NATIONAL SORGHUM PRODUCERS

# SORGHUM Grower

SUMMER 2017

## Bruce Maunder
### Renowned Breeder
*An Industry Leader Tribute*

*Also:*

**DANFORTH CENTER, PIONEERS IN SORGHUM RESEARCH**

**GROWERS GAIN GROUND WITH SUGARCANE APHIDS**

*Also Inside*
**SORGHUM CHECKOFF NEWSLETTER**

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ON THE COVER: After many years of service to the sorghum industry in a variety of capacities, Bruce Maunder has retired for a second time. This issue, we pay tribute to Bruce for his leadership and say thank you for the lasting impact he has had on us all.

NATIONAL SORGHUM PRODUCERS
SORGHUM Grower

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## NATIONAL SORGHUM PRODUCERS

4201 North Interstate 27
Lubbock, Texas 79403
806-749-3478 (phone)
800-658-9808 (toll free)
806-749-9002 (fax)
www.SorghumGrowers.com

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## Editor's Desk

# *Honoring Those Who Helped Us Get Here*

Harry Truman once said, "Men make history and not the other way around. In periods where there is no leadership, society stands still. Progress occurs when courageous, skillful leaders seize the opportunity to change things for the better." In this issue of Sorghum Grower, we have the great privilege to honor a leader in our industry such as this.

Dr. Bruce Maunder has a notable career with a singular focus on sorghum. His efforts and devotion alongside many other leaders in the industry have created progress in crop technology that is bridging the sorghum plant of yesterday with that of tomorrow, and attention is shifting to sorghum by plant breeders and scientists in a profound way.

We now embrace adversity with enhanced technology, and overcoming challenges we face in the sorghum industry is becoming easier through additional investment in the crop. Just as Maunder and other researchers tackled greenbug through improved sorghum varieties in the 1960s and 1970s, producers today are overcoming the challenges presented by sugarcane aphids—only quicker. These improvements would not be possible without former lessons, though, and mentorship from men like Maunder who have been in the trenches in the past.

The same can be said as we look at the front line of farm policy. It is farm bill time, and the process, exercised every five years, looks a little different this time. The entire agriculture industry and Congressional leaders are digging deep, looking at notes and experience from the past, as measures to succeed may reach far beyond what is necessary to achieve a fair shake for our individual commodity interests and what is just for farmers.

We too have opportunity to change things for the better, and I encourage you to be the type of leader Truman describes. Today, we count our blessings for leaders like Maunder who helped us get here and to those he impacted along the way that are able to look at the future with optimism for success.

Jennifer Blackburn
*NSP External Affairs Director*

# Crunching The Numbers

## *Budgeting for the 2018 Farm Bill*

By Mollie Dykes

Farm bills are all about two things—money and policy. Every five years, our country develops a new farm bill to ensure agriculture continues to thrive regardless of weather conditions and the state of the agriculture economy.

To begin setting the stage for how the farm bill will be written, budgets must be set while industry leaders discuss the current needs of agriculture. That is exactly where we stand today, evaluating what sorghum needs in the new farm bill and what resources will be required to fulfill those needs.

### Show Me the Money

The first step in the money discussion happened when the U.S. House of Representatives released their Fiscal Year 2018 Budget Resolution in mid-July. This budget outlined $10 billion in cuts to agriculture spending over the next 10 years, which will primarily focus on the Supplemental Nutrition Assistance Program (SNAP). Together, mandatory and discretionary spending in agriculture is budgeted at $144.9 billion.

The Congressional Budget Office baseline released in June will be used for scoring purposes this fall when lawmakers set out to write the next farm bill. The baseline showed that 10-year savings from the 2014 bill are expected to top $100 billion, more than four times the estimate at the time of farm bill passage.

Of particular note, conservation, crop insurance and commodity policies are all expected to spend below baseline. While these savings are good for the country and tax payers, it is a double-edged sword. These savings could potentially hurt in the development of future policy in that funding to agriculture could be limited.

This budget is what allowed the policy inclusion of a $3.95 sorghum reference price. Currently, sorghum producers are expected to receive an average of $68.31 per acre in Price Loss Coverage program payments this October.

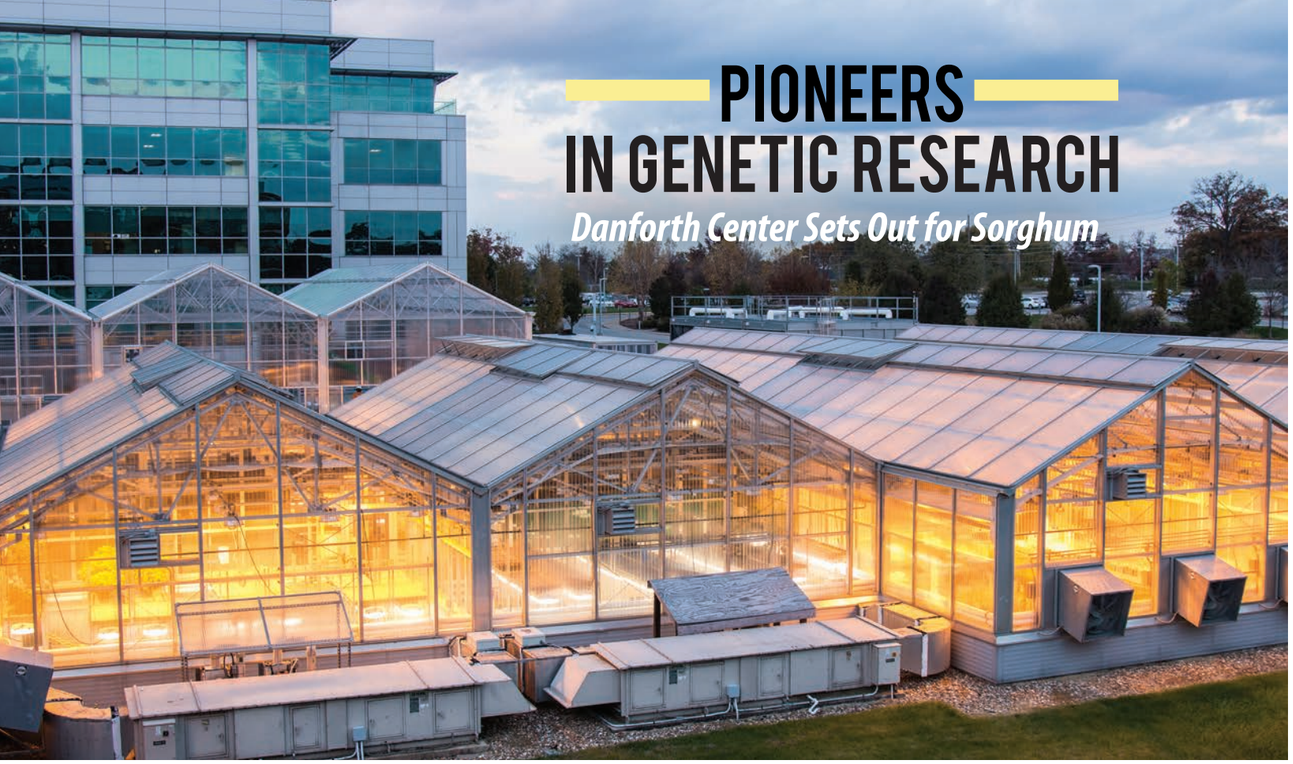
### Standing Ground

Despite cuts to agriculture spending, House Committee on Agriculture Chairman Mike Conaway (R-TX), who stood his ground on his commitment to American agriculture and fought for minimal cuts, is confident there are still sufficient dollars to write a farm bill that works for everyone. Additionally, savings from the 2014 Farm Bill combined with these cuts proposed by the House budget resolution could actually protect agriculture from additional cutbacks in the future.

While any sort of cuts to agriculture are less than ideal, especially when we are faced with variable weather conditions and an agriculture economy that has seen a 50 percent drop in net farm income in just four years, these are cuts we can work around. Essential programs that provide farmers and ranchers with the stability and predictability they need in this economic climate will still receive the attention they deserve in the next farm bill.

The National Sorghum Producers legislative committee, board of directors and staff have been working for months on policy to make sure the sorghum industry and our farmers get the best policy deal possible. Throughout this process, NSP will be there, fighting for each and every sorghum producer, for a safety net that protects their interests and for continued research and other provisions that keep the sorghum industry thriving.

IN FEBRUARY, National Sorghum Producers presented Senate Agriculture, Nutrition and Foresty Committee Chairman Pat Roberts (R-KS) with the Congressional Sorghum Award for his devotion to agriculture and the sorghum industry.



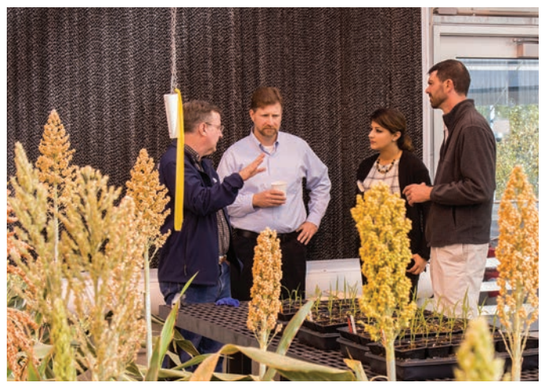
# PIONEERS IN GENETIC RESEARCH

## *Danforth Center Sets Out for Sorghum*

*By Jennifer Blackburn*
*Contributed to by the Donald Danforth Plant Science Center*

Missouri is the Show Me State, home of St. Louis and the Gateway Arch to the West—a monument constructed to honor the explorers who pushed the boundaries of the American frontier. St. Louis is also home to a modern structure where present-day pioneers are charting new territory in the name of science that benefits humanity. The developing crop of choice—sorghum.

Founded in 1998, the Donald Danforth Plant Science Center focuses scientific research at the nexus of food, energy and the environment to improve the productivity and sustainability of agriculture.



◀ SORGHUM CHECKOFF Director of Agronomy Brent Bean and Crop Improvement DirectorJustin Weinheimer visited Todd Mockler and Nadia Shakoor at the Danforth Center in November 2016 to view their greenhouses and lab and discuss future research opportunities.

Recent investments by the U.S. Department of Energy (DOE) Advanced Research Projects Agency-Energy (ARPA-E) and the Bill & Melinda Gates Foundation have put the Danforth Center on the map for high capacity genetic studies in sorghum. Danforth Center scientists, Todd Mockler, Ph.D., member and the Geraldine and Robert Virgil Distinguished Investigator, and Nadia Shakoor, Ph.D., associate director of the project, are leading the $8 million multi-institutional Transportation Energy Resources from Renewable Agriculture (TERRA) project funded by ARPA-E.

The Mockler lab is moving its focus almost entirely to sorghum, funding provided, turning the attention of approximately 23 other research scientists to the crop, as well. Mockler also plans to hire a full-time sorghum breeder.

"There is no master plan," said Mockler, "but I am steering the Titanic in the direction to do all sorghum, all the time, piece-by-piece."

Prior to his work at the Danforth Center, Mockler spent much of his last 15 years sequencing and analyzing plant genomes. The last five years, his team has focused on plant phenotyping that uses imaging and sensor type technologies to monitor plant growth and development, which is what lead to the opportunity he has to work with the DOE today. What lead Mockler's attention to sorghum?

"I attended an international sorghum meeting several years ago in Atlanta, and at that meeting, I decided that I wanted to focus my research on sorghum," Mockler said. "Up to that point, I had mostly worked with model plants such as Arabidopsis and Brachypodium, related to wheat. Sorghum is fascinating to me because of its innate tolerance to heat and drought stress and because it is so versatile as a grain, forage and biomass."

The TERRA research team deployed a state-of-the-art, gantry-based plant phenotyping system for high-resolution imaging of entire crop plots grown under field conditions at a University of Arizona research center. The team will also conduct genomic analyses on sorghum and will integrate phenotype and genomic results to create a high-quality reference dataset of energy sorghum's physical characteristics and genomic information.

"By understanding the phenotypic and genomic variation of bioenergy sorghum, we will lay the foundations for deploying computationally-enabled breeding strategies that will generate high-yielding sorghum hybrids," said Mockler.

These innovations will advance the effectiveness and speed of sorghum breeding programs and production and add next-generation feedstocks with more favorable greenhouse gas emission profiles to the total energy supply. Although the systems developed will initially be used to improve energy sorghum, they will be directly extendable to other significant energy or food security crops.

In 2016, the Bill & Melinda Gates Foundation awarded the Mockler lab a three-year $6.1 million grant to expand and accelerate the impact of the TERRA Phenotyping Reference Platform (REF) program to optimize breeding strategies for improving the yield and stress tolerance of sorghum bicolor as a critical source of nutrition for millions of people living in Sub-Saharan Africa.

▲ RECENT INVESTMENTS by DOE and the Gates Foundation are putting sorghum back into Danforth Center greenhouses.

Shakoor said because sorghum is among the most efficient crops in terms of conversion of solar energy and use of water, it is an ideal crop to target for improvement to meet the predicted doubling of global food demand by 2050.

"Sorghum is truly a cereal grain for the 21st century," she said. "With the ever-increasing demand for climate-resilient crops and a dramatic rise in certain food trends, grain sorghum is a dream crop for scientists like myself who are invested in improving both quality and yield traits in global food security crops."

Additional endeavors by Mockler and his Danforth Center team include launching the Global Sorghum Initiative (sorghuminiative.org), aimed at engaging the international sorghum community to recommend lines for sequencing as part of grants funded in part by the Illumina Greater Good Initiative and the DOE Joint Genome Institute Community Sequencing Program, which supports the sequencing of 1,000 sorghum genomes.

The Danforth Center rarely had sorghum growing in its greenhouse before 2013, but that is certainly not the case today. Opportunities are endless for the crop, and Mockler said now is the right time for sorghum.

SORGHUM IMPROVEMENT CONFERENCE OF NORTH AMERICA

SICNA

**WHEN**

January 29 - January 31, 2018

**WHERE**

Donald Danforth Plant Science Center
St. Louis, Missouri

Join researchers, producers and industry representatives at the 2018 Sorghum Improvement Conference of North America to explore the opportunities and challenges the sorghum industry faces today. **"Raise the Bar"** is the theme of the 2018 conference where attendees will be focused on strategies for raising the national sorghum yield average to 100 bu/acre while raising the national value of sorghum relative to corn by two percentage points by 2025. The Donald Danforth Plant Science Center has been, and will continue to be, instrumental in sorghum research thus making it the perfect location for SICNA 2018. Learn more at SICNA.net.

# MAUNDER

## ETCHED in Sorghum History

Story by Jennifer Blackburn
Layout by Kelsi Christian

"In the day and time he was a commercial plant breeder, I think he was a prototype that we should have all tried to emulate—I know I did."

That is how Larry Lambright, director of the National Grain Sorghum Foundation, humbly describes Bruce Maunder, a lifetime advocate for sorghum and a man admired throughout the industry for his dedication to the crop—and for the people he inspired along the way.

Lambright's first introduction to Bruce was as a farm kid looking for work during college while studying at Texas Tech University. For three years he worked as temporary labor, and as graduation approached, Lambright made a decision that changed his life.

### Investing in People

"I went, hat in hand, asking about a full-time job, and Bruce was gracious enough to consent," Lambright said. "We agreed to an hourly wage. I came out of there higher than a kite because I did the math in my head, and I was going to make $8,000 a year. I could buy anything I wanted, I thought. This was 1972."

At the time, Bruce was Director of Sorghum Research for DekalbAgResearch in Lubbock, Texas. Lambright said he worked for Bruce for close to 18 months before he offered him a salaried position, and so began a lifelong friendship where he taught Lambright how to be a commercial plant breeder.

With successful plant breeding careers at both Monsanto and Chromatin, Lambright was not the only one Bruce gave a career start in sorghum. Jeff Dahlberg, center director for Kearney Agriculture Research and Extension in Parlier, California, recalled his first time meeting Bruce. It was the winter of 1991, and Dahlberg found himself sitting in a room with the Sorghum Crop Germplasm Committee, led by Bruce, at an American Seed Trade Association meeting. Dahlberg was finishing his master's degree at the time.

"They were talking about establishing a sorghum curators position in Puerto Rico," Dahlberg said. "I was lucky enough to get the position."

Working as the first sorghum curator, Dahlberg said tapping into Bruce's knowledge about germplasm was essential when Bruce and his team of plant breeders visited winter nurseries in Puerto Rico.

"I think what Bruce taught me was a huge appreciation for the diversity of sorghum and germplasm," he said. "He was extremely passionate about that, and he believed I could be somebody good in sorghum, so that was really helpful."

Bruce also helped provide an unlikely start to another leader in the sorghum industry. It was 1998 when the executive director position opened at National Sorghum Producers, and Tim Lust was working as themarketing and research director. Despite his youth and limited experience, Lust found the support of a 40-year veteran in the industry at his side.

"Talk is cheap. Actions speak louder than words, and Bruce modeled and showed that he cared," Lust said. "He invested tremendously in my growth as a staff person and certainly went to bat for me in the position that I am in today."

Lust now has a 24-year career in sorghum and said the value Bruce has provided him in knowledge and guidance over the years is immeasurable.

"I think he helped me really in knowing the value and importance of detail and not cutting corners or making mistakes," he said. "You cannot run a good breeding program and be sloppy. You cannot run a good trade association and be sloppy. You cannot run a good farm and be sloppy. Details matter, and I think he always pointed that out and modeled that."

Bruce's mentorship of promising young leaders in sorghum expands beyond the United States, as well. David Jordan, professor in genetics and plant breeding and sorghum team leader for the Queensland Alliance for Agriculture and Food Innovation in Warwick, Australia, was working at Dekalb when Bruce was director of worldwide research.

"I was dropped into the deep end as a plant breeder with not a lot of experience," Jordan said, "and one of the things that I always remember was if I sent a fax to Bruce with a question, I'd have an answer the next day, which is actually kind of amazing. I imagine we were a relatively small part of the Dekalb business back in that time, and that was something that always impressed me."

"He really took the time to support people and not necessarily the people who would directly benefit him," he said. "It was very much in terms of a sorghum industry benefit he could see in that person and trying to support them the best he could."

Jordan, for 10 years now, leads the public sorghum breeding program in Australia, which is a partnership between the University of Queensland, the Queensland Department of Agriculture and Fisheries and the Grains Research and Development Corporation.

### Demanding Excellence

While the ultimate supporter to those around him, Bruce also demanded excellence in every facet of the business.

"You have to be a little bit stubborn and hard headed if you are going to get things done," Lust said, "and when Bruce set his mind to something, there wasn't a lot of back down in him."

"Over the years working with him, I was really happy about that when he was going after somebody else, and sometimes that person was me, which wasn't all that fun," Lust said. "Regardless, there was always a respect of knowing the value of his opinion."

While always open and willing to help people who were trying to do right by sorghum, Jordan, too, said Bruce would let people know when they were wrong.

"He wasn't the sort of guy who would suffer fools lightly," Jordan said, "If you were doing something crazy or that he didn't agree with, he would certainly let you know."

This standard holdstrue from a research standpoint, as well. Bruce understands technology isextremely valuable and helpsthe crop, but he always considers practicality for the farmer, Lust said.

"Bruce had the mindset of ok, is this cool technology or is this really advancing the crop?" Lust said. "And is this ever going to get to the field, or are we just spending money on neat science?"

## Focused on the Farmer

Lust said these questions Bruce asked his entire career garnered respect from sorghum farmers across the nation.

"Inevitably, I'll have a farmer come up and ask, 'Do you ever see Dr. Maunder anymore? How's he doing?'" Lust said. "If you ever wondered how much the man traveled, what his network was and what his reach was, look at the deep, personal relationship he has with growers all over the United States."

Dahlberg recalled a time he and Bruce were driving to Kansas when they worked collaboratively at National Sorghum Producers—Dahlberg as research director and Bruce as a volunteer research adviserfollowing his retirement from Dekalb. Bruce asked Dahlberg if he wanted to see a stretch of road with cowboy boots hanging upside down on fence posts.

"It told me that Bruce really had traveled this country, especially the Sorghum Belt," Dahlberg said, "and he knew not only where every little sorghum field was but where every little odd thing in the country was."

One stop at a grower meeting in rural southeast Colorado introduced Bruce to Terry Swanson, a sorghum farmer from Walsh. Swanson said it was apparent Bruce was genuinely interested in the welfare of sorghum producers and their success, which Swanson found even more evident during his time on the board at National Sorghum Producers.

"Bruce was a really good fit for the organization because of his openness and integrity as an individual," Swanson said. "He was someone the board could turn to and trust to know we were going in the right direction."


Swanson said not everyone always agreed with Bruce, but people knew he always had the sorghum industry's best interest at heart and was a valuable mentor to the producer board of directors.

## Passion for Germplasm

Bruce's connectivity to growers and his deep understanding of germplasm set him apart. Without the sorghum curator position Dahlberg held, Jeff said a collection of 40,000 sorghum accessions—a single, collected variety—would not have been accessed and little interest and knowledge about its contents would have existed.

Bruce advocated for U.S. Department of Agriculture Agricultural Research Service funding through his role on the germplasm committee to have the collection duplicated and backed up with a push to have the collection germinated to ensure the sustainability of the collection for future research.

"You know, germplasm is not very sexy, right? It's not very flashy or wow," Dahlberg said, "but to have someone who really understands it, it's true importance and can be excited about that, well, it certainly benefited Dekalb and allowed him to produce some really great hybrids."

## A Global Perspective

Germplasm that helps hybrids yield more and perform better on farms starts with growth and success internationally. Through his role as head of global research at Dekalb, Bruce carried a unique global perspective, Lust said, which helped him have an impact across the world.

"One of the things Bruce really exposed to me was the fact that the U.S. sorghum industry matters, but it really only matters in the context and scope of an international sorghum program," Lust said. "It is real easy for us to get caught up in our own little world and not really understand the full implications of the global process and global breeding."

Jordan agrees the entire industry benefits from global research.



"You get to the end of your career and think, 'did I make an impact,'" Jordan said, "and I think he is one of those guys who looks back and says, 'Well, I really did have an impact on not just one area of breeding within the company, but globally on the crop,' which I think is probably the thing that I think about when I think of Bruce. When he stopped being a breeder, he didn't stop having an impact."

## Giving Back

Bruce has an accomplished career. His breeding achievements include some 150 commercial sorghum grain and forage hybrids grown on as much as 9.8 million acres in more than 20 countries. He held the position as president of the prestigious Crop Science Society, was on the board for *Diversity* magazine, served the World Food Prize under Dr. Norman Borlaug and on the Sorghum Crop Germplasm Committee for USDA. He was also active for more than 20 years on the U.S. Agency for International Development (USAID) International Sorghum and Millet (INTSORMIL) program as chair of the External Evaluation Panel.

His investment in people, though, is one of his greatest legacies.

Bruce also met Terry Swanson's son Miles that day at the southeast Colorado grower meeting and told them if Miles had interest in studying agronomy at Texas Tech University to let him know.


"When Miles decided to go to [Texas] Tech, Bruce was extremely supportive," Swanson said. "Maunder is interested in young people, and Miles was successful during his time there as a result of his mentorship."

Bruce is undoubtedly passionate about the next generation of leaders, and today, he provides scholarships to students at the University of Nebraska, Purdue University, Kansas State University and Texas Tech University. During the last 20 years as a voluntary research adviser at National


Sorghum Producers, Bruce has been the cornerstone of the National Grain Sorghum Foundation, which now gives four scholarships awarding over $5,000 each year to students studying agriculture who are interested in sorghum.

Countless sorghum breeders from across the world were mentored by Bruce. In fact, Lust said it was nothing for Bruce to drive 8-12 hours to be with a breeder, walk through the nurseries, look at the material, and give advice and his opinion.

He cared about those around him and always did the right thing the right way with a generous heart, Lambright said.

Swanson described a foundation of pillars that represent the sorghum industry and said if half a dozen great men live on in this industry, Bruce is the deep set foundation for us all.

"Bruce is dedicated to the sorghum plant—the agronomic, biologic improvement of the plant and our industry beyond any descriptive words," he said. "Few people have devoted themselves to one thing as much as Bruce Maunder."

## A Tribute to Bruce

After a 40-year career in sorghum followed by 20 years in "retirement" as a research adviser to the producer organizations of this industry, Bruce remains a notable figure in sorghum, attending meetings and providing mentorship across the country. In his second retirement, he is still active weekly in Lubbock Meals on Wheels and is a dedicated financial supporter of college students seeking degrees in agriculture at various land-grant universities.

National Sorghum Producers extends our deepest thanks and sincere appreciation to Bruce for his dedication to the sorghum industry. It is easy to say Bruce has had one of the greatest impacts on our industry not only in the United States but world-wide, and we are forever grateful.

# PRODUCERS GAINING GROUND WITH SUGARCANE APHID

*by Shalin Lawson*

A tiny new pest in sorghum that arrived in fields four years ago once left farmers and scientists alike bewildered—but not anymore.

Blake Tregellas, a farmer from the northeast Texas Panhandle, has locked horns with the notorious sugarcane aphid and is putting the pressure back in its direction, and he isn't the only one fighting back. Producers across the Sorghum Belt are gaining ground managing the sugarcane aphid.

Investment in research and education has proven useful for many farmers. Growers have become better versed on the aphid and its habits and have a renewed hope for sorghum's future.

"In a good year, sorghum is still going to be a profitable crop even including spraying for sugarcane aphid in our budget," Tregellas said. "Every crop has pests that we have to manage and scout for, and now we can treat the aphid accordingly thanks to the work done by the Sorghum Checkoff and Texas A&M AgriLife Extension."

▲ BENEFICIAL INSECTS like lady bugs are critical to controlling sugarcane aphid populations.

Tregellas does his best to be out in the field during critical time periods, turning over leaves scouting for the sugarcane aphid. He believes this is the number one key to dealing with the pest. On his family operation, they scout biweekly and try to stick to an organized schedule once growing season is in full swing. To prevent aphid populations from exploding, Tregellas implements weekly scouting measures once sugarcane aphids are spotted.

"They reproduce at an astronomical rate, so once we hit that economic threshold provided by the Checkoff and Texas AgriLife, we pull the trigger," he said.

Tregellas has primarily used Transform but would like to begin utilizing a combination of Transform and Sivanto to keep from building up a resistance and encourages other growers to alternate usage as well.

"The aphids haven't deterred us from growing sorghum because we've had such great success for so many years," Tregellas said. "For us, the opportunity and benefits outweigh the cost; we just have to be smart and timely."

Tregellas also highlighted the point that seed companies are making tolerant varieties a priority.

"Everybody is trying to improve on that and add it to their lineup. You can tell because now companies are rating their tolerant hybrids, which wasn't happening three or four years ago," he said.

Tregellas said his sorghum acreage has remained steady at about 4,000 acres annually and produced above-average yields in 2016.

## EDUCATION KEY

Ed Regier, a sorghum farmer in north central Oklahoma, shared how developing his personal knowledge has improved his ability to manage the pest. Regier has been vigilant and believes reading magazine articles, attending seminars and consulting a local agronomist are vital steps to building a wide knowledge base on sugarcane aphid control. Because sugarcane aphid populations multiply faster than other pests, he said, it is important to be aware and prepared. Time management is essential in guarding against the intrusion of the aphid.

"The sugarcane aphid is not devastating. You can control them. It simply takes proper management and time to keep them in check," Regier said. "My advice to farmers who might be less experienced in managing this pest is to hire an agronomist and to ask questions."

*(Continued on Page 16)*

Regier's operation utilizes several control methods for the aphid.

"We plant early, scout twice a week after aphids are spotted in the field and keep the beneficial population up to the best of our ability," he said. "The biggest misconception in our area is that it's not economical to raise sorghum with the sugarcane aphid. I had over 100 bushels per acre in the fields where there were sugarcane aphids and have increased my sorghum acreage this year."

Regier also plants tolerant seed varieties and relies on research conducted in his area.

"It is essential we stay on top of these guys, but 2016 was definitely better than the year before, and so far we haven't spotted any here this year," Regier said. "I can't see it being a devastating problem in years to come; it'll just be another pest you have to watch for."

## STAY PROACTIVE

Jon Gwynn, a producer located in the Coastal Bend region of Texas, emphasized the importance of being proactive against the aphid, as well. Managing the problem sooner rather than later has made the difference on his operation.

"It pays to be educated," Gwynn said. "It's worth the time and effort to do it right the first time, and we aren't afraid to go ahead and spray. We've had a lot of success with Transform, a Dow AgroSciences product, and Sivanto Prime from Bayer. They both have their place and have served us well in different aspects of treatment."

Gwynn believes sorghum will remain a viable crop in his region despite some producers' uncertainty regarding the sugarcane aphid's presence. He is convinced sorghum is a consistent, reliable crop that works great in their rotation.

"Sorghum is a great crop because of its drought tolerance and resiliency," Gwynn said. "It has amazed me with its adaptability and tendency to rebound; therefore, despite the challenge with the sugarcane aphid, grain sorghum remains a huge portion of our region's portfolio."

"Overall, we are learning to manage the sugarcane aphid and the pesticides work when we use them the right way by applying as soon as we deem necessary," Gwynn said. "Transform and Sivanto have been extremely valuable assets to our operation when considering time value and affordability. They each have unique characteristics that are needed in our acres."

Gwynn said the past three years of grain sorghum production in the Coastal Bend, have been some of the best crops in a long time.

"2014 fields held average if not above average yield, 2015 yielded even better and 2016 yields were just phenomenal," Gwynn said. "Many factors come into play when considering yield, but the sugarcane aphid continues to show no negative affects on yield in the Coastal Bend when managed properly."

Industry-wide efforts between National Sorghum Producers, the Sorghum Checkoff, state extension, equipment manufacturers, and private seed and chemical companies have provided in-the-field solutions for growers and generated resources to help lessen the burden sugarcane aphids can bring.

Tregellas said farmers now have access to more knowledge than ever before and taking everything into account, it is time to release that fear surrounding the sugarcane aphid.

"I think if someone is on the fence, they should try growing it because the best way to get experience is to do it yourself," he said. "They shouldn't be afraid of the sugarcane aphid because it is manageable."

## *New Technology*

### A GAME CHANGER

The **360 UNDERCOVER** sprayer attachment is changing the way sorghum farmers treat sugarcane aphids. The attachment can be positioned according to crop growth stage. It is designed to surround the leaf and upper canopy, attacking the target from the all angles. This allows the grower to spray treatment under the canopy thus improving coverage, which is a key to controlling the sugarcane aphid. Using a ground application system will distribute a higher volume of liquid which should also increase total coverage.

### KEY FEATURES

- Treats directly under the leaf where aphids build
- Each unit operates up to four multidirectional spray nozzles
- Customizable spray pattern and droplet size

# WATERMELON ARUGULA SORGHUM SALAD

## Make this recipe

### WHAT YOU'LL NEED:

**Salad:**
1 cup whole grain sorghum, cooked
2 cups seedless watermelon, 1-inch cubes
1 cup cucumber, diced or spiralized
7-ounces arugula
1/4 cup sunflower seeds, raw
6 ounces feta cheese, crumbled

**Lemon-Mint Dressing:**
1/2 cup olive oil
1/4 cup lemon juice
2 tablespoons white balsamic vinegar
2 teaspoons sorghum syrup
1 teaspoon Dijon mustard
1/4 cup mint
1/4 teaspoon sea salt

### DIRECTIONS:

1. In a large bowl mix together cooked sorghum, watermelon, cucumber, arugula, sunflower seeds, and feta cheese. Set aside.
2. In a blender, add olive oil, lemon juice, white balsamic vinegar, sorghum syrup, Dijon mustard, mint, and sea salt. Blend until well combined.
3. Pour the olive oil mixture over the salad, place in a serving bowl, and serve.

For this recipe and more, visit: SimplySorghum.com

Sorgonomics™

# BASIS BASICS

*Managing basis for profitability*

## What is basis?

Basis is calculated by subtracting the nearby futures price from the cash price. 'Nearby' is defined as the futures contract closest to the expiration without going into the delivery month. Basis captures the effects of local supply and demand, as well as transportation costs and risk on commodity prices.

## How does basis work for sorghum?

Sorghum basis is priced off of the corn futures contract. Elevators and other grain buyers will use the corn contract to hedge their inventory if they are holding sorghum. So, it is the difference between the cash price at that location versus the board price.

## Why isn't sorghum on the Chicago Board of Trade?

There is simply not enough volume of grain sorghum to be traded on the CME. In the futures markets, liquidity is really important, and you get liquidity with volume. Grain sorghum was traded at Kansas City at one point, but because of the liquidity issues, grain buyers continued to use the corn contract, which suggested the basis risk between corn futures and cash sorghum wasn't anything that couldn't be managed.

## How does basis vary across the Sorghum Belt?

Basis is going to vary for a number of reasons. It depends how close you are to markets. For example, basis in areas with access to shipping terminals has appreciated significantly since China entered the market for U.S. sorghum in summer 2013. Near interior terminal markets, such as those found in central Kansas, appreciation has been intermittent due to many other costs. Conversely, for producers in close proximity to ports like Houston, Texas, low transportation costs have almost continuously held farm prices for sorghum at a premium to corn since China entered the market, particularly if they could hold grain beyond harvest.

## How is basis related to supply & demand?

In effect, your cash price represents local supply and demand, and the CME is more of a national and international price. For example, if you are in an area where there has been a drought, and there are a lot of cattle feeding or ethanol plants, those operations either have to shut down or truck in grain. The grain merchandiser then has to pay the transportation cost, and as a result of that low grain supply and high demand, the basis shrinks or moves to a premium. The cash becomes very high relative to the futures at that point, because you have to pay enough in cash to pay for what it costs to truck it to the buyer. So, it's more of a local cash supply situation.

## How do changes in the market impact basis?

A short crop in the Corn Belt is a supply issue that supports a strong sorghum basis. If ethanol prices increase due to positive regulatory change, you would assume that would raise the amount ethanol plants could pay for sorghum to make basis stronger. The shipping of sorghum to China is an example of a stronger basis that was demand driven. So any of those factors, especially local conditions, are going to drive that number more than anything else. If you've got a really big crop like we have over the past couple years and the elevators are stacking grain out on the ground, you don't even have to ask what the bid is for grain– you know the basis is going to be really wide. They'll buy it, but only at a really reduced cash price, which means a weak basis.

## How does basis change throughout the year?

In general, basis is typically weaker at harvest time when farmers are selling grain off the combine. Then it tends to get stronger toward the end of the crop year. It also depends on what is going on in the Corn Belt and in the rest of the world.

## How does on-farm storage benefit a producer in relation to basis?

Grain sold at harvest trades at a weak basis—typically the year's lowest cash value relative to futures. For producers with storage, grain can be delivered to elevators or end-users when basis is relatively strong, and wait times can often be reduced or even eliminated. However, producers must consider capital costs, the costs of keeping grain in condition and additional marketing burdens. The U.S. boasts the world's premier elevator system for a reason—elevation and storage is a valuable service. Thus, producers should weigh the costs and benefits thoroughly before building storage.

## How can basis affect producer profitability?

The stronger the basis, the higher your cash price is relative to the board. So, if you can pick up an additional $0.15/bu, those additional dollars can add up just off of managing basis. There are many farmers who sell grain this way. For example, because of on-farm storage and a farmer's ability to manage basis, their decision to sell is often driven by how strong the basis is. When the basis is strong, the local market is telling the farmer it needs grain, and it is bidding the cash price up to get it.

## Is there a relationship between basis and crop insurance?

The short answer is no. Both corn and sorghum crop insurance set their price elections based off of the Chicago Mercantile Exchange. The farmer's actual selling price does affect his insurance indemnity calculation. However, since sorghum is not traded on the CME, RMA uses an average basis from multiple locations to arrive at a percentage of the corn price election for sorghum. National Sorghum Producers helped develop this calculation methodology, which has considerably increased the sorghum price election compared to the historical RMA calculation.* Historically, sorghum has gotten short-changed on the price election used in crop insurance.

*During the 2008 Farm Bill debate, NSP worked with then Congressman Jerry Moran (R-KS) and others to include a provision to develop a new methodology that was replicable and transparent. NSP then worked with RMA to refine the new methodology, which uses sorghum prices throughout the Sorghum Belt to calculate the price election. The methodology corrected what were very wide spreads between corn and sorghum price elections for crop insurance and incorporated a time period of 10 years to calculate the price elections.*

SORGHUM CHECKOFF

Summer 2017 www.sorghumcheckoff.com

# NEWSLETTER



## WHAT'S INSIDE



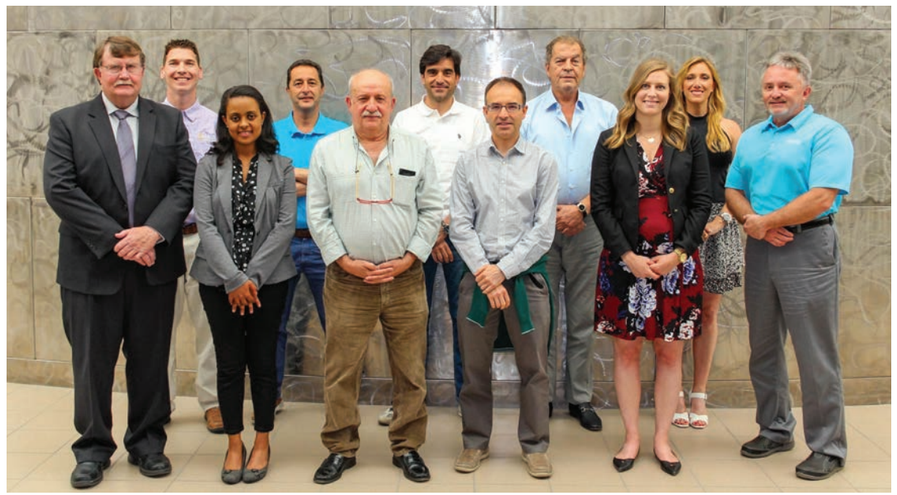
## SUMMER TRADE TEAMS CREATE TRADE RELATIONSHIPS

Each summer, the Sorghum Checkoff partners with the U.S. Grains Council to facilitate trade team visits. These visits either host teams of international sorghum buyers and end-users from across the globe or send teams of U.S. sorghum industry representatives to visit countries interested in sorhghum use in order to strengthen existing trade relationships and to foster new opportunities with potential buyers, creating enhanced interest and market demand for U.S. sorghum.

The summer trade teams launched with a team of manufacturers and company executives from the European Union (EU) May 15-20. The team was the first of its kind from Europe to visit the U.S. to learn specifically about the sorghum food industry and consisted of representatives from Spain's baking, bread, milling, cooperative and livestock feed industries.

"The purpose of the trip was to educate European importers and bakers about the quality and diversity of U.S. sorghum," said Doug Bice, Sorghum Checkoff market development director. "Spain is a major purchaser of grains, and we're here to show trade teams like this the opportunity U.S. sorghum offers to meet their growing consumer needs."

During their visit, the EU team witnessed sorghum's versatility in baked goods as they visited a baking lab, sorghum mill, retail stores and suppliers. Shawn Thiele, the International Grains Program's (IGP Institute) flour milling and grain processing curriculum manager, walked the team through the different techniques used to process sorghum into different forms and compared sorghum's qualities to other popular baking ingredients to show the grain's versatility. Demand is growing for sorghum use in healthy, whole-grain specialty products across the globe, and as the largest producer of sorghum, U.S. growers are well positioned to meet increased demand in Europe.



**A European trade team toured facilities at the International Grains Program in Manhattan, Kansas, in June.** *Photo by IGP Institute.*

**U.S. merchandisers and trade representatives visit Rancho Lucero in Durango, México.**

**Chinese buyers visit Sorghum Checkoff board director Jim Massey's farm in Robstown, Texas.**

Following the EU team visit, a team of U.S. merchandisers and trade representatives traveled to México June 5-10 to discuss export logistics and market opportunities for sorghum. The team visited beef, poultry and swine producers to discuss sorghum's benefit when used in livestock feed. With long-standing trade relationships with several businesses in México, the trip served as the opportunity to strengthen existing relationships and expand partnerships into new areas of the country.

"This was our opportunity to share the value and accessibility of U.S. sorghum with potential buyers and to continue fostering long-lasting relationships," said Sorghum Checkoff regional director Brent Crafton. "We were able to meet in person to discuss logistics, price, quality and sorghum use, which allows us to cultivate new partnerships and strengthen existing ones."

U.S. farmers can offer Mexican buyers their needed quantity and quality of sorghum grain, utilizing advantageous rail lines, ports and on-farm storage. With exports being the number one marketplace for U.S. sorghum growers, visiting buyers and providing logistical and price information in a face-to-face setting is a smart way to expand sorghum exports into México.

Continuing education on export logistics and market opportunities, a team of next generation Chinese merchandisers from several agriculture and commodity trading companies visited Texas and Kansas June 20-July 1. The group, whose businesses represent more than 50 percent of China's total sorghum imports from the U.S., visited grain elevators, farms, ethanol plants and export facilities to discuss purchasing sorghum for export to China through hands-on learning experiences.

"It's a unique opportunity to meet our international buyers face-to-face and show them the fields," said Sorghum Checkoff board director Jim Massey. "They are able to see how we grow, harvest and transport the grain, and we are able to learn about how it's used overseas."

During the visit, the group toured export facilities at the Port of Corpus Christi and the Port of Brownsville, Texas. They also visited local producer farms, grain elevators, the IGP Institute at Kansas State University and a Kansas ethanol plant. The two-week tour allowed hands-on learning experiences for the group while enabling producers and businesses to foster important relationships with buyers.

# STRATEGIC PLANNING LEADS TO NEW AQUACULTURE MARKET

After years of strategic planning and vision, a new market was recently explored in Southeast Asia that shows potential to bring producers more value for their sorghum crop. The Sorghum Checkoff partnered with the U.S. Grains Council to conduct a catfish feeding trial in Vietnam, exploring the ability to use sorghum in aquaculture. Results of a study supported by the Sorghum Checkoff and conducted by the U.S. Grains Council demonstrated the ability for sorghum to be successfully substituted in traditional aquaculture feed through a catfish feeding trial in Vietnam.

Results showed no difference between sources of starch on growth performance, fillet color or physical properties of feed pellets when comparing sorghum to cassava, a traditional fish feed ingredient. U.S. sorghum also contains no tannins and contains higher protein and amino acids, showing it can benefit aquaculture diets.

"The results of the feeding trial showed great success for sorghum in aquaculture as well as the Board's commitment to continuous strategic development and leveraging of programs with the Council," said Sorghum Checkoff executive director Florentino Lopez. "The results show sorghum can be a beneficial ingredient in aquaculture diets, helping provide a sustainable and growing market to U.S. sorghum producers while supplying end-users with a new, cost effective ingredient."

The idea to look to aquaculture as a new market for sorghum began in August 2015 when the Sorghum Checkoff board of directors discussed multiple opportunities to increase sorghum value and demand that would lead to direct producer impact.

"As a board, we were looking for ways to differentiate sorghum as a grain by examining some of its characteristics that could be beneficial in new markets," said Sorghum Checkoff board director Adam Baldwin, a sorghum farmer from McPherson, Kansas. "Aquaculture is a major market in Asia. It's one that has a lot of potential to bring value to sorghum producers and at the time had been untapped by the U.S."

The Sorghum Checkoff board of directors examined numerous projects with the U.S. Grains Council and determined aquaculture was a good fit. The board of directors was also very thoughtful and intentional in selecting the catfish feeding trial as a way to tap into a market that could provide consistent demand at a high value to producers.

After receiving such positive results, the next step in launching this new market for sorghum is promotion. The Sorghum Checkoff and U.S. Grains Council will begin sharing the results of the feeding trial publicly and with the aquaculture industry. Plans are set to travel to Asia in the coming months to visit with fish farms, feed operations and grain buyers to promote the use of sorghum in aquaculture. Utilizing existing trade relationships in the area, the Sorghum Checkoff and U.S. Grains Council will travel overseas to expand sorghum use and foster new relationships with potential buyers.

"Now the key is education," Baldwin said. "We need to meet face-to-face to educate end-users on the benefits of sorghum and the advantage of importing from U.S. producers."

The Sorghum Checkoff is excited about new opportunities for sorghum internationally, and the results of this fish feeding trial are a major win in the creation of new high value markets. To read the full results of the feeding trial visit SorghumCheckoff.com.

# SORGHUM FEATURED IN NEW CHICK-FIL-A BUN

Chick-fil-A recently announced the use of sorghum flour in their new gluten-free buns. This major fast food chain, known for its impeccable customer service and chicken-based menu, made big news for the industry when they added sorghum to its menu in June 2017. This ingredient inclusion of a new menu item is one example of sorghum's growing presence in the consumer food market, also evidenced by its eightfold increase in restaurant menu inclusion over the past three years.

"Sorghum's nutritional health traits, gluten-free characteristic and versatility in cooking have created new market opportunities for the grain," said Sorghum Checkoff market development director Doug Bice. "We work with chefs, restaurants and others in the food industry to launch sorghum onto their radar, promoting its inclusion in consumer food products."

Sorghum Checkoff staff worked with Chick-fil-A to provide nutritional information on the grain and sorghum samples for testing new recipes. Chick-fil-A is the first fast food chain to offer a gluten-free bun alternative featuring sorghum nationwide. Sorghum's naturally gluten-free health trait caters to the niche market of those with Celiac disease or gluten sensitivities, a growing market in the U.S.

The new bun, now available at most Chick-fil-A restaurant locations, can be substituted for any regular bun featured on their main menu. With over 2,100 restaurants in 46 states the inclusion of sorghum on their menu creates huge exposure for the sorghum industry and a new market for sorghum producers. Sorghum's adaptability to be popped, flaked, milled into flour, toasted, or cooked as a whole grain creates a multitude of options for restaurants and chefs to include in restaurant menus. Sorghum Checkoff staff continue to explore new opportunities for sorghum's growth in the consumer food industry and promote the whole grain's nutritional benefits and versatility.

# SORGHUM INDUSTRY EVENTS

Sept. 11-15 - ANFACA Group Visit
*Texas and Kansas*

Sept. 18-22 - China Feed Raw Materials Market
*Hanzhou, China*

Oct. 17-19 - Sunbelt Ag Expo
*Moultrie, Georgia*

Oct. 21-24 - Food and Nutrition Conference & Expo
*Chicago, Illinois*

*For more events, visit sorghumcheckoff.com/calendar*

# CONTACT US

Jennifer Blackburn
External Affairs Director
(806) 687-8727
jennifer@sorghumcheckoff.com

# SORGHUM CHECKOFF MISSION

To efficiently invest checkoff dollars to increase producer profitability and enhance the sorghum industry.

# Efficiency Through Technology

## *Tapping into advanced technology can lead to immense efficiency gains*

By John Duff

The year is July 2025. Your agronomist just left for a much-needed vacation, so managing the crop is your responsibility for the next two weeks. As if it had been waiting for the resident expert to leave, your smartwatch buzzes. Your satellite monitoring system has found a problem in the middle of your biggest sorghum field, and the drone it sent to investigate could not provide you with a diagnosis. You take your farmer CEO hat off, put your agronomist hat on and leave for the field.

You are relieved when you walk out into the field and see the problem spot was actually caused by a lightning strike and not a new insect or weed the drone did not recognize. You are also happy to see how well the crop is doing. Much of your past two years has been spent in Japan promoting sorghum food products you and three other growers began producing in early 2022, and it is nice to be back in the field. You head back to the office to check the satellite's production projection and visit with your marketing manager about your hedges. This crop could be a record.

This scenario, and many others like it, will play out daily on farms across the U.S. and the world in 2025 as this level of sophistication and vertical integration will be commonplace. However, this scenario could play out today. All these tools are at producers' disposal (almost all of them—satellites and drones that can diagnose any problem imaginable are not quite ready for commercial use), and deploying them together could mean untold efficiency gains, even in the short term.

Companies such as FarmLogs and Farmers Edge, based in Manitoba, Canada, provide these tools and the support producers need to use them effectively.

"The first wave of digital agriculture was, and is, prescription maps," said Wade Barnes, Farmers Edge CEO. "Higher yields and less waste are already possible when inputs are tailored to measurable field conditions—this has been proven."

Barnes believes the next waves will revolutionize agriculture.

"The next waves will see producers using data to make decisions in all areas of farm management—not just agronomy," said Barnes. "Implement purchasing is a great example. Implement performance is very different for each farm, and today, performance can be tracked in real time. This allows producers to assess their horsepower and other needs in a very individualized way."

Farmers Edge traces its roots to 2005, when two agronomists, Barnes and Curtis MacKinnon, set out to cut waste and improve productivity using variable rate technology. Today, the company bridges the gap between Main Street and Silicon Valley providing both hands-on agronomic advice and cutting-edge software.

"Farmers Edge is made up of crop consultants who realized data made them better and transformed themselves into digital agricultural technologists," noted Barnes. "The agricultural technology space is filled with Silicon Valley entrepreneurs who know nothing about agriculture but are looking for an industry in which to introduce disruptive change from the top down. Farmers Edge started at the bottom and built the product from the field up."

Recent negative headlines related to precision agriculture adoption do not worry Barnes. He believes infrastructure is a large part of the solution.

"Monitoring and ultimately forecasting crop progress will be important for planning and scheduling everything from herbicide applications to harvest," said Barnes. "The whole industry is chasing accurate forecasting, but it is just not possible without digital infrastructure on the farm."

Companies focused only on remote forecasting and not building infrastructure will have lower-quality data and thus less accurate forecasts and recommendations Barnes believes.

"These types of fundamental digital farm tools will need to be perfectly accurate going forward," he said, "and we are already working toward this using on-farm implement performance monitors and weather stations."

Barnes feels this real-time, farm-specific data enables better decision-making today, and this information flow will only improve.

"If we can predict yield 45 days in advance, why would a farmer not aggressively hedge more often?" he said. "And, if a bank could monitor the progress of a customer's crop in real time, would producers not have more favorable access to capital?"

"I see the future of agricultural technology affecting areas outside the realm of agronomy, like crop insurance and marketing, just as significantly."

Other participants in the agricultural supply chain have the same vision for both producers and their individual industry segments, and for many, the future is already here.

"Autonomy and sensing are playing an increasing role in agriculture. In terms of plants, it is becoming pervasive from plant breeding to crop management practices to food processing and delivery," said Dr. Melba Crawford, Professor of Agronomy, Civil and Electrical and Computer Engineering at Purdue University.

"The big breakthroughs driving increases in drone usage are improvements in the software used to process data," said Crawford. "These machines can now provide plant images with reasonable fidelity at a low cost. The Federal Aviation Administration's relaxation of rules has also been a boon to the market, and both breeders and farmers are now ready for the next level of capability."

Many producers have struggled to fully realize all the benefits remote sensors and drones have to offer, frequently using the tools for very basic crop moni-

toring and even out of simple curiosity. However, Crawford sees this changing rapidly.

Crawford is tied into sorghum through her work at Purdue. The Indiana land grant leads one of the six projects that make up the Department of Energy (DOE) Transportation Energy Resources from Renewable Agriculture (TERRA) program. This $30 million DOE sorghum initiative aims to commercialize rapid plant characterization equipment that will enable more effective sorghum breeding.

"Our TERRA project is truly interdisciplinary and has both a sensing and a genomics component," Crawford explained, noting her team is simultaneously working to map the connection between observable plant characteristics and their genetic drivers.

"For sensing, we are developing capability to reliably acquire and process data from both color-based cameras for measuring plants' physical characteristics and hyperspectral cameras for monitoring plant chemistry," Crawford said. "Simultaneously, we are working to develop the genome-to-phenome connection to better understand the contribution of plant genetics to outward characteristics."

In addition to Purdue, other data-driven TERRA participants include automated lettuce thinning pioneers Blue River Technology, drone manufacturer Near Earth Autonomy and even technology heavyweight IBM. Through private product development and publically-funded research for producers and the breeders that support them, agricultural technology presents vast opportunity. From supply chain participants to farmers, the endgame for all involved is efficiency.

"One of our key people has been with us since we started Farmers Edge," said Barnes of his 35-year veteran agronomist. "All the data we have amassed in the last two and a half years has enabled us to begin making yield projections with fewer soil samples, and we now have agronomists monitoring crop performance primarily from a desk. This recently prompted our agronomist to ask: 'Why am I doing this work manually when I can do what they're doing?'"

Barnes underscored the need for human expertise and the synergies that can occur when talented agronomists' recommendations are augmented from above.

"I would be in great shape if I had 100 agronomists as talented as he is. But I only have a handful. These tools allow me to make near-perfect recommendations with dramatically fewer resources."





KANSAS GRAIN SORGHUM
Growers Working Together

# Sorghum *Update*

*Brought to you by the Kansas Grain Sorghum Commission*

## Jeff Casten, A Leader in Sorghum

Albert Einstein once said, "Only a life lived in the service to others is worth living."

A Kansas farmer has done just that. Jeff Casten of Quenemo, Kansas, has spent many years serving the sorghum industry to ensure its sustainability for years to come. Although he is now retiring from these roles, Casten's work will live on for generations.

Distinguished among a select tier of Kansas farmer-leaders, Casten has earned placement in the pantheon of distinguished leaders to Kansas agriculture.

"If there was a Kansas sorghum hall of fame – Casten would be in it," Jesse McCurry, Kansas Grain Sorghum executive director, says. "His contribution is fundamental—and lasting."

A long-time leader for sorghum at the state and national levels, Jeff stepped down from the Kansas Grain Sorghum Commission board at the July 2017 board meeting.

"Jeff Casten is the reason I got involved," said Bill Grieving, another important player for sorghum and farmer from Prairie View, Kansas. "He is a humble individual about doing what he can for the sorghum industry. He did what he could do and didn't care about who got the credit."

Grieving credits Casten for supporting him along the way in leadership roles as well.

Like many talented farmer-leaders in demand, Casten's leadership shadow over Kansas agriculture extends through many organizations. Frontier Farm Credit's Janet (McPherson) Bailey came to know him through Kansas Farm Bureau's Resolutions Committee.

"Jeff had the ability to identify an issue and the broad impact it had on all farmers," she said. "He was always respectful, resourceful and forward-thinking."

According to Bailey, Jeff's selflessness made for constructive work.

"He is a leader people seek because of his ability to bring good ideas and people together," she said.

Elbert Harp, National Sorghum Producers first executive director, was instrumental in Casten's early involvement and the renewal of the Kansas state association. Through his involvement and success in the yield contest, Casten was recruited by Harp following an awards ceremony at the courthouse in Emporia.

"Elbert was recruiting from areas and some of my peers mentioned I should do that," Casten said. "I said I would help."

That "yes" led to more association involvement, including the chairman roles at the state association and National Sorghum Producers.

"I have had the pleasure of working with Jeff for the better part of 20 years, and I appreciate his commitment to sorghum," says NSP and United Sorghum Checkoff Program CEO Tim Lust. "From hosting numerous international trade teams to serving as president of the National Sorghum Producers early in his farming career, Jeff has been a successful, detail-oriented leader who was extremely helpful promoting the concept of the national checkoff program. Not only did he help draft the original bylaws and structure for the United Sorghum Checkoff Program that helped ensure its long term success, but he also stepped in and served on the original board of directors. We are grateful for his leadership in the sorghum industry."

Sorghum is part of Casten's DNA and is an industry he has devoted a great part of his life to since childhood.

"Sorghum is my history," Casten said. "My dad grew it since the 1950s when I was five or six. Dad always had it in rotation and had to have some acres."

Kansas sorghum farmers thank Jeff and his family for many years of great work. And we wish Jeff the very best in his next chapter.

*Kansas Grain Sorghum Commission, 501 Dawn Lane, Colwich, KS 67030*
*(785) 477-9474, www.ksgrainsorghum.org*

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# Sorghum Shortcuts

## National Sorghum Producers and BASF Scholarship Now Open

The National Sorghum Producers and BASF have partnered for a second year to create a joint scholarship program for two students seeking an undergraduate or graduate degree in an agriculturally related curriculum. Students must be a child or grandchild of a NSP member, and undergraduates must be entering at least their second year of study by the 2018-2019 academic year.

The scholarship will be available to students beginning August 1, 2017, for the 2018-2019 academic year. The scholarship will include an award for tuition as well as cover the recipients' cost to attend the 2018 Commodity Classic in Anaheim, California. Interested students can apply at *SorghumGrowers.com/sorghum-foundation* by Dec. 1, 2017. For questions or to submit materials, contact Debra Lloyd at debral@sorghumgrowers.com or 800-658-9808.

The 2016 winners for the NSP and BASF joint scholarship were Abigail Arthaud of Oklahoma State University and Cody Nedbalek of Texas A&M University.

## NSP Welcomes New Industry Partners

The National Sorghum Producers recently welcomed two new industry partners, Bish Enterprises and Dyna-Gro Seed.

Bish Enterprises is a Bronze Level Sponsor for the NSP Industry Partner Program. Bish markets the newly designed Bish Super-Crop® sorghum header, created to accommodate the needs of sorghum producers.

Dyna-Gro is a Contributor Level sponsor for the Industry Partner Program. Dyna-Gro Seed carries 31 varieties of sorghum seed and develops hybrids to supply a variety of products. Based out of Ralls, Texas, this company distributes seed throughout the United States, Argentina and Austria.

The NSP Industry Partner Program provides the resources necessary to create opportunities and effectively represent the sorghum industry. Collaborations with private industry businesses – like Bish Enterprises and Dyna-Gro Seed – allow NSP to lead legislative and regulatory change as well as maintain full momentum in advancing opportunities for grain, sweet and biomass sorghum.

National Sorghum Producers appreciates the recent support from Dyna-Gro, Bish Enterprises and the other industry partners, which allow us to advocate for a more profitable and competitive sorghum industry.

## James F.C. Hyde Sorghum Whiskey

Sorghum use in the distilled spirits industry continues to take shape, and opportunity is knocking from a brand debuted in National Sorghum Producers' booth at the 2017 Commodity Classic. James F.C. Hyde Sorgho Whiskey captured Classic attendees' attention in March, and is now inviting all those involved in the sorghum community to become ground level investors/owners of this revolutionary new whiskey.

Those interested in finding out more about this unique investment opportunity can go to the James F.C. Hyde Sorgho Whiskey offering page at the Securities and Exchange Commission approved WeFunder.com equity crowd funding portal: *https://wefunder.com/epec.holdings.inc.* The investment minimum is $100.

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