







2017-2018 ANNUAL REPORT











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DIRECTOR'S STATEMENT

The American Pecan industry has entered a new chapter in its history. In November 2016, the pecan industry voted to approve a Federal Marketing Order (FMO). The FMO is a valuable tool and is the purest form of local government for an agricultural industry. The American Pecan Council (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.

As a result, the APC began putting in place the pieces needed to effectively operate a federal marketing order. The Council hired Weber Shandwick to create an awareness campaign that kicked off in May 2018. By August, the Council put in place a full-time staff and several necessary by-law changes; policies; and procedures to effectively meet the USDA mandates and carry out the mission of the APC. Furthermore, the APC began its strategic planning to set out short and long-term goals for the industry.

The result has produced great results in such a short amount of time. Data is being mandated and collected by the Council; marketing programs are starting to be executed; standards for incoming and outgoing product are beginning to be discussed and take shape; research is beginning; and the industry is starting to enter as a unified voice in the "nut war".

In an effort to communicate the industry's activities over the past year, I am pleased to present the first American Pecan Council's annual report. This report outlines all activities that the Council has invested during the 2017 – 2018 year. Additionally, it outlines some of the activities that the Council will be focusing on during the 2018 – 2019 Fiscal Year.

On behalf of the Council and staff, thank you again for the opportunity to serve you and the industry. We look forward to the challenges and providing solutions to the ever-changing global nut economy. Should you have any questions, input, or would like additional information, please do not hesitate to contact the Council office.

High Regards,

Alexander J. Ott



CHAIRMAN'S STATEMENT

We grow, process, and offer to the world one of the most perfect foods in God's creation. With that fact as a reality, the 2018 crop season has been a difficult year for pecans. If you are a pecan stakeholder, you know. Therefore, I will not rehash the laundry list.

The old-timers in the Brazos River Bottom of Texas, where we grow pecans, talk of the year when the Brazos River "flowed backwards" as being "one of those years." I have heard stories from folks who have weathered more pecan storms than I have speak of nuts selling for two bits a pound; i.e., "one of those years.". We do not want to go back there. As the future unfolds, we will refer to the 2018 season as "one of those years."

This first annual report of the American Pecan Council outlines the strides made since the Federal Marketing Order was voted in by growers and established as federal law only thirty short months ago. From a standing start, the Council has established a national office, staffed it with experienced professionals, and begun the work of implementing the mandate given with the passage of the Order.

The recent investment by the Council to contract with the Boston Consulting Group to comprehensively study the pecan industry and make recommendations on a Strategic Plan defines a path forward for success. The industry is in a global market where consumers demand quality, convenience, healthful foods, dependable supply, and value. The public wants to know where their food is grown, how their food is grown, how it is processed, and what care is taken to deliver healthy food across the value chain. It is imperative, that we, as an industry, adapt, deliver and constantly pay attention to our customer and end user. Being smart about repositioning our product in the marketplace can lead to a rewarding paradigm shift.

The Strategic Plan developed by BCG is comprehensive and focused. When fully implemented, it will assure our success and establish a profitable foundation for the pecan industry to build on for decades to come.

I repeat: we grow, process, and offer to the world one of the most perfect foods in God's creation what an incredible fact in our favor! A chunk of coal is simply an immature diamond awaiting favorable conditions. Fortunately, maturing our industry and creating favorable conditions is a choice, not fate nor luck.. We hold in our hands the potential of the crown jewel of tree nuts. The pecan industry has only scratched the surface of what it can be. The future is truly up to us.

B. Michael Adams





THE APC: 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. 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 C A N 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
- ComplianceData & 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 12 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.

COUNCIL MEMBERS

AMERICAN PECAN COUNCIL

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

EXECUTIVE DIRECTOR:

CHAIRPERSON:

Alexander J. Ott

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	
Accumi	ulator	
J.B. Easterlin	Chad Selman	
Public Member		
Vacant	Ronald P. Hays	

DISTRICT MAP



15 STATES

APC STAFF

EXECUTIVE DIRECTOR

Alexander J. Ott aott@americanpecan.com

DIRECTOR OF MARKETING & REGULATORY AFFAIRS

Jeff Smutny jsmutny@americanpecan.com

ASSISTANT DIRECTOR OF MARKETING & INDUSTRY RELATIONS

Julianna Keck jkeck@americanpecan.com

OPERATIONS MANAGER

Deborah Barnett dbarnett@americanpecan.com

DIRECTOR OF INDUSTRY RELATIONS

Emma Garner egarner@americanpecan.com

CONTACT THE OFFICE:

817-916-0020 industry@americanpecan.com



STATEMENT OF FINANCIAL

POSITION: Fiscal Year Ended September 30, 2017

ASSETS	
Current Assets:	
Cash and Cash Equivalents	\$5,103,770
Total Current Assets	\$5,103,770
Fixed Assets:	
Property, Plant, and Equipment	\$4,146
Less: Accumulated Depreciation	(\$ 139)
Total Fixed Assets	\$4,007
Other Assets:	
Security Deposit	\$2,000
Total Other Assets	\$2,000
TOTAL ASSETS:	\$5,109,777

LIABILITIES	
Accounts Payable	\$1,770,836
Total Current Liabilities	\$1,770,836
TOTAL LIABILITIES:	\$1,770,836

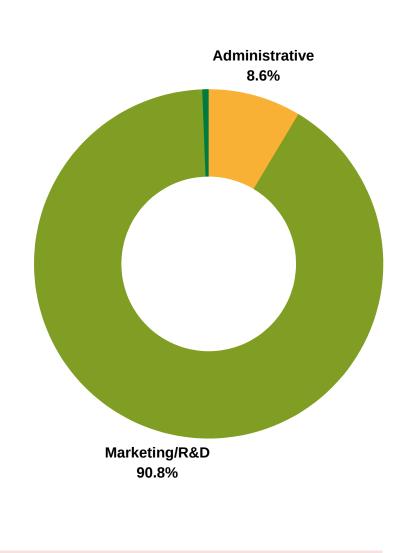
NET ASSETS	
Without Donor Restriction	\$3,338,941
Total Net Assets	\$3,338,941

TOTAL LIABILITIES AND NET ASSETS	\$5,109,777
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STATEMENT OF EXPENSES:

2016-2017

EXPENSES	
Administrative	\$255,418
Communication	\$283
Compliance	
Depreciation	\$139
Governance	
Marketing/R&D	\$2,700,963
Personnel	\$17,114
Reporting & Statistics	
TOTAL:	\$2,973,917



REVENUES	\$6,312,875
EXPENSES	\$2,973,934
NET ASSETS ENDING	\$3,338,941

STATEMENT OF FINANCIAL

POSITION: Fiscal Year Ended September 30, 2018

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Current Assets:

\$7,572,030 Cash and Cash Equivalents **Prepaid Expenses** \$103,259

Total Current Assets \$7,675,289

Fixed Assets:

Property, Plant, and Equipment \$47,289 Less: Accumulated Depreciation (\$8,181)

Total Fixed Assets \$39,108

Other Assets:

\$2,400 Security Deposit

Total Other Assets \$2,400

TOTAL ASSETS: \$7,716,797

LIABILITIES

Accounts Payable \$2,357,146

Total Current Liabilities \$2,357,146

TOTAL LIABILITIES: \$2,357,146

NET ASSETS

Without Donor Restriction \$5,359,651

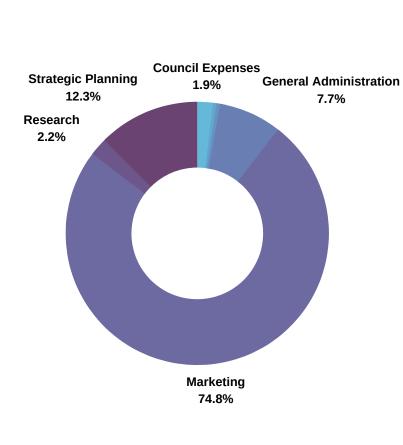
Total Net Assets \$5,359,651

TOTAL LIABILITIES AND NET ASSETS

\$7,716,797

STATEMENT OF EXPENSES:

2017-2018



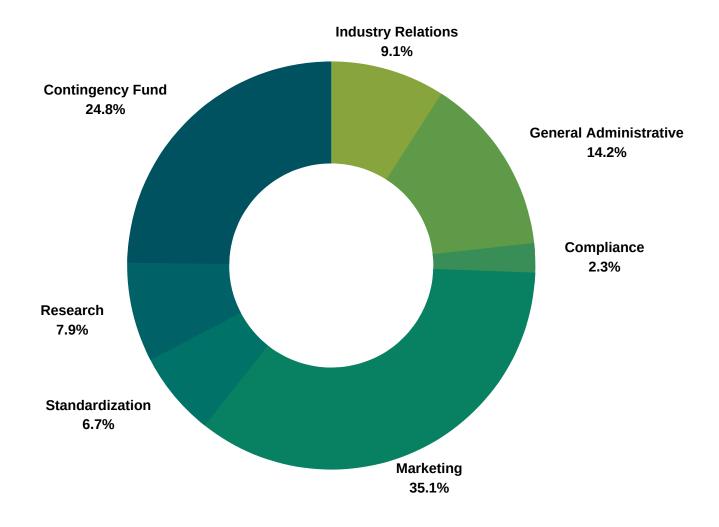
EXPENSES			
Council Expenses	\$172,117		
Capital Items	\$2,480		
Compliance	\$38,388		
Depreciation	\$8,042		
Data & Statistics	\$39,241		
General Administration	\$692,469		
Industry Comms.	\$5,780		
Marketing	\$6,697,096		
Research	\$195,841		
Strategic Planning	\$1,100,000		
TOTAL:	\$8,951,454		

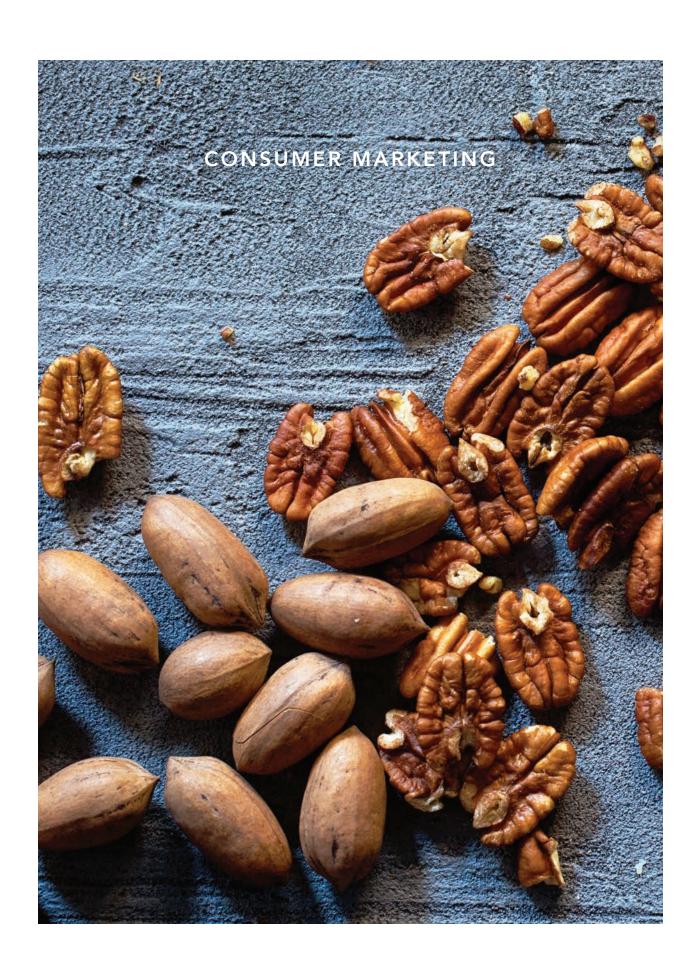
REVENUES	\$6,312,875
EXPENSES	\$2,973,934
NET ASSETS ENDING	\$3,338,941

APPROVED BUDGET

EXPENSES: 2018-2019

EXPENSES	
Industry Relations	\$880,000
General Administrative	\$1,374,300
Compliance	\$225,000
Marketing	\$3,405,000
Standardization	\$648,000
Research	\$765,000
Contingency Fund	\$2,403,700
TOTAL:	\$9,701,000





COMING TOGETHER TO TAKE ON A MARKETING CHALLENGE

Prior to Federal Marketing Order 986, there was no organized industrywide effort to drive consumer demand for pecans. Created in 2017, the American Pecan Council (APC) became the first organization uniting U.S. pecan growers and handlers.

A resource dedicated to marketing American Pecans in the U.S. was a huge step forward, but consumer research confirmed there was much work to be done; familiarity with — and purchase of — pecans was lower than that of almost all other nuts. In fact, research showed that many people thought of pecans as a baking ingredient, rather than a nut.

The challenge was clear: Demand would not increase if consumers only thought of pecans for holiday pies. To dramatically grow demand for pecans meant we must first drive awareness of pecans and reframe the way today's consumers think about them. Much more than a pie ingredient, pecans must become a cooking and snacking staple.



Grounded in Consumer Research to Reach Today's Pecan Consumer

While we want everyone to enjoy pecans, we've looked at where industry marketing dollars can make the biggest impact. We conducted consumer research, which showed that nutrition-conscious moms who like to cook for their families are the most likely to consider pecans in a new way.

These moms want:

- Nutrition and great taste
- New recipes and opportunities to experiment
- Menu inspiration on their phones (in fact, people check their phones 150 times per day on average — it's today's mobile billboard)

To reach them, we must:

- Showcase the health, taste and versatility of pecans
- Use social media and mobile-friendly methods to share inspiring recipes
- Partner with like-minded food bloggers and nutrition experts who have loyal, established followers

YEAR ONE: What the FMO has done for you

SPOILER ALERT – Prior to our efforts, pecans received only 15 percent of consumer awareness when it came to top-of-mind recall. Since we deployed our efforts, top-of-mind recall has increased to 19 percent — surpassing pistachios! How did we do it? Take a look at the detailed efforts that follow.

News Articles About Pecans Reached More Consumers Than Ever

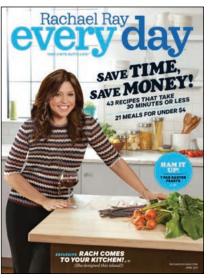
4,159 news stories and TV segments featured pecans vs. just 711 the year before marketing efforts began. That is a 400 percent increase.

In December 2017, we met one-on-one with editors at top-tier outlets including Family Circle, Rachael Ray Every Day and Shape to share the story of American Pecans. Joined by growers Brad and Angie Ellis, we educated editors about the taste, nutrition and heritage of pecans. We raised the nutrition profile of pecans and shared recipe

inspiration and usage tips. These meetings put American Pecans on editors' radars and helped establish relationships that we built upon and leveraged throughout 2018.

We continue to keep American Pecans top of mind with media and consumers by engaging media in strategic ways and at key moments. In August 2018, we participated in a broadcast media tour with lifestyle expert Terra Wellington who shared back-to-school snack tips and featured American Pecans to TV viewers and radio listeners across 25 markets nationally.











To bolster our nutrition story and highlight the heart-healthy benefits of pecans, we became certified by the American Heart Association's Heart-Check Food Certification Program. This well-known and trusted third-party endorsement of pecans as a heart-smart food drove additional media coverage and helped build our credibility among media and consumers. In fall 2018, we joined the national heart-healthy conversation with a front-page ad in Family Health, with cover star Barbra Streisand. The insert ran in newspapers in top-tier markets of USA Today's national network, such as Chicago, Los Angeles and Washington, D.C., and was picked up digitally by 131 newspapers within the network.



We also shared our story with readers across the country, giving them reasons to go beyond the baking aisle with pecans to consider the nuts as a nutritious, tasty snack, and a versatile ingredient for cooking.

We tapped into relevant cultural moments and trends to bring pecan recipes front and center:

- Shortbread Pecan Ghost Cookies for Halloween
- Pecan-Crusted Pork Tenderloin for Easter
- Honey Ginger Pecan Snack Mix for the Big Game
- Pecan Roasted Beet Dip with Sage
- Pecan, Pear, Pomegranate Kale Salad These recipes met consumer demand for colorful, nutrient-dense foods, and they tasted delicious.

As we inspired consumers to use pecans in creative and nutritious ways, we also were a tried-and-true source for pecan pie recipes. Not only was Classic Pecan Pie the most visited recipe on AmericanPecan.com, but Google announced that pecan pie was the most searched recipe in all of 2018!



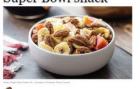




ROASTED PECANS



The San Diego Union-Tribune Pecan Council suggests Super Bowl snack



Journal

Frightfully easy ghost cookies are perfect Halloween treat



Orlando Sentinel

Consider Pecan-Crusted Pork Tenderloin for Easter





BRAND LAUNCH



American Pecans, The Original Supernut™ – the industry's first-ever national brand – made its debut in April, National Pecan Month. We went to the media capital of the country – New York City – to introduce the brand to media, influencers and consumers with a one-day pop-up store, the Not Pie Shop. Showcasing pecans' versatility, the shop served a full pecan menu (everything but pie) and featured shelves full of innovative pecan products, such as pecan milk, pecan butter, pecan oil, pecan snacks, and pecan flour and meal.

Growers and shellers attended to highlight the hard-working people behind American Pecans, share their unique stories and answer questions from media and consumers. Throughout the day, we inspired media guests along with 1,300 local visitors with "not pie" recipes, prompting them to

think of pecans in a different way. A Facebook Live broadcast gave people across the country a peek inside the Not Pie Shop. We also sent engaging, Instagram-worthy mailers to more than 100 media and bloggers, giving them a fresh take on the nut they thought they knew.

American

Food and nutrition influencers served as spokespeople at our Not Pie Shop to conduct demonstrations to reinforce pecans' versatility to media and consumers. Nationally recognized registered dietitian Dawn Jackson-Blatner served as our brand launch host, participated in a satellite media tour and served as host at the Not Pie Shop. Dawn broadcasted via Facebook Live from the Not Pie Shop, taking her audience along as she toured the shop and broadening awareness for The Original Supernut.



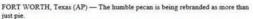






U.S. pecan growers seek to break out of the pie shell

By Emily Schmall



just pie.

Pecan growers and suppliers are hoping to sell U.S. consumers on the virtues of
North America's only native nut as a hedge against a potential trade war with China,
the pecan's largest export market.

The pecan industry is also trying to crack the fast-growing snack-food industry.



The New York Times

The Washington Post





We worked with an Associated Press reporter to break the news of the brand launch, giving her a close look at the heritage and history of American Pecans, sharing the mission and goals of the APC, introducing her to some of the hard-working men and women in the industry and giving her an exclusive first look at the new brand and the strategy behind it. After interviews with key stakeholders in the industry, the reporter published an insightful news article that announced The Original Supernut on our brand launch day, featured in more than 200 newspapers and their websites across the country.



American Pecans Made Their National TV Debut on America's Most Watched Morning Show

More than 21 million TV and online viewers were introduced to The Original Supernut on "Good Morning America."

We used America's #1 morning show to introduce America's only native tree nut to millions of consumers from coast to coast. Building on the success of the AP article and the Not Pie Shop two weeks prior – and tapping into a relevant food moment in time, Mother's Day – we showcased the incredible versatility, taste and nutrition of The Original Supernut to people both inside and outside of the pecan belt. Our spokeperson Dawn Jackson-Blatner shared why The Original Supernut deserves a superfood status and demonstrated simple ways to swap in pecans and make dishes more delicious and nutritious. The segment

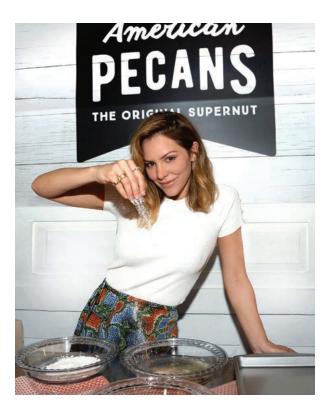
aired in May 2018 and was shared across social channels, garnering more than 7,200 shares and resulting in more than 16.8 million earned and social impressions.





We extended our brand launch to key food and nutrition influencers across the country by sending them "Not Just Pie" mailers that announced the news and provided them with sharable assets. These mailers helped keep pecans top of mind among key experts and drive buzz on social channels.

Actress and singer Katharine McPhee, star of Broadway's hit show "Waitress," stopped by the Not Pie Shop and tasted some of the delicious dishes. Photos of her visit hit entertainment media outlets, inserting us into pop culture and building buzz around American Pecans.

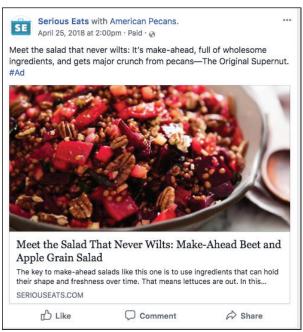








To further inspire consumers to use pecans outside of the pie shell, we met them where they go for culinary recipes and inspiration. We launched a partnership — the first of its kind for a commodity — with top food websites Simply Recipes and Serious Eats, which directly drove consumers to purchase pecans through shoppable recipes. We also deployed digital ads across the platforms to put pecans front and center as consumers plan meals. During the campaign, Simply Recipes experienced a 414 percent surge in pecan recipe page views, and we garnered 5.8 million impressions across the two platforms.







12 Savory & Sweet Recipes Starring Pecans!



This post is brought to you in partnership with the American Pecan Council in celebration of National Pecan Month.

Everyone knows pecan pie, right? But this naturally sweet nut is so delicinus. and versatile - and nutritious! - that it deserves the spotlight more than just at Thanksgiving.

Did you know that pecans are The Original Supernut™? That's right!

Pecans are the only major tree nut indigenous to America — kinda cool, right? Also, a handful of pecans — about 19 halves — provides a good source of fiber, thiarnin, and zinc, and is an excellent source of copper and manganese, a mineral that's essential for metabolism and bone health"

Pecans also add crunchy texture and natural sweetness to any recipe.

They are especially delicious mixed with dried fruit for a quick trail mix, tossed over morning oatmeal, yogurt parfaits, or salads, or sprinkled as a savory topper on pastas or dips

Love pecans?! Here are 12 recipes that you'll love!

Check out these recipes for nutty zucchini bread, a mixed green salad topped with pecans, goat cheese bacon pops, and more!

Click here to see all our best pecan recipes!

* Note: 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.





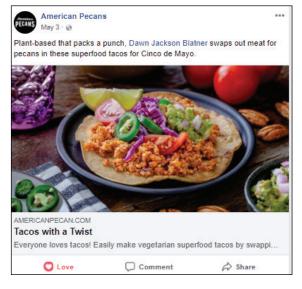






Throughout the program with the food sites, American Pecans' own website and social channels were a constant source of inspiration and education. Through digital ads and paid social content, we shared recipes and tips, encouraging consumers to use The Original Supernut in different ways, and launched a #NotJustPie contest for them to show their own recipes. Our digital content performed very well, with two promotional videos garnering 4.5 million views. In total, our social media brand launch content garnered 3.1 million impressions. In total, our owned social media brand launch content garnered 13.1 million impressions.







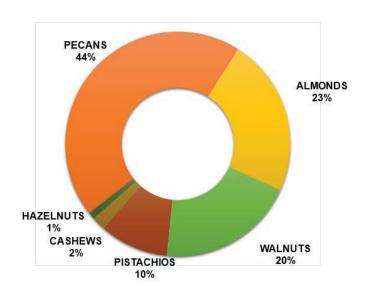


During The Original Supernut brand launch from April through May, 44 percent of all nut conversations were about pecans

Pecans, for the first time, beat every tree nut in media coverage

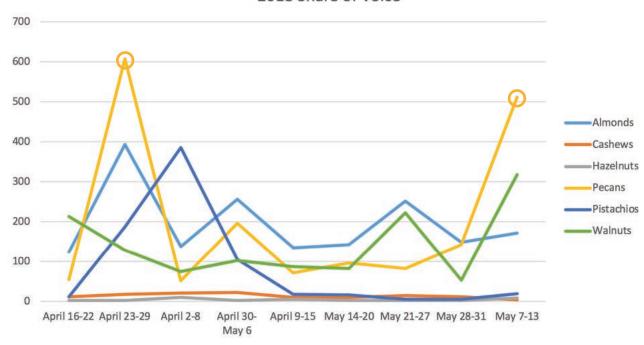
We helped bring pecans to the center of the conversation by launching The Original Supernut in a creative and compelling way: We created an always-on news engine that engaged local and national media with on-trend recipes and spotlighted the nutritional profile of pecans. During our brand launch from April through May, we secured 2,122 news stories about pecans, which garnered 290 million impressions and surpassed our goal by 30 percent.

Fifty-six percent of headlines contained health-related words, including "nutritious," "health," "superfood" or "supernut" prominently, reinforcing our health credentials. During our brand launch time frame in 2018, pecans coverage jumped 468 percent year over year.

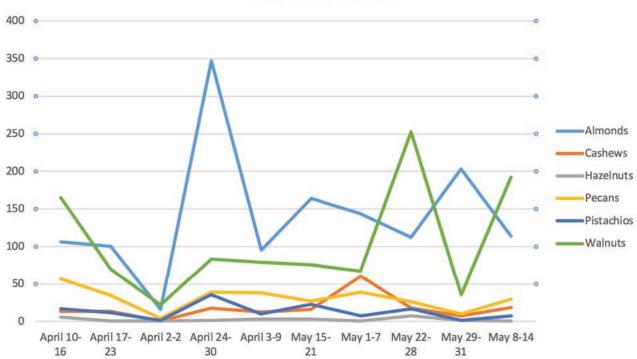


Share of Voice: how much of the media coverage with target consumers your brand owns versus your competitors





2017 Share of Voice



PECAN PARTNERS



feastingathome □Coconut Pecan Energy Balls with a whisper of garam masala spice... these vegan, gf, paleo snack bites take only 10 minutes to make! #yum.

recipe here \(\bar{\pi} \)
https://www.feastingathome.com/coconut-pecan-energy-balls-with-masala-spice/

#energyballs #feastingathome #energybites #energyballsnacks #vegan #glutenfreevegan #paleodiet #snacks

Popular recipe bloggers and nutrition experts powered the pecan story

Our Pecan Partners have a combined readership of more than 24 million. That's 24x the weekly circulation of USA Today.

Our target audience turns to influential online food bloggers and dietitians for culinary inspiration and recipes, as well as nutritional tips and insights. Some of these influencers have developed loyal, engaged followings as large as some national media outlets, making them the "new media" of today.

We developed strategic relationships with these influencers - our Pecan Partners - to help drive awareness and usage for American Pecans. They created a steady cadence of engaging content including videos, GIFs, long-form blog content, recipes, social posts and more, showcasing new ways to use pecans. Each influencer has a loyal and engaged following — and is a true pecan advocate. With them, we created more than 125 recipes for use on our website, social channels and for all members of the pecan industry to use in marketing activities.



thekitchenmccabe - Follow

thekitchenmccabe Favorite nut. I like pecan maple-roasted for snacking. Can't get enough!
What about you? What's your favorite nut and way to eat them?
View all 26 comments
kook. Nevboard Pecans too with sesame made into brittle! Yum hugosolis, rene My freind would make some with roasted pecans with raw suparcinnamon and a little butter. The we experimented making holiday nut balls by some crasy idea we had for another purpose, when a customer brought his own batch of nut balls with a Puripab spice variation. They where so a wesome.

soullandseason Pecans are my favorite as well II love im in a pile!

ROASTED PECAN BUTTERNUT SQUASH SOUP (PALEO, VEGAN)

Thick and creamy roasted pecan butternut squash soup with coconut milk and sauteed leek. This easy, silky soup is paleo, vegan, and Whole30 compliant.

This post is sponsored by The American Pecan Council





American Pecans officially introduced itself to 22 of the country's most influential media dietitians and nutrition experts during the 2017 Academy of Nutrition and Dietetics' Food and Nutrition Conference and Expo (FNCE) in Chicago. We hosted a creative multicourse pecan-inspired dinner at one of the city's top restaurants, offering insight about pecan nutrition to these key nutrition experts and showcasing the versatility of pecans through unique pecan dishes.

Texas pecan growers Winston and Kristen Millican attended the event and brought their authentic, first-hand grower and sheller stories to life. We also boosted awareness of the American Pecan's nutrition and health profile with the debut of our nutrition handout and sparked consideration for future relevant media opportunities with these key influencers.







In the fall of 2017, we partnered with nationally recognized registered dietitian, newspaper columnist and TV host, Ellie Krieger, to help bring the pecan harvest to life to Americans outside the pecan belt. Ellie traveled to Georgia, seeing the harvest firsthand and shared the experience with her large audiences via a two-part Facebook Live event. The Facebook Live broadcast gave viewers a front-row seat to the pecan harvest and

insight into the nut's nutritional benefits and rich heritage. After her time in Georgia, Ellie hosted a Facebook Live broadcast from her kitchen giving viewers the chance to ask questions about cooking with pecans and how they stack up nutritionally. Additionally, we tapped Ellie's nutrition expertise to drive awareness of pecans' nutritional benefits, which secured coverage in top-tier outlets like The Washington Post.

Throughout 2018, partnerships with registered dietitians fueled media coverage — in broadcast segments, national magazines and online — as accredited experts who could speak to the nutritional benefits of pecans. They helped drive education around pecans' heart health benefits, nutrition research findings and more. Coverage appeared in Men's Fitness, Reader's Digest, Good Housekeeping and Health, among other outlets. Broadcast segments focused on pecans in markets nationwide, including New York, Boston, Washington, D.C., and Nashville, Tennessee.







DIGITAL MARKETING



The complete story of The Original Supernut's health, taste and heritage is now an online destination

On average, more than 60,000 people visited AmericanPecan.com every month to learn about American Pecans and search for new pecan recipes.

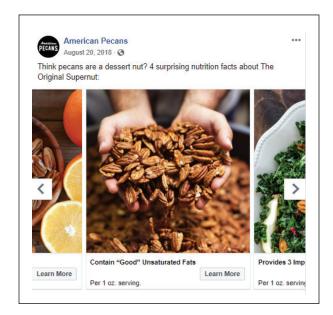
One of the APC's first priorities as a brand was to create an information hub, AmericanPecan.com, and a social presence for American Pecans. Our social channels enhance our earned efforts and expose the brand to more consumers. These platforms also allow us to focus on targeted audiences to craft specific messages that resonate and result in a more efficient and effective spend.

The website serves as our knowledge center where consumers, media and industry can find resources about pecans, including recipes, nutritional material and research findings. The site also includes a dedicated section for the industry, featuring the latest events, news,

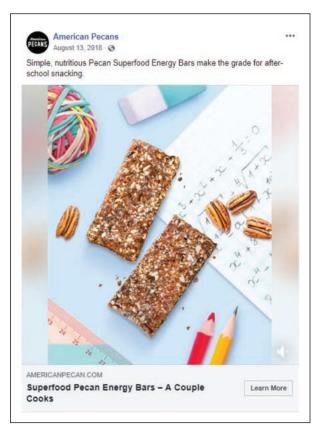
toolkits and more. We created a style guide for all American Pecans assets and channels; this brings the American Pecans brand to life in a visually consistent way across platforms.

Our social channels serve as our idea factory, where people get inspired about the many ways to use pecans and are driven to the website to learn more. Social channels also work to engage with our target audience in real time. We created a social presence across the four primary social platforms — Facebook, Instagram, Twitter and Pinterest — and we established Facebook and Instagram as primary channels based on where our target audience spends the most time.

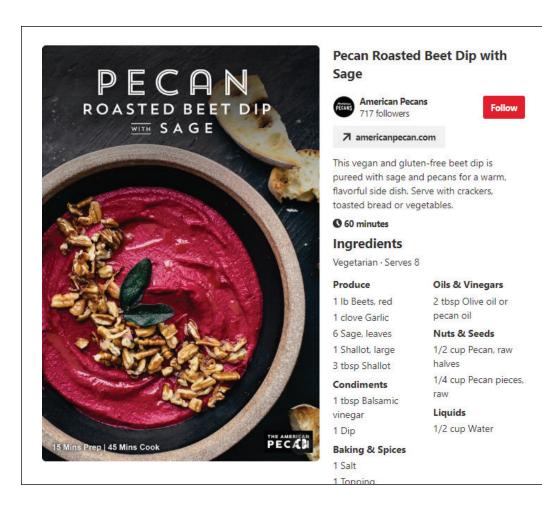
Facebook drives brand awareness through engagement and is the most sophisticated social targeting tool. It's also the most consistently used channel by our audience segments, making it central to our brand awareness goals. On Facebook, we share recipes, tips, user-generated content and more via videos, image carousels and still images.



Instagram is also a priority, driving brand awareness through visual storytelling. Our target audience segments spend a lot of time on Instagram, and because it is owned by Facebook, it has the same sophisticated targeting capabilities. Instagram features creative and compelling images, and it's the only channel that combines the "usage" messaging and visual storytelling for the food-obsessed audiences and influencers who flock there.









Pinterest and Twitter also play a role in engaging our audiences. Pinterest serves as our recipe box — it's where people get inspired to cook with pecans. On Twitter, we share pecans news and information, and we retweet relevant content.



Industry now has 350+ new tools to market American Pecans

Recipes, photos, nutrition materials, social media and brand use guides, plus videos, logos and social content are all accessible to you via AmericanPecan.com and American Pecan social channels.

Industry investment reached more consumers together than individual efforts ever could

APC is efficient with your dollars and puts them to work for you. For every 1,000 people reached, we've spent just \$7.21, which is on the low end of the industry average (\$7.10 to \$8.10 per 1,000).

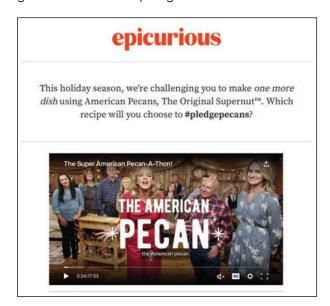
QUICK LOOK: 2018-2019 Consumer Marketing

The Super American Pecan-A-Thon

From flooding, devastating hurricanes and international tariffs, 2018 was a tough year for the pecan industry. With the industry making consumer headlines for reasons other than to tout the bounty of America's native nut, we put our growers center stage, literally. Our growers, along with social influencers and actress and comedian Wendi McLendon-Covey, came together to put on a topnotch show: the Super American Pecan-A-Thon.

The extravaganza, chock-full of recipes and entertaining ideas, shined a spotlight on the real families and farms behind The Original Supernut.

In partnership with Epicurious, a digital media powerhouse that our target audience turns to for meal and holiday inspiration, we encouraged Americans to tune in for the big show. Of course we shared recipes, stories and inspiration, but we also — most importantly — focused on driving purchase intent by asking viewers to #PledgePecans and make one more dish using American Pecans during the holiday season. In just six and a half weeks, we generated 11 million pledges.

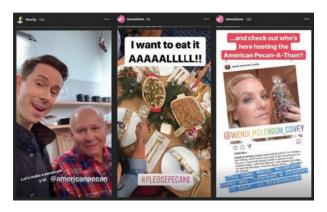














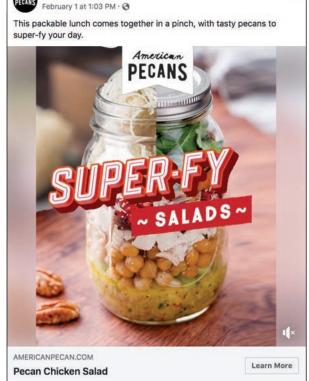
On Nov. 20, one of the most popular days of the year for online recipe searches, we launched the Super American Pecan-A-Thon on both AmericanPecan.com and Epicurious.com. The landing pages worked, with consumers spending almost double the amount of time on Pecan-a-thon content than other Epicurious custom content. And through precise and targeted paid efforts, the Pecan-a-thon drove 600 percent more users to AmericanPecans.com compared to The Original Supernut brand launch.

Pecan partners helped spread the Pecan-A-Thon love driving 57K+ engagements across Facebook, Twitter and Instagram. The industry rallied in support, and Wendi helped us secure celebrity and entertainment media buzz in 12 entertainment outlets, generating 28.3 million impressions. Local papers from coast to coast continued to inspire readers to pledge pecans throughout the 2018 holiday season. We generated 260.6 million impressions, with 74 percent of that coverage including nutrition messaging. Additionally, pecans increased share of voice year over year, from third in 2017 to second in 2018 – and, pecans were featured in twice as many headlines as almonds.









American Pecans

Super-Fy With American Pecans

The APC will springboard off the momentum of the Super American Pecan-A-Thon into the Superfy marketing campaign with a goal of showing Americans how to take any dish from standard to standout by adding The Original Supernut. 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 The Original Supernut is a hardworking ingredient that can make any recipe more nutritious and more delicious.

We're getting the word out through targeted paid social media posts that put wholesome and timely recipes featuring American Pecans in the social feeds of our key audience — meal-planning Gen X and Gen 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 continues as run digital ads with them and other Conde Nast-owned properties. The partnership also features shoppable ads that direct users to Amazon.com, where consumers can purchase pecans directly to super-fy their meals at home.

We're also capitalizing on high-search moments by promoting pecan-inspired recipes for specific holidays and cultural events. Consumers looking for appetizer ideas for their Big Game watch party or a heart-healthy option to serve their sweetheart on Valentine's Day (both fall during February, which is American Heart Month) will see superfied 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

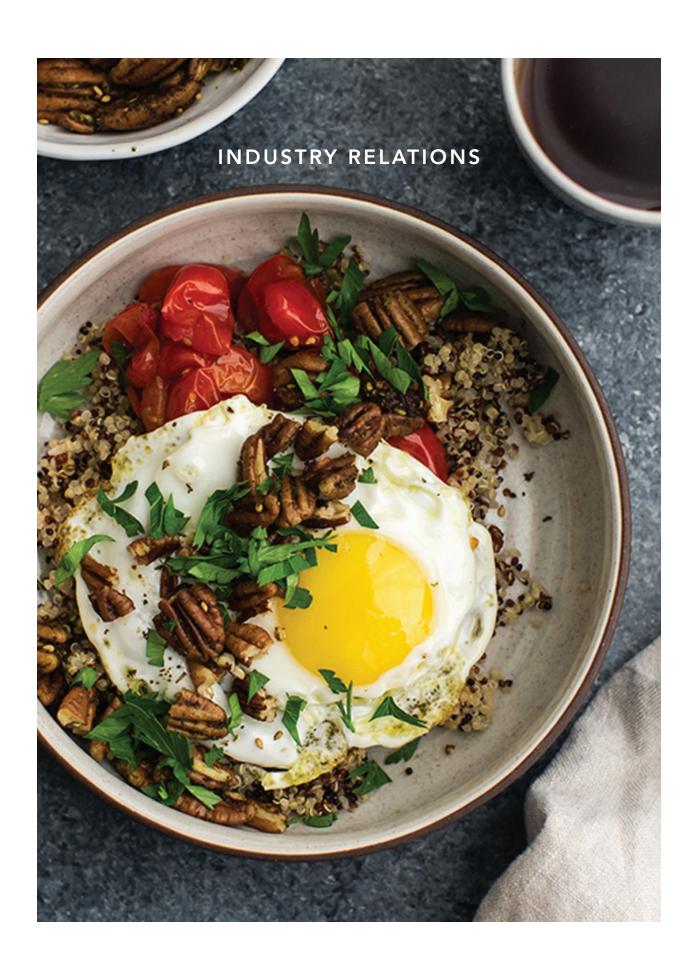
A new year means new resolutions, with many Americans committing to improve their health in 2019. While nutrition is top of mind, we are working to educate retail dietitians about the nutritional benefits of pecans for use in their point-of-sale efforts.

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 more 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 nutritional information, the toolkit makes it easy for supermarket RDs to put pecans in the grocery store spotlight.

Nutrition Research

With a keen eye on elevating our arsenal of nutrition research, we have partnered with Guy Johnson, PhD, of Johnson Nutrition Solutions to identify opportunities for pecan nutrition research and help us build out a strategic path as we work to fund the right studies to elevate The Original Supernut. As part of the initiative, Guy has conducted interviews with five leaders in the research community to solicit their opinions on research areas with the most potential. We want to focus on research where pecans are part of a unique or compelling story. With the help of these talented leaders, we are crafting an RFP for distribution within the industry, and more details will follow.



LISTENING: Feedback from industry across the Pecan Belt

The American Pecan Council remains steadfast to meet our goals to market American Pecans to consumers as well as to provide new tools for industry to promote their own businesses. To accomplish this and best serve industry, the APC is building relationships with industry stakeholders. Advocacy begins with understanding, and within the first few months as an organization, the APC went into the orchards and processing plants to meet with the people who are on the ground and fuel the American pecan industry.

Following immersion trips to the Western, Central and Eastern regions in 2017, APC staff, Council members and agency partners continued to visit industry across the pecan-growing states. These visits served as an opportunity to listen and learn from industry, to make sure we had a clear understanding of the values, concerns and priorities for growers and shellers across the culturally and geographically diverse pecan industry.

In addition to the relationships formed during the tours and other in-person visits, we engaged one-

on-one with those who reached out to the APC directly. Both phone calls and incoming messages to our industry-exclusive email, industry@ americanpecan.com, allowed us to answer questions, consider comments, address concerns and offer resources throughout the year. As our program continues to grow, we are committed to keeping direct lines of communication open and encourage candid feedback. This serves to inform and inspire our work for years to come.





SHARING: Informing industry about APC and latest successes

As nationwide marketing efforts rolled out, the APC also dedicated program resources to communicate our strategy, tactics and results to the industry. We exhibited at 10 industry events in 2018, presenting marketing work and connecting one-on-one with attendees. Following our consumer brand launch of American Pecans, The Original Supernut™ in April 2018, we debuted a new booth, complete with items featuring our new brand to foster excitement and encourage adoption among industry. These trade shows gave us unique opportunities: to excite the industry, share recent marketing results, connect with industry members across the nation and ask for their thoughts to help inform future strategic initiatives.

We also launched an editorial content program to publish APC updates in Georgia Pecans, Pecan South and West Coast Nut. Each article shares the inspiration and strategy behind our latest marketing work and gives readers the chance to hear directly from APC staff and council members. We also nurtured relationships with agriculture trade media so they had the latest APC news to include in upcoming coverage.

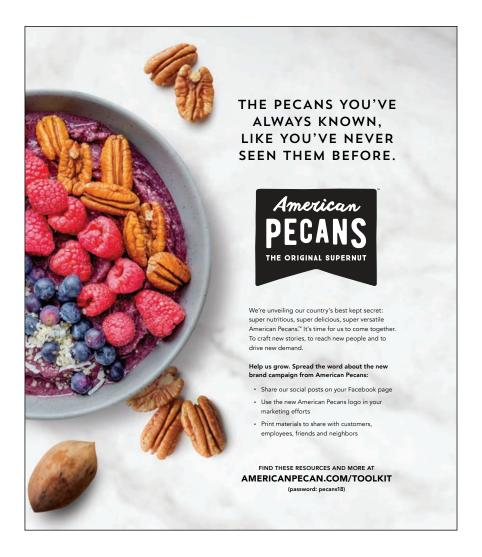
We released the Year One IMPACT Report in September 2018 to highlight both the successes and impact of our marketing efforts in 2017.

GEORGIA PECANS











INDUSTRY OUTREACH &

EVENTS: Engaging with valuable stakeholders, like YOU, across the pecan belt!

OCTOBER 2017

October 6, 2017 – Council Meeting Call – There was a recommendation of the Governance Committee and Finance Committee Chairman to include in the 2018 Budget a line item to appropriate the cost of employing a search firm to conduct a search for an Executive Director of the American Pecan Council.

October 13, 2017 – Council Meeting Call – There was a recommendation from the Marketing Committee, Chairman Bruce Caris to approve the Weber Shandwick Proposed Budget SOW Phase 3.

NOVEMBER 2017

November 7, 2017 – Eastern Immersion Tour – The American Pecan Council along with our global marketing firm, Weber Shandwick (WS) wrapped up their final immersion tour in the Eastern region in Macon, GA where we toured orchards, cleaning facilities, and shelling plants. There was an immersion tour conducted in the Western, Central, and Eastern regions so Weber Shandwick could gain valuable knowledge and insight about the pecan industry, and the differences by region. The experience was very useful for WS as they developed the marketing strategy for the American Pecan Council.

On the first day, we visited Mason Pecans, Lane Southern Orchards, Easterlin Pecan Company, and Ellis Brothers Pecans. We ended the day in Tifton, GA with a dinner and marketing update presentation from Weber Shandwick.

We continued the tour November 8, 2017 where we visited Hudson Pecan Company, Shiloh Pecan Farms, and Sunnyland Farms. The tour ended in Albany, GA with a dinner and marketing update presentation from Weber Shandwick.

Overall, the final immersion tour was a success. Weber Shandwick had the wonderful opportunity to witness harvest in full swing and learn more about pecan production in the Eastern region. As harvest is the busiest time in the year for the pecan industry, APC staff greatly appreciated the time and each stop.

JANUARY 2018

January 22-24, 2018 – General Council Meeting – APC discussed the 2016 and 2017 assessment collections, office and executive director search updates, financial report, APC official reporting forms, and approval of the Funding Request Proposal. Other topics of discussion included booths at the association meetings and USPGC 2017 funding report. Weber Shandwick provided a presentation regarding the current and upcoming marketing efforts as well as announcing that pecans have been certified by the American Heart Association (AHA) and the official brand launch for American Pecans in April.

MARCH 2018

March 14-15, 2018 - NPSA Mid-Winter Conference – APC staff, two Weber Shandwick team members and several APC council members manned the APC booth during the conference. APC staff and Bruce Caris, Chairman of the Marketing Committee delivered a presentation regarding APC's recent progress and activities. At the end of the presentation, APC had enough time to answer questions and provide insight on activities.

March 26-28, 2018 - GPGA Conference – APC staff, two Weber Shandwick team members and several APC council members staffed the APC booth throughout the conference. APC staff delivered a presentation regarding how to maintain compliance with the Federal Marketing Order. Weber Shandwick also gave a presentation on marketing updates and "Your Dollars at Work. APC continued to encourage registration of growers/shellers as well as educate local constituents on the purpose of the APC, the forthcoming brand launch and first-handler protocols.

APRIL 2018

April 2018 – South Carolina Spring Meeting – APC staff attended South Carolina Pecan Spring Meeting, presented APC update and WS marketing update and presentation.

April 16-17, 2018 – General Council Meeting – APC approved funding request proposal presented by the Funding Request Panel, the financial report, and previous meeting minutes. There were staff and office updates, committee reports, and a marketing update from Weber Shandwick regarding advertisement, social media, blogging, and further reaching marketing demonstrations, the review of budget expenditure and the cost placements, and future efforts with the third phase beginning and 2019 calendar planning. With the consumer facing brand launch around the corner, WS unveiled the consumer facing brand launch to the Council Members.

MAY 2018

May 10, 2018 – Council Meeting Call – APC discussed the reallocation of funds along with the marketing & research budget. APC moved to approve the Weber Shandwick Scope of Work (SOW).

JUNE 2018

June 14-16, 2018 – OPGA Convention – APC staff attended the OPGA convention at the Downstream Casino Resort in Quapaw, OK. Mike Adams, Chairman and APC staff presented an update on the American Pecan Council. Weber Shandwick also presented an Investment Dollars at Work: Marketing Update.



June 21-22, 2018 – Tri-State ArkLaMiss
Pecanference: Raymond, MS – APC staff attended the Tri-State Pecanference. Mike Adams,
Chairman, presented an American Pecan Council update, and Weber Shandwick provided a marketing update presentation.



JULY 2018

July 15-18, 2018 – TPGA – The American Pecan Council (APC) attended the Texas Pecan Growers Association's annual meeting on July 14 – 17. The event provided an opportunity for the APC to meet with several members of the industry and discuss the latest activities taking place with the 18-month old federal marketing order. During the meeting, APC hosted a couple of seminars to answer questions and assist handlers in filling out the new federally mandated pecan reporting forms and assist with compliance. APC staff also hosted private one-on-one training to assist handlers and accumulators in reporting pecan data properly.

In addition, APC had a booth that showcased its latest marketing materials and programs to the industry. Weber Shandwick provided an update on the APC activities, showing that the new 21st century billboards are through digital media and held in the palm of our hands, aka cell phones. Thanks to the APC's marketing efforts, over 290 million people were reached in a small span, with lots of recipes, health information, utilizing pecan marketing materials and information.

July 30, 2018 – USDA Compliance Review - On July 30 – August 3, the American Pecan Council had its USDA compliance review. The review is a mandatory component of the Federal Marketing Order and reviews all aspects of the order including: internal controls, travel, anti-trust, handler visits and audits, and APC activities to name a few.



AUGUST 2018

August 24, 2018 – AZPGA - On August 23 – 24, 2018, the American Pecan Council attended the Arizona Pecan Growers Annual Conference in Tuscon, AZ. During the Conference, the APC presented an update on several APC activities. These included updates on outreach to the industry, marketing activities, research, standards, statistics, and upcoming programs such as strategic planning. Other topics included cultural practices, pests and disease issues, and soil health.

August 30, 2018 – General Council Meeting - On August 30, 2018, the American Pecan Council held a full Council meeting. The successful meeting saw the Council update its by-laws and internal control policies while putting into place several new policies that will assist the industry in directing funding, employees, and overall operations of the Council. Special thank you to USDA for assisting the APC in identifying a few areas that were strengthened as a result of the compliance audit. Other items adopted during the meeting included the approval of the Council's 2018-2019 budget.

SEPTEMBER 2018

September 5-7, 2018 – Asia Fruit Logistica - On September 5 – 7, Executive Director Alex Ott attended the Asia Logistica Trade Show. Asia Logistica is the second largest trade show, behind Fruit Logistica and is focused on Asia markets. During the event, APC met with several representatives of several countries to gather information on the impacts of the latest tariffs and market conditions as it relates to pecans and other nut crops. Additionally, the event provided an opportunity to meet with several other commodity programs to see how other programs are being impacted by the trade situations. It should be noted that there was interest into existing and new markets for pecans. However, further information and market analysis is needed to see if these are markets that will bring additional movement for pecans. APC will continue to update the industry on new and existing markets and how these are changing for the positive or negative due to the challenges globally.

September 13-14, 2018 – NPSA Annual Meeting - On September 13 & 14, the American Pecan Council updated the National Pecan Shellers Association on the activities and marketing programs the American Pecan Council (APC) is conducting for the 2018 – 2019 year. By attending the show, it provided the APC an opportunity to look for synergies to promote the industry's crop in a unified message. Additionally, it allowed APC to communicate the importance of working together and getting good data for the industry to utilize. Special thanks to Jon Krueger, the new Executive Director of the National Pecan Shellers Association, for the opportunity to present at his annual meeting.

September 20, 2018 – Alabama Pecan Growers Associations Annual Meeting – APC staff presented at the Alabama Pecan Growers Association Annual Meeting to update industry members on APC progress and current activities. APC staff answered and addressed questions that arose during the meeting.



September 26, 2018 - USDA/Agriculture Promotion Groups' Educational Showcase - On September 24, the American Pecan Council met with several divisions within USDA to discuss opportunities offered under the Chinese tariff mitigation program. In July, China imposed significant tariffs on the pecan industry. As a result of the tariffs, the Trump Administration authorized \$12 billion in mitigation measures to assist all commodities that have been impacted. Under the mitigation programs, the American Pecan industry received over \$16 million in purchase programs for the industry. The APC met with several officials that oversee this program to get additional information on how the program will be administered.

APC WORKSHOPS: Educating Industry

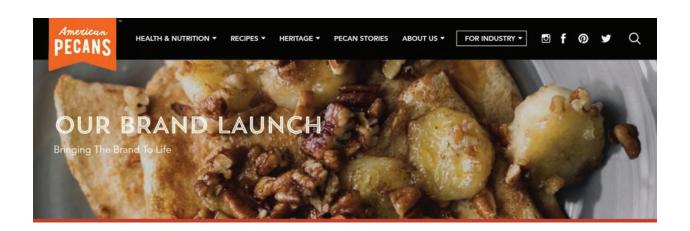
Every year, APC staff conducts Handler Regulatory & Reporting Courses to educate industry members about the federally mandated reporting forms and assist handlers of pecans with compliance to the Federal Marketing Order. Questions from industry members are answered during a live walk through of the Handler Portal and reporting forms found on the American Pecan website. In addition, these workshops delve into the purpose of Federal Marketing Orders (FMO), the many tools available to industry that are unique to FMOs, and how industry can use the marketing and promotional materials available for their use. The goal is to provide education and training for compliance activities required by Federal Marketing Order 986, including: Reporting Forms, Handler Visits, and Handler Audits.







EQUIPPING: Providing tools and resources for industry



APC not only supports industry by promoting American Pecans to consumers, but also offers industry-specific information, tools and resources they can use to the benefit of their own business.

In spring 2018, we launched the exclusive Digital Toolkit for Industry, an online, password-protected hub on AmericanPecan.com. This membersonly portal serves as a rich archive for reference materials and detailed brand information, as well as a hub for creative assets to download and post for social media and individual marketing efforts. This includes dedicated pages for each consumer marketing campaign, including the brand launch, that explain our methodology for each initiative and feature customized supplemental content available for use. This gave members an easy way to find and feature these new assets on their own websites, social media and packaging.

To answer the industry's call for more frequent updates, we launched In A Nutshell, a biweekly APC e-newsletter, in July 2018. Subscribers receive relevant industry news, including conference schedules and planned orchard visits, as well as marketing initiative updates, additions to the

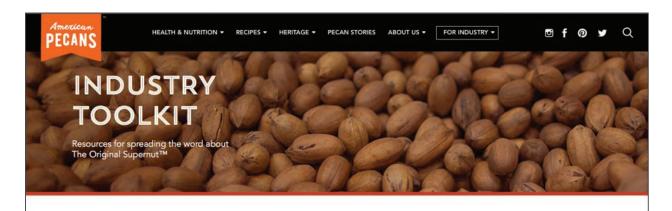
digital toolkit, and key information about forms and regulatory matters. The newsletter is a simple yet effective way to introduce our efforts to a wider audience.

66

Looking at the website,
documents and information –
it's awesome! Love it!
I will add the logo
to my packaging, social
media and more.

- TEXAS PECAN GROWER

99



WELCOME TO THE AMERICAN PECANS™ DIGITAL TOOLKIT FOR INDUSTRY

We are thrilled to officially launch the American Pecans, The Original Supernut™ brand with a first-ever national campaign to help consumers realize that pecans are super nutritious, super delicious and super versatile. This campaign is in direct service to the American Pecan Council's goals of increasing demand for U.S. pecans, both domestically and abroad, and competing with other major tree nuts that have benefited from industry-funded campaigns.

This new brand isn't just for consumers – it's a rallying point for the whole pecan industry and the most recent milestone since our Federal Marketing Order was approved.

In this toolkit, you can discover more about how to use the brand that you helped build.

We've assembled information on the new American Pecans brand, including key details and dates for our brand roll-out, resources you can reference when communicating about or using the brand, and content you can share.

So help us grow. Spread the word about American Pecans' new brand campaign by sharing our content on your social channels, using the new American Pecans logo in your marketing materials, or printing materials to share with employees, friends and neighbors.

We hope you find the information and materials useful, and please reach out to us with any questions – industry@americanpecan.com or 817-916-0020.

OUR NEW BRAND

MEET AMERICAN PECANS, THE ORIGINAL SUPERNUT





Issue No. 1 JULY 2018



APC Board members and staff, alongside representatives from USDA and Weber Shandwick, take time to meet with growers about the APC

APC ATTENDS TPGA

The American Pecan Council (APC) attended the Texas Pecan Growers Association's annual meeting on July 14-17. The event provided an opportunity for the APC to meet with several members of the industry and discuss the latest activities taking place with the 18-month old federal marketing order. During the meeting, APC hosted a couple of seminars to answer questions and assist handlers in filling out the new 2017 APC pecan reporting forms. APC staff also hosted private one on one trainings to assist handlers and accumulators in reporting pecan numbers.

In addition, APC had a booth that showcased its latest marketing materials and programs to the industry. Weber Shandwick provided an update on the APC activities, showing that the new 21st century billboards are through digital media and held in the palm of our hands, aka cell phones. Thanks to the APC's marketing efforts, over 290 million people were reached in a small span, with lots of recipes, health information, utilizing pecan marketing materials and information. APC will continue to update its members on the activities of its marketing programs.

Lastly, anyone who needs additional information or has questions about filling out their forms, please contact the Council office at (817) 916-0020.

2017 SEASON WRAPPING UP

The American Pecan Council (APC) is beginning to wrap up collecting data and organizing it for information distribution. In 2016, the industry voted to begin the Federal Marketing Order (FMO). As a result, assessments were collected for the 2016 season. In 2017, forms were created to reflect the collection of the crop. However, to properly account for the data, handlers had to report their 2016 data on the 2017 forms. Additionally,

the 2017 crop had to be reported as well. This made for a large task for the industry in understanding the forms and how to properly report. APC really appreciates the industry's cooperation and patience. However, throughout this process, the industry is getting a better understanding on how to properly fill out the forms to gather good and accurate data. Currently, staff is finalizing the 2016 data. Additionally, with the 2017 fiscal year and crop coming to an end, the industry is in the process of tabulating those numbers and assisting the industry with any last-minute questions.

To date, there have been several questions surrounding the forms and how to make them simpler. Thanks to your feedback and suggestions by the industry, the APC is in the process of reviewing the forms and plans to look at making the forms more "user friendly". In the meantime, should you have any questions regarding the forms, please contact Emma Garner at the Council office.

TRUMP ADMINISTRATION PROPOSES \$12 BILLION IN RESPONSE TO TARIFFS

On July 6, 2018, China announced an increase in its pecan tariffs from 22 percent to 47 percent. The increased tariff is due to retaliate against the increased tariffs from the U.S. Although Pecans are not named specifically in the tariff, pecans are classified under the "other nut" category and are placed in the 47 percent tariff category. On July 24, 2018, the U.S. Secretary of Agriculture Sonny Perdue, announced that the U.S. Department of Agriculture (USDA) will take several steps to assist farmers in response to trade damage from unjustified retaliation. President Trump directed the Secretary to develop a short-term relief strategy to protect agriculture. Specifically, USDA will authorize up to \$12 billion in programs, which is in line with the estimated \$11 billion impact of the retaliatory tariffs on U.S. agricultural goods. USDA outlined specifically which following programs will be used to assist farmers. These programs include the Market Facilitation Program, a Food Purchase and Distribution Program, and the Federal Trade Promotion Program.

On a side note, APC will continue to enhance its domestic promotion to increase demand for the local market. For additional information, please contact the APC office.

APC NEW EXECUTIVE DIRECTOR TAKES THE HELM

On July 1, 2018, Alexander Ott took the helm of the American Pecan Council (APC). Alex comes to the APC with over 14 years of experience in state commission and federal marketing

order experience. Prior to the APC, Alex was the Executive Director of the California Apple Commission, the California Blueberry Commission, the California Blueberry Association and the California Olive Committee. Although he only started on July 1, Alex has already attended the Oklahoma Pecan Growers Association Convention, the Tri-State Convention and just recently the Texas Pecan Growers Association conference. Please take a moment and welcome Alex Ott to the APC.

STRATEGIC PLANNING RFP

The American Pecan Council (APC) has announced a Request for Proposal (RFP) for a strategic planning facilitator. The purpose of the meeting will be assist the APC in developing a 3-5 year strategic and organizational plan based on a ten-year outlook. Once approved, the APC will have measured objectives that will help guide the industry in developing and moving the pecan market forward. APC will continue to update the industry as the planning gets underway. For information about the RFP, please contact the APC office.

CALENDAR OF EVENTS

Arizona Pecan Growers Annual Meeting August 23-24, 2018

> **APC Board of Directors Meeting** August 30, 2018

> > Georgia Pecan Field Day September 6, 2018

Asia Fruit Logistica September 5-7,2018

National Pecan Shellers Association 2018 Annual Meeting September 13-14, 2018

> Tri Agri Farm Center Event September 25th, 2018

Western Pecan Production Short Course October 15-17, 2018

New Mexico Pecan Growers Meeting November 2, 2018



American Pecan Council

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ESTIMATED CROP FOR 2018 PROJECTED

During the Texas Pecan Growers Association (TPGA) conference, a projected 2018 crop was presented. Chairman of the TPGA, Lalo Medina, announced the 2018 pecan crop at 303 million pounds. This is very similar to the Tri-State prediction of 300 million pounds presented to the industry last month. The following outlines the estimates by states:

State	Tri-State (2018) Millions of	Texas (2018) Millions of	
	lbs.	lbs.	
Alabama	3.0	5.0	
Arizona	24.0	25.0	
Arkansas	1.0	1.5	
California	6.0	5.5	
Florida	.5	1.0	
Georgia	115.0	110.0	
Kansas	.5	.5	
Louisiana	10.0	10.0	
Mississippi	3.5	3.0	
Missouri	0.5	0.5	
New Mexico	65.0	62.0	
Oklahoma	17.0	16.0	
South	.05	1.0	
Carolina			
Texas	53.0	60.0	
Other States	.05	1.5	
TOTAL U.S.	300.0	303.0	

APC will continue to monitor the crop and report as numbers are reported. Have a great season!

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Issue No. 2 AUGUST 2018



Pecan-Crusted Asian Turkey Meatball Lettuce Wraps from APC partner
The Defined Dish.

ENLISTING FOOD BLOGGERS TO DRIVE AWARENESS AND USAGE

Consumer research shows that pecans have been viewed primarily as a pie ingredient. To change the way people think about and eat pecans, we are inspiring people to use pecans in their weekly meal planning. And we've enlisted well-known food bloggers and recipe developers to help.

Our newest Pecan Partners include Half Baked Harvest, Running to the Kitchen, The Modern Proper, and The Defined Dish. These partners have a combined audience of more than 2 million followers on their blogs and social media channels, where they are sharing pecan recipes through social posts, videos, GIFs and more.

The APC uses partner content on its own social and online channels, and we encourage you to do the same. You might just find inspiration for your own weeknight meal planning.

Be sure to check out some of the newest recipes including Superfood Pecan Energy Bars and Pecan-Crusted Asian Turkey Meatball Lettuce Wraps.

We are also partnering with credentialed nutrition experts to reinforce pecans' nutrition benefits. Our new partners include Holley Grainger, Jackie Newgent and Toby Amidor. Each are regularly featured by food and health-focused

media. Stay tuned for updates on upcoming TV viewing opportunities, so you can see these experts in action!

PUTTING THE ORIGINAL SUPERNUT ONBACK-TO-SCHOOL MENUS

Many parents across the country have one thing on their minds – getting their kids back to school. In fact, "back to school" is the tenth-highest Google search over the last two weeks! It's a perfect opportunity for American Pecans to help refocus on nutritious choices and fresh fall flavors.

Be sure to check out and share the national 7 Day Menu Planner column, which includes Sheet Pan Pecan-Crusted Salmon. The inspiring list of recipes continues to be shared by media from coast-to-coast, with a combined readership of more than 800,000 to-date. That's a lot of people who are learning that pecans are for more than pies!

We will continue back-to-school menu planning on Friday, August 17 as we conduct TV interviews across the country. The APC is partnering with lifestyle expert Terra Wellington, and popular brands, to host local TV segments featuring pecans as a "must-have" menu add as families work to get back into a routine with the start of school. We'll keep you posted on tune-in information.

You can find more featured recipes in Tennessee's <u>Paris Post Intelligencer</u> and on USA Today's The Food Channel, which recently posted the <u>Pecan Superfood Tacos</u> and Classic Chicken Salad with Pecans.



Our Superfood Pecan Tacos recipe appeared on USA Today's The Food Channel.

SERIOUS EATS, SIMPLY RECIPES PROMOTE #NOTJUSTPIE RECIPE CONTEST WINNER

Following the launch of The Original Supernut, we held our #NotJustPie recipe contest on Instagram and Twitter, asking for recipes that showcased creative ways to use pecans beyond the classic pecan pie. After receiving entries from across the country, we selected a pecan-inspired twist on Nashville hot chicken as the winning recipe.

Our winner, Crystal Schlueter of <u>@HomeOnTheIronRange</u>, used pecans in not just one part of her recipe but three: pecan-crusted chicken drizzled in pecan oil along with a pecan pesto. The winning recipe was made into an easy-to-share video and posted on recipe websites, <u>Serious Eats</u> and <u>Simply Recipes</u> – two top online resources for our target audience – reaching more than 3.3 million people.



Our winning recipe for pecan-crusted Nashville Hot Chicken.

ENGAGING WITH YOU

We enjoyed seeing many of you at last month's TPGA Annual Conference, and hope you were able to catch our presentations outlining our marketing results to-date.

We will be at several events in the weeks ahead, and look forward to connecting in-person. Later this month, the APC will have a booth at the Arizona Pecan Growers Annual Meeting (August 23-24). If you're planning to make the trip to Tucson, please stop by to say hello.

Additionally, we will share updates at the National Pecan Shellers Association Annual Meeting, September 13-14 in Coronado, CA. Stay tuned for details on additional events and opportunities to meet with the APC.

Arizona Pecan Growers Association Annual Meeting

August 23-24, 2018

American Pecan Council Meeting August 30, 2018

Georgia Pecan Field Day

September 6, 2018

Asia Fruit Logistics September 5-7, 2018

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National Pecan Shellers Association 2018 Annual Meeting

September 13-14, 2018

Alabama Pecan Growers Association
Annual Meeting

September 20, 2018

Tri Agri Farm Center Event September 25, 2018

Western Pecan Production Short Course October, 15-17, 2018

New Mexico Pecan Growers Meeting November 2, 2018



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Issue No. 3 AUGUST 2018

MITIGATION MEASURES SOON TO BE ANNOUNCED

Last month, the President announced a \$12 billion package to assist industries impacted by the Chinese tariffs. The Secretary of Agriculture, Sonny Perdue, announced that the US Department of Agriculture will take several steps to assist farmers in response to trade damage from the retaliation. USDA outlined the assistance may be provided through the Market Facilitation Program, Food Purchase and Distribution Program, and the Federal Trade Promotion Program. Currently, the American pecan industry has a 47% Chinese tariff in place.

Specifics of the programs are still being finalized. Additionally, USDA will determine how the commodities will be assisted and how much for each sector.

On a side note, those wishing to become part of the Commodity Procurement Program may sign up through the USDA's Agricultural Marketing Service. This program provides an opportunity for the industry to sign up as a vendor and then, through a competitive process, provide an opportunity to sell products to the USDA. For more information or to view the schedule of webinars that outline the program, please go to the Commodity Procurement webpage at:

https://www.ams.usda.gov/about-ams/programs-offices/commodity-procurement

or contact jeffrey.davis4@ams.usda.gov.

The APC will continue to monitor this issue as it is prepared for announcement.

APC ATTENDS ARIZONA MEETING

On August 23 – 24, 2018, the American Pecan Council attended the Arizona Pecan Growers Annual Conference in Tuscon, AZ. During the Conference, the APC presented an update on several APC activities. These included updates on outreach to the industry, marketing activities, research, standards, statistics, and upcoming programs such as strategic planning. Other topics included cultural practices, pests and disease issues, and soil health.



APC Staff and USDA conduct first compliance review

FIRST USDA COMPLIANCE REVIEW FOR APC COMPLETED

On July 30 – August 3, the American Pecan Council had its USDA compliance review. The review is a mandatory component of the Federal Marketing Order and reviews all aspects of the order including: internal controls, travel, anti-trust, handler visits and audits, and APC activities to name a few. For being an 18-month old organization, the APC faired well with its compliance. The APC will review several of the items outlined by USDA and make the necessary amendments to its current policies and procedures.

APC BEGINS COMPLIANCE HANDLER REVIEWS

The American Pecan Council has begun its annual handler reviews. As mandated under the Federal Marketing Order, it is required that the APC conduct handler reviews to ensure that the industry is properly reporting assessments and information required by the forms. The APC continues to assist the industry in understanding how to fill out the necessary information. All proprietary information is kept securely and cannot be shared with anyone. For information about forms, or how to fill out the forms properly, please contact Emma Garner at the Council office.

WELCOME ABOARD JEFF SMUTNY

The American Pecan Council (APC) is pleased to welcome Jeff Smutny as its new Director or Regulatory and Marketing Affairs. Prior to accepting the new role at APC, Jeff served as Western Regional Director for USDA, which oversees several Federal Marketing Orders. Additionally, Jeff served as the Assistant Division Director in Washington DC for USDA and was a field specialist for Federal Marketing Orders. Jeff also served as Vice-President of Marketing with the California Tree Fruit Agreement, in which he lead both domestic and international marketing programs of over \$11 million. Jeff brings to APC an expertise in USDA compliance, marketing, and regulatory affairs. Please take a moment to welcome aboard Jeff Smutny.

COUNCIL SET TO MEET AUGUST 30, 2018

On August 30, 2018, the American Pecan Council (APC) will meet at the Hyatt Regency at the DFW Airport. Agenda items include: Industry Relations, Governance, Standardization, Research, and Marketing. The Council will focus on budgets for these areas for the 2018 – 2019 season. Additionally, the Council has put out a Request For Proposal (RFP) for strategic planning. For additional information, about the APC meeting, please contact the Council office.

WE WANT TO HEAR FROM YOU!

Do you have an opinion you wish to share, or want to comment, both good or bad, about APC activities? We want to hear from you. Go to our website and let us know. We have also set up an annyonomus portion for those that wish to comment but not say who you are. Go to www.americanpecan.com.



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CALENDAR OF EVENTS

APC Board of Directors Meeting August 30, 2018

> Georgia Pecan Field Day September 6, 2018

> > Asia Fruit Logistica September 5-7,2018

National Pecan Shellers Association 2018 Annual Meeting September 13-14, 2018

Alabama Pecan Growers Association Meeting September 20, 2018

> Tri Agri Farm Center Event Oklahoma September 25th, 2018

USDA Ag Promotions Showcase Washington, DC September 26, 2018

Western Pecan Production Short Course October 15–17, 2018

New Mexico Pecan Growers Meeting November 2, 2018

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Issue No. 4 SEPTEMBER 2018

USDA ANNOUNCES PECAN PURCHASES

We want to ensure that each of you has seen the update from the USDA Agricultural Marketing Service about the purchase on pecan products to mitigate the impacts of trade damage. More than \$16,000,000 will be used to purchase pecans for distribution to various food nutrition assistance programs. For more information on the program and requirements for eligibility as a contractor, visit the <u>USDA website</u>. The APC will continue to provide updates on trade relief as information is made available.

YOUR MARKETING DOLLARS AT WORK

The American Pecan Council recently completed the first year of its consumer marketing efforts – the first such industrywide program for the American Pecan industry. We are proud of what we have achieved since marketing efforts kicked off last year, and while there is still much to accomplish, we are grateful for your trust and support as we work to raise consumer awareness of – demand for – The Original Supernut. As stewards of industry resources, we're committed to providing timely updates on your marketing dollars at work. Read on for a year in review.

To drive demand, we know we must get consumers thinking about pecans in a new way; therefore, much of our efforts have been focused on showcasing the delicious and diverse uses of pecans, in addition to touting their nutrition benefits. To this end, we have significantly increased the amount of news stories about pecans. America's native nut appeared in more than 4,100 newspaper and TV stories in the last year – that's more than five times the previous year. Through all of our efforts, marketing spend has been \$7.21 per every 1,000 people reached – on the low end of industry average (\$7.10-\$8.10).



Buffalo Pecan Pimento Cheese recipe, courtesy of The Defined Dish

By partnering with influential food bloggers and registered dietitians, we are reaching a large audience of consumers eager for recipe ideas. In fact, our recipe and nutrition partners have a combined following of more than 24 million. Read on to learn

how you can use their recipes and photos for your own business and personal use. You can also read more about the APC marketing strategy in a recent conversation with Pecan South. Interested in more? Get your copy of the full report by emailing the APC at industry@americanpecan.com.



MEDIA HIGHLIGHT: BACK-TO-SCHOOL COVERAGE

Last month, we told you about our back-to-school campaign focused on getting American Pecans into more lunchboxes as kids head back for the new year. As students in 29 million U.S. households returned to school, it was a timely opportunity to position American Pecans as an essential part of any school supplies checklist.

In order to tell the story of The Original Supernut — while also reaching households with school-age children — we participated in school-themed media interviews from coast to coast. With the help of lifestyle expert Terra Wellington, we shared American Pecans' nutrition story and three American Pecan recipes (Green Apple Pecan Smoothie, Superfood Pecan Energy Bars and Pecan Parmesan Crusted Chicken) on local TV and radio stations throughout the country. The result was 480broadcast and online media stories, including several in large markets such as Los Angeles, Philadelphia and Houston.

RESOURCES FOR YOU

Every member of industry should reap the benefits of the national marketing campaign. Our goal is for the latest resources and research to help bring pecans to life for your customers, corporate buyers, and beyond. While you can always find images, recipes, and social content for your use on our website and social channels, if you are interested in taking things offline, there are several printed resources available to bring The Original Supernut into the conversation.

The **Nutrition Handout** is a multi-page guide to all of the natural benefits the pecan offers, based on the latest studies.

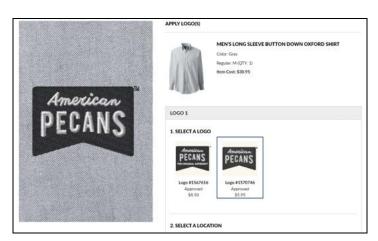


The **American Pecans Fact Sheet** is a quick round up of information that people say they are interested in learning about The Original Supernut – including the pecan's native history, nutrition highlights, and suggestions on how to use them in new ways.

The American Pecan Council Pocket Guide is a quick resource for understanding both the APC, and the American Pecans brand, with brief bullets and top-of-the-line information perfect for reference on-the-go.

Downloadable versions of each of these can be found on the AmericanPecans website. Simply visit AmericanPecan.com/toolkit (password: pecans18), download the file and either print at home or bring to a professional printer.

In order to equip industry with resources, the APC is offering 50 professionally printed copies of both the nutrition handout and fact sheet FREE to industry members who request them. If you would like to order copies to be shipped to you, please email the APC office at industry@americanpecan.com. So far, we have received positive feedback on these resources and hope you find them to be useful as well, whether you are distributing in shipments, in a storefront or at a local farmers' market.



ORDER YOUR OWN AMERICAN PECANS GEAR

We have heard your interest in owning American Pecans apparel and branded items, and are thrilled about the enthusiasm for the new brand. The American Pecan Council is excited to announce our partnership with Lands End, making it even easier to proudly display the American Pecans brand.

Through the "American Pecans" Lands End online site, you can add the American Pecans embroidered logo to any eligible Lands End item, from hats and vests to polos and pullovers. The logo is available for embroidery with and without 'The Original Supernut' tagline.

You can visit the online shop to order your American Pecans gear here. 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, or email us a photo at industry@americanpecan.com.

APC ON THE ROAD

We hope those of you who attended last month's Arizona Pecan Growers Annual Meeting in Tucson got the chance to meet our Executive Director, Alex Ott, and stop by our booth. We continued our event presence this week at the National Pecan Shellers Association Annual Meeting near San Diego, where Alex and representatives from our Weber Shandwick marketing team gave an update on APC activities to date and a preview of our path forward into 2019.

Next up, the APC will be in Fairhope, AL to present at the Alabama Pecan Growers Association Annual Meeting (September 20), before heading to the USDA/Agriculture Promotion Groups' Educational Showcase in Washington, D.C. (September 26). We look forward to meeting you! Please stop by the booth and introduce yourselves, share your feedback, and allow us to get to know you.

If you are a member of the industry and have an event you would like us to add to our <u>Industry Events</u> calendar on the website, please email us at industry@americanpecan.com.



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Issue No. 5 SEPTEMBER 2018



American Pecan Council staff attend USDA Showcase in DC

APC SHOWCASES PRODUCTS BEFORE USDA REPRESENTATIVES

On September 26, 2018, the American Pecan Council participated in an Agricultural Round Table Showcase in Washington D.C. The purpose of the show was to showcase the importance of Federal Marketing Orders and Research and Promotion (R&P) programs, and their role for the industry. Several commodity programs demonstrated recipes, showcased product, and relayed several success stories that have assisted their industry. Information was provided to attendees, showing the importance of product development, promotion, statistics, research, standardization, and compliance. Additionally, the event provided an opportunity for all federal programs to share and discuss information amongst the group. APC is a member of the Agricultural Round Table and looks forward to continuing to work with other agricultural programs in the months ahead.

APC MEETS WITH USDA

On September 24, the American Pecan Council met with several divisions within USDA to discuss opportunities offered under the Chinese tariff mitigation program. In July, China imposed significant tariffs on the pecan industry. As a result of the tariffs, the Trump Administration authorized \$12 billion in mitigation measures to assist all commodities that have been impacted by China's actions. Under the mitigation programs, the American Pecan industry received over \$16 million in purchase programs for the industry. The APC met with several officials that

oversee this program to get additional information on how the program will be administered. The APC will continue to work with industry and USDA to provide the information needed to become a supplier as well as how to participate in the program. Additionally, \$200 million, in Ag Trade Promotion, has been authorized to assist industries in developing strategies that have been impacted by the tariffs. Applications are due November 2, 2018. These dollars are open to federal marketing programs, trade associations, state and local commodity programs, and private companies. However, it was made clear that applications need to demonstrate new ideas, how the crop was impacted by the China market disruption and must display coordination within the industry to show broad support amongst the industry. Applications will then be reviewed and approved. It should be noted that these are not Market Access Program (MAP) dollars, but additional dollars under the Ag Trade Promotion programs and will be treated separately from MAP dollars. For additional information regarding these programs, please contact the Council office.

APC RECAP AUGUST 30, 2018 COUNCIL MEETING

On August 30, 2018, the American Pecan Council held a full Council meeting. The successful meeting saw the Council update its by-laws and internal control policies while putting into place several new policies that will assist the industry in directing funding, employees, and overall operations of the Council. Special thank you to USDA for assisting the APC in identifying a few areas that were strengthened as a result of the compliance audit. Other items adopted during the meeting included the approval of the Council's 2018-2019 budget. This budget includes: dollars for marketing programs; Market Access Program (MAP) assistance; research for satellite mapping projects, electronic reporting, and NASS studies; assistance for forms, and compliance; general research dollars; and strategic planning. Finally, during the meeting, the 2016 summary numbers were released to the industry. The APC plans to release the 2017 numbers in September and then will begin to release monthly numbers starting in October 2018. APC is excited about the changes and the information being generated by the Federal Marketing Order and looks forward to continuing to provide vital tools to the pecan industry, so decisions may be made based on unfiltered, unbiased data. Should you have any questions, please do not hesitate to contact the American Pecan Council.

APC ATTENDS ASIA LOGISTICA

On September 5 - 7, Executive Director Alex Ott attended the Asia Logistica Trade Show. Asia Logistica is the second largest trade show, behind Fruit Logistica and is focused on Asia markets. During the event, APC met with several representatives of several countries to gather information on the impacts of the latest tariffs and market conditions as it relates to pecans and other nut crops. Additionally, the event provided an opportunity to meet with several other commodity programs to see how other programs are being impacted by the trade situations. It should be noted that there was interest into existing and new markets for pecans. However, further information and market analysis is needed to see if these are markets that will bring additional movement for pecans. APC will continue to update the industry on new and existing markets and how these are changing for the positive or negative due to the challenges globally.

BIG MARKET DYNAMICS – BIG MARKETING NEEDED

With several market dynamics being changed due to the increased tariffs and other market variables, the Council approved a six-month marketing strategy for the industry. This six-month strategy will push demand for the pecan industry during the peak of production. During the brand launch in May of 2018, pecans for the first time led the social media discussion and networks in the nut category. This was a very good indicator that Pecans can educate consumers but need to do so through new modern means of technology. Social media and Social TV, where data has shown most consumers get their information on nuts will be increased, driving demand for the industry. By driving demand, more pecans will be sold during the peak of season, hopefully providing an outlet for the industry during the "wave of pecans" that are coming. APC will continue to monitor and track these developments as the program is launched. Should you have any questions about the marketing program, please contact the Council office.



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APC SPEAKS AT NPSA

On September 13 & 14, the American Pecan Council updated the National Pecan Shellers Association on the activities and marketing programs the American Pecan Council (APC) is conducting for the 2018 – 2019 year. By attending the show, it provided the APC an opportunity to look for synergies to promote the industry's crop in a unified message. Additionally, it allowed APC to communicate the importance of working together and getting good data for the industry to utilize. Special thanks to Jon Krueger, the new Executive Director of the National Pecan Shellers Association, for the opportunity to present at his annual meeting.

CALENDAR OF EVENTS

Western Pecan Production Short Course October 15–17, 2018 Las Cruces, New Mexico

> Produce Marketing Association October 18 – 20 Orlando, Florida

New Mexico Pecan Growers Meeting November 2, 2018

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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 <u>upload</u> <u>your images/videos here</u> 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



Issue No. 7 October 2018



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:

<u>https://www.fema.gov/disaster/4400</u> . 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

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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

ENGAGING: Including industry in marketing efforts



The consumer brand launch kicked industry involvement into high gear. Preparations included an e-blast to showcase the new brand, as well as to share the schedule of the day's events. Additionally, the APC distributed hats, totes, koozies, notebooks and decals to ensure our ambassadors in every pecan-growing state were outfitted in our new logo ahead of the official launch. Industry members did their part and shared their photographs with the new gear — on their heads, on their trucks and even on their packaging.

And who better to reinforce the benefits and spread the word about American Pecans than

those who know them best? We rallied industry to serve as spokespeople and offered media training sessions to teach them how to share the APC story effectively with national and local media outlets.

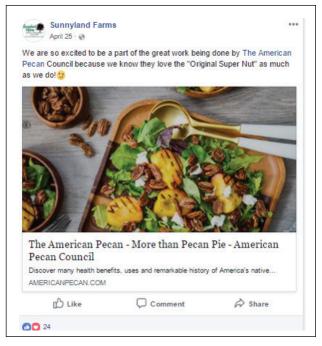
On launch day at the Not Pie Shop in New York City, we tapped our industry experts to share their stories. Their firsthand knowledge and personal experiences resonated with the media and the public. Our guests also experienced how truly versatile pecans are by exploring a wall featuring everything from pecan oil and lip balm to breading mixes and new snack flavors, all generously donated by industry members.

Industry members spread the word to the world about the first-ever, national consumer brand for pecans. When The Original Supernut hit social media, industry amplified the message by tweeting, sharing and reposting American Pecans content, as well as creating their own.









A LOOK FORWARD: 2018-2019 Industry Relations

The APC Industry Relations program strives to provide frequent and open communication about marketing activities, dollars spent and the new and exciting ways to get involved with American Pecans. A revamped biweekly industry newsletter highlights key events, pecan media placements and updates on marketing and research initiatives.

A new, monthly Marketing Highlights handout serves to showcase results and share insights as the APC works to increase awareness and demand for pecans. Sending short overviews each month answers industry requests for meaningful, frequent updates on our efforts and will complement the second edition of the annual "Your Marketing Dollars At Work" report.

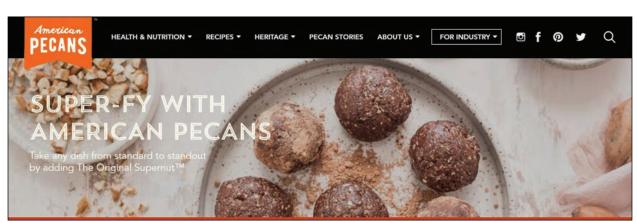
A new content series written by APC Executive Director Alex Ott educates the industry about different APC and industry topics. The first article in the series, which appears in multiple pecan trade publications, outlines the responsibilities and parameters of a Federal Marketing Order, written as a FMO 101.

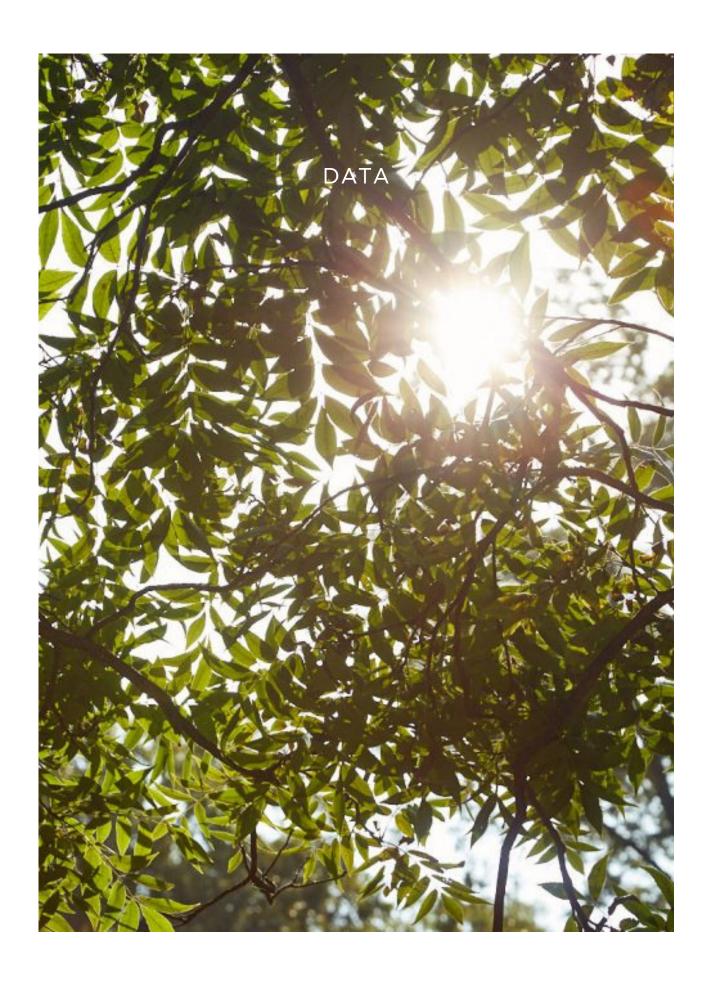
The APC offers many opportunities for industry members to get involved in marketing efforts and leverage APC resources to promote their own businesses. When new consumer marketing campaigns launch, the Digital Toolkit for Industry

will be updated with the corresponding resources for industry use. During the 2019 conference season, the APC will host a series of marketing workshops at industry events, to teach different tactics industry can integrate in their individual businesses.

We're thrilled to see industry's continued excitement around our marketing efforts. From sharing recipes to promoting The Super American Pecan-A-Thon in November 2018, industry across all 15 pecan-growing states joined together to maximize our success. We look forward to building on these efforts and working together to create new ways for consumers to fall in love with pecans.







WHY REPORTING MATTERS:



Providing industry with accurate data and statistics is one of the five fundamental elements of a Federal Marketing Order. During the 2017-2018 fiscal year, the Council developed reporting forms so that the handlers can begin to report for increased transparency within the industry. APC compiled the data received from these reporting forms and established the first-ever Pecan Industry Position Report available to the industry. APC published the Pecan Industry Position Report regarding the 2016 crop year from October 1, 2016 through August 31, 2017 and the 2017 crop year from September 1, 2017 through August 31, 2018.

This is the first-time pecan industry stakeholders have access to data that is not based off programs publishing data on a voluntary basis, but rather from handlers of pecans who are Federally mandated to submit to the Council office. This aspect of the Federal Marketing Order improves data availability to support decision making and objective implementation of uniform standards.

To ensure the accuracy of the reporting forms received, APC began handler audits/reviews conducted by a 3rd party auditor during the 2017-2018 FY. The compliance operation within the Federal Marketing Order establishes fair and transparent industry standards and holds stakeholders accountable for what they are reporting to the Council office.

WHO IS A HANDLER?

As previously stated, handlers of pecans are federally mandated to submit reporting forms to the Council office. A handler is anyone who operates as described in § 986.20 of the Federal Marketing Order.

§ 986.20 To Handle.

To handle means to receive, shell, crack, accumulate, warehouse, roast, pack, sell, consign, transport, export, or ship (except as a common or contract carrier of pecans owned by another person), or in any other way to put inshell or shelled pecans into any and all markets in the stream of commerce either within the area of production or from such area to any point outside thereof. The term "to handle" shall not include: sales and deliveries within the area of production by growers to handlers; grower warehousing; custom handling (except for selling, consigning or exporting) or other similar activities paid for on a fee-for-service basis by a grower who retains the ownership of the pecans; or transfers between handlers.

Pecan Industry Position Report

For the Crop Year Ended August 31, 2017

INTER-HANDLER TRANSFERS OF PECANS

Inshell Pounds Transferred: Improved Native/Seedling Substandard

Total



Total

152,616,016
27,860,314
10,513,116

190,989,446

Com	mitted
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	Comm	IIII		
	Export	Domestic	Uncommitted	Total
Inshell:				
Improved	383,854	4,443,036	23,636,897	28,463,787
Native/Seedling	-0-	-0-	2,122,661	2,122,661
Substandard	-0-	-0-	1,870,060	1,870,060
Total	383,854	4,443,036	27,629,618	32,456,508
Shelled:				
Halves	4,861,066	11,122,427	(158,203)	15,825,290
Pieces	3,012,032	14,355,760	4,285,076	21,652,868
Work In Process	665,730	2,995,117	527,779	4,188,626
Total	8,538,828	28,473,304	4,654,652	41,666,784
Total Inventory (Inshell Basis)	17,461,510	61,389,644	36,938,922	115,790,076
Pecan Handled Throughout the Year:				
Improved				256,319,126
Native/Seedling				35,844,869
Substandard			_	16,160,296
Total			_	308,324,291

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 inproper uncommitted inventory calculations.

§986.20 Inventory totals do not include pecans warehoused by growers.

Shelled Meats are converted to inshell using a yeild of 50% (multiplying the shelled meats by"2"). The form automatically makes this calcualtion.

Pecan Industry Position Report

For the Crop Year Ended August 31, 2018

Inshell Pounds Transferred:
Improved
Native/Seedling
Substandard
Total

YEAR-END INVENTORY

Committed

Total
110,729,662
15,468,732
16,809,311
143,007,705

	Export	Domestic	Uncommitted	Total
Inshell:				
Improved	-0-	12,453,104	23,078,430.00	35,531,534
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	29,370,810	44,785,690
Shelled:				
Halves	5,336,220	16,181,851	(1,513,515)	20,004,556
Pieces	2,450,530	20,561,213	14,366,864	37,378,607
Work In Process	-0-	586,408	350,547	936,955
Total	7,786,750	37,329,472	13,203,896	58,320,118
Total Inventory (Inshell Basis)	15,573,500	90,073,824	55,778,602	161,425,926

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.

Shipments and Inventory on Hand

For the Year Ended August 31, 2018

BEALLA	Total
Shipments:	
Shelled Meats	112,738,912
Inshell	86,198,451
Total Shipments (Inshell Basis)	311,676,275
Total Pecans in Inventory:	
Shelled Meats	340,718,964
Inshell	481,527,775
Total (Inshell Basis)	1,162,965,703
Commitments to Ship:	
Shelled Meats	
Domestic-Shelled Meats	234,298,721
Export-Shelled Meats	75,374,222
Total Meats	309,672,943
Total Means	000,072,010
Inshell	
Domestic-Inshell	13,268,445
Export-Inshell	46,254
Total Inshell	13,314,699
Less Contracts to Purchase	
Shelled Meats	(1,645,957)
Inshell	(7,102,792)
monen	(1,102,132)
Total Commitments (Inshell Basis)	622,265,879

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

FLUMINA	Total
Inshell Exported for Shelling:	
Mexico	32,205,615
Total Inshell Exported for Shelling	32,205,615
Shelled Meats - Produced in U.S. Inshell Returned to U.S.:	
Mexico	10,965,003
Total Shelled Meats - Produced in U.S. Inshell Returned to U.S.	10,965,003
PECANS PURCHASED OUTSIDE THE U.S. BY U.S. HANDLERS	
	Total
Shelled Meats:	
Country of Origin:	
Australia	101,770
Mexico	14,827,838
South Africa	192,470
Total Shelled Meats	15,122,078
T 1 11	
Inshell:	
Country of Origin:	44.000
Australia	44,063
Mexico	49,746,846
South Africa	-
Total Inshell	49,790,909
Total (Inshell Basis)	
Australia	247,603
Mexico	79,402,522
South Africa	384,940
Total (Inshell Basis)	80,035,065

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Destination Report

For the Crop Year Ended August 31, 2018

2017 - 2018 - YTD

World Region

September 1 through August 31 2018

			1	0	
Destination		Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
Africa					
<u> </u>		130,320	-0-	-0-	260,640
Algeria					
Egypt		4,680	-0-	-0-	9,360
	Total Africa	135,000	-0-	-0-	270,000
Asia					
China		390,660	3,397,555	-0-	4,178,875
Hong Kong		247,830	35,034,819	-0-	35,530,479
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		393,690	-0-	-0-	787,380
Thailand		150	-0-	-0-	300
Taiwan		178,500	25,000	-0-	382,000
Vietnam		50,195	4,788,934	-0-	4,889,324
	Total Asia	1,925,225	43,246,308	-0-	47,096,758

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Destination Report

For the Crop Year Ended August 31, 2018

2017 - 2018 - YTD

World Region

September 1 through August 31 2018

Destination —	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
Australia/Oceania				
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	45,120	-0-	-0-	90,240
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	-0-	-0-	6,756,060
Total Europe	16,981,380	174,000		34,136,760

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.

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Destination Report

For the Crop Year Ended August 31, 2018

2017 - 2018 - YTD

World Region

September 1 through August 31 2018

Destination	Shelled	Inshell	Sub-Standard	Total (Inshell Basis)
Middle East				
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
North America				
Canada	5,091,640	42,750	-0-	10,226,030
Mexico	483,900	15,029,406	639,896	16,637,102
Total North America	5,575,540	15,072,156	639,896	26,863,132
South America				
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	26,540,195	58,492,464	639,896	112,212,750

Pecans Received from Own Account

For the Crop Year Ended August 31, 2018

VN	
Variety Name	Total Pounds
Inshell	
Blends/Mixed Bu	
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	297,984,001

The preliminary report regarding the 2017 crop year is based upon industry receipts, and may be subject to change as more information is provided.



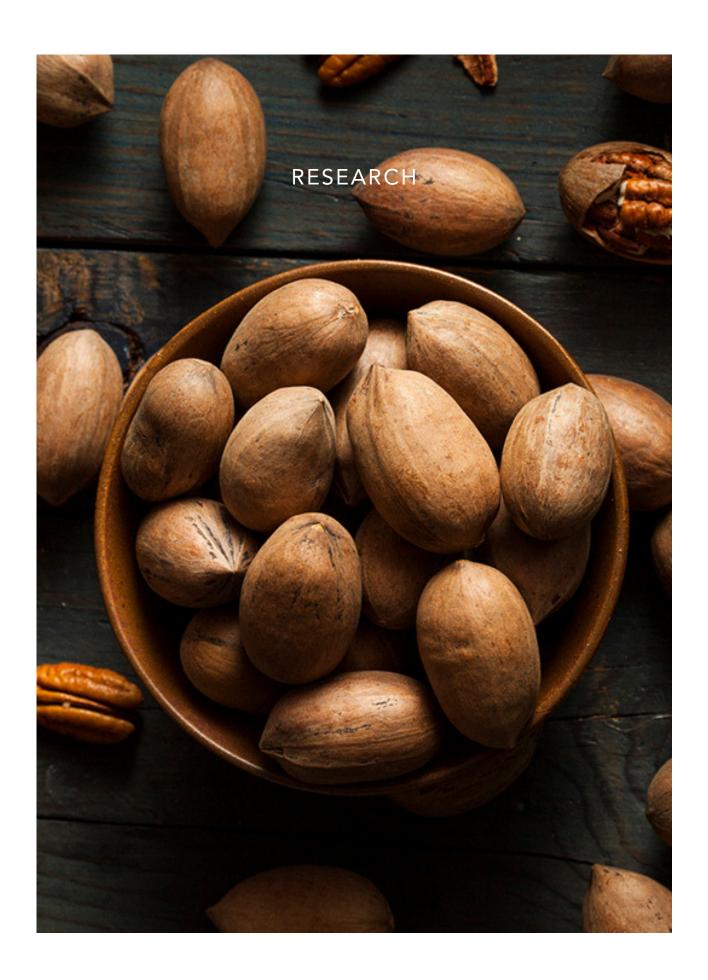
STRATEGIC PLAN SETS TONE FOR FUTURE OF APC:

In September 2018, the American Pecan Council (APC) began its Strategic Planning Process. The APC hired Boston Consulting Group to assist the APC with its strategic planning development. To begin, an industry survey, coupled with several economic, global, analytical, marketing, and operational studies were conducted to assist the Council in understanding all the issues impacting the pecan industry. After completing the studies, a "deep dive" into several of these issues will be conducted, putting together a plan for the American Pecan Council. Strengths, opportunities, identified threats, challenges, and solutions will be prepared and adopted by the Council in order to ensure that growers' dollars are working hard for the industry's benefit, while ensuring that the key strategies adopted will be meaningful and measurable for the industry.

With the newly formed APC, it is important that the industry set the tone, the agenda, and the solutions early in order to identify and measure success. Several key areas being examined include: marketing (both domestic and international); health and nutrition research; industry relations; grades, standards, and data; and other issues that might directly impact the advancement of marketing and generating demand for pecans. Once completed, the APC will adopt a strategic plan and share its findings, strategies, and actions with the industry. Stay tuned!







SUMMARY OF CURRENT RESEARCH PROJECTS:

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 competition.



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 APC's 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 shoe 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 unique characteristics of the nut. These studies will not only assist in understanding the pecan health benefits in more detail, but will also give the pecan its own health benefit identity we can message on.

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 complete.

NASS STUDY

The American Pecan Council approved the National Agricultural Statistics Service (NASS) to conduct a January survey for the industry. Once completed, the data will show an estimated crop report for the 2018/2019 season. This crop forecast can be measured with the other industry forecasts and give a better understanding on trends for the forecasted crop. Additionally, the crop forecast, coupled with the mapping project will provide the industry with an average crop yield overall for the U.S. This is helpful when developing economic data and information for the industry.

APPLICATION FOR REQUEST FOR PROPOSAL (RFP) FOR THE AMERICAN PECAN COUNCIL

COMPANY BACKGROUND

Name of Company: <u>Forecasting and Business Analy</u>	rtics LLC	
Applicant Contact: Oral Capps, Jr.	E-Mail: ocapp	s@tamu.edu
Address: 9409 Whitney Lane College Station, TX 77845	Phone: Phone2: Fax:	(979) 255-7081 (979) 845-8492 () -
How long has your company been in existence? 17	Years (since Ju	ıly 2001)
Please describe your company's services (Attach ac	dditional pages	if necessary):
Our company (FABA LLC) specializes in the develop tools to enable forecasting and decision-making fo Our services include: (1) demand analysis and strat and promotion campaigns; (3) data mining and bus types of analysis require developing and utilizing vainformation, please consult our web site at:		

Company Background: What sets your company apart from other similar research companies? (Attach additional pages if necessary).

FABA LLC provides specializes in the identification and assessment of factors which affect the business and economic landscape, principally in the arena of agribusiness. Our team consists of notable researchers from the academic community. Our depth of experience is unparalleled by any other similar research company. The attached resumes of our team members illustrate their extensive experience in market analyses in building, managing, and using economic baseline models relating to the markets of a wide range of agricultural commodities (including pecans) to analyze a wide range of market issues from the effects of changes in exchange rates to return on investment (ROI) analyses, market forecasting, and more. Team members worked with the Texas Pecan Board in a Return on Investment (ROI) analysis. Also, team members recently worked with the American Pecan Council on an analysis of the effects of the Chinese retaliatory tariff on pecans.

CLIENT LISTS

Please list some of your clients that may be relevant to your experience and your propo	
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ETEASE HSESUNDE OF VOUL CHEHES THAT HIAV DE FETEVAIN TO VOUL EXDELIEUCE AND VOUL DEOD	\ al.

- 1. The Cotton Board (Tom Eubank and Bill Gillon, CEO)
- 2. <u>USDA</u>, Agricultural Marketing Service (Dana Coale, Deputy Administrator for Dairy Programs)
- 3. The American Lamb Board (Megan Wortman, CEO)
- 4. The United Soybean Board (John Becherer, former CEO)
- 5. <u>Commodity Roundtable Marketing and Communications Group (William Watson, The Fresh Approach)</u>
- 6. Avocados from Mexico (Ron Campbell, CEO)

FEES

Please list your percentage of your fee schedule for staff versus project. Attach additional pages if necessary.

The cost associated with this proposed project is \$25,000. We would propose that payment be made as follows: (1) half upon signing the contract and (2) half upon delivery of the final report. All fees are for services provided by the researchers associated with the project. Any travel approved by APC for presentations or other such requests would be paid by the American Pecan Council outside this contract.

PROPOSAL: Economic Benchmark Model and Study of 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 quickly analyze the impacts of policy shifts or market changes on producer profitability. In contrast, the data and information relating to the structure and functioning of U.S. pecan markets is much more limited. Consequently, little effort has been made to develop reliable tools for the pecan industry to aid in strategic decision making.

Vision and Direction of the Proposed Project

Any project intended to assist the pecan industry "in the development and execution of comprehensive, integrated research programs to ultimately assist the American Pecan industry in demand and value" must begin with understanding the structure of the industry itself. Figure 1 provides a preliminary look at the structure of the U.S. pecan industry. Producers in the Eastern and Western regions of the United States produce both improved varieties of pecans as well as native seedling pecans. Growers sell 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, however, 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 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 export markets (China, Hong Kong, Vietnam, Canada, Mexico, and the EU among many others). With growing demand from both export markets and domestic users, shellers have increasingly brought in imports, almost all from Mexico, to meet domestic supply needs. Imports now account for over 40% of total U.S. pecan supplies and exceed the volume of exports (Figure 2). In considering the domestic use of pecans, competition between pecans and other tree nuts and peanuts would need to be accounted for as well.

Figure 1. Preliminary Representation of the Structure of the U.S. Pecan Industry

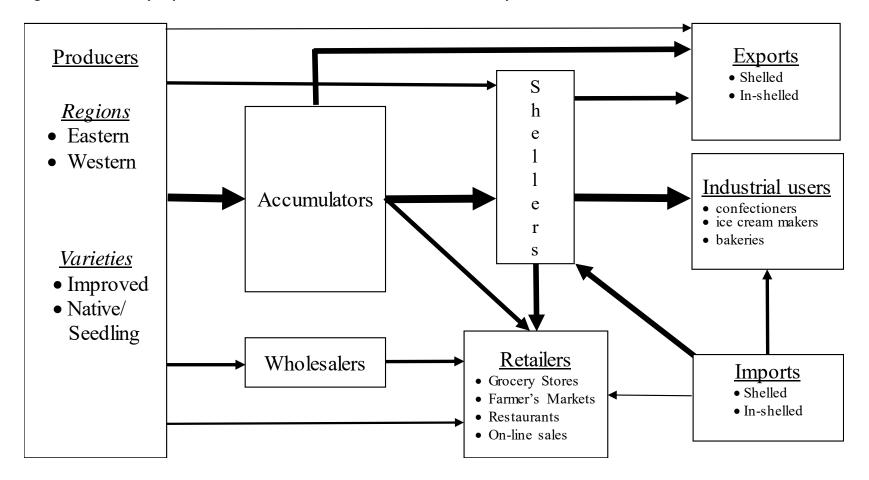
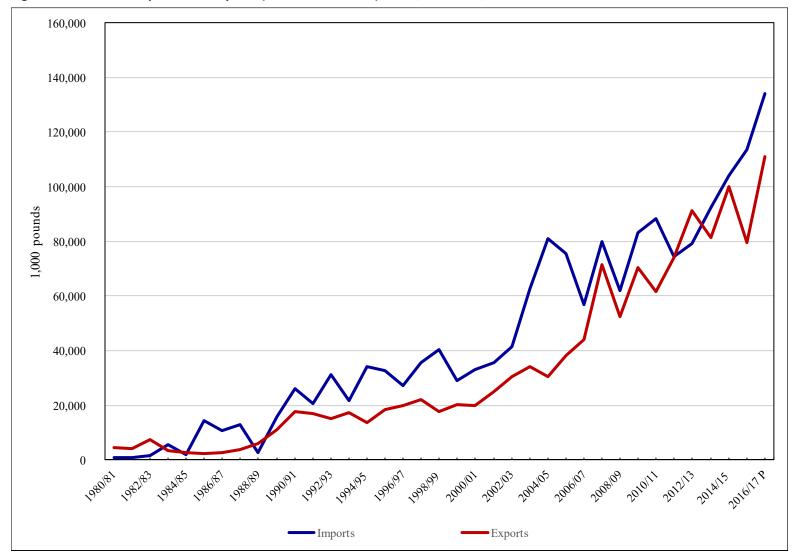


Figure 2: U.S. Pecan Exports and Imports (USDA FATUS Data), 1980/81 – 2016/17



Once the structure of the industry is well-documented, then data must be collected for production, sales, purchases, industrial and consumer uses, and prices that represent those activities along the pecan supply chain. Unfortunately, data on U.S. pecan industry activities over time are woefully lacking. Therefore, this part of the project would necessarily focus on identifying, collecting, and validating available data. For some industry activities, the data available may be suspect, such as USDA export data for pecan exports by destination. In many other cases, such as accumulator and sheller purchases and sales, data are not publicly available. In such cases, we will need to work with the pecan industry to determine what credible data may be available for critical industry activities.

Execution of the Project

Once the structure of the industry is properly defined and documented and the available data are collected, a baseline economic model of the industry can be developed that replicates the structure of the industry to the extent of the available data. The model will be capable of analyzing the industry impacts (regional/varietal production, use, price, trade, etc.) from major market changes and policy shifts to the extent of available data. The model will necessarily include functions that identify the key factors (drivers) that influence U.S. pecan supply, demand, trade (exports and imports), and other supply chain activities. The model will enable the contractor to quickly respond to requests from the American Pecan Council to determine the effects on the U.S. pecan market prices and industry profit resulting from various market changes. For example, if this model had been available earlier this year, the contractor could have used it to quickly measure the impacts of the Chinese tariff on U.S. pecan exports and the likely effects on industry profits. Measurement of the increase in industry profit from state and national pecan promotion programs is another example of an analysis that the contractor could perform with the baseline model when sufficient years of data on promotion expenditures become available. For that analysis, the use of the baseline model would allow the contractor to measure the effects of promotion on domestic (industrial and retail consumers) and foreign demand for U.S. pecans, the consequences for imports from Mexico, and changes in U.S. pecan production, prices, and profits. From such an analysis, the return on investment in pecan promotion could be calculated. The model will be flexible in its design to allow for changes in available data or industry structure over time.

Objectives of the Project

The vision, direction, and execution proposed for this project suggest four overriding objectives:

define and document the structure of the U.S. pecan industry;

- identify and collect the available data needed to represent the activities of the pecan industry and identify the critical data gaps that exist;
- use the data collected to develop an economic baseline model that represents the actual structure and functioning of the U.S. pecan industry; and
- use the economic baseline model to conduct an analysis to illustrate the functioning of the model such as the effects of the Chinese tariff on pecan imports.

To be useful as an aid to producer decision-making, at a minimum the baseline model would need to identify and measure (to the extent of available data) the effects of the key drivers of the:

- supply of pecans by U.S. region (Eastern, Western) and type (native/seedling and improved varieties);
- pecan inventory behavior;
- U.S. disappearance of pecans;
- U.S. exports of pecans;
- U.S. imports of pecans; and
- U.S. pecan prices.

Deliverables and Timeline

The main deliverable will be an economic baseline model capable of analyzing the effects of changes in U.S. pecan markets and the consequences for U.S. production, consumption, prices, and trade. As an illustration of the use of the model for analyzing market changes, we will conduct an analysis of the effects of the Chinese import tariff on U.S. pecans export volume and value and the consequences for U.S. production, utilization, and price of pecans as well as pecan industry profit. At the end of this contract, the econometric model of the U.S. pecan industry (PECANMOD) will be owned by the American Pecan Council but will reside with and will be maintained and updated by the contractor. Future analyses using the model by the contractor as requested by the American Pecan Council will be conducted under any contractual arrangement the American Pecan Council deems appropriate.

Given the expected difficulty associated with the industry data and modeling, we propose a deadline of one year from the date of the signing of the contract. We expect to interact frequently with the American Pecan Council, not only updating our progress on the project but also seeking assistance in the acquisition of key data.

ACKNOWLEDGEMENT

I acknowledge that the American Pecan Council is an equal opportunity employer and that the proposal submitted to the American Pecan Council is to the best of my ability factual and accurate. I understand that I am the appropriate and authorized person of this company to submit a proposal to the American Pecan Council. Furthermore, I also understand that the proposal may be modified before final approval of the American Pecan Council. Lastly, I understand that if approved, I will submit the necessary reports and documentation needed and or requested by USDA and/or the American Pecan Council to fulfill the reporting requirements.

Oral Capps, Jr., Managing Partner	
Name of Authorized Applicant (Print)	
Chal George	October 9, 2018
Signature of Authorized Applicant	Date

BRIEF RESUMES OF TEAM MEMBERS

Gary W. Williams, Ph.D.

Professor of Agricultural Economics

Co-Director of the Agribusiness, Food, and Consumer Economics Research Center (AFCERC)

Department of Agricultural Economics

Senior Scientist, Norman Borlaug Institute for International Agriculture

Texas A&M University

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Professional Preparation

B.S. (Economics) Brigham Young University
 M.S. (Agricultural Economics) Purdue University
 Ph.D. (Agricultural Economics) Purdue University
 1981

Professional Background

Dr. Williams is Professor of Agricultural Economics and Co-Director of the Agribusiness, Food, and Consumer Economics Research Center (AFCERC) in the Department of Agricultural Economics at Texas A&M University. He is the AFCERC chief operations officer responsible for managing the research program of the Center and leads AFCERC research and outreach projects relating to commodity and agribusiness markets and policy and international trade and policy. He is also an Associate Faculty Member of the Department of International Affairs of the Bush School of Government and Public Service at Texas A&M University. His areas of teaching and research emphases include commodity promotion programs, international agricultural trade and development, agricultural policy, and marketing and price analysis. Dr. Williams was raised in Lubbock, Texas and is a 1968 graduate of Monterey High School. He holds a Ph.D. and an M.S. degree in Agricultural Economics from Purdue University (1978 and 1981) and a B.S. in Economics from Brigham Young University (1974). Prior to joining the faculty at Texas A&M University, he gained experience as a professor and Assistant Coordinator of the Meat Export Research Center at Iowa State University, Senior Economist at Chase Econometrics, agricultural economist for the USDA, and Special Assistant to the U.S. Deputy Under Secretary of Agriculture for International Affairs and Commodity Programs at USDA. Dr. Williams speaks fluent Spanish and has lived and worked in Latin America throughout his career, focusing particularly on NAFTA and other agricultural trade, policy, and development issues. In recent years, he has become particularly well known for his research on the economic effectiveness of commodity checkoff programs, including those for soybeans, cotton, dairy, lamb, Florida orange juice, propane, Norwegian seafood, dairy products, Texas citrus, Texas pecans, sorghum, and others. He is also well known for his research on U.S. and world oilseed and oilseed product markets and the U.S. livestock industry including issues related to sheep and lamb markets and the effects of concentration in the beef packing industry. He recently served as Chair of a National Academy of Science Committee on the Status and Economic Performance of the U.S. Sheep and Lamb Industry. He also recently served as a member of a National Academy of Science Committee on the Future of Animal Science Research. He currently serves as a member of the Review Oversight Committee for the Genome Canada funded Project: "Application of Genomics to Improve Disease Resilience and Sustainability in Pork Production".

Appointments

- 2011- Senior Scientist, Borlaug Institute for International Agriculture, College of Agriculture and Life Sciences, Texas A&M University
- 2009- Co-Director, Agribusiness, Food, and Consumer Economics Research Center (AFCERC), Department of Agricultural Economics, Texas A&M University, College Station, TX
- 2008-18 Associated Professor, Department of International Affairs, The Bush School of Government and Public Service, Texas A&M University, College Station, TX
- 2002-09: Visiting Professor (annual courses taught), International University of Ecuador, Quito, Ecuador

- 2000-02: Visiting Professor, Autonomous University of Chapingo, Center for World Agriculture and Agroindustry Economic, Social, and Technological Research, Texcoco, Mexico
- 1988-09: Professor and Director, Texas Market Research and Development Center, Department of Agricultural Economics, Texas A&M University
- 1986-88: Associate Professor, Department of Economics, Iowa State University
- 1984-88: Assistant Coordinator, Meat Export Research Center, Iowa State University
- 1983-86: Assistant Professor, Department of Economics, Iowa State University
- 1981-83: Senior Economist, International Agriculture Service, Chase Econometrics, Bala Cynwyd, PA
- 1979-81: Agricultural Economist, Agricultural and Trade Policies Branch, International Economics Division, Economic Research Service, U.S. Dept. of Agriculture
- 1978-79: Special Assistant to the Deputy Under-Secretary of Agriculture for International Affairs and Commodity Programs (G. Edward Schuh). U.S. Department of Agriculture
- 1976-78: Research Assistant, Department of Agricultural Economics, Purdue University
- 1974-76: International Economist, Ag. and Materials Branch, Office of Econ. Research, Washington, D.C.

Language Skills

English: reading, writing, speaking, comprehension skills Native (4 on a 4-point scale)

Spanish: reading, writing, speaking, comprehension skills Nearly native (3++ on a 4-point scale)

Portuguese: reading, comprehension skills Intermediate (2 on a 4-point scale)

Selected Awards and Recognition

Most Outstanding Student in Economics, College of Business, Brigham Young University, 1974

Distinguished Service Award, Meat Export Research Center, Iowa State University, 1988

Appointed to Texas Ag. Commissioner's Select Committee on North American Free Trade Agreement, 1991-1994 Vice Chancellor's Award in Excellence for Team Research, Texas A&M University, 1998.

"Article of the Year" Award by the Northeastern Agric. and Resource Econ. Assoc. for "Examining Packer Choice of Slaughter Cattle Procurement and Pricing Methods," *ARER*, April 1999 with Capps, Love, and Adams.

Appointed Chair, Committee on the Economic Development of Current Status of the Sheep Industry in the United States, the National Research Council, National Academy of Sciences, 2006-2008

Appointed Member, Committee on the Future of Animal Science Research, the National Research Council, National Academy of Sciences, 2014-2015.

Appointed, Member of the Review Oversight Committee for the Genome Canada funded Project: "Application of Genomics to Improve Disease Resilience and Sustainability in Pork Production," 2016-2017.

Selected Publications

- Williams, G.W. and O. Capps, Jr., "Generic Promotion of Sorghum of Food and Industrial Uses," *J. of International Food and Agribusiness Mrktng* (forthcoming 2018).
- Williams, G.W., O. Capps, Jr., and D. Hanselka, "The National Economic Contribution of Generic Food and Agricultural Product Advertising and Promotion." *J. of International Food and Agribusiness Mrktng* 30 (2):191-210, 2018.
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- Welch, J.M and G.W. Williams, "Competitiveness of U.S. Wheat: The Role of Productivity," Report to the National Association of Wheat Growers, Washington, D.C., August 31, 2015.
- Goldstein, B., L. D'Abramo, G.F. Hartnell, J. Mench, M. Salman, D. Treacy, B.L. Turner II, G.W. Williams, F Wu. *Critical Role of Animal Science Research in Food Security and Sustainability.* Washington, D.C.: The National Academies Press, 2015.
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- Williams, G.W. and J.M. Welch, "Economic Analysis of the Potential Returns from an Enhanced Wheat Checkoff Program," Joint Meeting of the National Wheat Foundation, the National Association of Wheat Growers, and the Wheat Alliance, Santa Ana Pueblo, New Mexico, October 30-31, 2014.
- Williams, G.W., O. Capps, Jr., and S.H. Lee, "The Return to Soybean Checkoff Investments," Report to the Audit and Evaluation Committee of the United Soybean Board, St. Louis, Mo., July 2014.
- Ghosh, S. and G.W. Williams, "Returns to Stakeholders from the American Lamb Checkoff Program: A Supply Chain Analysis," Report to the American Lamb Board, Denver, Colorado, June 2014.
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Oral Capps, Jr.

Executive Professor and Regents Professor
Holder of the Southwest Dairy Marketing Endowed Chair
Co-Director Agribusiness, Food, and Consumer Economics Research Center (AFCERC)
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Professional Preparation

B.S. Mathematics, Virginia Tech, 1975
M.S. Agricultural Economics, Virginia Tech, 1977
M.S. Statistics, Virginia Tech, 1979
Ph.D. Agricultural Economics, Virginia Tech, 1979

Professional Background

Dr. Capps is a demand and price analyst, with particular expertise in econometric modeling and forecasting methods. He is a nationally and internationally recognized leader in demand analysis, specializing in working with large data bases. Applied research areas include analyses of expenditure patterns of pre-prepared foods and foods eaten away from home, analyses of health and nutrition issues, uses of scanner-derived information for managerial decision-making in food retailing, and analyses of regional, national, and international markets for the agricultural, agribusiness and financial sectors. In addition, Dr. Capps specializes in unilateral price effects of mergers and acquisitions, and evaluations of commodity checkoff programs.

Dr. Capps has authored 145 refereed journal articles and co-authored four books, Food Demand Analysis: Implications for Future Consumption; Introduction to Agricultural Economics, Seventh Edition; Economic Impact of Country-of-Origin Labeling on the U.S. Beef Industry; and Changes in the Sheep Industry in the United States: Making the Transition from Tradition. Another book, A Step-by-Step Approach to Economic Modeling and Forecasting, is in process. Additionally, he has produced a series of detailed notes to accompany the seminars delivered on behalf of The SAS Institute, Inc. (SAS) entitled, An Introduction to Applied Econometrics and Advanced Topics in Applied Econometrics. Moreover, Dr. Capps currently teaches a seminar entitled, Time-Series Analysis and Forecasting for NABE. Finally, Dr. Capps is Co-Founder (in 2001) and Managing Partner of Forecasting and Business Analytics, LLC, (FABA) a consulting firm specializing in the use of quantitative methods to address economic problems.

In 1995, Dr. Capps was honored at Texas A&M University with the Association of Former Students Distinguished Achievement Award for Teaching. In 1997 and in 2010, he was the recipient of the *Journal of Food Distribution Research* Outstanding Journal Article Award. In 1999, he received recognition via the Vice Chancellor's Award in Excellence for Team Research at Texas A&M University. In 1999, Dr. Capps was the recipient of the American Agricultural Economics Association Distinguished Teaching Award, and a co-recipient of the Applied Consumer Economics Award given by the American Council on Consumer Interests. In 2000, he was the co-recipient of the *Agricultural and Resource Economics Review* Outstanding Journal Article Award. In 2001, Dr. Capps received the Frank Panyko Distinguished Service Award from the Food Distribution Research Society. In 2002, Dr. Capps was bestowed the Vice Chancellor's Award in Excellence for Research at Texas A&M University. In 2003, Dr. Capps was the recipient of The Association of Former Students Distinguished Achievement Award for Teaching at the College level. Further, he was named a Fish Camp namesake by students at Texas A&M University in 2004. In 2006, Capps was appointed to the National Academies Committee on the Economic Development and Current Status of the Sheep Industry in the United States. In 2007, Dr. Capps also was appointed to the National Beef Demand Study Group. Additionally, Dr. Capps was one of five co-recipients of the 2007 AAEA President's Award. In February 2009, Dr. Capps

received the SAEA Lifetime Achievement Award. In March 2011, Dr. Capps received the Vice Chancellor's Award in Excellence for Industry/Agency/University/Association Partnerships. In June 2011, Dr. Capps was recognized by the Western Agricultural Economics Association with the Distinguished Scholar Award. In August 2011, Dr. Capps was invited to join the Economics Advisory Council of the Alliance for Potato research and Education. In November 2011, Dr. Capps was bestowed the title of Regents Professor by the Board of Regents at Texas A&M University. In 2014, Dr. Capps was recognized as a Fellow by the *Agricultural and Resource Economics Review*. In 2015, Dr. Capps was recognized as the recipient of The Association of Former Students Distinguished Achievement Award for Teaching at the University level. In July 2015, he was recognized as the co-recipient of the *Journal of Agricultural and Resource Economics* Outstanding Journal Article Award. In October 2015, Dr. Capps was bestowed the title of Certified Business Economist TM. Currently, only a handful number of economists possess this title. In 2018, Dr. Capps was recognized as the co-recipient of the FDRS Presidential Award for Excellence in Research and Communication.

App	point	tment	ts
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2011 to present	Regents Professor, Department of Agricultural Economics, Texas A&M University
2009 to present	Executive Professor, Department of Agricultural Economics, Texas A&M University
2009 to present	Co-Director, The Agribusiness, Food, and Consumer Economics Research Center, Department of
	Agricultural Economics, Texas A&M
1989 to 2009	Professor, Department of Agricultural Economics, Texas A&M University
1994 to 2000	Graduate Recruitment Coordinator, Department of Agricultural Economics, Texas A&M
	University
1986 to 1989	Associate Professor, Department of Agricultural Economics, Texas A&M University
1984 to 1986	Associate Professor, Department of Agricultural Economics and Department of Statistics,
	Virginia Polytechnic Institute and State University
1985	Visiting Professor, Department of Agricultural and Applied Economics, University of Minnesota
1979 to 1984	Assistant Professor, Department of Agricultural Economics and Department of Statistics,
	Virginia Polytechnic Institute and State University
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Selected Publications since 2010

Selected Journal Articles

- Leister, A., O. Capps, Jr., and C. Parr Rosson III, "The Effects of New Product Beef in Guatemala," Journal of Food Distribution Research 41, 2 (2010): 1-11.
- Love, H.A., O. Capps, Jr., and G.W. Williams, "Concentration in the U.S. Beef Packing Industry and Slaughter Cattle Pricing," Journal of Food Distribution Research 41, 3 (2010): 25-41.
- Alviola, P.A. and O. Capps, Jr., "Household Demand Analysis of Organic and Conventional Fluid Milk in the United States Based on the 2004 Nielsen Home scan Panel," Agribusiness: An International Journal 26, 3 (2010): 369-388.
- Williams, G.W., O. Capps, Jr., and T. Dang, "Does Lamb Promotion Work?" Agribusiness: An International Journal 26, 4 (2010): 536-556.
- Dharmasena, S., O. Capps, Jr., and A. Clauson, "Ascertaining the Impact of the 2000 USDA Dietary Guidelines for Americans in the Intake of Calories, Caffeine, Calcium, and Vitamin C from At-Home Consumption of Non-Alcoholic Beverages," Journal of Agricultural and Applied Economics 43, 1 (2011): 13-27.
- Williams, G.W. and O. Capps, Jr., "Is the Cotton Checkoff Program Worth the Cost?" Journal of Cotton Science 15 (2011): 109-126.
- Kyureghian, G., O. Capps, Jr., and R.M. Nayga, Jr., "A Missing Variable Imputation Methodology with an Empirical Application," Advances in Econometrics: Missing Data Methods 27A (2011): 313-337.
- Bouhlal, Y. and O. Capps, Jr., "The Impact of Retail Promotion of Private Label Products: The Case of Processed Cheese," Agribusiness: An International Journal 27 (2011): 1-14.
- Dharmasena, S. and O. Capps, Jr., "Intended and Unintended Consequences of a Proposed National Tax on Sugar-Sweetened Beverages to Alleviate the U.S. Obesity Problem," Health Economics 21, 6 (2012): 669-694.
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- Ishdorj, A. and O. Capps, Jr., "The Effect of Revised WIC Food Packages on Native American Children," *American Journal of Agricultural Economics*, 95, 5 (May 2013): 1266-1272.
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- Dharmasena, S., G. S. Davis, and O. Capps, Jr., "Partial Versus General Equilibrium Calories and Industry Revenue Effects of a Sugar-Sweetened Beverage Tax," *J. of Agricultural and Resource Economics*, 39, 2 (2014): 157-173.
- Ishdorj, A., O. Capps, Jr., and P.S. Murano, "Investigating the Relationship between Food Pairings and Plate Waste in Elementary School Lunches," *Food and Nutrition Sciences*, 6, (2015): 1029-1044.
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- Capps, Jr., O., D. A. Bessler, and G. W. Williams, "The Ramifications of Nearly Going Dark: A Natural Experiment in the Case of Orange Juice Advertising," *Agricultural and Resource Economics Review*, 45, 1(April 2016): 68-97.
- Goodwin, Jr., H. L., O. Capps, Jr., S. Watkins, C. Eagleson, K. Karges, C. Springfield, and N. Shearer, "Poultry Diets Compared for Gross Margin Improvement," *Feedstuffs*, (March 2016), 20-21.
- Capps, Jr., O., H.L. Goodwin, Jr., L. N. Burns, K. Karges, C. Springfield, and N. Shearer, "Determining the Value of Various Ingredient Characteristics and Product Components in Poultry Feed Ingredients," Feedstuffs, April 2016, 34-35
- Capps, Jr., O., A. Ishdorj, P.S. Murano, and M. Storey, "Examining Vegetable Plate Waste Among Elementary School Children in Texas by Diversity and Grade," *Health Behavior and Policy Review*, 3, 5 (September/October 2016): 419-428.
- Dharmasena, D., D. A. Bessler, and O. Capps, Jr., "Food Environment in the United States as a Complex Economic System," Food Policy 6 (2016): 163-175.
- Williams, G. W., O. Capps, Jr., and D. Hanselka, "The National Economic Benefits of Food Imports: The Case of U.S. Imports of Hass Avocados from Mexico," *J. of International Food and Agribusiness Mrktng* 29, 2(2017): 139-157.
- Ishdorj, A. and O. Capps, Jr. "The Impact of Policy Changes on Milk and Beverage Consumption of Texas WIC Children" *Agricultural and Resource Economics Review*, 46, 3 (2017):421-442.
- Capps, Jr., O., A. Ahad, and P.S. Murano, "Understanding Spending Habits and Buying Behavior of the American Muslim Community: A Pilot Study," *Journal of Food Distribution Research*, 43 (November 2017): 51-74.
- Zheng, W., S. Dharmasena, O. Capps, Jr., and R. Janakiramon, "Consumer Demand for and Effects of Tax on Sparkling and Non-Sparkling Bottled Water in the United States," *Journal of Agribusiness in Developing and Emerging Economies*, 8,3 (2018): 501-517, link https://doi.org/10.1108/JADEE-09-2017-0089.
- Williams, G.W., O. Capps, Jr., and D. Hanselka, "National Economic Contributions of Generic Food and Agricultural Product Advertising and Promotion," *Journal of International Food and Agribusiness Marketing*, (2017), published on line November 27, 2017, link https://doi.org/10.1080/08974438.2017.1402729.
- Murano, P. S., O. Capps, Jr., and A. Grimajo, "Grapes in School Meals: Impact of Plate Waste on Costs and Consumption," *Journal of Nutritional Health and Food Science*, 6, 1 (2018): 1-9.
- Bakhtavoryan, R., O. Capps, Jr., A. Dallakyan, and V. Salin, "On the Use of Time-Series Analysis in Examining Food Safety Issues," *Journal of Food Distribution Research*, 49, 2 (July 2018): 57-80.
- Capps, Jr., O., A. Ishdorj, S. Dharmasena, and M. Palma, "Economic Ramifications of Obesity: A Selective Literature Review," chapter to appear in the *Handbook of Agricultural Economics*, forthcoming 2018.
- Palma, M.A., Y. Li, C.R. Hall, H. Khachatryan, and O. Capps, Jr., "Measuring Effects of Advertising on Green Industry Sales: A Generalized Propensity Score Approach," *Applied Economics*, forthcoming 2018.
- Williams, G. W. and O. Capps, Jr., "Generic Promotion of Sorghum for Food and Industrial Uses," *Journal of International Food and Agribusiness Marketing*, forthcoming 2018.

Selected Other Publications (since 2010)

- Capps, Jr., O., G.W. Williams, and T. Dang, "Effects of Lamb Promotion on Lamb Demand and Imports," AFCERC Commodity Market Research Report No. CM-01-10, January 2010.
- Capps, Jr., O. and V. S. Salin, "Market Research on Promised Land Brand Milk," AFCERC Commodity Market Research Report No. CP-03-10, December 2010.
- Capps, Jr., O. Advanced Topics in Applied Econometrics, Business Knowledge Series for the SAS Institute, Inc., December 2010.
- Williams, G.W., O. Capps, Jr., V. S. Salin, S. Dharmasena, L. Higgins, W.J. Thompson, and D. Anderson, "Ethnic Lamb Buying and Preparation Behavior and Preferences," AFCERC Commodity Market Research Report No. CM-01-11, January 2011.
- Capps, Jr., O. and G.W. Williams, "Analyzing the Effectiveness of the Lamb Promotion, Research, and Information Order," AFCERC Commodity Market Research Report No. CM-02-11, January 2011.
- Williams, G.W., O. Capps, Jr., D. Hudson, S. Pan, and J. Robinson, "Cotton Research and Promotion Program: Economic Effectiveness Study," AFCERC Commodity Market Research Report No. CM-3-11, April 2011.
- Capps, Jr., O., V.S. Salin, S. Dharmasena, and R. Hanselman, *Effectiveness of Marketing Order 955 in Promoting Sales of Vidalia Onions*, Report Prepared for the Vidalia Onion Committee, December 2011.
- Capps, Jr., O., G.W. Williams, and J. Malaga, "Impacts of the Investments Made in Research, Promotion, and Information on Production and End Uses of Sorghum," Research Report to the United Sorghum Checkoff Program (USCP), Agribusiness, Food, and Consumer Economics Research Center, Texas A&M University, Department of Agricultural Economics, July 2013.
- Williams, G.W., O. Capps, Jr., D. Hanselka, and L. Burns, "Economic Benefits of the Expansion of Avocado Imports from Mexico," February 2014 (Part 1) and April 2014 (Part 2), Report to the Mexican Hass Avocado Import Association.
- Williams, G. W., O. Capps. Jr. and S.H. Lee, "The Return to Soybean Checkoff Investments," Report to the Audit and Evaluation Committee, United Soybean Board, St. Louis, MO, July 2014.
- Capps, Jr., O., H.L. Goodwin, and L. N. Burns, "Ascertaining the Value of Components Associated with Poultry Feed Ingredients," Report to H.J. Baker, June 2015.
- Capps, Jr., O., G. W. Williams, and D. Hudson, "Cotton Research and Promotion Program: Economic Effectiveness Study," Report to the Cotton Board, July 2016.
- Williams, G.W., O. Capps, Jr., and D. Hanselka, "The U.S. National and State-Level Benefits of Avocado Imports from Mexico," Report Prepared for the Mexican Hass Avocado Import Association, September 2016.
- Capps, Jr., O., G.W. Williams, V.S. Salin, and D.S. Brown, "Quantitative Evaluation of the Effectiveness of Marketing and Promotion Activities by the National Dairy Promotion and Research Program and the Fluid Milk Processor Promotion Program: Report to Congress," Prepared for the U.S. Department of Agriculture, Agricultural Marking Service (AMS), Phase 5, November 2016.
- Williams, G.W., O. Capps, Jr., and D. Hanselka, "The National Economic Contribution of Agricultural Advertising and Promotion," Report Prepared for the Commodity Market Roundtable Committee, April 2017.
- Capps, Jr., O. and G.W. Williams, "Forecasts of Hass Avocado Shipments from Mexico by Size: February 2017 to April 2017," Report Prepared for the Mexican Hass Avocado Import Association, April 2017.
- Capps, Jr., O. and G.W. Williams, "How Effectively Does the Norwegian Seafood Council Promote Norwegian Seafood Exports," Report Prepared for the Norwegian Seafood Council, June 2017.
- Penson, J.B., O. Capps, Jr., C.P. Rosson, and R. Woodward, *Introduction to Agricultural Economics*, Pearson, Seventh Edition, August 2017.
- Capps, Jr., O. and G.W. Williams, "Forecasts of Hass Avocado Shipments from Mexico by Size: August 2017 to October 2017," Report Prepared for the Mexican Hass Avocado Import Association, August 2017.
- Capps, Jr., O., G.W. Williams, and M. Welch, "Producer Return on Investments in Sorghum Research, Promotion, and Information: An Updated Analysis," Research Report Prepared for the United Sorghum Checkoff Program (USCP) Board, November 2017.
- Capps, Jr., O. and G.W. Williams, "2018 Update Report: How Effectively Does the Norwegian Seafood Council Promote Norwegian Seafood Exports? Research Report to the Norwegian Seafood Council, May 2018.
- Williams, G.W. and O. Capps, Jr., "How Effectively Does the Norwegian Seafood Council Promote Norwegian Whitefish Exports? June 2018.

Victoria S. Salin, Ph.D.

Professor and Chair, Intercollegiate Faculty of Agribusiness, Director of the Master of Agribusiness Program, and Co-Director, Agribusiness, Food and Consumer Economics Research Center (AFCERC), Department of Agricultural Economics, Senior Scientist of the Norman E. Borlaug Institute for International Agriculture of Texas A&M University, Texas A&M University, College Station, TX.

Professional Preparation

B.S. (Political Science) Miami University, Oxford, OH	1982
M.S. (Foreign Affairs) University of Virginia, Charlottesville, VA	1984
Ph.D. (Agricultural Economics) Purdue University	1996

Professional Background

Victoria Salin is a Professor in the Department of Agricultural Economics at Texas A&M University specializing in agribusiness management and finance. Dr. Salin is also Co-Director and chief financial officer of AFCERC and manages its budget, staffing, and day-to-day operations. She leads AFCERC research and outreach projects relating to food safety, traceability, and strategic management. She is a member of the Scientific Advisory Council of the World Food Logistics Organization and serves on the Board of Directors of the State of Texas Agricultural Finance Authority. Her research specialty is in applications of real options theory to agribusiness investments, currently analyzing food safety risks and risk-shifting contracts. Recent research projects include microfinance and credit rationing, and risk exposures of lending institutionsDr. Salin was an editor in private industry and with the Economic Research Service, USDA in her early career. She also served as an international trade analyst at the U.S. International Trade Commission before pursuing a degree in agricultural economics at Purdue University specializing in agribusiness finance and international trade.

Appointments

2013 – present	Professor and Chair, Intercollegiate Faculty of Agribusiness, and Director of the Master of
	Agribusiness Program, Department of Agricultural Economics, Texas A&M U., College Station, TX
2011-present.	Senior Scientist of the Norman E. Borlaug Institute for International Agriculture of Texas A&M
	University.
2003 – 2013	Associate Professor, Department of Agricultural Economics, Texas A&M U., College Station, TX
2009 – present	Co-Director, Agribusiness, Food, & Consumer Economics Research Center, Texas A&M University
1996 – 2003	Assistant Professor, Department of Agricultural Economics, Texas A&M University, College Station, TX
2000 - 2012	Director, Texas Agricultural Finance Authority, Texas Department of Agriculture, Austin, TX.

Selected Awards and Recognition

Member, Board of Trustees of the International Institute of Tropical Agriculture (www.iita.org), a unit of the CGIAR system with the goal of food security in Africa and commercialization of crop improvements. Chair of Partnerships for Delivery Committee and member of Audit and Finance Committee, 2016-present

Economist Member of the Scientific Advisory Council, World Food Logistics Organization, an affiliate of the Global Cold Chain Alliance (gcca.org), 2008-present

Named Fellow of the International Food and Agribusiness Management Association, 2017

Recipient, Texas A&M Former Students Association Distinguished Achievement award, College level, 2016.

V.F. and Gertrude Neuhaus Teaching Scholars Program Award, College of Agriculture and Life Sciences, Texas A&M University, 2003 and 1997.

Big 12 Faculty Fellowship for project with University of Missouri entitled "Public Finance for Rural Economic Development," 2002

Elected to Board of Directors, Committee on Women in Agricultural Economics, a committee of the national professional association, May 2002.

Governor Bush's appointee to Board of Directors, Texas Agricultural Finance Authority, June 2000-June 2002. Reappointed by Governor Perry, June 2002-2012.

Selected Publications

Selected Journal Articles

- Ketzenberg, M., G. Gaukler, and V. Salin. 2017. "Establishing Dynamic Expiration Dates for Perishables: An Application of RFID and Sensor Technology," *International Journal of Production Economics*, 193:617-632.
- Gaukler, Gary M., Michael E. Ketzenberg, and Victoria Salin. 2017. "Expiration Dates and Order Quantities for Perishables," *European Journal of Operational Research*.
- Bahktavoryan, Rafael, Oral Capps, Jr., and Victoria Salin. 2014. "The Impact of Food Safety Incidents Across Brands: The Case of the Peter Pan Peanut Butter Recall," *Journal of Agricultural and Applied Economics* 46(4) 1:15.
- Bahktavoryan, Rafael, Oral Capps, Jr., and Victoria Salin. "Impact of Food Contamination On Brands: A Demand Systems Estimation of Peanut Butter." *Agricultural and Resource Economics Review*, 41(3):1–13.
- Salin, Victoria. 2012. "Logistics Analysis of the Pathogen Control Provisions of the Almond Marketing Order." *Journal of Food Distribution Research*.
- Power, Gabriel, Victoria Salin, and John L. Park. 2012. "Strategic Options Associated with Cooperative Members Equity, *Agricultural Finance Review*, 72(1) 48-6.
- Ng, Desmond, and Victoria Salin. 2012. "An Institutional Approach to the Examination of Food Safety," *International Food and Agribusiness Management Review*, 15 (2).
- Chang, Meng-Shiuh, Victoria Salin, and Yanhong Jin. 2011. "Diversification Effect of Real Estate Investment Trusts: Comparing Copula Functions with Nonparametric Methods," *Journal of Property Research*, 28 (3):189-212.
- Wolfley, Jared, James Mjelde, Danny Klinefelter, and Victoria Salin. 2011. "Machinery Sharing Contractual Issues and Impacts on Net Returns of Agribusiness Firms," *Journal of Agriculture and Resource Economics*, 36(1):139-159.
- Teratanavat, Ratapol, Victoria Salin, and Neal H. Hooker. 2005. "Recall Event Timing: Measures of Managerial Performance in U.S. Meat and Poultry Plants," *Agribusiness: An International Journal* 21(3):351-373.
- Hooker, Neal H., Ratapol Teratanavat, and Victoria Salin. 2005. "Crisis Management Effectiveness Indicators for U.S. Meat and Poultry Recalls," *Food Policy* 30(1): 63-80.
- Salin, Victoria, and Rodolfo M. Nayga. 2003. "A Cold Chain Network for Food Exports to Developing Countries," *International Journal of Physical Distribution and Logistics Management* 33(10):918-931.
- Fuller, Stephen, Luis Fellin, and Victoria Salin. 2003. "Effect of Liberalized U.S.-Mexico Rice Trade: A Spatial, Multi-Product Equilibrium Analysis," *Agribusiness: An International Journal* 19(1):1-17.
- Wang, Zijun, Victoria Salin, Neal H. Hooker, and David Leatham. 2002. "Stock Market Reaction to Food Recalls: A GARCH Application," *Applied Economics Letters*, 9(15): 979-987.
- Krueger, Angela M., Victoria Salin, and Allan W. Gray. 2002. "Geographic Diversification Strategy and the Implications of Global Market Integration in Table Grapes," *Agribusiness: An International Journal*, 18: 81-99.
- Salin, Victoria, and Neal H. Hooker. 2001. "Stock Market Reaction to Food Recalls," *Review of Agricultural Economics*, 23:1:33-46.
- Willis, David B., Victoria Salin, Curtis F. Lard, and Sara Robison. 2001. "An Economic Assessment of the Red Imported Fire Ant on Texas Production Agriculture," *Texas Journal of Agriculture and Natural Resources* 14:68-79.
- Krueger, Angela, Victoria Salin, Gary Williams, Lorraine Eden, and Allan Gray. "Profitability of Geographic Diversification Strategy," *Journal of Food Distribution Research* 30(1):112-123.
- Salin, Victoria. 1998. "Information Technology in Agri-Food Supply Chains," *International Food and Agribusiness Management Review* 1(3): 329-334.
- Salin, Victoria, Amy P. Thurow, Nicole Elmer, and Katherine R. Smith. 1998. "Exploring the Market for Agricultural Economics Information: Views of Private Sector Analysts," *Review of Agricultural Economics* 20(1):114-124.

Other Publications

- Salin, Victoria, Senarath Dharmasena, Alex Wong, and Ping Luo. 2006. "Food Product Recalls in the USA, 2000-2003," Journal of Food Distribution Research, 37(1):150-153.
- Salin, Victoria, Juan A. Atkins, and Omar Salame. 2002. "Value Added in Food Manufacturing and Retailing: A Ratio Analysis of Major U.S. States," *Journal of Food Distribution Research*, March, pp. 136-150.

- Salin, Victoria, Rodolfo Nayga, Catherine Viator, Wu-Yi (Dennis) Fang, and Wipon Aiew. 2001. "Infrastructure Needs Assessment for Distribution of Frozen Processed Potato Products in Southeast Asian Countries," *Journal of Food Distribution Research*, March 2001, pp. 200-203.
- Salin, Victoria. 2000. "Information Technology and Cattle-Beef Supply Chains." Principal Paper presented at 2000 annual meetings of the American Agricultural Economics Association, Tampa, Florida, August, 2000, *American Journal of Agricultural Economics*, 82(5):1105-1111.
- Salin, Victoria. 2011. "2010 Global Cold Storage Capacity Report," prepared for the International Association of Refrigerated Warehouses, published to trade association membership and for sale, online at http://iarw.org/hq/aboutus/capacity.asp, March.
- International Association of Refrigerated Warehouses, 2012 Productivity and Benchmark Report, chapter on Analysis by Type of Warehouse by Victoria Salin, published to trade association membership and for sale online.
- Salin, Victoria. 2012. "RFID Technology to Manage Inventory of Perishable Foods," in industry publication Scientists Speak, published for the membership of the Global Cold Chain Alliance, April.
- Salin, Victoria. 2011. "2010 Global Cold Storage Capacity Report," prepared for the International Association of Refrigerated Warehouses, published to trade association membership and for sale online at http://iarw.org/hq/aboutus/capacity.asp, March.
- Salin, Victoria. 2011. "Interest Rates: Not the Only Driver of Investments," in industry publication *Scientists Speak*, published for the membership of the Global Cold Chain Alliance, May.
- Salin, Victoria. 2010. "International Trade in Food: Trends in the USA and Links to the Global Economy," in industry publication *Scientists Speak*, published for the membership of the Global Cold Chain Alliance, April.
- Agribusiness, Food and Consumer Economics Research Center (lead author Victoria Salin). 2009. "Growth Prospects for the Global Temperature-Controlled Warehouse Industry," report reviewed by investment bankers and published in public offering document S-11 for Americold Realty Trust, filed Dec. 14, 2009 with the U.S. Securities and Exchange Commission.
- Salin, Victoria. 2009. "Finance, Fuel, and Fundamentals: The Markets in 2008 and Impact on Businesses in the Cold Chain," in industry publication *Scientists Speak*, published for the membership of the Global Cold Chain Alliance, April.
- Salin, Victoria and Julie Pennington. 2017. "Comparative analysis of existing reintegration practices within IOM: Main areas of interventions and lessons learned." Unpublished internal report provided to United Nations International Organization on Migration, Dec. 27, 2017.
- Salin, Victoria. "Variability In the Impact on Industry of Food Safety Regulation: A Review of Ex Post Analyses," Working Paper CM-03-12, Agribusiness, Food, and Consumer Economics Research Center, Texas A&M University, March 2012.
- Williams, G.W., Oral Capps, Jr., V. Salin, S. Dharmasena, L. Higgins, D. Anderson, "Ethnic Lamb Buying and Preparation Behavior and Preferences" Working Paper CM-01-11 Agribusiness, Food, and Consumer Economics Research Center, Texas A&M University, March 2010.
- Salin, Victoria. "Development of Cold Chain Infrastructure through REITs," Working Paper IM-01-10, Agribusiness, Food, and Consumer Economics Research Center, Texas A&M University, March 2010.
- Salin, Victoria, Desmond Ng, and Nathaniel A. Joy, "An Examination of Bounded Rationality in Food Business: Food Product Recall Event Analysis," Working Paper CM-05-10, Agribusiness, Food, and Consumer Economics Research Center, Texas A&M University, October 2010.
- Jones, Eluned, Victoria Salin and Gary W. Williams. "Nisin and the Market for Commercial Bacteriocins." TAMRC Consumer and Product Research Report No. CP–01-05, Texas A&M University, July 2005.
- Fellin, Luis, Stephen W. Fuller, and Victoria Salin. "U.S./Mexico Rice Trade: An Economic Analysis of Factors Influencing Future Trade." TAMRC International Market Research Report No. IM-1-2000, Texas A&M University, February 2000. http://agecon.tamu.edu/faculty/salin/research/webdoc1.htm.
- Salin, Victoria, Gary Williams, Michael Haigh, Jaime Malaga, Jose Carlos Madrinan, and Katharine Sheaff. "Structure of the Mexican Rice Industry: Implications for Strategic Planning." TAMRC International Market Research Report No. IM-2-2000, Texas A&M University, February 2000.



AMERICAN PECAN COUNCIL – NATIONWIDE ACREAGE ASSESSMENT FOR PECANS

PREPARED FOR: Alex Ott/American Pecan Council

PREPARED BY: Joel Kimmelshue/Land IQ

Casey Gudel/Land IQ Mica Heilmann/Land IQ

DATE: August 28, 2018

Introduction

This proposal and scope of work was developed at the request of the American Pecan Council (APC) for the purpose of developing an approach for assessing field-by-field pecan acreage in a phased method to ultimately map all pecan orchards and estimate acreage nationwide.

Historically, APC has relied upon the input from growers as well as surveys conducted by the United States Department of Agriculture (USDA) – National Agricultural Statistics Service (NASS) to determine pecan acreage nationwide. USDA utilizes the Fruit and Nut Survey each year through phone and mail surveys of growers and handlers to determine acreage, yield, price and value of production. This method is unlikely to achieve 100% completeness and there is no way to detect growers that are planting pecans for the first time or those that respond erroneously or not at all.

Land IQ leverages spatial imagery from both public and private sector sources, including the USDA's National Agricultural Imagery Program (NAIP), Landsat, Sentinel, RapidEye and other commercially available image resources. These data are then extensively validated by on-the-ground visual verification of orchard type. These technologies allow for highly accurate, large-scale crop and land use identification to be performed at time increments as desired, and make possible comprehensive land use information available.

LAND IQ BACKGROUND

Land IQ is a private technology, research, and science-based consulting firm that specializes in integrating agronomic sciences with spatial sciences to address large-scale land management and landscape analysis challenges. Specifically, we integrate agronomic land-based sciences, remote sensing, GIS, and advanced data management to better understand agricultural management and production systems at the field-scale. We also build specific, web-based interactive data management tools and solutions for the purposes of viewing results and dissemination of data. This expertise aligns well with the needs of the APC, as do some of the base data that we have already developed for the entire state of California as well as other western states, including current and historic pecan mapping.

EXPERIENCE

CROP CLASSIFICATION

Land IQ specializes in land use mapping, particularly agricultural land use. Since as early as 2010, we have mapped regional and statewide crop acreages for multiple years for the following specific commodity organizations:

- Almond Board of California
- California Avocado Commission
- California Walnut Board
- California Pistachio Research Board
- California Dried Plum Board
- California Rice Industry

In addition to these specific groups, and for the California Department of Water Resources (DWR), Land IQ has recently completed statewide crop mapping for 2014 and 2016 for over 45 crop categories that make up approximately 98% of the cropped acreage within the state. The most recent overall statewide crop mapping is 97.6% accurate based on ground truthing validation datasets. Overall, the permanent crop mapping results in higher accuracies. For example, Land IQ almond mapping accuracies were 98.8% in 2016. The 2014 crop mapping performed for DWR is now publically available and Land IQ is currently completing the 2016 update (to be released in 2018). Land IQ is contracted with DWR to map future years; currently forecasted through 2022. Pecans are currently grouped with other deciduous trees, however can be differentiated in the mapping with our approaches.

In 2017, Land IQ conducted 12,200 miles of ground truthing within California for the purposes of the previously mentioned validation dataset, but also for continuous improvement of our crop prediction algorithms via incorporation of these robust training datasets. Also, we are constantly updating our field boundary datasets to account for changes in cropping patterns including removal and planting of orchards, joining or splitting of fields, and removal of permanently constructed roads and structures. An example of the Land IQ crop mapping detail is shown as a subset of statewide land use mapping (Figure 1).

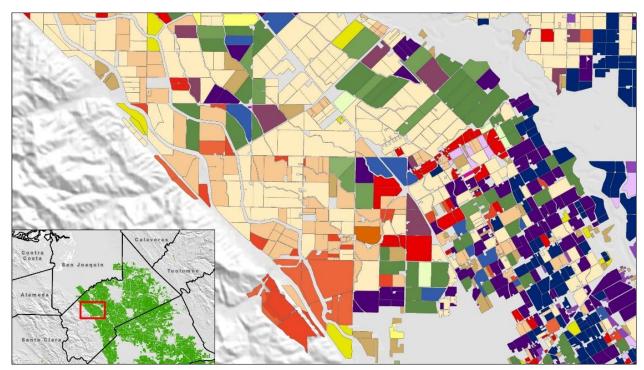


FIGURE 1. FIELD SCALE CROP MAPPING

It is important to note that because Land IQ conducts the statewide crop mapping for DWR, we will insure that consistency of acreage and orchard location is maintained between public mapping of pecans (usually a year or two later) for the state of California and internal APC mapping. In other words, no discrepancies will occur between the two sources.

In addition to mapping all of California, Land IQ has also historically mapped commodities, including pecans in regional areas, in other western states including Arizona, New Mexico and Texas.

AGE CLASSIFICATION

Land IQ is also now finalizing completion of age mapping of all permanent crops in California to the actual planting year (+/- 1-2 years at >90% accuracy). Examples of age mapping can be viewed in the link to the ABC Industry Web Map below.

WEB MAP TOOLS

Once crops have been classified and other spatial layers incorporated, Land IQ then creates and maintains web mapping applications for secure use by our clients. Two examples of public web mapping applications that we have developed or participated in developing are listed below:

www.almonds.com/maps

https://gis.water.ca.gov/app/CADWRLandUseViewer

We have developed numerous private/internal web mapping applications for our commodity-based clients that are currently in use today and mimic those public examples above.

Confidentiality: This scope of work is considered confidential in nature, and is intended for review and consideration only by the addressees in the "Prepared For" line.

STAFFING RESOURCES

Staff expected to work on this project from Land IQ have been involved in various aspects of statewide crop mapping for the last 10 years, and in agricultural remote sensing, geospatial analysis and large-scale data management for the last 22 years. Other appropriately qualified staff may also participate to facilitate timely completion of any tasks approved by APC as a part of this proposed scope of work.

- Principal Agricultural Scientist Joel Kimmelshue, PhD
- Project Manager Casey Gudel, MS
- Principal Agricultural Scientist Mica Heilmann, BS
- Senior Remote Sensing Analyst Zhongwu Wang, PhD
- Remote Sensing Analyst Diya Chowdhury, MS
- Project Agricultural Scientist Seth Mulder, MS
- Geospatial Developer and Programmer Xue Gao, MS
- Project Agricultural Scientist and Data Management Specialist Chris Stall, MS
- GIS Analyst and Data Management Specialist Justin Sitton, BS
- Field Scientist and Crop Specialist Andrew Loberg, BS
- Support Staff Various as needed

SUMMARY OF TASKS

This scope proposes a phased approach to mapping pecans and age analysis nationwide:

- Task 1 California, Arizona, New Mexico
- Task 2 Texas and Oklahoma
- Task 3 Alabama, Louisiana and Georgia

The approach for these tasks are discussed in detail below.

PECAN ACREAGE ASSESSMENT

Scope: This effort is intended to analyze "improved" pecan orchards nationwide for the 2018 production year. The approach will include the following:

- Field-by-field delineation of "improved" pecan orchards (true production acreage)
- Classification of "improved" pecan orchards into age classification. "Native" pecan production cannot be mapped at this scale and will have to be estimated similar to USDA approaches/information.
- Verification of existing "improved" pecan orchards. As a part of the QA/QC process, during annual map updates, Land IQ will verify existing pecan orchards. This verification will increase the already high predication accuracy.
- Summary of "improved" pecan acreage by state and county

Assumptions: It should be assumed that the Land IQ mapping product is over 96% accurate initially and that a small number of orchards will not be correctly classified. These errors are rare, but do exist. As a result, it is assumed the APC will notify Land IQ when errors exist so Land IQ can collaboratively update and improve the accuracy of the dataset for APC. These errors many times "cancel" each other out. Therefore, the numerical acreage is even more highly accurate than the spatial mapping.

Confidentiality: This scope of work is considered confidential in nature, and is intended for review and consideration only by the addressees in the "Prepared For" line.

Deliverables: The deliverable for this task will be a 2017 and 2018 acreage summary of all known "improved" pecan orchards and an age analysis of each "improved" orchard. A technical report with tabular data will also be provided, summarizing "improved" acreage by state and county.

SCHEDULE

Execution by both parties of this Scope of Work shall be a notice to proceed, and this work can be completed within the following schedule:

- Task 1 California, Arizona and New Mexico: within 4-5 months from a notice to proceed.
- Task 2 Texas and Oklahoma: within 3-4 months following completion of Task 1.
- Task 3 Alabama, Louisiana and Georgia: within 4-6 month following completion of Task 1.

COST ESTIMATE

The following cost estimate is provided in Table 1 on a per task basis. Tasks include the following aspects:

- 2017 and 2018 Classification
 - o Task 1: \$59,000
 - o Task 2: \$52,000
 - Task 3: To be determined following completion of Tasks 1 and 2
- 2017 and 2018 Individual Orchard Age Analysis
 - o Task 1: \$22,000
 - o Task 2: \$18,000
 - o Task 3: To be determined following completion of Tasks 1 and 2

It should be noted that subsequent year costs will be less once foundational mapping has been completed and a change analysis approach is implemented. Initial mapping and age analysis is most costly.

PAYMENT

Payment shall be made by APC to Land IQ at each Task level at the following milestones:

- 1. 25% of the cost upon execution of the contract documents by both parties for each Task
- 2. 50% at delivery of acreage and age analysis for each Task
- 3. 25% at delivery of final technical memorandum for each Task

All payments shall be made within 30 days of receipt of invoices from Land IQ.



Department of Plant Pathology

College of Agricultural and Environmental Sciences
Coastal Plain Experiment Station – Tifton Campus

2360 Rainwater Road Tifton, Georgia 31793-5766 Telephone (229) 386-3370 Fax (229) 386-7285

July 26, 2018

Mr. Bruce Caris American Pecan Council 3880 Hulen Street, Suite 105 Fort Worth, TX 76107

Dear Bruce;

The following page is an update of where we stand on the phosphite residue project funded by the APB. We appreciate the extension on these monies as it allowed an additional set of samples to be collected and analyzed. These samples are currently at the lab in California or in Oklahoma at the Noble Foundation, and the complete analysis will be conducted when those results are back. The attached overview summarizes the project and our findings thus far. I will add that these results are very favorable for the continued use of this valuable class of fungicide. I foresee their use expanding greatly in the southeast, and these data should give us a solid understanding of how to use them safely while minimizing residues in nutmeats. Thanks again for funding the project, and I will be glad to provide further details if needed prior to completion of the study.

Thanks for your help in this matter.

Regards,

Tim Brenneman

Professor

CC: Dr. Clive Bock

Dr. Charles Rohla

Research Update to the American Pecan Council

"Quantifying phosphite residues in pecan kernels – preserving an established export market"

Dr. Tim Brenneman, Department of Plant Pathology, UGA
Dr. Clive Bock, USDA-ARS, Byron, GA
Dr. Charles Rohla, Noble Foundation

Pecan growers rely heavily on fungicides to control scab and other diseases such as anthracnose. The most recent class of fungicide developed on pecans is the phosphonates (phosphites). The phosphite fungicides have proven to be effective on multiple pecan pathogens and are highly systemic. They are also reasonably priced, and therefore have been widely used by pecan growers the last several years, especially those growers in the southeastern region struggling with scab control on highly susceptible cultivars like Desirable. They are also widely used in the western production areas as mixes with fertilizers. Due to their systemic nature, treatment with phosphites will likely result in detectable residue levels in the kernels. However, EPA considers this chemistry so safe they did not even require residue data for crops like pecans, and therefore it was never generated. In recent years the European Union (EU) started requiring phosphite maximum residue levels (MRL's) for products they import, including pecans. Since such 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. Obviously this is problematic for anyone exporting pecans to the EU, particularly since use of these products is so widespread. After China, the EU is an important export market for U.S.grown pecans. Fortunately 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). This opens the door for much wider use of phosphites on pecans, but since actual residues in pecans are not known, it is imperative to determine these residues and insure compliance with the new standards. This is especially important to understand where usage of the chemistry is likely to increase. Therefore, the primary goal of this project was to document actual phosphite residue levels in pecans from trees treated with different rates and use patterns of phosphite fungicides, and secondarily to validate an alternative method of analysis which will be much cheaper than current methods which are very expensive.

Currently two sets of samples (225 total) have been collected from orchards in south and central Georgia and residues analyzed by the standard analytical methods accepted for international trade. An additional set of approximately 100 samples have been sent to the lab and we are waiting for the results. Duplicate samples of all these have also been sent to the Noble Foundation for analysis with the alternative, more economical procedure. When those results are completed, they will be compared with the conventional procedure to determine how well they correlate. A preliminary analysis of the partial data shows the following:

- Most unsprayed trees (about 30 samples) had no detectable phosphorous acid, but approximately 1/3 of samples from trees with no known exposure had detectable levels in the kernels. The highest level from an untreated tree was 6.8 ppm, and several others were over the previous legal MRL of 2.0 ppm.
- Trees treated with phosphite fungicides the prior year, or even two years prior, could have residues in the range of 20 ppm.
- No samples were found to contain residues of Fosetyl. This residue would result from application of a closely related fungicide that is not labeled for use on pecans.
- In the preliminary data, there is a significant linear relationship between the amount of phosphorous acid-based fungicides and the resulting residues in the kernels.
- Only 1 sample exceeded the new EU MRL of 500 ppm, and the great majority were < 300 ppm.

These results demonstrate how critical it was to get the MRL raised, as even some untreated trees were shown to have residues above the prior legal level of 2.0 PPM. The fact that illegal residues could easily result from treatments made even several years prior made this even more important. In addition, they demonstrate that the wide range of use patterns employed by pecan growers should produce residue levels that fall safely within the accepted levels. These results also verify that pecan growers are not using Fosetyl, a product illegal on pecans. When the additional lab results are complete, a more detailed analysis of the entire data set will be conducted, including the comparison of the standard analytical procedure and the experimental laboratory method.

Development and Execution of a Research Strategy for the American Pecan Council



Prepared by: Guy H. Johnson, Ph.D.



February 14, 2018

Development and execution of a Research Strategy for the American Pecan Council

INTRODUCTION:

The American Pecan Council (APC) is initiating a research program to investigate the health benefits of this delicious nut. A strategic research plan is needed to prioritize areas of most promise and to ensure that the available resources are used as efficiently as possible.

OBJECTIVE:

To work with the American Pecan Council and its stakeholders to develop a comprehensive research strategy designed to generate an ongoing flow of scientific information that can be used to communicate the health benefits of pecans to consumers and the professional community.

APPROACH:

Johnson Nutrition Solutions (JNS) will work with the appropriate APC personnel and its public relations council (Weber Shandwick) to accomplish the objective. The exact process that will be used to accomplish this task will be developed jointly as the project proceeds, but the major steps that are currently envisioned include:

Phase	Deliverable	Personnel	Approximate completion date
I	Deep dive into the pecan literature	JNS	February
	Develop discussion guide for one-on-one interviews	JNS/WS	March
	with academic experts		
	Identify/recruit candidates for one-on-one interviews	JNS/WS/APC	March
	(3-5)		
	Conduct telephone interviews to identify the most	JNS/WS	April
	promising areas of opportunity for new research		
	Compile summary report of interview findings	JNS/WS	April
II	Establish/recruit a Scientific Advisory Board (SAB)	JNS/WS/APC	May
	(3-5) – <i>optional</i>		
	 Develop guiding principles (structure, 		
	compensation etc.)		
	 Identify candidates (from one-on-one 		
	interviews and/or other sources)		
	 Extend invitations via telephone 		
	Identify research priorities in face-to-face meeting	JNS/WS/APC	June/July
	with SAB (If no SAB has been formed, priorities will		(depending on
	be established by APC in conjunction with JNS &		availability of
	WS)		SAB)
	Develop APC's research parameters (e.g., policy	JNS/WS/APC	June/July (can be
	regarding indirect cost, intellectual property rights,		done earlier)
	publication expectations)		

	Solicit research proposals:	JNS/WS	June/July
	 Option A – Approach individual investigators 		
	identified internally (in conjunction with SAB		
	if there is one)		
	 Option B – Draft RFP and distribute to 		
	research community		
III	Evaluate research proposals in conjunction with SAB.	JNS/WS	August/September
	If no SAB had been formed, evaluations will be made		
	by JNS/WS and recommendations made to APC		
	Final funding decisions	APC	August/September
	Contact applicants	JNS	August/September
	Review protocols with grant recipient(s) and modify	JNS	August/September
	as appropriate		
	Negotiate research contract(s)	JNS/APC	August/September
	Monitor research progress	JNS/WS	Ongoing
	Coordinate PR for presentations/publications	WS	Variable

BUDGET:

JNS costs

The project will be divided in to three phases for budgeting purposes. JNS's hourly rate is \$375. The exact time required to complete each phase is dependent on how the initiative evolves. Therefore, a range is provided for each phase. The low range of each phase will be invoiced at the initiation of that phase. Any additional hours will be invoiced at the completion of each phase along with any out-of-pocket expenses (e.g., travel). JNS guarantees that total cost of the project will not exceed the upper range unless both parties agree in writing that the scope of the project has changed significantly.

Phase	Personnel costs		
	With SAB	Without SAB	
I	\$16,000 to 21,000	\$16,000 to 21,000	
II	\$16,000 to 21,000	\$12,000 to 15,000	
III	\$20,000 to 24,000	\$20,000 to 24,000	

Other costs

Please note that additional costs will be incurred for this initiative. It is recommended that an honorarium of \$1,000 be provided for experts who participate in the one-on-one interviews. In addition, an honorarium of \$3,000 is recommended for members of the SAB if it is established. Additional out-of-pocket costs would be required for travel if there is a face-to-face meeting of the SAB.

Thank you for your consideration of this proposal.



Silliker Food Science Center Proposal

December 8, 2017 Revised January 29, 2018 Revised February 28, 2019 Revised March 2, 2019 Revised August 17, 2018

Shelf-Life Study of Pecans

Prepared for:

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Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 1 of 13 National Pecan Shellers Association ("Customer") wishes to engage Mérieux NutriSciences' Food Science Center (the "Food Science Center") to perform shelf life study (the "Study").

OBJECTIVE

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.

BACKGROUND OF ACCELERATED SHELF-LIFE STUDIES

This proposal addresses a briefing with Emily Connor of National Pecan Shellers Association (NPSA), to conduct a shelf-life study of shelled pecan halves and in-shell pecans.

The NPSA identified three varieties of shelled and in-shell pecans they would like to have evaluated: Western, Improved and Natives. To determine if there is a significant difference that the variety of the pecan plays on the shelf-life of the product, a "Phase 1" trial should be completed where the pecans are stored in open containers at accelerated conditions at 40°C with 50%RH. The results from this Phase 1 trial will be used to determine which variety(s) of pecan to use in the "Phase 2" study.

"Phase 2" of the study will address the effects of different storage temperatures and packaging types on the shelf-life of the pecans. Since pecans are often stored anywhere from refrigerated to abuse conditions, which can also serve for accelerated data, it is recommend that the study be conducted with the following storage conditions with the assumption being that the colder the temperature the products are held at the longer the shelf-life of the pecans will be.

- 2-8°C to represent refrigerated conditions
- 23°C with 50% +/- 5%RH to represent ambient conditions
- 32°C with 50% +/- 5%RH to represent accelerated and abuse conditions

Relative humidity can also play an important part of the shelf-life of the pecans. For the products being stored at ambient and accelerated conditions the relative humidity can be controlled at $50\% \pm 5\%$.

The shelf-life of the pecans will also be affected by the packaging. NPSA identified some common packaging types including vacuum packaging, netted bags, cellophane bags, bins for scooping and corrugated boxes. There are a number of strategies used for the extension of pecan shelf-life, for example vacuum packaging, nitrogen flushing (4), and carbon dioxide flushing (5) that can also be considered. A minimum of three packaging types is recommended to capture a broad spectrum of oxygen and moisture permeability. For example, a cellophane bag, corrugated box and open bin could be used to be representative. Optionally, choosing an additional packaging type with vacuum or gas flushing could foreseeably increase the shelf-life of the product. Packaging types would appropriately be chosen for the shelled halves and in-shelled categories of pecans.

NPSA would like to use samples from the most populated growing regions that have the most consistent average moisture level looking at the October-November harvest regions.

A shelf-life study is conducted by analyzing the product at specific intervals during storage to determine the amount of time before it is considered spoiled. Foods may be spoiled by physical or chemical changes. All analyses should be correlated with sensory evaluations to determine the most appropriate end of shelf-life. An accelerated shelf-life determination is a study where a product is exposed to one or

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 2 of 13 more abuse conditions for the purpose of predicting the shelf-life under normal storage conditions. Abuse conditions typically include higher temperatures to accelerate temperature-dependent reactions. The temperature-dependent reaction rate can then be calculated so that the end of shelf-life can be determined for lower temperature storage conditions. The effect of the change in temperature is often expressed as the temperature quotient, which is the ratio of the rate of change at one temperature to the rate at a specified lower temperature. The temperature quotient for a 10° C temperature difference is called the Q_{10} .

Q $_{10}$ can be calculated by the equation: Shelf-life at temperature T ($^{\circ}$ C) Shelf-life at (T ($^{\circ}$ C) + 10° C)

The simplest reaction rate estimation is a Q_{10} of 2 in that it is considered that a shelf-life doubles with each 10° C decrease in temperature or a rate of 4 from 40° C (104° F) to room temperature at 20° C (70° F) (3). Therefore a product with a shelf-life of 3 months at 40° C is estimated to have a shelf-life of 12 months at room temperature (20° C).

The use of a Q_{10} of 2 is a useful tool as an initial shelf-life estimate but may not represent the actual shelf-life acceleration factor of a specific food product. Accelerated studies utilizing a Q_{10} of 2 should be accompanied by a shelf-life study under normal storage conditions. Results from the normal storage condition study can be used to fine-tune the $Q_{10}=2$ estimate, thus allowing future accelerated storage studies on the same or similar food to be more accurate.

It is recommended that product be analyzed at a minimum of 5 to 7 time points over the duration of the shelf-life in order to provide an indication of chemical and physical changes. All initial accelerated shelf-life studies should include a study with product stored under normal conditions to ensure that the data from the accelerated study is accurate and predicts the real-time shelf-life.

Rancidity

The oil content in pecans is high, and therefore rancidity can develop at warm temperatures. Pecan oil is a combination of several oils, primarily oleic and linoleic oils. Linoleic acid is primarily responsible for oxidation and rancidity in pecan kernels (2).

Rancidity is a chemical decomposition of fats and oils and results in paint-like/cardboard-like odors and tastes. Oxidative rancidity is the degradation of lipids by oxygen. The double bonds of unsaturated fatty acids undergo oxidation, forming peroxides. The fatty acid then cleaves, releasing volatile aldehydes and ketones.

Peroxide values (PV) measure the level of peroxides in fats by the use of solvent extraction and titration. Peroxides are intermediate products to the ketones and aldehydes that smell/taste rancid. It is therefore difficult to provide a specific guideline as to what peroxide value level indicates rancidity. High peroxide values indicate rancid fat but lower values may be a result of the subsequent decrease in peroxides after reaching high concentrations.

In hydrolytic rancidity, water splits fatty acid chains away from the glycerol backbone in triglycerides (fats). Long chain free fatty acids (FFA) do not contribute much off-flavor to a rancid product, so the effect of hydrolytic rancidity is typically observed in oils containing short chain fatty acids (C4-C10). Free fatty acids can however affect texture, noticeable as a soapy aftertaste.

In this study, the development of rancidity will be determined by analyzing pecan samples for peroxide value and free fatty acids and correlating those results with sensory evaluations.

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 3 of 13

Moisture and Water Activity

Moisture, the amount of water in a food product, is often directly related to the end of shelf-life. Moisture gain in pecans is often considered a key indicator of end of shelf-life. For in-shell pecans, tannin from the shell lining can migrate to the kernel with moisture increases causing a darkening of the product. If there is a loss of moisture in in-shell pecans, a breakdown of the shell can expose the kernel to oxygen causing more rapid lipid oxidation (3). Additionally, moisture changes can affect the texture of the pecans. In terms of water activity, Santerre (4) reported that research has shown the water activity of pecans is affected by the moisture and lipid content. According to Santerre (4): "Pecans containing 64% lipid and 5.7% moisture may have a water activity (a_w) = 0.68 at 21°C (70°F), whereas, pecans containing 70% lipid and 4.5% moisture may have the same water activity. Pecans having a water activity <0.68 will not support the growth of mold or bacteria, and may have a moisture content from 4.5% to 5.7%, depending upon the lipid composition". Given the incomplete correlation between moisture and water activity, pecans will be visually inspected for mold growth at each time point and the water activity tested if there is a presence of mold.

Texture

Texture is the sensory and functional manifestation of the structural, mechanical and surface properties of foods detected through the senses of vision, hearing, touch and kinesthetics. (Szczesniak, 2002) The classification of textural terms for solids and semi-solids gave rise to a profiling method of texture description (TPA) applicable to both sensory (Brandt, Skinner, & Coleman, 1963) and instrumental measurements (Bourne, 1978; Szczesniak, Brandt, & Friedman, 1963a). With the instrumental method, texture profiling involves compressing the test substance at least twice and quantifying the mechanical parameters from the recorded force-deformation curves. (Szczesniak, 2002)

The texture of pecans is affected by moisture content, oil content, variety, harvesting, handling, and storage practices (Resurreccion and Heaton, 1987). Therefore, analytical texture analysis is recommended for determining the packaging and storage best practices for this product.

Ten replicates of textural analysis will be conducted at each pull time using a Texture Technologies TA.XTPlus. The method for analysis will be a texture profile analysis using a 3 inch diameter cylinder probe so the forces registered are primarily uniaxial. The pecan samples will need to be uniformly prepared such that the height and contact surface do not differ between samples and affect the force results. Therefore, a cork borer will be used for sample preparation and the resulting cylinders will be cut to a standardized height. This method has been shown to be suitable for measurement of texture of pecans and to be in agreement with sensory results in "Texture of Pecans Measured by Sensory and Instrumental Means".

Basic Sensory Analysis (Phase 1)

Phase 1 sensory testing will consist of a basic appearance and aroma evaluation where one scientist will make observations about the sample particularly in regards to color changes, visual textural changes, oxidation and rancidity aromas, and mold growth.

Consumer Sensory Panel (Phase 2 Shelled only)

To be able to better understand how typical consumers feel about different varieties of pecans, and how they are packaged, a consumer based panel is recommended for this study. For the validity and power of the data collected, the statistics used must be as robust as possible. To achieve this, we work with data sets that fit the normal distribution. This distribution has been well tabulated and areas under a normal curve correspond to probabilities that can be used to estimate probabilities of outcomes for experiments. To achieve a normal distribution, we must have a sample size that is large enough to have approximated

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 4 of 13 normality. According to the Central Limit Theorem, if random samples of n measurements are repeatedly drawn from a population with a finite mean μ and a standard deviation σ then when n is large (>=30) the relative frequency histogram for the sample means will be approximately normal, with mean μ and standard deviation (σ / \sqrt{n}). This approximation of the normal distribution becomes more precise as n increases; however, 30 sample points can be used as a minimum for approximating the normal distribution. We recommend a minimum of 75 consumers evaluate each product type at each of the sampling intervals.

At each sampling interval, representative samples of each product being compared will be collected and evaluated side-by-side for sensory quality by 75 sensory panelists. Panelists will be screened prior to participating in the study for pecan consumption. The pecans will be served in 4 oz. cups and labeled with a random three digit code. Panelists will rate the samples on the basis of appearance, aroma, texture, flavor and overall acceptability, using a 9 point hedonic scale (1=dislike extremely, 5=neither like nor dislike, 9=like extremely).

1	2	3	4	5	6	7	8	9
Disliked				Neither L	iked			Liked
Extreme	ly			Nor Dis	sliked			Extremely

Additional product characteristics may be added for evaluation if needed. Demographic information and open-ended comments from panelists will also be solicited. Attribute ratings will be analyzed using an ANOVA, and along with panelist comments will be used in determining a possible loss or differences in quality during the shelf life evaluation.

MATERIALS AND METHODS

Test Product

For Phase 1 10kg of each product and variety is needed.

For Phase 2, The number of samples per packaging is dependent on the size of each sample.

Samples for texture

One hundred and twenty (120) intact pecan halves for each variety will be necessary to conduct textural testing for phase 1. Four hundred intact pecan halves for each variety per temperature will be necessary to conduct textural testing for phase 2. Ideally, the Gainesville lab would receive one intact package per pull time containing a minimum of 20 pecan halves for each variety.

Samples for sensory

For phase 2, at least 450 pecan halves per variety per variable will be required at each consumer panel.

Silliker Food Science Center, 3600 Eagle Nest Drive, South Building, Crete, IL 60417. ATTN: Upasana Hariram. The packaged products will be supplied by NPSA.

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 5 of 13

Experimental Matrix

PHASE 1

- 2 Products: Shelled Halves and In-Shell Raw Pecans in open containers
- 3 Varieties of each product
 - o Western
 - o Steward
 - o Natives
- 1 Storage Temperature: 40°C with 50%RH
- 1 Packaging type: open packaging
- 1 production lot
- 1 replicate per time point
- 6 Pull times: Initial, week 3, 6, 9, 12, 15
- Chemical analyses: Peroxide value, Free fatty acids, and Moisture at each pull time (300g per pull time for chemical analysis)
- Physical Analysis: Texture (20 intact pecan halves are needed for texture per time point)
- Organoleptic analyses: Appearance, Odor (n=1) (50g per pull time)

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 6 of 13

Phase 2

Shelled	Storage	Dimensions and	Serving Size	No. of servings per
Halves	Temperature	Weight of Each	if Applicable	package
		type of packaging		
Nitrogen	2-8C (35.6 to 46.4F)			
flushed with	seasonal humidity			
cellophane	23C 50% (73.4F)			
(95%Nitrogen)	32C 50% (89.6F)			
Corrugated	2-8C (35.6 to 46.4F)			
	seasonal humidity			
	23C 50% (73.4F)			
	32C 50% (89.6F)			
Vacuum	2-8C (35.6 to 46.4F)			
Packed	seasonal humidity			
	23C 50% (73.4F)			
	32C 50% (89.6F)			

- 1-2 Variety of each product (to be determined from phase 1)
- 1 production lot
- 1 replicate per time point
- Pull times at each condition for analytical study. Sensory consumer panel will only occur
 every other pull time, and one "initial" pull may represent multiple temperatures per product,
 variety and packaging depending on availability of samples.
 - o Refrigerated: initial, week 18, 35, 52, 69, 86, 104
 - o Ambient: initial, week 8, 14, 21, 28, 35, 43
 - o Abuse: initial, week 4, 7, 10, 14, 18, 22
- Chemical analyses: Peroxide value, Free fatty acids, and Moisture % at each pull time (300g per time point)
- Microbiological analysis: visual observation for mold growth
- Physical Analysis: Texture Analysis (20 intact pecan halves per time point)
- Consumer Sensory Panel: At each designated pull time 75 pre-screened panelists will
 evaluate products based on appearance, aroma, flavor, texture, and overall acceptability using
 a 9 point hedonic scale. The number of samples compared per sitting can be limited by
 mental and sensory fatigue. Sensory fatigue is usually determined by the amount of
 carryover created by each sample and will be taken into consideration when determining an
 upper limit of comparisons made per sitting. (450 pecan halves per variety per variable)
- Additionally product will be shipped back to the client at each pull time, rotating locations.
 Please complete address in section 4(f). (200g per time point)

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In-shell	Storage Temperature	Dimensions and weight of each packaging
Sacks or	25C seasonal humidity	
Totes (max	2-8C (35.6 to 46.4F)	
50 lb)	seasonal humidity	
Or		
Sacks or	23C 50% (73.4F)	
Totes (need	2-8C (35.6 to 46.4F)	
to be scaled	seasonal humidity	
down)		

- 1 Variety of each product (to be determined from phase 1)
- 1 production lot
- 1 replicate per time point
- Pull times at each condition for analytical study. Sensory consumer panel will only occur
 every other pull time, and one "initial" pull may represent multiple temperatures per product,
 variety and packaging depending on availability of samples.
- Ambient: initial, week 8, 14, 21, 28, 35, 43
- Abuse: initial, week 4, 7, 10, 14, 18, 22
- Refrigerated: initial, week 9, 18, 27, 36, 45, 52
- Chemical analyses: Peroxide value, Free fatty acids, and Moisture % at each pull time (500g per time point)
- · Microbiological analysis: visual observation for mold growth
- Physical Analysis: Texture Analysis (20 in shell pecans per time point)
- Sensory analysis: Additionally product will be shipped back to the client at each pull time, rotating locations. Please complete address in section 4(f). (200g per pull time)

Sample Analyses

Samples will be analyzed initially (Day 0) and on predetermined intervals (listed in the experimental matrix). One (1) sample will be taken at each interval and analyzed for free fatty acids, moisture, texture and peroxide value. The methods of analyses are outlined in the following table.

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 8 of 13 Table 1: Methods of Analysis

Test	LIMS Code	Method
Free Fatty Acids with Extraction	FFA-EXTRAC	AOCS Ca5a39
Peroxide Value in Oil	PEROX-EXTRAC	AOCS Cd 8-53
Moisture	MOIST-KF	AOAC 991.02
Water Activity	WATER-ACT	AOAC 978.18
Texture by XTPlus Texture Analyzer	TEXTUREXTP	Manufacturer Instructions
Appearance	APPEARANCE	Internal Method
Odor	ODOR	Internal Method

REPORTING

One preliminary report will be issued after results are available from each pull time. Upon completion of the study, a report containing a statement of objective, methods used, study results, and a discussion of any significant findings will be prepared and issued. This report will include contribution to future white paper or presentation.

REFERENCES

- Ziaolhagh. H. Effect of packaging on shelf-life of almond kernels. International Journal of Agriculture and Crop Sciences. 2013. Volume 5-(1), pp 15-20
- 2. Herrera, Esteban. 2005. http://aces.nmsu.edu/pubs/ h/H620/welcome.html
- 3. Woodroof, J. G. Storage Life of Canned, Frozen, Dehydrated, and Preserved Fruits in Commercial Fruit Processing, 2nd Edition, pp 285 -287.
- 4. Santerre CR. (2012). Pecan Technology. Springer. Pages 61-62
- Gardea AA and Martinez-Tellez MA. (2011). Pecan (Carya illinoiensis (Wangenh.) K. Koch.). In: Yahia EM. (ed). Postharvest Biology and Technology of Tropical and Subtropical Fruits. Elsevier
- Resurreccion, A. V. A., and E. K. Heaton. 1987. Sensory and objective measures of quality of early harvested and traditionally harvested pecans. J. Food Sci. 52(4): 1038-1040, 1058.
- Szczesniak, A. Texture is a sensory property. Food Quality and Preference. Volume 13, Issue 4, 2002, Pages 215-225.
- Ocon, A, et al. 1995. Texture of Pecans Measured by Sensory and Instrumental Means. Journal of Food Science. 60(6): 1333-1336.

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 9 of 13 **Project Title: Shelf-life Study Pecans**

Revised Date of Submission: March 2, 2018 PRICING AND PROJECT SCHEDULING

Proposal Pricing Options

Phase 1 Analytical Study						
Option Details Total Cost						
Phase 1	6 Variable Study: 2 products, 3 Varieties, 1 Storage Temperature, 6 pull times	\$13,400				
Phase 2 Analytical Stud	dy					
Option	Details	Price/Variable	Total Cost			
Shelled (A)	9 variables: Shelled, 1 Variety, 3 Storage Temperatures for 3 packaging types, 6 Pull times at each Temperature, = 57 replicates per analysis	\$2,878	\$25,900			
Shelled (B)	18 Variables: Shelled, 2 Varieties, 3 storage temperatures for 3 packaging types, 6 pull times at each Temperature, =114 replicates per analysis	\$2,761	\$49,700			
In Shelled	3 variables: In Shell, 1 Variety, 3 Storage Temperatures, 1 Packaging Type, 6 Pull times at each Temperature, = 19 replicates per analysis	\$3,567	\$10,700			
Phase 2 Sensory Study						
Option Details Price/Sitting						
Phase 2	Study: 6-9 total sample comparisons per session.	\$4,500				

The Food Science Center understands that Emily Connor is the Project Manager for Customer. Upon execution of this Proposal, Upasana Hariram, Research Project Leader of the Food Science Center, will be assigned to the Study.

CUSTOMER ACCEPTANCE

1. Acceptance of Terms

- a. This Proposal expires thirty (30) days from the date issued unless signed and returned to Katherine Burke at Katherine.Burke@mxns.com
- Except as otherwise stated above, this Proposal is governed exclusively by Mérieux NutriSciences Terms and Conditions for Services ("the Terms & Conditions"), which are hereby

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 10 of 13

- incorporated by reference into this Proposal. The Terms & Conditions are available at https://www.merieuxnutrisciences.com/us/sites/merieux_nutrisciences_us/files/atoms/files/silliker_inc.pdf.
- c. Customer specifically acknowledges and agrees that (i) the representations and warranties of Mérieux NutriSciences set forth in the Terms & Conditions shall be the sole and exclusive representations and warranties made by Mérieux NutriSciences with respect to the Services contemplated under this Proposal, and (ii) no statement set forth in this Proposal shall constitute a warranty by Mérieux NutriSciences as to the scope, quality, timeliness, outcome, usefulness, applicability or any other aspect of the Services performed under this Proposal.
- d. A signed copy of the accompanying research agreement and a Purchase Order number will be required to initiate the Study. After receipt of the signed Proposal, a start date for the Study will be provided by Mérieux NutriSciences. If for any reason this Proposal is not signed by Customer, any conduct by Customer which recognizes the existence of a contract pertaining to the Study hereof, including but not limited to performance of Study by Mérieux NutriSciences for the benefit of Customer or Customer sending samples to Mérieux NutriSciences, shall constitute Customer's acceptance of the Terms and Conditions.
- **2. Term.** The term of this Proposal is for one (1) year from the date written below.

3. Invoicing and Payment

a. If invoicing contact is different than Customer's primary contact for this Study, please provide their contact information below:

Name:
Title:
Address:
Phone Number:
Email:
PO·

- b. All payments must be made in accordance with the Purchase Order, either through the electronic payment or credit card payment option elected by Customer or sent to the following address: Silliker, Inc., 3155 Paysphere Circle, Chicago, IL 60674.
- c. Mérieux NutriSciences Accepts All Major Credit Cards: (Please call 312-938-5151 and ask for our Accounts Receivable Department.)

4. Shipping

- a. Customer shall ensure that all samples shipped or otherwise delivered to Mérieux NutriSciences are (i) fully described on all shipping/delivery documents, (ii) properly packaged, and (iii) accurately marked and labeled.
- b. Customer shall ship best by codes and ingredient statements at least two (2) business days prior to test date. If not listed on product packaging, storage temperature and cooking/heating instructions should be included as well.
- c. Customer shall be responsible for damages incurred by Mérieux NutriSciences, its employees and its independent contractors that are the result of (i) Customer withholding safety information about handling any material delivered to Mérieux NutriSciences, or (ii) the nature and content of any materials delivered to Mérieux NutriSciences.

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- d. Mérieux NutriSciences shall not be responsible for any loss, damages or delays resulting from (i) ultimately, incorrect, incomplete or missing shipping or handling information, (ii) the nature or content of any shipment, including any defect, characteristic or inherent vice of the shipment, or (iii) damage to or loss of articles or alteration in any manner of the contents of a shipment (including, but not limited to spoilage, contamination or chemical changes affecting samples) as a result of improper packaging, shipping conditions or damage to packaging during shipment.
- Mérieux NutriSciences shall not be held liable for contaminated or damaged shipments to the client.
- f. Customer Shipping Address:

Company Name:
Address:
Address:
Attention:
Company Name:
Address:
Address:
Attention:
Company Name:
Address:
Address:
Attention:
Company Name:
Address:
Address:
Attention:

5. Cancelation Policy

- a. Any changes to the study design or project start date this study must be made no later than one (1) week before the agreed upon start date.
- b. If a study is cancelled or postponed with less than one (1) week notice prior to the start date, a fee of 10% of the project price or \$2000, whichever is greater, will be charged.

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 12 of 13 IN WITNESS WHEREOF, Customer, through its duly authorized representative, has read, executed, and delivered this Proposal and agrees to be bound by the terms of this Proposal:

National Pecan Shellers Association

Signature:		
Ву:		
Its:		
Date:		

Shelf-Life Study of Pecans August 17, 2018 Copyright © 2018 Mérieux NutriSciences. Page 13 of 13

NASS CFDA NO. 10.950		
UNITED STATES DEPARTMENT OF AGRICULTURE	TYPE OF AGREEMENT	0
EXTRAMURAL AGREEMENT TITLE OF PROJECT	Reimbursable AGREEMENT NO.	Cooperative Agreement TYPE OF ACTION
TITLE OF PROJECT	18-OA-2033-308	New award
2018 Pecan Production, Price, and Value	PERIOD OF AGREEMENT	Trow award
, ,	1-Aug-18 thru	30-Sep-18
	FEDERAL OBLIGATION	CHANGE IN FEDERAL OBLIGATION
ACTNOV (Nome and Address)	CRIS NO.	+□ - □ AUTHORITY
AGENCY (Name and Address)	N/A	7 USC 3318 (b); 7 USC 450a
USDA, National Agricultural Statistics Services	OBLIGATION DISTRIBUTION	
1400 Independence Ave., SW, Mail Stop 2002	Accounting Code	Amount
Room 5052, South Bldg. Washington, DC 20250	88009918	NASS \$135,000.00
vvasilington, DC 20200		11700 \$100,000.00
NASS TECHNICAL CONTACT (Name, Address and Phone Number)	Cooperator/Sponsor (Name and Address)	
HODA N.C. I.A. S. R. LOUCK C. O. S.		
USDA, National Agricultural Statistics Services 1400 Independence Ave., SW, Mail Stop 2002	American Pecan Council Alexander J. Ott, Executive Director	
Room 5052, South Bldg.	3880 Hulen Street, Suite 105	
Washington, DC 20250	Fort Worth, TX 76107	
Gerald Tillman	(817) 916-0020 (ph)	
202-720-3918 NASS FINANCE OFFICE (Complete Mailing Address)	www.americanpecan.com Cooperator/Sponsor Designated Representa	etive (Name and Address)
NASS FINANCE OFFICE (Complete Maining Address)	Cooperator/Sponsor Designated Representa	alive (Name and Address)
USDA, National Agricultural Statistics Services	American Pecan Council	
1400 Independence Ave., SW, Mail Stop 2002	Alexander J. Ott, Executive Director	
Room 5052, South Bldg. Washington, DC 20250	3880 Hulen Street, Suite 105 Fort Worth, TX 76107	
Diane Stonecypher	(817) 916-0020 (ph)	
202-720-0199	TID# 81-4738156	
APPLICABLE PROVISIONS A	AND REGULATIONS	
This Assessment includes the following:	Daymant	
This Agreement includes the following: Statement of Work; or	Payment: HHS/Payment Manage	romant System
□ Project Summary; or	☐ HHS/Payment Manag ☐ Treasury Check/EFT	
□ Proposal; and	□ Advance Payment A	
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Agreement No. 18-OA-2033-308 American Pecan Council Fort Worth, TX

OBJECTIVE:

The objective is to publish the preliminary pecan crop year 2018 utilized productions, price per pound, and value of utilized production. The American Pecan Council (APC) would like the Pecan Production, Price, and Value by variety table published in previous *Noncitrus Fruits and Nuts Preliminary Summary* publications.

APPROACH:

National Agricultural Statistics Service (NASS) will work with the APC under a Memorandum of Understanding to prepare and implement a survey of pecan growers, collect data from selected pecan growers, set estimates, and publish the results on the NASS website. The reference year will be crop year 2018. The States of interest are Alabama, Arizona, California, Georgia, Louisiana, New Mexico, Oklahoma, and Texas.

STATEMENT OF MUTUAL INTEREST:

Both parties are interested in supporting survey activities and preparing agricultural statistics for dissemination. The parties agree that meeting the objectives of this project will strengthen and enhance the ongoing statistical program within the scope of this agreement. This work is in support of the joint agricultural statistics program formally established by the memorandum of understanding between USDA's National Agricultural Statistics Service and the American Pecan Council, the cooperator.

THE COOPERATOR AGREES TO:

- 1. Provide resources in the amount of \$135,000.00 to NASS for sampling, data collection, setting estimates, and publishing those estimates on NASS's website.
- 2. Acknowledge that NASS maintains ownership of the survey data.

DELIVERABLE TO NASS

1. The APC will provide payment of \$135,000 by September 15, 2018, by check or funds transfer upon submission of a properly executed invoice.

DELIVERABLE ACCEPTANCE CRITERIA

Payment will be acknowledged by funds transfer.

Agreement No. 18-OA-2033-308 American Pecan Council Fort Worth, TX

NASS AGREES TO:

- Create a sample of pecan growers in Alabama, Arizona, California, Georgia, Louisiana, New Mexico, Oklahoma, and Texas.
- Conduct one mailing of the survey.
- Conduct limited phone and field followup of the mail non-response.
- Collect and key the survey data.
- Analyze data and set estimates.
- NASS will publish the pecan production, disposition, and income data in a table similar to that which is in previous *Noncitrus Fruits and Nuts Preliminary Summary*. The crop year of reference will be 2018. The States of interest are Alabama, Arizona, California, Georgia, Louisiana, New Mexico, Oklahoma, and Texas. The publication date/time will be 3:00pm Eastern Time on January 24, 2019.

DELIVERABLE TO COOPERATOR

A report with pecan production, disposition, and income data in a table similar to that which is in previous *Noncitrus Fruits and Nuts Preliminary Summary*. The crop year of reference will be 2018. The States of interest are Alabama, Arizona, California, Georgia, Louisiana, New Mexico, Oklahoma, and Texas. The publication date/time will be 3:00pm Eastern Time on January 24, 2019.

DELIVERABLE ACCEPTANCE CRITERIA

The published report on http://www.nass.usda.gov at 3:00pm Eastern Time on January 24, 2019.

MUTUAL AGREEMENTS

- 1. The estimated budget, Form REE-454, is hereby incorporated into the agreement. NASS estimates the total cost of the project to be \$135,000, which includes costs incurred for wages, benefits, supplies, sample selection, survey data collection, and postage. NASS will provide an invoice to the American Pecan Council by September 1, 2018 in the amount of \$135,000 for services performed. Payment by the American Pecan Council will be made within 30 days of receiving the invoice to cover expenses incurred for the services performed.
- 2. It is understood and agreed that funding of this agreement is contingent upon the passage of an appropriation by Congress for FYs 2018 and 2019 from which expenditures thereunder are authorized and can be legally used for the purpose of this agreement and shall not obligate the Agency upon failure of the Congress to so Appropriate. This agreement may also be reduced or terminated if Congress only provides Agency funds for a finite period under the continuing resolution.
- 3. The project agreed to in this Statement of Work must be approved by the Office of Management and Budget (OMB) and the NASS Senior Executive Team. As a condition for approval, OMB may require changes to the survey, some of which may be significant.

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These changes may also significantly change the project's cost and/or time line. If OMB-necessitated changes are required, both parties agree: (1) the project's cost (and possibly time line) may change, and (2) either party may cancel this agreement.

Copies of such correspondence and documentation between the Cooperator and the Authorized Departmental Officer's Designated Representative (ADODR) shall be sent by the originating party to the Authorized Departmental Officer (ADO) at:

Kevin Barnes, Associate Administrator USDA, NASS 1400 Independence Ave SW Washington, DC 20250

U.S. DEPARTMENT OF AGRICULTURE RESEARCH, EDUCATION, and ECONOMICS (REE)

COOPERATIVE AGREEMENT BUDGET

COOPERATOR: American Pecan Council			
AGREEMENT NO: 18-OA-2033-308	REE Agency (ARS/ERS/NASS) TO REIMBURSE	REE Agency (ARS/ERS/NASS) IN-HOUSE COSTS	COOPERATOR CONTRIBUTIONS
A. Salaries and Wages			
1. PI(s)/PD(s)	0		72,239
Other Professional Personnel	0		
Support Personnel	0		27,135
Total Wages and Salaries	0	0	99,374
B. Fringe Benefits (If charged as direct costs)			17,482
C. Total Salaries, Wages, and Fringe Benefits (A + B)	0	0	116,856
D. Nonexpendable Equipment (Attach supporting data	0	0	0
(List items and dollar amounts for each item)			
E. Materials and Supplies	0	0	0
F. Travel			
Domestic (Including Canada)	0	0	0
Foreign (List destination and amount for each trip)	0	0	0
G. Publication Costs/Page Charges	0	0	2,504
H. Data Enclave Costs	0	0	0
All other Direct Costs (Attach supporting data)			
Postage	0	0	3,364
Communication			0
Space	0	0	12,276
(List items and dollar amounts for each item)			
J. Total Direct Costs (C through I)	. 0	0	135,000
K. Indirect Costs (Specify rate and base)			
Rate			
Base			
L. Total Costs (J + K)	• 0	0	135,000
la .			

Comments

Notes:

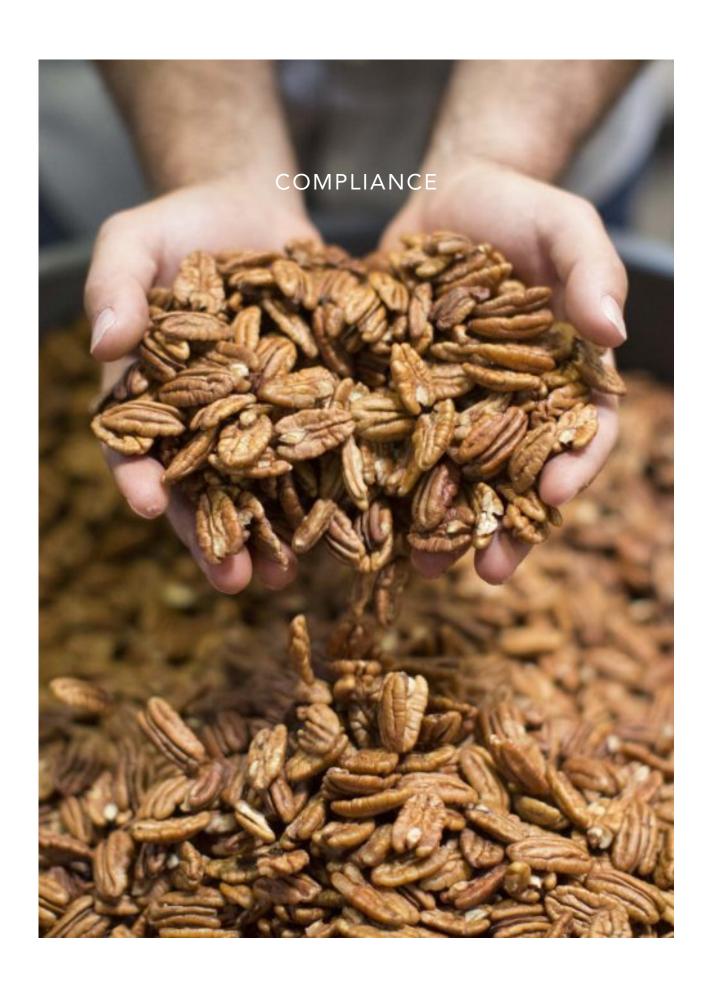
- 1. A separate budget is required for each funding period.
- 2. Federal Statute (7 U.S.C. 3318 (b)(1)(B)) requires a contribution of resources by all parties toward meeting the objectives of the Cooperative Agreement
- 3. The Cooperator's contribution must be no less than 20% of the funded amount of the agreement. Resource contributions of the Cooperator shall consist of a sufficient amount of itemized direct costs to substantiate a true stake in the project as determined by the ADO. The Cooperator's contribution must be maintained at 20% of Federal Funding throughout the life of the Cooperative Agreement (Bulletin 04-154, Subpart B, Section 23.b(1))
- 4. USDA is prohibited from reimbursing State Cooperative Institutions for indirect costs or tuition remission. Indirect costswill be reimbursed only upon receipt of an approved Indirect Cost Rate Schedule (7 USC 3319)
- 5. Unrecovered indirect costs may be used to meet a portion of the resource contribution requirement toward the cooperative effort.
- 6. Unallowable costs as defined in OMB Circulars A-21, A-122, or A-87 as applicable, cannot be considered a resource contribution.

Form REE-454(10/09)

Additional Notes:

Reimbursable surveys where there are no "in kind" payments from a cooperative agreement will complete only the "Cooperator Contributions" column.

REE Agency In-House Costs will consist of "in kind" payments from a cooperative agreement. Consult HQ FO for what to place in this column.



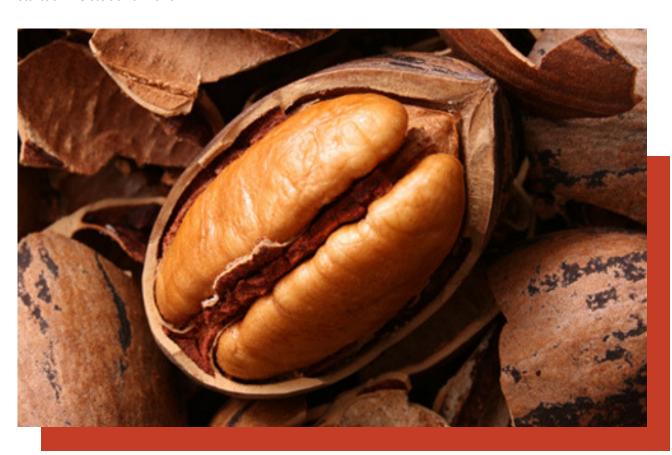
APC FORMS & DATA:

On August 30, 2018, the APC reported shipment, inventory, export, import and commitment data to industry. The report represented a first for industry as data was compiled by APC through the mandated reporting requirements found within the Federal marketing order. The data represented actual industry numbers. Industry information is gathered and compiled through seven different mandated forms that track pecans received, interhandler transfers, pecans export to foreign countries, pecans imported from foreign countries, pecans sent to Mexico for further processing, pecans committed and year-end inventory.

Through the marketing order, monthly reporting is mandated on all handlers. Reporting is also mandated on all growers who ship inshell to foreign countries. The monthly reporting process started in October of 2018.

These reports will provide important information moving forward reflecting on the current state of the pecan market. As each crop year passes, industry will begin to post current year crop figures with year's past to gain a number supported state of industry.

Looking forward, the APC has gathered feedback from industry members and has revised the forms making them much easier to use. The APC is also looking into providing a web based platform to file reports online.



USDA COMPLIANCE, AUDIT & CONTACT INFO:

The Agricultural Marketing Service (AMS) of the United States Department of Agriculture (USDA) conducts Federal marketing order compliance audits each time leadership of a marketing order changes. The American Pecan Council hired their new Executive Director on July 1, 2018. The audit also coincided with the required two-year compliance review. Two members of the AMS compliance team visited APC offices and started their four-day audit/review on July 30, 2018. AMS Compliance found 26 items which required amendments by the APC. The new APC leadership team immediately addressed the 26 areas of concern and presented them to the Council at the August 30, 2018 meeting where all were approved unanimously. Areas included:

- · Amendments to the APC By-Laws
- · Amendments to the APC Travel Policy
- Amendments to the APC Internal Control Policy
- Adopting an APC Staff Training Policy
- · Adopting an APC Employee Handbook
- · Adopting an APC Handler Policy
- Adopting an APC Whistle-blower Protection Policy
- · Adopting an APC Anti-Trust Policy
- · Adopting an APC Complaint Policy
- · Adopting an APC Policy for Funding Requests
- · Approving the APC/AMS e-Compliance Plan

By taking these actions, the APC satisfied the AMS compliance requirements and remains in good standing with USDA.

USDA CONTACTS

The Agricultural Marketing Service

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bruce.summers@ams.usda.gov
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