets seem most attractive for focused marketing

Outside of continued focus on China, must prioritize remaining geographies (work in process; input welcome)

Country	Current Market Size	Potential for Growth	Economic Feasibility	Cultural Considerations ¹	Overall outlook
China	⊖	✓	⊖	⊖	Currently a question with ongoing trade war; positive if/when trade tensions resolve for longer term
EU	✓	✓	✓	✓	Positive; opportunity to market specific use cases
Canada	⊖	⊖	⊖	✓	Positive; opportunity to expand domestic marketing to Canada
India	⊖	✓	⊖	⊖	Short-term negative due to government tariffs and lack of pecan infrastructure; long term positive, opportunity to grow
Korea	⊖	✓	✓	⊖	Mixed; stealing share from walnuts difficult due to public policy; lower emphasis on heart-health among consumers
UAE	⊖	⊖	✓	⊖	Mixed; non-primary market, but useful to maintain pecan presence for regional distribution
Japan	⊖	⊖	✓	⊖	Mixed; opportunity to capture growing demand, but competitive landscape and consumer adoption unclear
Turkey	⊖	⊖	✗	⊖	Negative; potential to compete vs walnuts, but structural headwinds from tariffs and public policy
Mexico	⊖	⊖	⊖	✓	Mixed; potential opportunity to target niche market in Mexico - could also cooperate to market pecans internationally

1. Detailed cultural considerations on separate page and in deep-dive
Some raw data may not fully reflect actual consumption; numbers should be viewed as directional indicators
Source: ITC 2012-2017 data; BCG analysis

■ Most favorable ■ Mixed
■ Favorable ■ Unfavorable

34

Meeting Agenda

1	Introduction & project overview	10:00-10:10
2	Belief audits themes & stakeholder survey	10:10-10:30
3	Industry economics	10:30-11:00
4	Global supply	11:00-11:10
5	Domestic demand & positioning	11:10-11:30
6	Export market prioritization	11:30-11:45
7	Projected demand gap & Path forward	11:45-12:00

35

Confidential DRAFT - for discussion

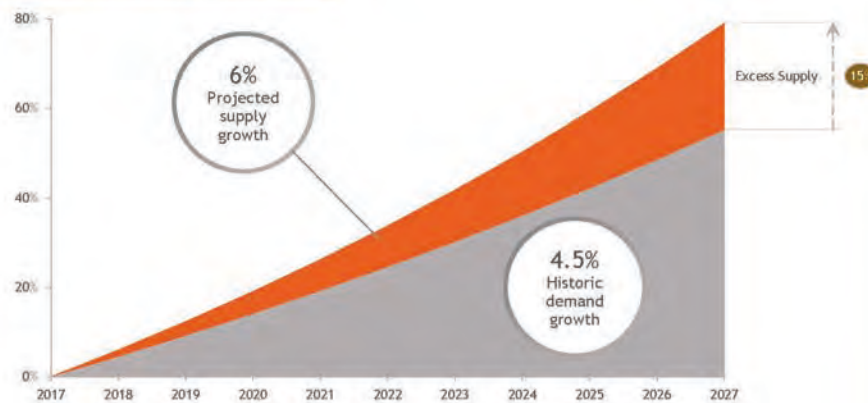
Projected demand gap 7

Demand: At current rates, global supply will exceed demand by 15% in ten years...

Growth of global market supply and demand (steady-state forecast)

% of base value

Illustrative; excludes impact of price changes



Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenuz; SAPPA; Industry Interviews; Stakeholder survey; INC Statistical Yearbook; BCG Analysis. Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane-Michael; should be viewed as approximation.

Key Takeaways:

- 15% forecasted excess supply within 10 years
- Supply growing 33% faster than demand under current projections
- Conservative estimate of gap between supply and demand; 20% of global demand growth driven by Chinese market

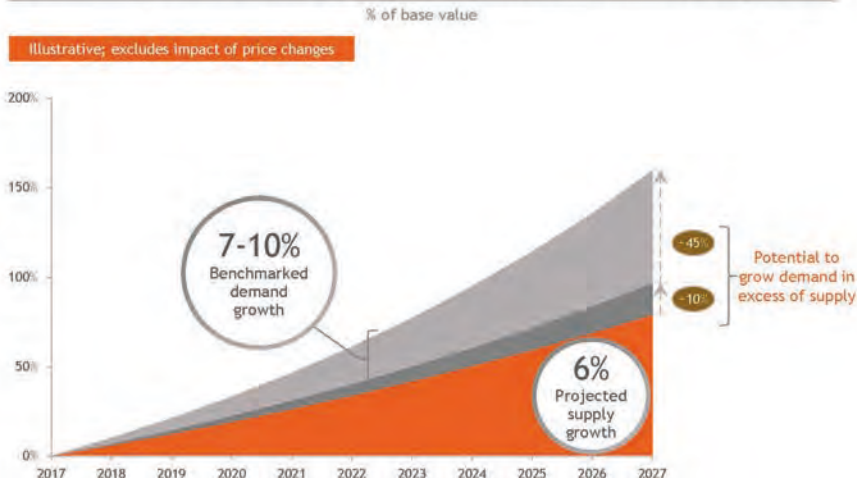
36

Demand: ...it's possible to grow demand faster than supply with right strategy

Growth of global market supply and demand (successful marketing case)

Potential for growth

- Almonds spurred 7-10% consumption growth in mid-2000s despite having an established market
- Pecans are a less-saturated market, and could expect similar or greater demand growth with proper marketing
- Effective marketing could result in demand outpacing supply by 1-4%+ annually



Source: USDA FAS/GATS; USDA NASS/ERS; SIAP; SAGARPA; Commuez; SAPPa; Industry interviews; Stakeholder survey; IHC Statistical Yearbook; BCG Analysis
Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as approximation

37

Where we're heading: Industry must work together to address challenges

We have more entities yet fewer resources, so must be targeted in where we invest our efforts to maximize impact

Associations by tree nut

	Pecans	Almonds	Walnuts	Pistachios
National	<ul style="list-style-type: none"> American Pecan Council National Pecan Shellers Association U.S. Pecan Growers Council, Inc. American Pecan Board National Pecan Federation 	<ul style="list-style-type: none"> California Almonds Almond Alliance 	<ul style="list-style-type: none"> California Walnuts 	<ul style="list-style-type: none"> Administrative Committee for Pistachios American Pistachio Growers
Regional	<ul style="list-style-type: none"> Southeastern Pecan Growers Association Western Pecan Growers Association Tri-State Pecan Growers Association 			
State level	<ul style="list-style-type: none"> Alabama Pecan Growers Association Arkansas Pecan Growers Association Arizona Pecan Growers Association California Pecan Growers Association Georgia Pecan Growers Association Georgia Pecan Commission Louisiana Pecan Growers Association Mississippi Pecan Growers Association New Mexico Pecan Growers Association North Carolina Pecan Growers Association Oklahoma Pecan Growers Association Texas Pecan Growers Association West Texas Pecan Growers Assoc. Texas Pecan Board 	<ul style="list-style-type: none"> Central California Almond Growers Association Central Valley Almond Growers Association 	<ul style="list-style-type: none"> Sacramento Valley Walnut Growers Association* 	<ul style="list-style-type: none"> California Pistachio Research Board Arizona Pistachio Growers Association
Total #	22	4	2	4

Source: USDA, BCG analysis

FMO

38

Where we're heading: Next steps



Today

Topics covered:

- Belief audit themes and initial stakeholder survey results
- Industry economics and value chain
- Domestic demand and current marketing
- Export market prioritization



Council Review #2 (to be scheduled)

Next steps:

- Consumer survey results and deep dive on consumption preferences, options for differentiated marketing strategy
- Potential opportunities to improve relationship between growers and shellers, and strengthen the way the industry operates and transacts
- Preliminary shape of the answer for APC strategic vision, with hypotheses on key actions and priorities for APC going forward
- Outreach to other leading associations to align on how all pecan organizations can work together



Thank you



Meeting Agenda	1 Introduction & plan for today 10 min	
	<i>Supply economics</i>	
	2 Modernizing the pecan value chain	50 min
	3 Global supply projections and implications	30 min
	<i>Demand generation</i>	
	4 Insights from pecan consumer survey	30 min
	5 Go-forward marketing strategy	30 min
6 'Shape of the answer for APC' & next steps	15 min	

Recall: High level deliverables for APC strategic planning effort



Clear APC vision and strategy that will enable *sustained pecan industry profitability*



Consistent fact-base with a *quantitative evaluation* of markets, competitors, & customers



Top priority strategic focus areas (3-5 critical initiatives) that all APC stakeholders agree to and support

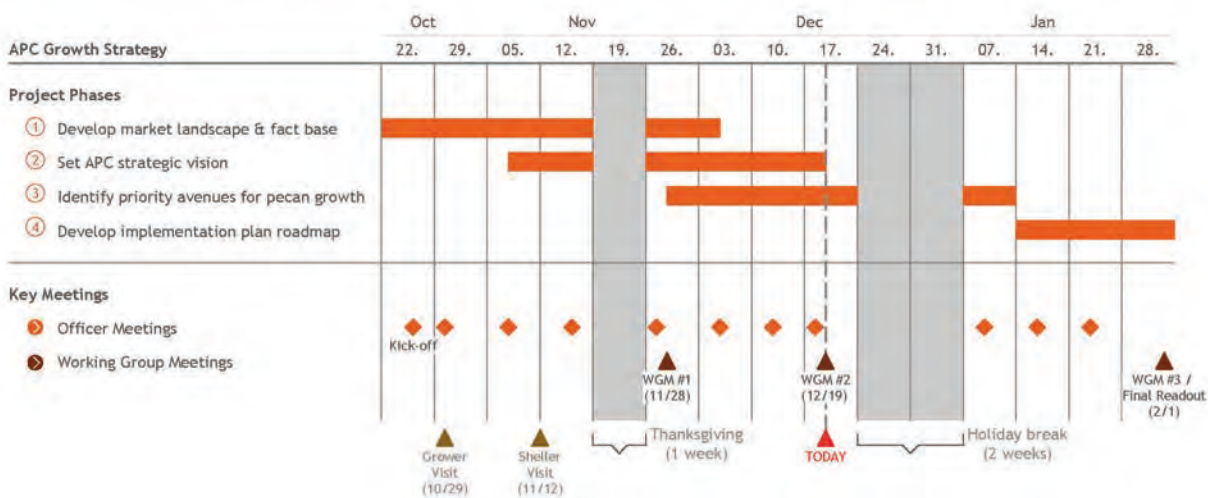


List of detailed sub-initiatives and a *collaborative process* to align on these actions



Implementation plan with org structure, capability requirements and *check-ins after the project ends*

Today is our second of three 'Working Group Meetings'



Where we're going: Topics we covered last time and plan going forward



Working Group Meeting #1

Topics covered last time:

- Belief audit themes and initial stakeholder survey results
- Industry economics and value chain
- Domestic demand and current marketing
- Export market prioritization



Working Group Meeting #2

Planned topics for today:

- Levers for modernizing and strengthening the value chain
- Global supply projections and implications on the pecan industry
- Insights from pecan consumer survey on consumption behavior, buyer demographics, and market perceptions
- Go-forward marketing strategy & framework for growing demand
- Preliminary "Shape of the answer" for APC's strategic plan



Working Group Meeting #3

Topics for our next meeting:

- Implementation: High-level roadmap with priority actions across APC for each component of the "answer"
- Operating model: Roles and capabilities necessary for APC to deliver on long term vision
- Enablers: E.g., Examples of effective tracking for marketing initiatives; guiding structure to modernizing and strengthening the value chain

5

Meeting Agenda

1 Introduction & plan for today 10 min

Supply economics

2 Modernizing the pecan value chain 50 min

3 Global supply projections and implications 30 min

Demand generation

4 Insights from pecan consumer survey 30 min

5 Go-forward marketing strategy 30 min

6 'Shape of the answer for APC' & next steps 15 min

6

② Industry economics

Takeaways from our last discussion

- ✓ Pecan industry has historically been challenging, with many obstacles grounded in the nature of the pecan market
- ✓ Growers at a structural cost disadvantage to other tree nuts, and variations in costs by region determine ability to bear price swings
- ✓ Shellers recently squeezed, with only the most efficient and at scale players able to compete against MX shellers given higher labor costs

7

② Modernizing the pecan value chain

Key messages for today

Four levers hypothesized to strengthen the pecan industry

- Establishing simple and robust standards
- Implementing third-party grading
- Facilitating greater price visibility
- Changing contracts to better share risk and upside

Considering other tree nut value chains provides a helpful benchmark, but must recognize pecans are unique

- Almond, walnut, and pistachio "vignettes" illustrate market examples of how some of these levers successfully work
- Must assess what operating aspects could work for pecans, and what modifications are needed

Some ideas would entail fundamental shifts that may take several years to get right, but will help long term health of industry

- Nothing has been decided
- Potential for changes to these levers, or new levers entirely, to come out of today's conversation

8

Pain points: Belief audits & stakeholder survey revealed recurring themes

Growers	Shellers	Buyers
 <p>Sense that shellers are trying to deceive growers on price</p>	 <p>Significant upfront capital commitment and high interest expenses <i>- \$20M taken out of value chain via interest expense¹</i></p>	 <p>Hypothesis: Lack of commitment to pecans given supply uncertainty</p>
 <p>No ability to capture upside if demand grows and pecan prices rise</p>	 <p>Market risk, and "sandwich position" between in-shell price increases and retail negotiations</p>	 <p>Hypothesis: Lack of innovation by CPG players given price volatility / swings</p>

1. ¹ Assumes 300M in-shell lbs. to process, \$2 per in-shell lb. for sheller to purchase, and 3.5% interest rate
Source: Market interviews

Four potential—and reinforcing—levers for improving industry fundamentals



Vignette: Almond industry structures contracts to spread risk across value chain

Segments of almond industry once transacted in a fashion similar to pecans

- Some processors paid growers upfront for grower harvests, and shouldered market risk by baking in a price "buffer"
- Growers did not trust processors to offer fair prices
- Processor bankruptcies put growers that depended on those processors at extreme risk

Bankruptcies, and success of Blue Diamond, catalyzed change

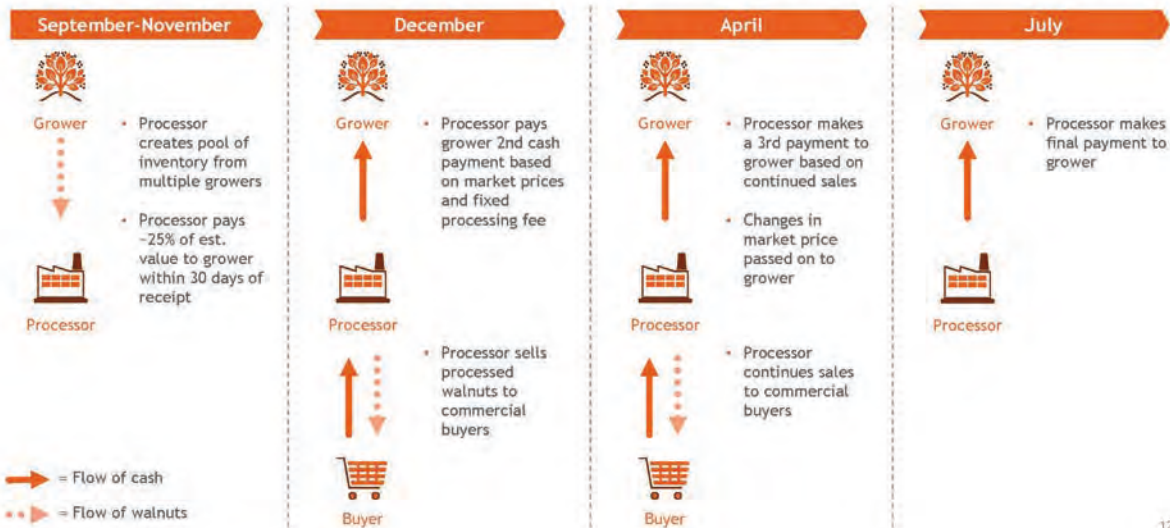
- Processors today build stocks of almonds during harvest and sell that inventory over the course of the year
- Growers are paid in regular installments based on the end market price for kernels, so growers share in market upside and risk

Movement away from "cash crop" transacting increased industry stability and benefited all stakeholders

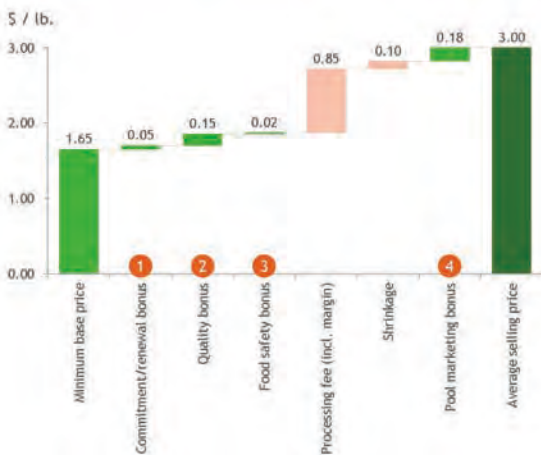
- Competition enforces fair prices to growers; processors want as much grower volume as possible to increase throughput
- Processors don't fully bear market risk and are incentivized to invest in better efficiency with greater financial flexibility
- Commercial buyers are more likely to invest in almond-related products due to more stable supply

Growers and processors must believe that each is better off with payments spread over time and market risk spread across value chain

Payment schedule: Other tree nut contracts mitigate some pain points of "cash crop" transacting; processors make periodic payments based on kernel prices



Contract incentives: Many contracts include "bonus" payments to incentivize high-quality production and long-term contracts



Source: Anonymized grower contract; market interview

Bonus description	Bonus amount per lb.
1. Commitment to a 3- or 5-year contract	\$.02 - \$.08
2. Insect damage percentage	(\$.20) - \$.20
3. Safe pesticide use / growing practices	\$.02
4. Average gross selling price for payable pounds less all other bonuses and fees	Varies with market price

Contract dates	Payment amount
October 31 of crop year	25% of base price
January 31 of following year	25% of base price + contract bonuses
April 30 of following year	25% of base price
July 31 of following year	25% of base price
December 15 of following year	Pool marketing bonus

Considerations: Impact of moving to non-"cash crop" model



Stakeholder benefits

Growers

- Chance to capture upside in pecan prices
- Price "fairness" enforced by competition
 - Shellers want growers to renew contracts by offering best prices
- Budgeting consistency of cash flow

Shellers

- Downside from price swings minimized
- No burden of upfront cash commitment or need to finance outlay
- Incentivized to lower processing costs and/or invest in value-added products



Potential risks / caveats

Growers

- Depending on contract, take on potential downside in kernel prices
- Must trust shellers to repay in multiple installments (counterparty risk)

Shellers

- Lose potential upside in pecan prices
- Favors lowest-cost shellers

Source: Quotes from interviews with almond and diversified tree nut growers

“Pecans are the decentralized, Wild West of nuts...I think pecan growers over time would do better if they adopted the almond model (non-cash crop).”

“Non-cash crop is the only model that brings both grower and sheller together. It brings the upside to the grower and helps the shellers with cash issues.”

Price visibility: Opportunity to increase transparency to match other crops

Pecan pricing relatively opaque compared to other models for sharing price information



Word of mouth

E.g., growers compare prices paid by different processors over a selling season



"Open book" contracts

E.g., growers decide to sell based on known processing costs and buyer price for a specific contract



Daily reporting

E.g., handlers report sales and inventories to third party, which aggregates, audits, and publishes



Real-time markets

E.g., creation and trading of liquid financial instruments

Less transparent

More transparent



Pecans primarily word-of-mouth, with some third-party data aggregation and "open book" contracts

1. Daily reporting for avocados and blueberries mandated by state legislation
Source: Market interviews

Third-party grading: Unbiased product evaluation required to avoid grower & sheller disharmony



Grading a central tension between growers and shellers

- Grower and sheller incentives conflict when evaluating product
 - Higher grades result in higher revenue to grower but higher costs to sheller
- Historical sentiment of growers and shellers trying to "game" one another
 - "Yields are in the eyes of the beholder."



The pecan grading process is strange. It goes by anybody's opinion; I can do ten samples and get ten different values.
-Pecan sheller



Other tree nuts use third parties to mitigate the conflict

- Almond industry leverages USDA to evaluate almond quality
 - USDA inspectors judge all product being delivered to processor
- Walnut players utilize DFA graders trained on FMO-established standards
 - "[DFA] is trained to work off the same standard so grading is fair."



There are some processors that have internal graders, but you invite conflict when processor employees issue grades and everything rides on that grade.
-Walnut processor

Potential action steps

Solicit RFPs from public and private entities on program scope

Fund grading trial with preferred partner organization

Third-party evaluation could take place pre- and post-processing to improve grading accuracy

Consistent standards: Three types of standards that APC can influence, with pecan grades highest priority

Type of standard	Grading / "Yielding"	Growing	Supply Chain
Example metric	<ul style="list-style-type: none"> Size Yield Insect damage 	<ul style="list-style-type: none"> Chemical usage 	<ul style="list-style-type: none"> Cold storage Shelf life Packaging
Utility	<ul style="list-style-type: none"> Determines price paid / received per unit 	<ul style="list-style-type: none"> Differentiates vs. other sources of supply Encourages traceability 	<ul style="list-style-type: none"> Ensures quality product reaches shelves

Potential action steps

Secure buy-in across growers and shellers around simple, robust grading standards

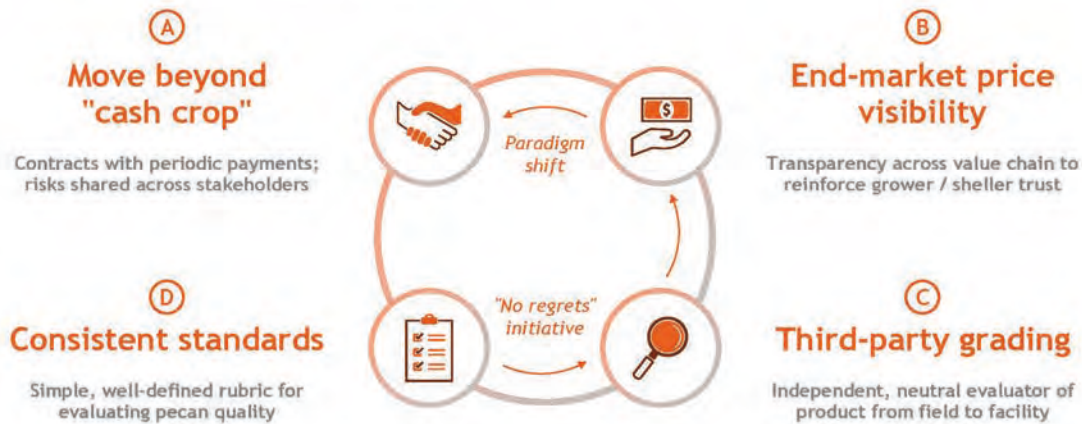
Mandate finalized tolerances as go forward industry designations for quality

Source: Market Interviews

17

Four potential—and reinforcing—levers for improving industry fundamentals

For discussion: What should this look like for pecans?



18

③ Modernizing the pecan value chain

Next steps

- ❑ Organize brainstorming workshop around key components required for an effective contract
 - Must involve both growers and shellers
- ❑ Incorporate today's feedback, and hash out across levers potential options for piloting and testing in the market
 - E.g., install third-party grader on-site at pilot sheller

Meeting Agenda

- | | |
|--|--------|
| ① Introduction & plan for today | 10 min |
| <i>Supply economics</i> | |
| ② Modernizing the pecan value chain | 50 min |
| ③ Global supply projections and implications | 30 min |
| <i>Demand generation</i> | |
| ④ Insights from pecan consumer survey | 30 min |
| ⑤ Go-forward marketing strategy | 30 min |
| ⑥ 'Shape of the answer for APC' & next steps | 15 min |

3 Global supply and demand

Key messages for today

Global supply expected to continue growing 6% annually and reach 1.2B+ lbs by 2027

- Currently U.S. and Mexico represent 90-95% of global volume
- In the future, 3-4 players will have volumes in excess of 100M lbs, with US and Mexico representing 75-80% of volume
- U.S. must shift perspective from "volume leader" to "differentiated global supplier" and "marketing leader"

Clear need to boost demand both domestically and internationally to meet anticipated supply gap






- Global demand has historically grown 2-5% per year
- At current growth rates, world supply of pecans will be 15% greater than demand by 2027
- Highest-cost U.S. players will need to consider cost-reduction / yield improvement strategies to stay competitive

U.S. consumes ~8% more pecans than 270M lbs produced in-country

- Suggests U.S. has trended toward net importing in recent years
- Other major producing countries are net exporters (S. Africa, Mexico export 60-90%+ of crop) and also supply China

Supply: Two countries currently lead production, with two growing rapidly

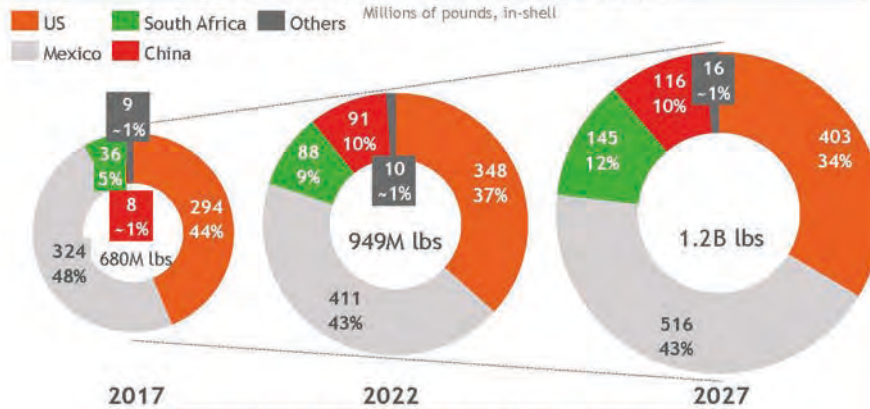
Mexico has most overall acreage, while South Africa leads in apparent yield per acre

	 USA	 Mexico	 South Africa	 China	 Others
Volume (In-shell, 2014-2017 average)	270M ¹ lbs ~46% global supply	296M lbs ~50% global supply	26M lbs ~4% global supply	<1-17M lbs ~1% global supply	~9M lbs ~2% global supply
Acreage as of 2017 (incl. non-bearing)	~378K ¹	~303K	~72K	~77K	~4K ³
Yield per acre (2016-2017 average)	~750 lbs average ¹ 1000-2800+ lbs improved	~1450 lbs	~1800+ lbs	N/A ²	Varies ~400-2800 lbs
CAGR over 2013-2017 (2-year period average)	~0%	~7%	~17%	N/A ²	N/A ²
Concentration of production	Fragmented; 14+ growing states	65% concentration in Chihuahua	70% concentration in N. Cape Province	~66% planted in Yunnan	Varies

1. Acreage inclusive of native trees / pecans 2. Data not currently available 3. Highly directional approximation. May not include non-bearing
Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenzuz; SAPP; Industry Interviews

Supply: Growth will be driven by new producers (S. Africa and China), leading to more fragmented supply landscape

Annual pecan production across top markets



Actual supply may be greater than projected due to increased growth hormone usage and additional South African production

Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenuez; SAPP; Industry Interviews; Stakeholder survey. Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as directional approximation.

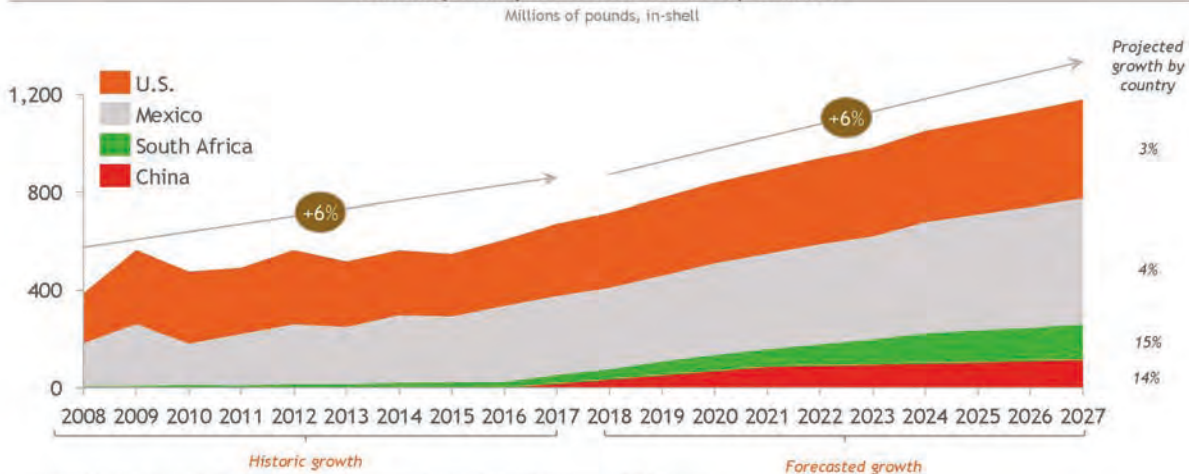
Key Takeaways:

- Global production to diversify away from 2 producers to 4 producers
- China may produce up to 5-10% of global pecan supply; may affect U.S. imports
- South Africa to continue rapid growth, comprise >10% of world supply in ten years - well suited to cater to Chinese demand

Supply: Projected supply growth in line with historic 6% CAGR

South Africa and China expected to be main drivers of continued growth

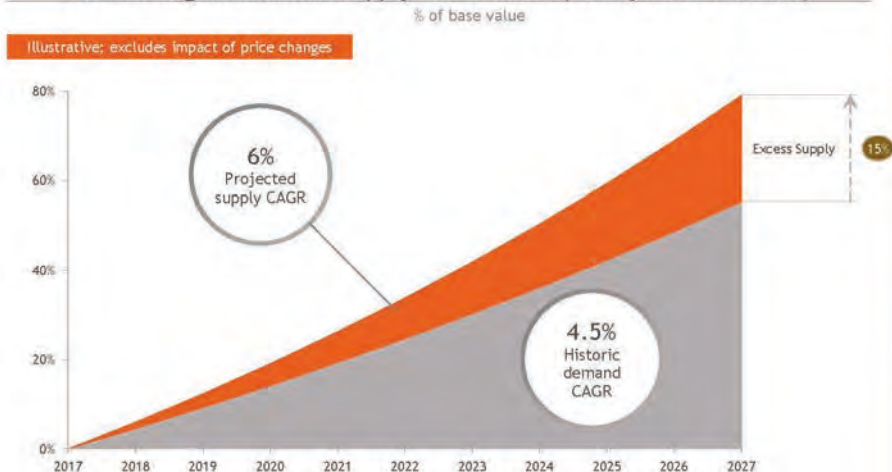
Annual pecan production across top markets



Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenuez; SAPP; Industry Interviews; Stakeholder survey. Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as directional approximation. "Other countries" not pictured on graph; Expected to be less than 1% total production in 2027.

Demand: At current rates, global supply will exceed demand by 15% in ten years

Growth of global market supply and demand (steady-state forecast)



Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenzez; SAPP; Industry Interviews; Stakeholder survey; IHC Statistical Yearbook. Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as approximation

Key Takeaways:

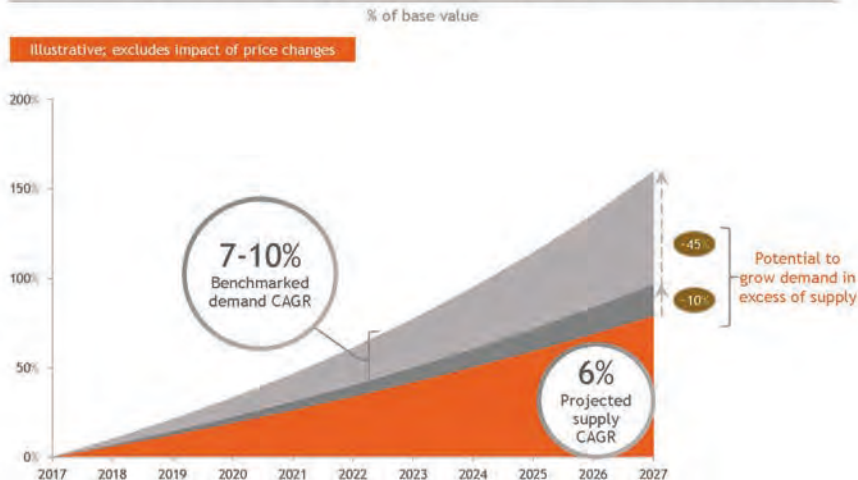
- 15% forecasted excess supply within 10 years
- Supply growing 33% faster than demand under current projections
- Conservative estimate of gap between supply and demand; 20% of global demand growth driven by Chinese market

Demand: Possible to grow demand faster than supply with right marketing

Growth of global market supply and demand (successful marketing case)

Potential for growth

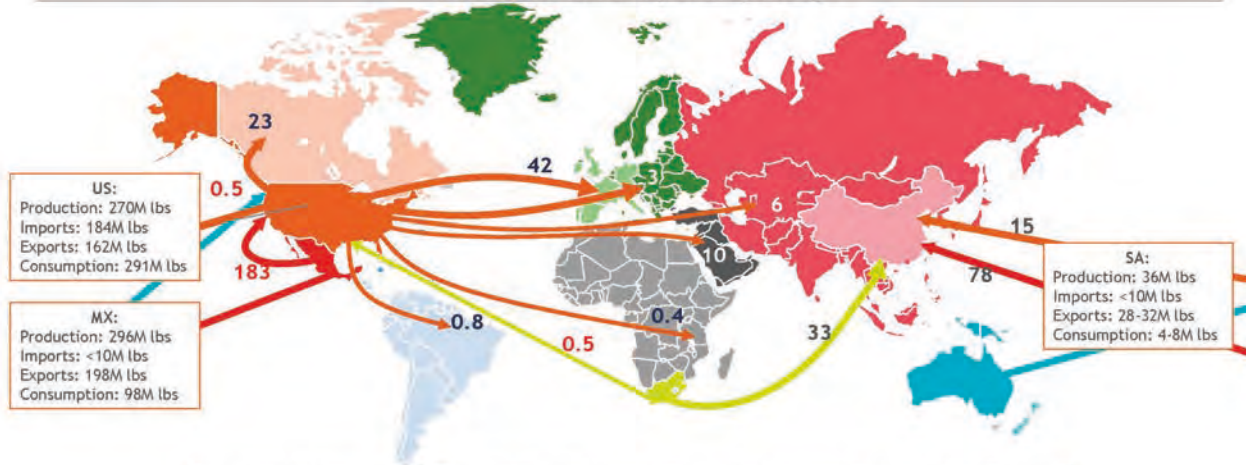
- Almonds spurred 7-10% consumption growth in mid-2000s despite having an established market
- Pecans are a less-saturated market, and could expect similar or greater demand growth with proper marketing
- Effective marketing could result in demand outpacing supply by 1-4%+ annually



Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenzez; SAPP; Industry Interviews; Stakeholder survey; IHC Statistical Yearbook. Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as approximation

Trade: Current global trade flows are mainly driven by US and Mexico

Annual trade flows of pecans globally¹



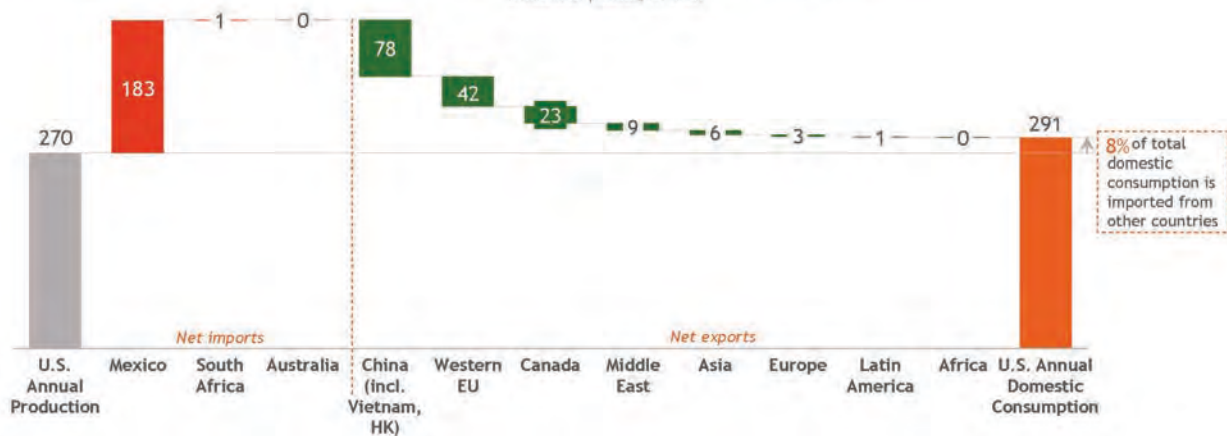
As more foreign production comes online, competition in export markets will increase

¹ Millions of pounds, in-shell basis; 2014-2017 average trade flows
 Source: USDA FAS/GATS; USDA NASS/ERS; SIAP-SAGARPA; Comenue; SAPPA; Industry Interviews

Trade: Adjusting for re-exports, the U.S. is a net pecan importer on average

Net Annual U.S. pecan flows, 4 year average

Millions of pounds, in-shell



Average of values from 2013-2017. Source: USDA GATS Trade data; USDA production data; SIAP-SAGARPA Production Data

Based on this data, some implications to consider:

- ✓ Growth in global supply will likely lead to increased foreign market competition, partially offset if those markets invest in building awareness to spur demand
 - APC must decide U.S. response to international supply - how to collaborate or compete with other producing countries in the future
- ✓ With supply outpacing demand, need to be prepared for potential price drops
 - Southeast may consider focusing on low cost/high yield varieties for future plantings
- ✓ Though U.S. is no longer global volume leader, still opportunity to maintain position as "industry leader" through differentiated "brand" or products
 - Need to set U.S. pecan up as hallmark product
 - Need to lead world in marketing efforts to continue growth in largest demand market

29

③ Global supply and demand

Next steps

- Implement feedback from today
- Assess strategic options in the face of rising supply (international competition vs cooperation)
- Incorporate strategy into APC's roadmap for boosting demand

30

Meeting Agenda

- 1 Introduction & plan for today 10 min

Supply economics

- 2 Modernizing the pecan value chain 50 min
- 3 Global supply projections and implications 30 min

Demand generation

- 4 **Insights from pecan consumer survey** 30 min
- 5 Go-forward marketing strategy 30 min
- 6 'Shape of the answer for APC' & next steps 15 min

31

Confidential DRAFT - for discussion

④ Insights from consumer survey

Key messages for today

Context: Conducted a survey of 2000 pecan consumers to supplement existing research on consumer segments, habits, and perceptions

Key Findings

Awareness: Consumers less aware of pecans and their health benefits...

- Higher awareness of peanuts, almonds, cashews, and walnuts
- Pecans are not strongly associated with tree nut health claims today

...and today's pecan consumers look different than average tree nut consumers, suggesting opportunity to reach new consumption base

- Pecan consumers skew more female, older, and lower income
- Among tree nuts, pecans have lowest reported snacking usage ~53%

Segmentation: Two distinct pecan segments—'Snacking' and 'Ingredients'

- 'Snacking' consumers eat pecans few times a week, tend to buy in bulk; health motivated snacking segment consumes even more frequently
- 'Ingredient' consumers eat pecans less than once a month and are generally not health motivated, tend to purchase more at grocery store

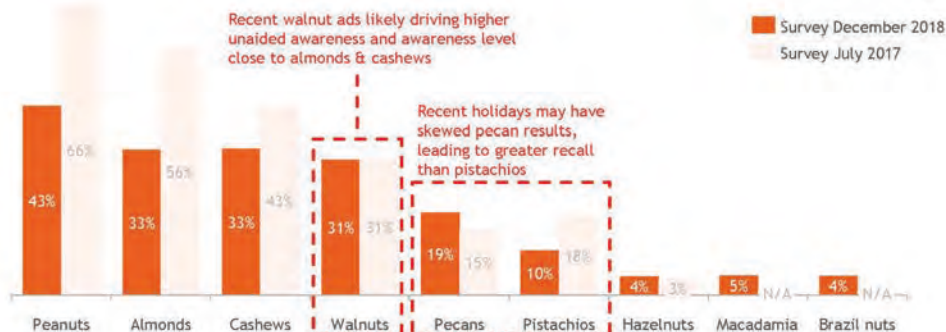
Opportunity: APC has opportunity to grow share with high frequency and higher income health-conscious snacking segment

- The health-conscious snacking segment is the most likely to increase consumption in response to stronger messaging around health benefits

32

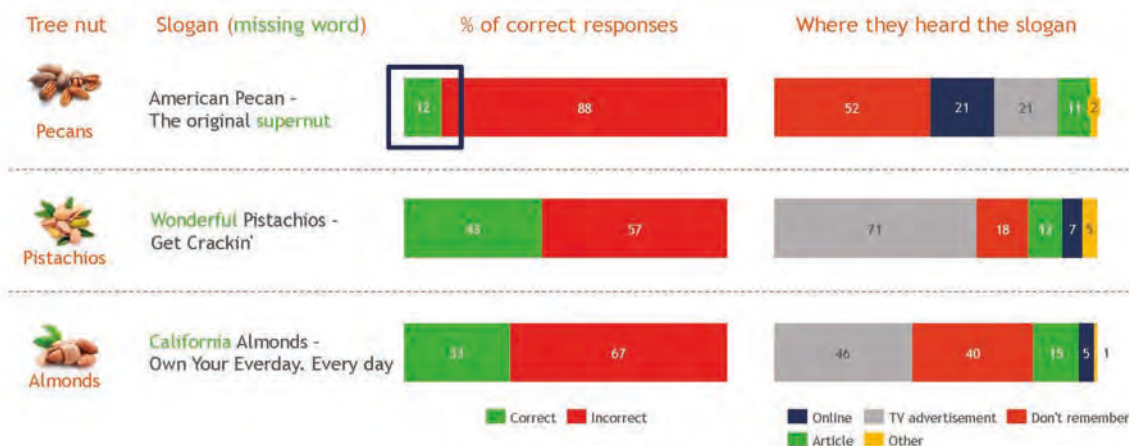
Unaided awareness: When asked to write in all tree nuts that come to mind, pecan recall was lower than peanuts, almonds, cashews, and walnuts

Percent of respondents that recalled the following tree nuts¹



1. Unaided awareness question slightly differed in Survey December 2018 and Survey July 2017. Survey December 2018 asked for all nuts a respondent can recall, whereas Survey July 2017 only asked for the top 3 nuts. To compare results, data above for Survey December 2018 only includes the first three nuts a respondent responded with. Source: Exactcast APC Research July 2017, 2018 Pecan Consumer Survey; n = 2058

'Brand' recall: When asked to fill in the missing word for nut slogans, tree nut consumers least familiar with American pecan 'supernut' slogan

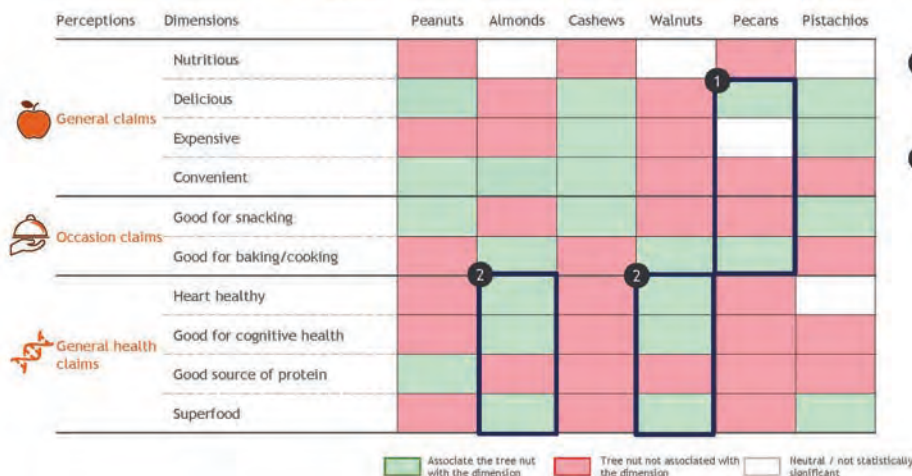


Result expected given early stages of marketing campaign and relatively limited budget of pecans vs. others - underscores opportunity for continued growth in brand awareness

Source: 2018 Pecan Consumer Survey; n = 2058

Perceptions: Among tree nut consumers, pecans not associated to health claims

Perceptions heat map: Claims that are 'significantly' associated with the following nuts¹



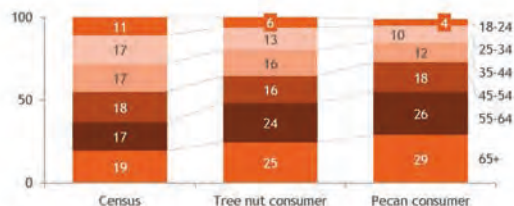
Key takeaways:

- 1 Pecans not associated with health claims, but considered delicious and good for baking/cooking
- 2 Health claims space is not crowded; only 2 nuts (almonds & walnuts) are associated across multiple

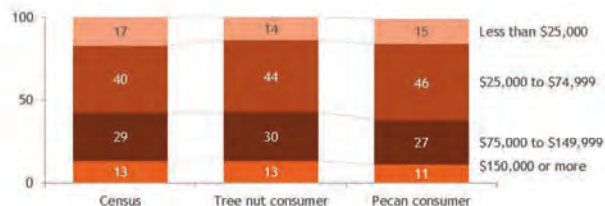
1. Heat map values were calculated by comparing the expected # of responses to the actual number of responses. Source: 2018 Pecan Consumer Survey; All respondents, both terminated and qualified respondents: n = 5915

Demographics: Today's pecan consumers tend to be older, more female, and more low-to-middle income versus other tree nut consumers

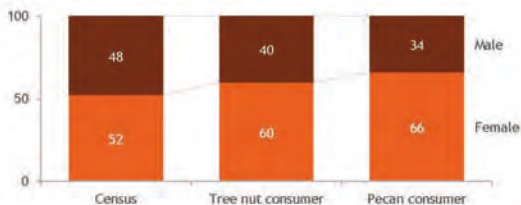
Age: Pecan consumers skew older than 54



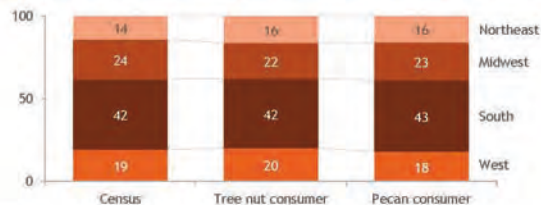
Income: Pecan consumers skew lower / middle class



Gender: Pecan consumers skew female

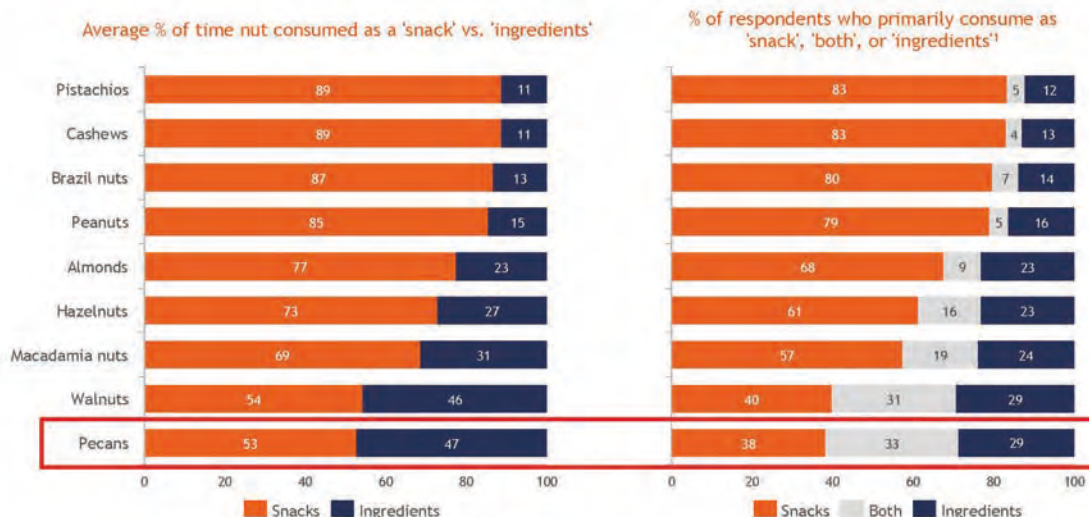


Region: No change in regional distribution among segments



Note: data corresponds to respondents who are the primary or co-decision maker for nut purchases. Source: 2018 Pecan Consumer Survey; n = 2058

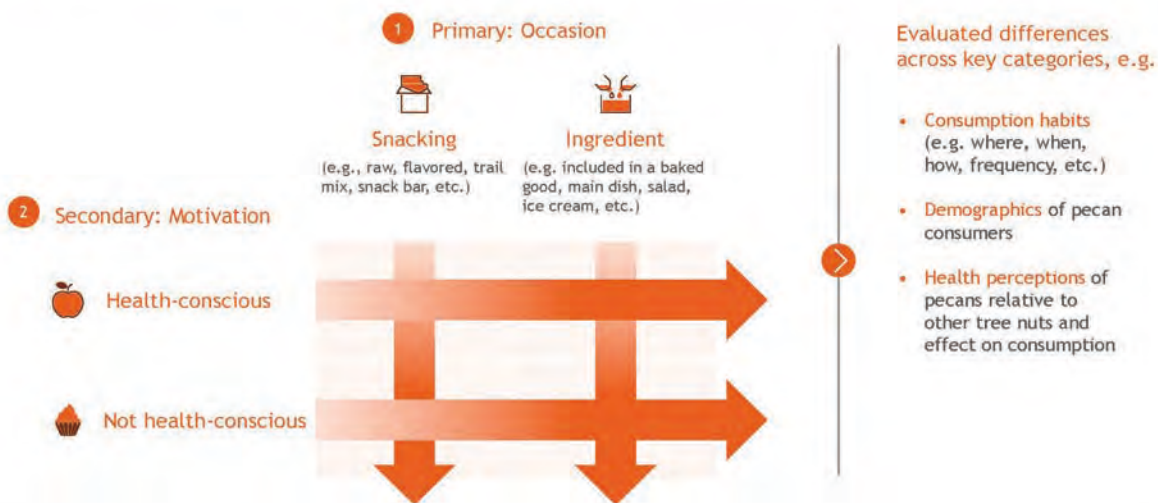
Occasions: Pecans have lowest reported snacking usage amongst tree nuts



1. Consumer classified as a snack if it makes up 75% or greater of annual consumption. Consumer classified as Ingredients if it makes up 75% or greater of annual consumption. Consumer classified as both for all other values.
Source: 2018 Pecan Consumer Survey; n = 2058















Segmentation: Two dimensions segment pecan consumers into four groups

Primary segmentation by consumption occasion and secondary segmentation by motivation



Source: 2018 Pecan Consumer Survey; n = 2058





Segment summary: Snacking segment tends to be more perceptive to health benefits, eats pecans more frequently, and more often motivated by health

		Occasion		
		Snacking 	Ingredient 	
	Health perceptions	Associate pecans with health benefits (e.g., 'heart healthy')	More often 	Less often 
		Associate pecans with nutrients (e.g., fiber)	More often 	Less often 
		Likelihood of increasing consumption from new knowledge of health benefits	More likely 	Less likely 
	Production claims	Production claims' effect on consumption (e.g. sustainable production)	No difference 	No difference 
		Typical purchase location	Convenience stores or in bulk at club stores	Grocery stores
	Consumption habits	Frequency of consumption	A few times a month	Less than once a month
		Consumption motivation	<ul style="list-style-type: none"> • Healthy/nutrition • Convenience • Satisfying hunger • Affordability 	<ul style="list-style-type: none"> • Specific recipe • Pairs well with other foods
		Time of day of consumption	In between meals	Dinner
		Demographics	Age, Income, Gender	No difference 

Source: 2018 Pecan Consumer Survey; n = 2058

39

Segment sizes: Today, not health-conscious segment represents two thirds of occasions; not health-conscious ingredient is largest sub-segment at 39%

		Occasion		
		Snacking 	Ingredient 	Motivation totals
Motivation	 Health-conscious	473 respondents (23%)	165 (8%)	638 (31%)
	 Not health-conscious	617 (30%)	803 (39%)	1420 (69%)
Occasion totals		1090 (53%)	968 (47%)	2058 (100%)

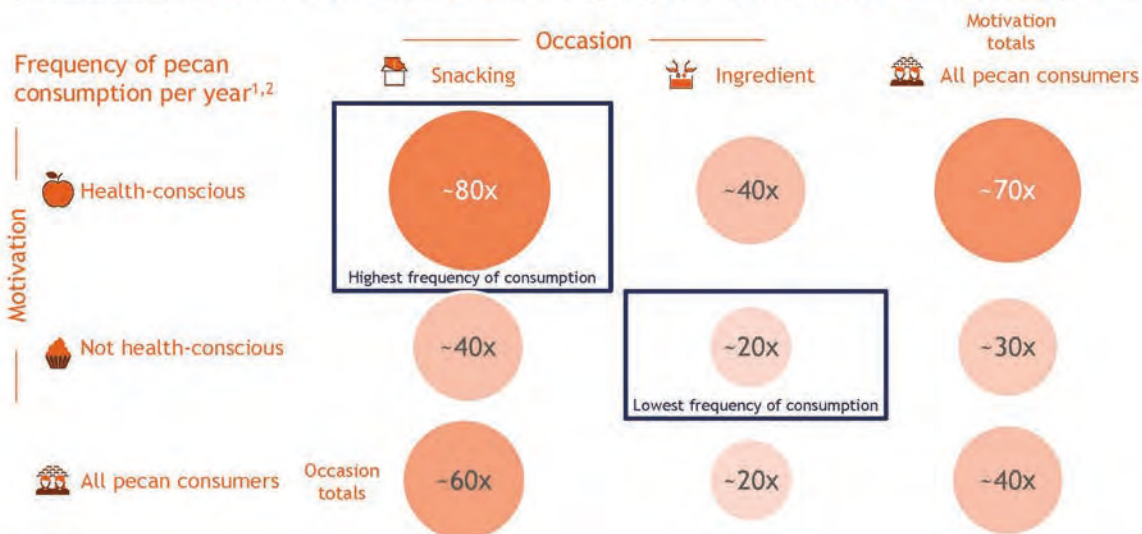
Key takeaways

- 1 Relatively even split between snacking and ingredients segments -53% vs. -47%
- 2 Health-conscious consumers make up a lower proportion of pecan consumers -31% with a majority of health-conscious consumers in the snacking segment
- 3 Not health-conscious ingredients segment is the largest segment, -39% of all pecan consumers

Note: Segment sizes calculated by calculating the # of respondents for the combination of responses for question about health motivation and consumption occasion

40

Frequency: Health-conscious & snacking segments eat pecans most frequently



1. Numbers adjusted to represent split between average % of consumption; 2. Calculated weighted average based on estimated # of times per year. Less than once a month = -6x a year, few times a month = -36x a year, few times a week = -150x a year, daily = -360x a year
Source: 2018 Pecan Consumer Survey; n = 2058

41

Consumption habits: Snacking segment is more motivated by convenience and affordability, leading to purchasing at convenience and club stores

Detail around last pecan consumption occasion	All pecan consumers (% of respondents)	Snacking (Index) ¹	Ingredients (Index) ¹
What were the motivations?			
Taste/Flavor	69	100	100
Health/nutrition benefits	31	147	52
Convenience - It was there	31	147	53
Filling / satisfies hunger	27	150	49
Recipe specified for pecans	26	22	178
Goes well with other foods	11	57	143
Affordable	6	125	75
Where were pecans purchased?			
Chain grocery stores (e.g. Krogers)	53	90	110
Big box superstores (e.g. Walmart)	40	104	96
Club retailers (e.g. Costco)	20	117	83
Specialty/Organic grocery stores	14	109	90
Other	11	99	101
Convenience store (e.g. 7-Eleven)	5	148	52
Online	3	104	96
What time of day were they consumed?			
Breakfast	5	120	80
Mid-morning	12	161	39
Lunch	18	93	107
Mid-afternoon	44	144	56
Dinner	24	41	160
After dinner / late night	34	111	89

Key takeaways

- Motivation for snacking segment driven by affordability, health benefits, and convenience; opposite motivations drive ingredient consumption
- Snacking segment more often purchases at convenience stores or in bulk at club stores
- Consumption of 'ingredients' is skewed towards dinner

1. Index values were calculated by dividing segment % of respondents by all consumers % of respondents
Source: 2018 Pecan Consumer Survey; n = 2058

42

Summary: Survey highlights 3 takeaways for APC



Health claims: Pecans are less associated with nutrition relative to other nuts

- Prioritize research on most impactful claims: Reduce risk of heart disease, support cognitive health, and anti-aging properties



Consumer segmentation: Pecans are under-represented with health-oriented snacking consumers

- Opportunity to target health-conscious snacking consumer to grow consumption; these consumers more likely to respond to health claims



Marketing: Strategy of messaging small family farms and 'superfruit of nuts', along with primary focus on key health claims, could benefit consumption

- Today's 'Supernut' campaign has potential with right audience; should continue messaging in future

Insights from consumer survey will inform APC's go-forward marketing strategy & key messaging behind it

Meeting Agenda

1	Introduction & plan for today	10 min
<i>Supply economics</i>		
2	Modernizing the pecan value chain	50 min
3	Global supply projections and implications	30 min
<i>Demand generation</i>		
4	Insights from pecan consumer survey	30 min
5	Go-forward marketing strategy	30 min
6	'Shape of the answer for APC' & next steps	15 min

⑤ Go-forward marketing strategy

Takeaways from our last discussion

- ✓ Domestic tree nut consumption up 3% last decade, but pecan share of volume declined given limited growth over same period
- ✓ Why? Pecans most commonly consumed in ingredient & recipe categories - stable low-growth segments (1% - 2% p.a.) - while other tree nuts (e.g., almonds & cashews) consumed in healthy snacking categories, which grow at faster rates (3% - 10%+)
- ✓ Lessons from almonds can help APC create plan tailored to unique differentiators where pecans can win (e.g., health, heritage) through continuous health research & targeted marketing to encourage new consumption occasions (snacking)

45

⑤ Go-forward marketing strategy

Key messages for today

Growing pecan demand can be achieved through focus on health-conscious and snacking consumers in our marketing messaging

Overall, APC has several levers to drive demand growth

- Continue emphasis on "Supernut" & family-owned American heritage
- In short term, expand to new consumption occasions (healthy snacking) through messaging, packaging, and nutrition research
- In long term, use comprehensive approach to product innovation and ongoing nutrition & consumer research

Nutrition research should be a key enabler of strategy, leveraging consumer research to identify specific health claims to target

- Use ongoing nutrition research to proactively create positioning strategy

Differentiated nutritional messaging to health-conscious 'snackers' will grow demand in new occasions with halo effect on core ingredient users

- Packaging modernization & distribution strategy to expedite process, with pecans in forms & locations conducive to new occasions
- Emphasis on 'premium' - high quality, authentic, with unique health advantages - will justify higher price relative to other tree nuts

In longer term, product innovation reinforces new ways to consume

46

For discussion: Proposed framework for growing pecan demand



47



Consumption occasions: Avocados & almonds continue to evolve use cases beyond core, capturing growth from higher frequency occasions



Source: Mintel, Weber Shandwick / ExactCast

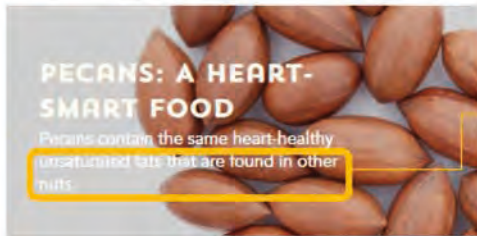
48



Differentiation (I/II): Today's pecan messaging leverages tree nut health halo



Benefits of "nuts, including pecans"; future research will aim to highlight unique pecan advantages



Limited existing pecan nutrition research, so claims made in context of other tree nuts

Source: APC website

Lack of nutrition research hinders ability to make health claims

Going forward, APC will differentiate pecans from other tree nuts using unique health advantages

49



Differentiation (II/II): Almond Board messaging is health-focused, user-friendly, and uniquely focused on almonds

- a Terminology uses widely-known nutrients and frames them positively (e.g., cholesterol, "good fats")
- b Titles are health-focused, informative, and sharp, rather than marketing or "catchy" (e.g., "The Proof for Pecans")
- c Topics are well-aligned to common health concerns, such as diabetes and weight management
- d Limited comparison to other tree nuts
- e Reiterates health benefits well-aligned to popular consumer trends

TASTY? YES. CRUNCHY? ABSOLUTELY. BUT DID YOU KNOW THAT ALMONDS ALSO PACK A SERIOUS NUTRITIONAL PUNCH?

- a HEART HEALTH**
 - High in monounsaturated ("good") fat
 - No cholesterol or sodium
 - A top food source of the antioxidant vitamin E
- b ENERGY**
 - 6 grams of protein per ounce
 - 12 vitamins and minerals
 - 13 grams of "good" monounsaturated fats
 - Rich in magnesium
- c DIABETES**
 - Low glycemic index
 - May improve certain risk factors
 - Curbs cravings
- d POWERFUL NUTRITION**
 - Tree nut highest in six essential nutrients
 - Prevents potassium
 - Plus protein and fiber
- e GLUTEN FREE**
 - Naturally 100% gluten free
 - Lots of forms to choose from
 - No-stress substitutions
- WEIGHT MANAGEMENT**
 - 6 grams of power-packed protein
 - 2.5 grams of satisfying fiber
 - Good fit with popular weight-loss plans
 - Just 160 calories per ounce

OUR APPROACH TO NUTRITION RESEARCH

Source: ABC website

50



Premium positioning (I/II): Important to align on what 'premium' should mean to grow demand for pecans

Premium is not...

Prohibitively costly



But rather is...

Justified in price

Luxurious



High quality

Niche, exotic, rare, specialty



Authentic / original

For special occasions only



For everyday

Healthier on all dimensions



Healthier on select dimensions

Positioning should differentiate pecans from other tree nuts - citing most valued pecan qualities - to justify higher price point

Example: Macadamias targeted exotic, niche, ultra-premium positioning (>\$22/lb), which backfired and stunted ability to grow



Premium positioning (II/II): Nut market can be segmented into four price tiers, with pecans at premium to walnuts & almonds

Continuing to refine

Directional assumptions

	Nuts	Avg retail price (\$/lb) ¹	% Volume ²		Volume M kernel pounds ³	Total implied retail value (volume) \$M, M kernel pounds ³
			Snacking vs.	Ingredient, dessert, baking		
Ultra premium tier	Macadamia	-23	60	40	15-25	\$400-\$450 (15-25)
Premium tier	Pecan		15	85	100-200	
	Hazelnut		20	80	30-40	
	Cashew	-12-15	70	30	250-350	\$8,000-\$10,000 (600-800)
	Pistachio		40	60	150-250	
	Brazil nut			85	15	5-10
Mainstream tier	Walnut		30	70	300-400	\$10,000-12,000 (950-1,150)
	Almond	-10	60	40	650-750	
Mainstream tier (ground nut)	Peanut	<4	30	70	5,000-5,500	(5,000-5,500) ⁴

1. Prices are approximate; includes average of per pound prices for multiple brands of raw / natural nuts at various retail locations (excludes value-added products) 2. Estimates from market interviews, and FMO reports 3. IHC Statistical Yearbook, 2016; kernel basis except pistachios (in-shell) 4. Retail value excluded due to price-variances in derivatives. Source: Global Data Price Intelligence, market interviews



Modernize packaging (I/II): Changes in format accelerates shift to new use cases

Typical pecan packaging implies particular use cases and is not conducive to on-the-go use...

...other nuts offer smaller-pack convenience for snacking, pairing ideas, & new occasions



➤ Recipes & baking



➤ Bulk for industrial or at-home use



➤ On-the-go



➤ Snacking / healthy pairs



➤ New occasions / times of day

Source: Euromonitor, Mintel, Weber Shandwick / Exactcast

53



Modernize packaging (II/II):
Consistently label American pecans with claims that reinforce product quality to consumers

For example...



American grown & processed



Gluten-Free



Non-GMO



Expiry or "Best before" date

54

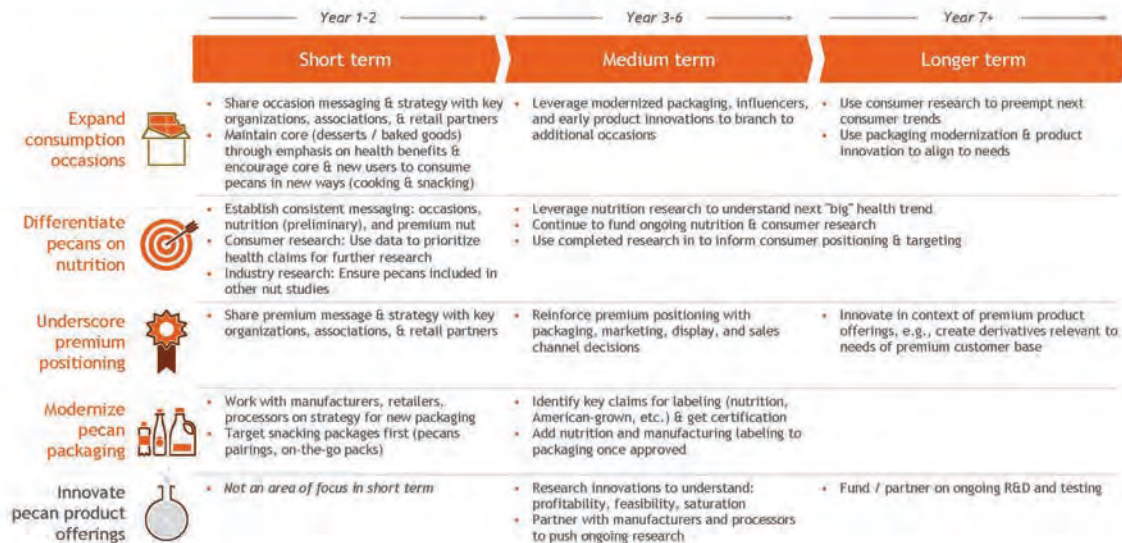
Product innovation: Long-term demand tied to product derivatives, evaluated & prioritized using 6 criteria

Continuing to refine

Criteria		 Pecan butter (Alternative nut butters)	 Pecan milk (Non-dairy milk)	 Pecan oil (Health & wellness edible oils)	 Pecan flour (Gluten-free flours)
Value proposition	Points of differentiation	<ul style="list-style-type: none"> Taste Nutrients (healthy fats, antioxidants) 	<ul style="list-style-type: none"> Taste Viscosity (creamy) No pulp (almonds) 	<ul style="list-style-type: none"> Healthy fats High smoke point (470°F) 	<ul style="list-style-type: none"> Taste Gluten-free Nutrition (low carb)
	Consumer demand	Category growth rates ¹	✓ 8%+ projected	✓ 7.7% / 6.2% projected ²	✓ 3.8% / 4.7% projected ²
Economic feasibility	Processing difficulty	✓ Moderate complexity; processed independently from other products	✓ Low complexity processed independently from other products	✗ Highly complex; dependent production processes and stringent production requirements (e.g., moisture)	✗ Low; complex to manufacture & unclear consumer demand
	Expected profitability	✓ Moderate; retailers push for almond butter pricing	✓ High; high water vs. other material content	✓ Moderate; complex manufacturing but may get premium price	✗ Low; complex to manufacture & unclear consumer demand
	Use of pecan byproducts	✓ Use full pecan (no waste)	✓ Use full pecan (no waste)	✗ Does not use entire pecan; byproduct is flour	✗ Dependent on byproduct of oil production
Capital investment		✓ Moderate	✓ Moderate	✗ High	✗ High

1. Directional CAGRs. 2. Volume consumption CAGR. Source: USDA nutrient database, Euromonitor, Market Interviews, BusinessWire

Where we're going: High-level roadmap of marketing strategy for next decade



⑤ Go-forward marketing strategy

Next steps

- ❑ Build roadmap for execution of refined marketing strategy
 - ❑ Short term priorities include: Industry-wide research; marketing with focus on premium positioning & healthy snacking occasions; packaging modernization
- ❑ Continue analyzing consumer survey data to refine nutrition research priorities
- ❑ Share examples of metrics for APC to track success of marketing efforts

57

Meeting Agenda

- | | |
|--|--------|
| ① Introduction & plan for today | 10 min |
| <i>Supply economics</i> | |
| ② Modernizing the pecan value chain | 50 min |
| ③ Global supply projections and implications | 30 min |
| <i>Demand generation</i> | |
| ④ Insights from pecan consumer survey | 30 min |
| ⑤ Go-forward marketing strategy | 30 min |
| ⑥ 'Shape of the answer for APC' & next steps | 15 min |

58

Tenants of our strategy: Working "Shape of the answer" for APC - for discussion

Components reinforce one another and equally important in a cohesive strategy - preliminary view; input welcome

Win fair share of tree nuts



Grow domestic and export demand for pecans, extending use beyond 'seasonal recipe nut' to 'everyday supernut', focusing on nutrition and snacking occasions

Lead amongst global suppliers



Be the global industry leader - set the global standard for producing, processing, and marketing pecans, while differentiating 'American Pecan' brand equity

Modernize the industry



Modernize how the industry transacts to share risk & upside across the value chain, increase collaboration, & position stakeholders to capture demand growth

Strengthen our infrastructure



Enable industry to selectively invest in new production methods and processing technologies that improve cost competitiveness and levels of value-added output

Unite pecan stakeholders



Serve as single, unifying voice for the industry - harness the collective power of pecan organizations with APC at the center driving a unified agenda & priorities

59

Where we're heading: Next steps and what to expect in WGM #3



Working Group Meeting #2

Topics covered today:

- Modernizing the pecan value chain
- Global supply projections and implications
- Insights from pecan consumer survey
- Go-forward marketing strategy
- 'Shape of the Answer' for APC



Working Group Meeting #3

Topics for our next meeting:

Implementation

- High-level implementation roadmap with priority actions across APC for each component of the "answer"

Operating Model

- Roles and capabilities necessary for APC to deliver on long term vision

Enablers, e.g.

- Examples of effective tracking for marketing initiatives
- Guiding structure to more flexible pecan contracts

60



Confidential DRAFT - for discussion



AMERICAN PECAN
COUNCIL

APC Strategic Plan

Working Group Meeting #3

1 FEBRUARY 2019

The slide features a background image of pecans in a bowl. It includes a red banner at the top with the text "Confidential DRAFT - for discussion". In the center is the American Pecan Council logo, which consists of a stylized pecan nut icon above the text "AMERICAN PECAN COUNCIL". Below the logo is a large orange banner containing the title "APC Strategic Plan" and subtitle "Working Group Meeting #3". At the bottom, a white banner displays the date "1 FEBRUARY 2019".

Meeting Agenda

1 Introduction & plan for today 5 min

Part I: Case for change & strategic vision

2 Recap: Case for change 20 min

3 Vision and strategic priorities 40 min

Lunch break 15 min

Part II: Implementation plan & structure for success

4 Initiative roadmaps & execution 50 min

5 APC operating model 10 min

6 Messaging to the industry 30 min

7 Path forward 10 min

1 Introduction & plan for today

Key messages

- Today is the third and final working group session for our strategic planning process
- Prior meetings focused on creating a fact base, understanding the case for change, and prioritizing potential growth levers
- Today we are synthesizing those growth levers into a strategic vision for industry...
- ...and discussing a plan for how the Council can help industry achieve this vision

Recall: High level deliverables for APC strategic planning effort



Clear APC vision and strategy that will enable *sustained pecan industry profitability*



Consistent fact-base with a *quantitative evaluation* of markets, competitors, & customers



Top priority strategic focus areas (3-5 critical initiatives) *that all APC stakeholders agree to and support*

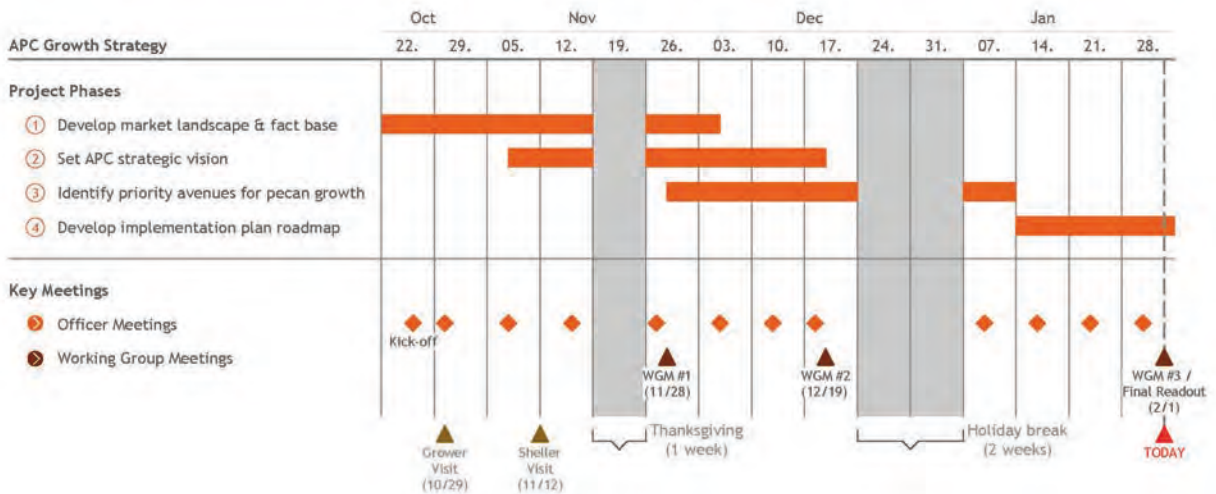


List of detailed sub-initiatives and a *collaborative process* to align on these actions



Implementation plan with org structure, capability requirements and *check-ins after the project ends*

Today is the third and final 'Working Group Meeting' for strategic planning work



Recap of research and analysis - *We've covered a lot together!*

Topics covered

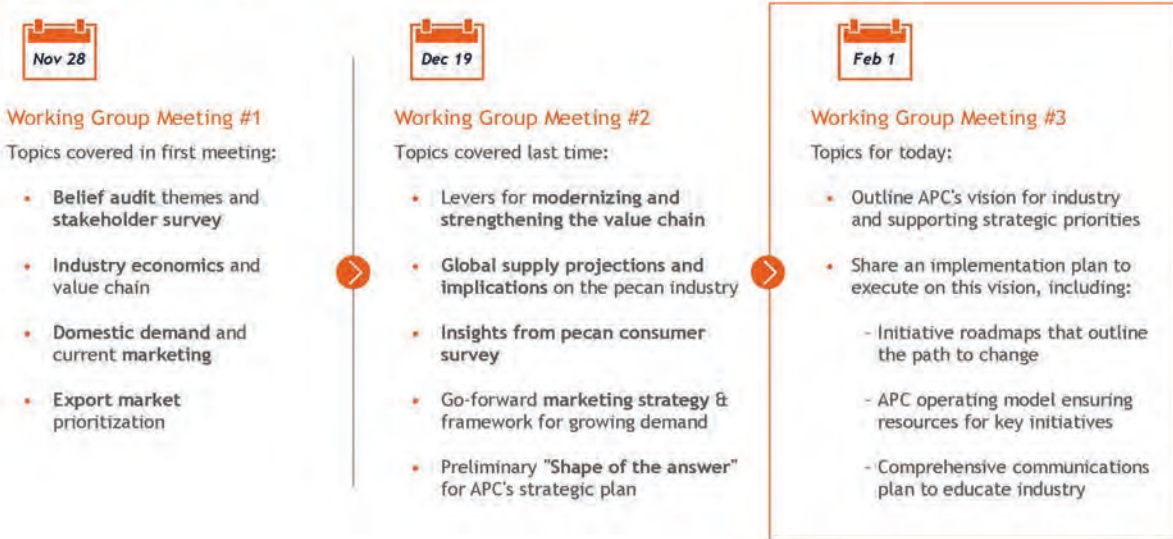
Demand generation		Consumer behavior & perceptions
		Domestic demand across nuts
		Marketing best practices
		Go-forward demand generation
Supply economics		International marketing strategy
		Voice of pecan stakeholders
		Global supply, present & future
		Market economics & value chain
		Export market prioritization
		Options for modernizing industry

Sources leveraged

Belief audits <ul style="list-style-type: none"> 30+ interviews with pecan industry stakeholders 10+ interviews with commercial buyers and other tree nut experts 	APC Investment <ul style="list-style-type: none"> 12 Officer Group meetings 12 Weekly check-ins 2 Working Group meetings Countless follow-up discussions
Proprietary surveys <ul style="list-style-type: none"> 2,058-respondent consumer survey 152-respondent stakeholder survey 	Internal knowledge base <ul style="list-style-type: none"> Center for Customer Insight Agribusiness and Consumer experts Past case experience
Market data, studies, and reports	
Tree nut industry <ul style="list-style-type: none"> US Pecan Growers Council National Pecan Shellers Association CA Admin. Committee for Pistachios American Pistachio Growers California Walnuts Almond Board of California Wonderful Pistachios Blue Diamond USDA 	International organizations <ul style="list-style-type: none"> IMF Economic Indicators WTO Tariff data Australian Dept. of Agriculture Comenuiez Hong Kong Trade Development Council Food Research International
3rd-party databases <ul style="list-style-type: none"> INC Database and Statistical Yearbook GlobalData Euromonitor 	Academia <ul style="list-style-type: none"> Multiple institutions including but not limited to: <ul style="list-style-type: none"> University of California University of Georgia Texas A&M New Mexico State University

6

Past topics and plan for today



7

Part I: Case for change & strategic vision

8

2) Recap: Case for change

Key messages

Confidential DRAFT - for discussion

- Pecan industry facing several challenges, and pain points exist for both growers & shellers
- Pecans lag other tree nuts on key dimensions
 - Pecan awareness is low, demand is flat...
 - ...while other tree nuts are growing on back of nutrition and snacking trends
 - 'Adversarial' industry practices hinder industry's ability to grow
- Meanwhile, supply growth in other markets (e.g. South Africa, China) presents potential oversupply situation if no change in demand
- We have a great product and the potential to grow demand for it...
- ...but must work together collaboratively to solve challenges & move industry forward

9

There are many structural challenges grounded in the nature of the pecan market

- Variations in growing costs both across & within regions
- More costly to grow pecans than other tree nuts
- Pressure from low-cost Mexican growers and shellers



RECAP ONLY

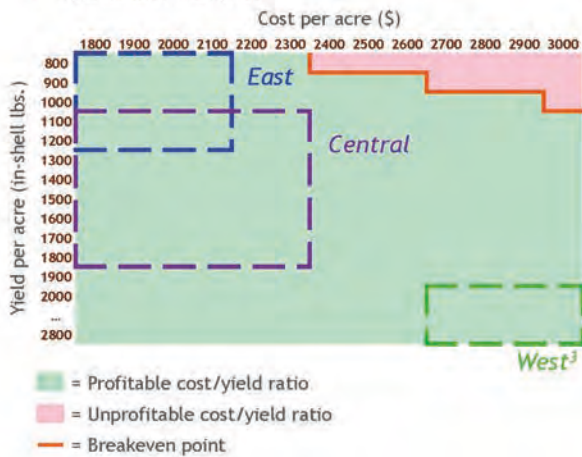
Confidential DRAFT - for discussion

Case for change 2

Growing costs: High variance by region, differing ability to bear price swings

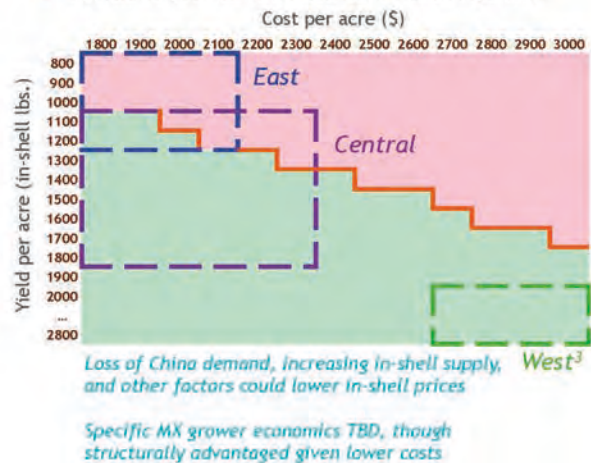
Profitability at market price of **\$3.00** per in-shell lb.

- Approx. 2017 max price¹



Profitability at market price of **\$1.75** per in-shell lb.

- Approx. 10-year low (ex. recession; inflation-adjusted)²



1. Price / in-shell lb. paid by China of ~\$2.93 in 2017 2. Inflation-adjusted price of US average in-shell of \$1.73 in 2012 3. "West" includes West Texas
 Source: Nature's Finest Foods; USDA; UC Davis; UGA; Market interviews

There are many structural challenges grounded in the nature of the pecan market

- Variations in growing costs both across & within regions
- More costly to grow pecans than other tree nuts
- Pressure from low-cost Mexican growers and shellers



RECAP ONLY

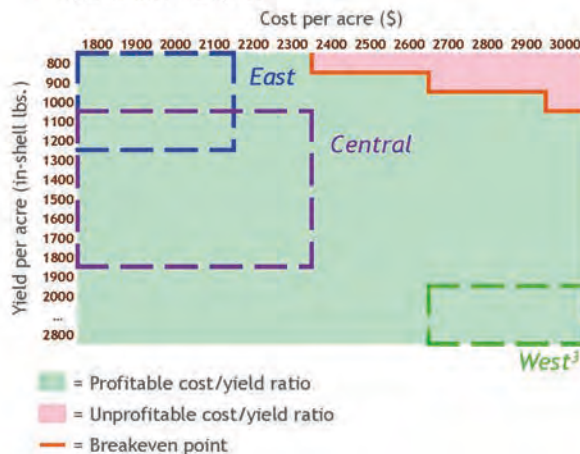
Confidential DRAFT - for discussion

Case for change 2

Growing costs: High variance by region, differing ability to bear price swings

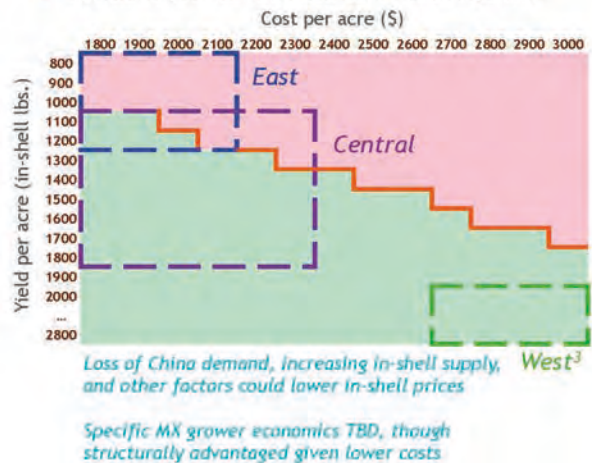
Profitability at market price of **\$3.00** per in-shell lb.

- Approx. 2017 max price¹



Profitability at market price of **\$1.75** per in-shell lb.

- Approx. 10-year low (ex. recession; inflation-adjusted)²



1. Price / in-shell lb. paid by China of ~\$2.93 in 2017 2. Inflation-adjusted price of US average in-shell of \$1.73 in 2012 3. "West" includes West Texas
 Source: Nature's Finest Foods; USDA; UC Davis; UGA; Market Interviews





RECAP ONLY

Confidential DRAFT - for discussion

Case for change 2

Production expense: Pecans more expensive to grow than other tree nuts

Regardless of region, pecans generally cost more to grow vs. other tree nuts given lower yield per acre

	 Pecans	 Almonds	 Walnuts	 Pistachios	
	Representative East	Representative West	Representative Almond cost	Representative Walnut cost	Representative Pistachio cost
Growing cost (\$/acre)	-2,000	-2,500	-3,300 to 4,900	-3,200 to 3,750	-3,750 to 3,900
In-shell yield (lbs/acre)	-1,000	-2,000	-	-5,000 to 6,000	-2,600 to 2,800
% meat	-45%	-55%	-	43.5% ¹	50%
Meat yield (lbs/acre)	-450	-1,100	-2,200 to 3,000	-2,200 to 2,600	-1,300 to 1,400
Meat growing cost (\$/lb)	-\$4.40	-\$2.30	-\$1.50 to \$1.70	-\$1.40 to 1.45	-\$2.80 to 2.90

-\$3.10-\$3.60
Weighted Average

Cost per pound highly variable—both across and within regions—given differences in scale, yield, weather, alternate bearing seasons, etc.

1. Based on USDA ERS "Fruit and Nut Tree-Yearbook" average walnut kernel yield
Note: Growing cost per acre excludes amortization of land and tree/establishment investments. Almond figures reported in meat yield basis only.
Source: Almond Board; UC Davis; USDA; market interviews

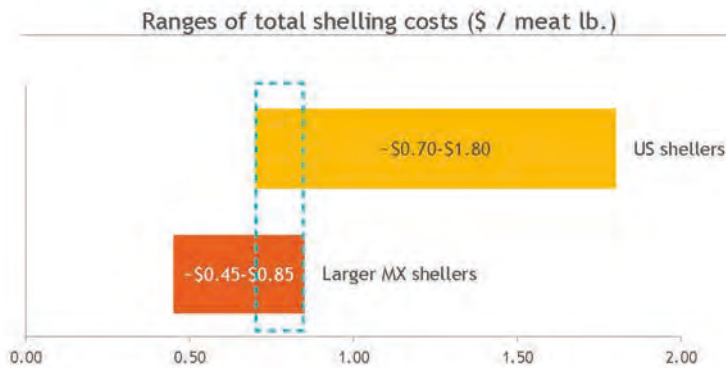
12

RECAP ONLY

Confidential DRAFT - for discussion

Case for change 2

Mexican shellers: US shellers are under pressure & struggling to compete vs. Mexico



Mexican shellers benefit from lower costs

With right processes / investments, and tailwind from lower transport costs, some US shellers competitive with MX shellers

Directional cost estimates; excludes carrying / transportation costs & mill loss

Source: Market interviews

13

Pecans currently lag other tree nuts on several dimensions critical to growth

- Domestic consumer demand has been stagnant, with US awareness & growth lagging other tree nuts
- Transaction model causes tension between growers and shellers, with limited sharing of risk & upside



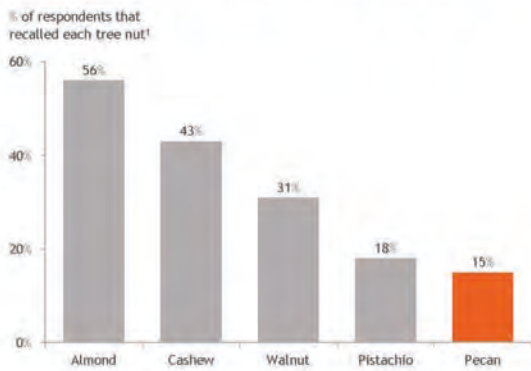
RECAP ONLY

Confidential DRAFT - for discussion

Case for change 1

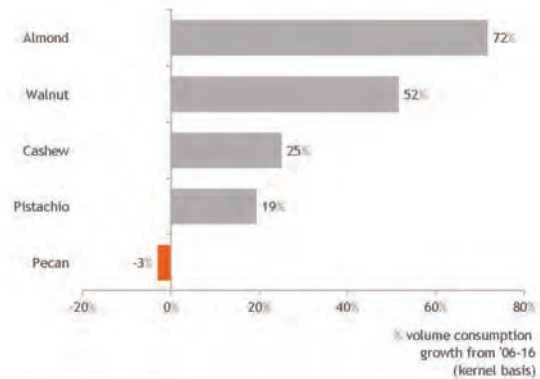
Consumer demand: US pecan demand significantly lags other tree nuts today

Top of mind awareness¹ of pecans in US is low relative to other mainstream tree nuts



Ten-year US pecan consumption stagnant while other tree nuts have experienced growth

International markets account for majority of pecan consumption growth (4-5% annually)



1. Unaided awareness question in July 2017 survey asks for top 3 nuts respondent recalled. Note: Pistachio consumption is in-shell
Source: Exactcast APC Research July 2017, IBC Statistical Yearbook

Transaction model: Many pain points from how growers & shellers transact today

Recurring pain points from interviews and stakeholder survey

Growers



Tension between growers and shellers on price and yield



No ability to capture upside if demand grows and pecan prices rise

Shellers



Significant upfront capital commitment and high interest expenses



Market risk, and "sandwich position" between in-shell price increases and retail negotiations

“ Pecans are the decentralized, Wild West of nuts...I think pecan growers over time would do better if they adopted a [new transaction] model.

“ Every time I look at the pecan model and the adversarial relationship, it's like being in a different world [relative to almonds & pistachios].

Source: Market interviews; quotes from interviews with almond and diversified tree nut growers

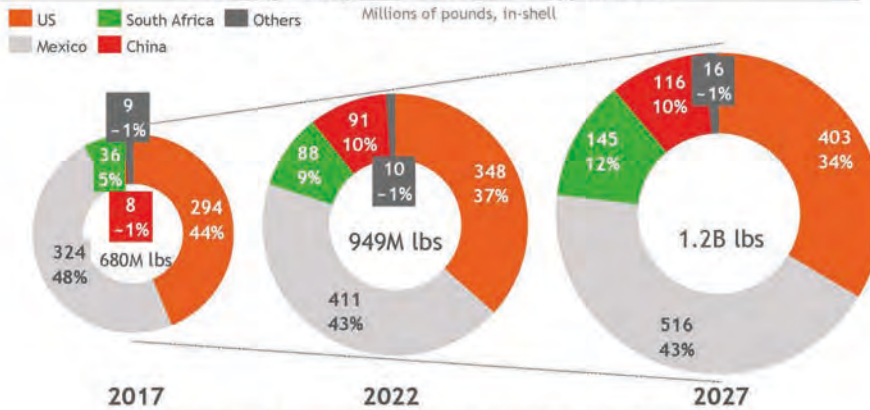
The industry is at a crossroads and in need of a paradigm shift

- Imminent global supply growth threatens to create pecan surplus
- If we do nothing, 2018 may be a glimpse into our future
- We must unite to address these challenges



Significant supply coming online from S. Africa & China, and if no corresponding change to consumer demand, market will be hit with surplus

Annual pecan production across top markets



- **China** may produce up to 5-10% of global pecan supply; may affect U.S. imports
- **South Africa** to continue rapid growth, comprise >10% of world supply in ten years - well suited to cater to Chinese demand
- Must **stimulate demand** to capture new supply and **diversify global demand** beyond China

Base case estimate of supply; sources of supply growth may vary based on actual productivity of S. Africa, China, & others

Source: USDA FAS/GATS; USDA MASS/ERS; SIAP-SAGARPA; Comenezuz; SAPP; Industry Interviews; Stakeholder survey
Forecasting does not account for cyclical nature of crop, or loss of production capacity due to Hurricane Michael; should be viewed as directional approximation

Fragmented industry groups must work together to address challenges

Associations by tree nut

	Pecans	Almonds	Walnuts	Pistachios
National	<ul style="list-style-type: none"> American Pecan Council National Pecan Shellers Association U.S. Pecan Growers Council, Inc. National Pecan Federation American Pecan Board 	<ul style="list-style-type: none"> Almond Board of California Almond Alliance 	<ul style="list-style-type: none"> California Walnut Board California Walnut Commission 	<ul style="list-style-type: none"> Administrative Committee for Pistachios American Pistachio Growers
Regional	<ul style="list-style-type: none"> Southeastern Pecan Growers Association Western Pecan Growers Association Tri-State Pecan Growers Association 			
State	<ul style="list-style-type: none"> Alabama Pecan Growers Association Arkansas Pecan Growers Association Arizona Pecan Growers Association California Pecan Growers Association Georgia Pecan Growers Association Georgia Pecan Commission Louisiana Pecan Growers Association Mississippi Pecan Growers Association New Mexico Pecan Growers Association North Carolina Pecan Growers Association Oklahoma Pecan Growers Association Texas Pecan Growers Association West Texas Pecan Growers Assoc. Texas Pecan Board 	<ul style="list-style-type: none"> Central California Almond Growers Association Central Valley Almond Growers Association 	<ul style="list-style-type: none"> Sacramento Valley Walnut Growers Association 	<ul style="list-style-type: none"> California Pistachio Research Board Arizona Pistachio Growers Association
Total No.	22	4	3	4

Indicates FMO

Source: USDA

Industry's geographic dispersion and limited resources make collaboration difficult, but not impossible

Ex: Blueberry growers / processors make decisions as a united industry despite having orgs. across 20+ states

3) Vision and strategic priorities

Key messages for today

- Today, more than ever, the pecan industry is in need of a long-term strategic plan
- Together, we've crafted that plan, with input from you and others across the industry
- This strategic plan represents a shared vision for industry - for both growers and shellers
- It's comprised of five intertwined and reinforcing priorities to rally the industry
- Plan is not about mandating change
- Goal is to provide options and tools we can use to resolve long-standing challenges, with the hope these will be adopted as benefits are realized

Overall strategic plan comprised of four elements



APC Vision

To *increase demand for American pecans* and provide industry with a path to *sustainably grow profitability across the value chain*

Strategic priorities

- Win fair share of tree nuts
- Lead amongst global suppliers
- Strengthen our infrastructure
- Modernize the industry
- Unite pecan stakeholders

Key initiatives


- Refine marketing strategy and agency ways-of-working
- Influence the development of priority export markets
- Update methods of data analysis & pecan evaluation
- Educate industry on ways to modernize transactions
- Harmonize the industry through active communication

Implementation plan

- Initiative roadmaps & teaming structure
- Supporting APC operating model
- Comprehensive communications plan






Confidential DRAFT - for discussion

Vision & strategic priorities 3



AMERICAN PECAN COUNCIL

STRATEGIC PRIORITIES

-  Win fair share of tree nuts
-  Lead amongst global suppliers
-  Strengthen our infrastructure
-  Modernize the industry
-  Unite pecan stakeholders


Five priorities underpin APC's strategic vision

“ *To increase demand for American pecans and provide industry with a path to sustainably grow profitability across the value chain* ”

22






Confidential DRAFT - for discussion

Vision & strategic priorities 3



AMERICAN PECAN COUNCIL

STRATEGIC PRIORITIES

-  Win fair share of tree nuts
- 
- 
- 
- 

Problem statement - What needs fixing?

Pecans are not growing as fast as other tree nuts because they are not associated with high-growth consumption trends such as health/nutrition and snacking

APC Initiatives - How will we fix it?

Aggressively market health benefits to grow everyday use of pecans

- Focus marketing on nutrition, snacking
- Accelerate nutrition research to expand messaging of pecan health benefits
- Modernize packaging with snack-sizes and incorporate differentiated labelling
- Influence product development and innovation

Impact - How do you benefit?

- ✓ Goal of increasing overall pecan demand
- ✓ Rebrand from seasonal ingredient nut...
- ✓ ...to healthy & convenient, great-tasting snacking nut
- ✓ Messaging will also appeal to core ingredient users

23



Problem statement - What needs fixing?

Global demand for pecans is underdeveloped today, with consumption concentrated in a few markets and limited coordination of international marketing efforts

APC Initiatives - How will we fix it?

Data-driven prioritization of international markets to coordinate international efforts

- Market directly to consumers in Western Europe & Canada near term, where healthy snacking campaign will appeal
- Lead coordinated marketing efforts with other pecan associations
- Focus limited APC resources in highest return export markets and activities

Impact - How do you benefit?

- ✓ Focus efforts in new markets to grow sales in long term
- ✓ Aim to diversify international customers to reduce risk
- ✓ Get pecans on the global radar as healthy snacking nut



Problem statement - What needs fixing?

The US pecan industry's data, standards, and grading practices are less developed than those of other tree nuts, with unreliable data, outdated standards, and conflicts over grading practices restricting industry growth

APC Initiatives - How will we fix it?

Strengthen infrastructure, making better data & uniform standards/grading available to all

- Simplify & publish standards for industry-wide adoption & usage
- Establish option for third-party grading
- Ensure standards are applied equally across domestic and int'l product
- Track and publish pecan data for all stakeholders to access




Impact - How do you benefit?

- ✓ Modernized standards to ensure quality supply
- ✓ Objective, independent grading to promote trust
- ✓ Access to data for more informed decision-making



AMERICAN PECAN
COUNCIL

STRATEGIC PRIORITIES

- 
- 
- 
-  **Modernize the industry**
- 

Problem statement - What needs fixing?

Pecan industry is one of the only remaining markets where transactions require upfront cash payments between grower and sheller, creating pain points and weaker value chain relationships that inhibit growth

APC Initiatives - How will we fix it?

Educate industry on options for modifying the way growers & shellers transact that industry participants can choose to adopt

- Research best practices from other industries
- Aid in learning & revision of alternative pecan transaction models





Impact - How do you benefit?

- ✓ Growers & shellers learn about—and could choose to adopt—different transaction models that:
 - Share upside & risk
 - Incentivize efficiency
 - Promote growth
 - Foster partnership



AMERICAN PECAN
COUNCIL

STRATEGIC PRIORITIES

- 
- 
- 
- 
-  **Unite pecan stakeholders**

Problem statement - What needs fixing?

Lack of transparency and visibility across stakeholder groups leads to limited cooperation, fragmented and duplicated efforts, and inefficiencies in market

APC Initiatives - How will we fix it?






Regular communications and clarity of APC strategic plan to unite stakeholders

- Communicate APC strategy and progress with broader industry
- Partner and coordinate with other industry associations to maximize impact
- Unify behind one common goal of growing pecan demand

Impact - How do you benefit?

- ✓ Regular communications and engagement with APC
- ✓ Align industry behind goal of increasing pecan demand
- ✓ Understanding how APC is looking after your interests
- ✓ Opportunities to provide feedback and contribute

Together we can achieve our future-state aspiration for the industry

	From - Current State	To - Future State
 Win fair share of tree nuts	Seasonally-consumed, <u>indulgent ingredient</u> nut lagging growth of other tree nuts...	...a differentiated, <u>nutrition-oriented, everyday snacking</u> nut capturing fair share of market growth
 Lead amongst global suppliers	Trade show-based, "push" export strategy with resources spread <u>across many markets</u>a <u>consumer-driven</u> export marketing strategy focused on <u>few highest potential markets</u>
 Strengthen our infrastructure	Limited, <u>unreliable data</u> and <u>non-uniform standards</u> enforced inconsistently...	... <u>improved data availability</u> to support decision making & objective implementation of <u>uniform standards</u>
 Modernize the industry	Transaction model that prevents value chain partnerships and <u>inhibits market growth</u> <u>researched best practices</u> that educate industry on <u>sharing risk & upside</u> to promote stability & efficiency
 Unite pecan stakeholders	<u>Fragmented stakeholders</u> acting in individual interest with limited collaboration...	...a <u>unified stakeholder base</u> with a common strategy, working together to benefit American pecan industry

Change is a journey: Your role as leaders is to help industry stay the course



Part II: Implementation plan & structure for success

30

Confidential DRAFT - for discussion

Implementation plan II

Implementation plan: Three integral components to execute our strategy



Initiative roadmaps & teaming structure

- Deconstructs "strategic priorities" into actionable pieces of work
- Establishes milestone-based work plan and path to execute strategy



Supporting APC operating model

- Ensures APC has resources and roles necessary to execute on strategic plan
- Creates new capacity for industry-advancing activities (e.g., new data tracking, pilot monitoring, etc.)



Comprehensive communications plan

- Establishes guidelines to convey consistent message to industry stakeholders
- Helps ensure clear and consistent sharing of information

31

4 Initiative roadmaps and execution

Key messages

- Each of five strategic priorities forms an initiative with corresponding working team
- These initiatives clearly identify the problems we will solve, the work we will do, and the end goal of each effort
- We're creating a program management structure, using APC's current committees, to ensure accountability & timely progress
- Each initiative team will have a roadmap to guide their actions, with mechanisms to work across teams and overcome obstacles

Each initiative will have a "Roadmap" to guide progress with three components

Case Statement



- Makes the "case for change" via a problem statement
- Lists tactical sub-initiatives that will form the basis of the team's objectives
- Summarizes the end goal; gives a picture of what success looks like

Charter



- Summary page which details the objective, team, and major milestones of the effort
- Acknowledges some high-level risks and interdependencies...
- ...and summarizes a mitigation strategy

For discussion today

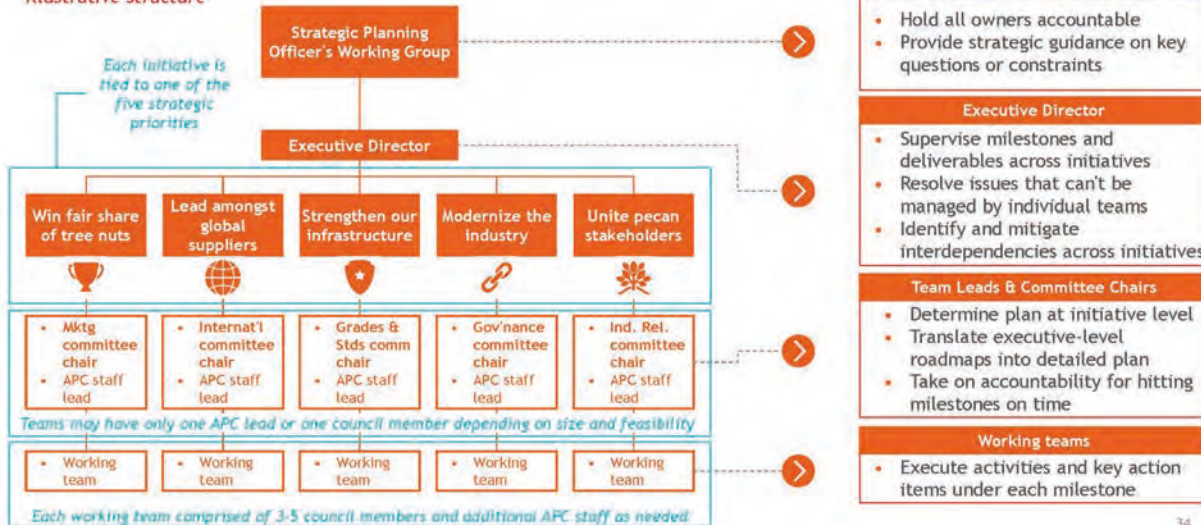
Timeline



- Lays out an executive-level view of macro activities necessary to achieve the initiative milestones
- Specific weekly activities not included; should be decided by initiative team members

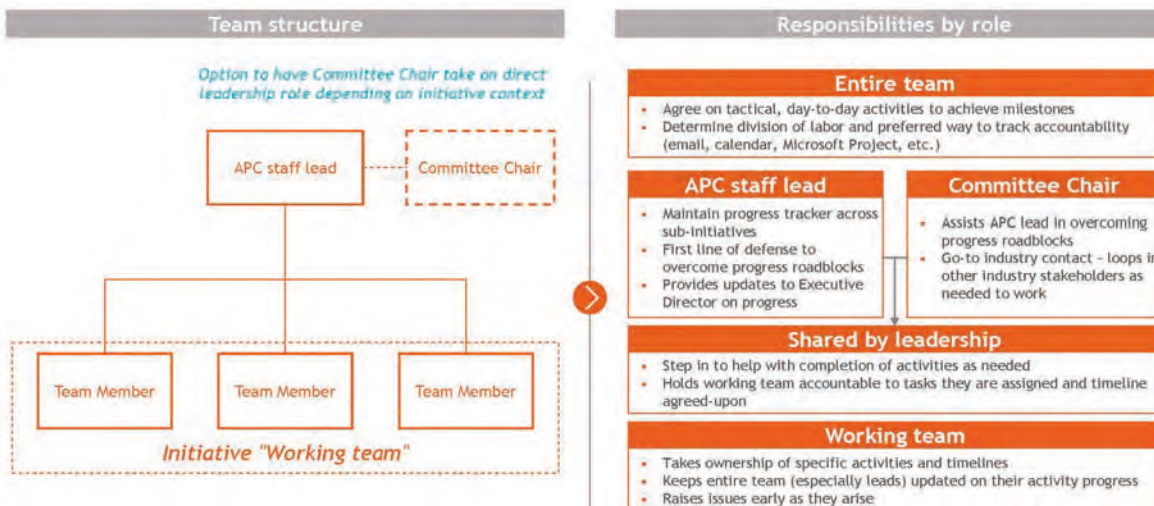
An "activist" program management structure is necessary to oversee and coordinate progress across strategic initiatives

Illustrative structure



34

The working team supporting each initiative will have clear roles and responsibilities to facilitate their work



35

Recurring meetings will keep teams on track & keep the working group informed of progress

1

Officer's working group meetings

Formal reports of overall progress on all initiatives to broader working team; strategic decision making
 → Monthly, with option to shift to quarterly; should align with committee meeting schedules

2

Updates with Executive Director

Individual initiatives reviewing progress with Executive Director and raising issues or delays
 → Bi-weekly / Weekly

3

Initiative team check-ins

Regular touch points as an initiative team drives implementation of required action items
 → 30 min weekly; ad hoc ongoing

Each meeting will emphasize next steps to continue progress on initiatives

Type	Meeting participants	Medium	Time (hrs)	Frequency	Purpose / Agenda
Officer's Working Group Meetings	<ul style="list-style-type: none"> Full officer's working group participation Executive Director <ul style="list-style-type: none"> Team leads / members as needed 	Conference Call / In-person presentation	2-3	Target monthly; option to shift quarterly with good progress <i>(Should align at least in part with committee meeting schedule)</i>	<ul style="list-style-type: none"> Formal reports of progress across all initiatives Strategic decision-making when faced with progress roadblocks or upcoming risks to initiatives
Updates with Executive Director	<ul style="list-style-type: none"> Initiative team leads (1-on-1 or small groups) Executive Director 	Call / In-person (as feasible)	0.5-1	Weekly; option to shift bi-weekly with progress	<ul style="list-style-type: none"> Progress check-ins on initiative activities Discussion of issues or delays on initiatives between team leads and Executive Director Confirm activities to be completed for next check-in
Initiative Team Check-ins	<ul style="list-style-type: none"> Initiative team leads and working team members 	Call / in-person (as feasible)	0.5-1	Minimum weekly; additional ad-hoc as needed	<ul style="list-style-type: none"> Progress check-in at working team activity level Team lead to ensure progress or escalate if roadblocks impeding progress

Important to meet frequently at launch and during critical periods; may reduce frequency as project proceeds on-track



Roadmap Draft: Initiative Team Charter - Win fair share of tree nuts

Initiative			
Refine marketing strategy and agency ways-of-working (<i>Re-focus around snacking and nutrition; improve how we work with agencies</i>)			
Team Leads	Preliminary Milestones	Dates	Owner
APC Mgmt lead (primary lead): Jeff Smutny Council Sponsor: Marketing Committee Head	1. Enhance marketing messaging and agency approach		
	1a) Revised strategy with Weber Shandwick to emphasize healthy snacking occasions	Q3 2019	Responsibility for some activities / milestones to be delegated by team leads
1b) Increased social media presence, higher consumer awareness/perception scores	Q4 2019/Q1 2020		
2. Differentiate pecans on nutrition; underscore premium positioning			
2a) Research underway on pecan health benefits that FDA likely to approve			
2b) Partnership with health influencers to advertise pecans as premium, healthy nut			
3. Modernize pecan products			
3a) Pilot of new pecan packages established between sheller and wholesaler			
3b) Pilot of distribution channels and display cases in at least one retailer			
3c) Revised labelling recommendations for all domestic pecan packages			
4. Innovate pecan derivative offerings			
		Long-term	
Risks and Cross-team tasks	Mitigation Strategy	Impacted Teams	
Cannot cost-effectively increase social media presence unless in-housed	Ensure appropriate APC resourcing (be it hiring or allocating time of existing employees) to in-house social media in an effective manner	None (Internal capabilities)	
Shellers do not appropriately pursue recommendation (snacking occasions)	Work with communications team to ensure industry participants understand strategy and benefits of new initiatives; help facilitate conversations as needed	Unite the Industry	

38



Roadmap Draft: Initiative Team Charter - Lead amongst global suppliers

Initiative				
Influence the development of priority export markets (<i>Shift spend towards target markets; focus on direct-to-consumer marketing</i>)				
Team Leads	Preliminary Milestones	Dates	Owner	
APC Mgmt lead (primary lead): Jeff Smutny (temporary) Council Sponsor: Internat'l Committee Head	1. Align Industry associations around core strategy			
	1a) All major associations exposed to strategy from roadshow at all annual events	Q4 2019/Q1 2020	Responsibility for some activities / milestones to be delegated by team leads	
1b) 75%+ of associations agreed to strategy and coordinating efforts with APC	Ongoing			
2. Shift vast majority of APC's International spend to Western Europe/Canada				
2a) Funding strategy finalized for 3-5 years, taking into account potential for China to play a larger role				
3. Move away from trade shows to focus on direct-to-consumer marketing				
3a) Trade show budget reduced to most relevant / essential events				
3b) Began influencer/direct-to-consumer campaign in target countries				
4. Establish forum to market with other pecan producing countries				
Risks and Cross-team tasks	Mitigation Strategy	Impacted Teams		
Other industry stakeholders resist strategy	Clearly communicate rationale behind strategy, not just data - make sure to be explicit that individuals may market to any region they want - APC strategy is just focusing on investing where their resources will generate highest ROI	Unite the Industry		
Difficulty launching new strategy with vendors	Schedule sessions with international vendors as needed to discuss new focus; request regular check-ins and progress reports, holding vendors to timeline and measurable results; <i>ensure strategy is in line with what's proposed for domestic marketing (Init. 1)</i>	Win fair share of tree nuts		

39



Roadmap Draft: Initiative Team Charter - Strengthen our infrastructure

Initiative			
Update methods of data analysis and pecan evaluation (Drive improvements in grades, standards, data quality, price transparency)			
Team Leads	Preliminary Milestones	Dates	Owner
APC Mgmt lead (primary lead): Emma Garner (Temporary) Council Sponsor: Grades&Standards Head	1. Finalize a simplified set of standards and publish for industry use		Responsibility for some activities / milestones to be delegated by team leads
	1a. Updated standards agreed upon with stakeholder input	Q2 2019	
	1b. Standards shared with USDA	Q3 2019	
	1c. USDA formally recognizes to standards as tolerances for industry	Q3 2021	
	2. Select third-party for impartial grading and make available to industry		
	2a. Grading options/volunteers for pilots identified via RFPs/discussions	Q3 2020	
	2b. Core set of grading variants established via conversations with pilot group	Q4 2020	
	2c. Economic/qualitative data from pilot tracked	Q3 2021	
	3. Improve data tracking, both internal APC and external pecan industry data		
	3a. Member database fully refreshed	Q3 2019	
	3b. Go-forward priority data decided on with source and frequency of collection	Q3 2021	
	4. Facilitate price transparency		
	4a. RFPs for third-party price tracking and reporting submitted and reviewed	Q4 2019/Q1 2020	
Team Members	To be determined		
Risks and Cross-team tasks	Mitigation Strategy	Impacted Teams	
USDA a bottleneck on updating standards	<ul style="list-style-type: none"> Expedite finalizing of updates to standards and accelerate submitting to USDA In tandem, publish to industry and promote pre-emptive changeover 	None	

40



Roadmap Draft: Initiative Team Charter - Modernize the industry

Initiative				
Educate industry on ways to modernize transactions (Share information, track industry first-movers, and publish best practices)				
Team Leads	Preliminary Milestones	Dates	Owner	
APC Mgmt lead (primary lead): Alex Ott (temporary) Council Sponsor: Governance Committee Head	1. Socialize research and provide forum for grower-sheller discussion		Responsibility for some activities / milestones to be delegated by team leads	
	1a. Contract framework research shared with stakeholders, feedback provided from growers and shellers	Q3 2019		
	1b. First non-cash crop pilots launched across 1-3 growers and shellers	Q4 2019/Q1 2020		
	2. Monitor pilot results and track progress			
	2a. Guiding principles adjusted based on evidence from 1-3 early programs	Q4 2020/Q1 2021		
	2b. Additional pilots launched and monitored as needed	Ongoing		
	3. Update best-practice guidelines with pilot takeaways & share with industry			
	3a. Consolidated takeaways from pilot programs	Q1 2022		
	3b. Shared findings across major grower-sheller conventions	Ongoing		
Team Members	To be determined			
Risks and Cross-team tasks	Mitigation Strategy	Impacted Teams		
Conflicts of interest within working team members	If necessary, neutral third-party resource dedicated to collecting feedback from multiple parties and raising objective concerns, opportunities, and analyses	None		
Negative outcomes from first series of pilots	Encourage pilots to be done on limited "test-and-learn" volumes; message that results of pilots will go towards refining industry best practices and improving future contracts	None		

41



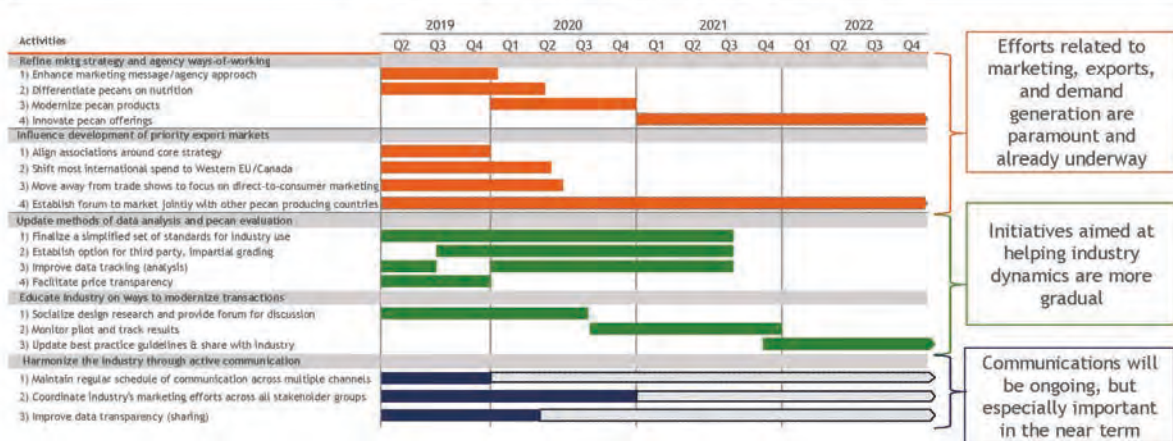
Roadmap Draft: Initiative Team Charter - Unite pecan stakeholders

Initiative			
Harmonize the industry through active communication (<i>Publish comms., attend events, improve data transparency</i>)			
Team Leads	Preliminary Milestones	Dates	Owner
APC Mgmt lead (primary lead): Emma Garner Council Sponsor: Ind. Relations Comm. Head	1. Maintain regular schedule of communications across multiple channels		Responsibility for some activities / milestones to be delegated by team leads
	1a) Defined regular communication plan for APC, incl. frequency, channels used, & content shared with each group (APC vs association leadership vs whole industry)	Q4 2019/Q1 2020	
Team Members	2. Coordinate industry's marketing efforts across all stakeholder groups		
	2a) Established presence at all major pecan group/association meetings	Ongoing	
To be determined	2b) Associations understand 12-month plan and APC's role (relative to other assns.)	Q4 2020/Q1 2021	
	3. Improve data transparency		
	3a) Defined types of data APC will collect	Q2 2020	
	3b) Publish APC-recommended data sources along with proprietary analysis	Q2 2020	
	3c) Implement annual stakeholder survey to continuously improve APC's practices	Q2 2020	
Risks and Cross-team tasks	Mitigation Strategy	Impacted Teams	
Written content (E.g., newsletters) not sufficiently shared with stakeholders	Proactively work with "Strengthen infrastructure" team to ensure member database is updated in timely fashion; each association meeting should result in better member list	Strengthen our Infrastructure	
Progress across initiatives not communicated with industry	Request downward communication of other initiatives' progress from strategic planning lead; contact other teams as needed to assist in messaging to industry	Multiple	

42

Initiatives have different timelines, and combined represent a long-term effort to improve the industry

Overview of all major activities across initiatives



43

5) APC operating model

Key messages

- APC must adapt its resourcing and build internal capabilities to successfully support strategic plan implementation
- Some functions are under-resourced, require additional full time or contracted support:
 - Nutrition research
 - International marketing
 - Compliance
- We've identified upwards of \$1.3M+ in potential savings on marketing spend
 - Could be reallocated to other needs
- We will take a more active role influencing activities of other pecan associations to further drive our strategic priorities

APC resourcing must evolve over time to achieve strategic priorities

Current

APC operations are lean with 5 full-time employees, sharing many responsibilities

- E.g., Director of Regulatory & Marketing

Marketing largely outsourced to PR agency

- Oppt'y to rationalize spend & bring some activities in house

Add'l resourcing required to achieve strategic priorities

Short term (until Oct. 2019)

Leverage current structure and supplement resourcing as needed

- Hire dedicated employees for marketing & compliance
- Coord. marketing strategy with national pecan orgs
- Mobilize other partner orgs to further APC strategy

Capture savings from rationalizing agency marketing spend, ~\$1.3M+

- Move select activities in house
- Can use savings to reinvest in marketing activities...
- ...and/or fund additional resourcing for other functions

Long term (until Aug. 2021)

Grow in-house capabilities of APC

- Add dedicated resources for international relations
- Expand internal marketing capabilities
- Continue to engage partner orgs

Implement robust outsourcing model

- Engage set of specialized contractors as needed
- Use competitive bidding to extract maximum value

FMO functions can be classified on spectrum from 'variable' to 'fixed' resourcing

Amount of resources for 'variable' functions scales with budget; 'fixed' functions often require a minimum level of staff

	Function	Sub-Function	Description
Variable Amount of dedicated resources scales with budget	1	Marketing	
	1a	Domestic Strategy	Coordination of media, events, & other activities
	1b	International Strategy	Coordination of international relations alongside media, events, & other activities
		Management / Execution / Outreach	Marketing execution & outreach to manufacturers and health professionals
	2	Industry Relations	Outreach to stakeholders about future initiatives & industry issues to ensure satisfaction
	3	Research	
Fixed Minimum amount of dedicated resources necessary regardless of budget		Nutritional	Identify & fund research on nutrition
		Agricultural & Environment	Identify & fund research on farm production
	4	Grades & Standards	Work to pass & maintain agreed upon grades & standards
	5	Compliance	Ensure APC & industry compliance with USDA regulations
	6	Data & Statistics	Gather & publish industry economic data (e.g. shipments, imports, production etc.)

Source: APC 2018, ABC 2012

46

Resourcing by function: APC may be under resourced for some functions that require a 'fixed' amount of resources

	Function	Sub-Function	# Employees	
			almonds	AMERICAN PECAN
Variable Amount of dedicated resources scales with budget	1	Marketing subtotal	17	1.5
	1a	Domestic Strategy	3	0.75
	1b	International Strategy	6	0.5
		Management / Execution / Outreach	8	0.25
	2	Industry Relations	7	1
	3	Research subtotal	8	0
Fixed Minimum amount of dedicated resources necessary regardless of budget		Nutritional	2	0
		Agricultural & Environment	6	0
	4	Grades & Standards	2	0.5
	5	Compliance	2	0.5
	6	Data & Statistics	2	0.5
		Total	38	4

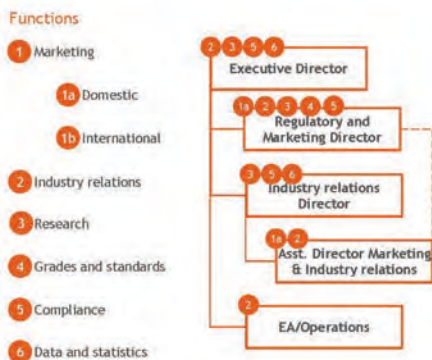
Functions to Inc. resources against

Source: APC 2018, ABC 2012

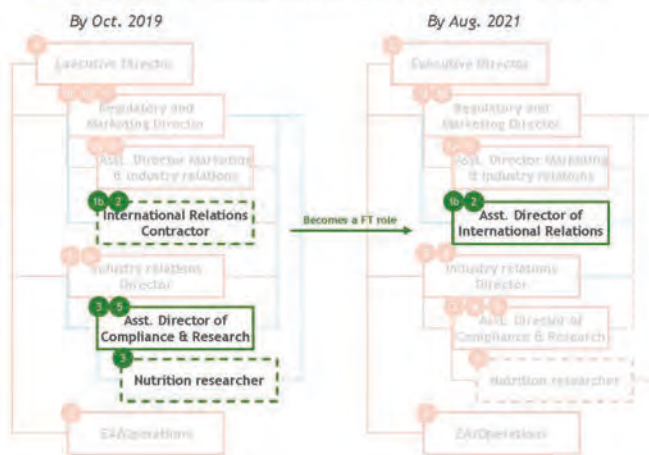
47

Organization structure: Evolution of staff roles to better fulfill functions

Today, many shared responsibilities among employees



In future state, add roles for compliance, research, & intl. relations

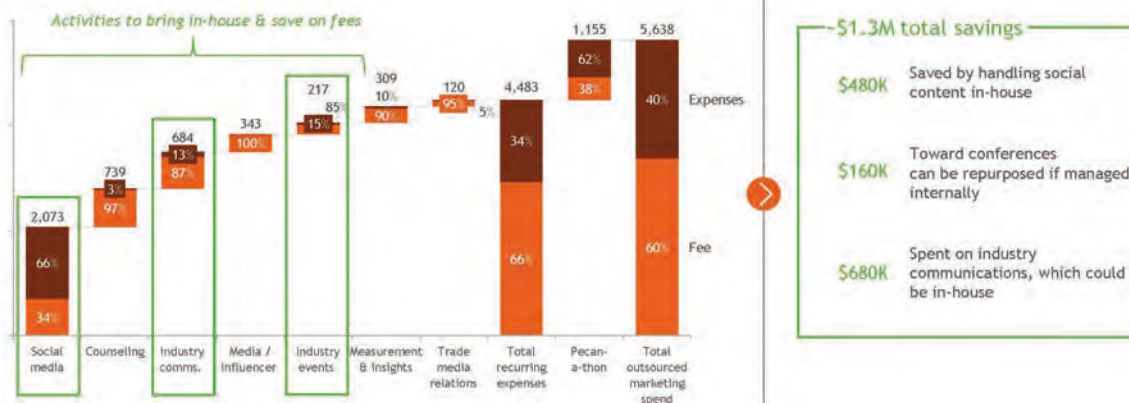


Source: Organization Websites

Existing full time employee Existing contractor New hire New contractor 48

Marketing activities: Conservative estimate suggests \$1.3M+ of fee savings by bringing social media, industry events, and industry communications in-house

Outsourced marketing expenditure



Source: APC WS budget

49

Partner orgs: Opportunity to coordinate marketing efforts & increase grower communication by leveraging activities from other pecan organizations



1. Not all state growers associations are pictured here
Source Organization Websites

6 Messaging to the industry

Key messages

- Communication of strategic plan to industry can be our biggest enabler...
- ...but if done improperly, can be the most significant barrier to achieving change
- We've developed a comprehensive communications plan to educate stakeholders on our shared vision and earn their buy-in
- As council members, you play a critical role in communicating this plan to others
- The "rumor mill" starts & ends with you!

Four components to external communications plan



Create storyline

- Write overarching story for stakeholders
- State case for change & key messages



Segment stakeholders

- Segment stakeholders & identify their unique requirements
- Adapt storyline to fit stakeholder groups



Determine channels

- Review available communication channels
- Identify key channels for stakeholder groups



Ensure comms planning/execution

- Detail sequencing & timeline of communications plan
- Highlight deliverables for key milestones

Who is communicating **what** to **whom**, **how** and **when**?

52

Communications plan composed of three tools for APC's use

Master communications plan



Description

Full communications storyline with Case for Change, Role of APC, & Strategic Priorities

Who should use

APC council members

How to use

- Simple and consistent; reinforce relevant pieces of storyline & tailor to audiences' interests

Strategic plan whitepaper



Two-page explanation of key findings & strategic plan

APC staff

- Leverage sections for articles, press releases, publications

Prepared talking points



Tear sheets of expected concerns & suggested responses to leverage

APC council members

- Use to prepare for industry relations questions & concerns
- Prioritize consistent responses

53

Three tenets to successfully execute communications plan



Straightforward process

- Straightforward, organized, & reinforcing communications plan to reach stakeholders
- Logical progression of communications; assume word will travel fast after initial outreach



Consistent messaging

- Consistent delivery of communications plan to all stakeholders
- No gaps in messages; everyone receives same key takeaways



Customized delivery

- Communications delivery tailored to best fit respective audiences
- Choose channels and representatives most likely to resonate with stakeholders

54

Messages tailored to three stakeholder segments at appropriate levels of detail

3 target segments

Messaging objectives

Level of Detail

Execution

APC council members



- Underscore burning platform
- Frame as industry-wide paradigm shift
- Arm for tough constituent questions

- Most detailed & comprehensive

- First outreach
- In-person council meeting

Other pecan associations



- Position as shared, industry-wide changes reinforced through ongoing transparency
- Careful messaging for issues other orgs cover (e.g., exports)
- Leave door open for partnerships

- Comprehensive
- Tailored to associations' perspectives

- Second outreach
- In-person meeting of leadership
- Leaders to champion to constituents

Industry at-large



- Create burning platform - but not panic
- Explicit "what's in it for me?"
- Reinforce validity of plan e.g., data & research

- High level, consistent
- Ongoing messaging

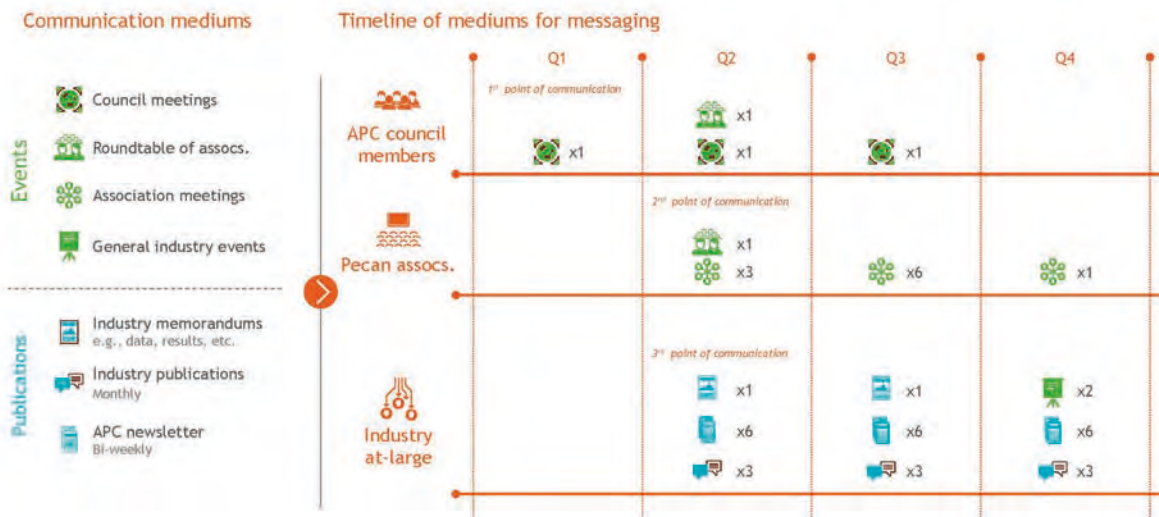
- Outreach after other stakeholder segments
- Control message through association leadership

55

Messages must also be customized for different communication mediums

Communication mediums	Objectives of medium	Level of detail
Events Council meetings Roundtable of assoc. Association meetings General industry events	Provide view of progress related to strategic priorities	Most detailed Most detailed Tailored to assoc. members High-level discussions
	Reinforce Case for Change & Vision; answer questions related to strategic plan	
	Reinforce Vision; convey high-level plan & progress; highlight benefits for stakeholders	
	Provide transparency on APC progress and opportunities for industry engagement	
Publications Industry memorandums e.g., data, results, etc. Industry publications Monthly APC newsletter Bi-weekly	Reinforce effectiveness of priorities by publishing data & other results from initiatives	Most detailed Comprehensive High-level
	Leverage articles to promote strategic agenda by highlighting benefits & progress	
	Provide transparency & engage industry in APC's activities	

Comprehensive plan with multiple touch points across all mediums



On topics like standards, grading, and modernizing transactions, important to message what is and what is not in scope for APC



Standards

Goals of initiative

- Update standards to set that is universally accepted by growers & shellers across regions
- Verify standards with 3rd party; ensure high quality and level playing field for in-shell & kernel
- Detail process and options for rapid-cycle updates to standards in emergency cases



Grading

Goals of initiative

- Evaluate multiple organizations capable of 3rd-party grading
- Stand up limited pilots with volunteering growers and shellers for grading trial
- Record results of pilots, revise as necessary, and bring to market as option for industry



Modernizing transactions

Goals of initiative

- Research how similar industries transact to highlight best practices
- Educate on different models and set of high-level components that growers and shellers can consider
- Provide an informational "toolkit" that industry members can utilize if it makes sense for them

To be shared

- Defined problem statement
- Description of proposed solution(s)
- Clear articulation of how solution positively benefits the industry

NOT in scope

- Instituting a new transaction model
- Drafting contracts or arbitrating disputes
- Pushing growers & shellers to alter how they do business

58

7 Path forward

Key messages

- Initiative teams will own the process for executing on the strategic plan
- As teams push initiatives forward, expect questions from others in the industry...
- ...and be prepared to answer by leveraging the comms. plan and being thoughtful about when and where to socialize information
- Change takes time and there will be bumps in the road
 - Adapt as needed, but don't lose sight of case for change & strategic priorities
 - Responsibility of this group to maintain steady momentum

59

Timeline of next steps

- Immediately post-WGM 3 | Continue work on standards and transaction research
 - Initiatives already in-process and don't want to lose momentum
- End of February (TBD) | Share strategic plan with full council
 - Critical to gain buy-in across the council
- Post-Council Meeting | Launch initiative teams that correspond to pre-existing committees
 - Team meetings to establish individual project plans, meeting cadence, and task owners
- March 3-5 | Present at Western Pecan Growers Association Annual Conference
 - Starting point for socializing of strategy to broader industry

60



Thank you

2018-2019 FISCAL YEAR
CONSUMER MARKETING



COMMITTEE SUMMARY

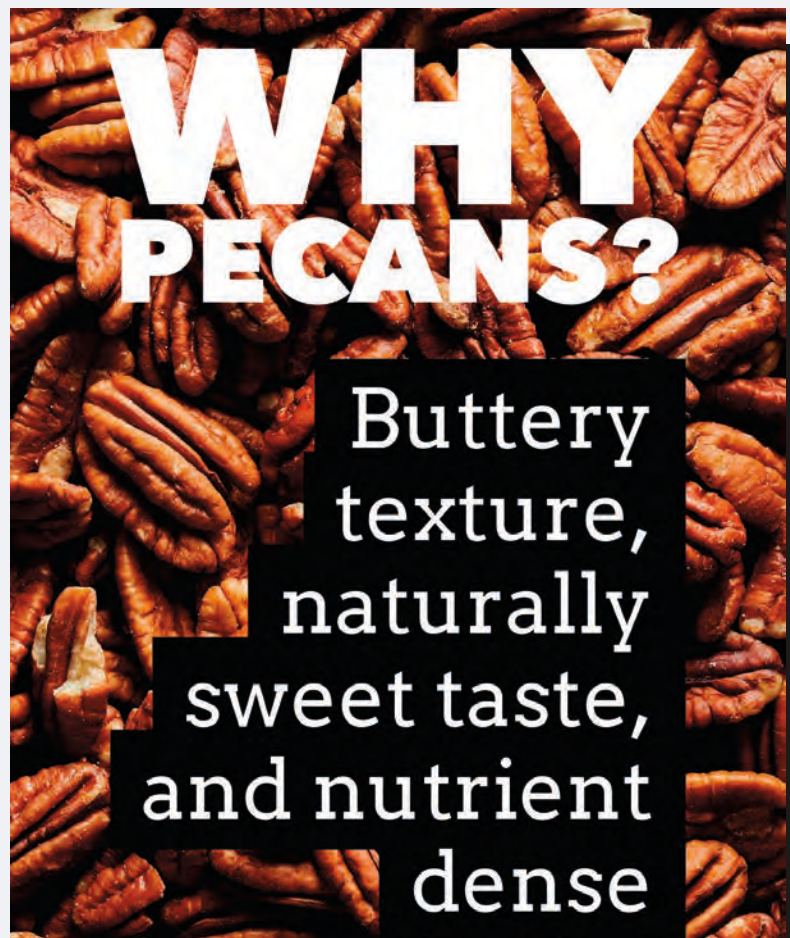
The marketing efforts of the American Pecan Council totaled over 75% of the industry's entire operating fund. The commitment to marketing American pecans is job one. During 2019, the APC built a first-rate team of marketing professionals and prepared to diversify its efforts by bringing more activities inhouse. Thanks in part to the Boston Consulting Group's strategic plan, we will save our industry \$1.85 million each year as the APC team finds ways to repurpose marketing dollars at significant savings. Looking forward over the next couple of years, the industry's realized savings will be repurposed into areas such as influencer marketing and engagement, nutrition-based research and marketing, and advertising including audio, video and digital marketing. Early returns on these efforts show a significant increase in pecan consumption by over 30%. Furthermore, in larger cities across the US, consumers will hear and see our commercials positioning pecans as a scrumptious snack. Furthermore, the APC has placed a significant focus on measuring the effectiveness of our marketing efforts. Data will drive the who, what, where and how of our efforts to make strategic use of each precious industry dollar.

Committee Chair

Bruce Caris

Committee Members

- Mike Adams
- Lalo Medina
- Trent Mason
- Angie Ellis
- Molly Willis
- Louie Salopek
- Phillip Arnold
- Jeff Worn
- Frank Salopek
- Randy Hudson
- Jennifer Ivey
- Sonja Roeder
- Les Daviet





American
PECANS
THE ORIGINAL SUPERNUT

OCTOBER 2018 MARKETING HIGHLIGHTS

HARVEST IS UNDERWAY



RUNNING TO THE KITCHEN
MICHIGAN • OCTOBER 1, 2018

Through partnerships with food bloggers, we are inspiring Gen X and Gen Y moms with savory pecan recipes. Responses to this "Sheet Pan Maple Mustard Chicken with Pecans and Sweet Potatoes" were overwhelmingly positive, and

55% OF COMMENTS
INDICATED AN INTENT TO PURCHASE PECANS.



QUOTE-WORTHY

Pecans are one of my favorite fall nuts. I love how you incorporated them into a seasonal fall main dish meal.

Now that the kids started school, I'm leaning towards all sheet pan suppers – my family will love this!

This is 100% happening for dinner this week!



AMERICAN PECAN COUNCIL



Our harvest video, highlighting the people behind The Original Supernut, reached an audience of **MORE THAN 295,000 ON SOCIAL MEDIA.**

A paid promotion campaign targeted the post to Facebook users who match our pecan consumer, reaching **76X MORE EYES** THAN A POST WITHOUT PROMOTIONAL SUPPORT.

HALLOWEEN SPOTLIGHT

As people searched for Halloween ideas, American Pecans was ready with delicious pecan treats. The pecan shortbread ghost cookie was popular with news media as well as people on social media.

News and social media about the ghost cookie made it our most popular recipe on AmericanPecans.com. The recipe page was visited **MORE THAN 6,900 TIMES** during October!

70%
OF HALLOWEEN RECIPE MEDIA PLACEMENTS WERE OUTSIDE OF THE PECAN BELT.



"Scary good, easy Halloween recipes"

"Boo-tiful shortbread pecan ghost cookies"

"Ghostly Good Treats"



In Alabama, RD partner Holley Grainger's "Spooky and Nutritious" segment on ideas for Halloween, using pecans reached **A BROADCAST AUDIENCE OF 75,000** and included messaging around the taste, nutrition, and heritage of pecans.



Pinterest



Pinterest users saved the ghost cookie **5,432 TIMES** to their own personal boards on Pinterest, a **60% INCREASE** from last October.

Why do Pinterest saves matter?
According to market research, 93% of active users of Pinterest use the platform to **PLAN FOR PURCHASE, AND 87% HAVE PURCHASED** because of Pinterest.



NOVEMBER 2018 MARKETING HIGHLIGHTS

ENCOURAGING AMERICANS TO #PLEDGEPECANS THIS HOLIDAY SEASON

American Pecans took center stage with The Super American Pecan-A-Thon, a first-of-its-kind online variety show, in partnership with Epicurious, a leading recipe website. A celebrity host, influential food and lifestyle bloggers and pecan growers from across the country shared holiday inspiration, including fresh recipes and crafting ideas, encouraging families to enjoy pecans both inside and outside the pie this season.



Our Facebook campaign generated **13.2M IMPRESSIONS** – that's **92% more impressions** than last November.



IN ORDER TO DRIVE CONSUMPTION, AMERICAN PECANS PROMOTES A WIDE RANGE OF RECIPES. IN NOVEMBER, WE SAW OUR **HIGHEST WEBSITE TRAFFIC IN 2018** AND MORE THAN HALF OF VISITS WERE FOR RECIPES.



OUR INFLUENCERS HELPED PROPEL INTEREST IN NONTRADITIONAL RECIPE OPTIONS. **BOBBY PARRISH'S FLAVCITY PRIME RIB BLOG POST ALONE DROVE 37% OF ALL PECAN PARTNER TRAFFIC TO RECIPES ON THE WEBSITE**

THE STAR POWER OF OUR PECAN-A-THON HOST HELPED SECURE **26.8 MILLION IMPRESSIONS** FOR AMERICAN PECANS IN POPULAR CONSUMER MAGAZINES, SUCH AS US WEEKLY AND INTOUCH – THAT NUMBER IS BIGGER THAN THE POPULATION OF TEXAS



intouch US LifeStyle

INDUSTRY SPREAD THE WORD.

THE PECAN-A-THON CAMPAIGN PAGE WAS THE MOST POPULAR SECTION OF THE DIGITAL TOOLKIT FOR INDUSTRY.



DIY DECORATORS LOVED AMERICAN PECANS PINTEREST IDEAS, WHICH REACHED MORE THAN **166,000 PEOPLE PER DAY**



THE PECAN-A-THON KICKED OFF OUR HOLIDAY CAMPAIGN TO #PLEDGEPECANS, ASKING AMERICA TO MAKE ONE ADDITIONAL PECAN DISH AT THEIR HOLIDAY DINNERS. THE CAMPAIGN RUNS THROUGH THE HOLIDAY SEASON, SO STAY TUNED FOR FULL CAMPAIGN RESULTS IN JANUARY.



DECEMBER 2018 MARKETING HIGHLIGHTS

On the heels of *The Super American Pecan-A-Thon* premiere, December's marketing activities doubled down on holiday recipe inspiration to drive demand through the holidays and beyond, encouraging America to #PledgePecans – a promise to include one more pecan-infused dish alongside your pecan pie during the holidays.

OUR ARTICLE, "GO BEYOND PECAN PIE THIS HOLIDAY SEASON," APPEARED NEARLY **800 TIMES** NATIONALLY IN DECEMBER.

58% OF THESE PLACEMENTS APPEARED IN NON-PECAN PRODUCING STATES AND ENCOURAGED CONSUMERS NATIONWIDE TO GET CREATIVE IN THE KITCHEN WITH PECANS OVER THE HOLIDAYS.



THE SEARCH WAS ON

Data shows that appetizer recipe searches are high in December, so our Pecan Partners developed recipes for **PECAN STUFFED MUSHROOM CAPS** and **PECAN AND SQUASH FLATBREAD** with Dried Cherries and Ricotta to fit the trend. These recipes were our top performing influencer content of the month.



HAVE YOU HEARD?



GOOGLE ANNOUNCED THAT PECAN PIE WAS THE MOST SEARCHED RECIPE OF ALL OF 2018!

Classic Pecan Pie continues to be the most visited recipe on AmericanPecan.com.



Paid social media and paid search advertising helped to generate interest in American Pecans holiday ideas, leading to **29% MORE PAGE VIEWS THAN LAST MONTH.**

SAVORY RECIPES ARE GAINING POPULARITY, TOO

After Classic Pecan Pie, December's most popular recipes on AmericanPecan.com were Sweet Potato Casserole with Bourbon Pecan Crumble, Mulled Cider with Caramel Pecan Rim and Smoky Spiced Pecans.



By tagging American Pecans, Instagram users helped share the brand with more than **1 million** additional Instagram followers in December – that's **MORE THAN THE PRINT CIRCULATION OF THE NEW YORK TIMES AND CHICAGO TRIBUNE COMBINED!**



JANUARY 2019 MARKETING HIGHLIGHTS

KICKING OFF 2019 WITH AMERICAN PECANS

Through search engine advertisements (paid search), American Pecans is reaching consumers who are looking online for recipes. People searching for phrases like "chicken recipes" and "lunch recipes" were directed to dishes "super-fied" with pecans. This month, **paid search was the primary driver of traffic** to AmericanPecan.com.



We aim to make the website as engaging as possible. By tracking the bounce rate (how many visitors leave the site after viewing only one page), we know how many visitors stick around to see the many benefits and uses of pecans. Our January bounce rate for the Super-fy landing page **was 2X better than the industry average**, meaning that the recipes, videos and photos successfully inspired visitors to stay and explore.



POWER COUPLE



We knew "breakfast" and "chocolate chip cookies" were popular Pinterest topics, so we released a short recipe video of our Chocolate Chip Pecan Breakfast Cookies. That recipe pin generated **750,000 video views** this month – **83% higher than November's popular Pecan Pie!**



WE LOVE SEEING CONSUMERS SPREAD THE WORD BY POSTING THEIR OWN PECAN CREATIONS AND TAGGING @AMERICANPECAN ON INSTAGRAM.

consiouslyfletty I had pecans recently for the first time in forever and they're AMAZING get want to add them to the normal routine!

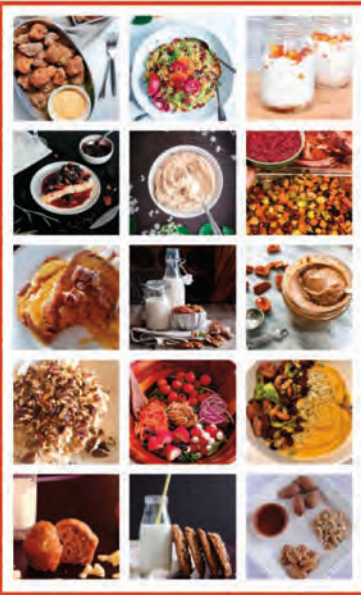
karendawkins @americanpecan very!! We love our pecans! 🍌

megwellness Yum I love pecans!!! I'm gonna check out the recipe!

ellicewolfie This looks delicious will have to try it. Pecans are my go-to snack. I'm sure I consume several pounds of them a week!! ❤️

ahheartforfood Never thought to make pecan butter. Thanks for sharing the recipe. Will be awesome in a "PB" sandwich.

jacleen23 Same! Have an unopened bag from Costco sitting on the shelf and then BAM...see this recipe. I'm making it this weekend. Yay!! ❤️❤️





FEBRUARY 2019 MARKETING HIGHLIGHTS

PECANS & PIGSKIN

From pecan-topped pizza on the Food Channel to pecan appetizers in the Chicago Daily Herald, game day pecan recipes were shared like never before – a 31% increase over last year’s Big Game recipe coverage.



AMERICAN HEART MONTH

American Pecans released an article, “Simple Ways to Be Heart-Smart,” to remind consumers of pecans’ heart benefits. **The article ran in 970 news outlets nationwide, reaching consumers in more than 40 states.** One of the featured recipes, Cherry Pecan Energy Bites, received **2x as many views** on AmericanPecan.com as it did in January.

OUTSIDE THE PIE, INSIDE THE INSTANT POT

The popular cookware tool was one of last year’s hottest holiday gifts, so American Pecans used paid search to intercept consumers searching online for Instant Pot recipes.

34% of all clicks to AmericanPecan.com in February were generated from the search “instant pot recipes” – showing consumers are considering pecans in their meal planning.



MEALS ON THE GO

CONSUMERS CONTINUE TO FAVOR OUR SOCIAL MEDIA POSTS ON MEAL PREPARATION.



This Pecan Chicken Salad in a Jar video garnered more than 317,000 views on Facebook this month – that’s 11,000+ a day!

kumquatblog @americanpecan pecan + chocolate = ❤️

shemovsphilly no better combo! pecans are so underrated!

sunkissedkitch Adore easy zoodle salads — and PECANS! 🥰

WE LOVE SEEING CONSUMERS ENGAGE ON SOCIAL MEDIA WITH OUR CONTENT AND THEIR OWN.

CHECK OUT THE PECAN LOVE!



American PECANS
THE ORIGINAL SUPERNUT

MARCH 2019 MARKETING HIGHLIGHTS

IN-STORE SUPPORT



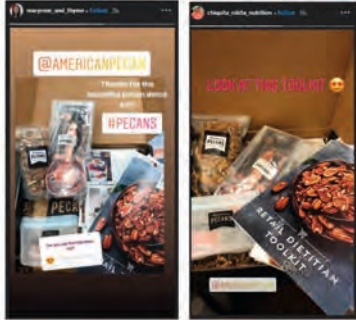
NOOZHAWK
The Goodest News in South Dakota
NUTRITION
Charlyn Fargo Ware:
Heart-Healthy Food
to Change Your Life

● ACTIVATION COMPLETE
● ACTIVATION COMING!



MEET YOUR SUPERMARKET DIETITIANS!

Retail Dietitians (RDs) are supermarket employees that guide shoppers towards nutritious products. As of March, 23 RDs nationwide have put our American Pecans toolkit to use – sharing nutrition information, recipe cards, and custom shopping lists in the grocery aisles. Even more plan to activate in the months ahead!



Twitter is a great platform to efficiently use our dollars while engaging with consumers. Our National Pi Day video ad on Twitter costs **only 2 cents per view!**

PECAN LOVE

We love seeing consumers engage on social media with our recipe content – check out some of the comments we got on this month's posts!

- acookienameddesire Delish 😍
4hr 2 likes Reply
- foodfaithfit | want all of them!
7hr 1 like Reply
- Kande Nielson
Goodness this looks scrumptious.
5hr Like Reply

A RECIPE FOR STRONG CONTENT

Planning impactful content on social media is a mix of research, audience insights, trends and timely opportunities – such as “fakeitdays” like National Pi Day!



RESEARCH
“Cheesecake” is a popular search term in the first three months of the year

AUDIENCE INSIGHT
Gen X/Y moms celebrate quirky holidays with their families

MARKETING TREND
Social media is the best place to capture attention about timely moments

The featured recipe page for Pecan Pie Cheesecake received 9,000 website views, with most traffic coming from Instagram

FOOD TREND
Buddha bowls are popular with health-conscious audiences

AUDIENCE INSIGHT
40% of parents are stressed about serving healthy dishes that everyone enjoys

MARKETING TREND
How-to-make-it videos of easily customizable recipes are perfect for short consumer attention spans

The Pecan Buddha Bowl video was watched all the way through more than 350,000 times on social media



APRIL 2019 MARKETING HIGHLIGHTS

PECANS 6 WAYS

ONLINE STORY
232,714 IMPRESSIONS

BROADCAST VIDEO CLIP
15,595 IMPRESSIONS

SOCIAL MEDIA ENGAGEMENT
1,440 LIKES, COMMENTS AND SHARES

PECAN PARTNERS SHOWCASE THE ORIGINAL SUPERNUT!

Registered Dietitians are telling the nutrition story of pecans – especially during National Pecan Month! These influential RDs reach an audience that is interested in health and eager to explore new foods and products.

Our Pecan Partners' voices go beyond one news story or blog post, with social media spreading the word to their followers and beyond.



CONSUMERS LEANING TOWARDS SAVORY OPTIONS

The Super-fy and Superweeks campaigns are focused on sharing savory ways to use pecans, making pecans an everyday staple. So far this year, 7 of the top 10 most visited recipes on our website are savory – indicating that consumers are showing sustained interest in new ways to use pecans.



USING CONSUMER TRENDS & SOCIAL TACTICS TO MARKET AMERICAN PECANS

INTRODUCING INSTAGRAM STORIES

104.7 MILLION INSTAGRAM USERS IN THE US

Social media is constantly evolving, providing new ways for consumers to interact with content. One of the biggest trends is Instagram Stories – views of stories are growing 15x faster than regular, in-feed content.



American Pecans has expanded social media marketing to Instagram Stories – and these segments generated our top two highest video views of April!



THE POWER OF RETARGETING

On social media, we “retarget” by showing American Pecans content to people who have recently visited our website or watched our videos. This strategy allows us to continue to lead consumers along the purchase journey, in an effort to convert content viewers to pecan purchasers through recipe inspiration.

The two best performing ads on social media this month were remarketed content.



MAY 2019 MARKETING HIGHLIGHTS

WHAT'S FOR DINNER?

Tracking most-clicked recipes helps us dish up what consumers like most – this month, “pecan chicken” recipes were clicked **more than 100 times a day**.



THIS MONTH, ONLINE SEARCHES FOR “PECAN” INCREASED BY 50% SINCE MAY 2016!



GOOGLE ADVERTISING IS PAYING OFF!

When consumers search “quick meals,” “easy meals,” and “minute meals,” many will see American Pecans ads with instant meal inspiration. The **average click-through-rate** for these ads **exceeded 9%** - more than triple Google’s average ad!

INFLUENCER CONTENT IS HITTING THE MARK



Our pecan bloggers show consumers how to use pecans in new ways, and we help maximize this impact with paid promotion of their recipes on social media. For plant-based pecan recipes, our **cost per engagement** on Instagram was **89% lower than average**.



WEBSITE VISITORS HAVE TRIPLED IN MAY 2019

More and more consumers are finding pecan inspiration on our website. In May, we had **3X** as many website visitors as we did in May 2018. **Interactions with our recipes – a key indicator of purchase intent – doubled year over year!**

PECANS ARE A-OK!

American Pecans’ Baked Pecan-Crusted Chicken Tenders were featured as a **gluten-free favorite** in **OK! Magazine**. Not only are we reaching our audience on their devices and through social media, this pecan-friendly recipe reached **more than 475,000 readers** in a May print issue, including our target audience of **Gen.XY moms**.

BAKED PECAN-CRUSTED CHICKEN TENDERS

With great protein, fiber and good fats, American Pecans’ “The Original SuperNut™” are a nutritious, delicious and versatile ingredient. Adding them to your diet can help you reach your health goals. They’re also a great way to make your meals more delicious.

PERFECT FOR: Snacking, salads, soups, dips, stir-fries, and more.

AMERICAN PECANS is a 100% natural, nut-free, and gluten-free product. It’s made from the finest pecans and is a great source of antioxidants and healthy fats.

AMERICAN PECANS is a 100% natural, nut-free, and gluten-free product. It’s made from the finest pecans and is a great source of antioxidants and healthy fats.

THINGS WE'RE OBSESSED WITH

OK! MAGAZINE features a variety of recipes and lifestyle tips. American Pecans’ Baked Pecan-Crusted Chicken Tenders were featured as a **gluten-free favorite** in the May issue.

AMERICAN PECANS is a 100% natural, nut-free, and gluten-free product. It’s made from the finest pecans and is a great source of antioxidants and healthy fats.





JUNE 2019 MARKETING HIGHLIGHTS

CONSUMERS FIND INSPIRATION AT AMERICANPECAN.COM



7X AS MANY NEW USERS VISITED THE APC WEBSITE IN JUNE 2019 AS COMPARED TO JUNE 2018.

HUNGRY FOR AMERICAN PECANS

We're driving these consumers toward purchase with enticing pecan recipes. **23.4% of June website visitors viewed recipes.**



KROGER MAGAZINE HITS THE SHELVES

A national Kroger survey indicates 93% of consumers were inspired to try a new product after reading Kroger's in-store magazine, so we put pecans front and center in it. New advertising featuring the heart-smart power of pecans was featured in the summer issue. **251,000 copies were circulated in 515 stores across the country.**

Simple Planning for Easy, Heart-Smart Summer Meals

Save your family wholesome meals this summer without a full-on meal planning. Instantly boost the heart-smart nutrients in your meals by adding a bag of pecans to your weekly grocery list. Certified by the American Heart Association's Heart-Check™, American Pecans are a versatile ingredient for easy dinners, like this Pecan-Crusted Honey Mustard Salmon — a flavorful combination that comes together in a flash.

Discover more heart-friendly recipes and meal plans at AmericanPecan.com.

Pecan Crusted Honey Mustard Salmon in Foil

For the honey mustard:
 1/2 cup Dijon mustard
 2 tbsp honey
 2 tbsp olive oil
 2 cloves garlic, crushed
 Juice of 1/2 lemon
 about 2 tbsp
 1/2 tsp salt
 1/4 tsp pepper

For the salmon:
 2 lbs salmon filets
 1 cup pecans
 2 tbsp fresh parsley

- Heat a grill to medium heat. While heating, preheat honey mustard ingredients.
- Line a large baking pan with foil, coat with cooking spray and place salmon in the middle of the foil. Sprinkle honey mustard over the salmon, then top with pecans. Fold the foil over the top of the salmon so that it completely covered.
- Transfer the foil pack to the hot grill. Cook for 13-14 minutes or until salmon is almost cooked through. Carefully open the top of the foil and continue to cook for another 3-4 minutes or until salmon is cooked through.

SUMMER WITH PECANS

To drive year-round pecan demand, we encouraged consumers to think outside the pie with fresh, al fresco options in our "Effortless Summer Entertaining" feature. The article ran in local newspapers and their websites more than 1,000 times.



JULY 2019 MARKETING HIGHLIGHTS

RECIPES TO

Heart smart* content connects the nutrition interests of our target audience with easy-to-create weeknight recipes. "Crusted salmon" had a click through rate of 5.67%, **130% higher than the average for Google advertising.**



*According to the Food and Drug Administration, research suggests that diets rich in polyunsaturated fat and cholesterol may help reduce your risk of heart disease. One serving of pecans (28 grams) contains 18 grams unsaturated fat and only 2 grams saturated fat.



AMERICAN PECAN COUNCIL

INFLUENCERS CREATE KID-FRIENDLY RECIPES

We partner with influencers to share pecan recipes through channels that our target audience already trusts. The meal plan recipes by blogger Real Housemoms have garnered more than 223,000 impressions – that's 1.5x the daily circulation of the Atlanta Journal-Constitution!



REAL HOUSEMOMS



FAST & FLAVORFUL FAVORITES

QUICK DISHES HIT THE MARK

Research reveals consumers are **more likely to search recipes with "quick" and "simple" in them**, so we built meal plans that would appeal to these searches! Fast & Flavorful Favorites was the most visited meal plan this month.

PECAN LOVE

"We had the alfredo tonight. Even the "cauliflower-unsure" family members liked it. Will make it again!"

"I made the pecan alfredo! It was a hit and delicious!"

"Wow that pecan spread looks so good! I have to make that!"

"Doesn't even matter, if there's pecan, I'm all over it!"

"I love the pecan crusted tilapia - for all u fish lovers out there these pecans give the fish the perfect crunch."



GROWING INTEREST IN AMERICAN PECANS

We continue to introduce new content to engage our audience with pecan inspiration. Users are spending **50% longer on the website** than they did in July 2018.



MEAL PLANS IN PRINT!

Our Creamy Chopped Chickpea Pecan Salad was a half-page, featured recipe in the Chicago Sun-Times menu planner – with **485,000 online viewers reached and 114,000 printed copies circulated!**



AUGUST 2019 MARKETING HIGHLIGHTS

BACK-TO-SCHOOL INSPIRATION HITS HOME



family dinner ideas

Our paid search engine campaigns resonated with parents bracing for busy, back-to-school schedules. Serving up pecan recipes to those searching for "family dinner ideas" and "lunch ideas for kids" secured the **most campaign clicks and impressions** for the month of August.

We targeted users who had recently visited AmericanPecan.com or watched Superweeks social videos with our Kid-Friendly meal plan on Facebook. This garnered a **strong click-through rate of 3.48%** to AmericanPecan.com – more than twice our program benchmark!



AMERICAN PECAN COUNCIL



DID YOU KNOW?

The APC equips industry with tools to market. The Original Supernut! Visits to the site's Industry section have increased more than 26% year-over-year. **More than half of users are checking out the toolkit**, where they find campaign materials, tools, tips and more.



CLICKIN' - FOR - CHICKEN

The Baked Pecan-Crusted Chicken Tenders recipe was the most-visited page of the month – 14% of all pageviews!

FRESH FAMILY FAVORITES



Our article, "Simplify Back-to-School Dinners with Nutritious Meal Plans" highlights easy ways parents can add pecans to amp up the nutrition of their weeknight creations. The article **garnered 332 placements in print and online!**

INFLUENCERS ENCOURAGE ENGAGEMENT

We partner with influencers whose online communities closely match our target audiences. Our partner content garners an **average engagement rate of 20%** amongst a Gen X and Y target audience, **more than twice** our overall Superweeks campaign average!





SEPTEMBER 2019 MARKETING HIGHLIGHTS

“WHY PECANS MIGHT BE AMERICA'S NEXT HOT! FOOD”

Media outreach educates reporters – as well as their readers and viewers – on the powerful potential of The Original Supernut. This fall, American Pecans landed a feature on MSN.com, with a potential reach of 3.1 MM consumers.

“BEYOND A COUPLE OF DISHES, WHAT ARE PECANS GOOD FOR? PLENTY, AS IT TURNS OUT.”



BACK-TO-SCHOOL BROADCAST

As kids hit the books, American Pecans hit the airwaves. Registered dietitians in Atlanta and Boston shared quick and nutritious options for backpacks and weeknight meals, reaching almost 200,000 viewers.



Sharing pecans alongside salmon, a well-known heart-smart food, helps consumers connect pecans with other nutritious options. 90% of clicks to our Pecan-Crusted Salmon recipe came from people searching for salmon recipes online!



RECIPES LITTLE ONES LOVE

Our “Meal Plans Kids Love” meal plan accounted for more than half of all pageviews of our Superweek website section as moms search for nutritious inspiration for a busy back-to-school season.

“I AM GOING TO MAKE IT ON FRIDAY OR SUNDAY!”
“I COULD EAT THAT. WOW!!”



PLANT-BASED POWER

Showcasing pecans’ plant-based protein broadens our engagement with a growing group of plant-based eaters. Thanks to targeted social media content, our cost per consumer engagement was only a very efficient 5 cents!

NUTRITIOUS, DELICIOUS AND VERSATILE: MARKETING THE ORIGINAL SUPERNUT™

The 2018-2019 Fiscal Year was tremendously exciting for American Pecans. After introducing American Pecans, The Original Supernut to the world in April 2018, this was the year to kick our program into high gear. We focused on using the new brand to showcase the benefits of American Pecans as well as the powerful people behind the product.

While industry continued to face challenges – from higher tariffs to severe weather, we carefully built momentum for our national marketing program. Our commitment is to make the strongest use of industry dollars, driving the largest impact for you and your businesses.



Focusing On a More Targeted Audience

Leading up to and during the brand launch, we pursued widespread awareness of American Pecans. With early successes in generating domestic awareness and a streamlined budget that required the utmost efficiency, we built our next phase of marketing to specifically pursue those with the biggest potential for driving pecan purchases.

In the 2018-2019 Fiscal Year, we strategically narrowed our target to focus on one core audience: Generation X and Y mothers. This group has children at home and holds purchasing power for groceries. Health and wellness for their families is a top priority, and demanding schedules mean that accessibility and ease of use are paramount. By focusing our efforts on these consumers, we were able to make a bigger impact with the consumers who are most likely to drive pecan purchase.

Fueled by consumer trends and behavior analysis, 2018-2019 Fiscal Year marketing efforts focused on sharing new ways to use pecans. We knew that pecans were a favorite dessert nut, but getting on mom's recurring mental menu required creative content, strong partnerships – and most of all, direct connection with consumers to educate them about the versatility of our native nut.

Digital-first, Integrated Marketing

Changing consumers' behavior was dependent on communicating in places they already go for help to make decisions and where they are influenced by new products and ideas. As digital media continues to dominate today's culture, concentrating our efforts on social media, outreach to editors at digital publications, paid search and influencer partnerships were keys to success.

Throughout the three major campaigns in the 2018-2019 Fiscal Year – Super American Pecan-A-Thon, Super-fy, and Superweeks – our core

messages of taste, nutrition and versatility remained front and center. We took every opportunity to dig deeper into these dominant themes, as well as share more about the pecan's heritage.



SUPER AMERICAN PECAN-A-THON

(October-December 2018)



We kicked off the 2018-2019 Fiscal Year with one of our most ambitious and exciting events yet – The Super American Pecan-A-Thon. At the end of a tough year for the pecan industry, and as the holidays approached, we needed a strong push to drive consumer demand.

Food brands pull out all the stops during the holiday season, showcasing their most craveable recipes in the great race for a place on America's tables. But even with their status as a beloved holiday ingredient, we knew American Pecans had to do more than pump out festive recipes to break through the clutter and inspire our target audience to consider more pecan-based dishes during the season.

We turned to research to see if the resilience of the American Pecan farmer would resonate with our target of Gen X and Y moms. Turns out they were very invested in the economic wellbeing of American agriculture. In fact, in the top 20 media outlets that Gen X and Y moms frequent, more than 2,000 articles and 1.3 million social shares featured the economic wellbeing of American agriculture and the future of the industry.

We leveraged this finding, along with other pieces of research: these moms care deeply about serving their family high-quality, delicious meals and have interest in the origins of their food. Forty-three percent of Gen X and Y moms make an extra effort to buy locally grown foods at the grocery store, and 55 percent believe doing so supports the local economy.

Pledge Pecans for the Holidays

Armed with these insights, we set out to turn our target's passion for buying local, healthy food into a patriotic interest. We wanted to put the American Pecan industry forward and shine a light on their perseverance while driving people to make more pecan recipes during the holiday season. To accomplish our task, we created a one-of-a-kind variety show, The Super American Pecan-A-Thon, where we asked America to #PledgePecans for the holidays – a promise to make one more pecan dish, beyond the beloved holiday pie, in support of America's pecan growers.



The Super American Pecan-A-Thon was the first of its kind executed by a commodity board – a live, online variety show featuring recipes, home décor and entertaining ideas for the upcoming holiday season – all featuring America's native nut.

epicurious

To execute the production on a national scale, we partnered with one of the largest international media organizations, Condé Nast, and their brand Epicurious, one of the most visited websites for culinary inspiration in the world. Epicurious attracts expert and amateur cooks alike and is a popular site with our target audience. It's also founded on the basis of culinary exploration – perfect for a product seeking to go beyond its traditional sweet usage.

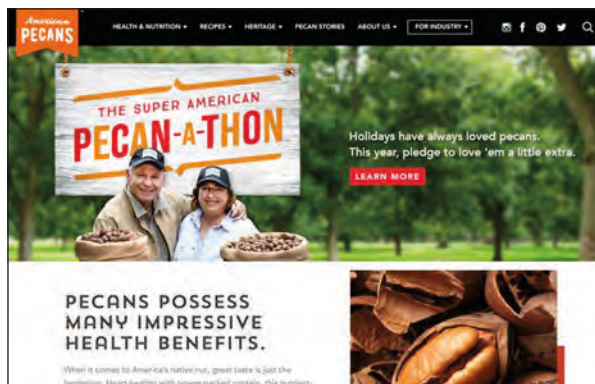
We researched the most searched-for recipes during the holiday period to be featured in the show – everything from main dishes and sides to drinks and holiday crafts. All of them highlighted the unexpected ways people can use pecans beyond the pie, from a Pecan Crusted Prime Rib to a holiday snow globe craft.






Holiday Inspiration, American Pecans Style

The show was hosted by comedian Wendi McLendon-Covey of hit TV shows and movies such as “The Goldbergs” and “Bridesmaids.” A cast of pecan growers and shellers from each region were the stars, lending candor and authenticity to the show as they took the stage to cook, share their stories, and mingle with social influencers, entertaining experts and culinarians, our celebrity host, and even a family band whose members were pecan growers! The show featured both growers and shellers representing the Western, Central, and Eastern regions. From the Western region, we had Heather Salopek (Grower, New Mexico) and Ben and Laura King (Growers, California). From the Central region, we had Kortney Chase (Grower and Sheller, Texas), Mike Spradling (Grower, Oklahoma) and the Iveys band, including Arlen (Grower, Texas), Sam, Jessica, Jenna, and Galen Ivey. From the Eastern region, we had Marianne Brown (Grower, Georgia).





Past the pie: Pecan growers share various uses for nuts on new web show



Tulsa-area pecan growers Mike and Lotsee Spradling serve as the public faces for the American Pecan Council's "Super American Pecan-A-Thon" web show.

Say the word "pecan" — however you might pronounce it — and the first thing most people think of is pie.

And that is something the American Pecan Council is hoping to change.

"Don't get me wrong," said Mike Spradling, whose Flying G Ranch and pecan orchard near Catoosa is home to hundreds of varieties of pecan trees spread out over 670 acres. "There is absolutely nothing wrong with the classic pecan pie. But we're wanting to get people to realize that pecans can be used in all sorts of ways."

A true celebration of the rich history and diverse backgrounds that make up America's pecan industry, The Super American Pecan-A-Thon aired on November 20 – one of the most popular days for online recipe searches – on AmericanPecan.com and had its own dedicated landing page where site visitors could tune in and find recipes from the show.

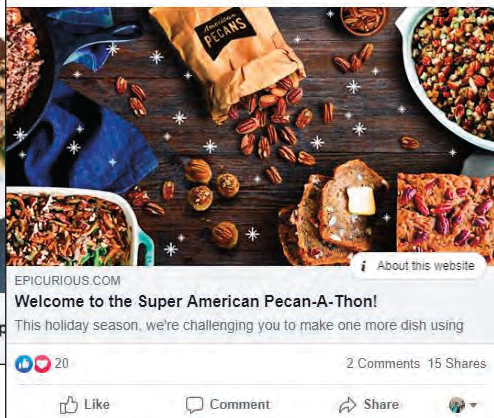
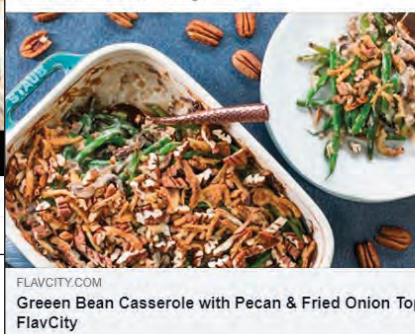
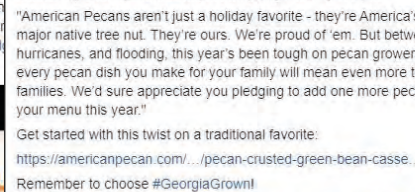
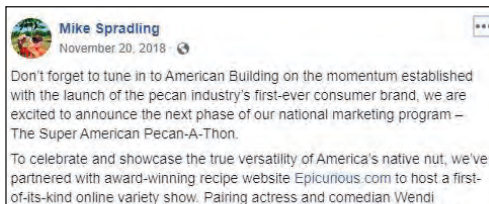
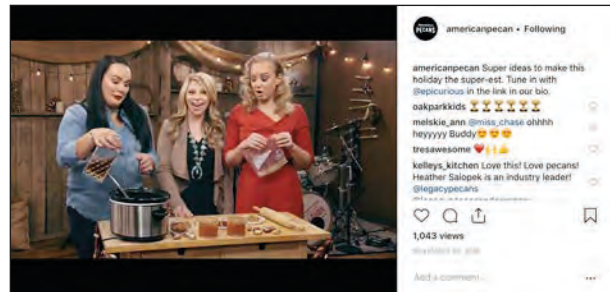
The show simultaneously screened on Epicurious.com and was supported via paid promotion through Condé Nast. It was also promoted on social media through paid campaigns targeted directly at Gen X and Y moms with an interest in cooking.

We pitched national, local and trade media to drive further awareness and emphasize the connection to the pecan growing community. The outreach resulted in articles like the *Tulsa World* piece, "Past the Pie: Pecan growers share various uses for nuts on new web show," as well as a tune-in announcement and interview with Executive Director Alex Ott on RFD-TV.

Industry in the Spotlight

Industry involvement was particularly powerful during this campaign, which featured so many industry members themselves. Promotional social media posts and supportive likes, comments, and shares of the show helped drive impact and raise awareness of the campaign.

The Super American Pecan-A-Thon drove more than 163,000 pledges comprised of recipe clicks on Epicurious.com and AmericanPecan.com. That's 163,000 moments of inspiration driving home pecans' place outside the pie shell. The Pecan-A-Thon also saw 11 million interactions including clicks, site page views, shares, likes, comments and video views. The show was watched 29,000 times on Epicurious and AmericanPecan.com.





SUPER-FY

(January-March 2019)



The beginning of the 2019 calendar year brought a renewed focus on health and wellness. To take advantage of the strong cultural interest in healthy living, we introduced the Super-fy campaign. The campaign showed how pecans can amp up the nutrition and taste of average meals and snacks, taking any dish from simple standby to super standout. We encouraged consumers to keep American Pecans in their fridge or freezer so they can easily add them to any recipe, from snacks and appetizers to sides and main dishes.

Heart-Smart* with Pecans

Our media relations efforts focused on educating Americans on the health benefits of pecans and offering quick, easy ways to incorporate them into diets. We wrote and released an article, "Simple Ways to be Heart Smart" to newspapers

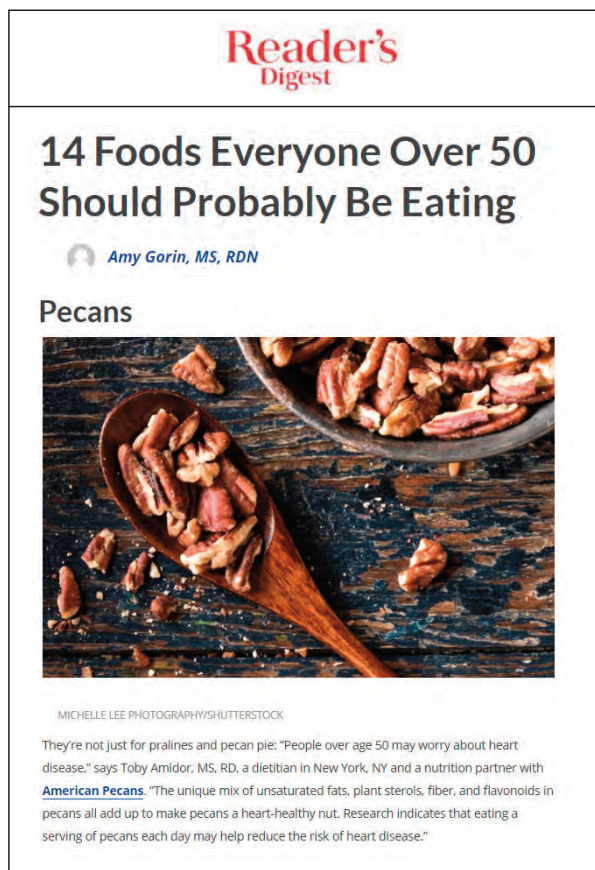
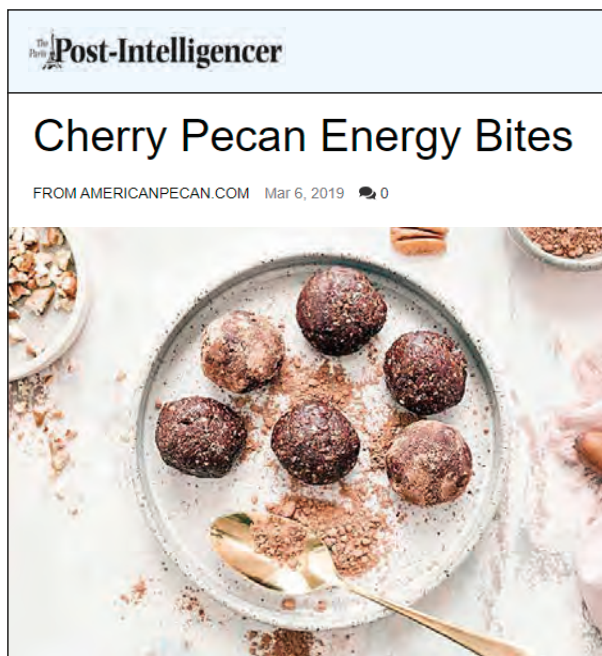
and magazines nationwide in the last week of January, right on the cusp of American Heart Month in February. In addition to the heart-smart* qualities of pecans, the article featured the recipe for Cherry Pecan Energy Bites, an ideal fit for our Gen X and Y mom target audience who wants quick and kid-friendly options.

To further insert American Pecans into the healthy habits conversation, we partnered with registered dietitian Andrea Luttrell for broadcast news segments to highlight pecans alongside other heart-healthy* ingredients. The segment aired in markets on the East Coast to reach consumers beyond the Pecan Belt.

*According to the U.S. Food and Drug Administration, scientific evidence suggests but does not prove that eating 1.5 ounces per day of most nuts, such as pecans, as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. One serving of pecans (28g) has 18g unsaturated fat and only 2g saturated fat.

From Daily Newspapers to Supermarket Magazines

We also tapped into relevant cultural moments to tell the Super-fy story. From New Year's resolutions to the Super Bowl, we secured coverage featuring American Pecans and new signature recipes in outlets such as *Reader's Digest*, the *San Diego Union Tribune*, *Times News* (Lehighton, Pennsylvania), *Paris Post-Intelligencer* (Paris, Tennessee) and *Arkansas Gazette*.



As we work to increase demand and purchase of pecans, where better to do that than at the supermarket where people buy groceries? We partnered with Kroger's *Live Naturally* magazine to release a heart-focused feature in four major markets nationwide: Kroger Atlanta, Kroger Southwest (Texas, Louisiana), Ralph's of California and Kroger Mid-Atlantic (West Virginia, Virginia, North Carolina, and Tennessee).

By combining pecan nutrition information with the seasonal interests of our audience, we created an engaging article featuring one of our summer grilling recipes.




Simple Planning for Easy, Heart-Smart Summer Meals

Save your family wholesome meals this summer without fuss with simple meal planning. Instantly boost the heartsmart nutrients in your meals by adding a bag of pecans to your weekly grocery list. Certified by the American Heart Association's Heart-Check®, American Pecans are a versatile ingredient for easy dinners like the Pecan-Crusted Honey Mustard Salmon—a flavorful combination that comes together in a flash.

Discover more heart-friendly recipes and meal plans at AmericanPecans.com.

Pecan Crusted Honey Mustard Salmon in Foil serves 6-8

<p>For the honey mustard:</p> <ul style="list-style-type: none"> - 1/4 cup Dijon mustard - 2 tbsp honey - 2 tbsp apple cider vinegar - Juice of 1/2 lemon - 1/2 tsp minced garlic - 1/4 tsp sea salt 	<p>For the salmon:</p> <ul style="list-style-type: none"> - 2 lb salmon filets, skin on or off - 1 cup pecan pieces - 2 tbsp fresh parsley 	<ol style="list-style-type: none"> 1. Heat a grill to medium heat. While heating, combine honey mustard ingredients. 2. Line a large baking sheet with foil, coat with cooking spray and place salmon in the middle of the foil. Spoon honey mustard over the salmon, then top with pecans. Fold the foil over the top of the salmon so that a compartment is created. 3. Transfer the foil pack to the hot grill. Cook for 10-12 minutes or until salmon is almost cooked through. Carefully open the top of the foil, and continue to cook for another 2-3 minutes or until salmon is cooked through.
---	--	--

*Heart-Check® certification does not apply to this recipe.
According to the American Heart Association, "saturated" doesn't mean "not good for you." It's a source of essential nutrients, such as protein, which is part of a diet recommended for heart health. The fact is, you need some saturated fat to stay healthy. One serving of pecans (28 grams) contains 10 grams unsaturated fat and only 2 grams saturated fat.




Retail Dietitians Spread the Word

In 2019, we strengthened important relationships with retail dietitians. They helped present pecans as a versatile ingredient, reinforcing its heart-smart* benefits and bringing its taste to life with product samples and recipe demonstrations. These RD partners received The Original Supernut Dietitian Toolkit filled with educational materials and branded signage for in-store demos and displays. Twenty-three retail dietitians nationwide used the campaign toolkit and conducted demonstrations with American Pecans in-store – right as consumers are considering what items they are going to purchase.



With recipe inspiration, recommended social media content and nutrition information, the toolkit allowed supermarket RDs to take their in-store support of pecans to new heights. Several RDs expanded on these kits, featured content on their social channels and highlighted The Original Supernut in local news coverage.

In April during National Pecan Month, RD and social media influencer Mia Syn shared the pecan love in a TV cooking demo in Charleston, SC and with her 84,000 Instagram followers by posting about six different ways to use pecans “outside the pie.”



SUPERWEEKS

(April-September 2019)



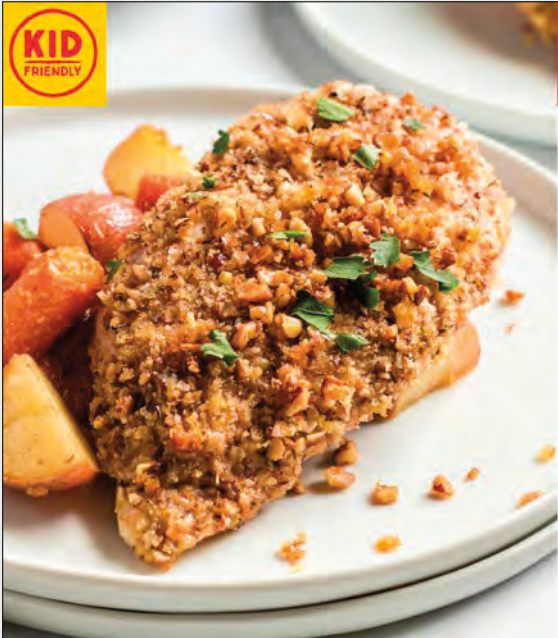
Throughout the spring and summer, we capitalized on the success of the Super-fy program by evolving it into Superweeks. We knew that the back half of the year had to be extremely hardworking, stretching dollars to target the people with the greatest volume potential for pecan purchase, while leveraging our strongest value adds – nutrition and taste. In order to make pecans an everyday cooking and snacking staple for our audience, we needed to insert ourselves in the everyday process of meal planning. We wanted to encourage our audience to make a simple, definable change – to purchase one bag of pecans per week – and convince them to do so through a campaign that showcases the versatility and value of pecans.

This campaign leveraged the popularity of meal planning by offering ideas on how one bag of pecans could be incorporated into a week's worth of family meals. We outlined the many uses for pecans to our target audience (Gen X and Y moms) as they planned their meals for the week. We also tapped into their desire to put creative, family-friendly dishes on the table.

**MAKE EVERY WEEK A
SUPERWEEK
WITH THE ORIGINAL SUPERNUT**

Pecan-Inspired Meal Plans for All

By showing how versatile just one bag of pecans can be, we encouraged our target audience to add them into their weekly grocery hauls. Each week of the campaign, we released a new selection of pecan-inspired recipes for families to enjoy during busy work weeks. The meal plans highlighted seven themes – Heart Health, Gluten Free, Kid-Friendly, Plant-Based, Magic Number, Energy and Summer Socials – that were informed by extensive research into the lifestyles, and dietary needs and goals of our target audience. The research focused on themes with the highest search volume, social conversations and earned conversations on a monthly basis tailored to our target.



PECAN CHICKEN SHEET PAN DINNER

Prep time: 15 minutes
Cook time: 25 minutes
Total Time: 40 minutes
Serves: 5

INGREDIENTS

<p>CHICKEN</p> <ul style="list-style-type: none"> 2 boneless skinless chicken breasts (about 1½ pounds) 1 teaspoon salt ¼ teaspoon black pepper 1 cup finely chopped fresh pecan pieces ½ cup panko breadcrumbs ½ tablespoon salt 1 tablespoon dried thyme 1 tablespoon garlic powder 2 eggs Fresh parsley for garnish 	<p>VEGGIES</p> <ul style="list-style-type: none"> 1 pound quartered baby red potatoes 1 pound baby carrots 3 tablespoons olive oil ½ tablespoon salt ¼ teaspoon black pepper
---	--

METHOD

FOR THE VEGGIES

1. Preheat oven to 400°F
2. Spray a sheet pan with non-stick cooking spray or oil. Place potatoes and carrots on the pan and toss with olive oil and ½ tablespoon salt and ¼ teaspoon pepper.

FOR THE CHICKEN

1. Slice chicken horizontally into 4 cutlets. Season with 1 teaspoon salt and ¼ teaspoon pepper.
2. In a shallow bowl combine the pecans, bread crumbs, ½ tablespoon salt, thyme, and garlic powder.
3. In a separate bowl, beat the eggs.
4. Dip chicken in eggs, then dredge in the pecan mixture, coating both sides. Place on the sheet pan.
5. Place sheet pan in oven and bake for 10 minutes. Flip the chicken over and stir the vegetables. Cook for an additional 10 minutes, until chicken is golden brown and juices run clear. Remove chicken from sheet pan and transfer to a plate to rest. Cook the vegetables for an additional 5 minutes.
6. Garnish with parsley if desired.

NUTRITION FACTS PER SERVING

Based on 1 chicken breast

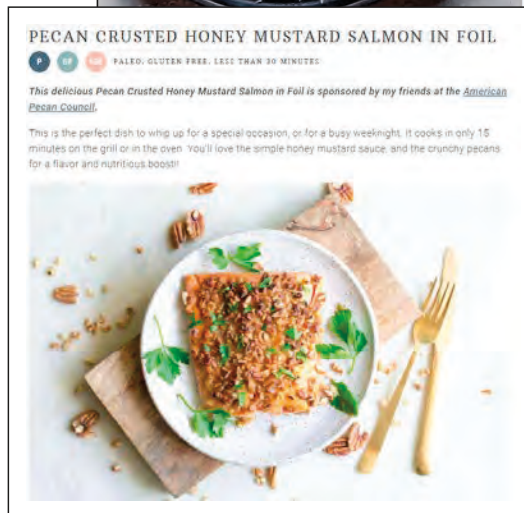
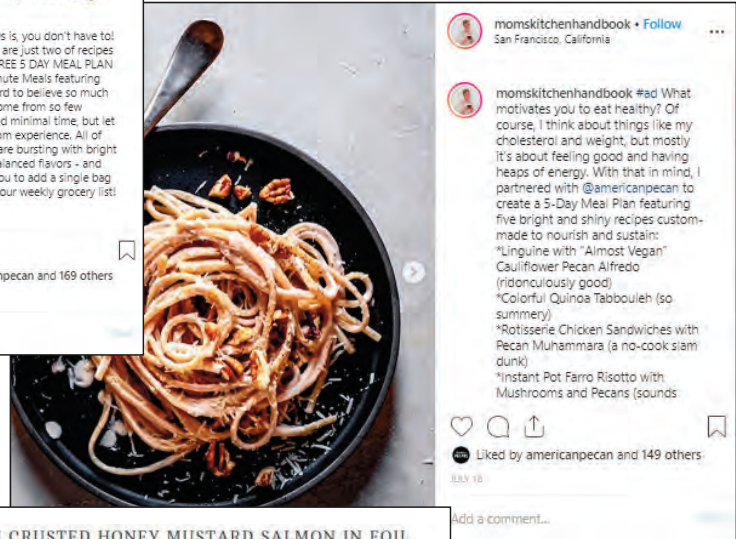
Calories: 429	Fat: 28 g
Saturated Fat: 3 g	Cholesterol: 94 mg
Sodium: 2970 mg	Carbohydrates: 31 g
Protein: 17 g	Fiber: 7 g
Sugar: 7 g	



[f](#) [t](#) [i](#) [p](#) @AmericaPecan | AmericaPecan.com

Digital Content and Partnerships Drive Efficient Results

We partnered with influencers and bloggers who specialize in creating meal-planning guides and menus to develop content as well as promote the program on blogs that our audience already loves to read. We leveraged traditional media outreach to share the Superweeks message with news outlets nationwide, as well as paid social media advertisements targeted to our audience.



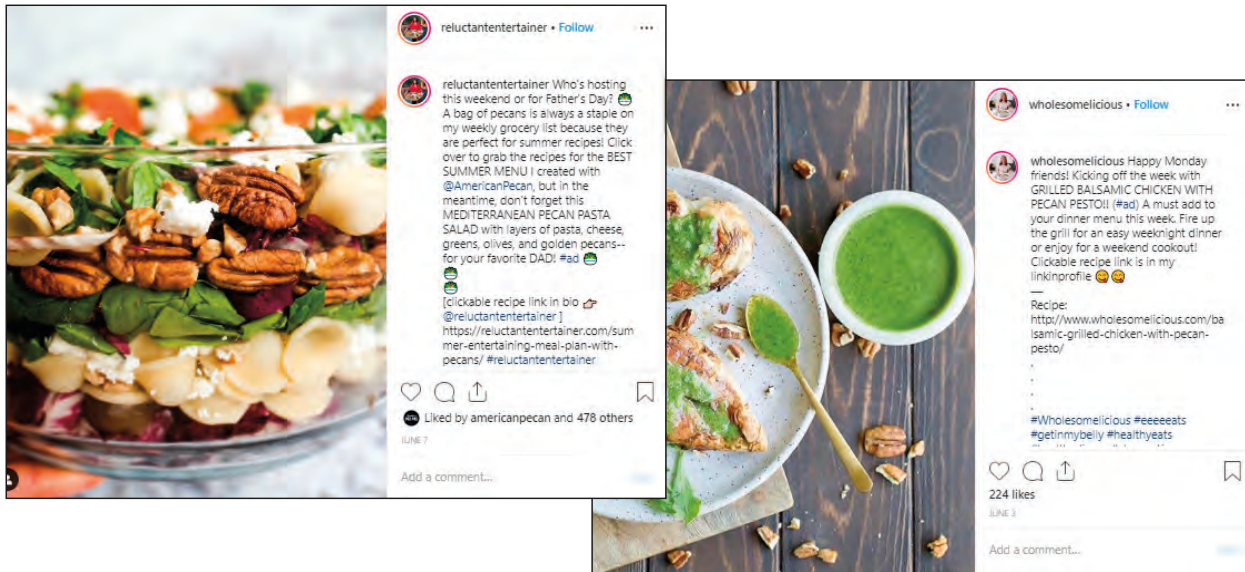
joyful healthy EATS



mom's kitchen handbook
— Raising Fresh-food Kids in a French-fried World —

REAL HOUSEMOMS
• REAL IDEAS FOR REAL LIFE •

Wholesomelicious
Wholesome Ingredients. Delicious Food



The campaign garnered more than 16 million video views across Facebook, Instagram, Pinterest and Twitter. This content continued to drive traffic to the website, with 80,000 link clicks from social media posts and an efficient cost of just four cents per click.

- dkhealthcoach** Love using pecans in my healthy cooking. 😊
- zyia_jersey_girl** Pecan Alfredo sounds absolutely amazing! Totally snagging these recipes!
- jessicaspiro** Wow that pecan spread looks so good! I have to make that!
- tidymom** Pecans make everything better! This looks fabulous
- goodfoodmadesimple** This whole menu looks amazing! These recipes would definitely make the back to school season a little bit easier 🍪
- streetsmart.rd** You're talking my love language with pecans and pasta!!
- maliceng848** ❤️ Cauliflower Pecan Alfredo
- beautifuleatsandthings** This recipe looks so delicious! 🍴

Media Results from Coast to Coast

To support the campaign in newspapers and online, we wrote and released an article titled "Simplify Back-to-School Dinners with Nutritious Meal Plans" to hundreds of news outlets nationwide. The article – which featured the nutrition benefits of pecans plus tasty, weeknight-friendly options such as Pecan-Crusted Air Fryer Pork Chops – was distributed in July and August for the start of back-to-school season. The article ran in print and online news outlets more than 1,000 times in all 50 states, including the *St. Louis Post-Dispatch*, *The Advocate* (Baton Rouge, Louisiana) and *The Southern Maryland Chronicle*.

We were also featured in the May 27 issue of *OK! Magazine*, a top national entertainment magazine, with our Baked Pecan-Crusted Chicken Tenders in the "Things We're Obsessed With" section, reaching an audience of more than 2 million consumers.



Simplify Back-to-School Dinners with Nutritious Meal Plans

MISSION, Kan., July 29, 2019 /PRNewswire/ -- (Family Features) Back-to-school season can be cluttered between after-school activities, weekend sports and evening homework – as well as making dinner each night. Creating a master meal plan with quick, simple and nutritious meals is an easy way to take control of your family's hectic schedule. Start by stocking the pantry with staple ingredients that amp up the nutrition and flavor of your family favorites.



BAKED PECAN-CRUSTED CHICKEN TENDERS

With plant protein, fiber and good fats, **American Pecans, The Original Supernut™**, are a nutritious, delicious and versatile ingredient, making them the perfect addition to weekly grocery lists and meal plans. Just one bag of pecans goes a long way in making dishes more wholesome and flavorful.

Finely chopped pecans are an excellent gluten-free swap for bread crumbs, whether you're topping pastas and casseroles or adding a crispy crust to chicken, fish or pork.

Pecans also provide a more nutritious crunch to salads than croutons, and ground pecan meal is a gluten-free option for flour.

This recipe for Baked Pecan-Crusted Chicken Tenders brings a gluten-free twist on a family favorite. Simple to make, it will become a go-to dish for everything from backyard summer gatherings to brown-bagged work lunches.

For more recipes and inspiration featuring The Original Supernut™, visit americanpecan.com.



INGREDIENTS

- 1 1/2 to 2 lb. chicken breast tenders or chicken strips
- 2 cups raw pecan halves or pieces
- 1 cup gluten-free bread crumbs
- 1 tsp garlic powder
- 1/4 tsp cayenne
- 1 tsp salt
- 3 large eggs
- 1 cup gluten-free flour blend

METHOD

1. Preheat oven to 425 degrees.
2. In a food processor, pulse pecans until as fine as bread crumbs. Mix pecans along with bread crumbs, garlic powder, cayenne and salt in a shallow bowl.
3. In another shallow bowl, whisk eggs until smooth.

4. Lightly season chicken tenders with salt and pepper. Working with one chicken tender at a time, dip in eggs, flour, eggs and then pecan mixture (be sure to press the pecan mixture onto the chicken so it's completely coated). Set chicken on a baking sheet lined with a

- cooling rack or parchment paper. Repeat with remaining chicken.
5. Place chicken on center rack and bake for 20 minutes, until golden brown and cooked through.
6. Serve pecan-crusted chicken tenders warm. If desired, pair with a buttermilk ranch dip.

58 MAY 27 2019 OK!

MISSION, Kan., April 26, 2019 (GLOBE NEWSWIRE) -- (Family Features) Summer means it's time to stock up on fresh produce and light the grill for a season of outdoor gatherings with friends and family. Make entertaining easier with flavorful options that can make menu-planning a breeze all summer long.

A nutritious and versatile ingredient, American Pecans can be your secret weapon for a variety of entertaining occasions. Add one bag of pecans to your shopping list and transform standby recipes into wholesome and delicious meals and snacks for the whole crowd.

Enjoy the long summer nights on the back porch with a Spiced Pecan Grilled Peach Salad, packed with the essential flavors and textures of summertime. Or serve up Pecan-Crusted Asian Turkey Meatball Lettuce Wraps, a light and delicious appetizer or easy entree to keep guests satisfied.

Discover more summertime entertaining recipes and cooking tips at AmericanPecan.com.

Spiced Pecan Grilled Peach Salad with Goat Cheese



Retail Dietitians Promote Health Benefits

On local broadcast TV segments in July, registered dietitians Amy Goodson and Annessa Chumbley presented pecans as a source of protein that make for a delicious snack and recipe addition. They explained the pecan’s health benefits and how the nut is ideal for effortless summertime entertaining, sharing our Pecan Berry Green Salad as an impressive option. The segments reached more than 25,000 viewers, connecting them with the easy entertaining options of The Original Supernut.

In building our relationships with supermarket RDs, we partnered with one of their most trusted sources – the Retail Dietitians Business Alliance (RDBA). The RDBA’s newsletter is distributed to more than 2,200 members nationwide, and in the May and June issues, American Pecans provided an opportunity for RDs to download the RD toolkit and Superweeks content.

LOOK AHEAD TO 2019-2020 FISCAL YEAR CONSUMER MARKETING

The goal of our 2018-2019 Fiscal Year efforts continues into the 2019-2020 Fiscal Year: increase demand for pecans by showing consumers they are not just a traditional sweet ingredient, but rather a superfood with delicious and nutritious offerings for all meals, seasons and lifestyles.

A Pie Full of Holiday Inspiration

We started the new fiscal year with a bang and broke through the typical holiday coverage with a national showstopper – the Pecan ThanksEverything Pie. The wacky creation was born out of the desire to disrupt newsfeeds and news cycles to reach our audience during a typically cluttered time period. To do that, we needed a breakthrough way to show how pecans are a crucial ingredient in both sweet and savory dishes during holiday celebrations. We partnered with Brooklyn-based pie bakers and sisters Melissa and Emily Elsen of Four & Twenty Blackbirds pie bakery to develop the Pecan ThanksEverything Pie, a creation with eight unique slices each representing a different holiday dish.

From national media coverage to deskside meetings with editors in New York City and robust paid social media support, the campaign provided a strong start to the 2019-2020 Fiscal Year at a peak time for pecan sales. The Pecan ThanksEverything Pie drew national media attention and was one of our most successful campaigns to-date, putting pecans front and center as a must-have holiday ingredient.

Media outlets such as *Thrillist*, *Reader's Digest*, *Good Housekeeping*, *Rachael Ray Every Day*, *Delish*, *Taste of Home* and more ran stories or posted on social media about the Pecan ThanksEverything Pie and highlighted ways to incorporate pecans into holiday meals.



delish

This Pie Is An Entire Thanksgiving Meal In One, So There's No Need To Cook This Year




Managing to cook the turkey, stuffing, green beans, and all the other [Thanksgiving](#) fixings at the same time is no easy task. It's no wonder that sometimes we need to turn to [mixes](#) instead of the homemade stuff. Now there is a pie that has every dish that you'd find on the Thanksgiving table.

American Pecans partnered with [Four & Twenty Blackbirds](#), a Brooklyn-based

Taste of Home

This Gorgeous Pie Is Your Favorite Thanksgiving Dish in Each Slice

 Colleen Duvall

Updated: Nov. 12, 2019



COURTESY AMERICAN PECAN

You can't say the four food groups aren't represented.

For most of us, making one or two [tasty pumpkin pies](#) is where the Thanksgiving baking begins—and ends. But sisters Emily and Melissa Elsen, the co-owners of a bakery in Brooklyn, wanted a challenge this year.

The duo created a [pecan ThanksEverything pie](#) to pack all kinds of Thanksgiving goodness in one crust. If you enjoy your turkey, cranberry sauce and mashed potatoes all mixed up together, this one's for you!

The Superpowers of Pecans

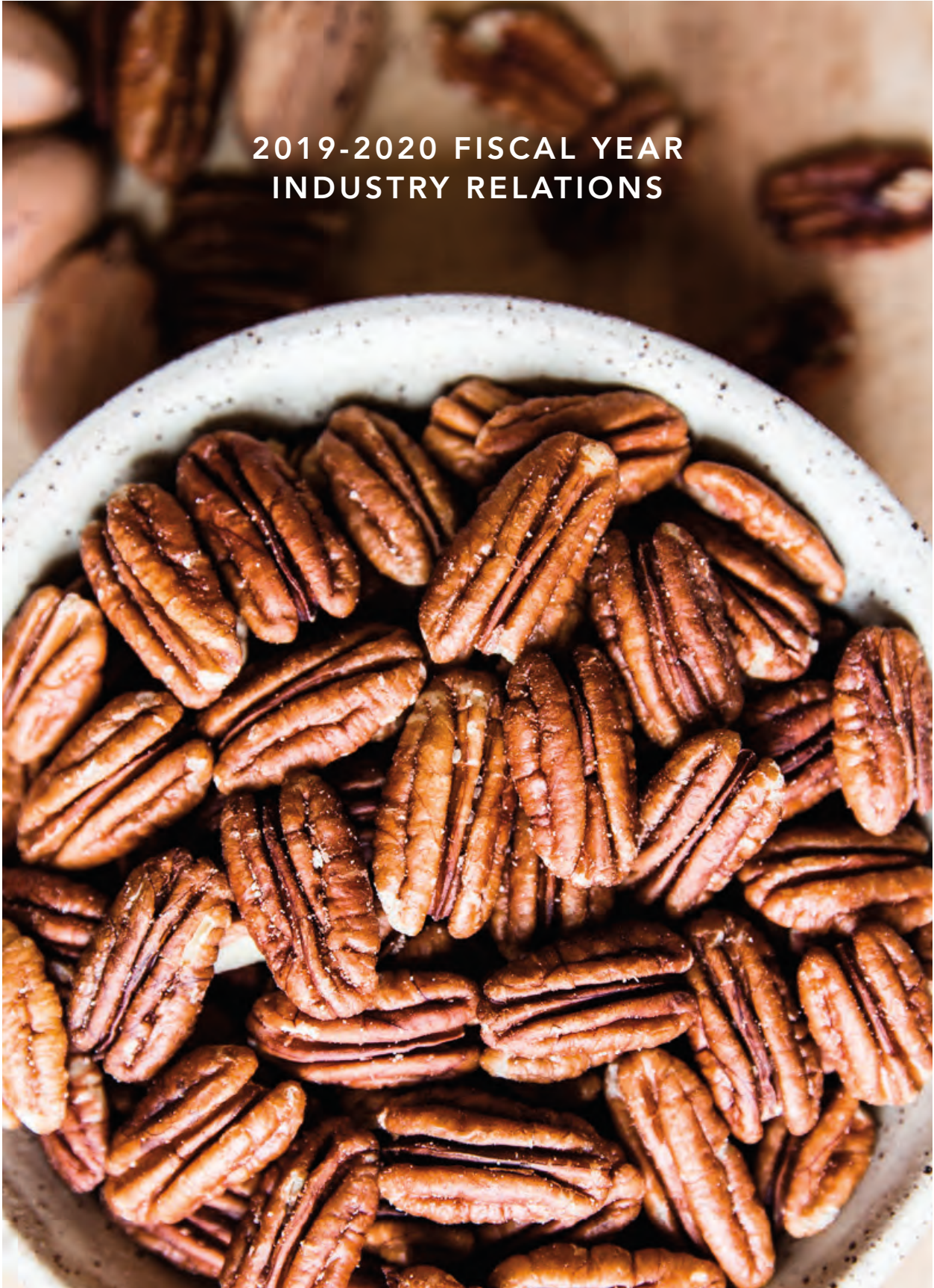
To ring in the new decade, American Pecans introduced The Superpowers of Pecans, a content series created in the comic-book style of superheroes, which are dominating today's movie and media culture. The series promotes the nutrition qualities of pecans as superheroes in their own right, acting as the ultimate sidekick to help busy consumers power through their packed schedules.



As the year continues, American Pecans will continue to build a marketing program fueled by strong consumer analysis and social media targeting, as well as events, activations and content informed by what is relevant and popular in today's culture. In order to break pecans out of the harvest and holiday dessert pattern, we're continuing to share pecan recipe inspiration at unexpected times and around some of the biggest celebration moments in culture today.

As we work in earned, paid and social media, we are committed to constant improvement. We continually evaluate the performance of our marketing program to inform what we create next, ensuring that we optimize every step of the way and use industry dollars effectively.

2019-2020 FISCAL YEAR
INDUSTRY RELATIONS



COMMITTEE SUMMARY

The U.S. pecan industry is spread across 15 growing states from California all the way to North Carolina.

Each region and even each state is very unique and face many different challenges to overcome. Prior to the Federal Marketing Order, there was a lack of transparency and visibility across stakeholder groups leading to limited cooperation among stakeholders, fragmented and duplicated efforts, and inefficiencies in the pecan market – the industry has never had a uniform strategic vision before. With such diverse dynamics, it is very important to encourage coordination among stakeholders and unify industry efforts to make the biggest impact.

The focus should be shifted to fighting the “nut war”. The Industry Relations committee goal is to unite pecan stakeholders through regular communications and clarity around the APC strategic plan. APC will provide ongoing communications about its strategy and progress and encourage partnership and coordination with other industry associations to maximize impact. The APC is dedicated to helping unite the industry behind one common goal of growing pecan demand and awareness.

The American Pecan Council keeps industry up to date on current issues and items with active communications through multiple channels such as the bi-weekly newsletter, industry publication articles, and engagement with other trade media sources. APC has presence at each pecan association conference and meetings and other outreach opportunities in order to meet industry members across the fifteen growing states.

In the past, the industry has depended on limited and unreliable data. In light of this, APC is focused on providing reliable and accessible data sources that support decision making. The FMO mandates handlers of pecans to submit monthly data regarding their operations. Currently, APC compiles and publishes this data through industry with monthly pecan industry position reports posted on AmericanPecan.com & sent to the broader industry in order to establish fair and transparent data.

The Pecan Industry Position Reports coupled with other funded projects such as USDA NASS surveys and Land IQ pecan acreage surveys enable industry members to make more informed business decisions. All of these items create regular communications about APC’s strategy and progress to the broader industry to create a unified stakeholder base with a common strategy, working together to benefit American pecan industry. To keep up to date on the Council and all the programs and activities, we encourage industry members to register on the American Pecan website under the “For Industry” tab to keep up to date with the Council.

Committee Chair

Deborah Walden-Ralls

Committee Members

- Buck Paulk
- Angie Ellis
- Mike Adams
- Mike Spradling
- Louie Salopek
- Phillip Arnold
- Adam Harrell
- Dan Zedan
- Ron Hays



UNITING AND EQUIPPING THE AMERICAN PECAN INDUSTRY

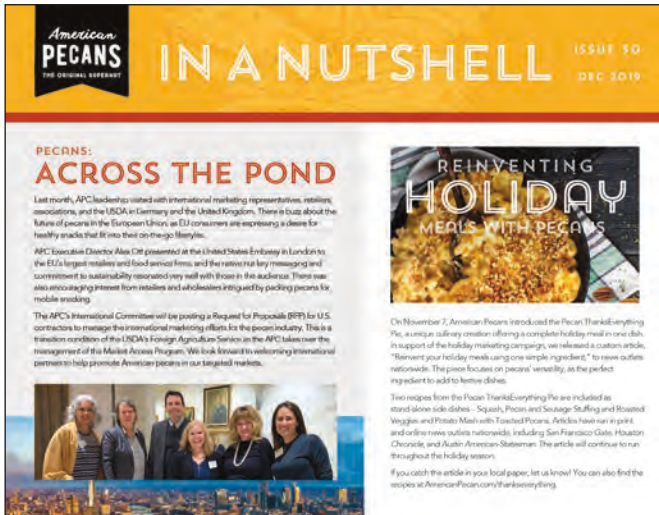
This past year was one of the more challenging years that our industry has experienced, but one in which perseverance and collaboration continued to move the industry forward. The beginning of the fiscal year was marked by continued international changes, and tariff pressures dominated much of industry conversation. In addition, the devastation of severe weather, especially Hurricane Michael in the Southeast, forced much of industry to recover and rebuild.

Throughout these challenges, we were given the opportunity to continue unprecedented measures of unification and forward momentum for the future of American Pecans. The creation of the Pecan Congress kicked off and provided an opportunity for 22 industry organizations to come together for the first time in pecan history. The event provided an opportunity for each of the organizations to update each other on activities and while creating synergies on like minded projects. This forum has become an invaluable part of information sharing for the industry on hot topic and important issues that impact the marketing of pecans.



UPDATES AND COMMUNICATIONS

Our commitment came with an increased volume and depth of industry communications in the 2018-2019 Fiscal Year. A key resource to keep industry abreast of news, the In a Nutshell newsletter was distributed via email twice per month to more than 3,000 recipients, detailing APC regulatory, policy and marketing initiatives and updates. Dedicated e-blast announcements shared details of important industry events, marketing campaign launches, or other issues that required special attention.





Your Dollars at Work

In addition to this regular communication, this fiscal year, we introduced the Monthly Marketing Highlights. These reports were developed in direct response to industry requests for a short, easy-to-read, frequent update on marketing initiatives. The new monthly progress report, which features the ongoing success and development of the domestic marketing program, is the most frequently visited item in our Industry Toolkit.

Each report offers a handful of data points that demonstrate the tangible impact of marketing efforts. It also provides insights on a variety of different tactics, including paid social media, traditional earned media coverage and work with bloggers and influencers. The report not only shows increased awareness of pecans as a versatile ingredient, but also consumer actions that demonstrate purchase intent, like website recipe views.

Industry in the News

We also strengthened our relationships with trade and local media outlets in pecan-growing markets. The American Pecan Council continued to contribute regularly to *Pecan South*, *Georgia Pecans* and *West Coast Nut*, with articles covering a breadth of topics and updates on APC activities such as social media, measuring success, marketing strategies and campaign themes. Around large marketing campaign launches, we secured coverage featuring our industry members and the APC in trade outlets such as RFD-TV and local media such as *Tulsa World*.

RECORD-SETTING SITE VISITS
Thanks to media coverage and paid social media advertisements, there were **nearly 150,000 site visitors in November** - the most monthly visitors since we launched!

PECAN LOVE @
"Made this tonight and the goat cheese log and honey pecan spread were amazing. I felt so fancy. Thanks for the inspiration!"
"Omg! So perfect!!!! 🍴👍 Saving this for sure!"
"These look incredible!!" "Love pecans so so much!"
"Just started following @Americanpecan thanks!"

CONSUMERS ARE STAYING TO BROWSE!
As we work to engage consumers on the benefits and many uses of pecans, we look at time spent on the site as an indicator of interest in this content. Time on the site in November **increased 40% from this time last year!**

AMERICAN PECAN COUNCIL

SOCIAL CONTENT HITS THE MARK
The Pecan ThanksEverything Pie was a showstopper, and social media videos of the pie reached viewers nationwide. We **cut our cost per video view in half** from our last campaign. Thanks to appealing content, which resonated with more of our target audience, we stretched your marketing dollars even further.

COST PER CLICK AT AN ALL-TIME LOW!
Reaching consumers who are searching for recipes gives us a great opportunity to influence those preparing to buy ingredients. We used paid search terms to drive consumers to pecan recipes on our website as they searched for holiday inspiration. Compared to last December, our cost per click to the site was **53% lower** at 92 cents, demonstrating increasingly efficient targeting and relevant keywords.

AMERICAN PECAN COUNCIL





IN A NUTSHELL

Issue No. 6

OCTOBER 2018

HURRICANE MICHAEL

Our thoughts and prayers are with all of those affected by the devastation of Hurricane Michael this week. For additional information, please see communication titled "Hurricane Michael & Disaster Assistance Information."

THE SUPER AMERICAN PECAN-A-THON

Mark your calendars – our next show-stopping pecan event is launching in November! Just ahead of the Thanksgiving holiday, we are partnering with top recipe site Epicurious to host the Super American Pecan-A-Thon. The interactive, online variety show is designed to reach our target audience through Conde Nast owned properties Bon Appetit, Self, Conde Nast Traveler and more. Growers will appear alongside a celebrity host and influential food and lifestyle bloggers to share recipes, cooking tips, home décor and entertaining ideas all featuring The Original Supernut.

To further the movement, viewers will be encouraged take the #PecanPledge, a promise to make one more dish beyond pie this holiday season in support of American Pecan growers.

GET INVOLVED

Harvest is upon us, and the holidays aren't far behind – a time of year when pecans are top-of-mind with consumers. In our first harvest season as The Original Supernut, we're aiming to celebrate the heritage and holiday traditions of our native nut, while encouraging our target audience to think beyond the pecan pie. Our next phase of marketing activities includes an online variety show encouraging recipe lovers coast to coast to pledge to make one new recipe with pecans this holiday season, in addition to their tried-and-true favorites.

As we continue to drive towards our goal of changing perceptions and raising demand, we want you to be a part of the American Pecan story. There are several ways you can get involved:

Share Your Story:

Help us personalize American Pecans with stories of the families behind the nut we love and the journey from field to fridge. We're collecting photos and videos that tell your story – prize-winning trees, planting kickoff, celebrations of a healthy yield, vintage family photos or videos of the farm

and field and more. If you'd like to share, please [upload your images/videos here](#) by Friday, 10/19. We are happy to provide further direction or answer any questions you might have before then.

Share Your Product: Many Americans aren't familiar with the taste, color, and texture of a real, fresh pecan – and we're aiming to change that. **We're in need of fresh, beautiful pecans and/or pecan oil** to feature during our variety show and via our social influencer partnerships. If you're interested in donating, please respond to this email by Friday, 10/19 so we can provide further shipping instructions.

Share Your Thanks: Our goal is to share a personalized thank you on behalf of the industry for folks who take the #pecanpledge. That's where you come in! If you have a smart phone and are willing to take a video, we are looking for you. Simply record yourself saying the below script and [upload the file here](#) by Friday, 10/19

Sample Script:

We'd love it if you would take the Pecan Pledge and give a new American Pecan dish a try this holiday. We hope our recipes will make your family as happy as you've made ours. Thank you!

We will cut to a series of "Thank you"s together to end the video.

Helpful Tips:

1. Shoot your video outdoors if the weather permits in front of your pecan orchard or barn
2. Make sure to speak clearly so that the sound is captured
3. The light should be shining towards you, not behind you
4. Shoot your video horizontally

We are grateful to the industry for your willingness to support this FMO, and are excited to kick off another campaign in celebration of The Original Supernut and the people behind it. We'll share more about the Pecan-A-Thon in the weeks ahead.



Visit our website or social channels for these seasonal recipes (L:R: Slow Cooker Mulled Cider with Pecan Rim, Pecan Ghost Cookies, Roasted Pumpkin and Sweet Potato Soup with Pecan Pomegranate Salsa, Pecan Baked Apples)

HARVEST STORYTELLING: CELEBRATE THE SEASON

Before the Pecan-a-thon debut, the fall celebration is officially underway! There is no better time to promote American Pecans than the harvest and holiday seasons, when the nut is already top-of-mind with consumers.

Thanksgiving-inspired recipes are a great way to showcase the versatility and heritage of pecans. Among the thousands of news stories about pecans over the past year, holiday-themed recipes have been very popular with both editors and readers. As we pursue an even bigger push with consumers this holiday season, we are not only evaluating what was successful last fall, we are using search engine and social media data to show us what type of recipes our target audience is seeking. Each of these insights helps APC determine which recipes we share and get the most out of our marketing efforts.

So, what type of meal and snacking inspiration are we sharing this fall? We are encouraging media – as well as their readers and viewers – to think of a traditional fall ingredient in a non-traditional way.

In addition to coupling pecans with other classic fall flavors like pumpkin and squash, we are also breaking tradition with new ideas like ciders, soups, and salads to show the many different uses for pecans. We're also using Thanksgiving to tell the uniquely American heritage story of The Original Supernut.

TRY THESE SPOOK-TACULAR TREATS!

For all you Halloween lovers, don't worry – we aren't skipping this spooky holiday! Last year, our Pecan Ghost Cookies performed spook-tacularly with media and consumers, so we're again sharing this clever recipe as a homemade alternative to store-bought sweets.

We're also serving up our Sweet Potato and Pumpkin Pecan Soup as a hearty pre-trick-or-treating meal. No matter what delicious pecan recipe you enjoy, try it with the Slow Cooker Mulled Cider – the delicious Pecan Rim is definitely a treat.

Click on the link below or our social channel buttons at the end of this newsletter to find these and many more

seasonal recipes. If you try them out, we'd love to hear what you think!



Pecan partners inspire audiences with recipes such as Instant Pot Stuffed Acorn Squash with Pecans (A Couple Cooks) and No Bake Pumpkin-Pecan Pie Paleo Bits (The Defined Dish)

CAPTURING SEASONAL TRENDS

Our social influencers and bloggers, otherwise known as our "Pecan Partners," are hard at work creating new seasonal and holiday recipes based on some of the season's hottest food trends and cooking techniques. For example, A Couple Cooks' [Instant Pot Stuffed Acorn Squash with Pecans](#) not only celebrates the best flavors of fall, but also answers the high online search volume for recipes using an Instant Pot and was recently featured in a must-try fall round-up on [Self.com](#). The Defined Dish's new [No-Bake Pumpkin-Pecan Pie Paleo Bites](#) are paleo diet friendly, but delicious for anyone looking for a fun twist on a classic favorite.

The recipes will be shared with our target audiences through paid social and search campaigns to make the content work even harder for us, reaching more consumers to grow interest and demand.

They also appear on the recipe page of our website, AmericanPecan.com, which has more than 60,000 visitors each month. You can check out some of the additional fall recipes at the links below, and be sure to check back throughout the season:

- [Roasted Pumpkin and Sweet Potato Soup with Pecan Pomegranate Salsa](#)
- [Pecan Apple Stuffing](#)
- [Sweet Potato Casserole with Bourbon Pecan Crumble](#)
- [Pecan Cranberry Relish](#)



Growers at the Alabama Pecan Growers' Annual Meeting were among the first to hear about our next big holiday marketing push

APC ON THE ROAD

We enjoyed meeting many industry members at this year's National Pecan Shellers Association Annual Meeting in California and, most recently, at the Alabama Pecan Growers' Annual Meeting in Fairhope. For those who attended, we hope you found the marketing updates and presentation on what is coming up this year informative and exciting!

Many of this year's conferences are now complete, but we will continue to travel and meet with industry. Executive Director Alex Ott will be in New Mexico next week, and APC staff will be attending the PMA Fresh Summit Conference & Expo in Orlando, Florida October 19-20, as well as visiting several stops in Georgia in the days following. We look forward to the opportunity to connect with many of you in person!

In addition to opportunities to meet at events and conferences, we encourage you to continue to stay in touch through the newsletter, email (industry@americanpecan.com) and phone (817) 916-0020.)

As you enter the holiday season, please reach out if you are interested in learning more about how to make American Pecans marketing materials work for you and your business. From social media content, to printed nutrition facts and handouts, the APC staff is here to equip you with the resources you need.



AMERICAN PECAN
CORPORATION

3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



APC Staff Alex Ott & Jeff Smutny join Brent Brinkley with the Georgia Pecan Growers Association to survey the damage caused by Hurricane Michael.

APC TOURS HURRICANE DAMAGED AREAS

On October 10 – 12, Hurricane Michael ravaged the Southeast pecan producing regions, smashing into Florida, Alabama, Georgia and making its way to South Carolina. When the storm hit the Florida panhandle it was recorded as a dangerous Category 4, making it one of the worst storms in U.S. history.

APC staff met with several growers who were impacted by the storm. According to Lenny Wells, with the University of Georgia Extension, losses are currently estimated at “27,455 acres of pecan trees which translates to a loss of approximately 17% of Georgia’s pecan acres.” Additionally, the Extension estimates current year crop losses at \$100 million, and tree loss valued at \$260 million. Future income loss is predicted at \$200 million due to the lack of pecan producing trees.

Secretary Perdue announced that farmers and ranchers impacted by the hurricane in 13 counties are eligible for federal assistance. Several of the programs are through the Environmental Quality Incentives Program (EQIP) program. For additional information please go to: <https://www.fema.gov/disaster/4400>. The American Pecan Council will continue to update the industry as more information becomes available.

MITIGATION DOLLARS AVAILABLE

As part of trade mitigation measures, the US Department of Agriculture (USDA) is providing \$200 million in Agricultural Trade Promotion (ATP) Dollars. The Foreign Agricultural Service will be managing the application requests and distribution of program dollars. Although the dollars are open to Federal Marketing Orders, state commissions, trade associations, and private companies, it was emphasized by FAS that the broadest group, coupled with a complete Unified Export Strategy (UES) will have more success in obtaining the dollars. It should be emphasized that these dollars are not Market Access Program (MAP) dollars and are part of a separate program. However, these dollars may be utilized in markets that will assist the industry due to the tariffs that were imposed on several commodity programs. Additionally, these dollars are in addition to the industry buy programs. The pecans industry received \$16.8 million under the commodity purchase program. The APC is currently working with USDA to provide product specifications for the purchase of product. In the meantime, APC will continue to work with applicants and the industry as the ATP dollars become available. Applications for these dollars are due November 2, 2018.

NASS SURVEY BEING CONDUCTED

The American Pecan Council has funded a (NASS) survey to collect the latest information from the pecan community. This survey, coupled with American Pecan Council’s 2018 monthly data, will provide the industry with information that will assist the industry in knowing how much crop is projected, being moved, and in inventory. Currently, the APC has released 2016 and 2017 summary data. For a complete copy of the data, please visit the APC website at: www.americanpecan.com. In the meantime, the industry is encouraged to fill out their NASS survey if they have not done so. Council staff will continue to update the website and inform the pecan industry as data is updated.

APC GIVES PRESENTATION TO OK GROWERS

On October 2, 2018, Executive Director Alex Ott attended an Oklahoma tour. Special thanks to Mark Hamilton in providing a tour of his pecan cleaning and pecan oil facilities. After the tour, growers were updated on the latest American Pecan Council Activities, Oklahoma research projects, and presented the latest information on domestic and international market issues that may impact this year’s crop. The Oklahoma

Pecan Growers Association (OPGA) also provided information about their organization and working relationship with the Federal Marketing Order. Ott emphasized the importance of driving demand over the next six months to move product during our peak times. Changing the perception of pecans from a “pie ingredient” to an everyday use while emphasizing the important health benefits is going to be critical in order to prepare for the “wave” of pecans that are coming down the line. Council staff will continue to promote and update the industry as the marketing programs continue to move forward.

STRATEGIC PLANNING GETS UNDERWAY

The American Pecan Council (APC) is beginning the first phases of its comprehensive strategic planning program. The program will provide an industry outlook over the next 1, 3, 5 and 10 years, while examining activities and opportunities for the APC and industry. This program will be critical for the pecan industry as it will identify where the industry should most effectively put their dollars to “move the needle” for pecans. Additionally, the project will lay out specific goals for the industry to measure success for both the FMO and the pecan industry. Currently, an industry survey is being prepared and will be sent out for feedback. APC will continue to update the industry as studies and information become available. For additional information, please contact the APC office.

APC PRESENTS AT NEW MEXICO SHORT COURSE

On October 15 – 17, New Mexico State held its pecan short course program. Executive Director, Alex Ott, presented the latest activities of the APC to the group. The program included information on basic pecan practices, soil and water technologies and techniques, marketing strategies, and the latest on pecan pests and diseases. Special thanks to Richard Heerema with New Mexico State for putting on the short course.



American Pecan Council
3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020
FAX: (866) 232-0085

info@americanpecan.com
americanpecan.com

APC ATTENDS PMA

On October 18 – October 20, American Pecan Council (APC) attended the annual Produce Marketing Association (PMA) trade show in Orlando, FL. The PMA show provides an opportunity to meet with buyers, consumers, growers, and suppliers throughout the U.S. and the world. Events include: latest marketing techniques, latest technologies, recipe development, domestic and international market development, and the latest on new food laws and regulations, just to name a few. It is also a great opportunity to meet with other federal marketing orders, trade associations, and commodity programs to share information on the current market place.

SAVE THE DATE

AMERICAN PECAN-A-THON

Get ready for the online event of the year. Highlight **November 15th** on your calendar for the online event of the year; The Super American Pecan-A-Thon. We aim to creatively engage our consumer at a time when pecans are top-of-mind with a breakthrough activation. We are excited to be working in partnership with top recipe media property Epicurious/Bon Appetit to put on an entertaining variety show starring The Original Supernut. The Super American Pecan-A-Thon broadcast will feature hilarious film star Wendi McLendon-Covey and some top recipe and lifestyle social influencers to help guide the show. Plus, you'll see fellow growers supporting the show, as well!

We'll help encourage viewers to take the **#pecanpledge** to make one more pecan dish (beyond the pie) this holiday.

Keep your eyes peeled for more information.

CALENDAR OF EVENTS

New Mexico Pecan Growers Meeting
November 2, 2018
Las Cruces, New Mexico

Pecan-A-Thon
November 15, 2018

North Carolina Pecan Growers Association
February 16, 2019
TBD

Find us on social media!



#americanpecan



@americanpecan



IN A NUTSHELL

Issue No. 8

NOVEMBER 2018



Tune into The Super American Pecan-A-Thon on November 20th at Epicurious.com

THE SUPER AMERICAN PECAN-A-THON IS ALMOST HERE!

Get ready to see The Original Supernut like you've never seen it before. The Super American Pecan-A-Thon is set to air on November 20 at 11 AM EST / 10 AM CST, and we can't wait to share it with you!

Just what is the Super American Pecan-A-Thon? It is an interactive, online variety show that celebrates the versatility of America's native nut, while entertaining consumers and introducing them to the growers behind pecans. We'll also be combining two themes that resonate with our consumer audience – health and humor.

Our celebrity host is Wendi McLendon-Covey, comedian and star of hits such as television shows "The Goldbergs" and "Reno 911!" and the movie "Bridesmaids." She's joined by a cast of food and lifestyle bloggers who've created custom recipes, crafts, and home décor ideas – all featuring American Pecans.

Of course, no pecan event would be complete without the you – the industry! We have several industry members joining the cast of the show – The Iveys, a Texas pecan-growing family band, Mike and Lotsee Spradling of Oklahoma, Kortney Chase of Texas, Heather Salopek of New Mexico, Ben and Laura King of California, and Marianne Brown of Georgia – who will be sharing pieces of their family stories illustrating the powerful legacy of the American pecan industry.

From Thanksgiving sides to cocktails and how to arrange the perfect tablescape, our hosts will show the audience how to create new holiday traditions the whole family will enjoy. Throughout the online broadcast, viewers can click the site for more information on the featured recipes and holiday decorations.



Mike and Lotsee Spradling shooting Super American Pecan-A-Thon promotional materials in their orchard earlier this week.

#PLEDGEPECANS

Beginning a week before Thanksgiving, we will ask America to #PledgePecans, and make one more dish with America's native nut this holiday season. Whether consumers are inspired by a recipe from one of our food bloggers or get creative in the kitchen on their own, #PledgePecans will encourage Americans to add one more pecan dish to the table, beyond pie. Starting Nov. 15, you can go to bit.ly/epi-pledgepecans to let us know you will #PledgePecans.

Once you make your pecan creations, share photos on social media using the hashtag #PledgePecans. We hope you'll encourage friends and family to do the same. #PledgePecans will continue through Dec. 31 – we look forward to seeing all of the pecan creations!



Sweet Potato Casserole with Bourbon Pecan Crumble, the perfect addition to this year's Thanksgiving table.

A NEW MARKETING TOOLKIT FOR YOU

Keep an eye out for additional information and resources to put the Super American Pecan-A-Thon and #PledgePecans campaign to work for you. The day prior to the Pecan-A-Thon, we'll share an updated, online Industry Toolkit with materials to share with your friends and family, and to benefit your own business. Stay tuned for more details!

SHARE YOUR LEGACY

Thank you to all industry members who donated their pecans and pecan products to The Super American Pecan-A-Thon – we greatly appreciate your support, and look forward to sharing your fresh, beautiful product during the show.

If you're still interested in contributing to the Pecan-A-Thon or future campaigns, we welcome family stories, pictures, and videos for inclusion in our ongoing marketing activities. Please consider submitting your favorites via [this link](#), or by emailing industry@americanpecan.com.



Registered Dietitian Holley Grainger appears on WBRC Birmingham, sharing nutritious pecan treats for Halloween celebrations.

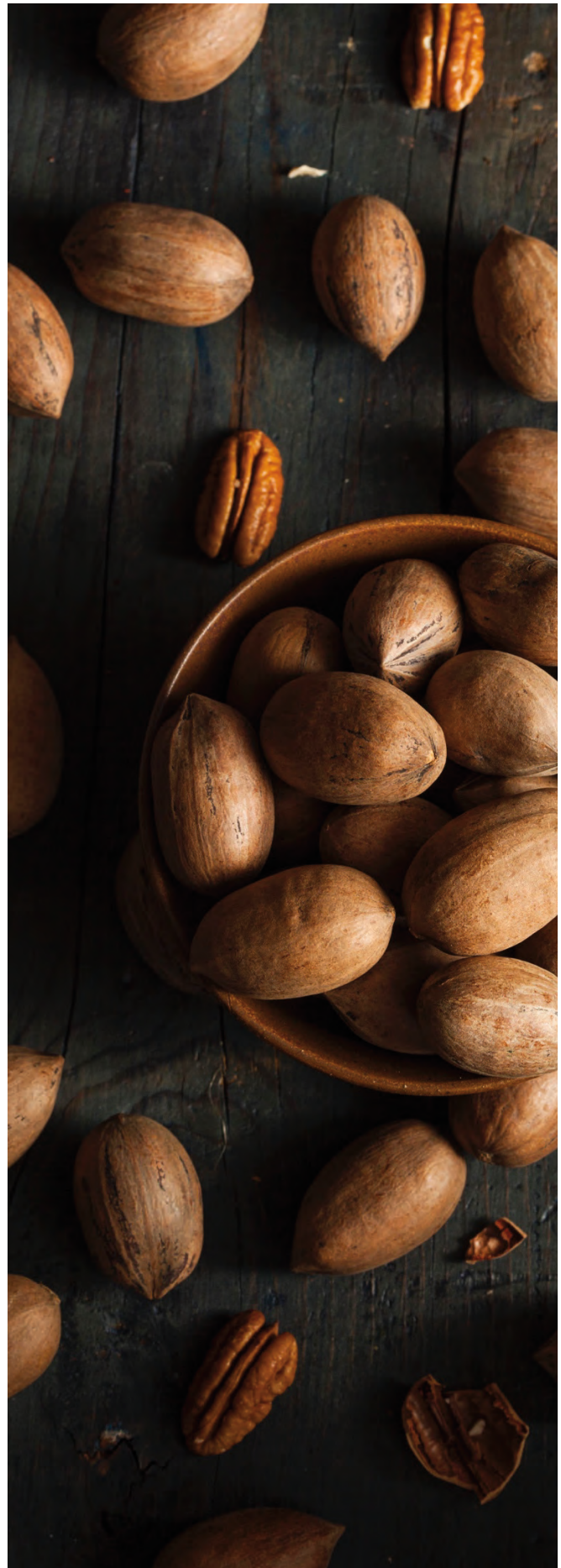
TAKE THE APC SURVEY

You should have received an email from the APC this week regarding an industrywide survey. The APC values your feedback and your input is vital to the success of our efforts on behalf of industry. We ask that you please respond no later than Monday, November 19.



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020

Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 9

December 2018



A huge THANK YOU to our pecan cast of characters:

Marianne Brown, Kortney Chase, Ben & Laura King, Heather Salopek, Mike & Lotsee Spradling, and musical inspiration by The Iveys

HAVE YOU MADE YOUR PLEDGE, YET?

Did you see your fellow pecan family members take part in the Big Show November 20th? The Super American Pecan-A-Thon aired coinciding with one of the most popular days of the year for holiday recipe searches online; we launched The Super American Pecan-A-Thon on AmericanPecan.com and Epicurious. All of our paid social and search support went live shortly after, inspiring our target consumer with recipes beyond the pie – and intercepting her where she's already looking.

Early results have come in and with this event pecans have captured the Number 1 position for Share of Voice across all nut categories during this very important time of the year.

The Pecan-A-Thon is still ongoing and you have time to make that pledge to use pecans beyond just pie this year. Simply visit <https://americanpecan.com/pledgepecans/> and click "Start the Show".

APC VISITS USDA TO DISCUSS GUIDELINES

USDA's Agricultural Marketing Service hosted a Research & Promotion and Marketing Order Information Session on November 27, 2018, in Crystal City, VA. 43 federally regulated marketing programs were in attendance to review updated program guidelines and to take part in question and answer sessions with the U.S. Department of Justice and USDA's Office of General Counsel. Alex Ott and Jeff Smutny were able to have a private sidebar meeting with the Office of General Counsel to discuss contract requirements. USDA listened to program concerns and will address them in the coming months. We look forward to guideline revisions based on our feedback.

EXECUTIVE DIRECTOR VISITS CA PECAN GROWERS

On November 13, 2018, the American Pecan Council's Executive Director, Alex Ott, updated the California Pecan industry at the annual Grape, Nut & Tree Fruit Expo. The event provided an opportunity to meet and discuss several issues within the U.S. Pecan industry. Updates on topics included the latest developments on tariffs, hurricanes that impacted the Florida, Georgia, and North Carolina areas, and flooding in the central pecan region. Ott also updated the group on the latest APC activities to drive demand and generate consumer awareness. Following the event, Ott was given a tour of several of the pecan growing regions of the Central Valley, showcasing the differences in growing practices compared to other pecan regions and several of the issues that are directly impacting the California pecan industry.



(left) Mark Hendrixson with CA Pecan Growers leads the industry update discussion

INDUSTRY WIDE SURVEY—STRATEGIC PLANNING

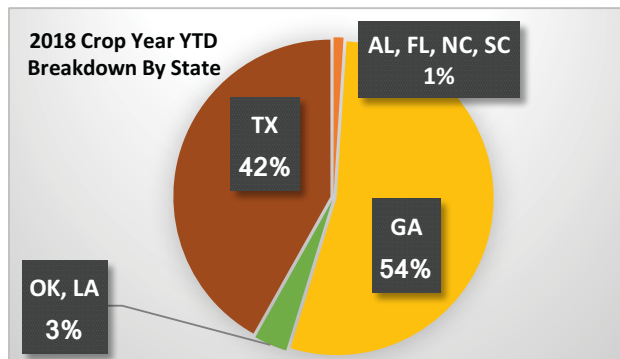
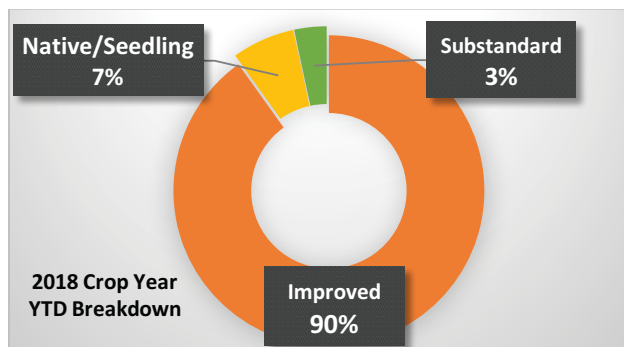
We have extended the industry wide survey, but it closes soon so submit your feedback now! American Pecan Council (APC) values your input as a member of the pecan industry. **For those who have not yet participated**, we ask once more that you help us by completing the survey. Some of the questions that are asked include "what are the biggest challenges you face?" and "where would you like to see the APC focus its efforts?" – questions whose answers will help guide our path forward.

For everyone, if you have any questions, or you know someone else who would be interested in participating but has not been contacted, please email strategicplanning@americanpecan.com.

APC PECAN POSITION REPORTS

The American Pecan Council publishes monthly Pecan Industry Position Reports, which contain the latest pecan trade statistics. These reports consist of compiled data received from the handlers of pecans and are aligned with the pecan crop year from September 1 to August 31. Reference these reports to understand the trends that impact the pecan industry such as the latest shipping and inventory information, as well as international trade activity. You can reference these

monthly Pecan Industry Position Reports in the Industry tab of the Americanpecan.com website. If you have any questions regarding the monthly reporting forms, please contact the APC office at (817) 916-0020.



OUR TEAM IS GROWING!

We are happy to welcome American Pecan Council's new Operations Manager, Deborah Barnett. Deborah brings a varied wealth of knowledge to her role. A veteran of the non-profit sector, she's highly experienced in administrative office management, event planning, and relationship building. Throughout her career, Deborah has worked with teams to improve efficiency by streamlining operations, build digital management systems, and manage projects to success, which makes her the perfect fit for our team!



The American Pecan Council would also like to welcome the new Assistant Director of Marketing and Industry Relations, Julianna Keck. Julianna hales from the Coachella Valley where her family has a deep-rooted history in the California Date industry. Additionally, she grew up spending time on her family's ranches in southeastern Arizona and New Mexico assisting her parents in planting their

now established pecan orchard in Cochise County. A graduate of Pepperdine University with a degree in Integrated Marketing Communication, Julianna established a career in media and outreach through writing for regional travel and lifestyle publications. Her experience will assist the APC in marketing and industry relations. Please take a moment to welcome both Deborah and Julianna to the American Pecan Council.

IN MEMORY OF BENJAMIN LITTLEPAGE



Benjamin Meek Littlepage, 87, of Colfax, Louisiana, passed away on Wednesday, December 5, 2018. He was a well-respected pecan grower from Colfax, Louisiana. Throughout his many years in the pecan industry, he became the President of the National Pecan Growers Council and received many awards for his contributions to the industry. Mr. Littlepage became well known for providing his pecan crop estimate every year at the Tri-State Pecan Conference. American Pecan Council is deeply saddened by the news of the passing of Mr. Littlepage. He will be sorely missed as will his efforts that have helped the pecan industry succeed. Our condolences go out to all Ben's friends and family.

CALENDAR OF EVENTS

American Pecan Council Meeting December 18, 2018 Dallas, Texas
Fruit Logistica February 6-8, 2019 Messe Berlin
Southeastern Pecan Growers Annual Conference February 22-23, 2019 Sandestin, Florida
Western Pecan Growers Association Annual Conference a March 3-5, 2019 Las Cruces, New Mexico
NPSA Mid-Winter Meeting March 13-15, 2019 Atlanta, Georgia
Georgia Pecan Growers Association Conference March 26-28, 2019 Tifton, Georgia
Texas Pecan Growers Associations Conference & Tradeshow July 14-17, 2019 Frisco, Texas

Don't forget to find us on social media!
#americanpecan @americanpecan

American Pecan Council
3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020
FAX: (866) 232-0085

info@americanpecan.com
americanpecan.com





IN A NUTSHELL

Issue No. 10

DECEMBER 2018

Pecans are #1!

Earlier this month, Google released its annual Year in Search report, where it shares the top searched terms from the previous year. Topping the list of [most searched recipes](#) in 2018 was the holiday standby Classic Pecan Pie.



Oklahoma growers Mike and Lotsee Spradling promote The Super American Pecan-A-Thon.

THE PECAN-A-THON IS LIVE!

We hope you have all had the opportunity to tune in to The Super American Pecan-A-Thon. The online variety show – which debuted November 20 and runs through the end of the year – celebrates the many ways American Pecans can make the holidays a little more super.

Featuring celebrity comedian Wendi McLendon-Covey, food and lifestyle bloggers, and growers from across the country, the show highlights pecan-inspired takes on traditional recipes and creative décor ideas.



The full Pecan-A-Thon cast, including growers, food and lifestyle influencers, and celebrity host Wendi McLendon-Covey, pause for a group photo during filming.

Our grower cast members have continued to spread the word with [local media](#), and we have enjoyed seeing how many of you are bringing the Pecan-A-Thon and #PledgePecans to life this holiday season.

It's not too late to get involved. You can spread the word through social media or by using this [printable flyer](#) (password: pecans18). And be sure to share your own culinary creations on social media or by emailing us at industry@americanpecan.com.

If you haven't yet, watch the show by visiting AmericanPecan.com/PledgePecans, keep sharing photos of how you and your families have chosen to #PledgePecans this season, and be on the lookout for a report on the results of the Pecan-A-Thon in the New Year.



Pecan-A-Thon cast member Kortney Chase (Austin, TX) brought each recipe and craft featured on the show to her family over Thanksgiving.

PUT APC MARKETING TO WORK FOR YOU

If you have recently visited the [Digital Toolkit for Industry](#) on AmericanPecan.com (password: pecans18), you may have noticed a different look! The toolkit has been redesigned for easier navigation and expanded with additional marketing resources for you.

Under the [Marketing Campaigns](#) section, we've created mini toolkits for both the consumer brand launch in April and The Super American Pecan-A-Thon campaign, which house helpful information and resources related to each effort. The [Tools & Tips](#) section includes guides and how-to resources,

and you can find a host of American Pecans brand assets under the [Logos & Downloadable Materials](#) page.

CHECK OUT MARKETING HIGHLIGHTS

Many of you have asked for printable, monthly updates on APC marketing. We appreciate the input and last month, we debuted a monthly update of marketing highlights to show how your dollars are being used to support our goal of driving awareness and preference for American Pecans.

These reports can be found on the [Your Dollars at Work](#) page in the updated Digital Toolkit for Industry (password: pecans18). There you can also find the Year One Impact Report.

If you have questions about the new reports or resources, or any updates or photos you'd like to share, please contact us at industry@americanpecan.com.



Stahmanns Pecan Inc. (La Mesa, NM) shared a photo of their team watching The Super American Pecan-A-Thon.

ELEVATING NUTRITION IN THE NEW YEAR

With The Super American Pecan-A-Thon, we showed America all the ways pecans can be used in holiday dishes in addition to the traditional pie. In 2019, we'll remain focused on the versatility of The Original Supernut, but with an even greater emphasis on our taste and nutrition messages.

We're kicking off the New Year with a new Super-fy campaign, where we'll show how any dish can be taken from standard to standout, simply by adding American Pecans. We're also engaging supermarket registered dietitians (RDs) – nutrition experts who specialize in helping consumers make wholesome choices in the grocery aisles. With these RDs advocating on behalf of pecans, we can drive our nutrition message to shoppers right at the point-of-sale.

We'll have more details, along with new Super-fy resources you can use, as we get closer to the campaign kick-off in January. Be on the lookout for an update in coming newsletters, and stay up-to-date by following American Pecans on social media. Links to our channels can be found by clicking on the icons at the end of this newsletter.

From all of us at the American Pecan Council, warmest wishes to you and yours this holiday season!



AMERICAN PECAN
COUNCIL

3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 11

JANUARY 2019

RESEARCH PROJECTS MOVING FORWARD

The American Pecan Council is conducting several research projects to assist in data collection, and health benefits for pecans. The following is a list of the projects currently being conducted:

Economic Benchmark Model & Study

The American Pecan Council approved Forecasting and Business Analytics, LLC to conduct an economic benchmark model and study. The purpose of the study is to develop an economic baseline model capable of analyzing the effects of changes in the US pecan markets and the consequences for US production, consumption, prices, and trade. This project is important to the industry as it will establish a repeatable model that may be used by the industry to assist in disasters, production changes, or any other issues that may impact the pecan industry.

Satellite Mapping

The American Pecan Council will be conducting a US Pecan acreage survey. Conducted by Land I.Q., the project will utilize satellite imaging to identify pecan trees. Instead of acreage surveys conducted by the industry, the use of modern technology will give the American Pecan industry a more detailed and accurate summary of acreage in the top eight states. Once the project is completed, other states may be added as there will be a model to identify trees both in the native and improved varieties. The project is set to begin in the west and move east. To date, 70% of California, Arizona, and New Mexico is complete, with work beginning in the central region. APC will update the industry as this project nears completion.

Quantifying Phosphite Residues in Pecan Kernels

Dr. Tim Brenneman, Department of Plant Pathology, UGA; Dr. Clive Bock, USDA-ARS, Byron, GA; and Dr. Charles Rohla, Noble Foundation, have been conducting an American Pecan Council study on phosphite residues in pecan kernels.

According to the research team's initial summary, phosphite fungicides have proven to be an important tool in the pecan industry. EPA considers this chemistry so safe they did not require residue data for crops like pecans. However, in recent years the European Union (EU) started requiring phosphite maximum residue levels (MRL's) for products they import, including pecans. Since data does not exist, these levels were set at an extremely low level (2.0 PPM). Limited testing of treated pecans indicates that virtually any usage will result in residues exceeding this level. Exports to the EU would face a problem with MRLs. However, since this project was initiated, the EU has approved a much higher MRL for pecans (500 PPM) as part of nut-crop group package with the other tree nuts (almond, pistachio and walnut). Initial results from this project show that the industry is well below these MRLs. Thanks to the APCs funding efforts and the work of the Dr. Brenneman, Dr. Bock, and Dr. Rohla, this specific pecan study shows that it was critical to establish a more realistic MRL for phosphites, while having data available to show specific pecan uses of the product. A final report will be available once the work is completed.

Health Nutrition Study

The American Pecan Council is funding studies specifically focused on health nutrition. Currently, several of the nut studies focused on health include pecans as part of a general nut category. However, it is important to develop specific pecan health studies that focus on the specific characteristics of the nut. These studies will assist in understanding the pecan health benefits in more detail, while assist in giving the pecan its own unique health benefit identity. APC will update the industry as these studies begin receiving data.

Pecan Shelf Life Study

The American Pecan Council is funding a pecan shelf life study for handling practices of pecans. The objective of this study is to determine the best storage practices for shelled halves and in-shell raw pecans by conducting a shelf-life

study using rancidity development, moisture changes, physical changes and sensory evaluations while the product is stored at different storage conditions in a variety of packaging types. As the results are collected, it will assist the industry in educating consumers and buyers on the best handling practices of pecans. Pecan quality and consistency is key in order to ensure that customers enjoy their experience with pecans and continue to purchase our commodity. Results will be shared once the project is complete.

FARM BILL SIGNED – IMPORTANT TOOL ADDED TO APC

On December 20, 2018, President Trump signed into law the Agriculture and Nutrition Act (Farm Bill). Although the \$867 billion package is for the next ten-years, there are several important requirements and funding contained within the package. For the American Pecan Council and the pecan industry, a provision for pecans was added into the entitled Section 8e(a) of the Agricultural Adjustment Act (7 U.S.C. 608e1(a)), adding pecans into this section of law.

Section 8e of the Act provides that when certain domestically produced commodities, including pecans, are regulated under a Federal marketing order, imports of that commodity must meet the same or comparable grade, size, quality, and maturity requirements. In short, it provides the industry with an equal rule across the industry.



American Pecan Council
3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020
FAX: (866) 232-0085

info@americanpecan.com
americanpecan.com

Enforceable quality standards are created and submitted to USDA by Federal Marketing Orders (FMO). Because the American Pecan Council is the industry's FMO, the APC will begin looking at standards for the industry. Once approved by APC, standards will be submitted to USDA for approval and eventual enforcement through inspection. The APC is tasked with creating the standards and assisting USDA in enforcement of the standards. Without a Federal Marketing Order, the Section 8(e) provision would not be enforceable. This is a big step and win for the industry in establishing standards that can be applied equally for all pecans.

CALENDAR OF EVENTS

Annual Texas Pecan Short Course
January 28 – 31, 2019
College Station, TX

Fruit Logistica
February 6-8, 2019
Berlin, Germany

North Carolina Pecan Growers Association
February 16-17, 2019
Clinton, NC

Southeastern Pecan Growers Annual Convention
February 22 – 23, 2019
Destin, FL

Western Pecan Growers Association
March 3 – 5, 2019
Las Cruces, New Mexico

National Pecan Shellers Association Mid-Winter
March 13 – 14, 2019
Atlanta, GA

Georgia Pecan Growers Annual Conference & Trade Show
March 25 – 27, 2019
TBD, GA

Find us on social media!



#americanpecan



@americanpecan



IN A NUTSHELL

Issue No. 12

JANUARY 2019

SUPER-FY

The latest marketing campaign from the APC shows how to take any dish from standard to standout by adding The Original Supernut.

SUPER-FY WITH AMERICAN PECANS

If you follow American Pecans’ social channels, you’ve likely seen that our Super-fy marketing campaign is well underway. Because pecans are often viewed as a dessert nut, they don’t always get the health-promoting credit they deserve. With Super-fy, we’re showing consumers that pecans are a hard-working ingredient that can make any recipe not only more delicious but also more nutritious.

Through targeted paid social media posts, we’re putting wholesome and timely recipes featuring American Pecans in the social feeds of our key audience – meal-planning Gen X and Y moms. Through paid search, consumers looking online for specific recipes will immediately be directed to dishes “super-fied” with pecans. Our partnership with Epicurious.com is still working hard for us as we continue to run digital ads with them and other Conde Nast owned properties. The partnership also features shoppable ads which direct users to Amazon.com where consumers can directly purchase pecans to super-fy their meals at home.

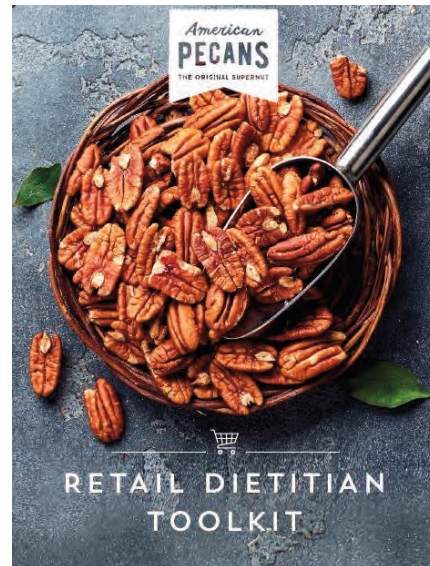


We’re also capitalizing on high-search moments in time by promoting pecan-inspired recipes for specific holidays and cultural events. Consumers looking for appetizer ideas for their football watch party or a heart-healthy option to serve-up during American Heart Month in February will see super-fied American Pecans recipes in their top search results. You can learn more about the campaign by visiting AmericanPecan.com/superfy.

GOING IN-STORE WITH RETAIL DIETITIANS

A new year means new resolutions, with many Americans committing to their health in 2019. While nutrition is top of mind, we are working to educate retail dietitians about the nutrition benefits of the pecan for use in their own efforts at point-of-sale.

Who are retail dietitians? You may be surprised to learn that most supermarkets have a registered dietitian on staff whose role is to help shoppers choose wholesome options when perusing the grocery aisles. By working with these health-focused purchase-drivers, we can elevate The Original Supernut’s presence, reinforce its heart health benefits and bring its superior taste to life through product sampling and in-store recipe demonstrations. We’ll turn retail dietitians into pecan advocates – and in doing so, engage meal planners while they shop for groceries.



We’re arming these important partners with The Original Supernut Retail Dietitian Toolkit – a suite of tools, educational materials and branded signage for in-store demos and displays. Full of recipe ideas, suggested social content, and nutrition information, the toolkit makes it easy for supermarket RDs to put pecans in the grocery store spotlight.



Hajovsky Pecan Farm (La Grange, TX) promotes The Super American Pecan-A-Thon on Facebook.

INDUSTRY MEMBERS #PLEDGEPECANS

Thank you to everyone who participated in the #PledgePecans campaign during the holidays! We loved seeing how each of you helped promote American Pecans and The Super American Pecan-A-Thon.

The APC's marketing efforts are in service to the entire American pecan industry and we encourage you to leverage our brand and other marketing assets – including social media posts – in the promotion of your own business. Check out the [Tools & Tips](#) page of the Digital Toolkit for Industry to access helpful materials you can reference when using the American Pecans brand.



Lanes Southern Orchards (Fort Valley, GA) shares the Pecan Snow Globe craft from The Super American Pecan-A-Thon on Instagram.

THE APC HITS THE ROAD IN 2019

The APC is looking forward to another engaging conference and trade show season. If you're attending an industry show in the coming months, be sure to attend an APC led workshop and/or connect with our staff onsite.

Included here and on our website is a list of upcoming events. Reach out to industry@americanpecan.com to submit an event for inclusion in this newsletter or on our [website](#).

CALENDAR OF EVENTS

Noble Research Institute – Managing Your Pecan Orchard Course

January 17, 2019
Ardmore, OK

Annual Texas Pecan Short Course

January 28-31, 2019
College Station, TX

Fruit Logistica

February 6-8, 2019
Berlin, Germany

Noble Research Institute – Pruning Pecan Trees for Improved Production Course

February 12, 2019
Madill, OK

North Carolina Pecan Growers Association

February 16, 2019
Clinton, NC

Southeastern Pecan Growers Association Annual Convention and Trade Show

February 22-23, 2019
Destin, FL

Western Pecan Growers Association Annual Conference and Trade Show

March 3-5, 2019
Las Cruces, NM

National Pecan Shellers Association Mid-Winter Meeting

March 13-14, 2019
Atlanta, GA

Georgia Pecan Growers Association Annual Conference

March 25-27, 2019
Tifton, GA



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



IN A NUTSHELL

Issue No. 13

JANUARY 2019

GEARING UP FOR TRADE SHOW SEASON

As harvest draws to a close in the West, another big season for the pecan industry is on the horizon—conference & trade show season! Beginning mid-February and continuing through the late summer months, members of our staff will be traveling near and far, attending the annual conferences of more than a dozen state growers and national shellers associations.

The *North Carolina Pecan Growers Association* will kick off the season with its annual workshop on February 16, 2019, in Clinton, NC. This is closely followed by the *Southeastern Pecan Growers Annual Convention & Trade Show*, February 22-23, 2019, in Destin, FL, and the *Western Pecan Growers Association Annual Conference and Trade Show*, March 3-5, 2019, in Las Cruces, NM. Mark your calendar and plan to attend an industry show in your region—we look forward to connecting with you in person and/or seeing you in one of our APC-led workshops.

For a complete list of upcoming events and additional details, see the calendar on page 2 of this newsletter, or visit the [Industry Events page](#) on our website.

SUPER-FY YOUR MARKETING EFFORTS

Our Super-fy campaign is up and running, with targeted social media, paid search and digital ads spreading the word about American Pecans' nutrition, versatility and taste to consumers nationwide. To help you get the most out of the campaign, we've developed a dedicated [Super-fy page](#) in the Digital Toolkit for Industry. Complete with a social media calendar, downloadable logos and more, the new page is full of information and resources you can leverage for your own marketing activities. You can check out the new page and explore the rest of the toolkit by visiting americanpecan.com/toolkit (password: pecans18).



Engaging your online followers has never been so easy! On the new Super-fy page, you'll find all sorts of useful marketing tools, including a Social Media Content Calendar with pre-designed social posts

APC INSTATES ANNUAL 'BEN LITTLEPAGE DAY'

During the December General Council meeting, the American Pecan Council unanimously approved a resolution honoring the profound contribution and legacy of the late Benjamin Meek Littlepage, by declaring September 24th "Ben Littlepage Day." Mr. Littlepage was a bigger-than-life pecan-grower and a gentle giant in the industry, whose participation within a variety of organizations has helped the industry succeed across the pecan belt. We are grateful for Ben Littlepage and hope you'll join in celebrating his life and legacy, annually on the 24th day of September.

To view a certified true copy of the resolution visit the [Industry News page](#) on our website.

APC PECAN POSITION REPORTS

The latest APC Pecan Position Report shows a total of 17,564,847 pounds (in-shell basis) of net shipments to sources such as retail, grocery stores, wholesale, other handlers, etc. Currently, the total handler inventory supply reported is 174,232,650 pounds (in-shell basis) with a total of 134,545,875 pounds (in-shell basis) committed. To view the December Pecan Industry Position Report, please navigate to the [Industry tab](#) of the Americanpecan.com website.

If you have any questions regarding the monthly Pecan Industry Position Reports or the monthly reporting forms, please contact the APC office at (817) 916-0020 or email industry@americanpecan.com.

DECEMBER MARKETING HIGHLIGHTS

The latest edition of our monthly Marketing Highlights Report, sharing updates on December activities, is available to view, download and print. Check out the December report by clicking below or by visiting the [Your Dollars at Work](#) page in the updated Digital Toolkit (password: pecans18).



On the heels of The Super American Pecan-A-Thon premiere, December's marketing activities doubled down on holiday recipe inspiration to drive demand through the holidays and beyond, encouraging America to #PledgePecans – a promise to include one more pecan-infused dish alongside your pecan pie during the holidays.



THE SEARCH WAS ON

Data shows that appetizer recipe searches are high in December, so our Pecan Partners developed recipes for PECAN STUFFED MUSHROOM CAPS and PECAN AND SQUASH FLATBREAD with Dried Cherries and Pecans to fit the trend. These recipes were our top performing influencer content of the month.



OUR ARTICLE, "GO BEYOND PECAN PIE THIS HOLIDAY SEASON," APPEARED NEARLY **800 TIMES** NATIONALLY IN DECEMBER. **58% OF THESE PLACEMENTS** SHARED IN NON-PECAN PRODUCING STATES AND ENCOURAGED CONSUMERS NATIONWIDE TO GET CREATIVE IN THE KITCHEN WITH PECANS OVER THE HOLIDAYS.



[Download the December Marketing Report](#)



AMERICAN PECAN
COUNCIL

3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020

INDUSTRY EVENTS

MARK YOUR CALENDAR

Fruit Logistica
February 6-8, 2019
Berlin, Germany

**North Carolina Pecan Growers Association
Annual Meeting**
February 16, 2019
Clinton, NC

**Southeastern Pecan Growers Association
Annual Convention and Trade Show**
February 22-23, 2019
Destin, FL

**Western Pecan Growers Association Annual
Conference and Trade Show**
March 3-5, 2019
Las Cruces, NM

**National Pecan Shellers Association Mid-Winter
Meeting**
March 13-14, 2019
Atlanta, GA

**Georgia Pecan Growers Association Annual
Conference and Trade Show**
March 26-27, 2019
Tifton, GA



Follow us on social media: @americanpecan



IN A NUTSHELL

Issue No. 14

FEBRUARY 2019



Our Cherry Pecan Energy Bites recipe was featured in our latest media article showcasing pecans as a heart-healthy ingredient.

ASKING AMERICANS TO THINK HEART-SMART

February is American Heart Month – and right on the heels of New Year’s resolutions, it’s the perfect time to remind consumers of how easy it is to incorporate heart-healthy ingredients as part of a balanced diet and healthier lifestyle. To insert American Pecans into the healthy habits conversation, our media relations efforts have focused on educating Americans on the health benefits of pecans and offering quick, easy ways to incorporate them into daily diets.

Our article, “Simple Ways to be Heart Smart” was timed for release to newspapers and magazines nationwide in the last week of January, as editorial teams begin to focus on heart health. Media has shared our story from coast-to-coast, including [Malibu Times Magazine](#) (Malibu, CA), [The Miami County Republic](#) (Miami, Kansas) and [Longview News-Journal](#) (Longview, TX), among others.

The article not only shares the heart-smart qualities of pecans, but debuts one of our newest recipes – Cherry Pecan Energy Bites. As a quick, portable, kid-friendly option, they’re an ideal fit for our Gen X and Gen Y mom target audience. You can find the recipe in the article, or at [AmericanPecan.com](#). If you give them a try, send us a note and/or photo, at industry@americanpecan.com – we always enjoy seeing industry use our recipes at home.

To further amplify our heart-healthy efforts, we’ve partnered with a registered dietitian for broadcast news segments to highlight pecans alongside other heart-healthy ingredients. Featuring our new Cherry Pecan Energy Bites recipe, the segment will air in markets in the northeast, ensuring our heart health message reaches consumers well beyond the Pecan Belt.

You can celebrate American Heart Month, too, by sharing heart-smart pecan-based recipes with your followers on social media. Check out the new Social Media Content Calendar resource on the [Super-fy marketing page](#) in the Digital Toolkit for Industry (password: pecans18) for fresh ideas to post to your channels. Additionally, we’ve renewed American Pecans’ American Heart Association (AHA) Heart-Check Mark for 2019, which you can use in your own marketing materials and packaging. Reach out to us at industry@americanpecan.com for more details.



The American Pecans Nutrition Handout is just one of the nutrition-focused resources available to industry in the Digital Toolkit.

SPREADING THE PECANS NUTRITION MESSAGE

From our Super-fy campaign, which shows consumers how they can make meals more nutritious and delicious by adding American Pecans, to new partnerships with retail dietitians, we’re putting the pecan nutrition message front and center in 2019. This includes our research priorities, as we look to conduct our own nutrition studies in the coming months and years.

Based on consumer research, while most Americans see other nuts, like almonds and pistachios, as a “health food,”

there is little awareness of the pecan's unique nutrition profile. We see significant opportunity to differentiate the nutrition of pecans in the broader tree nut category, and we intend to focus our research – this year and beyond – on investigating the health benefits of The Original Supernut. We'll then leverage any findings in our marketing efforts to align with popular consumer trends in health and nutrition.

As a member of the pecan industry, you can take advantage of the nutrition-focused resources created by the APC. Our [Logos & Downloadable Materials](#) page in the Digital Toolkit for Industry is chock-full of useful materials, including the American Pecans Nutrition Handout. Visit AmericanPecan.com/toolkit (password: pecans18) to download the handout for use in your own marketing and promotion activities.



Lane Southern Orchards (Fort Valley, GA) shares our Pecan Milk Breakfast Porridge on Instagram

INDUSTRY SHARES THE ORIGINAL SUPERNUT

All APC marketing efforts are intended to directly support the American pecan industry, and that includes your own individual business. We are always pleased to see members of the industry using our recipes and social media posts in their own marketing materials. Visit the [Tools & Tips](#) page in the Digital Toolkit for Industry for a helpful how-to guide for sharing APC posts to your business' social channels.



Tennessee Valley Pecan Company (Decatur, AL) uses our recipe for Pecan Milk in a promotional post on Twitter.

CALENDAR OF EVENTS

Noble Research Institute – Pruning Pecan Trees for Improved Production Course

February 12, 2019
Madill, OK

North Carolina Pecan Growers Association

February 16, 2019
Clinton, NC

Southeastern Pecan Growers Association Annual Convention and Trade Show

February 22-23, 2019
Destin, FL

Western Pecan Growers Association Annual Conference and Trade Show

March 3-5, 2019
Las Cruces, NM

National Pecan Shellers Association Mid-Winter Meeting

March 13-14, 2019
Atlanta, GA

Georgia Pecan Growers Association Annual Conference

March 26-27, 2019
Tifton, GA



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 15

FEBRUARY 2019



The APC joined over 78,000 top-class trade visitors from 135 countries, who congregated in Berlin for Fruit Logistica 2019

APC ABROAD: FRUIT LOGISTICA 2019

The American Pecan Council attended Fruit Logistica, the world's largest produce exposition in Berlin, Germany, during the week of February 4th. Executive Director Alex Ott and Marketing Director Jeff Smutny met with international marketing agencies from the United Kingdom, China, India, Germany, France, and Spain.

The recently completed industry funded strategic plan has specifically pointed towards China, the European Union, Canada and India as the top international markets for American pecans. The strategic plan has identified pecan global supply to almost double to 1.2 billion pounds by 2027. Like most other Federal marketing orders, bringing the international marketing component in-house will provide APC with substantial cost savings that can in turn provide for a much more aggressive international marketing strategy.

APC ATTENDS NCPGA ANNUAL MEETING

On February 15 – 16, American Pecan Council's Executive Director Alexander Ott and Chairman Mike Adams attended the 25th Annual North Carolina Pecan Growers Association's Annual Meeting. The event provided an opportunity for the APC to listen to the latest issues and developments in the North Carolina pecan industry. North Carolina suffered damage from Hurricane Florence in 2017 and continues to make a comeback. Several growers are finding success in selling their pecans in local markets while

new growers are beginning to become involved with new plantings.

Additionally, the APC provided an update to the growers on the latest developments of APC events and activities and an update on the global pecan market place. The APC demonstrated the need to work together as an industry no matter how big nor small the acreage or state. Events that occur in another country or state will have an impact on the entire pecan industry.

A special thanks to Phillip Ricks and the North Carolina pecan growers for allowing the APC the opportunity to meet with the industry.

Our next stops...

The Western Pecan Growers Association Annual Conference and Trade Show in Las Cruces, NM, and the National Pecan Shellers Association Mid-Winter Meeting in Atlanta, GA. Hope to see you there!

APPLY LOGO(S)

MEN'S PERFORMANCE HALF ZIP MOCK SWEATER
 Color: True Navy
 Regular: L (QTY: 1)
 Item Cost: \$65.95

LOGO 1

1. SELECT A LOGO

Logo #1567616 Approved \$8.95	Logo #1570746 Approved \$6.95

2. SELECT A LOCATION

Custom ordering your own branded gear is fun & easy

REP AMERICAN PECANS IN STYLE!

If you didn't know, the American Pecan Council has a partnership with Lands' End, making it easy for you to proudly display the American Pecans brand wherever you go!

Whether you're looking for gear to wear on the farm, around town, or at a business function, the ["American Pecans" portal on the Lands' End Business website](#) lets you add our logo to an array of eligible Lands' End items, including hats, vests, polos, pullovers, and more. The American Pecans logo is available for embroidery with or without "The Original Supernut" tagline.

For assistance with ordering, contact the American Pecan Council office. Once you've received your apparel, we'd love to see! Share a picture on social media and tag @AmericanPecan, and/or email us a photo at industry@americanpecan.com.

JANUARY MARKETING HIGHLIGHTS

Today, we released the January edition of our monthly Marketing Highlights Report, sharing updates and results from January marketing activities. You can view and download the report by clicking the link below or by visiting the [Your Dollars at Work](#) page in the Digital Toolkit for Industry (password: pecans18).



KICKING OFF 2019 WITH AMERICAN PECANS

Through search engine advertisements (paid search), American Pecans is reaching consumers who are looking online for recipes. People searching for phrases like "chicken recipes" and "lunch recipes" were directed to dishes "super-fed" with pecans. The month, paid search was the primary driver of traffic to AmericanPecan.com.

We aim to make the website as engaging as possible. By tracking the bounce rate (how many visitors leave the site after viewing only one page), we know how many visitors stick around to see the many benefits and uses of pecans. Our January bounce rate for the Super-fly landing page was **2X better than the industry average**, meaning that the recipes, videos and photos successfully inspired visitors to stay and explore.



[Download the January Marketing Report](#)

SAVE THE DATE—APRIL COUNCIL MEETING

Mark your calendars now for APC's upcoming General Council Meeting. The meeting, which will take place from 9:00 a.m. to 12:00 p.m. on Wednesday, April 10th, 2019, at the Hyatt Regency DFW International Airport, is open to the public. Stay tuned for more details in the coming weeks!

CALENDAR OF EVENTS

**Southeastern Pecan Growers Association
Annual Convention and Trade Show**
February 22-23, 2019
Destin, FL

**Western Pecan Growers Association Annual
Conference and Trade Show**
March 3-5, 2019
Las Cruces, NM

**National Pecan Shellers Association Mid-Winter
Meeting**
March 13-14, 2019
Atlanta, GA

**Georgia Pecan Growers Association Annual
Conference**
March 26-27, 2019
Tifton, GA

For a complete list of upcoming industry events & educational courses, visit the [Industry Events page](#) on AmericanPecan.com



AMERICAN PECAN
COUNCIL

3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 16

March 2019

Heart-Healthy Media Mentions

During National Heart Month, our registered dietitian partnerships were hard at work for The Original Supernut. American Pecans were featured as a heart-healthy ingredient in broadcast segments that appeared in markets across the nation.



Supermarket dietitian Kim Kirchherr of IGA Supermarkets shares her excitement about the American Pecans toolkit she received with her Twitter followers.

SUPERMARKET DIETITIANS ACTIVATE IN-STORE TO PROMOTE THE ORIGINAL SUPERNUT

As mentioned in previous newsletters, part of the APC’s 2019 focus on marketing the nutrition of pecans includes partnerships with supermarket dietitians – in-store experts who help consumers choose nutritious options during their weekly grocery run. Partnering with these Registered Dietitians has helped us intercept our target audience – Gen X and Gen Y moms – in the grocery store as they are making purchasing decisions about what to feed their families.

We kicked off our partnerships earlier this year by sending toolkits that included nutrition information, pecan-inspired recipes and mini food processors so they could share pecans with consumers during in-store demos. We specifically

targeted dietitians located in states outside the Pecan Belt to help introduce America’s native nut to shoppers who may not be as familiar with pecans.

Since launching this program, 25 dietitians have committed to participating and 11 have already begun featuring American Pecans recipes on their [social channels](#), hosting in-store demos with pecans, and even mentioning The Original Supernut in [news coverage](#) through their partnerships with their local media outlets. We look forward to seeing how these experts continue to spread the pecan love in the months to come.

MARKETING TACTIC SPOTLIGHT: PAID SOCIAL MEDIA

The APC is committed to being good stewards of industry assessment dollars, and is using the latest marketing tactics to reach our target audience in effective, cost-efficient ways. One of the many tools we use is paid social media.

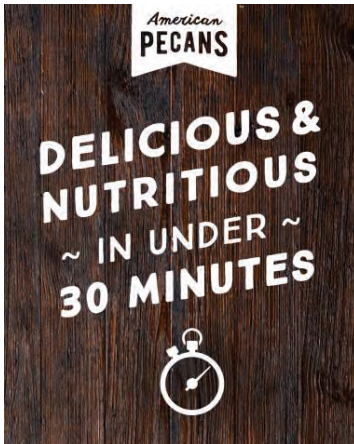
Research shows that 70 percent of consumers have purchased a product that they have seen in a brand’s social media channels or from paid social posts appearing in their feed. In 2018 alone, social media advertising helped brands generate \$51.3 billion in revenue, and that revenue is set to grow 10.5 percent each year.

With paid social media, we are able to target American Pecans posts to appear in our key audience’s social media feeds. To ensure our investment drives the most impact, we conducted research to uncover which social channels are best for reaching our Gen X and Gen Y mom target audience. As a result, we’ve focused our paid social efforts on Facebook and Instagram to spread our message on the digital platforms where they already spend their time. We also found that these channels allow for more detailed targeting, allowing us to reach key consumers.

The results show that this tactic is working. Since beginning paid social, the visits to AmericanPecan.com have risen almost 30 percent in only three months. We have also seen more visitors viewing the pecan recipes we feature on the website, showing we are driving interest in new uses for pecans. While on the site, consumers can also view

information on the many benefits of pecans, including nutrition information and recipe inspiration.

As a member of the American pecan industry, you can leverage the creative assets the APC develops for its own paid social media posts. This includes our Super-fy 10-second videos, which feature delicious, pecan-filled recipes. These videos are available for you to download and share on your own social media channels – just visit the [Super-fy page](#) in the Digital Toolkit for Industry and look under the Resources for You section (password: pecans18).



APC collateral used in American Pecans paid social is available in the Digital Toolkit for Industry to download and use.

INDUSTRY SHARES THE ORIGINAL SUPERNUT

We love seeing industry members share APC marketing assets on their own social media. Be sure to follow @AmericanPecan on Facebook, Twitter, Instagram and Pinterest.

You can also visit the [Tools & Tips](#) page in the Digital Toolkit for Industry to access and download our how-to guide for sharing APC social media posts to your channels. Who knows? Your post may be featured in an upcoming issue of this newsletter!



The Nut House & Country Market shares our mouth watering chili recipe with their Facebook followers.

CALENDAR OF EVENTS

National Pecan Shellers Association Mid-Winter Meeting

March 13-14, 2019
Atlanta, GA

Georgia Pecan Growers Association Annual Conference

March 26-27, 2019
Tifton, GA

American Pecan Council General Council Meeting

April 10, 2018
Dallas/Fort Worth International Airport

For a complete list of upcoming industry events & educational courses, visit the [Industry Events page](#) on [AmericanPecan.com](#)



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 17

MARCH 2019

APC MEETS WITH INDUSTRY

American Pecan Council (APC) management has had a busy February and March this 2019. Representatives made presentations highlighting some of the statistical findings from APC's recently completed Strategic Plan. Talking points on the 5 initiatives identified in the plan were covered, including unifying industry, pecan marketing, international marketing, modernizing the industry, and grower sheller transaction models. APC met with industry members at:

- Southeastern Pecan Growers Association Annual Conference in Destin, FL on February 22nd and 23rd;
- Georgia Pecan Growers Association Meeting in Tifton, Georgia on February 26th;
- West Texas Pecan Growers Association in El Paso, TX on February 27th;
- Western Pecan Growers Association Annual Conference in Las Cruces, NM from March 3rd through 5th;
- National Pecan Shellers Association Mid-Winter Meeting in Atlanta, GA on March 13th and 14th

The APC will be providing a deeper look into the Industry's Strategic Plan with the Council during a working group meeting in April. APC will also provide statistical information to those attending the upcoming Pecan Congress on April 9th.



APC Executive Director Alex Ott educates pecan growers on options for grades & standards at the February meeting in De Leon, TX

DE LEON MEETING

APC staff Alex Ott and Emma Garner met with ~60 Texas growers in De Leon, Texas on February 27, 2019, to provide updates on APC's recent marketing and industry relation activities, an overview of the strategic plan findings, and grades and standards 101. The purpose of the meeting was to educate industry members on each individual grade and standards. Currently, the pecan industry has voluntary in-shell and shelled standards. However, industry can choose to mandate a grade and standard if it is the direction they would like to go. We want to thank each and every one of you who came out to the De Leon meeting. If you have any questions regarding grades and standards, please reach out to the Council office.

APC COMMITTEE MEETING UPDATES

Four committees met via conference call on March 20th and March 21st, 2019, to discuss new opportunities and initiatives that align with APC's Strategic Plan. A big thank you to everyone who contributed time & energy to these important meetings.

You'll find a brief recap of what was discussed on the following page.



APC staff had the privilege of meeting with industry members and delivering presentations at recent conferences

Grades & Standards Committee

Congratulations to Randy Hudson for becoming the Chairman of the Grades & Standards committee. The Committee met to discuss grades and standards such as incoming, outgoing, and quality standards under the provisions on Section 8(e). There was great dialogue and feedback from industry members regarding the current issues around MRLs and standards within the industry. The pecan industry has inshell and shelled standards that have been in place for over thirty years. In December 2018, the shelled meats standards were updated to meet internal USDA requirements. Currently, the Council is looking into submitting updated inshell and shelled grades and standards as a package to USDA. These standards will remain nonmandatory, unless industry chooses to move forward with mandating them, through enforcement via third party inspection. APC staff will continue to gather more information regarding the standards and potential research on MRL levels. We will update the industry once more information is available.

Industry Relations Committee

Congratulations to Deborah Walden-Ralls for her appointment as Chairwoman of the Industry Relations Committee. The meeting discourse centered around streamlining the reporting form and data collection process. The Committee recommended an RFP for electronic data reporting which will be reviewed during the next Council meeting. These services include development, launch, and ongoing maintenance of the system. Additionally, APC provided an update of the NASS January survey for the American pecan industry, which has been delayed due to the government shutdown. The new publication date of the NASS survey is March 14, 2019. APC also provided an update on the Land IQ and digital mapping project, a.k.a. the U.S. Pecan Acreage survey. This project utilizes satellite imaging to provide a detailed and accurate summary of acreage in the top eight states. The Industry Relations Committee discussed the first edition of the American Pecan Council annual report showcasing APC activities and progress during the 2017-2018 fiscal year. Once published, this will be available on the American Pecan website. The last item of conversation was the revamping of the APC communications plan to increase presence and engagement with industry members.

International Committee

The International Committee will be making a recommendation to the Council on April 10th to contract with Callanan and Callanan Consulting to submit an Emerging Market Program (EMP) proposal and a Unified Export Strategy (UES) to USDA on behalf of the APC.

The committee also discussed relations with the Mexican pecan industry and how the APC might be able to work with Mexico to contribute to APC efforts through voluntary contributions on Health and Research studies, as an example. Another alternative that the committee asked APC staff to look into was the establishment of a USDA Research and Promotion Board that would mandate

assessments on nuts imported into the United States. Part of such a program would also mandate foreign representation on the Board.

Marketing Committee

The Marketing Committee will be making a recommendation to the Council during its April meeting to approve the social media based “Superweeks” proposal presented by Weber Shandwick. This is a six-month campaign that would finish off the fiscal year.

In addition, the Committee will be recommending that the APC subscribe to the AspireIQ influencer platform. The platform will enable APC staff to work directly with social media influencers. Being able to conduct certain marketing activities in house allows the APC to stretch industry’s dollars. The platform will save a substantial amount on social media efforts and then enable the APC to apply those savings to other line items within the marketing budget.

Another recommendation for the Council to consider will be the funding of studies on health-related issues and pecans. Dr. Guy Johnson has identified areas of interest for pecans. If the Council approves, the APC will be posting requests for proposals on the different areas, with studies to begin later this year.

In a preview of what’s to possibly come with the next fiscal year; the National Pecan Shellers Association proposed two Chefs Summit events. Also, the committee is looking at utilizing Comcast Cable to run a 6-month television campaign in strategically aligned markets.

FEBRUARY MARKETING HIGHLIGHTS

The latest Marketing Highlights Report, sharing activity and results from February marketing efforts, is available to view and download. Visit the [Your Dollars at Work](#) page in the Digital Toolkit for Industry (password: pecans18) or click the button below to check it out.

The image shows the cover and a preview of the February 2019 Marketing Highlights report. The cover features a collage of food images and the text "American PECANS THE ORIGINAL SUPERFOOD" and "FEBRUARY 2019 MARKETING HIGHLIGHTS". The preview includes several articles: "PECANS & PIGSKIN &" with a photo of a pizza, "Energy food" with a photo of a bowl, "Simple Ways to be Heart Smart" with a photo of a bowl, and "AMERICAN HEART MONTH" with a photo of a bowl. The "AMERICAN HEART MONTH" article includes the text: "American Pecans released an article, 'Simple Ways to Be Heart Smart,' to remind consumers of pecans' heart benefits. The article ran in 970 news outlets nationwide, reaching consumers in more than 40 states. One of the featured recipes, Cherry Pecan Energy Bites, received 2x as many views on AmericanPecan.com as it did in January."

[Download the February Marketing Report](#)

PECAN CONGRESS TO BE HELD

The American Pecan Council is coordinating a Pecan Congress of all pecan associations. The meeting will take place on Tuesday, April 9, 2019, at the Hyatt Regency DFW International Airport. The first of its kind, this meeting will provide a space for up to two representatives from each association to gather and give updates on their current activities and research. This will enable industry to further unify our efforts and eliminate duplication, so we can maximize our impact with limited resources.

On April 10, 2019, the American Pecan Council will have a general Council meeting open to public. The meeting will take place from 9:00 am CST – 12:00 pm CST in the Maverick Conference Room at the Hyatt Regency DFW International Airport.

If you have any questions, please feel free to contact the Council office. We hope you'll join us for the general Council meeting!

CALENDAR OF EVENTS

Georgia Pecan Growers Association Annual Conference

March 26-27, 2019
Tifton, GA

Pecan Association Congress Meeting

April 9, 2019
Dallas/Fort Worth International Airport

American Pecan Council General Council Meeting

April 10, 2019
Dallas/Fort Worth International Airport

Oklahoma Pecan Growers Association Annual Convention

June 15-19, 2019
Ardmore, OK

For a complete list of upcoming industry events & educational courses, visit the [Industry Events page](#) on [AmericanPecan.com](#)



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 18

April 2019

Pecans for Lent

We're always on the lookout for new ways to introduce pecans to media contacts. The beginning of Lent posed an ideal time to focus on meatless recipe options and position pecans as a "plant-based protein." This approach landed hits like [this](#) local *Times News* feature in Pennsylvania!

Lenten meals: Pecans provide a tasty, plant-based alternative to meat



OUR TARGET AUDIENCE: WHO THEY ARE AND WHY THEY ARE OUR FOCUS

You've probably heard us talk about reaching our "target audience" and may be wondering – who is this audience, and why did the American Pecan Council choose to focus on them?

When we refer to target audiences, we are simply talking about a specific group of people who – based on unique defining traits – represent the greatest opportunity for expanding the purchase and consumption of pecans. A target audience is critical to ensuring that valuable marketing funds are being spent where they can make the biggest difference.

What does this mean for American Pecans?

This means that our target audience does not include folks who are already loyal pecan purchasers. That is the key reason that industry members see less of APC marketing efforts than the average consumer – you already know about and consume pecans!

As we then look at audiences who are not yet pecan lovers, we further focus in on demographics that represent the largest purchase potential. This is not to say generating broad awareness among a greater population set is not important – if we had our way, we'd convince *everyone* to

eat pecans! But we know there are some groups who will be easier to reach and convince using fewer resources. For this reason, we have identified a specific target audience to focus our marketing efforts and make sure we're making the most effective and efficient use of industry dollars.

Who is APC's target audience and why?

Developing a target audience is a tailored process that must first start with consumer research. We started with a base question: who would buy the most pecans when properly motivated?

Those who cook at home multiple times a week, with multiple mouths to feed would be most likely to purchase larger quantities of an ingredient or snack. Going deeper, we knew that nutrition was a critical piece of our pecan story – so our target audience is also health conscious and looking for ways to make their weekly meals more nutritious.

Most importantly, we needed to ensure our target audience had purchasing power – individuals who are likely to make the everyday spending decisions for their household, particularly when it comes to food. Our research found that **moms in Generations X and Y** fit the bill on all counts:

- 56 percent of moms with children 18 or younger **cook at least 3 meals at home a week** and have "healthy foods" listed as a "MUST" when considering their weekly plans.
- These moms **love learning about new ingredients** and are interested in trying new recipes – 60 percent of moms look up new food ideas while they're cooking.
- 78 percent of Gen X and Y moms are **in a grocery store at least once a week**, indicating they hold the food purchasing power for their households.

While some of our marketing efforts cast a wide net for all potential pecan consumers, we focus the majority of our efforts on our target audience of Gen X and Y moms with kids at home.

Identifying our target audience allows us to tailor our marketing techniques. For example, consumer trends showed that Instant Pots have become popular among busy moms, so we worked with an influencer partner to create a

recipe incorporating pecans into an easy weeknight dinner using an Instant Pot. Targeted search engine advertising suggested the recipe and our website to Gen X and Y moms who searched online for “instant pot recipes” – generating 34 percent of clicks to the APC website in a single month!

What’s next? How do we plan to continue reaching this audience?

We have already seen how investing our funds toward marketing tactics that reach Gen X and Y moms allows us to stretch our dollars to get the most out of industry’s resources. In this next phase of marketing, we remain focused on reaching this audience and showing them how pecans can be a nutritious, delicious part of their regular routine.

This spring and summer, we’re introducing the concept of Superweeks – a week of meals incorporating pecans. With this campaign, we’ll show Gen X and Y moms the many uses for pecans as they plan their meals for the week, as well as tap into their desire to put creative and healthy dishes on the table for their families.

The Superweeks concept also shows the value of our product – we know pecans are a premium product, so showing how versatile just one bag can be encourages our target audience to add them to their regular, weekly grocery haul.

To do this, we’re leveraging traditional media outreach – sharing our Superweeks story with news outlets from coast to coast – as well as social media targeting. We’re also harnessing the power of a new group of influencers and bloggers who specialize in meal-planning guides and menu creation to connect directly to our ideal consumer.

With Superweeks, we’ll reach our target audience via the channels they most often turn to for meal planning, with a message that will most resonate with their desire to feed their families quick, nutritious and delicious meals.

**RESULTS AND REASONING:
HOW YOU CAN STAY CONNECTED**

Today’s marketing landscape looks very different than that of our parents, grandparents – or even ourselves five years ago! The most efficient tactics for reaching consumers are constantly shifting and changing, and it’s our promise as the stewards of your Federal Marketing Order to stay smart on what new channels are most effective for spreading the word about American Pecans.

While we aim to provide timely and thorough updates on our consumer marketing efforts, we know many of you may want to learn even more about our campaigns and strategic tactics. This summer, we’re hitting the road to share updates on APC – including our marketing program – at conferences throughout the country. We look forward to connecting with you in person at these events, and hope that you’ll take the opportunity to share your thoughts and ask any questions you may have.

In the meantime, we’re committed to sharing updates on marketing results with you on a monthly basis – through these newsletters and through the Digital Toolkit for Industry at americanpecan.com/industry. Be sure to check out the “Your Dollars at Work” page to access our Monthly Marketing Highlights reports, which showcase key results from marketing activities each month.

CALENDAR OF EVENTS

American Pecan Council General Council Meeting
April 10, 2019
Dallas/Fort Worth International Airport

Oklahoma Pecan Growers Association Annual Convention
June 15-19, 2019
Ardmore, OK

TriState ArkLaMiss Pecanference
June 20-21, 2019
New Roads, LA

For a complete list of upcoming industry events & educational courses, visit the [Industry Events page](#) on AmericanPecan.com



AMERICAN PECAN
COUNCIL

3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 19

APRIL 2019



Representatives from 19 of 21 state, regional, and national pecan associations attended the inaugural Pecan Congress on April 9, 2019

A SIGNIFICANT STEP FORWARD FOR THE AMERICAN PECAN INDUSTRY

On April 9, 2019, the American pecan industry held its first-ever “Pecan Congress.” The historic event brought together 19 of 21 pecan organizations representing different regions, state and national organizations. It provided a venue for the organizations to inform the industry on their specific issues, while offering an exchange of ideas and updates for the whole industry.

Additionally, the US Pecan Growers Association and the American Pecan Council signed a contract which will unify international messaging and help the industry go after extra funds to expand marketing efforts. This unification strategy is important as it will provide an avenue for increasing activities with pecan’s limited resources.



USPGC and APC leadership sign historic agreement

USPGC will lead the efforts in China, South Korea and South East Asia, while the APC will focus on Canada, EU, India, and other countries. This allows an opportunity to utilize expertise from both organizations for a common goal—to market and move pecans.

Overall, the event has received positive feedback and the industry is set to hold its next Pecan Congress on August 20, 2019, with the Council meeting on August 21. A special thank you to all of those that participated to make the event such a success. More detailed information will be sent to the associations as we begin preparing for the next event. If you’d like to learn more about the Pecan Congress, please do not hesitate to contact the APC office.



APC Executive Director Alex Ott addresses Georgia growers and industry members at GPGA’s 2019 Annual Conference in Tifton, GA

ON THE ROAD: GPGA ANNUAL CONFERENCE

APC staff attended and made a presentation highlighting aspects of APC’s recently completed Strategic Plan at the Georgia Pecan Growers Association Annual Conference on March 27, 2019. Executive Director Alex Ott presented 5 strategic priorities—win our fair share of tree nuts, lead amongst global suppliers, strengthen our infrastructure, modernize the industry, & unite pecan stakeholders—that emerged from the data, providing industry with a roadmap for successfully navigating the future.

APC staff also conducted a Handler Regulatory & Reporting Course to provide further education and training on compliance activities required by the Federal Marketing

Order 986, such as filling out the monthly reporting forms. If you were unable to attend the workshop and have any questions regarding the reporting forms, please feel free to contact the Council office at any time. We are here to assist you in completing the proper documentation to ensure compliance with the FMO.

Want to attend a course in person?

The next Handler Regulatory & Reporting Courses are scheduled to take place on July 15th & 16th at the 2019 Texas Pecan Growers Association Conference and Trade Show in Frisco, TX

RESULTS ARE IN ... AND THEY'RE PROMISING: ECONOMIC CONTRIBUTION OF GENERIC FOOD & AGRICULTURAL PRODUCT ADVERTISING

Results were just released of a study* conducted that analyzed the economic impact of agricultural promotion groups (APGs) in the United States. Results conclude that these programs have effectively enhanced the profits of their respective stakeholders and generated high rates of returns to the dollars invested in the programs. The study also found that the success of the programs in supporting and growing their respective sectors of agriculture has spilled over to growth in the general economy.

[Click Here to Learn More About This Study](#)

*"The National Economic Contribution of Agricultural Advertising and Promotion" by Forecasting and Business Analytics, LLC (April 2017).

MARCH MARKETING HIGHLIGHTS

The latest edition of our monthly Marketing Highlights Report, sharing updates on recent marketing activities, is available to view, download and print. Check out the March report by clicking below or by visiting the [Your Dollars at Work](#) page in the Digital Toolkit for Industry (password: pecans18).



[Download the March Marketing Report](#)

CALENDAR OF EVENTS

2019 NPSA Pecan Chefs Summit

May 1-3, 2019
San Antonio, TX

Arkansas Pecan Growers Association Education Meeting 2019

May 4, 2019
Lonoke, AR

Mississippi Pecan Growers Association—Field Day 2019

May 7, 2019
Raymond, MS

Oklahoma Pecan Growers Association Annual Convention

June 15-19, 2019
Ardmore, OK

TriState ArkLaMiss Pecanference

June 20-21, 2019
New Roads, LA

For a complete list of upcoming industry events & educational courses, visit the [Industry Events page](#) on [AmericanPecan.com](#)



AMERICAN PECAN COUNCIL

3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan





IN A NUTSHELL

Issue No. 20

May 2019

National Pecan Month Feature!

In honor of April being National Pecan Month, registered dietitian and social media influencer Mia Syn shared the pecan love in a TV cooking demo in Charleston, SC, and with her 84K Instagram followers by posting about six different ways pecans can be used “outside the pie.”



HAVE A SUPERWEEK WITH AMERICAN PECANS

Last month, we gave you a sneak peek at our latest marketing initiative – Superweeks – where we show consumers the many delicious ways to incorporate pecans into weekly menus. The concept taps into the current weekly meal planning trend among our target audience of moms in generations X and Y. Each week, we’ll release a new line-up of pecan-inspired recipes the whole family can enjoy during the work week.

Our goal is to show consumers how one bag of pecans can amp up their families’ meals all week long. In doing so, we hope to change people’s perceptions of pecans from a specialized ingredient they purchase around the holidays to a

year-round staple they add to their grocery basket on a weekly basis.

Some of you might be thinking, *what is the difference between Superweeks and Super-fy?* Think of Superweeks as an evolution of Super-fy. We want consumers to Super-fy their meals every day by adding pecans to their weekly meal plan routine – making each week a Superweek!

To do this, our meal plans will rotate between six themes – Heart Health, Gluten Free, Kid-Friendly, Plant Based, Magic Number, and Summer Socials – every few weeks. These themes were carefully chosen based on our target audience of Gen X and Y moms who have purchasing power and search for these types of recipes when meal planning this time of year.

The campaign kicked off last month and will run through September, sharing pecan-inspired recipes throughout the summer and into the back-to-school season this fall. Be on the lookout for Superweeks content on APC digital channels in the coming months!



The Superweeks campaign shows consumers how adding pecans to their weekly grocery routine allows for new, delicious and nutritious options beyond the pie.

ENGAGING INFLUENTIAL VOICES TO TELL THE SUPERWEEKS STORY

One of the key elements of this campaign is our partnerships with influential bloggers in the food/nutrition space who will create original content for Superweeks. While vetting influencers, we ensured each is a good fit for the campaign

and relates to our target audience of moms in Generations X and Y (age 25-54). Our newest influencers are all mothers who have a love for cooking and learning about nutritious new foods, regularly meal plan for their families and share their ideas with their social media and blog followers.

For Superweeks, each influencer will prepare meal plans along one of our six themes (Heart Healthy, Kid-Friendly, Gluten Free, Plant Based, Magic Number, and Summer Socials). Each partner was thoughtfully matched with one of these themes to fit their blog content, personal style and what their loyal followers have come to expect from them.

Our influencer partnerships for Superweeks are already underway – one of our partners, Sandy Coughlin of [Reluctant Entertainer](#) has already begun sharing [Superweeks content](#) with her 586K social media and blog followers. As a mom of three, she loves trying new recipes and sharing them online, and has amassed a strong following and popularity among other mothers who are looking to feed their families nutritious and delicious meals.

Sandy will create meal plans and content with our Summer Socials theme – showing how pecans can be incorporated into recipes for summertime meals and entertaining. Be sure to follow her on social media ([Facebook](#), [Instagram](#) and [Pinterest](#)) and keep an eye out for her Superweeks posts!



Sandy Coughlin of Reluctant Entertainer is just one of the influential bloggers we will work with for Superweeks.

SUPERWEEKS RESOURCES FOR INDUSTRY

As with all of our marketing initiatives, the Superweeks campaign is in service to you. As a member of the American pecan industry, we encourage you to take advantage of the materials and content the APC creates for Superweeks for use in promoting your own business.

To give you easy access to a host of Superweeks campaign resources, we created a [dedicated page](#) in the Digital Toolkit

for Industry (password: pecans18). The page shares helpful information on the campaign and includes downloadable resources – like our heart-smart shopping list and recipe cards – which you can print to hand out to customers or post to your own website.

Much like the Superweeks campaign, we will update the page frequently with new materials, so continue to check back throughout the campaign!

CALENDAR OF EVENTS

Oklahoma Pecan Growers Association Annual Convention

June 12-14, 2019
Ardmore, OK

TriState ArkLaMiss Pecanference

June 20-21, 2019
New Roads, LA

Texas Pecan Growers Association Annual Conference

July 14-17, 2019
Frisco, TX

Arizona Pecan Growers 24th Annual Conference 2019

September 5-6, 2019
Tuscon, AZ

National Pecan Shellers Association Annual Meeting

September 11-13, 2019
Nashville, TN

Know someone who should receive our newsletter?

Tell them to sign up by visiting [AmericanPecan.com](#) and entering their email in the “Let’s Stay in Touch” field. They can also email us directly at industry@americanpecan.com and ask to join our mailing list.



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



IN A NUTSHELL

Issue No. 21

MAY 2019



NEW ROUND OF TARIFFS SET

On May 10, 2019, the Trump Administration announced that it would begin imposing a new round of tariffs totaling \$200 billion in higher tariffs on Chinese goods. This new round of tariffs is in response to the tariffs that China has imposed on U.S. goods and services, including agricultural products, such as pecans. China's response has been to increase existing tariffs by as much as 25% including agricultural products.

As a result of the new trade tariffs being proposed, President Trump has turned to additional mitigation funding through existing programs, such as Market Facilitation Program, additional Agricultural Trade Promotion Program (ATP), and additional dollars for agricultural purchase programs. Last round, the pecan industry received a total of \$16.8 million for purchase products and \$1.3 million in ATP assistance.

As a result of the tariffs, the American pecan industry has seen exports to China/Hong Kong go from 80 million pounds to just 7 million pounds. It is projected that the impact on the pecan industry has been between \$240 - \$300 million dollars. The American Pecan Council will continue to update the industry as additional information becomes available. In the meantime, the APC will continue to drive demand in both domestic and selected international markets and increase awareness to alleviate supply. For additional information, please contact the Council office.

THE GEORGIA PECAN CONFERENCE

The APC attended the first annual Georgia Pecan Congress which took place in Tifton, Georgia, April 29-May 1, 2019.

The event was well attended by Georgia growers, accumulators and shellers. Others in attendance included members of the USDA and Georgia State Agriculture.

Discussion centered around improving relations within the supply chain and thus unifying industry. Other topics included Mexican imports, domestic marketing and improving the packaging of pecans. Shellers showed interest in encouraging foreign suppliers to make voluntary donations to and the APC. If agreed upon, those donations would be utilized by the APC to increase domestic marketing efforts and to conduct health research studies. On the marketing front, attendees noted that they would like to see a macro strategy when it comes to promoting pecans in regions of the United States that may not recognize pecans for use outside of holiday baked goods.

There were approximately 30 attendees in all. The overwhelming positive response appears to point towards Georgia conducting this event once a year. Thanks to Brent Brinkley and Samantha McLeod for coordinating the event.



Culinary Director Marie Ostrosky leads a live cooking demo showcasing the versatility of pecans at the Culinary Institute of America – San Antonio Campus

NPSA'S CHEFS SUMMIT 2019 ROUND-UP

May 1-3 marked the 2019 Pecan Chefs Summit in San Antonio, TX. The annual event, which took place in San Antonio, Texas, was organized and hosted by the National Pecan Shellers Association and funded in part by the American Pecan Council.

During this three-day immersion into the world of pecans, R&D chefs from around the nation were invited to see how pecans are grown and brought to market through touring a farm run by a 5th generation grower as well as a commercial shelling facility. Additionally, the chefs learned about the nutritional profiles of pecans and how to differentiate the texture, flavor, and uses of various pecan products (including halves, pieces, meal/flour, and oil), through live cooking demos and educational sessions.

We're excited to see what new applications from the foodservice industry come about as a result of this event!

APC RAMPS UP INFLUENCER MARKETING

The APC has partnered with the premiere influencer platform firm AspireIQ to begin building content for the Council's website and to build out their social communities. Thanks to AspireIQ, over the next few months the APC will begin working with over 30 influencers that will provide content via Pinterest, Instagram, Facebook and Twitter. The APC will also be creating a YouTube Channel that will host a variety of industry videos and recipes. The recently conducted APC Strategic Plan confirmed areas in which the Council could repurpose marketing dollars towards building a library of content while still retaining the services of the APC's public relations firm Weber Shandwick. These identified savings provide room within the budget to reach our target audience utilizing a variety of marketing tools. We look forward to expanding on this strategy in the upcoming fiscal year.

APRIL MARKETING HIGHLIGHTS

Today we released the latest edition of our monthly Marketing Highlights Report, sharing updates on recent marketing activities. You can view and download the report by clicking the button below or by visiting the [Your Dollars at Work](#) page in the Digital Toolkit for Industry (password: pecans18).



[Download the April Marketing Report](#)

Save the Date!

The next Handler Regulatory & Reporting Courses are scheduled to take place on July 15th & 16th at the 2019 Texas Pecan Growers Association Conference and Trade Show in Frisco, TX

CALENDAR OF EVENTS

Oklahoma Pecan Growers Association Annual Convention

June 12-14, 2019
Ardmore, OK

TriState ArkLaMiss Pecanference

June 20-21, 2019
New Roads, LA

Texas Pecan Growers Association Conference & Trade Show

July 14-17, 2019
Frisco, TX

Pecan Association Congress Meeting

August 20, 2019
Dallas/Fort Worth International Airport

American Pecan Council General Council Meeting

August 21, 2019
Dallas/Fort Worth International Airport

For a complete list of upcoming industry events & educational courses, visit the [Industry Events page](#) on [AmericanPecan.com](#)



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



IN A NUTSHELL

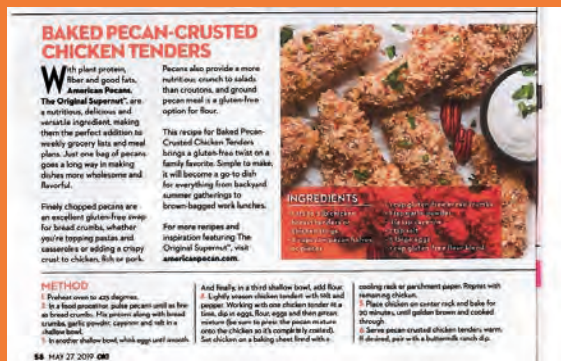
Issue No. 22

June 2019

Pecans in OK! Magazine

Have you seen us on the newsstand?

American Pecans were featured in the May 27th issue of OK! Magazine with our Baked Pecan-Crusted Chicken Tenders in the “Things We’re Obsessed With” section.



WHAT MAKES A SUPERWEEK?

Last month, we introduced Superweeks, our latest marketing initiative, where we encourage consumers to add pecans to meals throughout each week. Now that the campaign is in full swing, let’s look at some of the Superweek themes, and how the weekly meal plans align with the lifestyles and health goals of our consumers. To date, we have released six Superweek options, with themed meal plans that cater to our audience’s interests, dietary needs, and seasonal interests.

“Tasty Bites for Busy Nights” and “Zero to Super in 30 Minutes” each provide a week’s worth of pecan-inspired recipes that are perfect for working parents, busy families or anyone looking for quick but delicious meal inspiration.

Other Superweek plans cater to specific dietary restrictions or health interests. The “Eat Your Heart Out” week is chock-full of recipes that combine pecans with other heart-smart ingredients like salmon, quinoa, kale, and cherries. “Gluten-Free for the Family” and “Plant-Based Picks” plans demonstrate how pecans can be a staple source of nutrition for those that follow alternative diets.

Each of these meal plans, while distinct, has the same unifying goal in mind: to highlight pecans as part of the standard grocery and meal-planning routine because it is a hard-working ingredient that makes achieving health goals, or addressing lifestyle needs, even easier.

Do these meal plans sound like something your friends, family or customers might enjoy? Head to the “Superweeks” page on AmericanPecan.com, where you can check out the full plan on and the tasty recipes in each plan. Within the Industry Toolkit, you’ll find printable recipe cards, a heart-smart grocery shopping list, and more printable resources to add to your storefront, email to your customers, or share on social media.

For more ideas and inspiration, please reach out to us at industry@americanpecan.com. We’re always happy to help you brainstorm how to best make the American Pecans brand and marketing materials work for you!



Each Superweek is designed to appeal to busy families, providing delicious recipe inspiration that both parents and kids will love.



The Retail Dietitians Business Alliance is a resource for specific registered dietitians who work inside grocery stores nationwide, sharing new products and nutrition information with shoppers while they are in the store.

EXPANDING OUR RETAIL DIETITIAN PARTNERSHIP

You may recall our work with a group of “Supermarket RDs” earlier this year during our Super-fy campaign. We developed a turnkey toolkit of recipe cards, nutrition and proper storage information, as well as a calendar of suggested themes and activations for RDs to use during their in-store demonstrations. These RDs are particularly strong partners for our goal of increasing demand, because they educate shoppers in the store, influencing purchasing decisions.

The program’s first round was very successful, with 23 RDs activating in grocery stores nationwide. Now, we have expanded this Supermarket RD program by collaborating with the Retail Dietitians Business Alliance, a key resource for these dietitians. The RDBA’s newsletter is distributed to more than 2,200 members nationwide, and American Pecans was featured in a May issue and will be featured in another this month. Within these e-newsletters, we provided an opt-in link for RDs to receive our toolkit, including nutrition info, recipes, and usage inspiration as well as information they need to make successful in-store displays and demos. We are also sending the RDs a nutrition handout along with themed Superweeks 5-recipe meal plans, so they can encourage their shoppers to purchase a bag of pecans and create a week’s worth of meals.

Interested in taking advantage of these resources for your own business? Head to the Industry Toolkit on AmericanPecan.com (password: pecan18) where you can find these materials and more.

CALENDAR OF EVENTS

Oklahoma Pecan Growers Association Annual Convention

June 12-14, 2019
Ardmore, OK

TriState ArkLaMiss Pecanference

June 20-21, 2019
New Roads, LA

Texas Pecan Growers Association Annual Conference

July 14-17, 2019
Frisco, TX

Arizona Pecan Growers 24th Annual Conference 2019

September 5-6, 2019
Tuscon, AZ

National Pecan Shellers Association Annual Meeting

September 11-13, 2019
Nashville, TN

Know someone who should receive our newsletter?

Tell them to sign up by visiting AmericanPecan.com and entering their email in the “Let’s Stay in Touch” field. They can also email us directly at industry@americanpecan.com and ask to join our mailing list.



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



IN A NUTSHELL

Issue No. 23

JUNE 2019



NEW INDIA TRADE TARIFFS DO NOT IMPACT PECANS

On June 16, 2017, India government officials announced an increase in taxes on US products on several existing commodities. For nuts, it was announced that the surcharge duties will be set at 120%. However, pecans are excluded from the increased duty. Almonds and walnuts are the only nuts listed in the increase for duties. The effective duties go into effect June 16, 2019.

The American Pecan Council (APC) identified India as a potential top five market to target. Currently, the APC is submitting an emerging market proposal (EMP) to try and obtain dollars to study the market and begin establishing a pecan market in the country. The current tariff on pecans shipped to India is 36%. APC will continue to monitor and communicate with industry as data becomes available.

APC VISITS OKLAHOMA AND TRI-STATE CONFERENCES

On June 13, the American Pecan Council presented to the Oklahoma Pecan Growers Association. After the trip through the Panhandle State, the APC turned south to Louisiana where the APC spoke to the Tri-State Pecan Growers Conference. The presentations updated the attendees on the latest activities that the APC has completed and continues to work on. Currently, active projects include: continuation of the “Superweeks” consumer marketing campaign, nutritional research, consumer tracking, nearly completing the US satellite acreage

mapping, preparing for the next Pecan Congress, and providing updates on the latest shipment data. Issues discussed during the Q&A session included market updates on India, Mexico, S. Africa, domestic shipments, grades and standards and the changing of communication to target consumer groups.

A special thank you to both the Oklahoma Pecan Growers Association and the Tri-State Pecan Growers conference for putting on two great events. For more information about the topics covered, please contact the Council office.



APC Executive Director Alex Ott presents to industry members from Arkansas, Louisiana, and Mississippi at the 2019 Tri-State Pecan Growers Conference

MRL WORKSHOP

APC Staff Emma Garner attended the 2019 MRL Harmonization Workshop in San Francisco, CA on May 29-30, 2019. Over 150 attendants including industry members, organizations, and governmental agencies were represented at this workshop. There were 30 international attendees coming from over 7 countries. The workshop included international updates from Germany regarding the EU Commission, South Korea and Taiwan regarding their Positive List and enforcement, as well as the Southeast Asian Nation’s current MRLs. Other topics of discussion were EU pesticide policies as it relates to trade with EU, the MRL early alert system in the EU, an update from Environmental Protection Agency (EPA) and Committee on Pesticide Residues (CCPR), and FAS, overall MRL

compliance and exemptions, and the future of MRL harmonization. All presentations from this workshop are now available online at the link provided below:
<http://specialtycrops.org/mrlworkshop.html>

SASDA 2019 CONFERENCE

From June 8-12, 2019, Commissioners and Secretaries of Agriculture from Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Texas, Virgin Islands, Virginia, and West Virginia gathered in Fort Worth, Texas for the 2019 Annual SASDA Conference.

The purpose of the Southern Association of State Departments of Agriculture (SASDA) is to improve American agriculture through the development and promotion of sound public policy and agriculture related businesses and programs, and to communicate the vital economic importance of agriculture.

As a sponsor of the conference, APC was invited to join the Commissioners and Secretaries for educational sessions on the regulatory responsibilities of each state, and discussions over current and future agriculture policy issues.

To learn more about the organization and conference, visit www.sasdaannualconference.com.

MAY MARKETING HIGHLIGHTS

We have released the latest edition of our monthly Marketing Highlights Report, sharing updates on recent marketing activities. You can view and download the report by clicking the button below or by visiting the [Your Dollars at Work](#) page in the Digital Toolkit for Industry (password: pecans18).

The graphic features a top banner with images of pecan products and the text "American PECANS THE ORIGINAL SUPERBUT". Below this is a section titled "MAY 2019 MARKETING HIGHLIGHTS". The main content includes three key statistics: "WHAT'S FOR DINNER? Tracking most-clicked recipes helps us dish up what consumers like most - this month, 'pecan chicken' recipes were clicked more than 100 times a day." (accompanied by an image of a plate of pecan chicken), "THIS MONTH, ONLINE SEARCHES FOR 'PECAN' INCREASED BY 50% SINCE MAY 2016!" (accompanied by a Google search bar image), and "GOOGLE ADVERTISING IS PAYING OFF!" (accompanied by a Google AdWords image). A small American Pecan Council logo is at the bottom.

[Download the May Marketing Report](#)

Save the Date!

The next Pecan Congress of industry associations will be held at the Hyatt Regency DFW International Airport on Tuesday, August 20, 2019, beginning at 8:30 am CST. Breakfast and lunch will be provided. There will be a reception on the 20th at 6:00 pm CST. The Council meeting will be on Wednesday, August 21st beginning at 8:30 am CST. Breakfast and lunch will be provided. It is open to public.

CALENDAR OF EVENTS

Texas Pecan Growers Association Conference & Trade Show

July 14-17, 2019
Frisco, TX

American Pecan Council Handler Regulatory & Reporting Course

July 15-16, 2019
Frisco, TX

Pecan Association Congress Meeting

August 20, 2019
Dallas/Fort Worth International Airport

American Pecan Council General Council Meeting

August 21, 2019
Dallas/Fort Worth International Airport

Arizona Pecan Growers 24th Annual Conference

September 5-6, 2019
Tucson, AZ

National Pecan Shellers Association Annual Meeting

September 11-12, 2019
Nashville, TN



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



IN A NUTSHELL

Issue No. 24

July 2019



Grocery store chain Kroger features American Pecans heart-smart recipe for Pecan Crusted Honey Mustard Salmon.

HEART-HEALTHY PECANS FEATURED IN KROGER MAGAZINE

We're excited to share that American Pecans is featured as a heart-healthy option in grocery store Kroger's *Live Naturally* magazine this summer! We combined the educational information on the nutrition of pecans with the seasonal interests of our audience to create an engaging and delicious article, "Simple Planning for Easy, Heart-Smart Summer Meals." The piece features our American Heart Association Heart-Check designation, as well as a tasty dinner recipe, Pecan Crusted Honey Mustard Salmon in Foil.

Live Naturally is available throughout the store, as well as at the checkout counter and store entrance. Our American Pecans content was shared in stores in four major markets nationwide: Kroger Atlanta, Kroger Southwest (TX, LA), Ralph's of California and Kroger Mid-Atlantic (WV, VA, NC, TN).

Grocery magazines pose a great opportunity to reach our target audience as close as possible to their point of purchase. In fact, 93 percent of consumers surveyed by Kroger were inspired to try new products after reading the magazine.

Consumers also stated that recipes and articles were "most helpful" and 55 percent of readers made a recipe after seeing it in the magazine. We are excited to promote pecans in these grocery store magazines that help to move pecans from consumer awareness to consumer sales.

If you see the magazine in your store, we would love to hear about it. Send us a picture at industry@americanpecan.com, or call the office at (817) 916-0020 and let us know!

PUTTING THE BRAND TO WORK FOR YOU

Everything we create for our marketing efforts is yours to use for your own business. Most of these resources live in the Industry Toolkit on the American Pecans website, where you can find campaign-specific resources as well as logos, FAQs, and more. Print and share your favorite materials, and let us know what you'd like to see next!

You can check out the toolkit [here](#) (password pecans18).

THE SCIENCE BEHIND THE SUPERNUT

A core component of our marketing program is educating consumers on the nutrition story of pecans. We actively promote pecans as a nutrient-dense nut and highlight their American Heart Association Heart-Check Certification; however, we are restricted in sharing certain health and nutrition claims, due to lack of associated nutrition research. This year, we began laying the groundwork to share more of the pecan's nutrition story by commissioning nutritional research.

We partnered with nutrition consultant Guy Johnson, Ph.D., to help us develop a Request for Proposal (RFP) for research related to pecans and cardiovascular health and weight management. Research like this will help us tell more of the pecan nutrition story and support our claim that American Pecans truly are The Original Supernut.

We distributed this RFP to more than 70 researchers at universities and institutions across the country, both independently and through organizations like the Academy of Nutrition and Dietetics and the American Society for Nutrition. **We're thrilled to announce we received 21 proposals from top-tier researchers and institutions** including Harvard, Yale, UC-Davis and Penn State.

We are working with our consultant to review the detailed proposals and develop a recommendation for which researcher(s) will be awarded the research grant later this summer.

GETTING TO KNOW OUR MEAL PLANNING PARTNERS

In May, we introduced you to our Superweeks influencer program, where we partner with food and lifestyle bloggers to create new American Pecans recipes and spread the word about the versatility,

nutrition, and heritage of the pecan. Since May, the program has really taken off!

If you follow American Pecans on social media, or have been checking in with our Superweeks blog on AmericanPecan.com, you likely noticed a collection of new recipes.

These new creations came from a fresh group of partners whose blog content and readership line up with our target audience of Gen X and Y moms. These bloggers not only created new recipes, but also shared these recipes in the context of a full, American Pecans meal plan, or five days' worth of meals all centered around pecans.



plant-based meal plan

Yummy Mummy posted her mouth-watering Pecan Stuffed Bell Peppers recipe to her personal blog page, which has more than 70,000 readers per month!

The loyal followers of our pecan partners are learning how pecans can work in new and delicious ways for their families every day of the week. Check out some examples below!

- [Yummy Mummy Kitchen](#) provided us with five days' worth of pecan-filled, vegan meals, including this delicious recipe for Pecan-Stuffed Bell Peppers.
- [Wholesomelicious](#) shared five gluten-free recipes for weeknight meals, including Air-Fryer Pecan Crusted Pork Chops and Grilled Balsamic Chicken with Pecan Pesto.
- [Joyful Healthy Eats](#) provided us with five yummy meals that consumers can make in thirty minutes or less – perfect for our target audience of busy moms on the go.
- [Mom's Kitchen Handbook](#) just released the first recipe in her series of energy-boosting recipes for consumers.

Each of these partners appeals to a slightly different lifestyle or dietary preference – and together, they build a comprehensive picture for the consumer of the versatile power of pecans.

Have a favorite? You can always go to AmericanPecan.com to print or email the recipe to share with family, friends and customers.

CALENDAR OF EVENTS

Texas Pecan Growers Association Annual Conference

July 14-17, 2019
Frisco, TX

American Pecan Council Handler Regulatory and Reporting Course

July 15-16, 2019
Frisco, TX

Pecan Associations Congress

August 20, 2019
Dallas, TX

American Pecan Council-General Council Meeting

August 21, 2019
Dallas, TX

Arizona Pecan Growers 24th Annual Conference 2019

September 5-6, 2019
Tuscon, AZ

National Pecan Shellers Association Annual Meeting

September 11-12, 2019
Nashville, TN

KNOW SOMEONE WHO

SHOULD RECEIVE OUR NEWSLETTER?

Tell them to sign up by visiting AmericanPecan.com and entering their email in the "Let's Stay in Touch" field. They can also email us directly at industry@americanpecan.com and ask to join our mailing list.



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



Follow us on social media: @americanpecan



IN A NUTSHELL

Issue No. 25

AUGUST 2019



NEW STUDY REVEALS AN INVERSE ASSOCIATION BETWEEN NUT CONSUMPTION AND CARDIOVASCULAR DISEASES

The International Nut & Dried Fruit Congress just released a press release regarding a systematic review and meta-analysis of prospective cohort studies conducted by the Diabetes and Nutrition Study Group (DNSG) of the EASD (European Association for the Study of Diabetes) to summarize the evidence of the association between nut consumption and the incidence of, and mortality from, certain CVD outcomes. Results conclude that total nut consumption plays a beneficial role in reducing the incidence of, and mortality from, different CVD outcomes. [Click here to view the official press release.](#)

APC COMMITTEE MEETING UPDATES

On July 24-25, 2019, APC held Committee meeting conference calls for the five Committees: Governance, Marketing, International, Industry Relations, and Grades & Standards. Each committee approved recommendations which will be brought before the full Council for final approval on August 21, 2019 at the Hyatt Regency DFW hotel in Dallas, Texas. Areas of discussion at the Committee level have been outlined in brief, below:

The Marketing Committee discussed topics such as health and nutrition marketing, the upcoming 2019-2020 FY proposed marketing activities, and the upcoming 2019-2020 FY marketing budget. The committee approved a recommendation in these areas to boost pecan presence in

the domestic, international, and health and nutrition markets.

The Industry Relations Committee's topics of discussion included a review of the 2018-2019 FY activities such as Land IQ, reporting forms update, sponsorships, the Pecan Congress, and the upcoming 2019-2020 FY Industry Relations budget. The committee approved recommendations to the Council for compliance workshops and materials, industry relations activities, and funding for industry research.

The Grades & Standards Committee discussed the following: the upcoming 2019-2020 FY activities and budget and revisions to the current inshell standards. The committee approved recommendations to the Council for a voluntary Quality Assurance Program for American Pecans as well as industry research.

The International Committee's topics of discussion included USDA Unified Export Strategy and the 2019-2020 FY International Committee budget. The committee approved recommendations to the Council for a management contract regarding China, South Korea, and Southeast Asia, UES/EMP development, and the International Nut Congress Health Research.

The Governance Committee discussed financials, compliance, and the upcoming 2019-2020 FY budget.

All Committee Meetings are open to the public. Upcoming Committee Meetings, Council Meetings, and other industry events are published on the AmericanPecan.com website under the Industry Events tab. [Click here](#) to bookmark the page so you don't miss a thing!

Mark Your Calendar!

The next Pecan Congress of industry associations will be held at the Hyatt Regency DFW on Tuesday, August 20, 2019, beginning at 8:30 am CST. Breakfast and lunch will be provided. APC will be handing out the 2017-2018 FY Annual Report. The Annual Report will also be available on the AmericanPecan.com website following the Congress. The Council meeting will be on Wednesday, August 21st, beginning at 8:30 am CST. Breakfast and lunch will be provided. It is open to public. Please join us!



APC Western Region Representative Deborah Ralls and APC staff Emma Garner at the Handler Regulatory and Reporting Course conducted at the Texas Pecan Growers Association Meeting on July 15-16, 2019.

ON THE ROAD: APC ATTENDS TEXAS PECAN GROWERS ASSOCIATION CONFERENCE

APC staff attended and made a presentation highlighting aspects of APC's recently completed Strategic Plan at the Texas Pecan Growers Association Annual Conference & Trade Show on July 15-16, 2019 in Frisco, TX. Executive Director Alex Ott presented a review and update on the programs and activities that are in progress and those that have been accomplished during 2018 and 2019.

APC staff also conducted a Handler Regulatory & Reporting Course to provide further education and training on compliance activities required by the Federal Marketing Order 986, such as filling out the monthly reporting forms.

Have Questions Regarding the Monthly Reporting Forms?

If you have any questions regarding the reporting forms, please feel free to contact the Council office at any time. We are here to assist you in completing the required documentation to ensure compliance with the FMO.

AMERICAN PECANS TO BE FEATURED IN RFD-TV'S CHASING DOWN MADISON BROWN

APC has worked with RFD-TV a few times before to share news with the pecan industry - and the broader ag industry - about the brand launch and Pecan-A-Thon on their Market Day Report broadcast. The network reaches more than 52 million homes and showcases agribusiness as well as rural lifestyle. *Chasing Down Madison Brown* is one of the network's lifestyle shows, following Madison as she searches for the best farms, food and people in rural America.

This segment will highlight the American Pecan Industry and APC. Filming for the Chasing Down Madison Brown segment will occur on September 19th-21st in San Saba,

TX. APC will notify industry once the air date has been announced.

About *Chasing Down Madison Brown*

Meet Madison Brown, a seasoned road warrior who grew up rolling down the highway with country band Sawyer Brown and her father Mark Miller, founder and lead singer. Madison's unique and adventurous upbringing meant life on a tour bus, where each new stop brought new adventures, influenced her passion for food, and developed her love for exploring new places. Inspired by Madison's longtime blog, chasingdownmadisonbrown.com, this new series takes viewers coast-to-coast with behind-the-scenes tours, celebrity interviews, sporting events, chefs, food, and more.

JUNE MARKETING HIGHLIGHTS

The latest edition of our monthly Marketing Highlights Report was released this week, sharing updates on recent marketing activities. You can view and download the report by clicking the button below or by visiting the [Your Dollars at Work](#) page in the Digital Toolkit for Industry (password: pecans18).



CONSUMERS FIND INSPIRATION AT AMERICANPECAN.COM



HUNGRY FOR AMERICAN PECANS

We're driving these consumers toward purchase with enticing pecan recipes: **23.4% of June website visitors viewed recipes**



[Download the June Marketing Report](#)

CALENDAR OF EVENTS

Pecan Association Congress Meeting

August 20, 2019

Dallas/Fort Worth International Airport

American Pecan Council General Council Meeting

August 21, 2019

Dallas/Fort Worth International Airport

Arizona Pecan Growers 24th Annual Conference

September 5-6, 2019

Tucson, AZ

National Pecan Shellers Association Annual Meeting

September 11-12, 2019

Nashville, TN



IN A NUTSHELL

Issue No. 26

August 2019

Pecans are Part of the Plan!

American Pecans' recipe for Creamy Chopped Chickpea Pecan Salad was featured as a part of the widely syndicated Sunday "Seven-Day Menu Planner."

The article ran in papers nationwide, including Arkansas Democrat Gazette, Chicago Sun-Times (below), and New Hampshire Sunday News.



The Chicago Sun-Times shares a mouthwatering recipe for Creamy Chopped Chickpea Pecan Salad.

SIMPLIFYING BACK-TO-SCHOOL DINNERS

As summer comes to an end and kids prepare to head back to school, parents are looking for easy recipes with healthy, nutritious ingredients to add to their weeknight rotation.

We know that parents are busy – and according to Mintel research, 53 percent of consumers said they do not have the energy to cook. This makes it the perfect time to share tasty meal plans that incorporate The Original Supernut and take less than 30 minutes to prepare!

We released an article titled, "Simplify Back-to-School Dinners with Nutritious Meal Plans" to hundreds of news outlets nationwide. The piece features tasty favorites such as Pecan-Crusted Air Fryer Pork Chops and was distributed in July and August to coincide with the start of back-to-school season. Articles have run in print and online news outlets

such as the [St. Louis Post-Dispatch](#), [The Advocate](#) (Baton Rouge, La.), and [The Southern Maryland Chronicle](#).

The article shares the health benefits of pecans and explains how adding one bag to your grocery list creates an opportunity to explore a week's worth of new and nutritious dishes. These recipes are quick and kid-friendly, making them an ideal fit for our Gen X and Y Mom target audience.

You can find the recipes in the article, or at [AmericanPecan.com](#). If you try them, we would love to know what you think! Send us a note and photo at industry@americanpecan.com. We cannot wait to see!



Pecan-Crusted Air Fryer Pork Chops make for a delicious back-to-school dinner on a busy weeknight.

ROUNDING OUT THE SUPERWEEKS INFLUENCER PROGRAM

You may recall the information shared about our influencer program back in May. We are excited to introduce our latest group of partners and the meal plans they've created exclusively for American Pecans.

Our influencers' blog content and readership are well matched with our target audience of Gen X and Y Moms, who hold purchasing power for groceries in their households. Our research revealed that these mothers are health conscious and most likely to explore new ways to incorporate nutrients into family meals.

We also found that two out of three moms plan their weekly meals in advance, especially those with young kids. In fact, according to Mintel research, the most stressful time of day

for parents is dinnertime – and 82 percent of working moms try to combat this with advanced meal planning.

We partnered with bloggers [Mom’s Kitchen Handbook](#) and [Real Housemoms](#) to show consumers that pecans are a superfood that can help fuel families throughout the day, which research shows moms are looking for.

Mom’s Kitchen Handbook shared a [meal plan](#) with five days of high-energy recipes that fight sugar slumps and afternoon grogginess, such as [“Almost Vegan” Linguine with Cauliflower Pecan Alfredo](#) and [Grilled Pork Chops with Peach and Pecan Summer Salsa](#). These power-packed recipes show consumers how pecans can energize their days by providing “good” monounsaturated fat, plant-based protein, fiber and essential minerals (zinc, copper and manganese).*

**One serving of pecans (28g) contains 18g unsaturated fat and only 2g saturated fat.*

Mintel research also shows that one in four Gen X and Y moms is inspired by their children when choosing meals. Real Housemoms shared recipes that fit the bill, such as [Pecan Chicken Meatballs](#) and [Pecan Chicken Sheet Pan Dinner](#), that help introduce new and delicious options to kids.

mom's kitchen handbook



Katie Morford of Mom’s Kitchen Handbook shares five energy-filled recipes full of pecans.

AMERICAN PECANS ON THE AIRWAVES

In July, American Pecans was featured in TV segments on News 4 San Antonio and WISH-TV in Indianapolis. Both cities are large, diverse markets with great opportunity to create new pecan lovers!

Registered Dietitians Amy Goodson and Annessa Chumbley showcased pecans as a source of protein that make for a delicious snack and great addition to recipes. Amy Goodson is the former sports dietitian for many Texas athletic teams, including the Dallas Cowboys and Texas Rangers. She is also an ambassador for the American Heart Association and has co-authored a sports nutrition book for triathletes.

Annessa Chumbley is a mother of two, recipe creator, spokesperson, and talk show host on WISH-TV. In their segments, our RDs explained the health benefits of pecans and how they are ideal for effortless summertime entertaining, sharing our Pecan Berry Green Salad as an easy example of the versatility of pecans.



Popular Pecan Berry Green Salad was one of the summer favorites featured in our RD segments.

The segments reached more than 25,000 viewers, connecting consumers in markets around the country with the superfood power and easy entertaining options of The Original Supernut.

PECAN COVERAGE: FILMING FOR RFD-TV'S CHASING DOWN MADISON BROWN TELEVISION PROGRAM SET!

APC has worked with RFD-TV a few times before to share news with the pecan industry - and the broader ag industry - about the brand launch and Pecan-A-Thon on their Market Day Report broadcast. The network reaches more than 52 million homes and showcases agribusiness as well as rural lifestyle. *Chasing Down Madison Brown* is one of the network’s lifestyle shows, following Madison as she searches for the best farms, food and people in rural America.

This segment will highlight the American Pecan Industry and APC. Filming for the Chasing Down Madison Brown segment will occur on September 19th-21st in San Saba, TX. APC will notify industry once the air date has been announced.

About RFD-TV

RFD-TV is the flagship network for Rural Media Group, the world’s leading provider of multimedia content dedicated to the rural and Western lifestyle. Launched in December of 2000, RFD-TV is the nation’s first 24-hour television network featuring programming focused on the agribusiness, equine and the rural lifestyles, along with traditional country music and entertainment.

About *Chasing Down Madison Brown*

Meet Madison Brown, a seasoned road warrior who grew up rolling down the highway with country band Sawyer Brown and her father Mark Miller, founder and lead singer. Madison's unique and adventurous upbringing meant life on a tour bus, where each new stop brought new adventures, influenced her passion for food, and developed her love for exploring new places. Now, this recent college grad is tossing off the graduation cap, hitting the road, and taking you on the adventure of a lifetime.

Inspired by Madison's longtime blog, chasingdownmadisonbrown.com, this new series takes viewers coast-to-coast with behind-the-scenes tours, celebrity interviews, sporting events, chefs, food, and more. Madison talks with family and friends, such as Toby Keith, Mark Hall of Casting Crowns, the Bellamy Brothers, Karl Malone, Greg Maddux, Ben Zobrist and Sawyer Brown.

Know someone who should get our newsletter?

Tell them to sign up by visiting AmericanPecan.com and entering their email in the "Register Now" field under Industry News. They can also email us directly at industry@americanpecan.com.

CALENDAR OF EVENTS

Georgia Pecan Growers Field Day

August 28, 2019 | Baxley, GA

Arizona Pecan Growers 24th Annual Conference

September 5-6, 2019 | Tuscon, AZ

National Pecan Shellers Association Annual Meeting

September 11-12, 2019 | Nashville, TN

Florida Pecan Field Day and Florida Pecan Growers Association Annual Meeting

October 3, 2019 | Monticello, FL



3880 Hulen Street, Suite 105
Fort Worth, Texas 76107
PH: (817) 916-0020



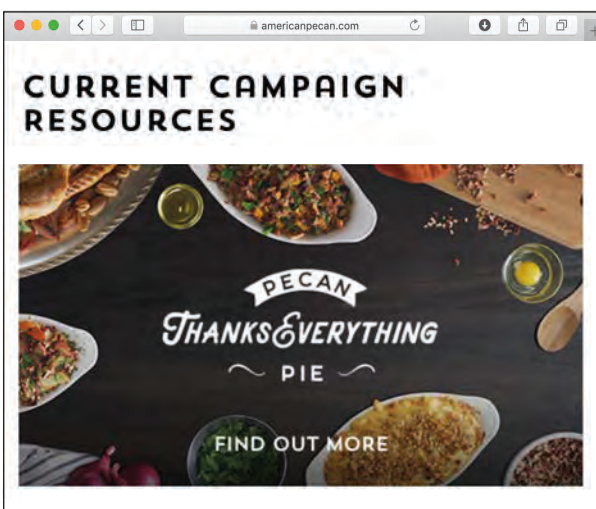
Follow us on social media: @americanpecan

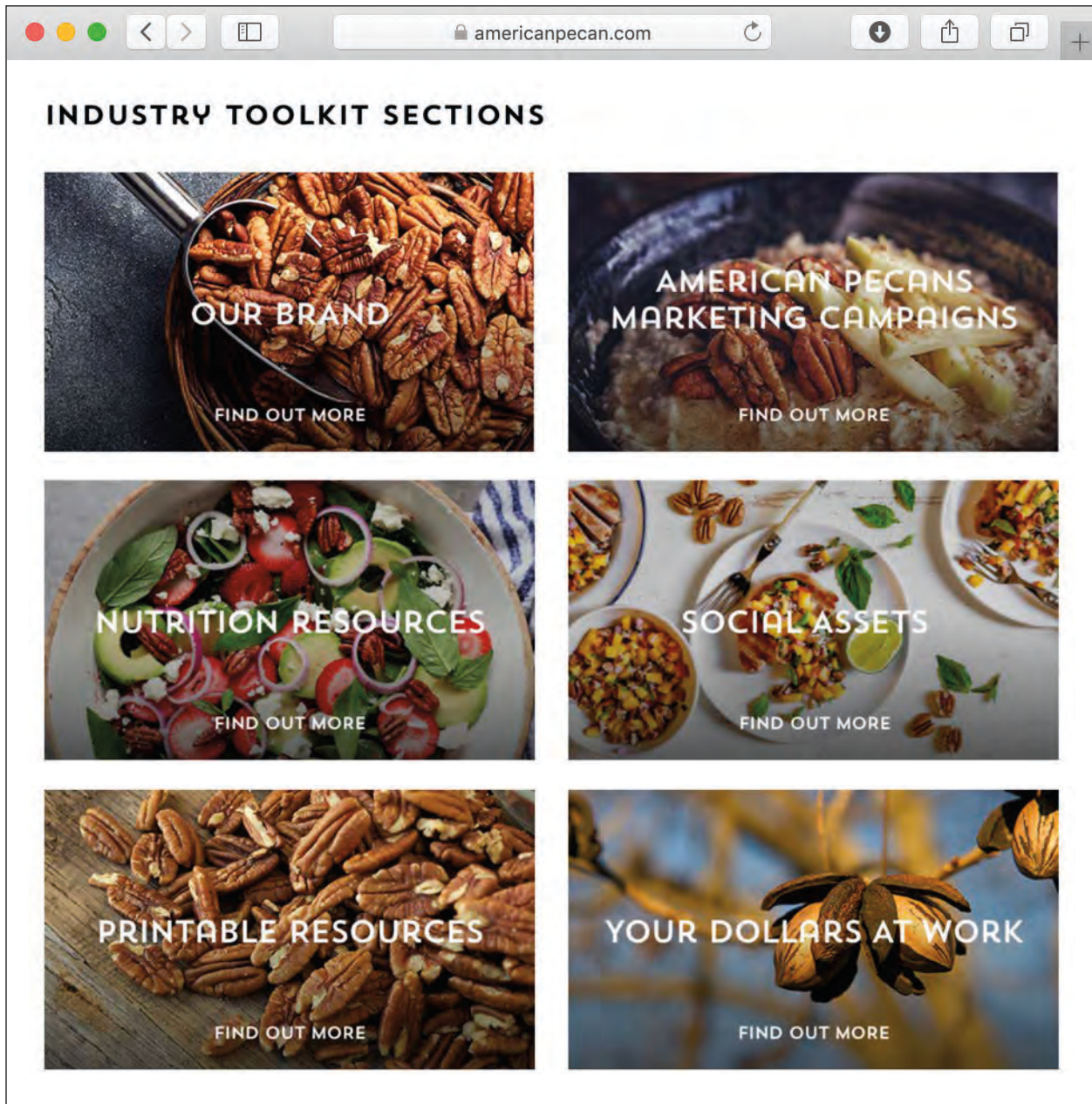
INDUSTRY TOOLKIT AND RESOURCES

In the 2018-2019 Fiscal Year, we furthered our commitment to making American Pecans marketing materials and campaigns accessible and comprehensive to industry through enhancements and continued updates to the Industry Toolkit on AmericanPecan.com (password: pecans18). At the launch of each consumer marketing campaign, we created resources for download and use on personal and business social channels, websites and in stores.

Enhancing Resources Based on Industry Feedback

We also added resources from the Pecan ThanksEverything Pie, Superweeks, Superfy, Super American Pecan-A-Thon and Brand Launch campaigns, with more to come next year. In response to industry requests, we also added a dedicated Social Media Assets section, including evergreen content that is not specific to a particular marketing campaign and can be used throughout the year.





We concluded the year with a reorganization of the Industry Toolkit to ensure that resources are shared in a way that best fits industry needs. We updated the layout of the Toolkit to put the most frequently requested resources front and center. The new Industry Toolkit now contains six sections – Our Brand, American Pecans Marketing Campaigns, Nutrition Resources, Social Assets, Printable Resources and Your Dollars at Work, which includes the aforementioned Monthly Marketing Highlights.

We encourage you to continue harnessing the power of online platforms for yourself. All of the images and videos that American Pecans creates for social media are yours to use to promote your own business.

TRAINING AND COLLABORATION

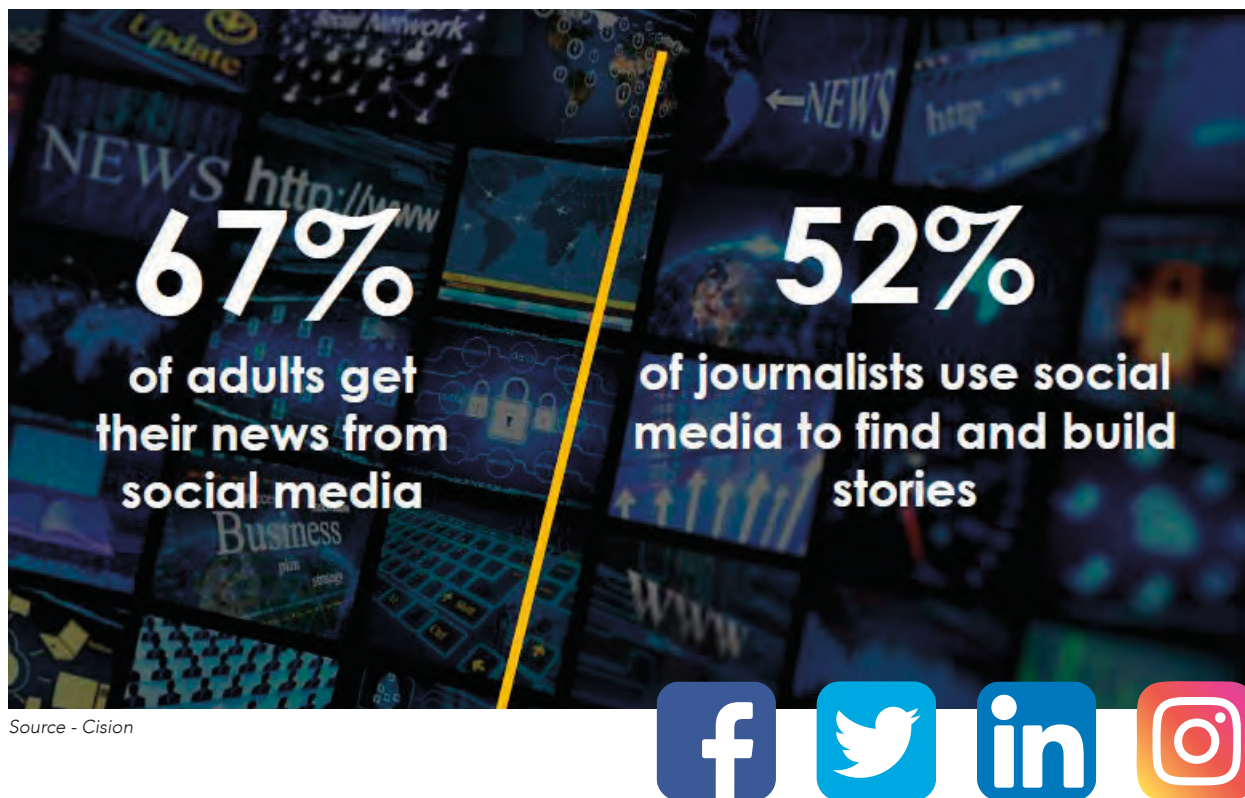
To continue teaching our industry about the power of social media, representatives from our marketing team presented to national and state industry organizations at Pecan Congress in August. We shared insights on the digital media landscape and its implications for the pecan industry, and provided inspiration for industry members to join and continue to engage in the social media revolution.

Harnessing the Power of Social Media

Throughout the presentation, we discussed the importance of social media, how to best build your channels and grow your audience, best practices for engagement on social media, and how to curate content that will appeal to your

audience and business goals. In addition to a group discussion and Q&A, we conducted small group exercises so attendees could discuss how the ideas presented could benefit their own organizations and constituents.

We love hearing feedback and appreciate outreach to the office and APC staff. We encourage you get involved in marketing campaigns, and never hesitate to reach out to the office for support in leveraging the resources available to you and your business. Industry communications and resources are made with you in mind, so your input is valuable. If you have any thoughts, questions or feedback at any time, please email industry@americanpecan.com or call the office at 817-916-0020.



Source - Cision

LOOK AHEAD TO 2019-2020 FISCAL YEAR INDUSTRY RELATIONS

As our overall marketing work progresses and evolves in 2020, so does our industry relations program and communications. The largest change to our standard communications has come in the form of the print newsletter, which arrives in mailboxes once per month. While we continue to distribute the e-newsletter via email, the print newsletter is an effort to ensure that the American Pecan Council is reaching every possible member of the industry.

Beyond the monthly newsletter distribution, the American Pecan Council will continue to keep you updated via email. Sign up for email updates by visiting AmericanPecan.com and filling out the "Industry Registration" form. To ensure that you are receiving these communications, please register for the mailing list on AmericanPecan.com, and contact the APC office if you need support in doing so.

Industry at the Center of the Story

Additionally, we will continue contributing articles to pecan and tree nut trade publications and share marketing updates and general news with news editors nationwide. We will also continue sharing the incredibly rich legacy of the pecan-producing community in our local and consumer media outreach, and we appreciate the members of industry who have generously shared their time and stories on behalf of the APC.

The 2019-2020 Fiscal Year kicked off with one of these features, a two-episode special on the American pecan industry with the RFD-TV show, "Chasing Down Madison Brown." Host Madison Brown traveled to San Saba, Texas to learn about growing and shelling operations, as well as the general history, nutrition and new uses

for The Original Supernut. This type of industry storytelling will continue to be a priority for the industry relations program throughout the year.

Our Commitment To You

The industry relations program will continue to be driven by a commitment: to the mission of the APC, to providing the resources and updates that you deserve, and to serving each of you. As we move forward in 2020, our goal is to give you the tools and information you need to grow your own business and demonstrate the efficient and effective use of your industry dollars for nationwide marketing efforts.





GRADES & STANDARDS

COMMITTEE SUMMARY

As identified in the strategic plan, the US Pecan industry's "infrastructure" is less developed than that of other tree nuts, with unreliable data, outdated standards, and conflicts over grading practices inhibiting industry growth. During the 2018-2019 fiscal year, the Grades & Standards Committee has focused on strengthening the pecan industry's infrastructure by improving and building industry data, creating uniform standards universally accepted by growers and shellers, establishing a program to set domestic product apart from international product, and tracking and publishing pecan data for all stakeholders to access.

Committee Chair

Larry Willson

Committee Members

- Mike Adams
- GL Straley
- Trent Mason
- Randy Hudson
- John Heuler
- Dan York
- Bruce Caris



UPDATED GRADES & STANDARDS

The original version of the voluntary U.S. standards for both in shell and shelled meats have been utilized in the pecan industry for over 40 years. The United States Standards for Grades of Shelled Pecans (83 FR 50475) has been in effect since July 15, 1969 and the United States Standards for Grades of Pecans in the Shell (83 FR 50475) has been in effect since October 15, 1976.

The first revision to the pecan standards was effective on December 10, 2018. USDA amended both standards by replacing the term “midget” with “extra small” in the Shelled Pecan standards and removing references to plastic models of pecan kernels and information on where the color standards may be examined from both standards. Prior to this amendment, no revisions or changes had been made to either of the standards.

In 2018-2019 fiscal year, the American Pecan Council (APC) approved to update both set of standards in order to make the language consistent with one another and streamline the classifications to the current market grades. The approved standards are included on the next page.

The U.S. voluntary standards for grades of pecans in the Shell and U.S. grades of Shelled pecans have been submitted to USDA and are awaiting approval to be issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. APC will send the official version of the standards to industry once they are published in the Federal Register.



DRAFT Standards for Grades of Pecans in the Shell

Effective _____

Draft 07/03/2019

Definitions

- §51.---- Well cured
- §51.---- Moisture content
- §51.---- Well developed
- §51.---- Fairly well developed
- §51.---- Poorly developed
- §51.---- Uniform in color
- §51.---- Fairly uniform in color
- §51.---- Inedible kernels
- §51.---- Loose extraneous or foreign material
- §51.---- Rancidity
- §51.---- Damage
- §51.---- Serious damage

Size Classification

- §51.---- Size Classification table

Grades & Grade Classifications

- §51.---- Premier
- §51.---- Fancy
- §51.---- Choice
- §51.---- Standard

Color Classifications

- §51.---- Kernel Color Classifications

Tolerances for Defects

- §51.---- Tolerances for defects

Sampling

- §51.---- Sampling procedure

DRAFT Standards for Grades of Pecans in the Shell

Effective _____

Draft 07/03/2019

Definitions

§51. ---- Well Cured

“Well cured” means that the kernel separates freely from the shell, breaks cleanly when bent without splintering shattering, or loosening the skin; and the kernel appears to be in good shipping or storage condition as to moisture content.

§51. ---- Moisture Content

For international shipments, moisture content should be no more than 4.5%. For domestic shipments, moisture content should be no more than 6%.

§51. ---- Well developed

“Well developed” means that the kernel is full-meated throughout its width and length. (see Photos)

§51. ---- Fairly well developed

“Fairly well developed” means that the kernel is full-meated in over fifty percent of the kernel’s width and length. (See Photos)

§51. ---- Poorly developed

“Poorly developed” means that the kernel is full-meated in less than twenty-five percent of its width and length. (See Photos)

§51. ---- Uniform in color

“Uniform in color” means that the shells do not show sufficient variation in color to materially detract from the general appearance of the lot and that 95 percent or more of the kernels in the lot have skin color within the range of one or two-color classifications.

§51. ---- Fairly uniform in color

“Fairly uniform in color” means that the shells do not show sufficient variation in color to materially detract from the general appearance of the lot and that 85 percent or more of the kernels in the lot have skin color within the range of one or two-color classifications.

§51.---- Inedible Kernels

“Inedible kernels” means that the kernel or pieces of kernels are rancid, moldy, decayed, injured by insects or otherwise unsuitable for human consumption.

§51.---- Loose extraneous or foreign material

“Loose extraneous or foreign material” means loose hulls, empty broken shells, rocks, wood, glass, plastic or any substance other than pecans in the shell or pecan kernels.

§51. ---- Rancidity

“Rancidity” refers to the tendency of the oil in a pecan kernel to become tainted as a result of oxidation or hydrolysis. While there is no definitive measure to determine rancidity, the tendency of the kernel to become rancid can be evaluated by testing the kernel’s peroxide and

DRAFT Standards for Grades of Pecans in the Shell

Effective _____

Draft 07/03/2019

free-fatty acid values. Peroxide values should be less than 5 mEq/kg. Free Fatty Acid should be less than 1%.

§51. ---- **Damage**

“Damage” means any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which materially detracts from the appearance or the edible or marketing quality of the individual portion of the kernel or of the lot as a whole. The following defects should be considered as damage:

- (a) Adhering hull material or dark stains affecting an aggregate of more than 5 percent of the surface of the individual shell;
- (b) Adhering material from inside the shell when firmly attached to more than one-third of the outer surface of the kernel and contrasting in color with the skin of the kernel;
- (c) Split or cracked shells when the shell is spread apart or will spread upon application of slight pressure;
- (d) Broken shells when any portion of the shell is missing;
- (e) Kernel which is not well cured;
- (f) Kernel which is “dark amber” or darker in color;
- (g) Kernel having more than one dark kernel spot, or one dark kernel spot more than one-eighth inch (3 mm) in greatest dimension;
- (h) Shriveling when the surface of the kernel is very conspicuously wrinkled;
- (i) Internal flesh discoloration of a medium shade of gray or brown extending more than one-fourth inch (6 mm) lengthwise beneath the center ridge, or any equally objectionable amount in other portions of the kernel: or lesser areas of dark discoloration affecting the appearance to an equal or greater extent; and,
- (i) Poorly developed kernel. (See Photos)

§51. ---- **Serious damage**

“Serious damage” means any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which seriously detracts from the appearance or the edible or marketing quality of the individual portion of kernel or of the lot as a whole. The following defects shall be considered as serious damage:

- (a) Adhering hull material or dark stains affecting an aggregate of more than 20 percent of the surface of the individual shell;
- (b) Broken shells when the missing portion of the shell is greater in area than a circle one-fourth inch (6 mm) in diameter;
- (c) Worm holes when penetrating the shell;
- (d) Rancidity when the kernel is distinctly rancid to the taste. Staleness of flavor shall not be classed as rancidity;
- (e) Mold, on the surface or inside the kernel, which is plainly visible without magnification;
- (f) Decay affecting any portion of the kernel;
- (g) Insects, web, frass or any distinct evidence of insect feeding on the kernel;

DRAFT Standards for Grades of Pecans in the Shell

Effective _____

Draft 07/03/2019

- (h) Kernel spots when more than three dark spots on either half of the kernel, or when any dark kernel spot or the aggregate of two or more spots on one of the halves of the kernels affects more than 10 percent of the surface;
- (i) Dark discoloration of the skin which is darker than “dark amber over more than 25% of the outer surface of the kernel;
- (j) Internal flesh discoloration of a dark shade extending more than one-third the length of the kernel beneath the ridge, or an equally objectionable amount of dark discoloration in other portions of the kernel; and
- (k) Undeveloped kernels having practically no food value, or which are blank (complete shell containing no kernel).

§51.---- Size Classification Table

Size of pecans may be specified in connection with the grade in accordance with one of the following classifications. To meet the requirements for any one of these classifications, the lot must conform to both the specified number of nuts per pound and the weight of the 10 smallest nuts per 100-nut sample.

Size Classification	Number of Nuts per Pound	Minimum Weight of the 10 Smallest Nuts per 100-Nut Sample
Jumbo	55 or less	In each classification, the 10 smallest nuts per 100 must weight at least 7% of the total weight of a 100-nut sample
Extra Large	56 to 63	
Large	64 to 77	
Medium	78 to 100	
Small	101 +	

Grades and Grade Classifications

§51.---- Premier

The highest quality, all product graded as Premier shall meet the following standards:

- (a) For quality:
 - (1) Well cured;
 - (2) Kernels are well developed;
 - (3) Both Shell and Kernels are uniform in color;
 - (4) Kernels not darker than “light” skin color.
 - (5) Free from damage or serious damage by any cause; and
 - (6) Comply with tolerances for defects (see §51.1404a)

§51. ---- Fancy

The second highest quality, all product graded as Fancy shall meet the following standards:

- (a) For quality:
 - (1) Well cured;

DRAFT Standards for Grades of Pecans in the Shell

Effective _____

Draft 07/03/2019

- (2) Kernels are well developed to fairly well developed;
- (3) Both Shell and Kernels are uniform in color;
- (4) Kernels not darker than “light amber” skin color.
- (5) Free from damage or serious damage by any cause; and
- (6) Comply with tolerances for defects (see §51.1404a); and,

§51. ---- Choice

The third highest quality, Choice product shall meet the following standards:

(a) For quality:

- (1) Well cured;
- (2) Kernels are fairly well to poorly developed;
- (3) Both Shell and Kernels are fairly uniform in color;
- (4) Kernels are not darker than “amber” skin color.
- (5) Comply with tolerances for defects (see §51.1404a); and,

§51. ---- Standard

The lowest quality product, Standard product shall meet the following standards:

(a) For quality:

- (1) Well cured;
- (2) No requirement for fullness of kernel
- (3) No requirement for uniformity of color
- (4) May contain kernels dark-amber or darker in skin color.
- (5) Increased tolerances for defects (see §51.1404b); and,

§51.---- Color classifications.

(a) The skin color of pecan kernels may be described in terms of the color classifications provided in this section. When the color of kernels in a lot generally conforms to the “light” or “light amber” classification, that color classification may be used to describe the lot in connection with the grade.

- (1) “Light” means that the kernel is mostly golden color or lighter, with not more than 25 percent of the surface darker than golden, and none of the surface darker than light brown.
- (2) “Light amber” means that the kernel has more than 25 percent of its surface light brown, but not more than 25 percent of the surface darker than light brown, and none of the surface darker than medium brown.
- (3) “Amber” means that the kernel has more than 25 percent of the surface medium brown, but not more than 25 percent of the surface darker than medium brown, and none of the surface darker than dark brown (very dark-brown or blackish-brown discoloration).
- (4) “Dark amber” means that the kernel has more than 25 percent of the surface dark brown, but not more than 25 percent of the surface darker than dark brown (very dark-brown or blackish-brown discoloration).

DRAFT Standards for Grades of Pecans in the Shell

Effective _____

Draft 07/03/2019

Tolerances for Defects

§51.1404 Tolerances for defects.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by weight, are provided as specified:

(a) For Premier, Fancy and Choice grades:

- (1) For shell defects, by count
 - (i) 5 percent for pecans with damaged shells, including therein not more than 2 percent for shells which are seriously damaged.
- (2) For kernel defects, by count
 - (i) 12 percent for pecans with kernels which fail to meet the requirements for the grade or any specified color classification including herein not more than 7 percent for kernels which are seriously damaged: *Provided*, that not more than 6 percent shall be allowed for kernels which are rancid, moldy, decayed or injured by insects: *And provided further*, that included in this 6 percent tolerance not more than one-half of one percent shall be allowed for pecans with live insects inside the shell.

(b) For Standard grades:

- (1) For shell defects, by count
 - (i) 10 percent for pecans with damaged shells, including therein not more than 3 percent for shells which are seriously damaged.
- (2) For kernel defects, by count
 - (i) 30 percent for pecans with kernels which fail to meet the requirements for Premier, Fancy or Choice grades including herein not more than 10 percent for kernels which are seriously damaged: *Provided*, that not more than 7 percent shall be allowed for kernels which are rancid, moldy, decayed or injured by insects: *And provided further*, that included in this 7 percent tolerance not more than one-half of one percent shall be allowed for pecans with live insects inside the shell.

§51.---- Sampling

In order to standardize the minimum sampling requirements, samples of pecans shall be taken at random from a composite sample drawn throughout the lot. The determination of edible kernel count, kernel development, color and moisture shall be based on a minimum sample of 500 grams of in-shell pecans after the sample is weighed and shelled with edible appearing half kernels and pieces being separated from the shell, center wall, other non-kernel material and inedible kernels and pieces. The grader will identify the amount of premier, fancy, choice and amber kernels as well as the amount of inedible material, kernels containing rot, mold insect damage and any other defects as enumerated in §51.----.

QUALITY ASSURANCE PROGRAM

Upon the completion of the American Pecan Council's (APC) Strategic Planning Process, the APC, with the help of the Boston Consulting Group (BCG), identified five main areas of change and opportunity for the industry. One component—"the need to modernize the industry"—led the Council to recommend and approve the vital development of a quality assurance program. Consequently, the APC has partnered with KCoE Isom to develop this quality assurance program. Phase 1 will involve a stakeholder survey, designed to gather information on industry priorities, challenges, and key items to address in order to establish a quality assurance program that is highly beneficial to industry members. The feedback we will receive from this survey will be utilized to inform the development of the voluntary industry-wide standard in Phase 2 to ensure the quality assurance program is YOUR program. As it is a lengthy process to establish and fully implement the program, APC will continue to update industry on the program's progress.



K • C O E I S O M



Appendix A: About Us

K-Coe Isom is a national food and agricultural consulting and business advisory company unlike any other. K-Coe Isom has an over 85-year history working with and for production agriculture and food companies. We are national experts in financial and business consulting, conservation, public policy, and sustainability.

The firm serves over 2,600 businesses across the entire food-ag supply chain, from producers to processors that support the industry. Our firm works directly with many growers, helping them be successful in their farm businesses. With a deep history serving growers in the tree nut industry, we are deeply embedded throughout the U.S.

K-Coe Isom helps sustain and grow food and ag operations in fluctuating conditions—weather, commodity price volatility, land values, and economic pressures. We make sure these businesses are strong for the next generation. In addition, we know that consumers are taking note of how products are produced and sold and businesses are increasingly pressured to track and report on sustainability metrics.

WE KNOW SUSTAINABLE FOOD AND AGRICULTURE SYSTEMS.

We are experts in food and agricultural supply chain sustainability. But more importantly, we are “grounded,” and that makes all the difference. Let’s face it, sustainability is different on the farm. Biological systems and weather can’t always be predicted and controlled. Agricultural operators have special business needs and challenges. We know that and we get it. Our firm has worked on cutting-edge agricultural industry-wide sustainability efforts, advised non-governmental organizations and food companies, as well as worked with specific commodities and individual operations.

Our firm specializes in sustainability solutions that can actually be implemented on individual operations, within organizations, or across an entire supply-chain or industry. Our Firm clients range from individual farming operations to *The Innovation Center for U.S. Dairy, Cargill, United Dairymen of Arizona, Blue Diamond Growers, Kellogg Company, Walmart, National Milk Producers Federation, the U.S. Department of Agriculture, Vann Brothers, T & P Farms, Burreson Farms*, and many others. We have relationships with industry experts, civil society organizations, producers and food companies that helps us ground-truth strategies that don’t show up in research papers. This makes us different.

WE DEVELOP MEANINGFUL SUSTAINABILITY SOLUTIONS.

Combining our boots-on-the-ground experience with extensive financial and business know-how, you can see why we successfully guide growers, industry groups, agribusinesses, and food companies toward meaningful sustainability frameworks that produce higher profitability and long-term viability. Just like you, we have the passion, good sense, and staying power to work in one of the world’s most important industries. Some of the highest value help we can give you includes:

SOLUTIONS DRIVEN.

We work in complex supply chains, along-side growers, producers, stakeholders, and customers, to bring practical sustainability solutions to the table.

Our experts provide solutions that not only measure sustainability, but do so in a way that brings value above and beyond customer reporting. *We believe sustainability is more than a checklist.*

- **Asking good questions.** Your answers determine the strategies for appropriately measuring and communicating sustainability information on behalf of your business and industry.
- **Getting the right information.** True value is not in sustainability data; it is in what you do with it. We help food and agriculture identify where the industry or business should be in the future, to help feed a world with 9+ billion people.
- **Capturing and creating value.** We believe sustainability is not just about consumer and customer demands but about creating real business value and opportunities.

WE EDUCATE, INFORM, AND STRATEGIZE.

Our experts actively participate in broad multi-stakeholder initiatives in the food and ag sector, such as Field to Market, National Council of Farmer Cooperatives, The Sustainability Consortium, Global Reporting Initiative, Carbon Disclosure Project, Sustainability Accounting Standards Board, U.S. and Global Roundtable on Sustainable Beef, and the Innovation Center for U.S. Dairy Sustainability Council.

OUR PEOPLE MAKE ALL THE DIFFERENCE.

Our combined skills in accounting, financial, and sustainability consulting in the food and agriculture supply chain helps our clients navigate through difficult challenges in the marketplace. Because the challenges we face together need us to inspire action and bring people together for common solutions.

Our Key Personnel



Emily Johannes, Director

Emily arms food and agricultural businesses and industry groups with valuable tools, plans, and analysis to increase their credibility in the marketplace. She leads K-Coe Isom's teams to build sustainability programs for growers and food companies, enabling them to capture and report sustainability information to valued customers and the public. Emily has over 15 years of program / project management experience in environmental impact assessment and sustainability within the private and public sectors.

Emily served as the Senior Environmental Technical Advisor for the NOAA, overseeing the national environmental and sustainability programs of the agency. Emily holds a M.S. in Ecology and Evolution from the University of Pittsburgh and a B.A. in Zoology from Miami University (OH).



Tommy Irvine, Partner

Tommy integrates innovative processes with tax and accounting know-how, delivering measurable results for agriculture and manufacturing businesses, primarily permanent crop operations in the tree nut industries. He focuses on a business' future financial performance so the owner has more time to devote to activities they do best or enjoy most. He visits facilities and gets to know key people to gain a full picture of the company, and bring advantageous operating structure and tax strategies, employing tools such as IC-DISC and R&D credits.

With experience as a university instructor, he analyzes financial results in detail and explains them with utmost clarity. Tommy plays an integral role in establishing healthy business operations while bringing a lighthearted, fresh attitude to any situation.

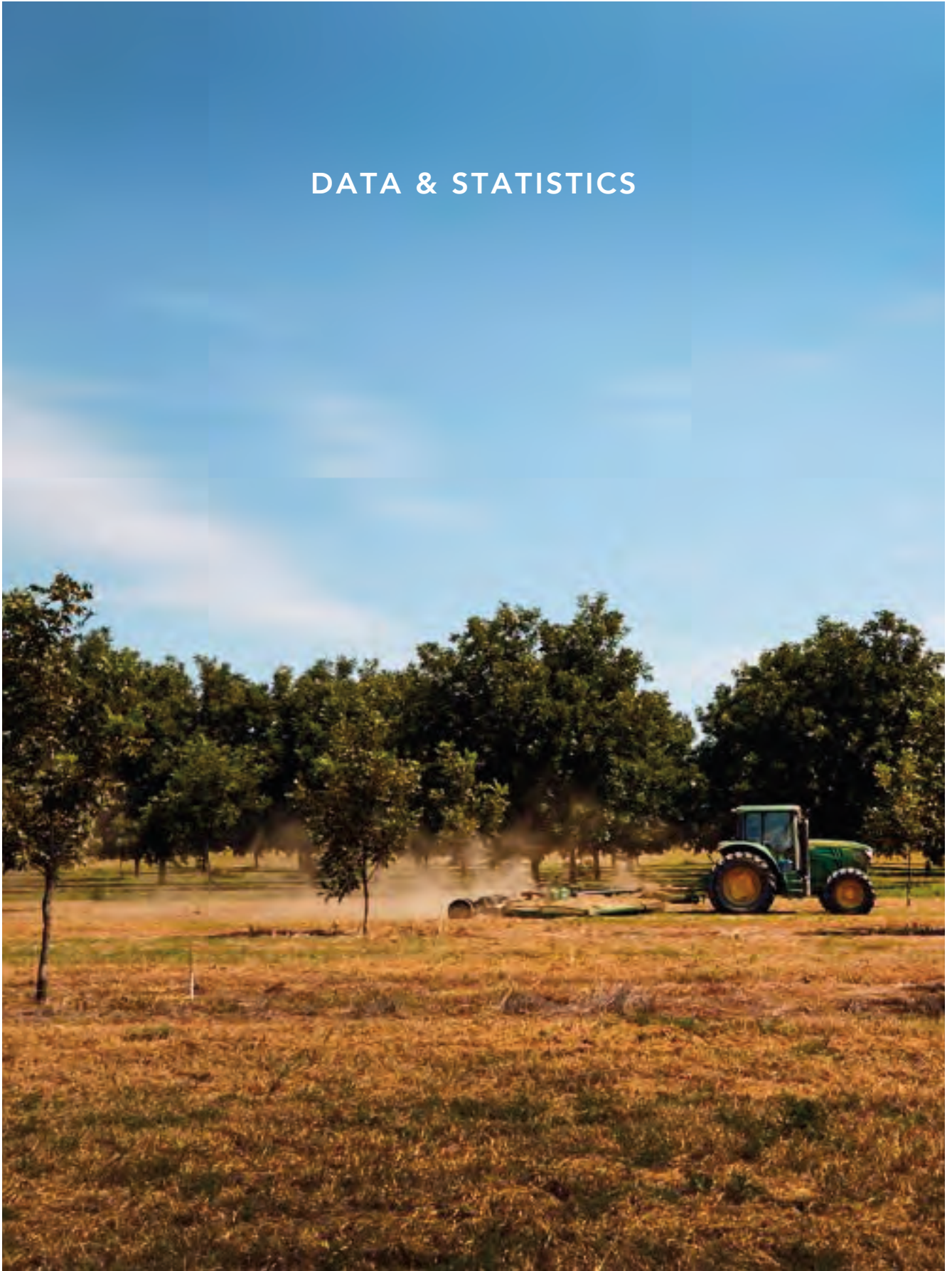


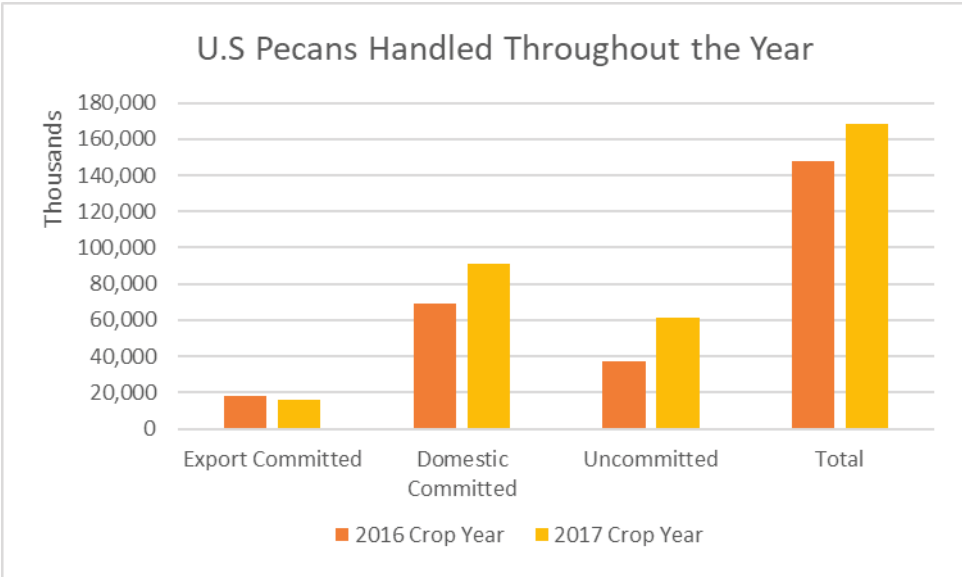
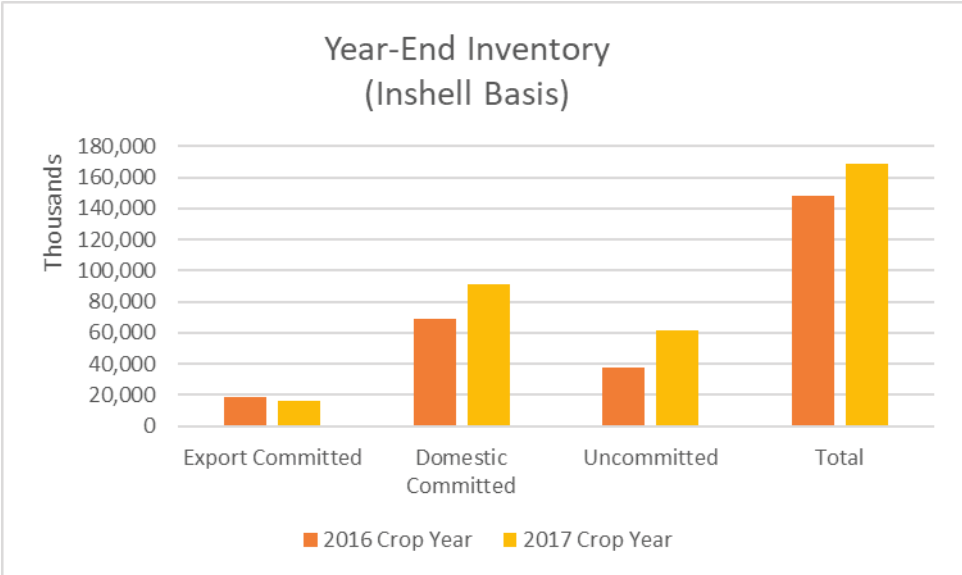
Lisa Becker, Senior Associate

Lisa focuses her time on serving permanent crop clients nationwide. She works closely with tree nut growers to provide business advising strategies and tax services. Inspired to drive innovation throughout our food system, Lisa lends her credentials as a CPA to bring value to clients seeking sustainability verification. She combines her skills in accounting, business advising and strategic planning for growers with her passion for sustainability consulting. This results in successful, long-term and value-add sustainability programs for our clients.

Lisa is certified in the Global Reporting Initiative's sustainability reporting framework. She earned her M.S. in Accounting and her B.S. in Business Administration from California Polytechnic State University, San Luis Obispo.

DATA & STATISTICS





AMERICAN PECAN COUNCIL

Pecan Industry Position Report

For the Crop Year Ended August 31, 2017

INTER-HANDLER TRANSFERS OF PECANS

	Total
Inshell Pounds Transferred:	
Improved	152,616,016
Native/Seedling	27,860,314
Substandard	10,513,116
Total	190,989,446



YEAR-END INVENTORY

	Committed				
	Export	Domestic			
Inshell:					
Improved	4,678,104	7,756,507	27,519,687		47,238,788
Native/Seedling	-0-	547,945	2,122,661		5,086,366
Substandard	-0-	472,510	1,870,060		2,342,570
Total	4,678,104	8,776,962	31,512,408		54,667,724
Shelled:					
Halves	4,861,066	14,398,960	(2,116,115)		21,029,051
Pieces	1,960,830	15,563,768	4,354,196		24,708,425
Work In Process		186,949	622,639		809,588
Total	6,821,896	30,149,677	2,860,720		46,547,064
Total Inventory (Inshell Basis)	18,321,896	69,076,316	37,233,848		147,761,852
Pecan Handled Throughout the Year:					
Improved					257,015,122
Native/Seedling					37,877,730
Substandard					11,177,758
Total					306,070,610

Numbers shall be corrected on an ongoing basis as additional information is received. Based off of the data on the reporting forms received from handlers, there may be a discrepancy in the total calculations due to the following: breakdown of totals were not provided and improper uncommitted

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

inventory calculations.
\$986.20 Inventory totals do not include pecans warehoused by growers.

Pecan Industry Position Report

For the Crop Year Ended August 31, 2017



Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

Pecan Industry Position Report

For the Crop Year Ended August 31, 2018

<u>INTER-HANDLER TRANSFERS OF PECANS</u> TM		Total		
Inshell Pounds Transferred:				
Improved		113,976,572		
Native/Seedling		16,193,194		
Substandard		17,017,579		
Total		147,187,345		
 <u>YEAR-END INVENTORY</u> 				
<u>Committed</u>				
	<u>Export</u>	<u>Domestic</u>	<u>Uncommitted</u>	<u>Total</u>
Inshell:				
Improved	-0-	12,453,104	25,248,158.00	37,701,262
Native/Seedling	-0-	2,004,305	4,945,834.00	6,950,139
Substandard	-0-	957,471	1,346,546.00	2,304,017
Total	-0-	15,414,880	31,540,538	46,955,418
Shelled:				
Halves	5,457,720	16,465,052	(1,037,448)	20,885,324
Pieces	2,450,530	20,837,600	15,655,964	38,944,094
Work In Process	-0-	586,408	350,547	936,955
Total	7,908,250	37,889,060	14,969,063	60,766,373
Total Inventory (Inshell Basis)	15,816,500	91,193,000	61,478,664	168,488,164

U.S. PECAN HANDLED THROUGHOUT THE YEAR

Improved	261,524,162
Native/Seedling	42,549,603
Substandard	22,328,434
Total	326,402,198

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

\$986.20 Inventory totals do not include pecans warehoused by growers.

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

Shipments and Inventory on Hand

For the Year Ended August 31, 2018

	<u>Total</u>
Net Shipments:	
Shelled Meats	102,690,925
Inshell	90,403,683
Total Net Shipments (Inshell Basis)	<u>295,785,533</u>
Total Pecans in Inventory:	
Shelled Meats	54,041,649
Inshell	31,999,774
Total (Inshell Basis)	<u>140,083,072</u>
Commitments to Ship:	
Shelled Meats	
Domestic-Shelled Meats	34,479,550
Export-Shelled Meats	8,449,562
Total Meats	<u>42,929,112</u>
Inshell	
Domestic-Inshell	262,550
Export-Inshell	
Total Inshell	<u>262,550</u>
Less Contracts to Purchase	
Shelled Meats	<u>(4,875)</u>
Inshell	
Total Commitments (Inshell Basis)	<u>86,130,524</u>

AMERICAN PECAN COUNCIL

Mexico Exports and Foreign Purchases

For the Crop Year Ended August 31, 2018

INSHELL PECANS EXPORTED TO MEXICO FOR SHELLING AND RETURNED TO U.S. AS SHELLED MEATS

	<u>Total</u>
Inshell Exported for Shelling:	
Mexico	20,057,645
Total Inshell Exported for Shelling	<u>20,057,645</u>
Shelled Meats - Produced in U.S. Inshell Returned to U.S.:	
Mexico	10,396,353
Total Shelled Meats - Produced in U.S. Inshell Returned to U.S.	<u>10,396,353</u>

PECANS PURCHASED OUTSIDE THE U.S. BY U.S. HANDLERS

	<u>Total</u>
Shelled Meats:	
Country of Origin:	
Australia	101,770
Mexico	11,192,858
South Africa	192,470
Total Shelled Meats	<u>11,487,098</u>
Inshell:	
Country of Origin:	
Australia	44,063
Mexico	49,746,846
South Africa	-
Total Inshell	<u>49,790,909</u>
Total (Inshell Basis)	
Australia	247,603
Mexico	72,132,562
South Africa	384,940
Total (Inshell Basis)	<u>72,765,105</u>

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

AMERICAN PECAN COUNCIL

Destination Report

For the Crop Year Ended August 31, 2018

2017 - 2018 - YTD

September 1 through August 31 2018

World Region

Destination	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
<u>Africa</u>				
Algeria	-0-	-0-	-0-	-0-
Egypt	4,680	-0-	-0-	9,360
Total Africa	4,680	-0-	-0-	9,360
<u>Asia</u>				
China	390,660	3,397,555	-0-	4,178,875
Hong Kong	247,830	40,427,223	-0-	40,922,883
India	49,500	-0-	-0-	99,000
Japan	431,850	-0-	-0-	863,700
Kuwait	144,690	-0-	-0-	289,380
Malaysia	450	-0-	-0-	900
Philippines	3,360	-0-	-0-	6,720
Qatar	6,630	-0-	-0-	13,260
Singapore	27,720	-0-	-0-	55,440
South Korea	441,690	-0-	-0-	883,380
Thailand	150	-0-	-0-	300
Taiwan	178,500	25,000	-0-	382,000
Vietnam	50,195	3,604,834	-0-	3,705,224
Total Asia	1,973,225	47,454,612	-0-	51,401,062

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

TM

AMERICAN PECAN COUNCIL
American
Destination Report

For the Crop Year Ended August 31, 2018

2017 - 2018 - YTD

September 1 through August 31 2018

World Region	Destination	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
	<u>Australia/Oceania</u>				
	Australia	130,320	-0-	-0-	260,640
	Total Australia	130,320	-0-	-0-	260,640
	<u>Europe</u>				
	Austria	49,800	-0-	-0-	99,600
	Belgium	338,310	-0-	-0-	676,620
	Czech Republic	23,550	-0-	-0-	47,100
	Denmark	830,040	-0-	-0-	1,660,080
	France	2,062,770	-0-	-0-	4,125,540
	Germany	4,778,370	-0-	-0-	9,556,740
	Greece	46,800	-0-	-0-	93,600
	Italy	82,500	174,000	-0-	339,000
	Lithuania	244,500	-0-	-0-	489,000
	Netherlands	4,200,690	-0-	-0-	8,401,380
	Norway	81,600	-0-	-0-	163,200
	Poland	22,800	-0-	-0-	45,600
	Portugal	10,080	-0-	-0-	20,160
	Russia	25,080	-0-	-0-	50,160
	Spain	93,600	-0-	-0-	187,200
	Sweden	251,580	-0-	-0-	503,160
	Switzerland	497,760	-0-	-0-	995,520
	United Kingdom	3,378,030	311,296	-0-	7,067,356
	Total Europe	17,017,860	485,296	-0-	34,521,016

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

AMERICAN PECAN COUNCIL

Destination Report

For the Crop Year Ended August 31, 2018

2017 - 2018 - YTD

September 1 through August 31 2018

World Region

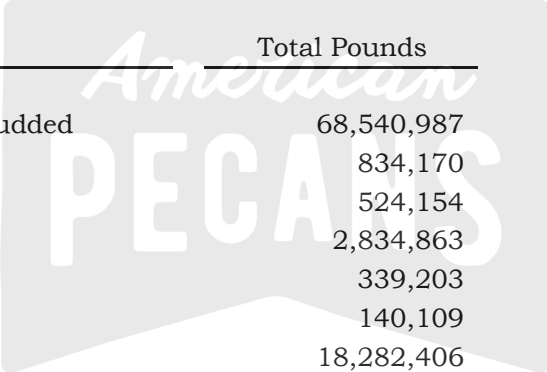
Destination	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
<u>Middle East</u>				
Israel	1,086,150	-0-	-0-	2,172,300
Jordan	-0-	-0-	-0-	-0-
Lebanon	65,520	-0-	-0-	131,040
Saudi Arabia	203,420	-0-	-0-	406,840
Turkey	24,000	-0-	-0-	48,000
United Arab Emirates	282,060	-0-	-0-	564,120
Total Middle East	1,661,150	-0-	-0-	3,322,300
<u>North America</u>				
Canada	5,091,640	42,750	-0-	10,226,030
Mexico	483,954	15,179,750	639,896	16,787,554
Total North America	5,575,594	15,222,500	639,896	27,013,584
<u>South America</u>				
Columbia	7,560	-0-	-0-	15,120
Peru	124,020	-0-	-0-	248,040
Total South America	131,580	-0-	-0-	263,160
Grand Total Exports	26,494,409	63,162,408	639,896	116,791,122

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

AMERICAN PECAN COUNCIL

Pecans Received from Own Account

For the Crop Year Ended August 31, 2018



Variety Name	Total Pounds
Inshell	
Blends/Mixed Budded	68,540,987
Bradley	834,170
Caddo	524,154
Cape Fear	2,834,863
Cheyenne	339,203
Creek	140,109
Desired	18,282,406
Desirable Type	1,498,000
Eastern Schley	2,993,909
Elliott	1,980,582
Excel	687,741
Moneymaker	2,222,170
Pawnee	3,502,464
Stuart	19,064,886
Sumner	3,839,395
Western Schley	96,573,494
Wichita	10,630,593
Other	21,221,950
Native/Seedling	20,463,200
Substandard	54,100,987
Total Varieties	<u><u>330,275,263</u></u>

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

Variance in data may occur due to lack of variety breakdown provided. Data may be revised or updated

AMERICAN PECAN COUNCIL

Shipments and Inventory on Hand

For the One Month Ended September 30, 2018

	Total
Shipments:	
Shelled Meats:	
Retail/Grocery/Export	10,722,533
Inter-handler Transfers Shipped	798,727
Inter-handler Transfers Received	(703,060)
Total Shelled Meats	<u>10,818,200</u>
Inshell:	
Retail/Grocery/Export	339,103
Inter-handler Transfers Shipped	5,442,327
Inter-handler Transfers Received	(1,181,248)
Total Inshell Meats	<u>4,600,182</u>
Total Shipments (Inshell Basis)	<u><u>26,236,582</u></u>
Total Pecans in Inventory:	
Shelled Meats	53,769,375
Inshell	39,494,271
Total (Inshell Basis)	<u><u>147,033,021</u></u>
Commitments to Ship:	
Meats:	
Domestic-Shelled Meats	36,081,779
Export-Shelled Meats	8,998,263
Total Meats	<u>45,080,042</u>
Inshell:	
Domestic-Inshell	5,697,351
Export-Inshell	5,344,532
Total Inshell	<u>11,041,883</u>
Less: Contracts to Purchase:	
Shelled Meats	<u>-0-</u>
Inshell	<u>-0-</u>
Total Commitments (Inshell Basis)	<u><u>101,201,967</u></u>

Data may be revised or updated as more information is provided.
 §986.20 Inventory totals do not include pecans warehoused by growers.

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

Mexico Exports and Foreign Purchases

For the One Month Ended September 30, 2018

**INSHELL PECANS EXPORTED TO MEXICO FOR SHELLING AND RETURNED TO
U.S. AS SHELLED MEATS**

	<u>Total</u>
Inshell Exported for Shelling:	
Mexico	4,487,077
Total Inshell Exported for Shelling	<u>4,487,077</u>
Shelled Meats - Produced in U.S. Inshell Returned to U.S.:	
Mexico	1,799,323
Total Shelled Meats - Produced in U.S. Inshell Returned to U.S.	<u>1,799,323</u>

PECANS PURCHASED OUTSIDE THE U.S. BY U.S. HANDLERS

	<u>Total</u>
Shelled Meats:	
Country of Origin:	
Mexico	166,650
Total Shelled Meats	<u>166,650</u>
Inshell:	
Country of Origin:	
Mexico	281,364
Total Inshell	<u>281,364</u>
Total (Inshell Basis)	
Mexico	614,664
Total (Inshell Basis)	<u>614,664</u>

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

TM

AMERICAN PECAN COUNCIL

Destination Report

For the One Month Ended September 30, 2018

2018 - 2019 - Current
One Month Ended September 30, 2018

World Region	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
Destination				
<u>Africa</u>				
Algeria	-0-	-0-	-0-	-0-
Egypt	-0-	-0-	-0-	-0-
Total Africa	-0-	-0-	-0-	-0-
<u>Asia</u>				
China	40,500	110,231	-0-	191,231
Hong Kong	-0-	-0-	-0-	-0-
India	-0-	-0-	-0-	-0-
Japan	22,500	-0-	-0-	45,000
Kuwait	-0-	-0-	-0-	-0-
Malaysia	-0-	-0-	-0-	-0-
Philippines	-0-	-0-	-0-	-0-
Qatar	-0-	-0-	-0-	-0-
Singapore	-0-	-0-	-0-	-0-
South Korea	99,000	-0-	-0-	198,000
Thailand	-0-	-0-	-0-	-0-
Taiwan	22,500	-0-	-0-	45,000
Vietnam	45,000	-0-	-0-	90,000
Total Asia	229,500	110,231	-0-	569,231

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

Destination Report

For the One Month Ended September 30, 2018

World Region
 Destination
 2018 - 2019 - Current
 One Month Ended September 30, 2018

Destination	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
<u>Australia/Oceania</u>				
Australia	-0-	-0-	-0-	-0-
Total Australia	-0-	-0-	-0-	-0-
<u>Europe</u>				
Austria	-0-	-0-	-0-	-0-
Belgium	7,200	-0-	-0-	14,400
Czech Republic	9,000	-0-	-0-	18,000
Denmark	85,080	-0-	-0-	170,160
France	126,720	-0-	-0-	253,440
Germany	234,360	-0-	-0-	468,720
Greece	-0-	-0-	-0-	-0-
Italy	-0-	-0-	-0-	-0-
Lithuania	44,100	-0-	-0-	88,200
Netherlands	366,810	-0-	-0-	733,620
Norway	-0-	-0-	-0-	-0-
Poland	-0-	-0-	-0-	-0-
Portugal	-0-	-0-	-0-	-0-
Russia	-0-	-0-	-0-	-0-
Spain	60,720	-0-	-0-	121,440
Sweden	10,800	-0-	-0-	21,600
Switzerland	11,760	-0-	-0-	23,520
United Kingdom	443,940	-0-	-0-	887,880
Total Europe	1,400,490	-0-	-0-	2,800,980

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by"2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

Destination Report

For the One Month Ended September 30, 2018

2018 - 2019 - Current
One Month Ended September 30, 2018

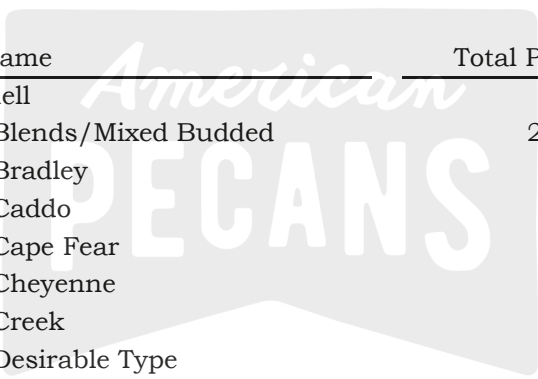
World Region	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
Destination				
<u>Middle East</u>				
Israel	175,860	-0-	-0-	351,720
Jordan	-0-	-0-	-0-	-0-
Lebanon	-0-	-0-	-0-	-0-
Saudi Arabia	-0-	-0-	-0-	-0-
Turkey	-0-	-0-	-0-	-0-
United Arab Emirates	-0-	-0-	-0-	-0-
Total Middle East	175,860	-0-	-0-	351,720
<u>North America</u>				
Canada	685,000	22,200	-0-	1,392,200
Mexico	123,401	43,632	-0-	290,434
Total North America	808,401	65,832	-0-	1,682,634
<u>South American</u>				
Columbia	-0-	-0-	-0-	-0-
Peru	-0-	-0-	-0-	-0-
Total South America	-0-	-0-	-0-	-0-
Total Exports	2,614,251	176,063	-0-	5,404,565
Total Domestic	-0-	-0-	-0-	-0-
Grand Total Shipments	2,614,251	176,063	-0-	5,404,565

Shelled Meats are converted to inshell using a yield of 50% (multiplying the shelled meats by "2"). The form automatically makes this calculation.

AMERICAN PECAN COUNCIL

Pecans Received from Own Account

For the One Month Ended September 30, 2018



<u>Variety Name</u>	<u>Total Pounds</u>
Inshell	
Blends/Mixed Budded	2,046,809
Bradley	-0-
Caddo	-0-
Cape Fear	-0-
Cheyenne	-0-
Creek	-0-
Desirable Type	-0-
Eastern Schley	-0-
Elliott	-0-
Excel	-0-
Moneymaker	-0-
Pawnee	80,606
Stuart	-0-
Sumner	-0-
Western Schley	967,869
Wichita	225,911
Other	452
Native/Seedling	92,555
Substandard	178,074
	<hr/>
Total Varieties	<u><u>3,592,276</u></u>

Variance in data may occur due to lack of variety breakdown provided. Data may be revised or updated as more information is provided.

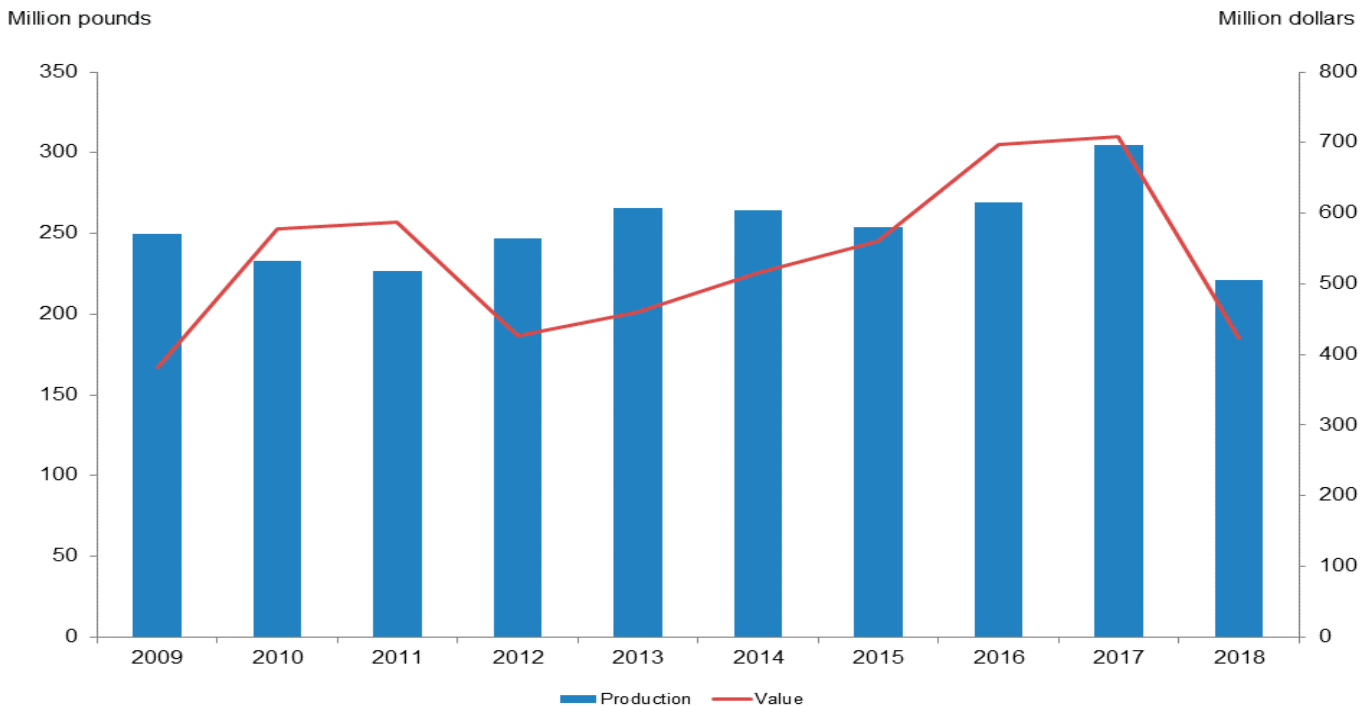
Released March 14, 2019, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

Pecan Production Down 27 Percent From Previous Year

Utilized production in 2018 totaled 221 million pounds, down 27 percent from 2017. Bearing acreage was estimated at 398,900, down 1 percent from the previous year. The average yield per acre was 555 pounds per acre, down 198 pounds from the previous year. The value of the crop totaled \$423 million, down 40 percent from the previous season, with an average annual price of \$1.91 per pound.

Improved variety pecan production, at 207 million pounds, declined 26 percent from the previous season. Improved variety pecans account for 94 percent of the US total pecan production. Native and seedling variety production totaled 13.9 million pounds, down 47 percent from 2017. New Mexico pecan production surpassed Georgia for the first time since 2006. In Georgia, pecan production was the lowest since 2006. This was the result of Hurricane Michael negatively impacting much of the pecan growing region. In addition, wet conditions in the summer months increased disease pressure and later limited the harvest of nuts blown off trees.

**Pecan Production and Value
United States 2009 - 2018**



Pecan Bearing Acreage, Yield, Production, Price, and Value – States and United States: 2016-2018

State	Bearing acreage			Yield per acre ¹		
	2016	2017	2018	2016	2017	2018
	(acres)	(acres)	(acres)	(pounds)	(pounds)	(pounds)
Alabama	8,900	8,400	7,500	247	220	220
Arizona	15,000	16,000	17,000	1,653	1,750	1,500
California	3,500	3,600	3,500	1,648	1,389	1,380
Georgia	120,000	120,000	110,000	908	892	510
Louisiana	12,300	12,300	13,400	325	650	450
New Mexico	40,000	43,500	45,500	1,800	2,115	1,980
Oklahoma	94,000	86,000	90,000	128	163	100
Texas	100,000	115,000	112,000	390	426	250
United States	393,700	404,800	398,900	682	753	555

See footnote(s) at end of table.

--continued

**Pecan Bearing Acreage, Yield, Production, Price, and Value – States and United States:
2016-2018 (continued)**

State	Utilized production		
	2016	2017	2018
	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)
Alabama	2,200	1,850	1,650
Improved	1,900	1,600	1,518
Native and seedling	300	250	132
Arizona	24,800	28,000	25,500
Improved	24,800	28,000	25,500
California	5,770	5,000	4,830
Improved	5,770	5,000	4,830
Georgia	109,000	107,000	56,100
Improved	109,000	107,000	56,100
Louisiana	4,000	8,000	6,030
Improved	1,500	3,000	2,515
Native and seedling	2,500	5,000	3,515
New Mexico	72,000	92,000	90,090
Improved	72,000	92,000	90,090
Oklahoma	12,000	14,000	9,000
Improved	3,000	3,000	2,970
Native and seedling	9,000	11,000	6,030
Texas	39,000	49,000	28,000
Improved	32,000	39,000	23,800
Native and seedling	7,000	10,000	4,200
United States	268,770	304,850	221,200
Improved	249,970	278,600	207,323
Native and seedling	18,800	26,250	13,877

See footnote(s) at end of table.

--continued

**Pecan Bearing Acreage, Yield, Production, Price, and Value – States and United States:
2016-2018 (continued)**

State	Price per pound			Value of utilized production		
	2016	2017	2018	2016	2017	2018
	(dollars)	(dollars)	(dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Alabama	2.030	1.960	1.480	4,467	3,628	2,439
Improved	2.130	2.030	1.500	4,047	3,248	2,277
Native and seedling	1.400	1.520	1.230	420	380	162
Arizona	2.710	2.500	2.030	67,208	70,000	51,765
Improved	2.710	2.500	2.030	67,208	70,000	51,765
California	2.540	2.300	2.000	14,656	11,500	9,660
Improved	2.540	2.300	2.000	14,656	11,500	9,660
Georgia	2.500	2.400	1.630	272,500	256,800	91,443
Improved	2.500	2.400	1.630	272,500	256,800	91,443
Louisiana	1.540	1.530	1.030	6,175	12,250	6,207
Improved	1.950	2.000	1.350	2,925	6,000	3,395
Native and seedling	1.300	1.250	0.800	3,250	6,250	2,812
New Mexico	2.960	2.400	2.190	213,120	220,800	197,297
Improved	2.960	2.400	2.190	213,120	220,800	197,297
Oklahoma	2.060	1.730	1.660	24,660	24,230	14,972
Improved	2.670	2.100	2.300	8,010	6,300	6,831
Native and seedling	1.850	1.630	1.350	16,650	17,930	8,141
Texas	2.410	2.250	1.740	94,020	110,010	48,762
Improved	2.540	2.390	1.830	81,280	93,210	43,554
Native and seedling	1.820	1.680	1.240	12,740	16,800	5,208
United States	2.590	2.330	1.910	696,806	709,218	422,545
Improved	2.660	2.400	1.960	663,746	667,858	406,222
Native and seedling	1.760	1.580	1.180	33,060	41,360	16,323

¹ Yield is based on utilized production.

Information Contacts

Listed below are the commodity statisticians in the Crops Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to nass@nass.usda.gov

Lance Honig, Chief, Crops Branch.....	(202) 720-2127
Jorge Garcia-Pratts, Head, Fruits, Vegetables and Special Crops Section.....	(202) 720-2127
Vincent Davis – Apricots, Bananas, Cherries, Garlic, Lettuce, Mint, Papaya, Pears, Strawberries, Tomatoes.....	(202) 720-2157
Fleming Gibson – Avocados, Cauliflower, Celery, Citrus, Coffee, Dates, Figs, Kiwifruit, Nectarines, Olives, Green Peas, Taro, Watermelons	(202) 720-5412
Greg Lemmons – Blackberries, Blueberries, Boysenberries, Cranberries, Cucumbers, Potatoes, Pumpkins, Raspberries, Squash, Sugarbeets, Sugarcane, Sweet Potatoes	(202) 720-4285
Dan Norris – Artichokes, Austrian Winter Peas, Cantaloupes, Dry Beans, Dry Edible Peas, Honeydews, Lentils, Mushrooms, Peaches, Snap Beans	(202) 720-3250
Daphne Schauber – Bell Peppers, Broccoli, Cabbage, Chile Peppers, Floriculture, Grapes, Hops, Maple Syrup, Tree Nuts, Spinach	(202) 720-4215
Joshua Bates– Apples, Asparagus, Carrots, Lima Beans, Onions, Plums, Prunes, Sweet Corn, Tobacco.....	(202) 720-4288

Access to NASS Reports

For your convenience, you may access NASS reports and products the following ways:

- All reports are available electronically, at no cost, on the NASS web site: www.nass.usda.gov
- Both national and state specific reports are available via a free e-mail subscription. To set-up this free subscription, visit www.nass.usda.gov and click on “National” or “State” in upper right corner above “search” box to create an account and select the reports you would like to receive.
- Cornell’s Mann Library has launched a new website housing NASS’s and other agency’s archived reports. The new website, <https://usda.library.cornell.edu>. All email subscriptions containing reports will be sent from the new website, <https://usda.library.cornell.edu>. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: <https://usda.library.cornell.edu/help>. You should whitelist notifications@usda-esmis.library.cornell.edu in your email client to avoid the emails going into spam/junk folders.

For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: nass@nass.usda.gov.

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases will apply to all programs and/or employment activities.)

If you wish to file a Civil Rights program complaint of discrimination, complete the [USDA Program Discrimination Complaint Form](#) (PDF), found online at www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.



AMERICAN PECAN COUNCIL ACREAGE & AGE SURVEY

August 20, 2019

Presented by

Joel Kimmelshue, PhD, CPSS

Casey Gudel, MS

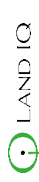
Mica Heilmann, CPSS, CPESC



Confidential and Proprietary Information Contained Within
No Copying or Reproduction Allowed without Approval

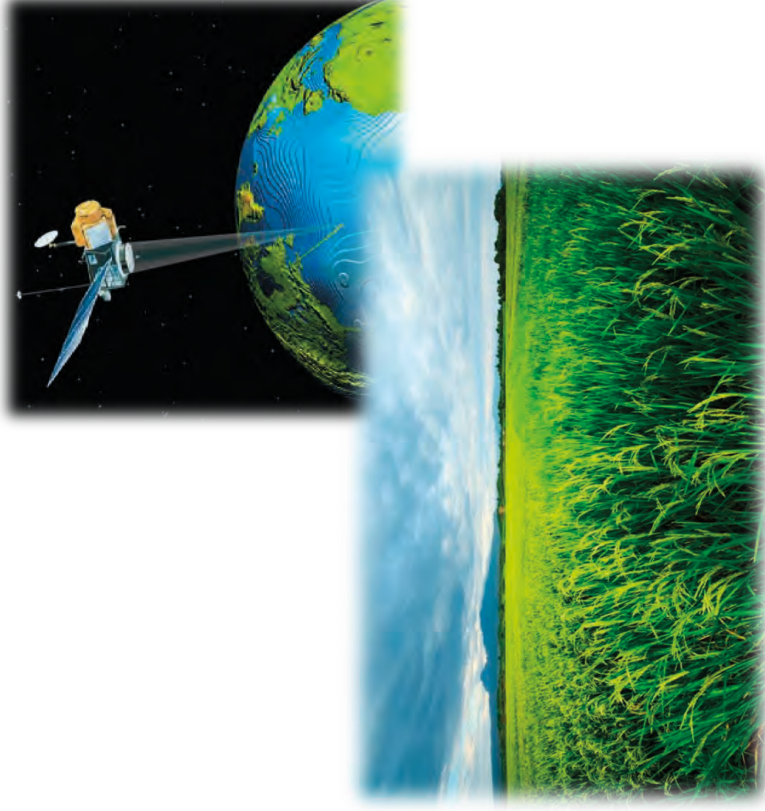
PRESENTATION OUTLINE

- Introduction to Land IQ
- Past Work Efforts
- Approach
- Pecan Results
 - Acreage
 - Age
- Pecan Applications
- Future Options



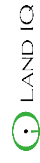
INTRODUCTION TO LAND IQ

- Agricultural Scientists
 - Crop production and nutrient management
 - Agricultural water quality and quantity evaluation
 - Salinity management
 - Agricultural reuse
 - Regulatory support
 - Land stabilization and erosion control
- Remote Sensing and GIS Technologists
 - Consumptive use estimation and crop identification
 - Large landscape evaluations
 - Irrigation and drainage
 - Production agriculture



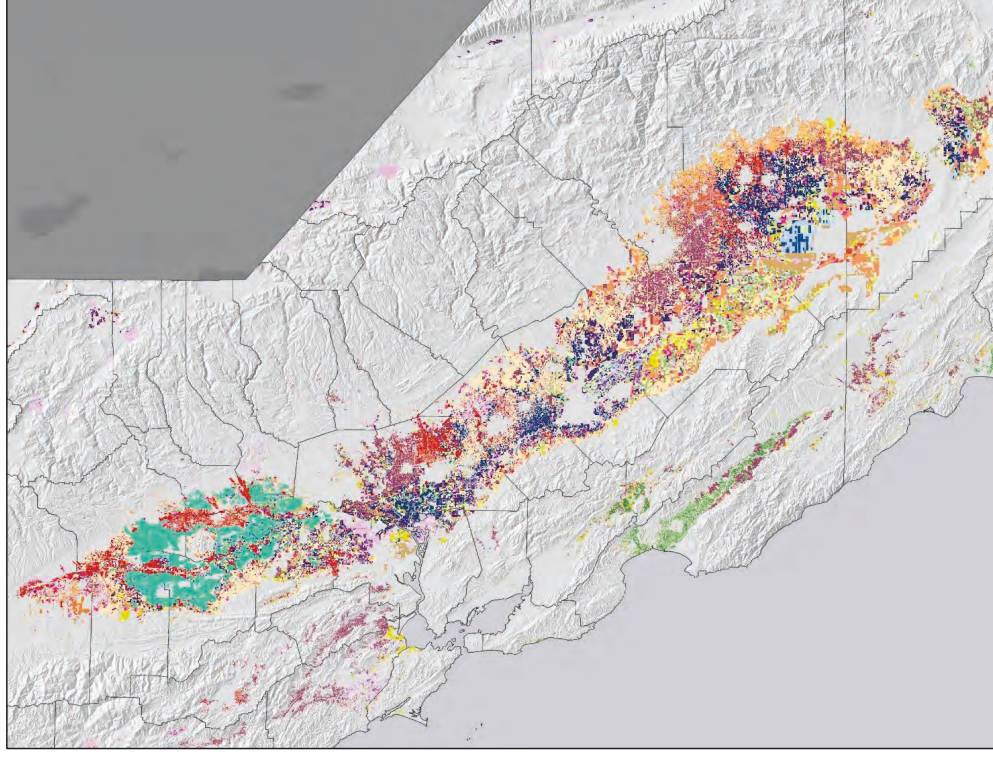
RELEVANT PROJECT EXPERIENCE

- **Agricultural Land Use**
 - Statewide: CA
 - Regional scale: CA, TX, AZ, NM, CO, MT
 - Commodity Organization Specific: Almond, Avocado, Dried Plum, Pistachio, Walnut, Rice, Wild Rice
- **Urban Landscape**
 - Regional scale: CA, TX, NM
- **Managed Wetlands/Riparian**
 - Statewide: CA
 - Regional scale: CA, TX, NM, AZ
- **Consumptive Use/ET**
 - Regional: CA Delta, Westlands Water District, Semitropic Water Storage District, North Kern Water Storage District, Shafter Wasco Irrigation District



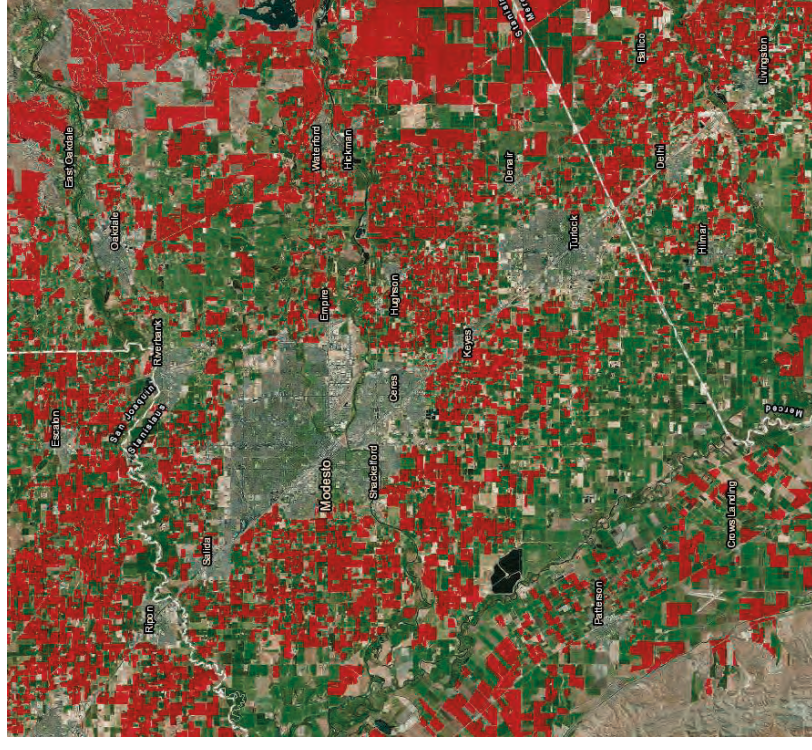
AGRICULTURAL LAND USE MAPPING

- Proven method developed over last 10 years
- Implemented on large projects in San Joaquin Valley, Sacramento Valley, Imperial Valley
- Centers on a hierarchical object based approach
 - Multi-temporal & multi-resolution aware
 - Allows input of 400+ predictor variables
- Leverages our “Spatial & Spectral Crop Library”
- Results in accurate crop maps, statistics, and crop change available for California
- Exceeds 96% accuracy on approximately 50 crops



TREE CROP MAPPING – HOW IS IT DONE?

- Historic mapping of tree crops in California and the knowledge on how to do that is critical
- In a sense ... we know what we're looking at
- Partly automated and partly manual
- Conduct ground truthing to “know” where pecans are
- Use “known” pecan orchards to create a signature or fingerprint
- Look at the rest of the image and see where fingerprint matches well
- Where finger print may match, but not sure, conduct a manual evaluation
- High resolution imagery is necessary



PECAN MAPPING

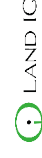
- Analyzed “improved” orchard acreage and age for 2017 and 2018 crop years
- “Native” estimates provided
- Eight States Mapped – from west to east
 - California
 - Arizona
 - New Mexico
 - Texas
 - Oklahoma
 - Alabama
 - Louisiana
 - Georgia



PECAN MAPPING

- Availability of necessary USDA-NAIP imagery

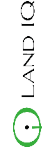
State	2017	2018	2019	2020	2021	2022	2023	2024
Georgia	X		X		X		X	
Texas	X		X		X		X	
New Mexico		X		X		X		X
Arizona		X		X		X		X
Alabama	X		X		X		X	
Louisiana	X		X		X		X	
Oklahoma	X		X		X		X	
California		X		X		X		X



NATIONWIDE “IMPROVED” PECAN ACREAGE

- Improved pecan acreage in 2017 and 2018

State	2017		2018	
	Acreage	Orchards	Acreage	Orchards
Georgia	180,192	10,319		
Texas	87,349	5,940		
New Mexico	50,632	4,572	51,410	4,642
Arizona	26,093	788	27,074	818
Alabama	18,044	1,674		
Louisiana	15,831	2,126		
Oklahoma	9,750	676		
California	4,831	263	5,166	281
TOTAL	392,725	26,358		



NATIONWIDE “NATIVE” PECAN ACREAGE

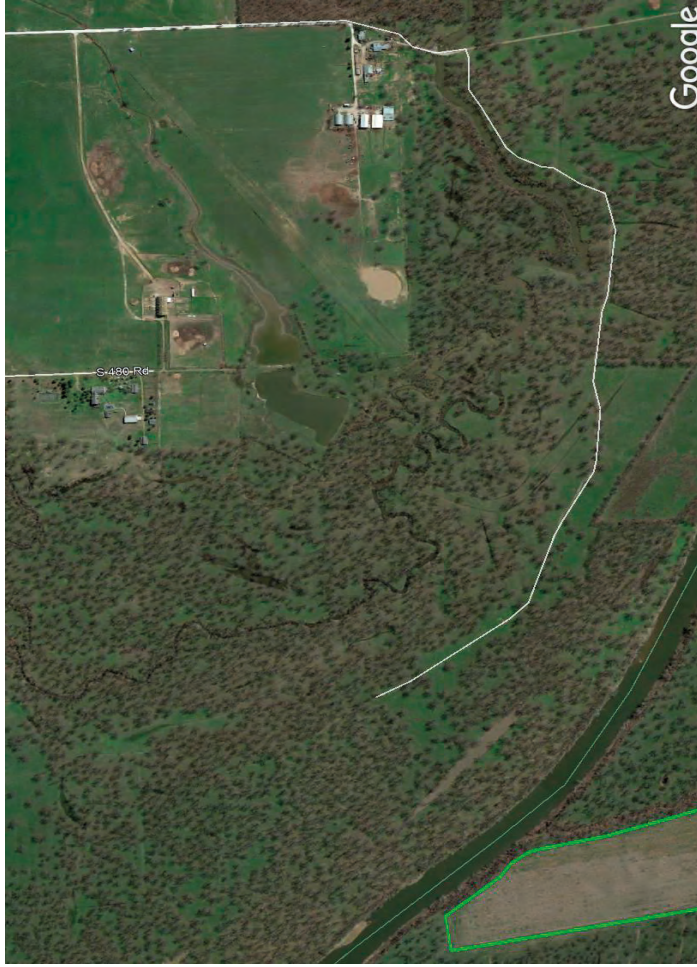
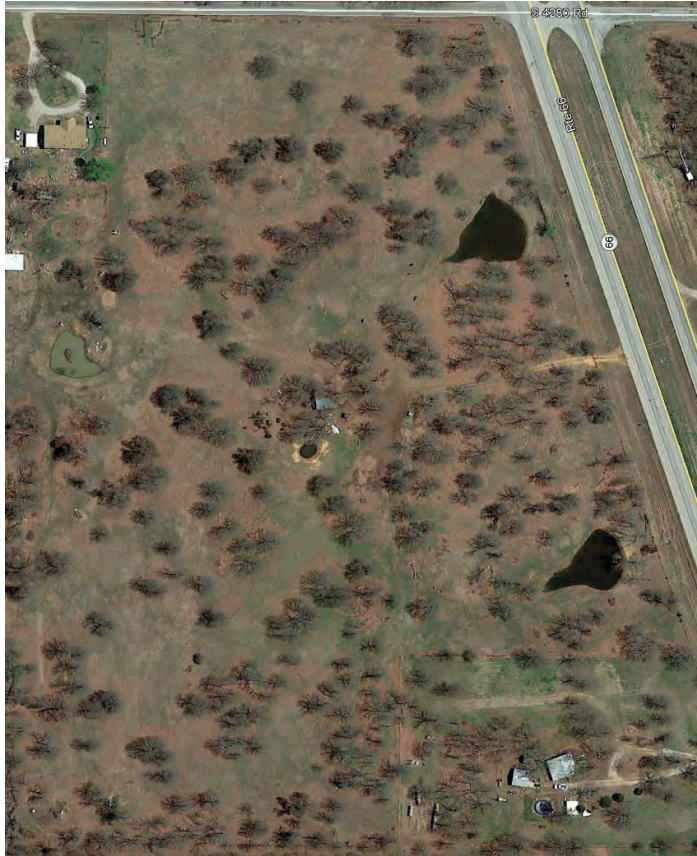
- Not a part of our scope of services, but ...
- Roughly estimated native pecan acreage in 2017
- Not able to be determined via remote sensing
- Utilize multiple lines of evidence to estimate native acreage including:
 - Our own remotely sensed evaluation
 - University research articles
 - Cooperative extension publications
 - USDA-NASS reports

State	2017 Acreage
Georgia	10,000 – 20,000
Texas	30,000 – 50,000
New Mexico	0
Arizona	0
Alabama	200 – 800
Louisiana	4,000 – 8,000
Oklahoma	65,000 – 85,000
California	0
TOTAL	109,200 – 163,800



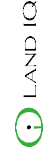
NATIONWIDE “NATIVE” PECAN ACREAGE

- Vast difference in native systems from “managed” to “forest”



NATIONWIDE “NATIVE” PECAN ACREAGE

- Vast difference in native systems from “managed” to “forest”



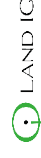
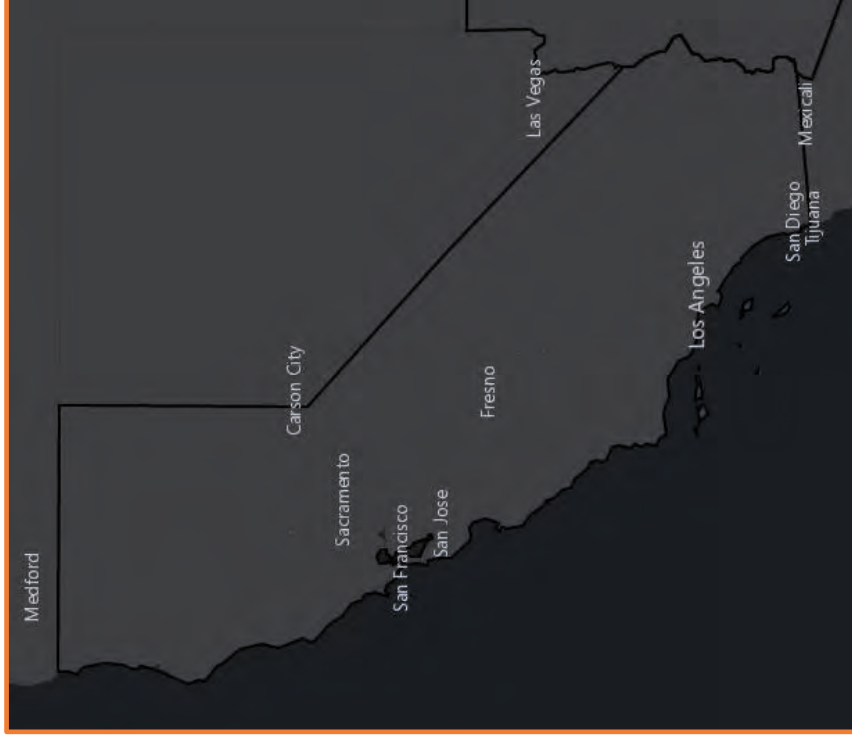
CALIFORNIA

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	3,600	3,500
Land IQ (improved)	4,831	5,166
Difference	+1,231	+1,666

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - California consists of improved orchards only
 - Highly accurate mapping
 - Slight increase in 2018 expected



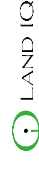
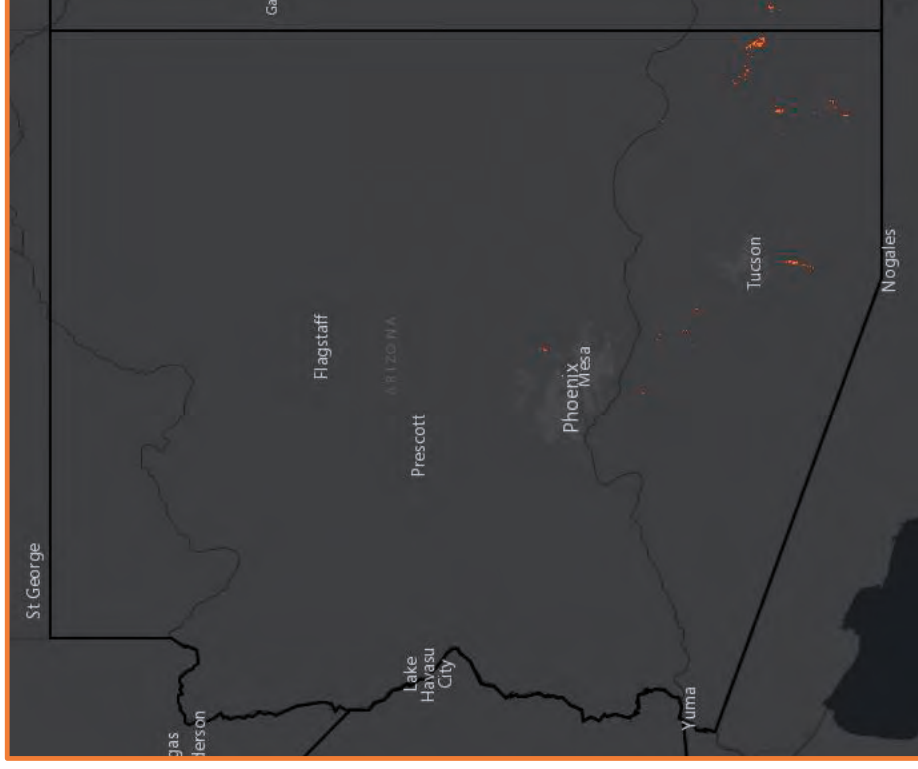
ARIZONA

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	16,000	17,000
Land IQ (improved)	26,093	27,074
Difference	+10,093	+10,074

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - Arizona consists of improved orchards only
 - Highly accurate mapping
 - Increase in 2018 expected



NEW MEXICO

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	43,500	46,000
Land IQ (improved)	50,632	51,410
Difference	+7,132	+5,410

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - New Mexico consists of improved orchards
 - Highly accurate mapping
 - Increase in 2018 and beyond expected



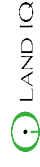
TEXAS

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	115,000	112,000
Land IQ (improved)	87,349	TBD
Difference	-27,651	TBD

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - Texas consists of improved and native orchards
 - West Texas different than Central/East TX
 - West Texas is highly accurate
 - Consider dividing Texas into two areas for analysis



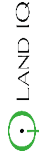
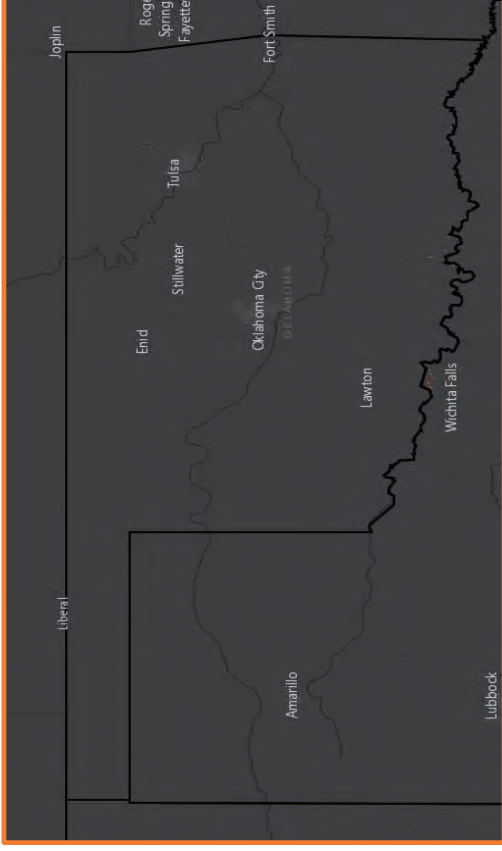
OKLAHOMA

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	86,000	90,000
Land IQ (improved)	9,750	TBD
Difference	-76,250	TBD

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - Oklahoma consists of mainly native orchards
 - Few acres of improved orchards
 - The state of most unknown



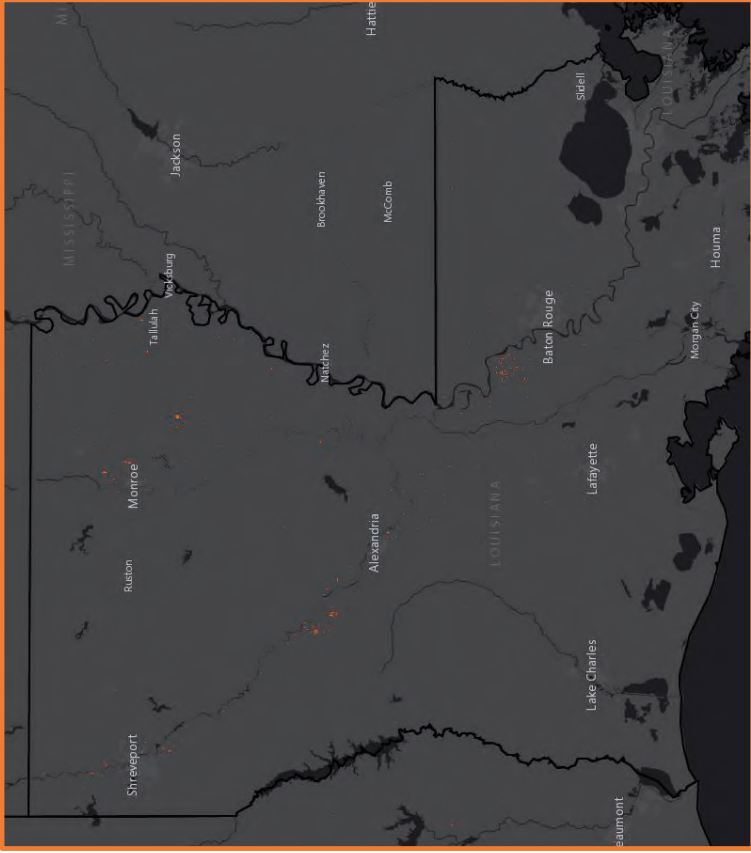
LOUISIANA

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	12,300	13,400
Land IQ (improved)	15,831	TBD
Difference	+3,531	TBD

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - Louisiana consists of improved orchards



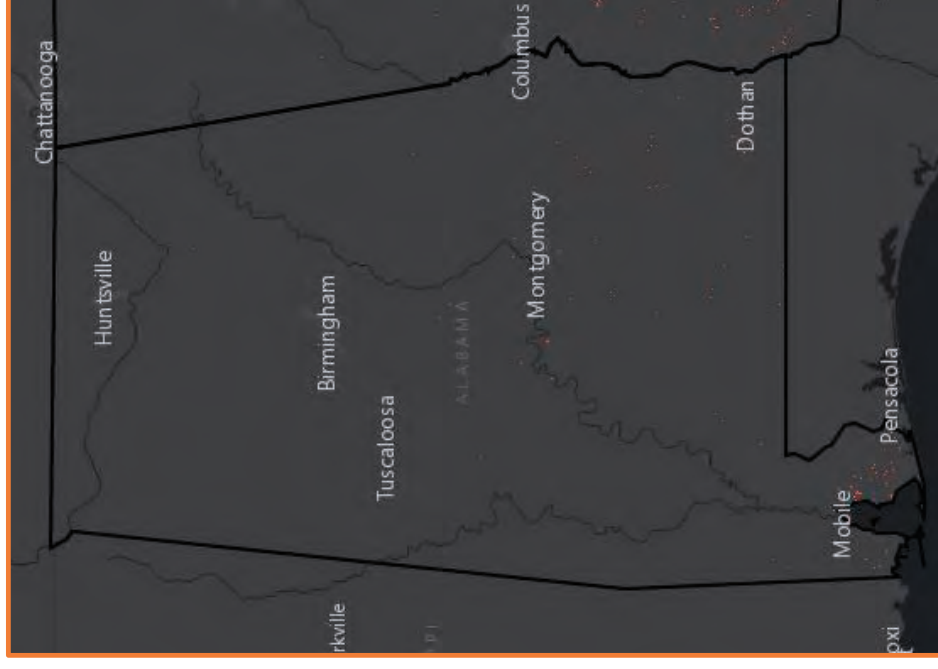
ALABAMA

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	8,400	8,000
Land IQ (improved)	18,044	TBD
Difference	+9,644	TBD

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - Alabama consists of mostly improved orchards
 - Some native orchards along creeks and streams
 - Fairly accurate for improved orchard mapping



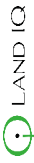
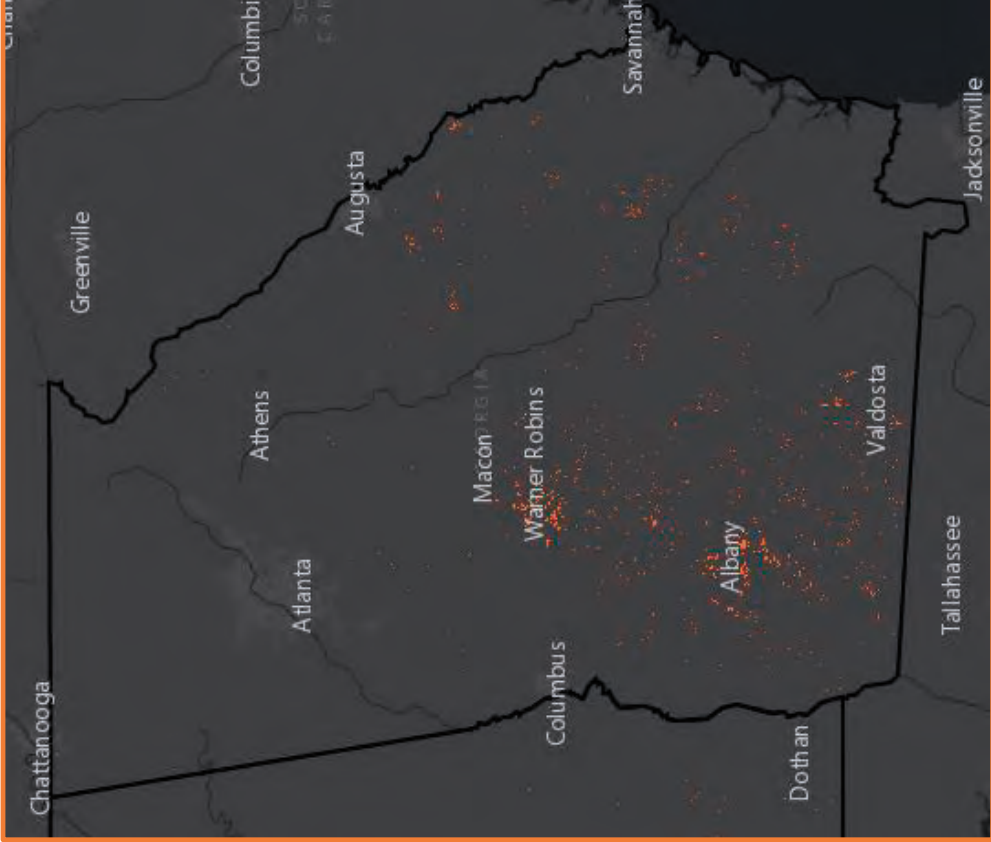
GEORGIA

- USDA-NASS and Land IQ Acreage Comparison

	2017	2018
USDA-NASS ¹	120,000	120,000
Land IQ (improved)	180,192	TBD (pre hurricane)
Difference	+60,192	TBD

¹ USDA-NASS acreage includes improved and native orchards

- Key Conclusions:
 - Georgia is dominated by improved orchards

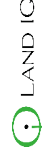


NATIONWIDE PECAN ACREAGE

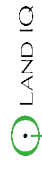
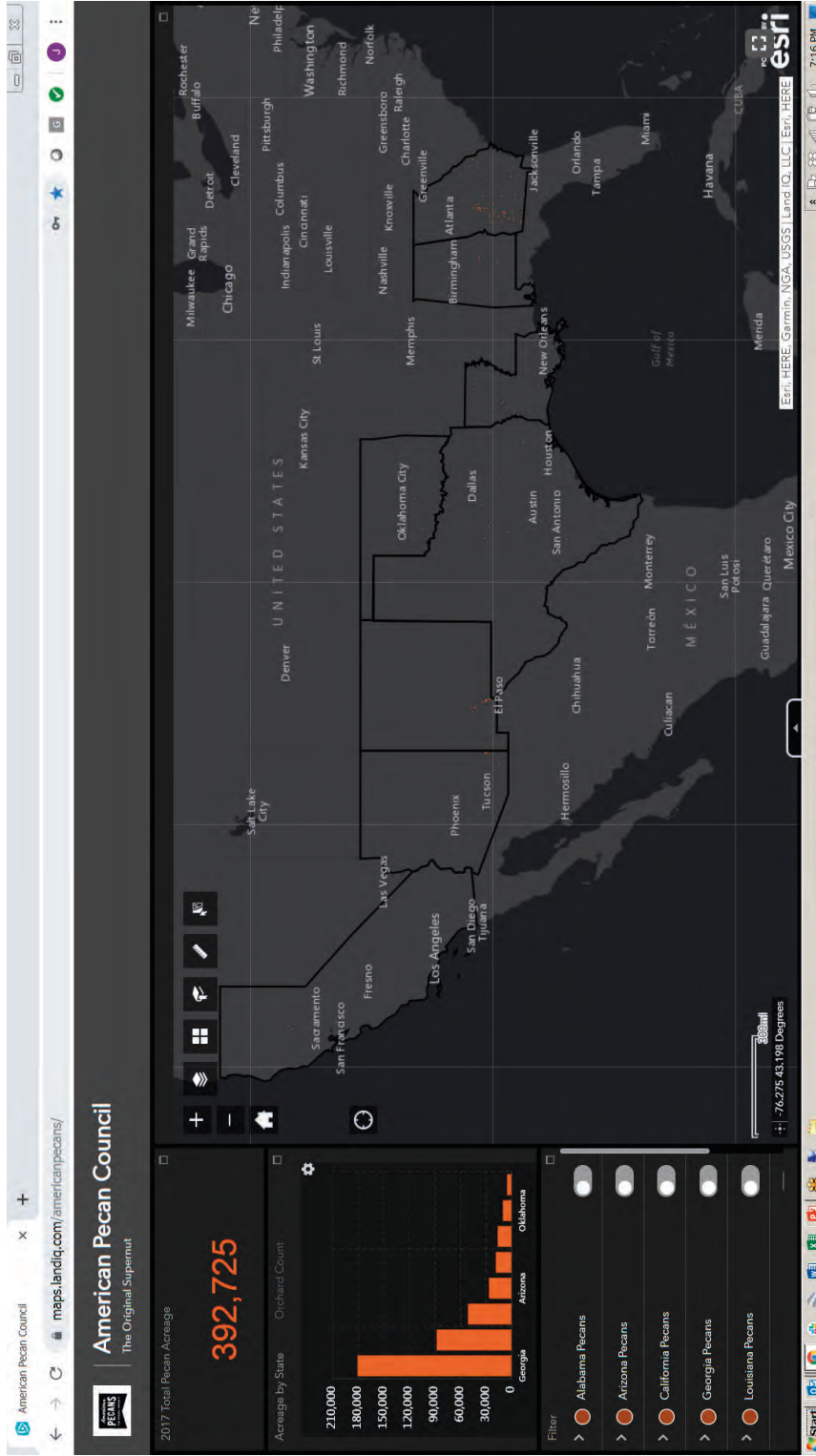
- USDA-NASS and Land IQ Acreage Comparison (eight mapped states)

	2017	2018
USDA-NASS – (improved & native)	404,800	409,900
Land IQ – (improved)	392,725	TBD
Land IQ – (native - average of range)	136,500	TBD
Land IQ – (total)	528,225	TBD
Difference – (Land IQ greater)	+123,425	TBD

- Key Conclusions:
 - USDA-NASS acreage includes survey acreage estimates of both improved and native orchards
 - Improved and native systems are very different analyses for remote sensing
 - Native systems generally cannot be determined via remote sensing
 - Every year improved systems are mapped, accuracies will increase (now at about 95% nationwide – higher in the west)



NATIONWIDE PECAN ACREAGE -- WEB VIEWER

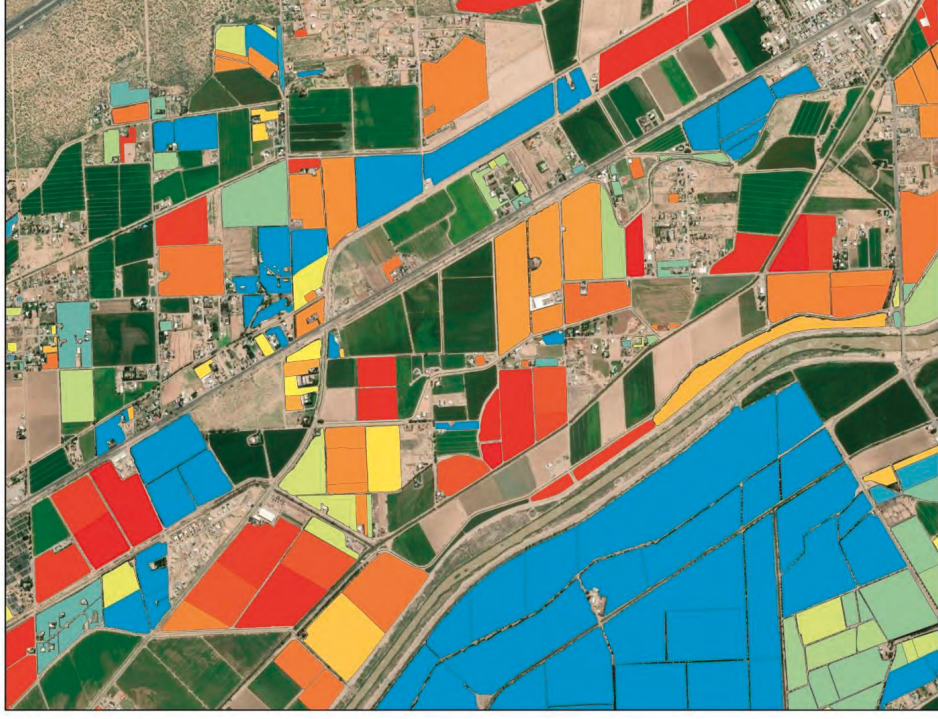


NATIONWIDE PECAN ACREAGE CONCLUSIONS

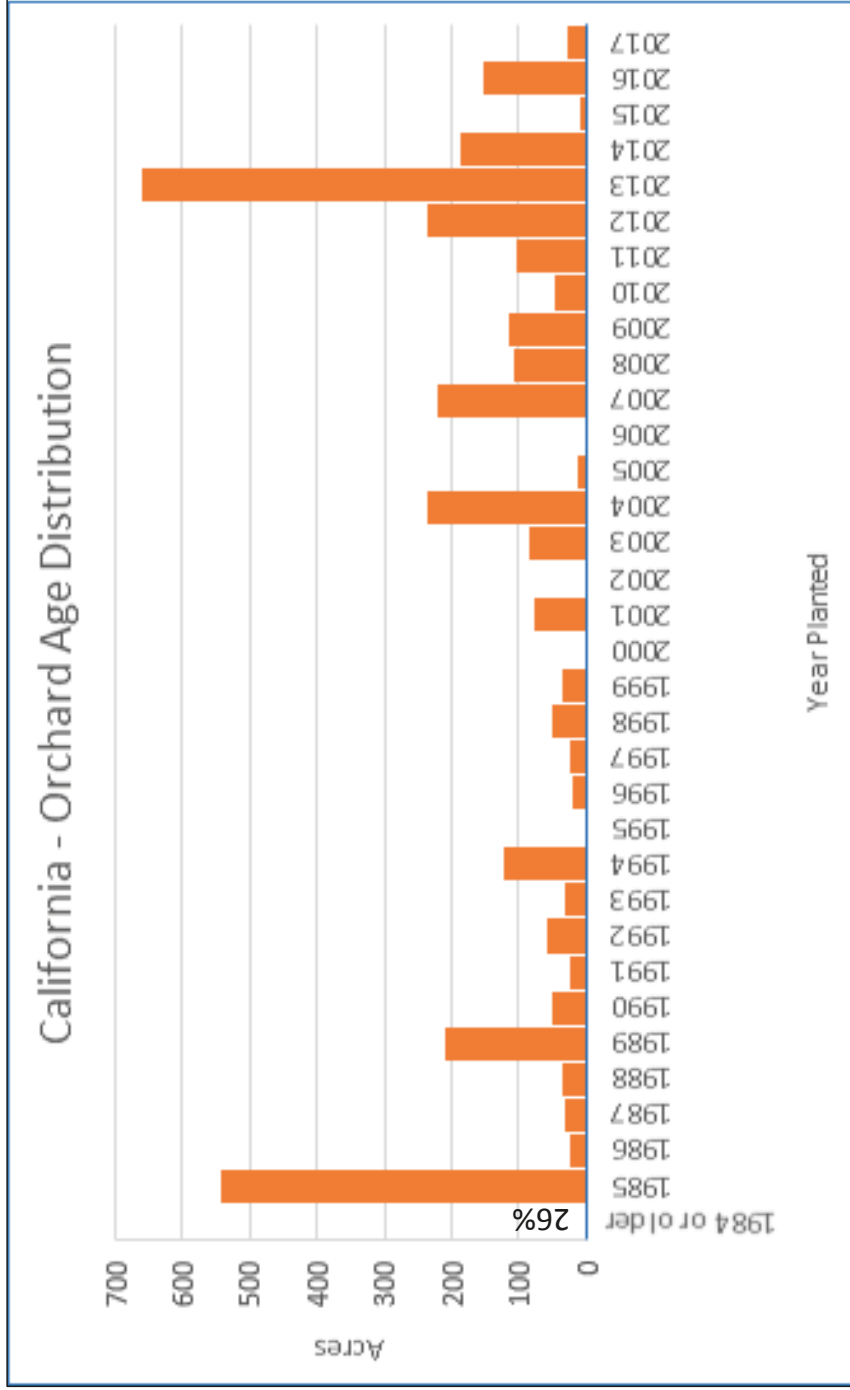
- USDA-NASS and Land IQ acreage comparison (eight mapped states)
- Land IQ acreage, including an initial estimate of “native” was approximately 125,000
 - 150,000 acres greater
- Experienced this with almonds, walnuts, and pistachios in California
- Growers “felt” and “assumed” USDA-NASS acreages were too low ... true by 10% for almonds
- Impacted the market price initially
- Now impacting crop volume estimates 4-5 years later
- Key to consider is that currently this is acreage and NOT volume of crop

AGE ANALYSIS

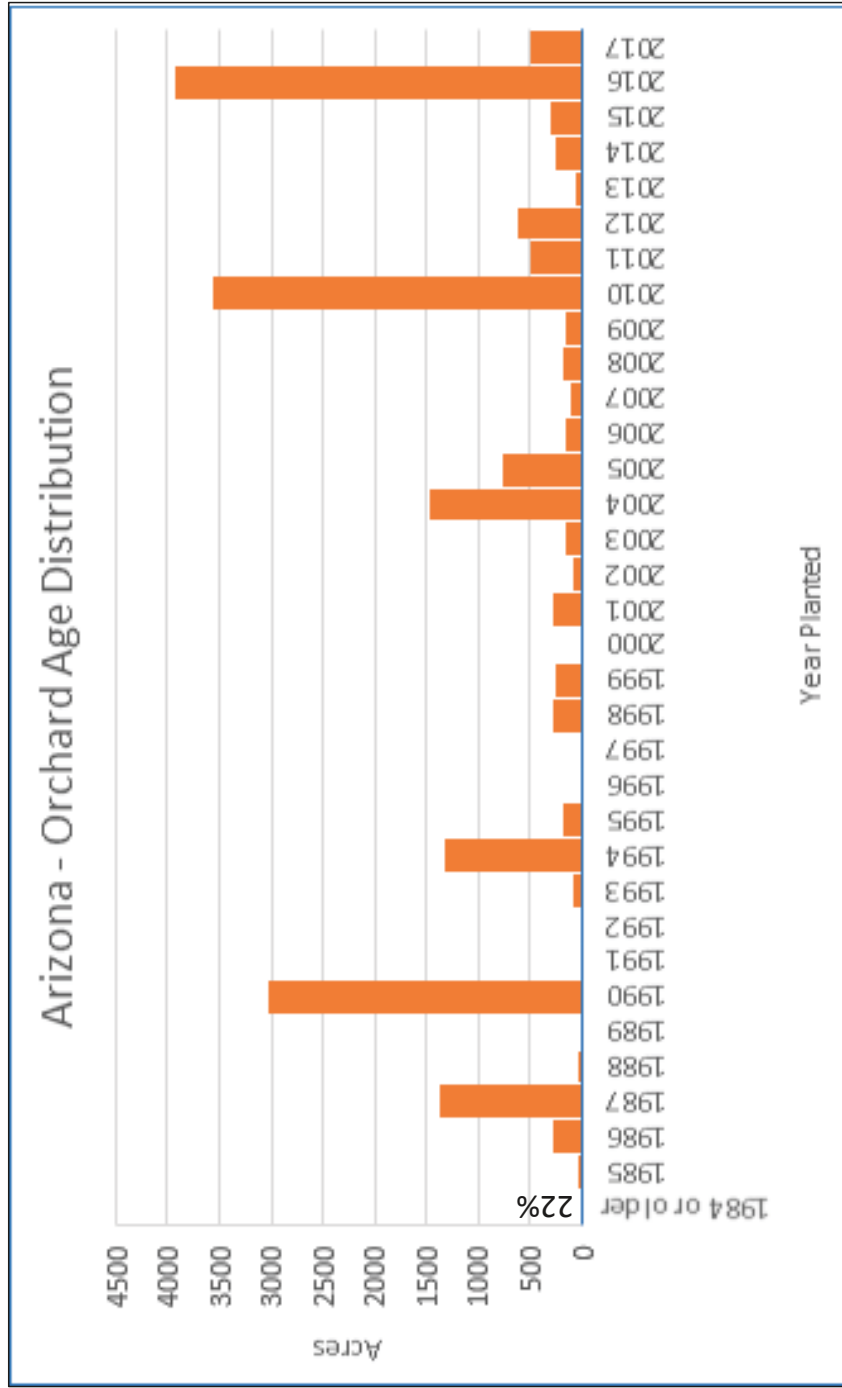
- Once orchards are mapped, only then can age be determined
- A backwards looking approach (through 1984) at imagery sources is conducted
- Once “signature” appears as open ground, then this establishes planting date
- Nationwide, over half the pecan acreage was planted prior to 1984



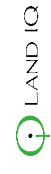
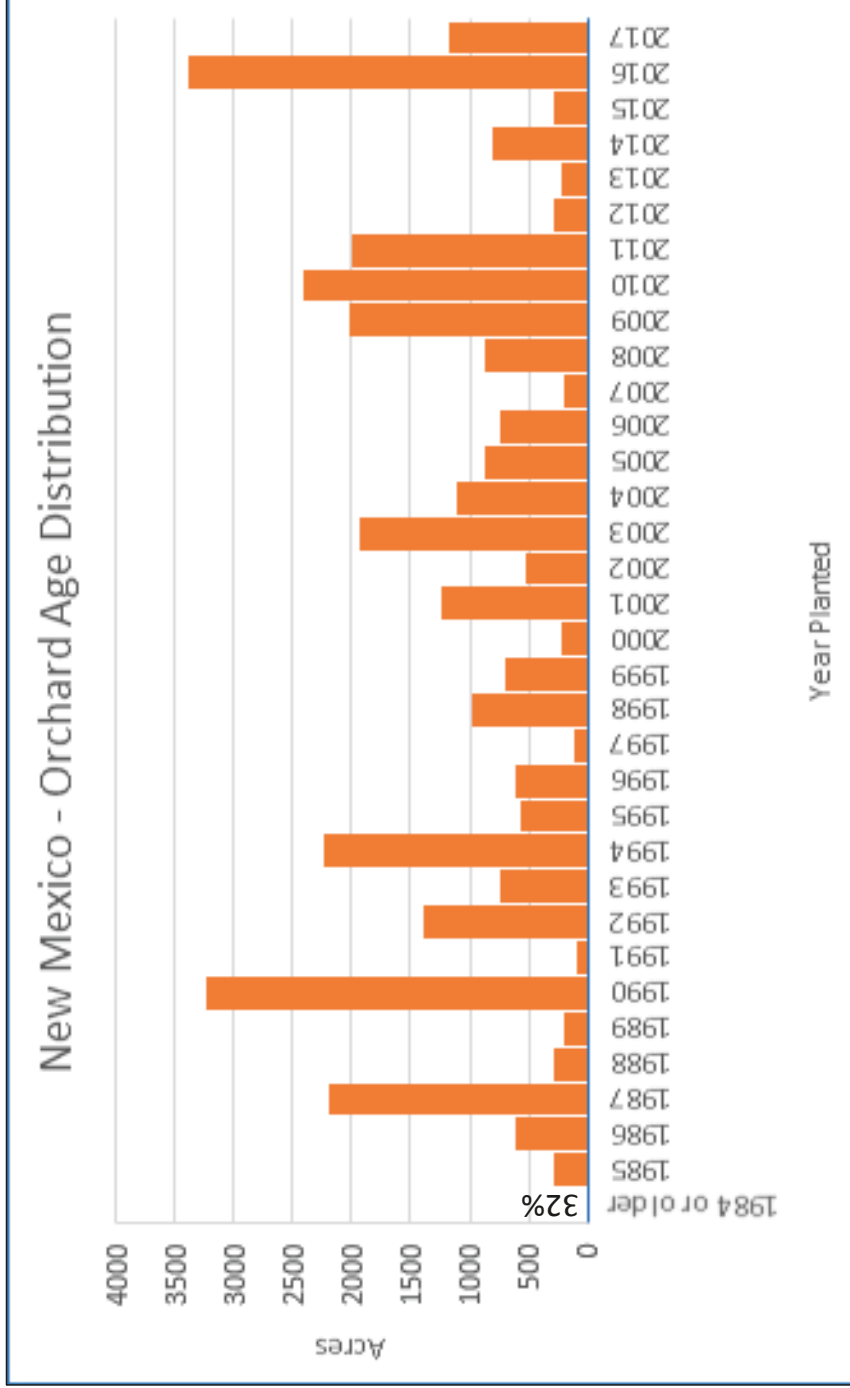
CALIFORNIA – AGE ANALYSIS



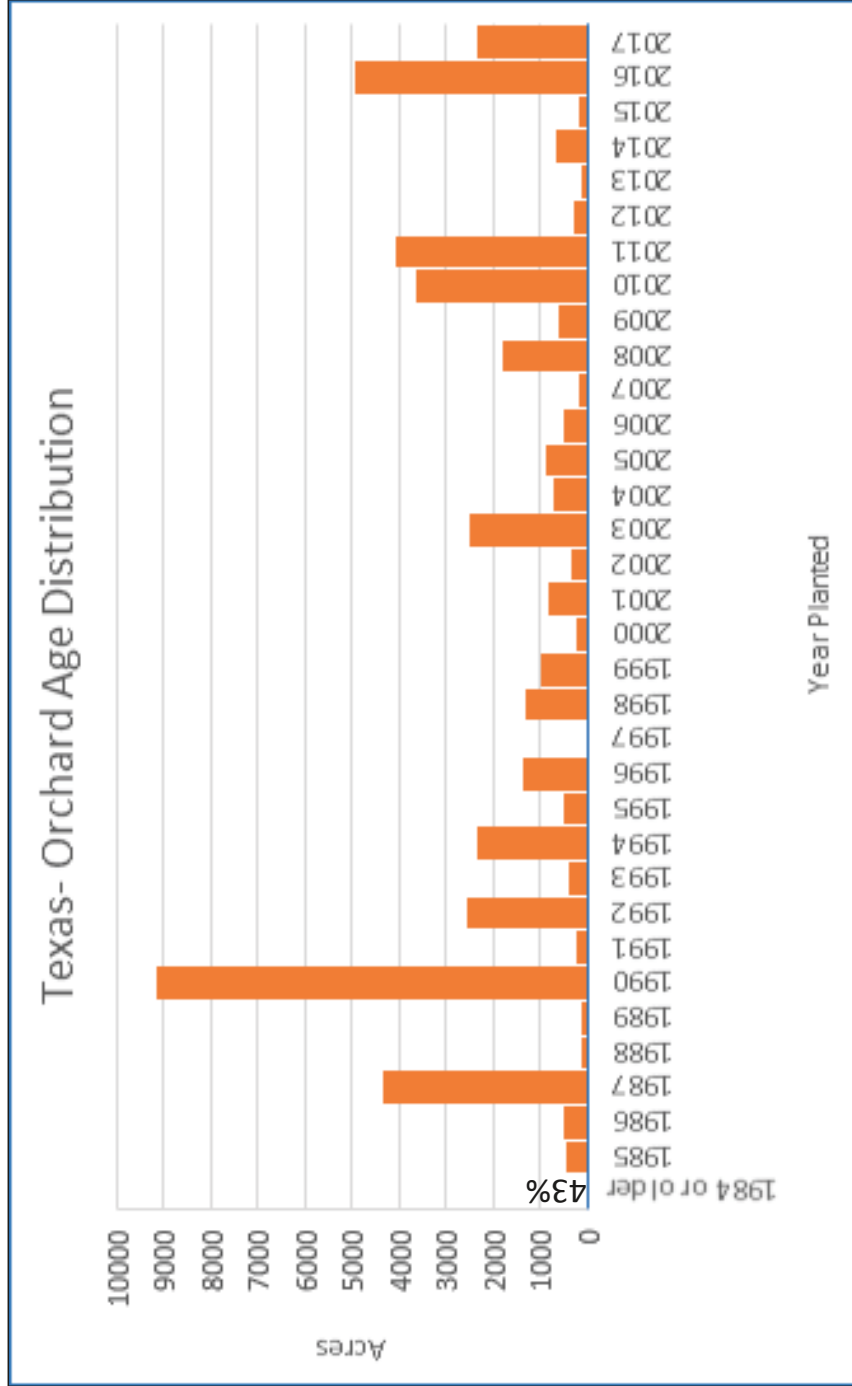
ARIZONA — AGE ANALYSIS



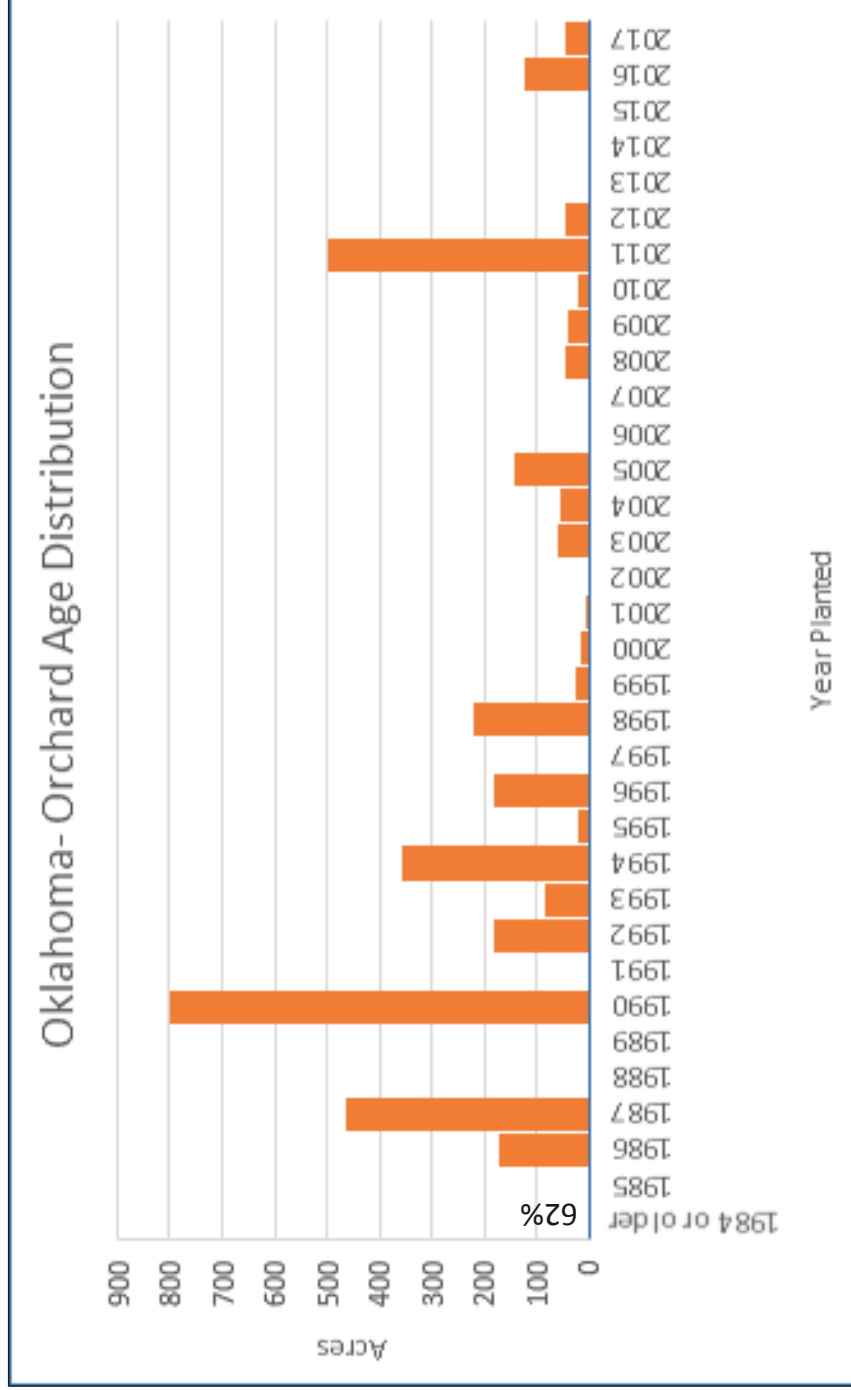
NEW MEXICO – AGE ANALYSIS



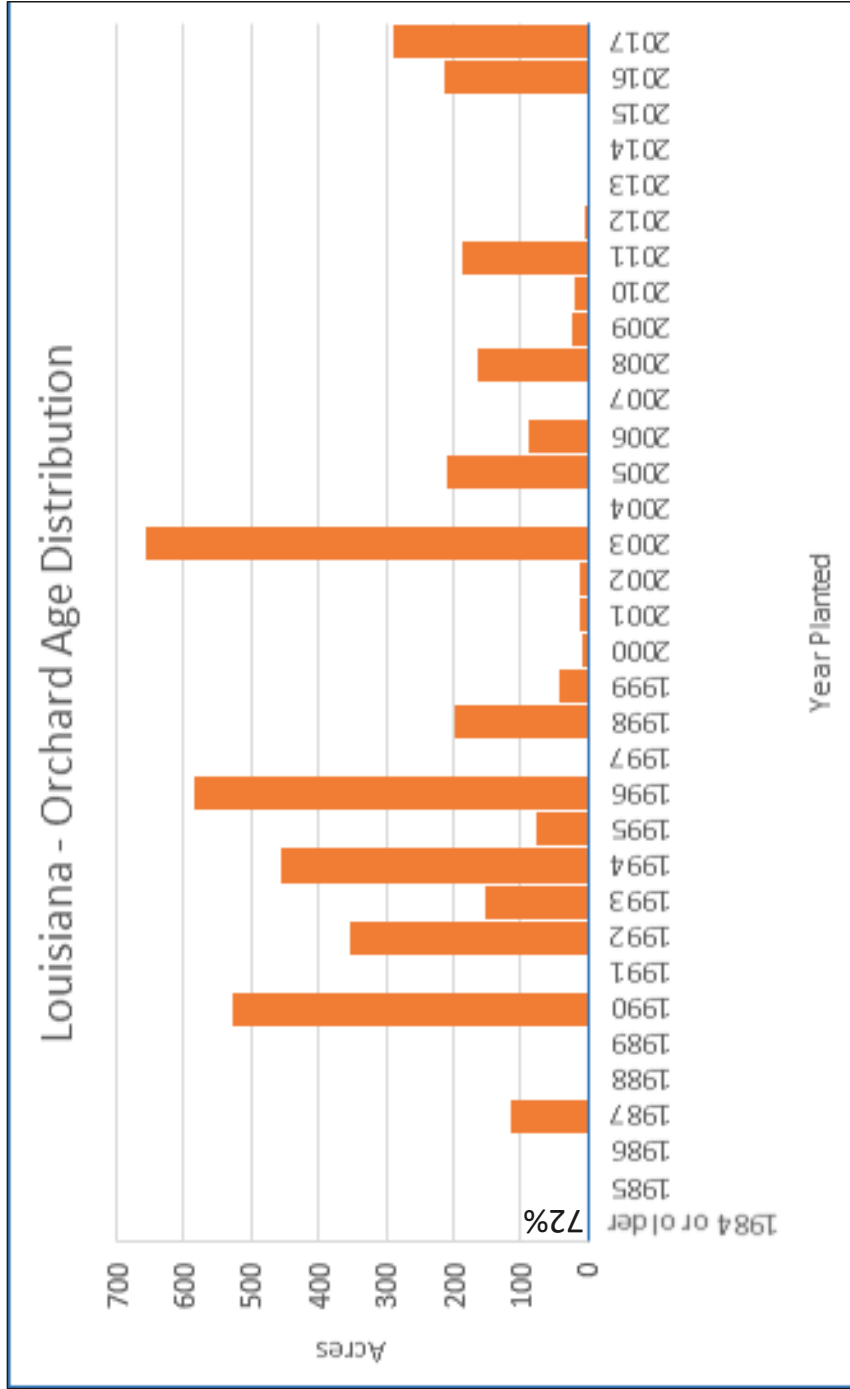
TEXAS -- AGE ANALYSIS



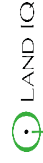
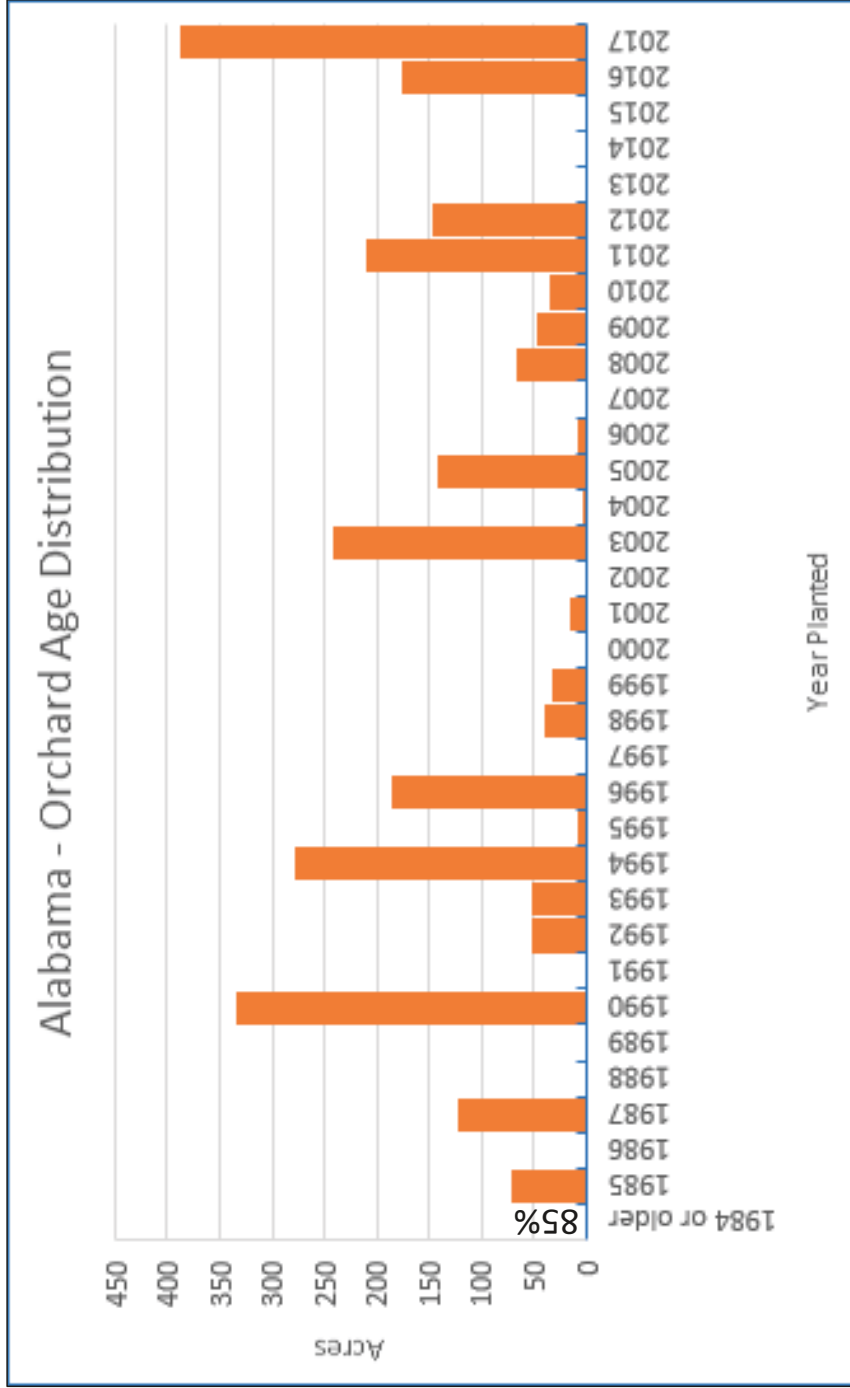
OKLAHOMA – AGE ANALYSIS



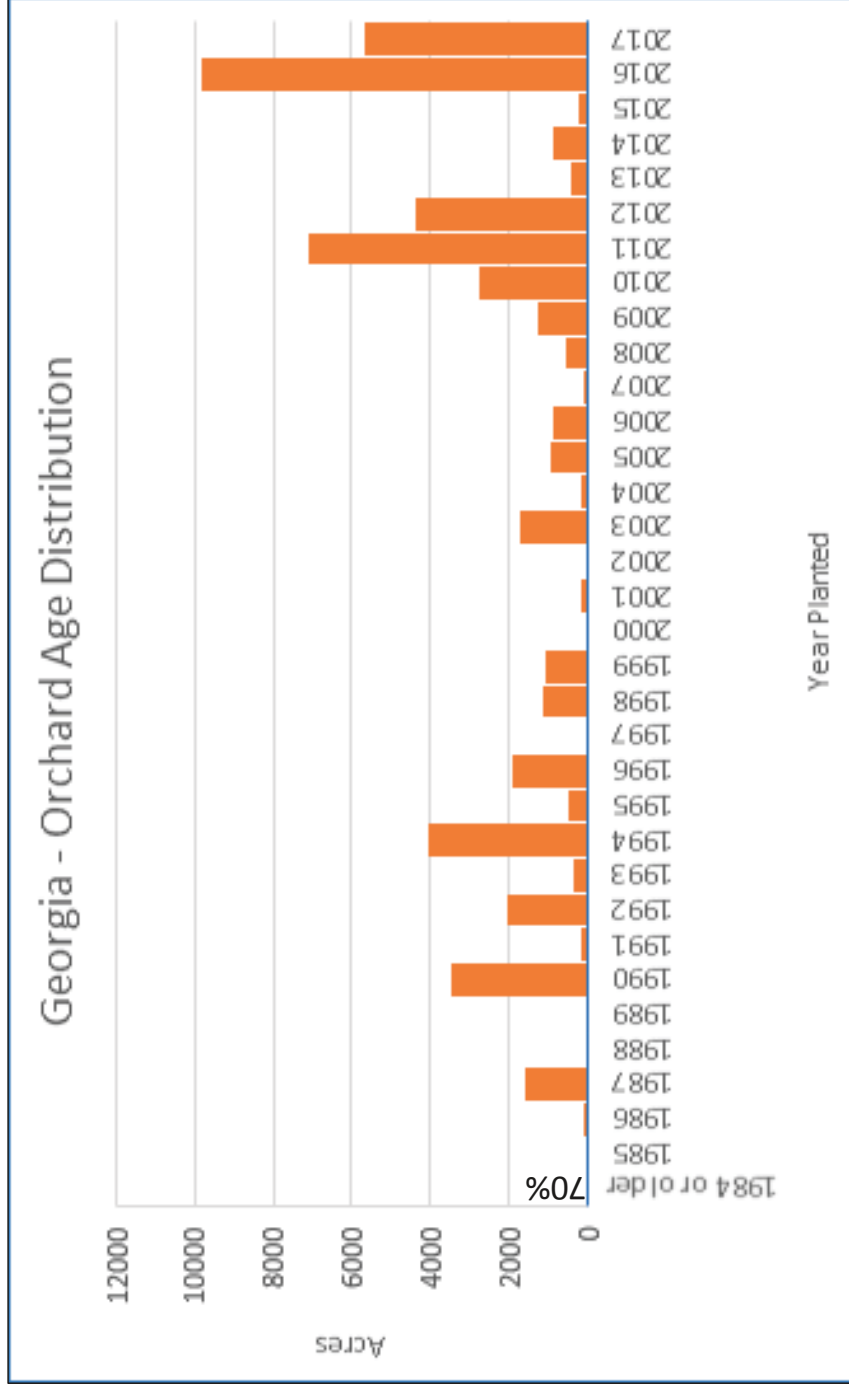
LOUISIANA – AGE ANALYSIS



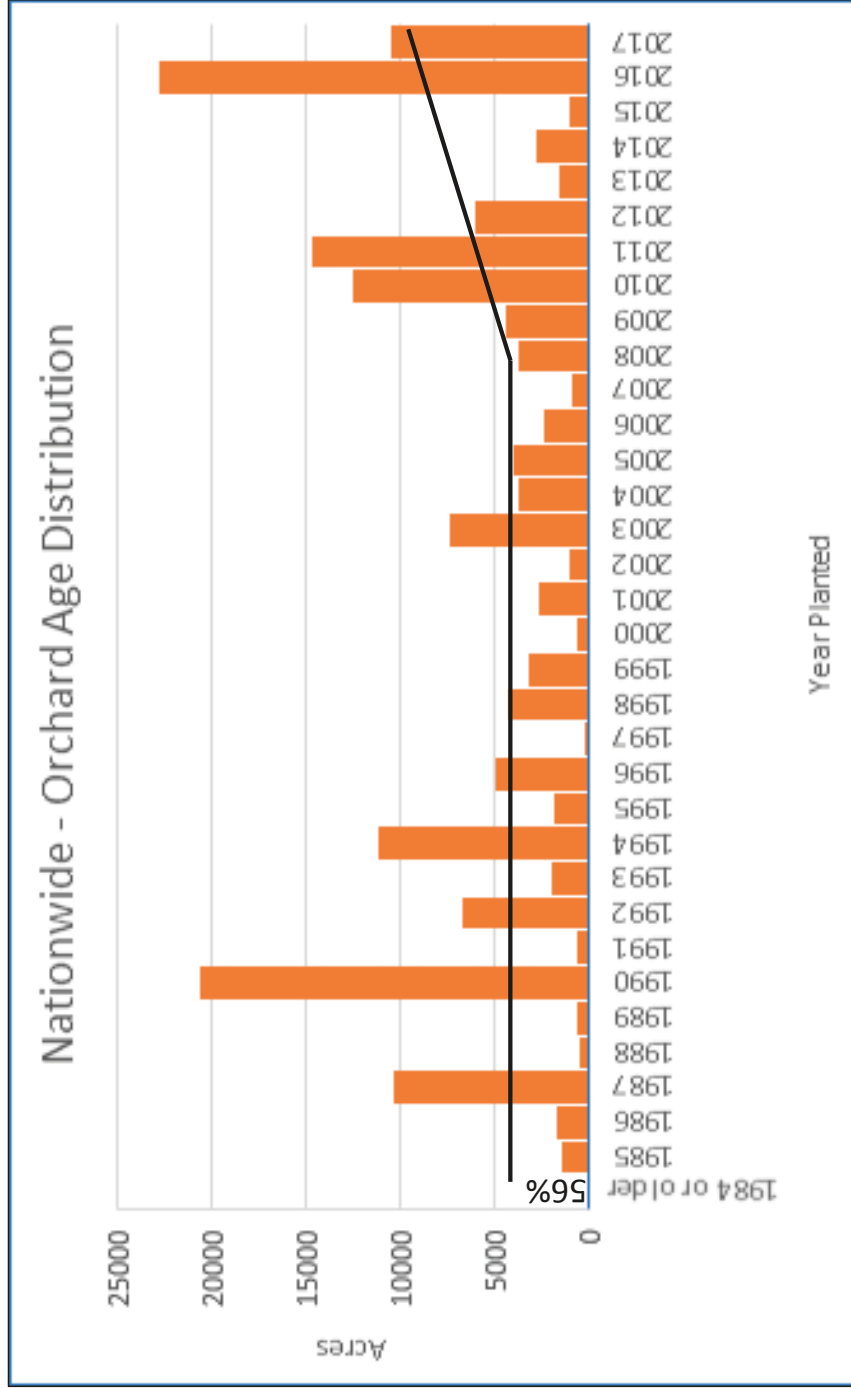
ALABAMA – AGE ANALYSIS



GEORGIA – AGE ANALYSIS

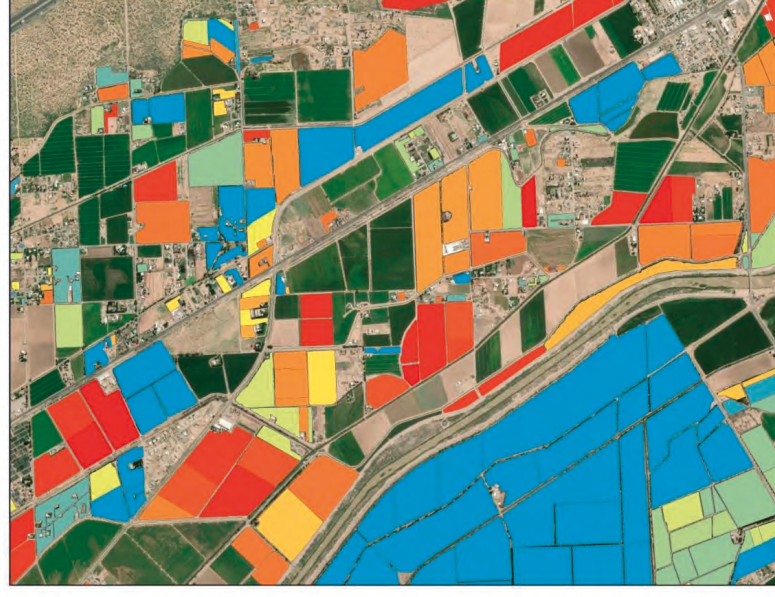


NATIONWIDE - AGE ANALYSIS



NATIONWIDE PECAN AGE CONCLUSIONS

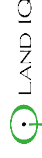
- Over 50% of pecans were planted in or before 1984
- Most recent increase in young pecan plantings is occurring in the western US (California, New Mexico, Arizona, West Texas)
- How will water supply challenges affect these plantings?
- Orchard age is a key component to many future analyses



POTENTIAL FUTURE APPLICATIONS OF MAPPING

- Expanded Acreage Assessment
 - Expand the field-by-field acreage assessment to seven (7) additional states including Arkansas, Florida, Kansas, Mississippi, Missouri, North Carolina and South Carolina.

State	2017	2018	2019	2020	2021	2022	2023	2024
Arkansas	X		X		X		X	
Florida	X		X		X		X	
Kansas	X		X		X		X	
Mississippi		X		X		X		X
Missouri		X		X		X		X
North Carolina		X		X		X		X
South Carolina	X		X		X		X	



POTENTIAL FUTURE APPLICATIONS OF MAPPING

- **Hurricane Michael Impacts**
 - Assessment of the acreage that was impacted by Hurricane Michael by mapping the 2019 acreage in Georgia.
- **Other Spatial Applications**
 - Not possible with tabular, survey based information
 - Regional production trends
 - Assessment tracking
 - Where is growth happening
 - Global production opportunities
- **Yield Estimation**
 - In-season projection of yield using acreage, age, location and variety as well as taking into account environmental factors and water supply reliability.

Applications of Mapping – Almond Yield Forecasting

- Basic need of the organization, growers & processors
- Utilizes the following components to forecast yield, with the most recent information available:
 - Acreage
 - Age
 - Location
 - Yield Function that is based on actual yields at the county level
- Allows users to adjust for environmental and water supply impacts



Applications of Mapping – Almond Yield Forecasting

- Step 1, 2 and 3: Plantings, Removals, and Price

MODIFICATIONS

STEPS 1, 2 AND 3 | PLANTINGS, REMOVALS AND PRICE:

STEP 1 - ORCHARDS PLANTED:
Please insert estimate for new orchards planted (acres) in:

2019	100000	Estimated range: 80,000 to 120,000 acres
------	--------	--

STEP 2 - ORCHARDS REMOVED:
Please insert estimate for orchards removed (acres) in:

2019	30000	Estimated range: 30,000 to 50,000 acres
2020	50000	Estimated range: 40,000 to 60,000 acres
2021	60000	Estimated range: 40,000 to 70,000 acres
2022	60000	Estimated range: 50,000 to 80,000 acres

STEP 3 - PRICE:
Please insert estimate for price (\$/lb) in:

2019	3.00	Estimated range: \$2.00 to \$4.00
2020	2.50	Estimated range: \$2.00 to \$4.00
2021	3.50	Estimated range: \$1.50 to \$4.00
2022	2.00	Estimated range: \$1.50 to \$4.00

Save and Calculate

Applications of Mapping – Almond Yield Forecasting

- Step 4 & 5: Environmental Impacts & Water Supply Impacts

STEP 5 WATER SUPPLY IMPACTS:

Please adjust for potential water supply impacts:

- Statewide adjustments will automatically populate all regions and counties for that same year.
- Regional adjustments will re-populate all counties within that region for that same year.
- Counties may be adjusted individually.
- Tool recalculates after clicking on the "Save and Calculate" button.
- Historic 8-year range: -11% to +8%.

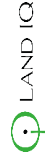
	2019	2020	2021	2022
STATEWIDE	2%	typical	typical	typical
VIEW REGIONS:				
Sacramento Valley Region	2%	typical	typical	typical
View Sacramento Valley Counties:				
Northern San Joaquin Valley Region	3%	typical	typical	typical
View Northern San Joaquin Valley Counties:				
Southern San Joaquin Valley Region	4%	typical	typical	typical
View Southern San Joaquin Valley Counties:				
Fresno	4%	typical	typical	typical
Tulare	5%	typical	typical	typical

GLOBAL PECAN MAPPING

- Land IQ was recently contacted by the International Nut and Dried Fruit Council
- Interested in discussing mapping tree crops globally
 - Almonds
 - Walnuts
 - Pistachios
 - Cashews
 - Hazelnuts
- Pecans exist in US (41%), Mexico (52%), South Africa (5%), Australia (1%), Others (1%)
- Recommend that they consider pecans
- Will keep APC informed of progress



QUESTIONS



DECEMBER 2019

Economic Benchmark Model and Analysis of the Effects of the Chinese Tariff on the U.S. Pecan Industry

Forecasting and Business Analytics, LLC

*Dr. Oral Capps, Jr.
Executive Professor and AFCERC CO-Director
Texas A&M University*

*Dr. Gary W. Williams
Professor and AFCERC Co-Director
Texas A&M University*



*Agribusiness, Food, and Consumer
Economics Research Center*



ECONOMIC BENCHMARK MODEL AND ANALYSIS OF THE EFFECTS OF THE CHINESE TARIFF ON THE U.S. PECAN INDUSTRY

Authors:

Dr. Oral Capps, Jr.

FABA Managing Partner and Executive Professor, Texas A&M University

Dr. Gary W. Williams

FABA Team and Professor, Texas A&M University

Abstract:

This report presents and describes the first economic model of the U.S. pecan industry ever developed. Known as PecanMod, the model replicates the functioning of the pecan industry for analysis of economic issues of importance to the pecan industry. After reviewing past research to analyze economic behavior in the U.S. pecan industry, the report discusses the structure of the U.S. pecan industry, identifies the data needed to model the economic activities of the industry, and evaluates the critical data gaps that exist. After laying out the structure and functioning of PecanMod, the report demonstrates the features and usefulness of the model by performing an analysis with the model of the U.S. pecan industry impacts of the Chinese import tariffs in 2017/18 and 2018/19. At the end, the report offers some comments on future uses of PecanMod and the continued evolution of the model required to insure that the model captures the full dynamics of the U.S. pecan industry.

Acknowledgements:

We gratefully acknowledge funding for this project from the American Pecan Council and for helping us to understand how the U.S. pecan industry functions. We also are greatly indebted to Loren Burns, AFCERC Program Manager, and student workers for excellent data and administrative support. Nevertheless, findings and conclusions are those of the authors and do not necessarily represent the views of the American Pecan Council or Texas A&M University.



A Limited Liability Company formed in Texas in 2001, FABA was founded on the belief that to utilize information effectively in a decision-making process, real world experience, sound econometric and statistical skills, and advanced analytical ability are necessary.

FABA provides a mix of theoretical horsepower and real world experience in designing and implementing research projects for its clients. FABA draws on resources with experience across many different private sector applications, with a common goal of utilizing econometric and statistical tools to create effective forecasting and other analytical tools that enable better decisions. FABA provides complete forecasting and business analytic solutions centering on the development of econometric/statistical models to aid decision-making in the business community in two ways: (1) analyses to better interpret the business, economic, and financial landscape and (2) forecasts to provide a better vision of the future.



EXECUTIVE SUMMARY

This report presents and describes the first economic model of the U.S. pecan industry ever developed. We first summarize the findings of past research that analyzes economic behavior in the U.S. pecan industry. We then discuss the structure of the U.S. pecan industry, identify the data needed to model the economic activities of the industry, and evaluate the critical data gaps that exist. Next, we briefly discuss the model of the U.S. pecan industry developed to replicate the functioning of the industry known as PecanMod. To demonstrate the features and usefulness of PecanMod, we use the model to perform an analysis of the impact of the Chinese import tariffs in 2017/18 and 2018/19 on the U.S. pecan industry. At the end, we offer some comments on future uses of PecanMod and the continued evolution and uses of the model.

While providing many important insights on the U.S. pecan industry, none of the previous economic research efforts on pecans attempted to develop a viable structural model of the U.S. pecan industry for at least two reasons: (1) a lack of needed data and (2) the on-off production behavior of pecan trees which tends to swamp the economic forces making statistical efforts to disentangle the economic drivers from the biological drivers in pecan markets quite difficult.

A review of the structure of the pecan industry and available data concludes that while some data related to the pecan industry are available, much data needed to characterize many critical activities in the U.S. pecan industry are not. Missing are historical, consistent, and reliable data on critical activities such as acreage planted and harvested, and trees removed by pecan variety, purchases by accumulators, wholesalers, and shellers, purchases by various retailers by type or as a group, purchases by various industrial users by type or as a group, and exports to specifically identified destinations. Price data associated with most of those activities also are not available for analysis. In addition, some of the available data are not useful or reliable for analysis such as exports by destination and terminal prices. Other available data are not specific as to type, such as domestic utilization for which there is no breakdown by retail or industrial uses.

We developed PecanMod as a relatively powerful economic model based on the available data. PecanMod is an econometric simulation model consisting of a set of equations that explain the movement over time of 13 key industry activities, including (1) improved pecan production (in-shell), (2) native pecan production (in shell), (3) total pecan production (in-shell), (4) total pecan production (shelled), (5) pecan import supply, (6) domestic pecan utilization, (7) ending stock demand, (8) export demand, (9) price of improved pecans (in-shell), (10) price of native pecans (in-shell), (11) average producer price of pecans (shelled), (12) import price of pecans, and (13) export price of pecans. Using statistical procedures (econometrics), the relationship between these key industry activities and the drivers that explain the economic behavior of each were determined.



For example, the econometric procedure determined that price is a statistically significant driver of production, import supply, export demand, domestic demand, and pecan stock demand behavior. Even so, the procedure concluded that each of those market activities are price inelastic, that is, not highly responsive to price changes. Various statistical measures confirm PecanMod does an excellent job of tracking the historical functioning of the U.S. pecan industry.

To demonstrate its features and usefulness, we use PecanMod to conduct a counter-factual simulation of the effects of the increased Chinese tariff in 2017/18 and 2018/19 on the U.S. pecan industry. The results indicate that over the two years, the main effect of the tariffs in those years was to reduce U.S. pecan exports and prices with some corresponding increase in domestic use and little or no effect on effect on production. The U.S. price declines plus the decline in exports and the small decline production all as a result of the tariffs led to sizeable declines in producer and export revenues of \$215 million (16%) and \$239 million (17%), respectively.

We used the counterfactual simulation results to determine how much of the actual change in industry activities that occurred between 2017/18 and 2018/19 was due to the weather and other issues affecting production that year and how much was due to the tariff. The results indicate that nearly all of the declines in producer and export prices that actually occurred between 2017/18 and 2018/19 were due to the tariff and nearly half of the drop in export volume with the rest of the export decline due to other market forces such as the decline in production in 2018/19. The tariffs were also responsible for about half of the drop in producer revenue and two-thirds of the drop in export revenue with the remainder due to other market forces that year.

PecanMod is a powerful analytical tool that is capable of analyzing the effects of many key economic forces on the U.S. pecan industry. The model is limited by a lack of data for key industry activities and by the consistency and reliability of available data. Like all models, PecanMod will need to evolve over time given changes that occur in the industry. As well, the model will need to expand to better capture the complex and extremely dynamic nature of the pecan industry. The analysis of the 2017/18 and 2018/19 Chinese tariffs on imports of U.S. pecans provides an excellent demonstration of what PecanMod can already do in analyzing the effects of economic events impacting the U.S. pecan industry. The attribution analysis demonstrates some of the additional insights that analysis with PecanMod can provide.

PecanMod is the exclusive property of APC. The model will reside at Texas A&M University to allow researchers to update and refine the model over time. Future analysis using the PecanMod can be carried out but only at the request of APC under separate contracts for the work requested.



TABLE OF CONTENTS

Abstract and Acknowledgements	i
Executive Summary	ii
Introduction.....	1
Past Research on Modeling the U.S. Pecan Industry.....	2
Structure of the U.S. Pecan Industry.....	3
PecanMod - A U.S. Pecan Industry Economic Benchmark Model	16
<i>The Statistical Model</i>	20
<i>Using PecanMod for Analysis – Counterfactual Simulation</i>	22
Demonstration of the Use of PecanMod: Economic Effects of the Chinese Import Tariffs	23
<i>Background on the Chinese Import Tariff</i>	24
<i>Expected Effects of the Chinese Import Tariff</i>	24
<i>Simulation Analysis of the Effects of the Chinese Import Tariff</i>	29
Final Comments	34
References.....	36
Appendix 1: Chronological Review of Past Economic Research on the U.S. Pecan Industry.....	39
Appendix 2: PecanMod Baseline Simulation Validation Statistics	45



TABLE OF FIGURES

Figure 1. Economic Structure of the U.S. Pecan Industry (No Data Gaps).....	4
Figure 2. U.S. In-Shell Pecan Production by Type, 1919 – 2019.....	6
Figure 3. Total U.S. In-Shell Pecan Production, 1919 – 2019.....	6
Figure 4. U.S. In-Shell Pecan Production by State and Total Production Value, 2009 – 2018.....	7
Figure 5. U.S. Pecan Bearing Acreage by State, 2016 – 2019	7
Figure 6. U.S. Pecan Yields by State, 2016 – 2019	8
Figure 7. U.S. Pecan Supply and Utilization (Shelled Basis), 1980/81 – 2018/19.....	10
Figure 8. U.S. Per Capita Consumption of Pecans (Shelled Basis), 1977/78 – 2018/19.....	10
Figure 9. U.S. Pecan Exports by Country (Shelled Basis), 1988/89 – 2018/19	11
Figure 10. Pecan Prices (In-Shell) Received by Producers by Type, 1922/23 – 2018/19.....	12
Figure 11. Nominal and Inflation-Adjusted (1922=100) Pecan Price Received by Farmers (In-Shell), 1922/23 – 2018/19.....	13
Figure 12. Pecan Prices (Shelled Basis): Producer, Export, and Import, 1988/89 – 2018/19	13
Figure 13. Reduced Data-Supported Economic Structure of the U.S. Pecan Industry Due to Data Gaps.....	15
Figure 14. PecanMod Structure	17
Figure 15. PecanMod Equations	18
Figure 16. PecanMod Variable Definitions	19
Figure 17. Effect of a Chinese Import Tariff on U.S. Pecan Export Quantity and Price.....	26
Figure 18. Effect of a Chinese Import Tariff on U.S. Pecan Export Quantity and Price Given an ELASTIC Export Supply of U.S. Pecans.....	26
Figure 19. Effect of a Chinese Import Tariff on U.S. Pecan Export Quantity and Price Given an INELASTIC Export Supply of U.S. Pecans.....	27



TABLE OF TABLES

Table 1. PecanMod Short-Run and Long-Run Price Elasticities.....	21
Table 2. Chinese Tariffs on Imports of U.S. Pecans, 2007 – 2019.....	25
Table 3. Effects of Chinese Import Tariff Increases on U.S. Pecan Industry in 2017/18 and 2018/19	30
Table 4. Contribution of Tariff to Changes in the Pecan Industry from 2017/18 – 2018/19.....	33



ECONOMIC BENCHMARK MODEL AND ANALYSIS OF THE EFFECTS OF THE CHINESE TARIFF ON THE U.S. PECAN INDUSTRY

Strategic decision-making in any U.S. crop industry requires good information regarding the effects of changes in U.S. and foreign government policies, weather, macroeconomic conditions, disease issues, and other key market influencers on production, utilization, and prices not only in the domestic market but also in foreign markets. The extensive information and data available on the structure and functioning of major U.S. field crop and livestock markets have enabled both public (USDA) and private groups (FAPRI and others) to develop policy and forecast tools to analyze the impacts of policy shifts or market changes on markets and producer profitability. In contrast, the data and information relating to the structure and functioning of U.S. pecan markets is much more limited. In addition, the off-and-on-year behavior of pecan production has infused considerable year-to-year and long-term variability into U.S. pecan markets which swamps the influence of both economic and policy variables on those markets. With both limited data and a high degree of biologically induced market variability, little effort has been made in the past to develop reliable economic models for the pecan industry to aid in strategic economic and policy decision-making.

The beginning point in developing a useful economic model for the pecan industry is to determine what relevant research may have already been done. Thus, for this project we first conducted an in-depth review of published pecan industry modeling efforts to gain insights on the state of research efforts, research challenges, and appropriate methodologies. The next step was to define the economic structure of the industry and the data needed to model how the industry functions. Gaps in the data were identified which required adjustments in the specification of the industry model. A database for the major activities in the pecan industry was developed to support the development of a baseline economic model that replicates the structure and functioning of the pecan industry to the extent of the available data. The model developed based on the available data (known as PecanMod) is capable of analyzing impacts on the U.S. pecan industry (production, utilization, price, trade, etc.) from major market changes and policy shifts. The model includes functions that identify the key factors (drivers) that influence U.S. pecan supply, demand, trade (exports and imports), and other supply chain activities as allowed by the data. The model will allow economic analyses of the impacts of various issues facing the U.S. pecan industry.

In this report, we first review past research to analyze economic behavior in the U.S. pecan industry. We then discuss the structure of the U.S. pecan industry, identify the data needed to model the economic activities of the industry and evaluate the critical data gaps that exist. Next, we briefly discuss the model of the U.S. pecan industry developed to replicate the functioning of



the industry (PecanMod). A more detailed technical documentation of the model can be provided separately. Then, to demonstrate the features and usefulness of PecanMod, we use the model to perform an analysis of the impact of the Chinese import tariffs in 2017/18 and 2018/19 on U.S. pecan production prices, consumption, inventories, exports, imports, and industry revenue. At the end, we offer some comments on future uses of PecanMod and the continued evolution of the model required to insure that the model captures the full dynamics of the U.S. pecan industry.

Past Research on Modeling the U.S. Pecan Industry

A number of economic studies have analyzed various components of the U.S. pecan industry. In this section, we provide an overview of the main studies that have been done. A more detailed chronological review of these studies is provided in Appendix 1. Although providing insights on various aspects of the pecan industry, past studies have provided only a fragmented view of the key activities and functions of the U.S. pecan industry.

Jones *et al.* (1932) was the first study to provide basic economic information to assist the development of the pecan industry through a survey focused on production, cost of production, and marketing. Palma and Chavez (2015) provided a more current overview of the pecan industry in the United States and the potential effects on supply and demand from the proposed Federal Marketing Order (FMO) for pecans. Florkowski, Purcell, and Hubbard (1992) surveyed pecan growers from Georgia to provide information about knowledge of and perceived adequacy of pecan quality standards. Wood (1993), Shafer (1996), Reid and Hunt (2000), and Wood (2001) all focused on production relationships for pecans. Onunkwo and Epperson (2000) dealt with the impacts of federal promotion programs on the foreign demand for U.S. pecans. Ibrahim and Florkowski (2005) analyzed the relationship between the pecan price and pecan cold storage inventory behavior. A 2007 study by the same authors examined the relationship between shelled pecan prices and inventories. Moore, Williams, Palma, and Lombardini (2009) conducted an evaluation of the economic effectiveness of the Texas Pecan Checkoff Program in expanding sales of Texas pecans. Kim and Dharmasena (2018) discussed price linkages across pecan producing states, particularly Georgia and Texas. Sumner and Hanon (2018) as well as Williams, Capps, and Salin (2018) considered the potential impacts of retaliatory tariffs on pecans. The majority of previous studies, however, centered attention on the demand for pecans (Lehrner, 1959; Dhaliwal, 1972; Wells, Miller, and Thompson, 1986; Florkowski, You, and Huang, 1999; Park and Florkowski, 1999; and Cheng, Dharmasena, and Capps, 2019).

While providing many important insights on the U.S. pecan industry, none of the previous economic research efforts attempted to develop a viable structural model of the U.S. pecan industry for at least two reasons. First, the lack of critical data has made efforts to analyze more than a few



aspects of the industry difficult if not impossible. Nevertheless, past studies have failed to address missing data issues for the key components of the pecan industry. Second, the dynamic nature of the pecan industry derived from the on-off production behavior of pecan trees has injected a high degree of variability into pecan markets over the years, which has swamped economic forces making statistical efforts to disentangle the economic drivers from the biological drivers in pecan markets quite difficult.

This study bridges the gaps in the economic literature using available data. Specifically, we develop a model of the U.S. pecan industry taking into account production relationships, import supply, export demand, domestic demand, and price linkages consistent with available data. We address data issues and use available data for the period of 1980 to 2018 to conduct an empirical analysis of the key relationships in the industry as allowed by the data. To demonstrate the usefulness of the model, we analyze the effects of the Chinese import tariff on U.S. pecans.

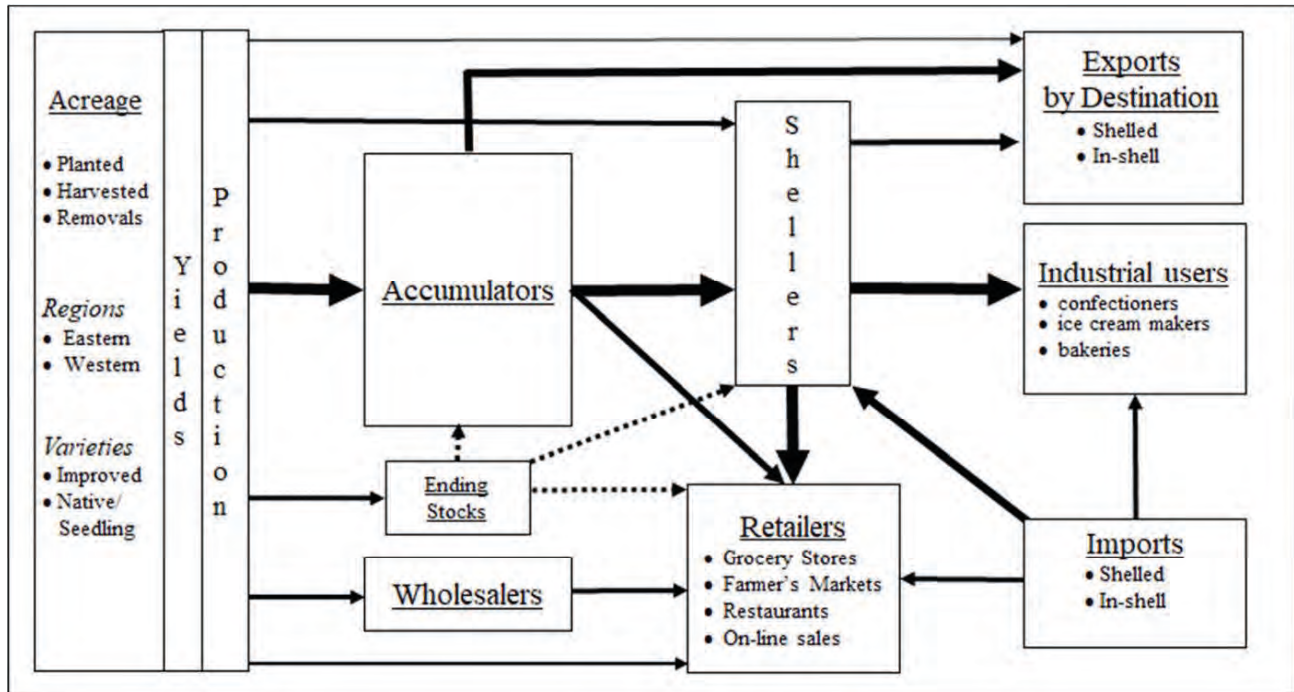
Structure of the U.S. Pecan Industry

The structure of the U.S. pecan industry is complex as depicted in Figure 1. At the left of that figure, pecan growers across the U.S. Eastern and Western regions plant, remove, and maintain existing pecan trees and harvest both improved varieties as well as native/seedling pecans. Pecan production is highly variable from year to year due to the alternate bearing behavior of pecan trees (on/off production behavior). Alternate bearing is a biological phenomenon where trees bear heavy and light crops in alternate years. The consequence is a high degree of year-to-year variability in U.S. pecan production. The variability in production is transmitted through the supply chain to processing and handling and all the way to end uses and prices.

U.S. pecan production is divided into two main groups, native/seedling (“wild”) and improved varieties. Native pecans tend to have thicker shells and smaller nuts than improved varieties (Nesbitt, Stein, and Kamas, 2013). The more thin-shelled improved varieties are preferred in commercial use because they are more easily shelled and tend to yield more pecan meat per pound of in-shell nuts. Different pecan varieties tend to have varying oil content, which affects the texture and flavor of the pecan kernel (Nesbitt, Stein, and Kamas, 2013). Newly planted pecan trees will become harvestable in five to eight years and can be productive for 100 years or longer (Call, Gibson, and Kilby, 2006). Profit margins are often more narrow for native pecans (Nesbitt, Stein, and Kamas, 2010). Managed native pecan groves tend to produce 500 to 1,000 pounds of nuts per acre per year while native pecans can produce from 1,000 pounds to 2,000 pounds per acre per year, each with high yields one year and low the next.



Figure 1. Economic Structure of the U.S. Pecan Industry (No Data Gaps)





U.S. pecan production was almost equally split between native and improved varieties in the 1940s through the 1960s and 1970s (Figure 2). Since then, however, improved pecan production has continued to grow while that of native pecans has declined precipitously. From a high of 164.5 million in-shell pounds in 1981 (48.5% of U.S. production), native pecan production declined by nearly 92% to only 14.5 million in-shell pounds in 2018 (6.0% of U.S. production). Over the same period, improved pecan variety production grew by 20% to 228.5 million in-shell pounds, about 94.0% of all U.S. pecan production. In 2019, the production of both improved and native varieties recovered somewhat to 253.2 million pounds and 27.8 million pounds, respectively.

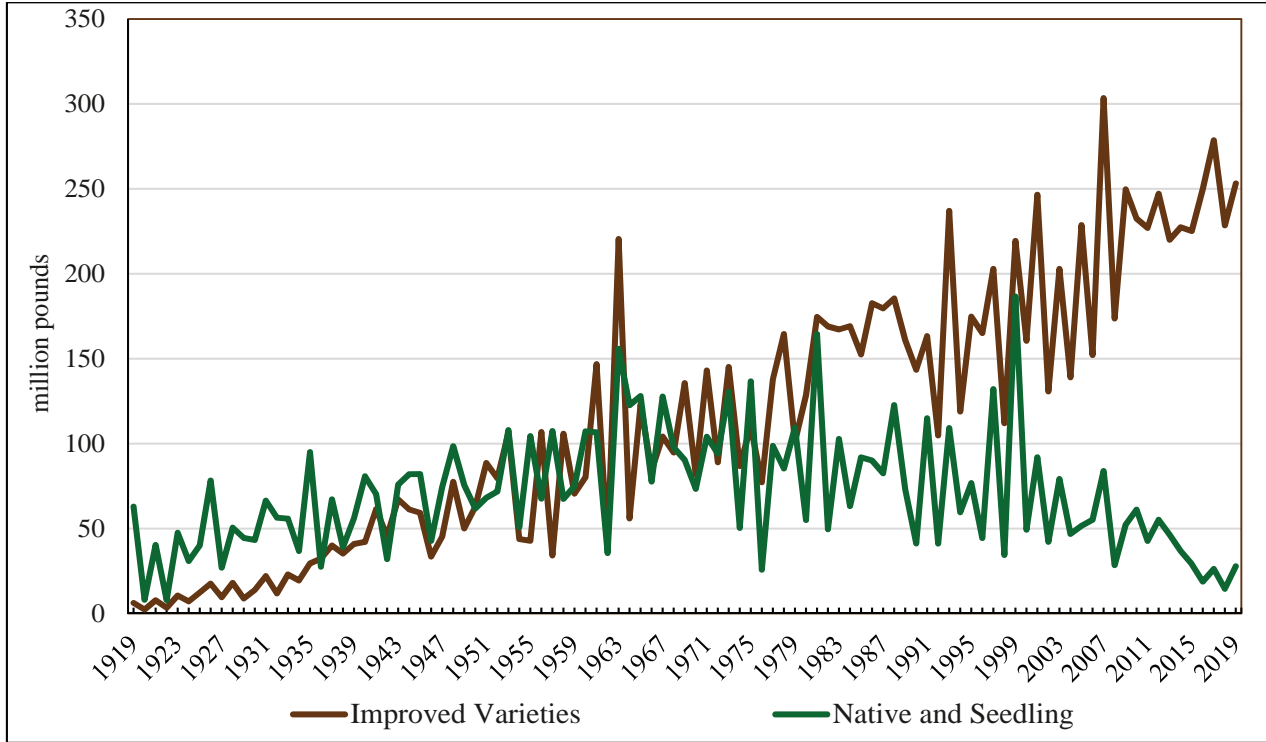
The high degree of year-to-year variability of U.S. pecan production over the years resulting from the alternate bearing behavior of pecan trees is evident in Figure 2 for both native and improved varieties and in Figure 3 for all pecans. Despite the sharp decline in native pecan production that occurred over time, the growth in improved pecan variety production more than made up for the native production decline until the last decade (2009 – 2019). Since 2009, total production has demonstrated little trend and a marked decline in variability, varying between about 250 million pounds and 300 million pounds over that period (Figure 3). The average year-to-year variation in production since 2009 was only about 12% compared to nearly 50% between 1990 and 2008.

Three states accounted for about 76% of U.S. pecan production (utilized) on average over the last decade, including Georgia (32.9%), New Mexico (26.8%), and Texas (16.4%) (Figure 4). The top five states (including Oklahoma and Arizona) accounted for nearly 90% over that period. As well as having the largest pecan production, Georgia accounted for the largest share of bearing acreage of any state (29.2%) over 2016 to 2018 followed by Texas (27.3%), Oklahoma (22.5%), New Mexico (10.8%), and Arizona (4.0%), and other states (6.2%) (Figure 5). Although Georgia accounted for the largest bearing acreage and the largest production over that same period, the three states with only improved pecan production accounted for the highest yields per acre including New Mexico (1,965 pounds), Arizona (1,717 pounds), and Georgia (770.0 pounds) (Figure 6). With improved varieties accounting for 58% of its bearing acreage and native/seedling 42%, Texas bearing acres yielded an average of 288.7 pounds per acre over 2016 to 2018. The native/seedling share of bearing acreage in Oklahoma is higher than in Texas at about 77% with only 23% in improved varieties. Consequently, the average pecan yield in Oklahoma was lower at 180.3 pounds per acre over 2016 to 2018.

In 2018, U.S. pecan production dropped by 27.4% to 175 million pounds (see Figure 4). At the same time, U.S. pecan production value dropped nearly in half (45.5%). Hurricane Michael severely damaged pecan trees in Georgia, downing trees, breaking tree limbs, and blowing nuts off trees. In addition, USDA reported that wet conditions in the summer months fostered disease

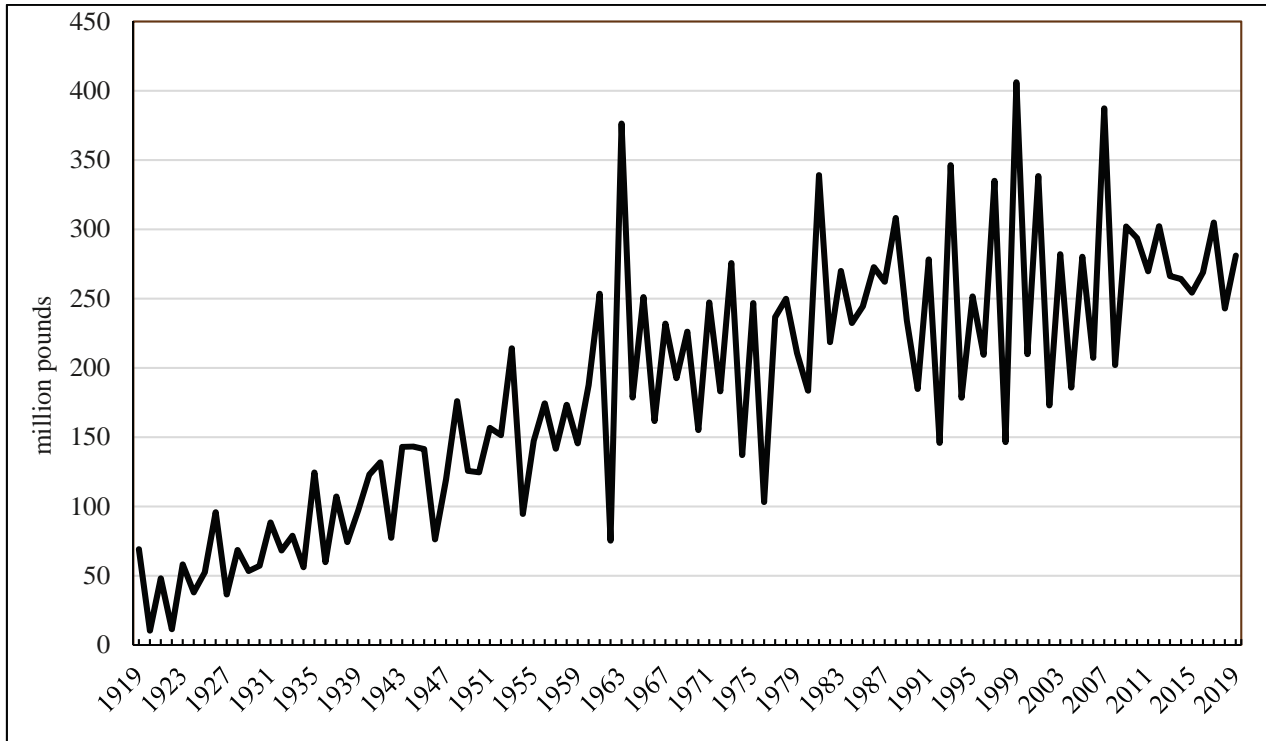


Figure 2. U.S. In-Shell Pecan Production by Type, 1919 – 2019



Source: Developed by authors based on data from USDA (2019a).

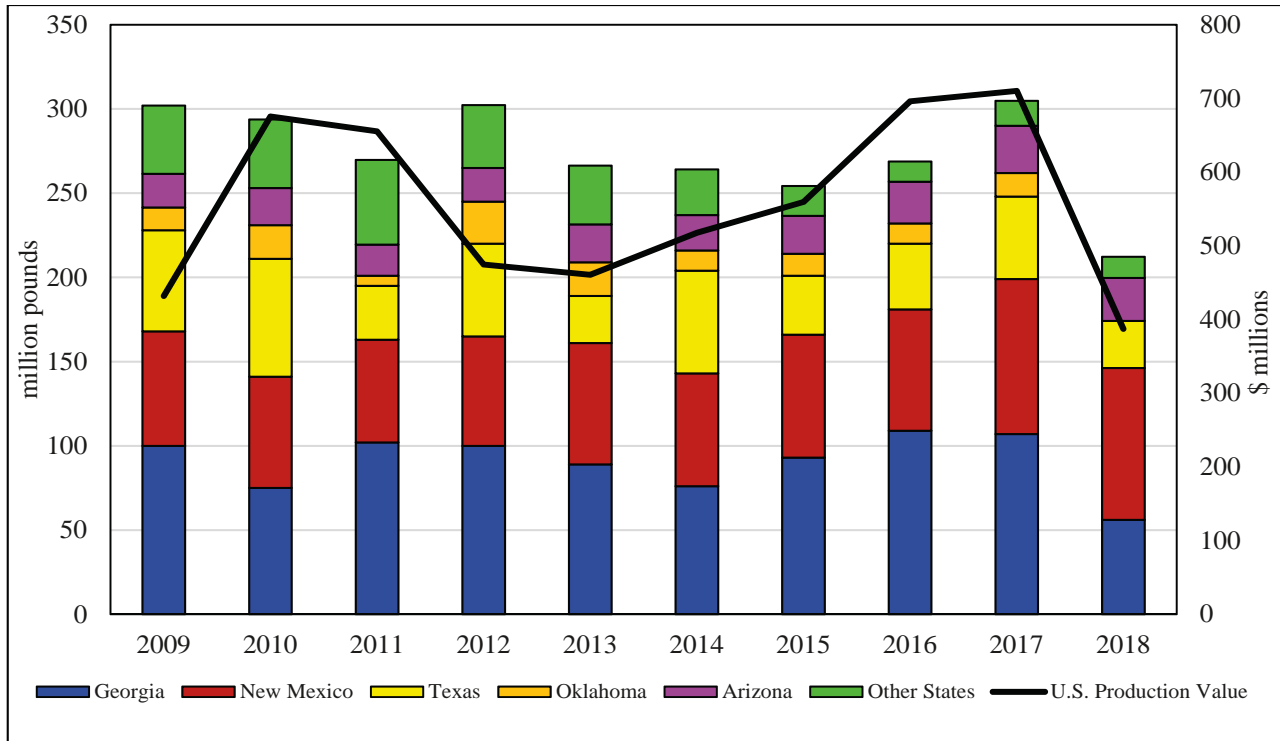
Figure 3. Total U.S. In-Shell Pecan Production, 1919 – 2019



Source: Developed by authors based on data from USDA (2019a).

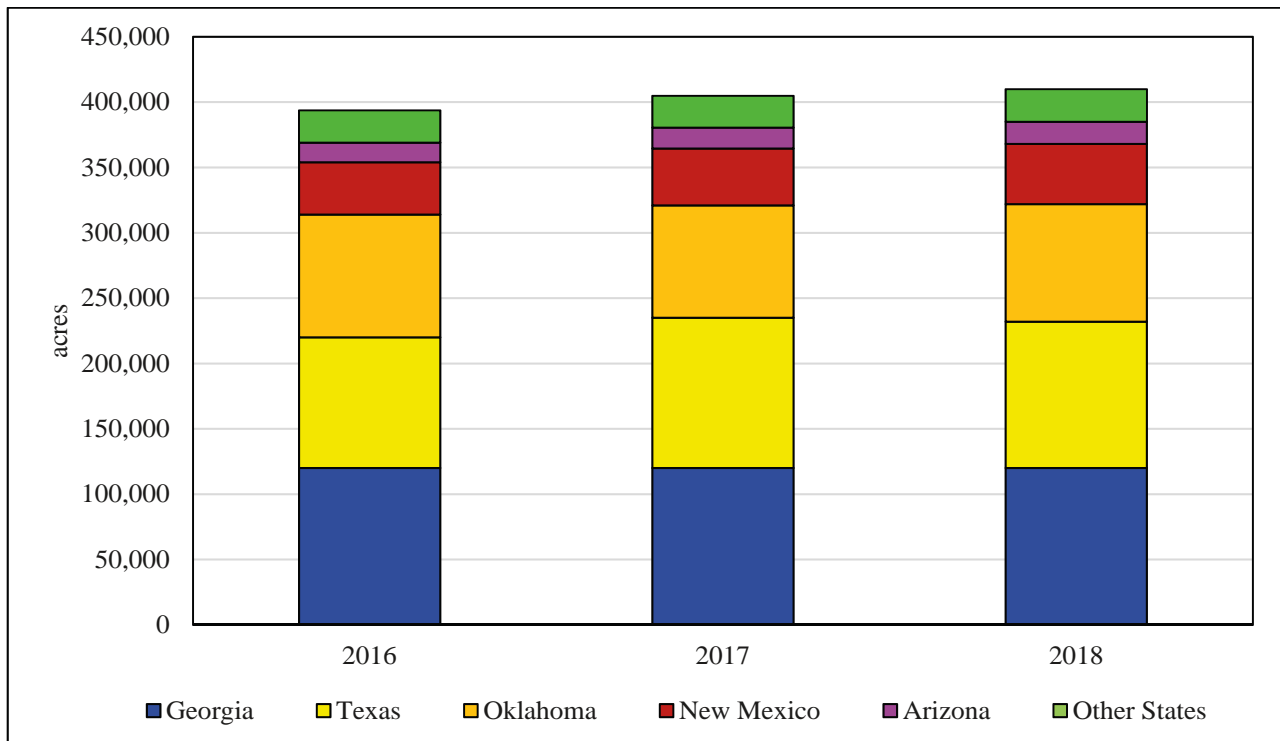


Figure 4. U.S. In-Shell Pecan Production by State and Total Production Value, 2009 – 2018



Source: Developed by authors based on data from USDA (2019a).

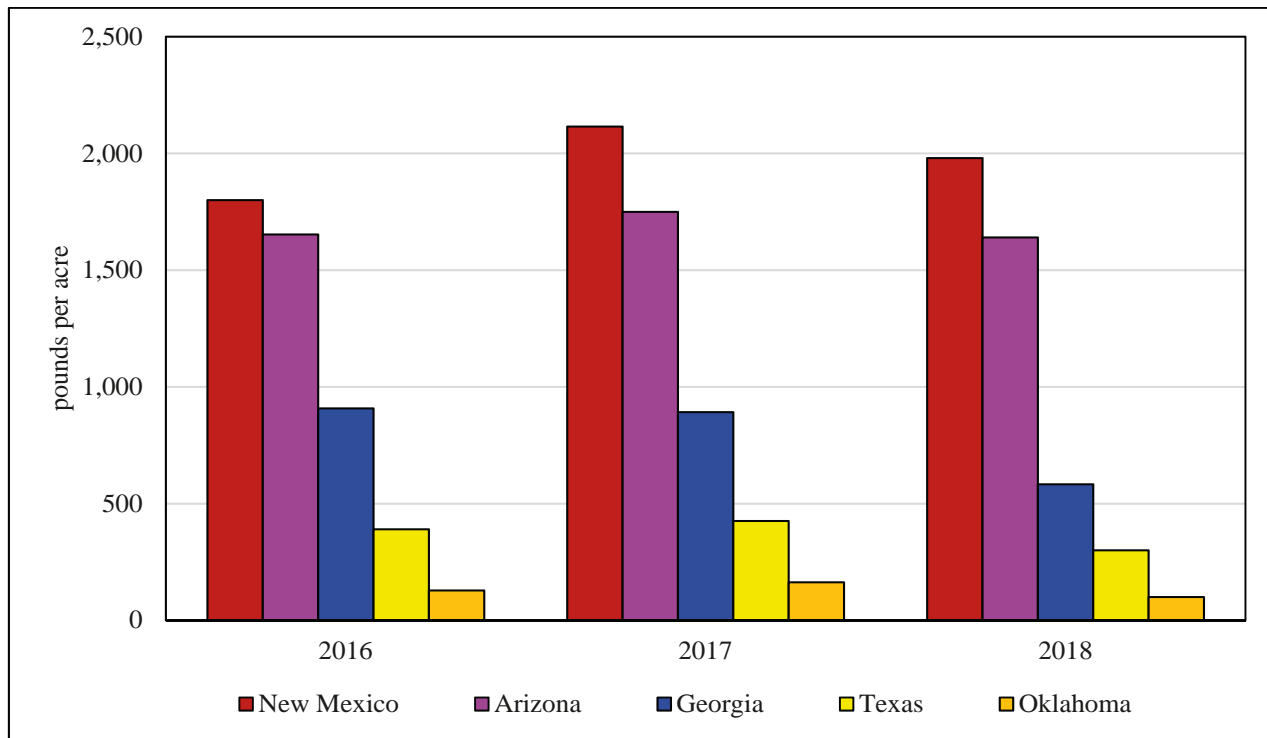
Figure 5. U.S. Pecan Bearing Acreage by State, 2016 – 2019



Source: Developed by authors based on data from USDA (2019a).



Figure 6. U.S. Pecan Yields by State, 2016 – 2019



Source: Developed by authors based on data from USDA (2019a).

issues and limited the harvest of nuts blown off trees (USDA, 2019a). As a result, Georgia's production plunged by 47.6% and its share of U.S. production sank from 35.1% in 2017 to 25.4% in 2018. Despite a 2% drop in its production, New Mexico became the top U.S. pecan producing state with 40.7% of the lower U.S. production in 2018. A steep 42.9% decline in Texas pecan production that year was reportedly due to a low alternate-year bearing production cycle yield (NASS, 2019b). Oklahoma also suffered a sharp decline in production that year (35.7%), while Arizona experienced a smaller reduction (8.9%).

As shown in the center of Figure 1, growers have historically sold the majority of their pecans to accumulators, companies that act as brokers, selling the nuts to shellers and paying the growers a percentage based on the final price they receive for the crop. In recent years, growers have increasingly diversified their sales portfolio to include wholesalers who sell to various users, direct to shellers or exporters, and even direct to retail destinations such as local farmer's markets and on-line sales. Shellers sell the processed (shelled nuts) to end users both in U.S. markets including industrial users (confectioners, ice cream makers, bakeries, and others), retailers (local, regional, and national food/grocery stores, restaurants, and others) and in foreign markets (China, Hong Kong, Vietnam, Canada, Mexico, and the EU among many others) (right-hand side of Figure 1). Unfortunately, little historical, reliable, or consistent data for most of those activities are available.



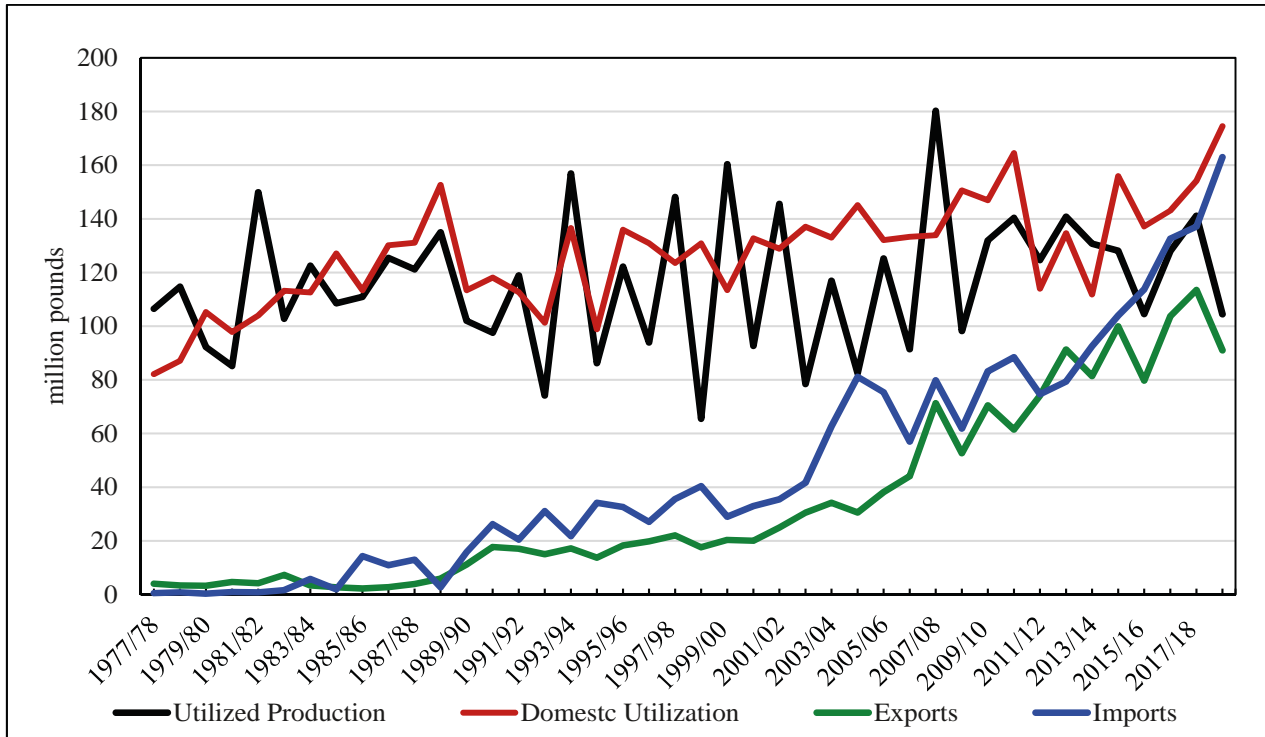
The domestic utilization of pecans across all end users (retailers and industrial users as shown in Figure 1) has varied substantially over the years with major peaks since 1980/81 occurring in 1988/89 (152.6 million pounds), 2010/11 (164.5 million pounds), 2014/15 (155.9 million pounds), and 2018/19 (174.5 million pounds) (Figure 7). Major lows over that period occurred in 1980/81 (97.8 million pounds), 1992/93 (101.3 million pounds), 1994/95 (98.8 million pounds), 2011/12 (114.0 million pounds), and 2013/14 (111.8 million pounds). Domestic utilization has exhibited a generally upward trend over the last decade, however, from an average of 120.2 million pounds in the 1980s to an average of 143.3 million pounds since 2010/11, an increase of 19.2%. Nevertheless, per capita consumption has varied little over that period, remaining between about 0.40 pounds and 0.50 pounds (Figure 8). Since the low of 111.8 million pounds in 2013/14, U.S. pecan consumption grew by half (56.1%) to a record 174.5 million pounds last year, despite the sharp drop in domestic production that year (Figure 7). The record consumption in 2018/19 was likely facilitated by several factors: (1) a 24.9% decline in the in-shell price of pecans, (2) an associated 19.8% reduction of pecan exports, (3) an increase in imports of 18.9% to a record 163 million pounds, and other factor such pecan promotion efforts under the auspices of the Federal Marketing Order for pecans. While generally considered a negative factor in U.S. pecan markets, the Chinese tariff increase nevertheless was well-timed to reduce export demand in 2018/19 when domestic production was at its lowest level since 2006/07.

With growing demand from both export markets and domestic users and lack of growth in domestic production, shellers and other domestic users have increasingly turned to imports, almost all from Mexico, to meet domestic supply needs (bottom right corner of Figure 1). Imports accounted for 40% - 42% of total U.S. pecan supplies from 2015/16 through 2017/18 but jumped to nearly 47% with the drop in U.S. production in 2018/19 (Figure 7). Imports have exceeded exports in most years over the last several decades. Nevertheless, exports have grown in importance as an outlet for U.S. pecans (top right corner of Figure 1). As a share of the total utilization of pecans, exports have increased from around 10% in the mid-1990s to over 30% in most years since 2011/12 given the general lack of growth in domestic utilization (Figure 7). A combination of the increased tariff on U.S. pecan imports into China and the production drop in 2018/19 helped reduce the export share of total utilization that year to only 26% (Figure 7).

Although the United States exports pecans to numerous countries, generally 75% to 80% have been exported to two groups of countries over the last decade: (1) China, Vietnam, and Hong Kong (CVH) and (2) Mexico (Figure 9). Until last year, CVH accounted for 50% -60% of U.S. pecan exports and Mexico for 20% -25%. Hong Kong has been the largest export market for U.S. pecans although much of the pecans are transshipped to China. The same is likely the case for Vietnam. Because the extent of transshipments to China through Hong Kong and Vietnam is not

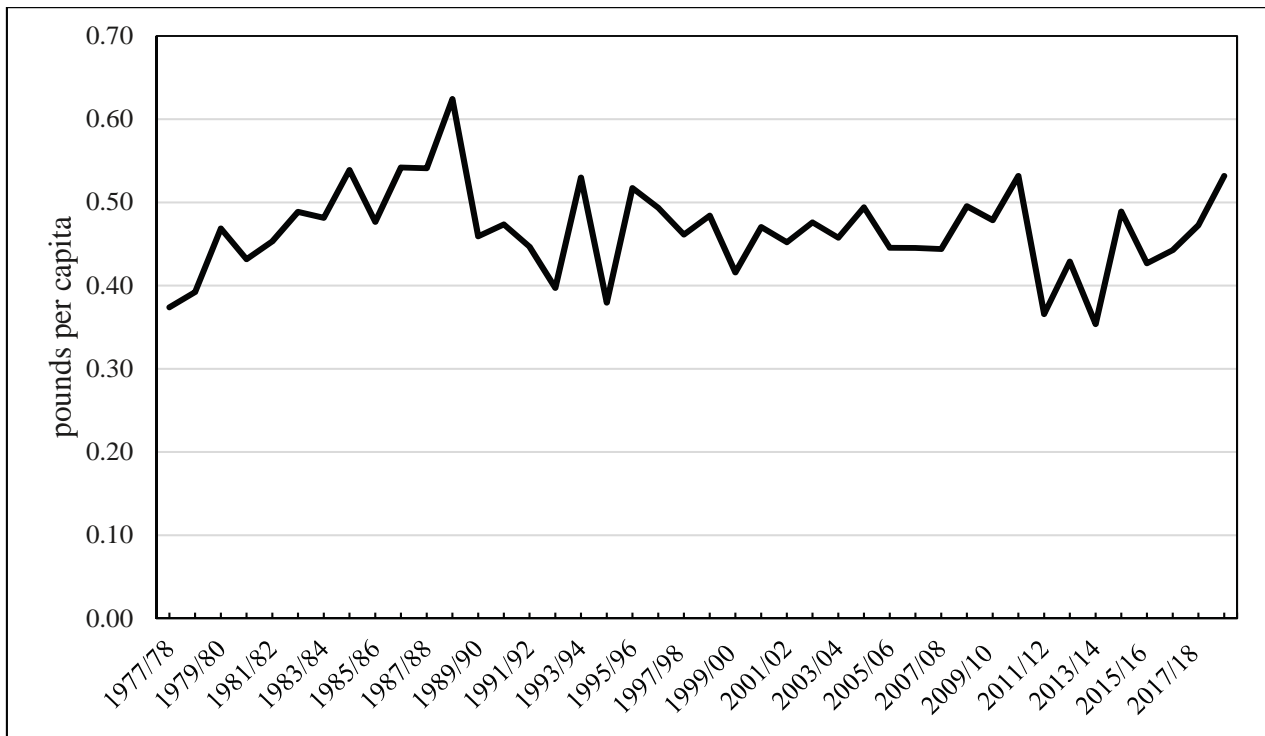


Figure 7. U.S. Pecan Supply and Utilization (Shelled Basis), 1980/81 – 2018/19



Source: Developed by authors based on data from USDA (2019b).

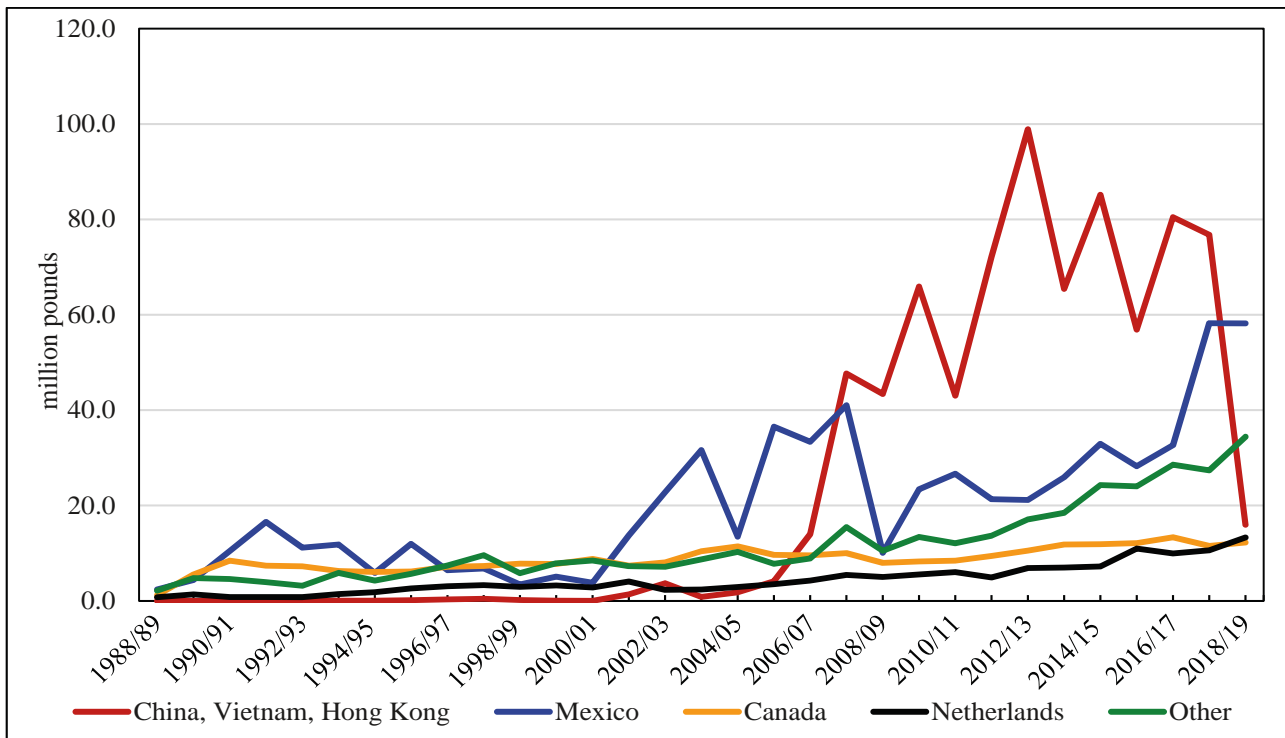
Figure 8. U.S. Per Capita Consumption of Pecans (Shelled Basis), 1977/78 – 2018/19



Source: Developed by authors based on data from USDA (2019b).



Figure 9. U.S. Pecan Exports by Country (Shelled Basis), 1988/89 – 2018/19



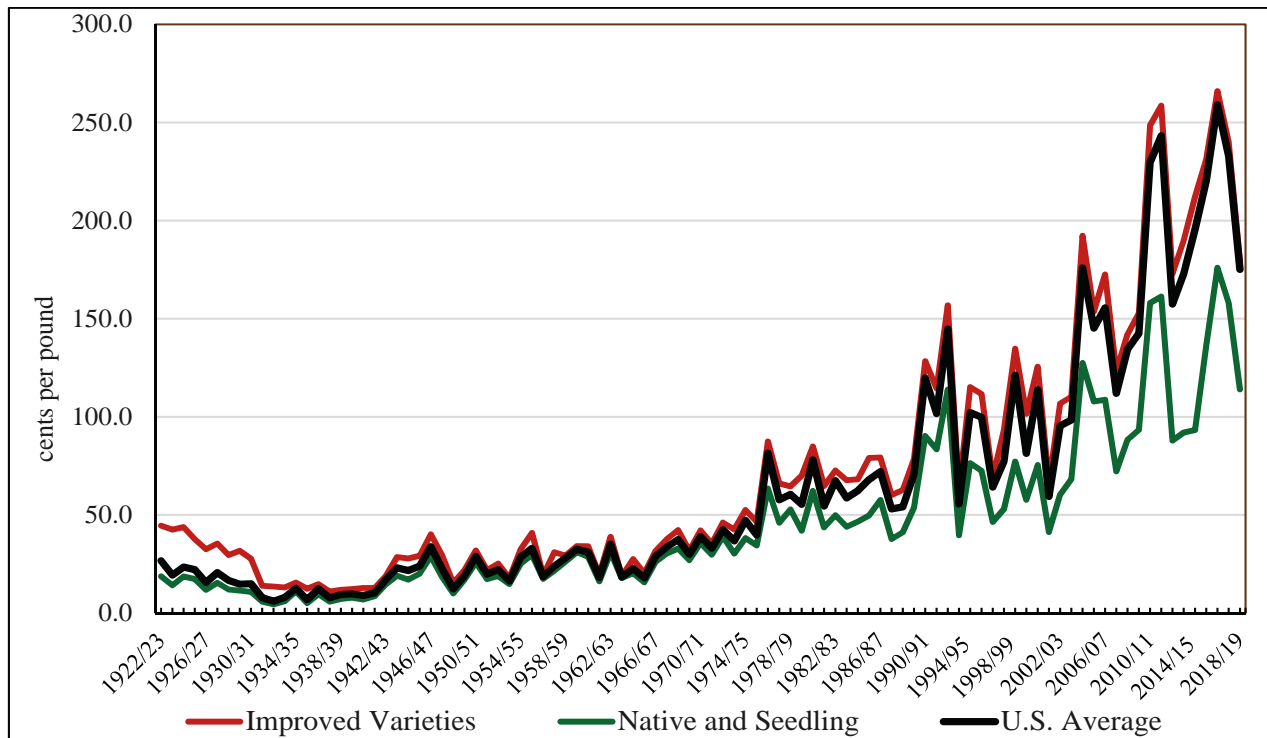
Source: Developed by authors based on data from USDA (2019c).

known, the export volumes for the three countries are added together as a single importing group in Figure 9. With the drop in U.S. pecan supplies available for export in 2018/19 and the increase in the Chinese tariff on U.S. pecans, exports to CVH dropped from 76.8 million pounds in 2017/18 to just 16 million pounds in 2018/19, a drop of nearly 80%. Other major countries importing U.S. pecans (with 2018/19 percentages of total imports) include the Netherlands (11.6%), Canada (10.7%), Israel (5.2%), United Kingdom (4.8%), France (2.2%), and Japan (0.8%) (Figure 9).

Although Figure 1 depicts the flow of pecans from production to end use, along with that flow are prices at each point along the value chain. At the production end are prices received by producers (in-shell) for native/seedling and improved varieties from each state (Figure 10). From an average of 98.5 cents/pound in the 1990s, the U.S. price of all pecans increased to an average of 206.0 cents/pound over the last decade (2009-2018) with an all-time high of 259.0 cents/pound in 2016. Improved variety prices have been above the average while prices of native pecans have traded at levels below the average. As the production of native pecans has declined over time, the average U.S. price and the price of improved varieties have become nearly the same.



Figure 10. Pecan Prices (In-Shell) Received by Producers by Type, 1922/23 – 2018/19



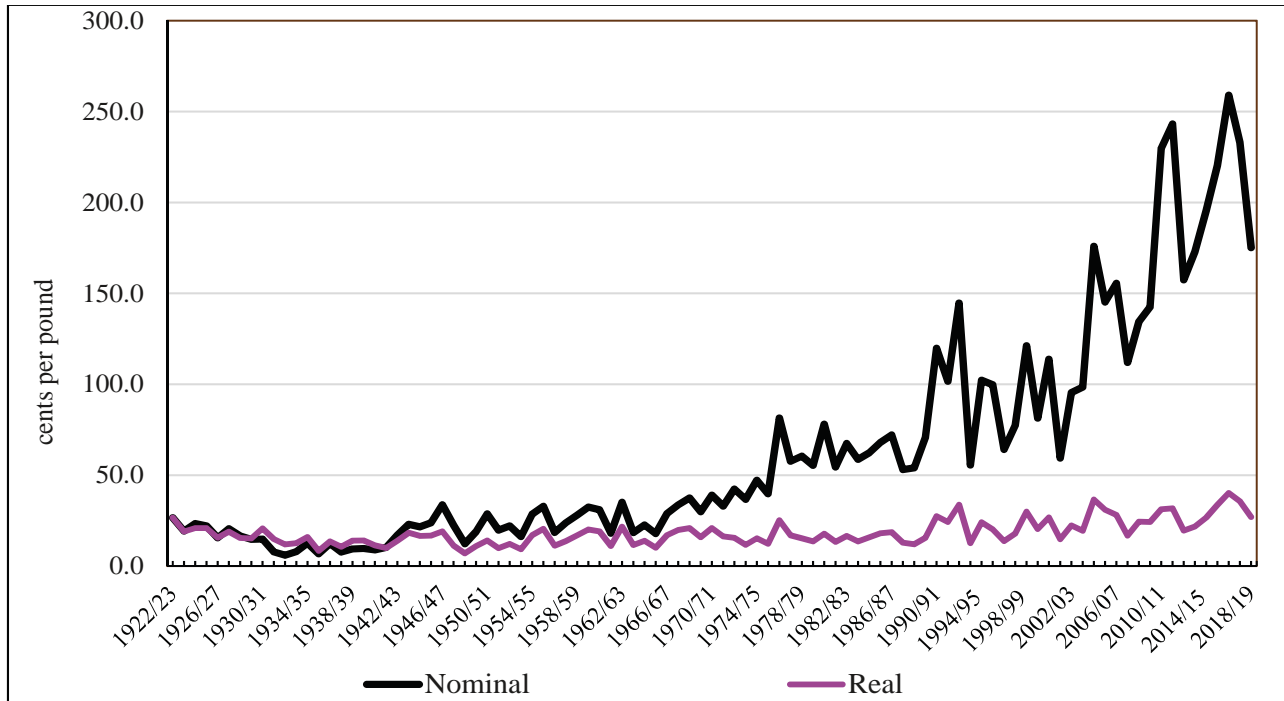
Source: Developed by authors based on data from USDA (2019b).

Although the increase in pecan prices over time appears impressive, when adjusted for inflation, the average price of pecans has changed little since the early 1920s (Figure 11). In fact, the inflation-adjusted (1922=100) price of pecans in 2018/19 (27.0 cents/pound) was nearly identical to the price of pecans in 1922 (26.6 cents/pound). In other words, the dollars earned from the sale of a pound of pecans in 2018 resulted in about the same purchasing power as the dollars earned from a pound of pecans in 1922. While the nominal price of pecans was increasing over time, the nominal prices of all other goods were increasing at about the same rate over time. That is, the price of pecans has increased at about the rate of inflation over time.

Few other reliable, consistently available prices for pecans over a sufficiently long period of time to support empirical analysis are available at any level of the value chain. The Agricultural Marketing Service of USDA collects prices at various U.S. terminals (USDA 2019d). Those data are available only back to 1998 and are not well correlated with farm prices. Export prices and import prices for pecans are not available either. As proxies for those prices, export and import unit values can be calculated from export and import volume and value data (Figure 12). The pecan export unit value has been consistently higher than and closely correlated with the average U.S. pecan price received by producers on a shelled basis over time. The pecan import unit value

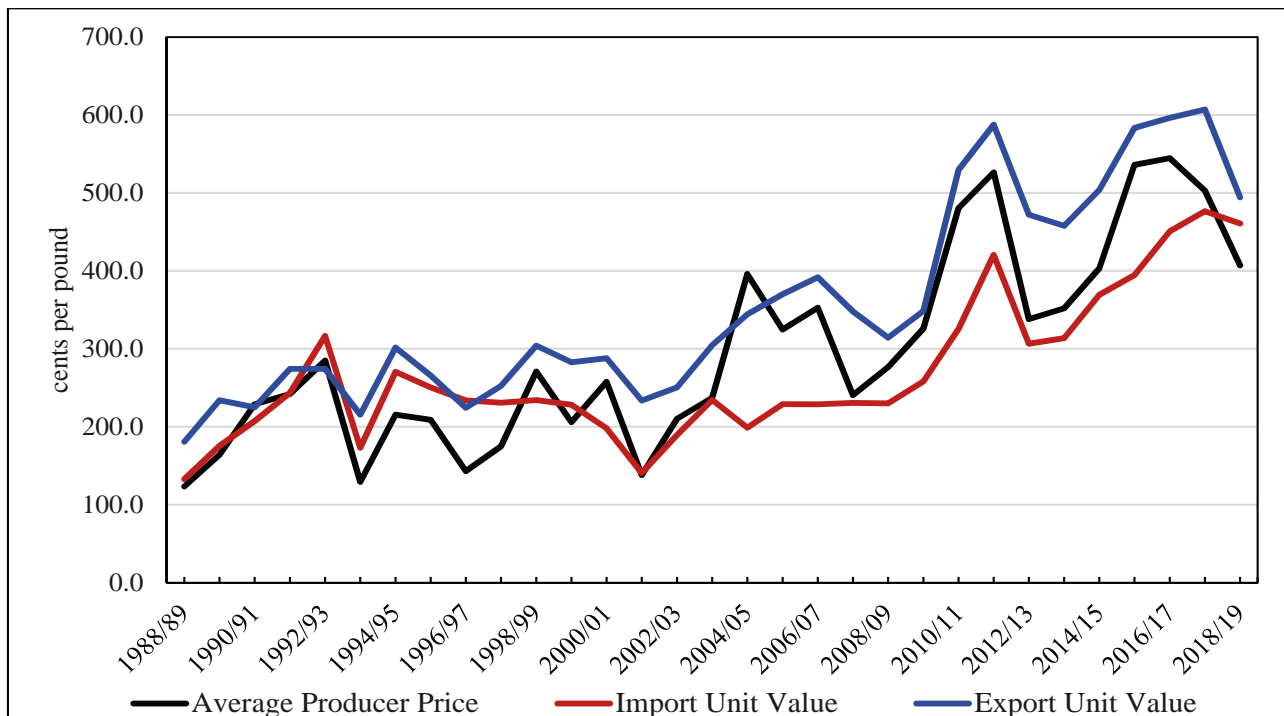


Figure 11. Nominal and Inflation-Adjusted (1922=100) Pecan Price Received by Farmers (In-Shell), 1922/23 – 2018/19



Source: Developed by authors based on data from USDA (2019b) and USDL (2019).

Figure 12. Pecan Prices (Shelled Basis): Producer, Export, and Import, 1988/89 – 2018/19



Source: Developed by authors based on data from USDA (2019b,c).



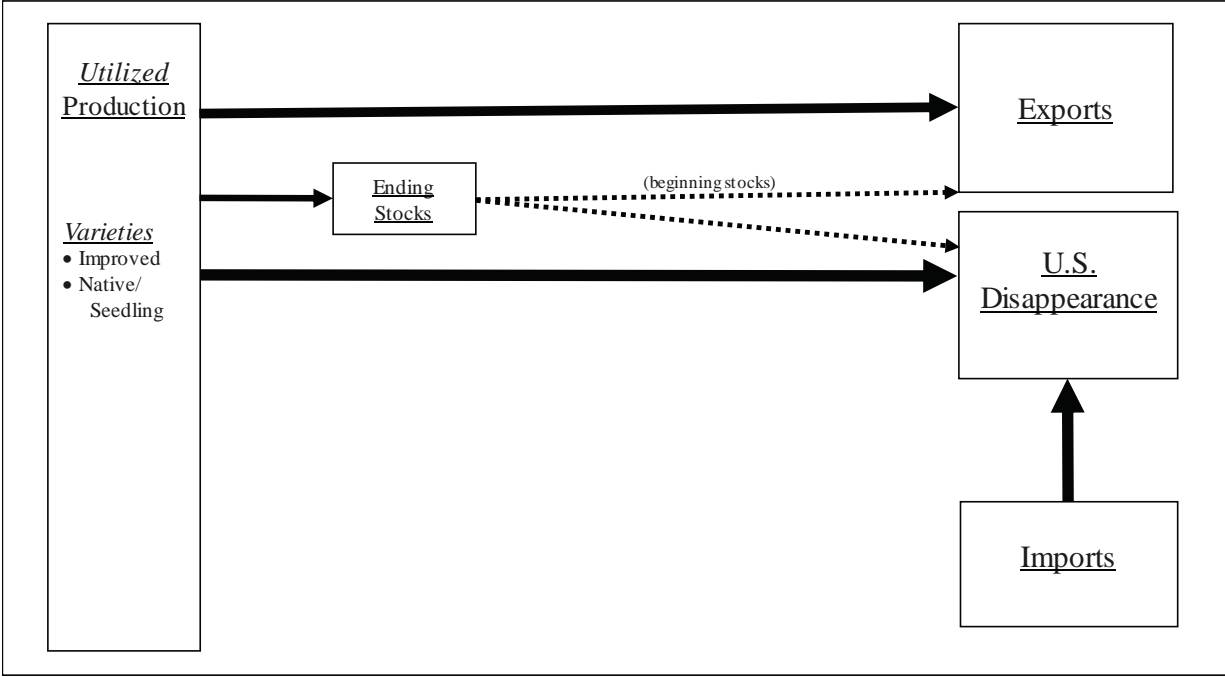
(shelled basis) has been consistently lower than but still highly correlated with the producer price. While the producer price and the export unit value declined in 2018/19, the import unit value declined by less. In fact, the import unit value in 2018/19 was above the U.S. producer price for the first time since 2001/02 and approached the export unit value of U.S. pecans. Some of the support for the import price of pecans likely resulted from the demand by shellers and processors for imports to meet domestic pecan demand in a low domestic production year. However, some of the support may be due to Chinese demand for Mexican pecans as China's pecan buyers shifted their purchasing habits to Mexico in the face of the increased cost to them of U.S. pecans due to the 47% tariff placed by the Chinese government on imports of U.S. pecans. According to one report, Mexico's pecan exports to China increased by more than 3,000% in 2018 relative to the previous year (Produce Report, 2019). Mexican pecan exports to China are assessed only the 7% most favored nation (MFN) tariff.

The preceding discussion demonstrates that while data related to the pecan industry are available, much data needed to characterize many critical activities in the U.S. pecan industry as depicted in Figure 1 are not available. Missing are historical, consistent, and reliable data on, for example, acreage planted and harvested, and trees removed (removals) by pecan variety or even by native and improved types, purchases by accumulators, wholesalers, and shellers, purchases by various retailers by type or as a group, purchases by various industrial users by type or as a group, and exports to specifically identified destinations. Price data associated with most of those activities also are not available for analysis. USDA has begun to collect data on pecan acreage and yield. However, given the long lag between the year when a pecan tree is planted and when that tree begins to produce, many years of acreage and yield data will need to be collected before those data are useful for empirical analysis. In addition, some of the available data are not useful or reliable for analysis such as exports by destination and terminal prices. Other available data are not specific as to type, such as domestic utilization for which there is no breakdown by retail or industrial uses.

If we strip all activities of the pecan industry out of Figure 1 for which historical, consistent, and reliable quantity and price data are not available, then Figure 1 devolves to Figure 13. The result is a simplified depiction of the pecan industry. Note that much of what happens along the industry value chain between production and final utilization is missing from the picture. Major components of this smaller, more data-supported economic structure of the U.S. pecan industry include primarily utilized production (by improved and native/seedling varieties) and imports (by country of origin) on the supply side and ending stocks, U.S. disappearance, and exports on the demand side. Export data do not support an analysis of foreign demand by China specifically. Domestic utilization data do not support anything more than a crude analysis of total use other than exports and ending stocks.



Figure 13. Reduced Data-Supported Economic Structure of the U.S. Pecan Industry Due to Data Gaps



PecanMod - A U.S. Pecan Industry Economic Benchmark Model

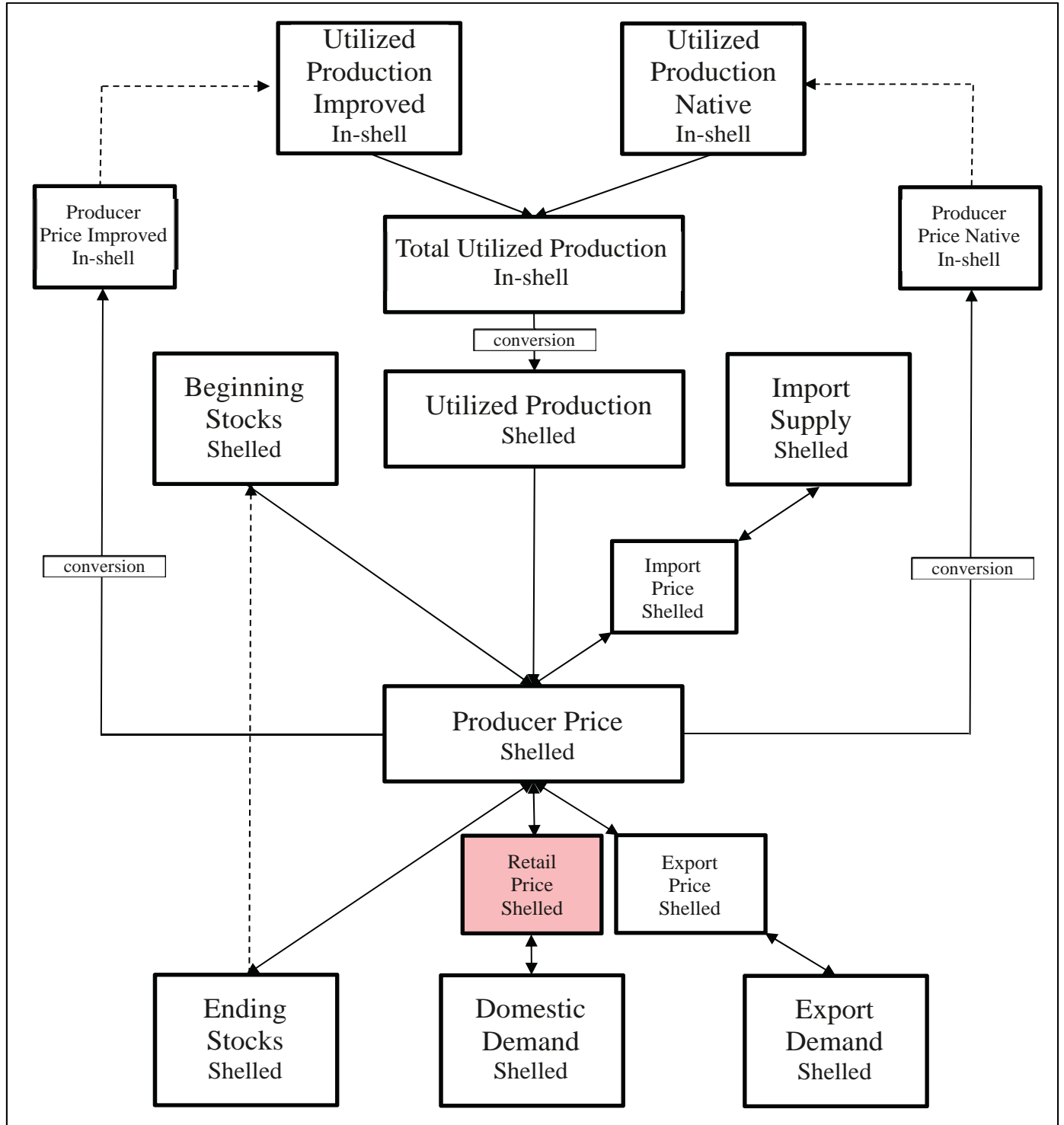
Despite the general lack of data available for modeling and conducting a detailed economic analysis of the complete U.S. pecan industry, we developed a relatively powerful economic model of the industry based on the available data, referred to as PecanMod. Building from Figure 13, reorganizing, and adding price linkages, the Structure of PecanMod is depicted in Figure 14. In the model, the supply-side activities (utilized native and improved variety pecan production (in-shell and converted to a shelled basis), beginning stocks, and imports) at the top of Figure 14 interact with demand-side activities (domestic utilization, export demand, and ending stocks) at the bottom of Figure 14 to determine producer prices (U.S. average, native, and improved) as well as export and import prices in a given year in the middle of Figure 14. The producer prices in that year then affect the production of improved and native pecans in the following year (dotted lines represent time lags). Together with import supplies and beginning stocks in the following year (which are ending stocks in the previous year), production in the following year interacts with demand activities in that year to determine prices in that year which then impact production in the following year and so on. Because no retail price of pecans is available (red box in Figure 14), we use the producer price (shelled basis) as a proxy assuming that the two prices are positively correlated to some extent.

The schematic representation of PecanMod in Figure 14 can be laid out as a corresponding set of 13 equations in Figure 15. Each equation represents one of the 13 boxes in Figure 14. The variable names are defined in Figure 16. The relationships between the ten variables representing industry activities are represented in equations (1) and (2) (improved and native pecan production), equation (5) (pecan import supply), equation (6) (domestic pecan utilization), equation (7) (ending stock demand), and equation (8) (export demand) in Figure 14. Equations (10) through (13) represent the various price linkages in the model. The relationships between the variables on the left hand side of each equation (the industry activities) and the various drivers that explain the behavior of the respective industry activity on the right hand side of each equation are determined through the use of a statistical procedure known as econometric analysis.

Three of the equations in the model represented in Figure 15 are identities to link various activities such as the addition of native and improved in-shell pecan supplies into a total in-shell pecan supply in equation (3) and the conversion of total in-shell supply to shelled supply in equation (4). Equation (9) is a market clearing condition requiring that total supply of shelled pecans equal the total demand for shelled pecans in each year. In the other ten equations, the econometric procedure identifies statistically significant drivers of each market activity and the statistical relationship between them. The estimated coefficients (structural parameters) provide measures of the change in each market activity in the model from a change in the respective explanatory (driver) variable.



Figure 14. PecanMod Structure



**Figure 15. PecanMod Equations**

(1)	$S_i = S_i(P_i^e, \alpha_{si})$	Improved pecan production (in-shell)
(2)	$S_n = S_n(P_n^e, \alpha_{sn})$	Native pecan production (in-shell)
(3)	$S_p = S_i + S_n$	Total in-shell pecan production identity (in-shell)
(4)	$S_u = \emptyset * S_p$	Total utilized production (in-shell conversion to shelled identity) (\emptyset = conversion rate)
(5)	$S_m = S_m(P_m, \alpha_{sm})$	Import pecan supply (shelled)
(6)	$D_u = D_u(P_u, \beta_{du})$	Domestic pecan utilization (shelled)
(7)	$E_u = E_u(P_u, \beta_{eu})$	Ending stock demand for pecans (shelled)
(8)	$D_x = D_x(P_x, \beta_{dx})$	Export demand for pecans (shelled)
(9)	$E_{ut-1} + S_u + S_m = D_u + D_x + E_u$	Market clearing condition (shelled)
(10)	$P_i = P_i(P_u / \emptyset, \theta_{pi})$	Price linkage (P_{improved} to P_{shelled} market)
(11)	$P_n = P_n(P_u / \emptyset, \theta_{pn})$	Price linkage (P_{native} to P_{shelled} market)
(12)	$P_m = P_m(P_u, \theta_{pm})$	Price linkage (P_{import} to P_{shelled} market)
(13)	$P_x = P_x(P_u(1+\tau), \theta_{px})$	Price linkage (P_{export} to P_{shelled} market)

13 unknowns: $S_i, S_n, S_p, S_u, S_m, D_u, E_u, D_x, P_i, P_n, P_m, P_x, P_u$

**Figure 16. PecanMod Variable Definitions****Endogenous Variables:**

- S_i = U.S. improved pecan production (in-shell)
 S_n = U.S. native pecan production (in-shell)
 S_p = U.S. total in-shell production
 S_u = U.S. total utilized production (in-shell converted to shelled)
 S_m = U.S. pecan import supply (shelled)
 D_u = U.S. domestic pecan utilization (shelled)
 E_u = U.S. ending stock demand for pecans (shelled)
 D_x = U.S. export demand for pecans (shelled)
 P_i = U.S. producer price of improved pecan varieties (in-shell)
 P_n = U.S. producer price of native pecans (in-shell)
 P_m = U.S. price (import unit value) of imported pecans
 P_x = U.S. price (export unit value) of exported pecans
 P_u = U.S. average producer pecan price (shelled)

Exogenous Variables:

- \emptyset = conversion rate (in-shell to shelled)
 α = drivers (shift variables) of the respective supply equations, including variables like inflation, prices of competing crops, technological change, etc.
 β = drivers (shift variables) of the respective demand equations, including variables like income, prices of other nuts, population, inflation, etc.
 θ = drivers (shift variables) of the respective price equations, including variables like exchange rates, transportation costs, etc.
 τ = Chinese pecan import tariff rate



The Statistical Model

In this report, we provide a summary of the estimated relationships previously discussed. The details of the full econometric model and parameters can be made available. The econometric model represents key industry activities such as improved and native pecan production, pecan import supply, domestic pecan utilization, ending stocks, and pecan export demand. The remaining equations represent the various price linkages in the model as well as identities.

The model does an excellent job of tracking the historical functioning of the U.S. pecan industry. Appendix 2 provides the statistics normally used to gauge the reliability of an econometric model, including the goodness-of-fit statistics (R^2 and adjusted R^2), the within-sample mean absolute percent error (MAPE), and the Theil U2 statistics. Goodness-of-fit refers to the ability of any model to explain the variability in industry activities. The R^2 statistics are close to 1, indicating that the model explains most of the variability in improved and native pecan production, pecan import supply, domestic pecan utilization, ending stocks, pecan export demand, and the various price linkages in the model. In addition, the MAPE statistics range from 1.89% to 19.76%, another indicator of excellent performance. In fact, most of the MAPE statistics are below 10%. Finally, a necessary condition for model validation is for Theil U2 statistics to be less than 1. This condition is met for each equation in the model as shown in Appendix 2. Hence, the set of estimated econometric equations mimics the actual behavior of key relationships in the pecan industry.

The key drivers of in-shell production of native and improved pecans were found to include inflation-adjusted grower prices, past production (a lag of two years for native pecans and lags of six and seven years for improved pecans). Key Influential factors associated with export demand of pecans were found to include inflation-adjusted export prices, inflation-adjusted world income, trend, and previous exports (a lag of two years). Similarly, key drivers of total U.S. imports were found to include inflation-adjusted import prices, trend, and the level of imports in the previous year. Domestic pecan utilization was found to depend on inflation-adjusted pecan prices, inflation-adjusted almond prices, inflation-adjusted U.S. income, and previous domestic pecan utilization (a lag of two years). Almonds and pecans were found to be substitutes. Pecans were found to be “normal” goods in that pecan consumption increases as income increases. Ending stocks were found to be dependent on inflation-adjusted producer prices of pecans, utilized production, and ending stocks in the previous year. The price linkage equations in the model reveal that import and export unit values of pecans as well as producer prices of native and improved pecans are all functions of the weighted average U.S. producer price of pecans.

Table 1 provides the estimated short-run and long-run indicators of price responsiveness in terms of elasticities. An elasticity is the percentage change in a given market variable from a one percent

**Table 1. PecanMod Short-Run and Long-Run Price Elasticities**

Dependent Variable	Variable Symbol	Time Period (Annual)	Short-Run Elasticities	Long-Run Elasticities
Native Production (In-Shell)	S_n (1,000 lb)	1960 to 2018	0.134	0.196
Improved Production (In-Shell)	S_i (1,000 lb)	1960 to 2018	0.000	0.323
Import Supply (Shelled)	S_m (1,000 lb)	1980 to 2018	0.516	0.646
Domestic Use (Shelled)	D_u (1,000 lb)	1979 to 2018	-0.148	-0.180
Ending Stock Demand (Shelled)	E_u (1,000 lb)	1980 to 2018	-0.215	-0.320
Export Demand (Shelled)	D_x (1,000 lb)	1990 to 2018	-0.625	-0.745
Improved Price (relative to Shelled Producer Price)	P_i (cents/lb)	1980 to 2018	0.955	0.955
Native Price (relative to Shelled Producer Price)	P_n (cents/lb)	1980 to 2018	1.010	1.010
Import Price of Pecans (relative to Shelled Producer Price)	P_m (cents/lb)	1980 to 2018	0.443	0.827
Export Price of Pecans (relative to Shelled Producer Price)	P_x (cents/lb)	1980 to 2018	0.658	0.658

Identities

Total In-Shell Pecan Production = Improved Pecan Production (In-Shell) + Native Pecan Production (In-Shell).

Total Utilized Production (In-Shell Conversion to Shelled Identity = Conversion Factor * Total In-Shell Production.

Market Clearing Condition (Shelled): Beginning Stocks + Domestic Production + Imports = Domestic Use + Exports + Ending Stocks.

change in the associated driver. The elasticities presented in Table 1 reveal that improved, native, and, hence, total pecan production are not very sensitive to price changes. For example, a 1% change in their respective prices lead to a 0.13% change in native pecan production and no response of improved pecan production over the short-run. (The short-run is the period over which pecan trees cannot or cannot fully respond to price changes). The same 1% change in their respective prices, however, leads to a 0.20% change in native pecan production and a 0.32%



change in improved pecan production over the long run. Further, a 1% percent change in the prices of imports and exports results in 0.52% and a -0.62% changes in the import supply and in the export demand for pecans, respectively, in the short-run and 0.65 and -0.75, respectively in the long run. Finally, a 1% change in the price of pecans leads to a -0.15% change in the domestic utilization of pecans. In summary, production relationships, import supply, export supply, and domestic utilization are not highly responsive to changes in prices in the short run or long run.

In addition, the procedure quantifies the impacts of real (inflation-adjusted) income and real almond prices on the domestic utilization of pecans in terms of elasticities. A 1% change in real U.S. income leads to a 0.44% change in the domestic utilization of pecans meaning that pecans are necessities because the income elasticity is positive and less than one. At the same time, a one percent change in the real almond price leads to a 0.05% change in the domestic utilization of pecans meaning that pecans and almonds are considered to be substitutes by consumers. Through the procedure. Also, 1% change in real (inflation-adjusted) world income increases export demand for pecans by 9.56%, indicating that changes in real world income play a major role in affecting the export demand for U.S. pecans.

Using PecanMod for Analysis – Counterfactual Simulation

The process of analyzing the effects of economic events on markets using an econometric model such as PecanMod is referred to as counter-factual simulation. The “simulation” of a model is simply the mathematical solution of a set of equations, such as the 13 equations of PecanMod. A *baseline* simulation is the simulation of the model to determine how closely the model replicates the actual, historical values of the variables in the model, such as the supply, demand, trade, and price variables in PecanMod, over the time period of the simulation. A number of statistical measures (known as validation statistics) are used to determine how closely the model comes to tracking the actual values of such market activities. A baseline simulation of PecanMod was conducted over the period of 1980/81 through 2018/19. The associated validation statistics for the baseline simulation indicate that the model does an excellent job of tracking the historical functioning of the U.S. pecan industry (see Appendix 2).

To use PecanMod for measuring the industry effects of some economic event, a *counterfactual* simulation analysis is conducted with the model. A counterfactual simulation analysis actually requires two simulations of the model to analyze two scenarios. The first scenario simulation assumes that nothing has changed over the time period of analysis, that is, nothing in the market is different than what actually occurred over history. This simulation is actually just the *baseline* simulation generated to determine the validity of the model. In the context of a counterfactual analysis, the baseline simulation is referred to as the “with” simulation because the simulated



values of the industry variables (supply, demand, price, etc.) include the effects of the event being analyzed (such as the effect of the Chinese tariff). Thus, the *with* scenario represents actual history, that is, the level of supply, demand, prices, trade, etc. in the U.S. pecan industry that include any effects on those markets of the event being analyzed.

The second scenario simulated with the model in a counter-factual analysis is the counterfactual simulation referred to as the *without* scenario analysis and is conducted by setting the value of some exogenous model variable (representing the event to be analyzed such as the Chinese import tariff) at a level different than its historical value and then simulating the model again over the same time period to generate new values for the industry variables (production, consumption, trade, prices, etc.). Because the changes in the industry model variables in the *without* scenario are generated by changing only the level of one (exogenous) variable representing an event like the Chinese import tariff, they represent the changes in the industry that would have occurred over history if changes in the event (like changes in the level of the Chinese tariff) had occurred. In the case of a Chinese tariff, the *without* scenario could simulate the effects of a zero Chinese import tariff in one period or over several periods. The simulated levels of the industry variables (supply demand, prices, etc.) in this example would represent the levels of those variables that would have occurred over time if there had been no Chinese import tariff.

Differences in the simulated levels of the industry variables in the model (supplies, demand, prices, trade, etc.) in the *with* scenario from those in the *without* scenario are then taken as direct measures of the effects of the event being analyzed, such as the effects of the Chinese tariff. Because no other exogenous variable in the model (e.g., level of inflation, exchange rates, income levels, agricultural and trade policies, etc.) other than the event being analyzed is allowed to change in either scenario, this process effectively isolates the effects of the event of interest on the industry. That is, the simulated differences between the values of the endogenous (industry) variables from the *with* scenario and from the *without* scenario provide direct measures of the historical effects of the event being analyzed (and only that event).

Demonstration of the Use of PecanMod: Economic Effects of the Chinese Import Tariffs

To demonstrate the usefulness of PecanMod, we used the model to analyze the U.S. pecan industry effects of the Chinese tariff on imports of U.S. pecans following the counter-factual simulation process described in the previous section. We first provide some background on the Chinese tariff and then outline the theoretically expected effects of a Chinese tariff on U.S. pecan imports. A discussion of the counterfactual simulation of the tariff and the results of that simulation are followed by some concluding comments.



Background on the Chinese Import Tariff

On April 2, 2018, China announced tariffs on imports of a variety of U.S. products, including pecans, as countermeasures to the U.S. Section 232 tariffs on steel and aluminum product imports imposed on China by the United States. The trade dispute is important to the U.S. pecan industry because China had become the top foreign market destination for U.S. pecans.

Actually, Chinese tariffs on imports of U.S. pecans are not a new phenomenon. Before 2007, pecans were rarely seen in China (Jun et al., 2013). However, the Chinese appetite for pecans exploded in 2007 when the price of walnuts jumped, making pecans a good substitute and a great bargain. China's pecan boom continued in following years as China's emerging middle-class consumer base, familiar with walnuts, found pecans to be similar to walnuts but more nutritious (Jun et al., 2013). At the time, China classified pecans as “other nuts” and assessed imports of U.S. pecans at the most favored nation (MFN) tariff rate of 13% (Table 2). As pecan imports began to increase, however, China increased the MFN tariff rate to 24% in 2008 and left it at that level through 2014. At the request of domestic industry in China, the government lowered the pecan MFN tariff rate to 10% where it remained until January 2018 when China again reduced the rate to 7%. Following the U.S.-China trade dispute in early 2018, however, the Chinese government subsequently added a new 15% tariff on April 2, 2018, bringing the total tariff to 22% for pecans of U.S. origin (Table 2). On July 6, 2018, China tacked an additional 25% onto the existing 22% tariff bringing the total tariff to 47%. On September 1, 2019, as part of the continuing U.S.-China trade dispute, China bumped up the tariff on imports of U.S. pecans by another 10%, increasing the total tariff facing Chinese buyers of U.S. pecans to 57%. In a matter of about a year and a half, the tariff charged on imports of U.S. pecans into China rose from 7% to 57%. The incremental Chinese tariffs were not applied to pecans originating from other pecan exporting countries like Mexico, South Africa, and Australia.

Expected Effects of the Chinese Import Tariff

China is the largest importer of in-shell pecans so any changes in China's pecan trade policies have major implications for the U.S. pecan industry. In the short run (the year in which the tariff was imposed in this analysis, 2018/19), the 57% tariff on in-shell pecans had little effect on U.S. pecan production given that producers are unlikely to remove trees from production given a price decline which they hoped to be of short duration. The 2018/19 production reduction was more likely the effect of Hurricane Michael and a low, off-year, alternate-year bearing production cycle yield that year. If the tariff remains in place for over a prolonged period, however, the effects of the tariff on U.S. plantings, removals, and harvest could be substantial. Nevertheless, the short-run effect of a tariff included a reduction in the U.S. producer price for pecans to some extent, along with a drop

**Table 2. Chinese Tariffs on Imports of U.S. Pecans, 2007 – 2019**

Year	MFN ^a Tariff	Tariff Added	Total Additional Tariff	MFN + Additional Tariff
	----- % -----			
2007	13			13
2008	24			24
2009	24			24
2010	24			24
2011	24			24
2012	24			24
2013	24			24
2014	10			10
2015	10			10
2016	10			10
2017	7			7
Jan – March 2018	7			7
Apr – Dec 2018	7	15	15	22
Jan – May 2019	7		15	22
June – Aug 2019	7	25	40	47
Sept – Dec 2019	7	10	50	57

^a MFN = most favored nation

in both exports and export revenue. How much the tariff contributed to the price and export decline experienced in 2018 depends on the price responsiveness of U.S. pecan export supplies and of the Chinese import demand for U.S. pecans as illustrated in Figures 17, 18, and 19.

In Figure 17, the price and quantity of U.S. pecans exported to China before the imposition of the retaliatory tariff by China are shown as P_0 and Q_0 , respectively. The export supply curve (ES) in Figure 1 represents the quantity of U.S. pecans available at various prices. The curve is upward sloping because the U.S. is willing to supply more pecans to the world market only at higher prices. The export demand curve ($ED_{\text{without tariff}}$) in Figure 17 represents the prices that importing countries are willing to pay for each level of U.S. pecans they import. This curve is downward sloping because the lower the price, the greater the quantity of U.S. pecan exports foreign importing countries are willing to buy. The effects of a tariff on U.S. pecan exports are illustrated with a lower ED demand curve ($ED_{\text{with tariff}}$) because the tariff leads to lower prices paid by importers for each level of pecan imports. Given the lower ED curve because of the tariff, the result is a reduction



Figure 17. Effect of a Chinese Import Tariff on U.S. Pecan Export Quantity and Price

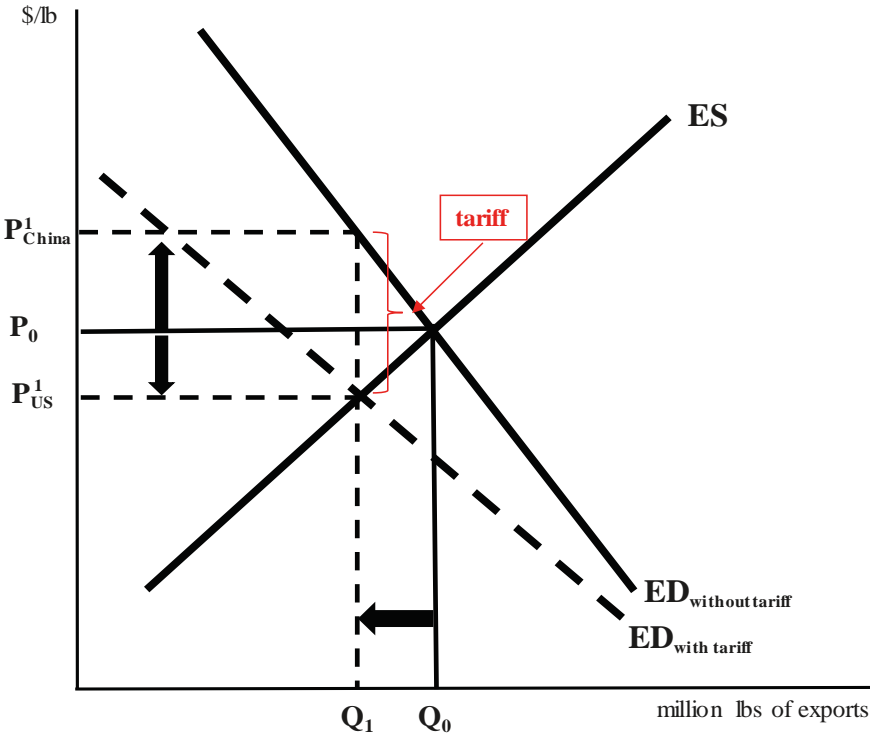


Figure 18. Effect of a Chinese Import Tariff on U.S. Pecan Export Quantity and Price Given an **ELASTIC** Export Supply of U.S. Pecans

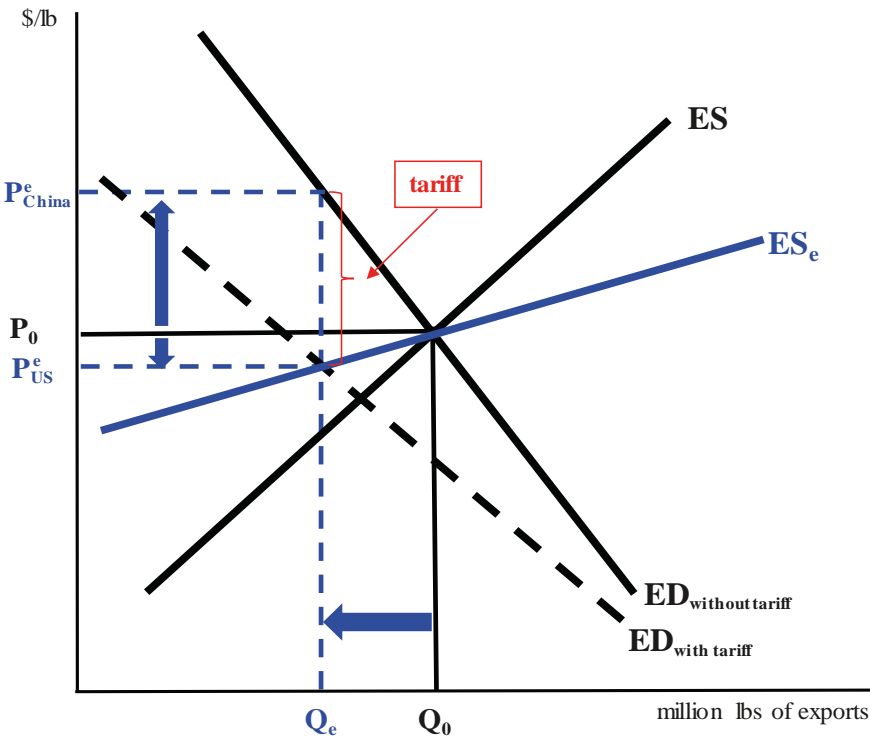
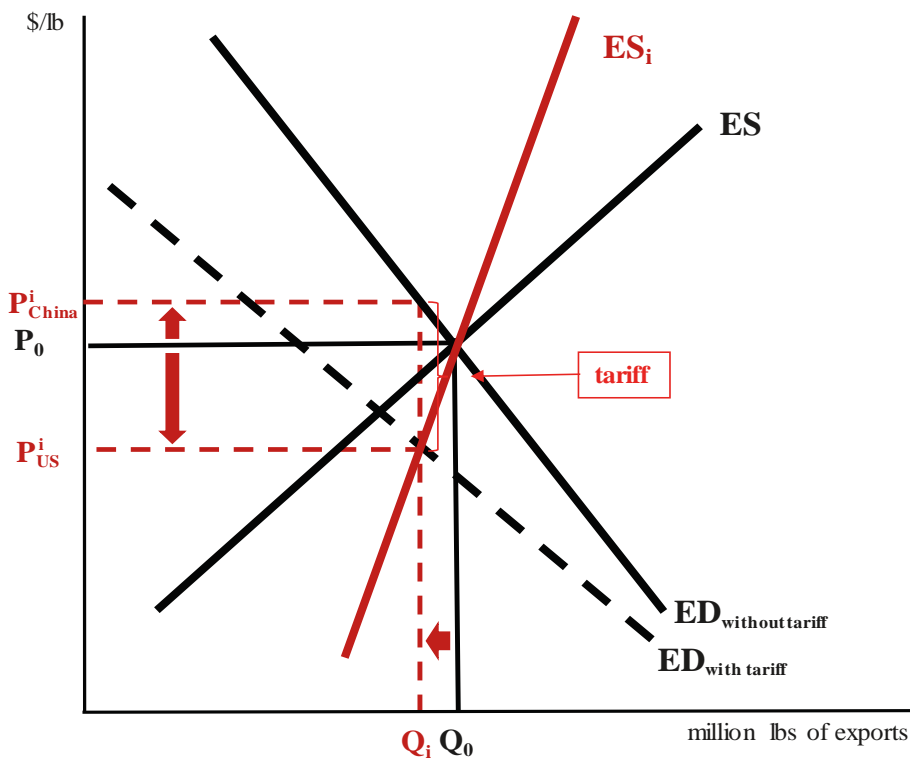




Figure 19. Effect of a Chinese Import Tariff on U.S. Pecan Export Quantity and Price Given an **INELASTIC Export Supply of U.S. Pecans**



in exports to Q_1 and a decline in the U.S. export price of pecans to P_{US}^1 . Adding the 57% tariff to the lower U.S. pecan price ($P_{US}^1 \times 1.57$) gives the price of pecans in China (P_{China}^1) which is higher because of the tariff. The U.S. price is lower because China imports fewer pecans, dampening the demand for U.S. pecans. The reduced level of imports of pecans by China results in a reduction in supplies available on the Chinese market which raises the price of U.S. pecans in that market.

Note from Figure 17 that the tariff effects are shared by both the U.S. and China because the tariff acts as a wedge between their prices – raising price in China and lowering price in the United States. Thus, the U.S. pecan price does not drop by the full 57% of the tariff. While some of the tariff is paid by the U.S. in the form of a lower price on a smaller level of exports, China pays for part of the tariff in the form of a higher price on that lower level of exports. Thus, the tariff is the difference between the higher price in China (P_{China}^1) and the lower U.S. price (P_{US}^1). The result is also a lower volume of U.S. pecan exports (Q_1) at a lower price (P_{US}^1) and, therefore, lower pecan export revenue. How far the volume and price of U.S. pecan exports drop as a result of the import tariff depends on the elasticities (that is, price responsiveness) of both U.S. pecan export supply (ES) and the Chinese demand for U.S. pecan exports (ED) as shown in the Figures 18 and 19.



Figure 18 demonstrates that if the U.S. export supply of pecans is relatively responsive (elastic) to price (ES_e), the same Chinese import tariff leads to a relatively smaller decline in the U.S. pecan export price to $P^{e_{US}}$ and a relatively larger decline in the volume of U.S. pecan exports to Q_e . The extent of the subsequent drop in export revenue depends on how far both the price and quantity exported drop. Note that in this case China pays most of the tariff because the price of pecans in the U.S. declines relatively less than the price of U.S. pecans in China increases. In this case, economists say that China bears the burden of the tariff.

Figure 19 demonstrates that the opposite is the case for the same tariff with a less responsive (inelastic) U.S. export supply of U.S. pecans (ES_i). In this case, the Chinese tariff leads to a relatively larger decline in the U.S. price of pecans to $P^{e_{US}}$ and a relatively smaller decline in the volume of U.S. pecan exports to Q_i . Given the lack of price response of U.S. exports to the tariff, most of the effects of the tariff are manifest as a decrease in the price of U.S. pecans with relatively less effect on U.S. exports of pecans. In this case, the U.S. bears the burden of the tariff because U.S. pecan price drops by more than the price in China increases. U.S. pecan exports are little affected by the Chinese import policy in this case.

Thus, in general, the more responsive (elastic) the U.S. supply of pecans is to the U.S. price of pecans, the more the cost of the tariff falls on China given the relatively large increase in their pecan price and the large drop in their imports of U.S. pecans. On the other hand, the more unresponsive (inelastic) the U.S. export supply of pecans is to the U.S. price, the greater the share of the cost of the tariff is borne by the U.S. pecan industry given the relatively large drop in the U.S. price of pecans. However, the drop in the volume of U.S. pecan exports is relatively smaller, which limits the decline in export revenue as a result of the tariff. This case is most representative of the U.S. pecan industry in the short-run. Remember that the short-run is generally the period over which supply cannot change much given a price change. As discussed in connection with Table 1, the domestic demand, export demand, and ending stock demand are quite unresponsive to price (inelastic) and the production of pecans is unresponsive to price in the short-run. Thus, because any price change from a tariff would have only a small effect on production, the supplies available for export would not be much affected over that period either. Thus, the main effect of a tariff that is in place for only a year or two would be a decline in the price of pecans during that period since a change in the production of pecans would not occur much until after five to eight years as producers make tree removal decisions. If producers expected the tariff to be reduced for only a short period of time, little change in production over the short-run or long-run would likely occur. If the tariff persisted for some time, however, then U.S. pecan production would tend to decline over time and reduce the availability of U.S. pecan supplies for exports, which, in turn, would tend to limit the price decline from the tariff over time.



Simulation Analysis of the Effects of the Chinese Import Tariff

Using PecanMod, we analyzed the effects of the increased Chinese tariff in 2017/18 and 2018/19, assuming that if the Chinese had not increased their tariff on U.S. pecan imports then the Chinese tariff would have remained at the 7% MFN level that was in existence before April 2018 when China began the retaliatory increase in their pecan import tariff (see earlier discussion). In 2017/18, the tariff was at the MFN level from October 2017 through March 2018 (see Table 2). An additional 15% was added to the existing 7% tariff for a total tariff of 22% starting in April 2018, which remained through the end of that crop year (September 2018). Thus, the 15% increase in the Chinese tariff only affected the second half of the 2017/18 crop year.

The 7% MFN tariff with the added 15% (total of 22%) continued from the beginning of the 2018/19 crop year in October 2018 through May 2019. In June 2019, an additional 25% was added to the 7% MFN tariff and the previously added 15%, a total tariff of 47%, which remained until August 2019. In the final month of the 2018/19 crop year (September 2019), an additional 10% was added for a total Chinese tariff on imports of U.S. pecans of 57% in that month and then on into the 2019/2020 crop year. Thus, the added Chinese tariff of 15% was in effect for the first eight months of 2018/19 and the next increase of 25% (a total increase of 40% above the 7% MFN) was in place for the next three months. Only in the last month of 2018/19 was the additional 10% added for a total increased tariff of 50% above the 7% tariff.

In this counterfactual simulation analysis, the *with* simulation is represented by actual history with the Chinese import tariffs at the levels set in both 2017/18 and 2018/19 as previously discussed (also see Table 2). The *without* or counterfactual simulation assumes that the import tariff was set at the 7% MFN level in both crop years. In other words, we analyzed only the effects of the increase in tariffs above the 7% MFN during those two crop years. The simulated differences between the values for the U.S. pecan industry (supply, demand, exports, prices, etc.) are measures of the effects of the increases in Chinese tariffs in those two years. In other words, the results of the analysis indicate how the increases in the Chinese tariff on U.S. pecan imports affected the U.S. pecan industry in those two years.

The results of the analysis are shown in Table 3. Replicating economic behavior in the pecan industry, the counterfactual simulation with PecanMod results in little effect of the tariff increases on production because pecan production cannot change much in such a short period of time to price changes, particularly the production of improved varieties. In addition, producers were not likely to have removed trees within those two years in response to the price decline given that most observers assumed that the trade war with China was temporary and soon would be resolved so that the Chinese import tariffs would be lifted. The simulation results indicate that over the two

**Table 3. Effects of Chinese Import Tariff Increases on U.S. Pecan Industry in 2017/18 and 2018/19**

	2017/18		2018/19		Two Year Effects	
	Change	%	Change	%	Change	%
U.S. Pecan Supply (mil. lb)						
Utilized Production (in-shell)					<u>Two-Year Totals</u>	
<i>Native/Seedling</i>	-1.2	-4.3	-2.8	-16.4	-4.0	-9.0
<i>Improved Varieties</i>	0.0	0.0	0.0	0.0	0.0	0.0
<i>Total</i>	-1.2	-0.4	-2.8	-1.2	-4.0	-0.7
Imports (shelled)	-1.3	-0.9	-3.1	-1.9	-4.4	-1.5
U.S. Pecan Use (shelled) (mil. lb)						
Domestic Use	1.9	1.2	4.5	2.6	6.4	2.0
Exports	-5.2	-4.4	-12.7	-12.2	-17.9	-8.1
Change in Stocks	1.5	17.0	3.8	n.d	-5.4	75.0
Revenue (\$ millions)						
Producer	-69.8	-9.0	-145.5	-25.5	-215.3	-15.9
Export	-75.5	-9.9	-163.1	-26.6	-238.6	-17.3
U.S. Pecan Prices (cents/lb)						
Producer Prices (in-shell)					<u>Two-Year Ave.</u>	
<i>Native/Seedling</i>	-15.7	-9.0	-41.0	-26.4	-28.3	-17.2
<i>Improved Varieties</i>	-23.0	-8.7	-60.0	-25.1	-41.5	-16.5
<i>U.S. average</i>	-21.9	-8.6	-57.2	-24.6	-39.6	-16.2
Export Price (shelled)	-36.9	-5.7	-96.8	-16.4	-66.8	-10.8
Import Price (shelled)	-20.7	-4.2	-53.9	-10.5	-37.3	-7.4

n.d. = a percentage change from a negative to a positive number which is undefined (cannot be calculated).

years, native pecan production declined slightly by 4.0 million pounds (in-shell) (9.0%) as a result of the tariff increases given that native pecan production tends to be more price responsive in a shorter period of time than are improved varieties. The tariffs had no effect on the production of improved pecans over those two years.

Because pecan production cannot respond quickly to price changes, the major consequences of the increases in the Chinese import tariff were declines in U.S. pecan prices as in the case illustrated



by Figure 19 (the case of an export supply that is highly unresponsive to price changes in the short-run). The tariff pushed native/seedling and improved variety prices (in-shell) down by 15.7 cents/lb (9.0%) and 23.0 cents/lb (8.7%), respectively, in 2017/18 and by 41.0 cents/lb (26.4%) and 60.0 cents/lb (25.1%), respectively, in 2018/19. The U.S. export price (shelled) declined by 36.9 cents/lb (5.7%) in 2017/18 and by 96.8 cents/lb (16.8%) in 2018/19 as a result of the tariff increases. The import price of pecans (shelled) declined by 20.7 cents/lb (4.2%) and 53.9 cents/lb (10.5%) in the two years, respectively, primarily because reduced exports as a result of the tariff increased the supplies available in the U.S. market which reduced the demand for imports.

Over the two years, the tariffs reduced pecan exports by 17.9 million pounds (8.1%) (Table 3). The export decline was limited despite the Chinese import tariff due to increases in U.S pecan exports to other countries. The tariff-induced price declines boosted domestic use by 6.4 million pounds (2.0%). The reduction in exports, however, led to lower domestic demand for imports by 4.4 million pounds (1.5%) and a stock build-up of 5.4 million pounds despite the tariff-induced lower prices. The U.S. price declines as a result of the tariff plus the decline in exports and the small decline in production as a result of the tariffs led to sizeable declines in producer and export revenues. Over the two crop years, the Chinese import tariffs reduced producer revenues by a total of \$215.6 million (15.9%) and export revenue by \$238.6 million (17.3%).

A common misperception is that a tariff of a given percentage should reduce the price in the exporting country by the same percentage. However, as discussed earlier, the tariffs insert a wedge between the prices of the importing and exporting countries. That is, the tariff drives up the price in the importing country and drives down the price in the exporting country down. The tariff is the percentage difference between the lower exporting country price and the higher importing country price. Thus, the percentage change in price is shared between the two countries. The exporting country price does not decline by the full amount of the tariff nor does the price in the importing country increase by the full amount of the tariff.

There are other reasons that prices in an exporting country do not appear to decline the full amount of a tariff, such as in the case of the Chinese tariff on imports of U.S. pecans. For example, China is not the only country that imports pecans from the United States. Recall that China, Hong Kong, and Viet Nam together have accounted for only about 50% of U.S. pecan exports. Thus, when pecans exports dropped as a result of the tariff in 2017/18 and 2018/19, U.S. exports to other pecan importing countries increased, reducing the export impact and the price effect of the tariff. In addition, the tariffs were not constant but rather changed during each crop year. In 2017/18, the additional 15% tariff that was added in that crop year was only added in the last six months of the crop year. Consequently, over the full crop year, the implied tariff increased by only 7.5% (half of 15%). Then in 2018/19, the tariff was only 15% above the 7% MFN for eight months, 40% above



the 7% MFN for only three months, and 50% above the 7% MFN for only one month. Thus, the implied tariff addition to the 7% MFN for the full 2018/19 crop year was only 24.167%¹.

The 2018/19 crop year was unusual not only because of the Chinese tariff on U.S. pecans that year but also because of Hurricane Michael, wet weather, and disease issues that negatively impacted pecan production that same year. How much of the change in industry activities (production, consumption, prices, and trade, etc.) was due to the weather and other issues affecting production that year and how much was due to the tariff? We used the counterfactual simulation results to analyze the contribution of the tariff to industry changes that occurred between the 2017/18 and 2018/19 crop years. In essence, we calculated the simulated changes in the industry due to the tariff for each industry activity between 2017/18 and 2018/19 as percentages of the changes in the corresponding activities that actually occurred between those two years. The results are in Table 4. Columns 1, 2, and 3 of Table 4 indicate actual outcomes for those two years. The last column indicates the share of the change that actually occurred between 2017/18 and 2018/19 that was due to the Chinese import tariff based on the counter-factual simulation results. For example, column three indicates that total U.S. utilized pecan production actually declined by 61.9 million pounds (in-shell) from all positive and negative events in 2018/19. The last column indicates that very little (about 4.6%), all from a decline in native pecan production, was due to the tariff. The rest was due to weather-related issues, a low alternate-year bearing production cycle yield in several states that year, and possibly other market forces. In addition, the results in Table 4 indicate that of the 20.4 million pound increase in U.S. domestic pecans use, about 22% was due to the tariff. The rest was likely due to other positive forces boosting consumer demand for pecans in 2018/19 over 2017/18 like the promotion efforts under the Federal Marketing Order for pecans, increasing consumer incomes, a relatively larger drop in the prices of other nuts (like walnuts), etc.

The results in Table 4 also indicate that the tariff accounted for about half of the drop in exports, with the remainder due to other forces like the drop in pecan production that year. Almost all (nearly 100%) of the declines in the export and producer prices of pecans that occurred between 2017/18 and 2018/19 was also due the tariff. The results provide some additional insight on the tariff effects on the volume of pecan imports, indicating that the tariff pushed pecan imports down slightly (about 3 million pounds) but forces like the drop in production and the increase in domestic demand overwhelmed the negative tariff effect and resulted in a higher level of pecan imports in 2018/19. The tariff also created conflicting effects on the price of imports. While declining like other prices due to the tariff, the import price was supported by other forces such as the increased demand by China for pecans from Mexico. For that reason, perhaps, the import price of pecans declined by less than the producer and export prices between 2017/18 and 2018/19.

¹ $24.167 = (8 * 0.15 + 3 * 0.4 + 0.5) / 12$

**Table 4. Contribution of Tariff to Changes in the Pecan Industry from 2017/18 – 2018/19**

	2017/18	2018/19	Change from 2017/18 to 2018/19	Percent of Change due to Tariff
U.S. Pecan Supply (mil. lb)				
Utilized Production (in-shell)				
<i>Native/Seedling</i>	26.3	14.5	-11.8	24.1
<i>Improved Varieties</i>	278.6	228.5	-50.1	0.0
<i>Total</i>	304.9	242.9	4.6	2.2
Imports (shelled)	137.1	163.0	25.9	-12.1
U.S. Pecan Use (shelled) (mil. lb)				
Domestic Use	154.2	174.5	20.4	22.1
Exports	113.5	91.0	56.4	26.2
Change in Stocks	10.6	1.9	-8.7	-44.1
Revenue (\$ millions)				
Producer	710.3	425.4	-284.9	51.1
Export	688.8	450.0	-238.9	68.3
U.S. Pecan Prices (cents/lb)				
Producer Prices (in-shell)				
<i>Native/Seedling</i>	158.0	114.0	-44.0	93.1
<i>Improved Varieties</i>	240.0	179.0	-61.0	98.3
U.S. average	233.0	175.1	-57.9	98.8
Export Price (shelled)	607.0	494.5	-112.6	86.0
Import Price (shelled)	476.6	460.9	-15.7	344.1

Finally, about half of the drop in producer revenue and over two-thirds of the drop in pecan export revenue from 2017/18 to 2018/19 were due to the tariff (Table 4). The rest was due to other market forces like the weather-related drop in production in 2018/19.

In summary, the main effect of the tariff was to reduce U.S. pecan exports and prices with some increase in domestic use and little or no effect on effect on production. Most of the price decline experienced in 2018/19 from 2017/18 was the result of the tariff and about half of the decline in



exports and in producer revenue. The rest of the changes in those variables between 2017/18 and 2018/19 was due to other forces, including the production decline that occurred in 2018/19.

Final Comments

PecanMod is a powerful tool for analyzing the effects of economic and policy issues relating to the U.S. pecan industry. The intention is to continue developing PecanMod to become even more inclusive of activities relating to the U.S. pecan industry and to capture more robustly the dynamics and variability of the industry. Even so, PecanMod already can provide useful analyses of the effects of numerous types of events on the U.S. pecan industry such as the pecan checkoff program, the USDA Trade Aid package benefits to the industry through the Food Purchase and Distribution Program, exchange rate changes, U.S. economic growth and growing consumer incomes, and much more. In addition, the model can be customized to analyze the effects of various other economic events.

Importantly, PecanMod is a tool for analyzing *economic* and not *biologic* events related to pecans. For example, even though pecan scab is the most economically significant disease of pecan trees in the southeastern United States, PecanMod is not designed to determine the biologic effects of the disease on U.S. pecan production. However, working with pecan tree pathologists and other pecan horticultural experts to develop an estimate of the effects of the disease on pecan production, PecanMod then can be used to determine the overall economic effects of an outbreak of the disease on the pecan industry, including the effects on price, consumption, exports, imports, ending stocks, producer revenue, and other key industry measures not only in the short-run but over time as well. The same is true for other biologic and other non-economic issues such as the short-run and long-run effects of hurricane damage and other weather events and new production technologies, among many others.

The model is limited in its ability to analyze the full set of activities in the pecan industry not only by a lack of data for key industry activities but also by the consistency and reliability of available data. Nevertheless, PecanMod replicates well the behavior of the U.S. supply, demand, and prices of pecans. Like all models, PecanMod will need to evolve over time given changes that occur in the pecan industry and the availability of data. As well, the model will need to expand to better capture the complex and extremely dynamic nature of the pecan industry. The analysis of the 2017/18 and 2018/19 Chinese tariffs on imports of U.S. pecans provides an excellent demonstration of what PecanMod can already do in analyzing the effects of economic events impacting the U.S. pecan industry. The contribution analysis demonstrates some of the additional insights that analysis with PecanMod can provide.



PecanMod is the exclusive property of the American Pecan Council (APC). The model will reside at Texas A&M University to allow researchers to update the database used to build and simulate the model and to refine and enhance the model over time. Future APC requests for analysis using the model can be carried out but only at the request of APC under separate contracts for the work requested.



References

- Call, R.E., R. Gibson, and M.W. Kilby. 2006. "Pecan Production Guidelines for Small Orchards and Home Yards." Cooperative Extension Publication AZ1400, College of Agriculture and Life Sciences, The University of Arizona, Tucson, Arizona, May. On-line at: <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1400.pdf>
- Cheng, G., S. Dharmasena, and O. Capps, Jr. 2019. "Demand Interrelationships of Peanuts and Tree Nuts in the United States." Working Paper, Department of Agricultural Economics, Texas A&M University.
- Dhaliwal, H.S. 1972. "An Econometric Investigation of Demand Interrelationships among Tree Nuts and Peanuts." Ph.D. thesis, Oregon State University.
- Epperson, J.E. and J.R. Allison. 1980. "Price Futures for the United States Pecan Industry." *HortScience* 15(4): 475-478.
- Florkowski, W.J., J.C. Purcell, and E.E. Hubbard. 1992. "Importance for the U.S. Pecan Industry of Communicating about Quality." *Hortscience* 27(5): 462-464.
- Florkowski, W.J., Z. You, and C.L. Huang. 1999. "Consumer's Selection of Retail Outlets in Buying Pecans." *Journal of Food Distribution Research* 30(2): 34-43.
- Ibrahim, M. and W. J. Florkowski. 2007. "Forecasting US Shelled Pecan Prices: A Co-Integration Approach." Selected Paper Presented at the Southern Agricultural Economics Association, Little Rock, Arkansas, 4-7 February.
- Ibrahim, M. and W. J. Florkowski. 2005. "Testing for Seasonal Co-integration and Error Correction: The US Pecan Price-Inventory Relationship." Selected Paper presented at the Southern Agricultural Economics Association, Little Rock, Arkansas 5-9 February.
- Jones, S.A., V.C. Childs, R.S. Washburn, B.H. Thibodeaux, J.W. Park, and H.E. Rutland. 1932. *An Economic Study of the Pecan Industry*. Washington DC: U.S. Department of Agriculture, Technical Bulletin No. 324, September 1932.
- Jun, W., C. Tang, J. Li, S. Zhang, J. Shen, R. Zhang. 2013. "China Food Manufacturing Annual Report." GAIN Report. Foreign Agriculture Service, US. Department of Agriculture. February 4. On-line at: <https://gain.fas.usda.gov/>.
- Kim, Y. and S. Dharmasena. 2018. "Price Discovery and Integration in U.S. Pecan Markets." *Journal of Food Distribution Research* 49(1): 39-47.
- Lerner, E.B. 1959. "An Econometric Analysis of the Demand for Pecans with Special Reference to the Demand Interrelationships among Domestic Tree Nuts. Ph.D. thesis, Oklahoma State University.



- Moore, E.D. and G.W. Williams, M.A. Palma, and L. Lombardini. 2009. "Effectiveness of State-level Pecan Promotion Programs: The Case of the Texas Pecan Checkoff Program." *HortScience* 44(7): 1914-1920.
- Nesbitt, M., L. Stein, and J. Kamas. 2013. "Improved Pecans." Texas Fruit and Nut Production Report No. E-609, Texas A&M AgriLife Extension Service, Texas A&M University System, College Station, Texas, February. On-line at: <https://agrilifeextension.tamu.edu/library/farming/texas-fruit-and-nut-production-improved-pecans/>.
- Nesbitt, M., L. Stein, and J. Kamas. 2010. "Native Pecans." Texas Fruit and Nut Production. Texas A&M AgriLife Extension Service, Texas A&M University System, College Station, Texas, February. On-line at: <https://aggie-horticulture.tamu.edu/fruit-nut/files/2010/10/native-pecans.pdf>.
- Palma, M. and D. Chavez. 2015. "Economic Analysis of the Implementation of a Federal Marketing Order for Pecans." Unpublished, Department of Agricultural Economics, Texas A&M University.
- Park, T. and W.J. Florkowski. 1999. "Demand and Quality Uncertainty in Pecan Purchasing Decisions." *Journal of Agricultural and Applied Economics* 31(1): 29-39.
- Produce Report. 2019. "3000% Increase in Mexican Pecan Exports to China." M.Z. Marketing Communications, Shanghai, China. August 12. On-line at: <https://www.producereport.com/article/3000-increase-mexican-pecan-exports-china>
- Onunkwo, I.M. and J.E. Epperson. 2000. "Export Demand for U.S. Pecans: Impacts of U.S. Export Promotion Programs." *Agribusiness* 16(2): 253-265.
- Reid, W. and K.L. Hunt. 2000. "Pecan Production in the Northern United States." *HorTechnology* 10(2): 298-301.
- Shafer, C.E. 1996. "Pecan Production and Price Trends 1979–1995." Faculty Paper 24019, Department of Agricultural Economics, Texas A&M University.
- Sumner, D.A. and T.M. Hanon. 2018. "Economic Impacts of Increased Tariffs that have Reduced Import Access for U.S. Fruit and Tree Nuts Exports to Important Markets." University of California Agricultural Issues Center and Department of Agricultural and Resource Economics, University of California, Davis, August.
- U.S. Department of Agriculture (USDA). 2019a. "Pecan Production." National Agricultural Statistics Service (NASS), March 14. On-line at: <https://downloads.usda.library.cornell.edu/usda-esmis/files/5425kg32f/tt44pv533/v979v9335/pecnpr19.pdf>



- U.S. Department of Agriculture (USDA). 2019b. “Fruit and Tree Nut Yearbook Tables.” Economic Research Service. On-line at: <https://www.ers.usda.gov/data-products/fruit-and-tree-nut-data/fruit-and-tree-nut-yearbook-tables/>
- U.S. Department of Agriculture (USDA). 2019c. “Global Agricultural Trade System (GATS).” Foreign Agriculture Service. On-line at: <https://apps.fas.usda.gov/gats/>
- U.S. Department of Agriculture (USDA). 2019d. “Specialty Crops: Custom Reports.” Agricultural Marketing Service. On-line at: <https://www.ams.usda.gov/market-news/fruits-vegetables>.
- U.S. Department of Labor (USDOL). 2019. “Producer Price Indexes.” Bureau of Labor Statistics. On-line at: <https://www.bls.gov/ppi/data.htm>.
- Wells, G.J., S.E. Miller, and C.S. Thompson. 1986. “Farm Level Demand for Pecans Reconsidered.” *Journal of Agricultural and Applied Economics* 18(1): 157-160.
- Williams, G.W., O. Capps, Jr., and V. Salin. 2018. “Effects of the Chinese Retaliatory Tariff on U.S. Pecan Exports.” Department of Agricultural Economics, Texas A&M University.
- Wood, B.W. 1993. “Production Characteristics of the United States Pecan Industry.” *Journal of the American Society of Horticultural Science* 118(4): 538-545.
- Wood, B.W. 2001. “Production Unit Trends and Price Characteristics within the United States Pecan Industry.” *HortTechnology* 11(1): 110–118.



APPENDIX 1

Chronological Review of Past Economic Research on the U.S. Pecan Industry

This appendix provides a more detailed, chronological review of past economic research on U.S. pecan markets.

Jones, Childs, Washburn, Thibodeaux, Park, and Rutland (1932)

“An Economic Study of the Pecan Industry.” U.S. Department of Agriculture, Technical Bulletin No. 324, September 1932.

This study is the earliest known economic analysis of the U.S. pecan industry. Conducted by the USDA Bureau of Agricultural Economics (now known as the Economic Research Service) in cooperation with various State agencies, the study covers the period of 1928-1930. The study reports the results of a survey focused on three basic pecan market activities: (1) production, which included estimates of the size of the pecan crop, a survey of the number of pecan trees by age groups and geographic distribution, and varieties grown; (2) cost of production, which dealt with practices and costs in the development of pecan orchards of improved varieties and in the operation of bearing orchards; and (3) marketing, which included a description of marketing practices in producing areas as well as a presentation of price and distribution data. The survey also included information on pecan-marketing conditions from the viewpoint of the retailer and consumer and a discussion of the competition of pecans with other nuts. The study provides data but no development of a U.S. pecan model.

Lerner (1959)

“An Econometric Analysis of the Demand for Pecans with Special Reference to the Demand Interrelationships among Domestic Tree Nuts.” Ph.D. thesis, Oklahoma State University.

This study is the first known attempt to investigate demand interrelationships of various tree nut products examining pecans, walnuts, filberts, and almonds using annual time-series data from 1927-1955, excluding the war years of 1942-1946. Using ordinary least squares regression, the estimated own-price elasticities were -1.19 for native pecans, -1.80 for walnuts, -23.04 for filberts, and -0.86 for almonds. The estimated income elasticities were 2.32 for pecans, 2.40 for walnuts, 20.12 for filberts, and 2.53 for almonds. Pecans and walnuts were found to be gross complements. Pecans and filberts, pecans and almonds, and walnuts and almonds were found to be gross substitutes. Although estimating demand relationships, the study does not consider production, price, or other pecan industry activities.

Dhaliwal (1972)

“An Econometric Investigation of Demand Interrelationships among Tree Nuts and Peanuts.” Ph.D. thesis, Oregon State University.

This study examined single equation demand interrelationships among eight tree nuts, including almonds, filbert, pecans, walnuts, pistachios, Brazil nuts, and cashews using annual time-series data from 1947-1968. The estimated own-price elasticities for each type of nut were substantially lower than reported by Lerner in 1959. The price elasticities estimated by Dhaliwal were -0.91 for pecans, -0.29 for walnuts, -1.93 for filberts, and -0.55 for almonds. Pecans and walnuts, pecans and Brazil nuts, and Brazil nuts and cashews were found to be gross substitutes; almonds and filberts as well as pecans and pistachios were found to be gross complements.

**Wells, Miller, and Thompson (1986)**

“Farm level demand for pecans reconsidered.” *Journal of Agricultural and Applied Economics* 18(1): 157-160.

This study estimated farm-level demand for pecans using annual data from 1970-1982 based on a price-dependent demand function. The own-price flexibility of pecans at the farm level they estimated was -0.97, similar to the estimate by Dhaliwai (1972).

Florkowski, Purcell, and Hubbard (1992)

“Importance for the U.S. Pecan Industry of Communicating about Quality.” *Hortscience* 27(5): 462-464.

The authors of this study surveyed pecan growers from Georgia to provide information about knowledge of and perceived adequacy of pecan quality standards. Logit models were used to identify variables influencing knowledge of pecan grades and their perceived adequacy. Larger and more experienced growers were more familiar with the USDA standards for grades than were smaller growers. The geographical location of growers within Georgia did not significantly affect the results.

Wood (1993)

“Production Characteristics of the United States Pecan Industry.” *Journal of the American Society of Horticultural Science* 118(4): 538-545.

This study as well as those by Epperson and Allison 1980; Swink, 1991; Wood, 1991; and Young, 1991 concludes that past efforts to forecast in-shell nut production and expanding domestic and export markets has been difficult. Forecasting-related problems have been largely associated with the alternative bearing tendency of the crop. This study characterized the cyclic, alternate bearing and correlative aspects of U.S. produced pecans and assessed the feasibility of solely using in-shell nut production to forecast future production based on stepwise autoregressive techniques. Univariate models will generally not be capable of satisfactorily forecasting production for the pecan industry. Past models, in general, failed to take into account the cyclic (alternate bearing) characteristic of pecan production.

Shafer (1996)

“Pecan Production and Price Trends 1979–1995.” Faculty Paper 24019, Department of Agricultural Economics, Texas A&M University.

A major conclusion of this study is that expected pecan production in the current season as well as beginning stocks affect pecan prices in each season. Relatively high pecan prices over the period from 1990 to 1995 were attributed to lower production and stocks in those years. In addition, the study notes a growing trend in international trade in pecans as well as a significant impact on U.S. pecan market prices from pecan import volumes.

Florkowski, You, and Huang (1999)

“Consumer’s Selection of Retail Outlets in Buying Pecans.” *Journal of Food Distribution Research* 30(2): 34-43.

This study identified differences in consumer characteristics and the selection of the type of a retail outlet in pecan purchases using a multinomial logit model. Data were collected through a



nationwide survey. The report concluded that age, household income, and household size are among the important consumer characteristics that influenced the selection of a retail outlet. Employment and the timing of pecan purchases also influenced the use of a specific type of retail outlet. In particular, mail-order purchases were made by older persons with higher incomes and from larger households in comparison to purchases at grocery stores or other outlets. The study also provided information needed to improve marketing strategies for different outlets and suggested that various strategies can be developed to reach different groups of pecan buyers by type of retail outlet.

Park and Florkowski (1999)

“Demand and Quality Uncertainty in Pecan Purchasing Decisions.” *Journal of Agricultural and Applied Economics* 31(1):29-39.

The authors of this study estimated a generalized Heckman model of purchase decisions incorporating perceived consumer quality attributes, ease of purchase, and familiarity with marketing outlets as factors influencing pecan purchases. A nationwide mail survey examining the purchases of raw, unprocessed pecans (shelled or unshelled) was conducted in the summer of 1993 based on a randomly drawn sample of consumers provided by marketing representatives from the pecan industry. The study concludes that marketing efforts encouraging consumers to spend more on nut products increased both the probability of pecan purchases and the amount purchased. They also found that consumers who used all types of nuts in a wider variety of foods tended to purchase pecans more frequently. In addition, a diverse set of marketing outlets were found to provide consumers with convenient sources of purchasing pecans and had a significant influence on the probability of pecan purchases but not on the amount of pecans purchased.

Onunkwo and Epperson (2000)

“Export Demand for U.S. Pecans: Impacts of U.S. Export Promotion Programs.” *Agribusiness* 16(2): 253-265.

In this study, the impacts of federal promotion programs on the foreign demand for U.S. pecans on a shelled basis were estimated over the period of 1986 to 1996. Attention was centered on Asia and the European Union, which together accounted for about 27% of U.S. pecan exports during that period. The own-price elasticities of export demand for pecans were estimated as -0.72 for Asia and -0.73 for the European Union. The returns per dollar of promotion expenditure for pecans were found to be \$6.45 for Asia and \$6.75 for the European Union.

Reid and Hunt (2000)

“Pecan Production in the Northern United States.” *HorTechnology* 10(2): 298-301.

This study finds that more than 93% of pecans produced in the United States are grown in the southeastern and southwestern states. However, the native range of the pecan tree extends northward into Kansas, Missouri, and Illinois. Reid and Hunt (2000) noted that in these northern states, commercial pecan production was expanding as additional acres of native trees were brought under cultivation, and orchards of short-season, cold-hardy cultivars were established. Native nut production dominated the northern pecan industry accounting for over 95% of nuts produced in the region. Cultural practices for native pecans had been developed for northern groves that feature low inputs and good yields.

**Wood (2001)**

Wood, B. W., "Production Unit Trends and Price Characteristics within the United States Pecan Industry." *HortTechnology*, (2001) 11(1):110–118.

A major finding of this study was that pecan's alternate-bearing characteristic causes significant marketing problems in the U.S. pecan industry. The study also finds that pecan prices have a much stronger relationship with supply at the national level than at the state level. As well, the supply of pecans on-hand at the beginning of the season, plus the supply from the current season's crop, plus the price of walnuts together accounted for 80% of the price variation of U.S. pecan prices.

Ibrahim and Florkowski (2005)

"Testing for Seasonal Co-integration and Error Correction: The US Pecan Price-Inventory Relationship." Selected Paper Presented at the Southern Agricultural Economics Association, February 5–9, Little Rock, Arkansas.

This study analyzed the relationship between pecan price and pecan cold storage inventory by applying seasonal co-integration methods. Monthly data over the period 1991 to 2002 were used in this analysis. Inventories were found to be a driver of pecan prices.

Ibrahim and Florkowski (2007)

"Forecasting U.S. Shelled Pecan Prices: A Co-Integration Approach." Selected Paper Presented at the Southern Agricultural Economics Association, February 4–7, Mobile, Alabama, 2007.

The study examined the relationship between shelled pecan prices and inventories using monthly data over the period January 1992 to December 2004. Engle-Granger and Johansen co-integration tests found evidence of a long-run relationship between pecan prices and inventories.

Moore, Williams, Palma, and Lombardini (2009)

"Effectiveness of State-level Pecan Promotion Programs: The Case of the Texas Pecan Checkoff Program." *HortScience* 44(7): 1914-1920.

This study evaluates the economic effectiveness of the Texas Pecan Checkoff Program in expanding sales of all Texas pecans and on sales of improved and native Texas pecan varieties. The analysis indicated that the Texas Pecan Checkoff Program had effectively increased sales of improved varieties of Texas pecans but had no statistically measureable impact on sales of native varieties of Texas pecans. A benefit-cost analysis determined that the additional sales revenues generated was relatively large compared to the dollar value invested in promoting pecans.

Palma and Chavez (2015)

"Economic Analysis of the Implementation of a Federal Marketing Order for Pecans." Unpublished Manuscript, Department of Agricultural Economics, Texas A&M University.

The study provided an overview of the U.S. pecan industry and the potential effects on supply and demand from the proposed Federal Marketing Order (FMO) for pecans. The assessment under consideration was \$0.02-\$0.03 per pound of improved pecan varieties in shell to be collected from handlers and \$0.01-\$0.02 per pound for native/seedling varieties. The chief conclusion was that pecan prices at the grower level would increase by \$0.63 for improved varieties and by \$0.036 for native varieties due to the proposed FMO for pecans. This study described the economic and marketing state of the pecan industry using available secondary data. In addition, this study



described the costs and benefits of the proposed FMO for pecan producers and handlers using a risk-based simulation model.

Kim and Dharmasena (2018)

“Price Discovery and Integration in U.S. Pecan Markets.” *Journal of Food Distribution Research* 49(1): 39-47.

Given the nature and the location of pecan production in the United States, the study postulates that the pecan price in one state likely affects or is affected by the pecan prices in other states. Using grower-level pecan price data on a biweekly basis from the October 2005/January 2006 through the October 2015/January 2016 seasons, pecan market integration patterns were estimated for Texas, Oklahoma, Georgia, and Louisiana using causality structures identified through machine-learning methods. Current pecan prices received by growers in Texas were found to be a direct cause of grower prices in Oklahoma, Georgia, and Louisiana. Past-period grower-level pecan prices in Georgia either directly or indirectly influenced current prices in other states.

Sumner and Hanon (2018)

“Economic Impacts of Increased Tariffs that have Reduced Import Access for U.S. Fruit and Tree Nuts Exports to Important Markets.” University of California Agricultural Issues Center and Department of Agricultural and Resource Economics, University of California, Davis, August.

This report summarized potential impacts of higher tariffs facing major U.S. fruits and tree nuts, particularly almonds, pecans, pistachios, walnuts, apples, oranges, raisins, sour cherries, sweet cherries, and table grapes. The loss in revenue due to declines in U.S. prices resulting from tariff increases in affected markets (Hong Kong and China, Vietnam, India, Mexico, and Turkey) was found to be about \$3.4 billion. Importantly, among tree nut commodities, almonds alone accounted for roughly \$1.6 billion in losses, while pistachios, walnuts, and pecans faced losses of roughly \$384 million, \$315 million, and \$224 million, respectively.

Williams, Capps, and Salin (2018)

“Effects of the Chinese Retaliatory Tariff on U.S. Pecan Exports.” White paper to the American Pecan Council.

The study considered the potential impacts of recent retaliatory tariffs on pecans. Commercially produced in 14 states, pecans are the only native tree nut grown in the United States. The study finds that the likely impacts of the Chinese 47% tariff on U.S. in-shell pecans are as follows: (1) Chinese imports of U.S. in-shell pecans will fall substantially; (2) exports of U.S. pecans to the European Union (EU) and to other countries likely will rise; (4) globally exports of U.S. pecans will fall but the rise of exports to the EU and to other countries will not cover the loss in exports experienced in China; (5) Mexico, South Africa, and Australia likely will capture more of the Chinese market but will not cover the loss in exports from the United States; and (6) exports of pecans from U.S. competitors to the EU and to the ROW likely will decline. As a consequence, U.S. pecan prices will drop and production likely will decline over time and led to a decline in producer revenues and profitability.

Cheng, Dharmasena, and Capps (2019)

“Demand Interrelationships of Peanuts and Tree Nuts in the United States.” Working Paper, Department of Agricultural Economics, Texas A&M University, 2019.



Cheng, Dharmasena, and Capps (2019) conducted a demand system analysis for peanuts and tree nuts in the United States. Monthly observations from 2004 through 2015 derived from the Nielsen Homescan Panel data were used. The nut categories in this analysis corresponded to peanuts, pecans, almonds, cashews, walnuts, macadamia nuts, pistachios, and mixed nuts. All of the own-price elasticities were statistically different from zero, ranging from -0.67 to -2.81. Income elasticities also were statistically different from zero, varying from 0.23 to 0.87, indicating that peanuts and tree nuts were necessities. In particular, the own-price elasticity for pecans was estimated to be -1.07, and the income elasticity for pecans was estimated to be 0.65. In addition, the issue of substitutability and complementarity of peanuts and tree nuts was examined in this analysis. Most nut types were found to be substitutes for each other. Specifically, pecans were found to be substitutes for peanuts, almonds, walnuts, macadamia nuts, pistachios, and mixed nuts. Pecans and cashews were found to be complements.



APPENDIX 2
PecanMod Baseline Simulation Validation Statistics¹

Name of Dependent Variable	Time Period (Annual)	R ²	Adjusted R ²	DW	RMSE	MAE	MAPE	Theil Decomposition Statistics			
								Bias Proportion	Variance Proportion	Covariance Proportion	Theil U2
S _n (1,000 lb)	1960 to 2018	0.925268	0.913311	2.041073	10,603.930	8,008.906	14.47	0.000029	0.021728	0.978243	0.1555
S _i (1,000 lb)	1960 to 2018	0.881114	0.862092	1.934235	22,209.920	18,310.550	13.78	0.000651	0.050615	0.948735	0.2340
S _m (1,000 lb)	1980 to 2018	0.989127	0.986227	2.500473	4,215.100	3,306.466	19.76	0.000064	0.003094	0.996842	0.5193
D _u (1,000 lb)	1979 to 2018	0.866537	0.836400	1.978798	6,187.479	5,010.276	3.99	0.000027	0.047910	0.952063	0.3238
E _u (1,000 lb)	1980 to 2018	0.862908	0.831951	1.768442	7,403.773	5,519.689	13.03	0.000013	0.043848	0.956140	0.2379
D _x (1,000 lb)	1990 to 2018	0.983503	0.978004	2.57888	4,521.947	3,432.311	9.60	0.000001	0.002938	0.997061	0.5123
P _i (cents/lb)	1980 to 2018	0.998229	0.998078	2.469824	2.558	2.116	1.89	0.000000	0.000443	0.999557	0.0789
P _n (cents/lb)	1980 to 2018	0.994715	0.993914	2.154009	2.714	2.137	2.99	0.000000	0.001325	0.998675	0.1235
P _m (cents/lb)	1980 to 2018	0.931914	0.923904	2.006546	27.342	20.650	8.40	0.001395	0.000004	0.998601	0.5581
P _x (cents/lb)	1980 to 2018	0.987525	0.962605	1.918434	24.094	18.107	5.60	0.000000	0.008253	0.991747	0.4972

Identities

Total In-Shell Pecan Production = Improved Pecan Production (In-Shell) + Native Pecan Production (In-Shell)

Total Utilized Production (In-Shell Conversion to Shelled Identity = Conversion Factor * Total In-Shell Production

Market Clearing Condition (Shelled): Beginning Stocks + Domestic Production + Imports = Domestic Use + Exports + Ending Stocks

¹ See Figure 16 for variable definitions.

FIND US HERE:



Follow us @AmericanPecan for quick and easy pecan recipes, nut news, videos, and more.

