



Insight

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NIFA, IR-4 Moves Increase Logistic Difficulties

Efforts to ensure the mint industry's voice is heard at the national level are becoming more challenging, at least logistically speaking.

With the National Institute of Food and Agriculture's (NIFA) move to Kansas City and with the IR-4 headquarters now shifting to North Carolina, connecting with these organizations has become more difficult.

"Geographically, we are getting pretty spread out," said MIRC Administrator Bryan Ostlund. "It has created some challenges, but we will figure it out."

Added to the difficulties, Ostlund noted that extensive turnover has occurred within NIFA, including in its top position, as well as significant downsizing, both of which increase the importance for he and MIRC Research and Regulatory Coordinator Steve

Salisbury to stay connected with the USDA institute.

"We have an inconvenient location and an individual who we haven't even met with yet," said Ostlund in reference to NIFA. "So, the pressure is on to get to Kansas City and start to build some of these relationships."

The USDA announced last year that NIFA was moving to Kansas City, while IR-4 announced this summer it was moving from its long-time headquarters at Rutgers University in New Jersey to North Carolina.

The IR-4 Project, which works to register pesticides for use in mint and other minor crops, receives the bulk of its funding from NIFA.

Ostlund said that when IR-4 was headquartered in New Jersey, it was



The National Institute of Food and Agriculture will be located in downtown Kansas City.

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convenient for he and Salisbury to meet with the organization, given that members, such as Takasago and Colgate, are located near the former headquarters.

“Geographically, we are getting pretty spread out. It has created some challenges, but we will figure it out.”

Bryan Ostlund,
MIRC Administrator

“IR-4 was in dang near the same county as some of our members,” Salisbury said. “It was very convenient.”

“We have had a fairly streamlined process of going to D.C. and then possibly going up to New Jersey to visit some of our members there,” Ostlund said.

“That whole thing has changed now, with NIFA moving to Kansas City and IR-4 moving to North Carolina. To swing into Kansas City takes a concerted effort and takes time, but it is very important that we do so, especially in light of the fact that NIFA has almost entirely changed hands in the last two years.

“Steve and I need to be strategic about how we handle these things,” Ostlund said. “We will need to combine our visits to these organizations with other trips. It will be challenging, but it is something we need to figure out.”

One positive, Salisbury noted, is that IR-4 now is headquartered near where multiple pesticide registrants operate in North Carolina.

“IR-4 going to North Carolina in some respects is a good thing, because several of our major registrants are right there in the Research Triangle Park/Raleigh-Durham area,” Salisbury said.

Also, Salisbury said, his initial impressions of the new director of NIFA, Scott Angle, are positive. “He spoke at the recent IR-4 conference in Baltimore and I was very impressed with his awareness of IR-4, in terms of his appreciation of the relevance of the project and what it does for U.S. agriculture.” ♦



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Research Council**

Annual Meeting
JANUARY 22-23, 2020

First Meeting of New SAC Makeup ‘Went Really Well’

In September, for the first time in many years, mint suppliers joined manufacturers and growers to review proposals as part of the MIRC’s Scientific Affairs Committee’s annual meeting.

The result?

“All in all, I thought it went really well,” said Eric Dowd, chair of the committee. “There were definitely more people there, but at the end of the day, it was great to get the perspectives from the mint suppliers.”

The MIRC Board of Directors voted last January to increase committee membership from 12 to 18 by adding six mint suppliers, the first time that suppliers have been a part of the SAC for decades.

Steve Salisbury, research and regulatory coordinator for the MIRC, said he thought Dowd did a good job of keeping the meeting moving and keeping the committee on task.

“He did a great job of directing the committee through a review of our priorities and a reprioritization process,” Salisbury said. “And he did a good job of making sure that the committee was focused on what our job is. He continued to remind the SAC members that when we make these decisions on what we are going to fund, let’s make sure that we are funding good science, but also funding things that are going to have a substantial impact on our industry,” Salisbury said.

Dowd noted that one method the committee uses to keep the focus on applied science is to start each meeting by reminding each other of the MIRC’s mission statement, which, in general, is to help promote and drive the



Attendees of the Scientific Affairs Committee’s annual meeting during a tour of Young Living Essential Oils’ global headquarters.

sustainability of the North American mint industry.

“And,” he said, “every proposal, every project that we approve, at the end of the day, we’ve got to be able to tie it back to how is that going to enhance the North American mint industry.

“I think it is really important to try to keep that clear line of sight as we are approving new projects,” Dowd said, “to keep in mind, what impact is it going to have on the industry, what value is it going to bring to the industry.”

The committee reviewed several projects in September, Dowd said, including projects addressing production issues faced by growers and projects that could enhance uses of mint by consumers.

“A big focus for us is integrated pest management,” Dowd said. “That

involves looking at how we can both help out the industry and address some of the key production issues for mint farmers through things like helping obtain new pesticides. Also, we are looking at things we can do with varietal improvements to develop mint plants that are maybe higher yielding or have disease resistance.

“In addition, we talked about projects and research that may help to enhance the use of mint or increase ways to use mint,” he said. “One of the projects that is being looked at now is can mint as an aroma help to improve focus and attention or even help in an academic situation,” he said.

“There are a wide range of projects that we are looking at, all the way from the field to the flavor to the consumer,” he said. ♦

Young Living Lauded for Hosting SAC Meeting

MIRC Board member Young Living was commended by MIRC members and administrators for both agreeing to host the MIRC Scientific Affairs Committee meeting in September and for how they went about it.

“It was very well done,” said MIRC Board member Mark Morlan. “They used their model of hosting and educating their sales associates to do what very few would have the ability to do. I appreciated all their efforts and admired the good taste and professionalism.”

“For a new member to come in and invite the whole group for a Scientific Affairs Committee meeting as a facilitator was above and beyond and a very nice courtesy,” said Bryan Ostlund, administrator of the MIRC.

“Certainly, they appear to want to be engaged with the MIRC in a very significant manner and they were willing to jump into the deep end of the pool pretty quickly,” said Steve Salisbury, research and regulatory coordinator for the Council. “It was nice of them to open up their doors and give the MIRC the VIP tour of the organization and help us understand what is going on there, and we are very grateful for that.”

Young Living, a multi-level aroma therapy company based in Lehi, Utah, joined the MIRC in 2018. The September SAC meeting provided members an opportunity to visit the company’s facilities and see how Young Living is utilizing the aromatic benefits of mint in different products – an opportunity that members embraced in part because the MIRC in recent years has funded studies in aroma therapy.

“The MIRC has traditionally been very well established with the oral care and



Young Living Essential Oils global headquarters, Lehi, Utah.

confection sectors of the mint industry,” Salisbury said. “I think getting into this aroma therapy or fragrance side of the industry is a good thing.

“Mint plays a big role in that industry and any way we can contribute and help out to promote that will ultimately be beneficial for our industry,” he said.

“I really enjoyed the meeting as a way of getting on the ground of where something is happening that relates to the research we direct,” Morlan said.

For three years now, the MIRC has been funding aroma therapy research conducted by Bryan Raudenbush, a physiological psychologist at Wheeling Jesuit University in Wheeling, West Virginia. Raudenbush has uncovered that mint scent can distract people from pain, keep people more focused when performing clerical tasks or when taking exams and, in general, improve performance in a wide range of activities.

Salisbury also noted that the meeting helped inform members and

administrators just how big the aroma therapy industry is these days. “It is a big deal,” Salisbury said, “and mint plays a pretty significant role there, probably more than most people suspect.”

“I don’t know if the use of essential oils is a fad or is here to stay,” Morlan said. “But there will be a percentage of the public that I think will continue to use essential oils more so than in the past. And the Raudenbush research is very valuable in the validation of mint use and should be continued.”

Salisbury noted that the MIRC has, in fact, dedicated a presentation slot to Rich Carlson, executive director of research and analytical science for Young Living, at the MIRC annual meeting in January to provide an overview of the aroma therapy industry. “I believe that will provide all of our members a good opportunity to hear about that industry and how mint is involved in it,” Salisbury said. ♦

New Purdue Scientist to Focus on Mint, Other Specialty Crops

After slightly more than two years without a weed scientist working in mint, Indiana growers in August of this year welcomed new Purdue University weed scientist Stephen Meyers.

Meyers joined the faculty in the university's Department of Horticulture and Landscape Architecture as an assistant professor August 12. Steve Weller, who retired from Purdue in June of 2017 after more than 37 years with the university, formerly conducted weed research in mint.

“I am going to try to continue what Dr. Weller has done in terms of utilizing resources at the state and national level.”

Stephen Meyers,
Assistant Professor, Weed Science
Purdue University

Meyers, who studied under Weller while pursuing a Bachelor of Science degree, said he is looking forward to working with the mint industry. “From my conversations with Dr. Weller, it is apparent that he holds mint growers and the mint industry in high regard,” Meyers said.

Meyers obtained his M.S. and Ph.D. in horticulture from North Carolina State University in 2009 and 2012, respectively, where he conducted research in numerous vegetable and fruit crops. Most recently, he served as an Associate Extension/Research Professor and Sweet Potato Extension Specialist at Mississippi State

University. While there, he also co-managed a 640 acre research station. Collectively, Meyers brings more than 13 years of weed-science experience in specialty crops to his position.

Meyers grew up around mint in Jasper County, Indiana, but said his experience working in mint is limited to the one year he worked under Weller.

“It will be a new crop to me for research purposes,” he said, “which is kind of exciting.”

Meyers said he will conduct research in weed biology, weed-crop interactions, herbicide tolerance and integrated weed-management strategies in hopes of providing specialty crop producers timely, research-based, weed-management recommendations.

Meyers said he plans to conduct the research at experiment stations and on farms with grower-cooperators.

“A lot of times, if you want to see how a practice holds up under real commercial conditions, it is great to be able to work with a grower cooperator,”

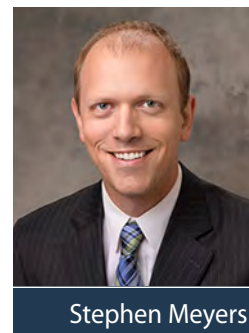
he said.

“Having it on-farm also allows the grower to have first-hand experience seeing how treatments affect the crops and the target weeds.”

Meyers said he is practiced in submitting research grant proposals and plans to continue to do so on both the state and federal levels, including to the MIRC.

“I have been successful in securing research funding from several USDA programs,” he said, “including the Specialty Crop Block Grant Program, the Organic Research and Extension Initiative Program and their Higher Education Challenge Program.

“I am going to try to continue what Dr. Weller has done in terms of utilizing resources at the state and national level,” he said. ♦



Stephen Meyers



Purdue University weed trial, South Bend, Indiana.

Chairman's Report

Gregory C. Biza, Chairman of the Board

As this is my last report as Chairman of the Board of the MIRC, I'd like to spend a little time reflecting on some of the recent history that has been forgotten. The MIRC was formed in response to a perceived and real need for organized research in mint that was being led in a somewhat ad hoc manner by individuals, companies and state funded groups. This organization as a body was established (or re-established) in the mid-'70s by a few highly motivated people and state research organizations.

Original members included:

Wrigley, Colgate, Lifesavers, Procter & Gamble, Warner-Lambert (now Mondelez), Rowntree (now Nestle), IP Callison & Sons, The AM Todd Company, Labbeemint, Wm Leman Company, State Mint Associations (Oregon, Washington, Idaho, Michigan, Indiana and Wisconsin) and individual farmers. It was managed and directed by a relatively small tight knit group of people, the names of many I've mentioned in past communications. The priorities then were focused primarily on *verticillium* wilt and managing or creating a variety that is resistant to the disease. As you know, this priority remains.

What has changed? The membership. Some organizations have come and gone and new organizations have joined. The current membership is in fact slightly smaller, yet no less dedicated, and looking strongly to the future to respond to our existing and potential risks in the future.

Past successes:

Plant Technologies, Inc. which throughout the '80s was funded by the

MIRC developed some moderately resistant plants that were released through the MIRC (M-83-5, M-83-7, Spearmints 227 and 225). Some of these varieties are still being grown.

Mint biopathway work continues to be funded at Washington State University (Rodney Croteau, PhD and Markus Lange, PhD). The work there has led to a massive understanding of the mint biopathway and genes responsible for mint oil production across many *Mentha* species and other essential oil-bearing plants.

In the '90s we asked Purdue and Michigan State Universities to develop transformation and regeneration schemes for mint to aid in the development of new varieties. Purdue was successful at developing this for both peppermint and spearmint. The techniques were then transferred to WSU to be combined with Rod Croteau's work in gene discovery to produce new varieties of mint. This was also successful. Unfortunately, the public was and is currently unwilling to accept this technology and thus those materials were never released.

We cannot forget the work done by our researchers in *verticillium* wilt control and assessment. We now have techniques for doing soil and plant assays for wilt, shortening the time to understand the potential effects of wilt on fields and the crop. Additionally, through the work at all of our funded universities we have a much clearer picture of the contributing factors to wilt with recommendations on positive practices and those to avoid in order to slow down the spread of this disease. I was impressed by a comment made by Dr. Ralph Green, Professor Emeritus

at Purdue University, who said he had been studying wilt since the 1940s and that although we have made many small steps in understanding and improving management of wilt, his opinion was that it will remain a problem in mint for many years to come. I am hopeful he was mistaken.

Crop protection product development and registration, during the '90s and to date, continues to be well guided by Mark Morris of A.M. Todd Company. The push to reduce organophosphate chemicals and find new more environmentally friendly solutions, including biological control opportunities, was clearly in focus. In those days we spoke at length of the Delaney Clause (which was not new) and what that meant for the mint industry and our portfolio. Our crop protection portfolio continues to evolve with strong emphasis on the maintenance of critical solutions for the growers. This effort is a combined success of the growers, the MIRC director, the scientific communities and registrants. Understanding the needs and applying the correct products and protocols is not simple. This work remains at the core of the MIRC and will continue.

These are but a few successes with a few names associated with the MIRC. Others include irrigation study protocols to reduce water consumption, alternative use studies and more.



Greg Biza

Looking to the future, we have many of the same challenges, wilt, crop protection product registrations and development, regulatory challenges. Additionally, what I'll call social media challenges are assumptions about products that are made based upon emotion and perceived risk without sufficient vetting of information and that data continues to grow.

The face of the MIRC must evolve as well and answer the tough questions we currently face, while anticipating the challenges of the future. While *verticillium* wilt is still the number one challenge, others remain and new ones have arisen. This is one reason I believe the MIRC as a group should be reaching out to other organizations like FEMA, JEFCA and others as we are all facing similar challenges in our spaces but can complement resources and information on risks of the future.

Rest assured that with a new generation of interested, dedicated individuals joining the MIRC, many more successes can be realized. As we explore the mint genome, we develop risk mitigation protocols, continue to search for and present new crop protection products

to the market, find new and more efficient distillation and energy use practices and develop alternative uses for mint, the MIRC will be in the best position to coordinate these opportunities.

The largest challenge for the MIRC currently is being able to do the great work we know we can do year in and year out. We wrestle with our budget to best use the monies we are entrusted with. As we enter 2020, we see a stagnate income budget. This directly affects our ability to respond to all the above challenges. At one time we were funding nearly \$700K worth of research annually. This has dwindled to approximately \$300K, which is a result of less North American mint sales and rising costs (through inflation or otherwise). The MIRC is NOT in any danger of being insolvent, but if we want to return to getting effective research accomplished, we must find the dollars and entice the right researchers to perform the work.

Again, reaching outside of the MIRC for additional members or membership categories is important but perhaps joining forces with other like or

similarly challenged groups could be part of the solution. Looking to find grant monies more directly, particularly when multiple states are involved in the studies, may also be a solution. These are just a couple of thoughts to be discussed amongst others. I would welcome any member to contact the MIRC with their thoughts on raising additional research dollars as this will be the key to our continued long-term success.

As I have done in the past, I want to thank every one of you in the MIRC for your support, dedication, time, effort and expertise in making this organization the success it is. Personally, at the end of the board meeting this year I will no longer be serving on the Board of Directors. It has truly been an honor to serve the MIRC and a pleasure not without its challenges for these many years. I wish the next Chairman all the success and patience required for the position and I look forward to seeing the next group of leaders take the reins of this important work.

Thank you! ♦



'Good Round of Projects' in AdvanceMint

A look at the effect of PhycoTerra® on soil health and yield and research into nematode control in mint are among projects awarded in the 2019 round of AdvanceMint Grant Awards.

PhycoTerra is the brand name of a microalgae that Heliae Agriculture, a global company with corporate offices in Gilbert, Arizona, produces. Heliae Agriculture purports that PhycoTerra conveys multiple benefits when added to soil, including increasing water efficiency, boosting soil microbiome, improving product taste and shelf life, increasing active carbon, improving marketable yield and boosting a plant's resilience to crop stressors.

Also awarded in the Mars Wrigley Confectionery funded program are projects looking into water conservation and a large-scale evaluation of different irrigation systems in which researchers are comparing low energy precision application (LEPA) and low energy spray application (LESA) systems to mid-elevation spray application systems, or MESA.

Additional funded projects look at sustainable practices for soil health,

look at uses of drone technology for field scouting, look into the use of aerial imagery for pesticide prescription maps and a project analyzing the potential to reduce electrical power needed to irrigate.

"I think it is a very good round of projects," said Steve Salisbury, research and regulatory coordinator for MIRC, "and I look forward to the results."

Salisbury added that four of the projects will be discussed in a panel session at the MIRC annual meeting in Scottsdale, Arizona, in January.

"We want to share results with the industry so everyone else can see some of the creativity occurring in the industry and also in the hopes of getting other farms engaged in their program," Salisbury said.

AdvanceMint is an awards project from Mars Wrigley Confectionery that promotes and encourages sustainable farming and distillation practices. The program, which awards a maximum of \$150,000 annually, is administrated by the MIRC. Individual awards are capped at \$25,000.



Farms and researchers in the U.S. and Canada are eligible for the awards.

Judges select award winners based on a variety of criteria, including a project's environmental, social and economic impact and the ability of a practice to be adopted.

Successful applicants also must have submitted information on their farm and farming practices to FieldRise, a national program that measures farm stewardship across commodities, or have agreed to submit information to the program during the program's next assessment period.

The current round of accepting applications ends December 31. ♦

AdvanceMint Still Accepting Applications for Round Three

Proposal Deadline:	December 31, 2019
Awards Distributed:	January 21, 2020
How to apply:	usmintindustry.com/Advancemint
Financial Awards:	Total program budget: \$150,000 Maximum per individual project \$25,000
Proposal Submission:	info@ostlund.com
Application Review:	A committee of four

Mars Wrigley Confectionery is offering sustainable agriculture awards to growers in the United States and Canada up to a combined maximum of \$150,000 for use during the 2020 planting season to fund sustainable farming and distillation practices.

Research & Regulatory Update

Steve Salisbury

Earlier in 2019, the mint industry gained a new herbicide registration and label. However, that new label came after the herbicide could have been used on the 2019 crop. BASF's Zidua herbicide with the assistance of the IR-4 Project was approved for use on mint by the EPA. This new tool will be a welcomed addition to the mint arsenal, but unfortunately it is not labeled for use in all states.

Zidua pyroxasulfone is a pre-emergence herbicide that is to be applied to dormant established mint. It is a Group 15 mode of action that is a root-and-shoot growth inhibitor that will control susceptible germinating seedlings before or soon after they emerge from the soil. This is only the second Group 15 herbicide registered in mint, which is key to improved integrated pest management strategies to prevent herbicide resistance development.

A significant point of interest in this regard is that it brings a different MOA than Sinbar terbacil which has been a long-standing staple for weed control in mint and has documented resistance in weed populations in mint production. Zidua brings a viable, effective alternative to Sinbar and can be used in rotation with or in place of Sinbar.

Zidua can provide weed control of several common broadleaf weeds that are problematic to mint production such as pigweed, palmer amaranth, waterhemp, kochia, lambsquarters, wild buckwheat and several others. It will also provide grass weed control for grasses such as cheat, bromes, annual bluegrass, Italian ryegrass, rattail fescue, foxtails and others. As a soil-

active pre-emergent herbicide, Zidua will provide some residual control. However, if weeds are already up and growing then you will need to tank mix with post-emergent herbicides to pick up those already sprouted weeds.

The MIRC funded a multi-state weed research effort in 2015 to collectively evaluate the use of Zidua in mint. Furthermore, the weed scientists have been evaluating its use in mint in many of the mint growing regions across the U.S. These scientists have studied the herbicide's performance and crop safety on many scenarios including peppermint, spearmint, baby, established, muck and mineral soils, tank mix partners and application timing.

In summary of several years of research, Zidua, when applied to dormant established mint at the label rates, resulted in acceptable crop safety. Dormant applications of Zidua, including with tank mix partners such as Gramoxone, Sinbar and Spartan also resulted in acceptable crop safety. When mixed with Chateau, there was a little more injury observed, but the mint recovered and oil yields were not significantly affected. Of course, crop safety response will depend on your specific situation, crop and field conditions and seasonal weather patterns. I encourage you to review the local research results to optimize your use of Zidua.

As for crop-rotation restriction, the plant-back intervals appear to be reasonable for many crops. Given the lengthy plant-back restrictions of Sinbar, there is quite a bit more flexibility with Zidua in this regard.

The unfortunate part about the Zidua registration for mint is that labels were only supported in Washington, Idaho, Oregon and

Montana. This leaves several of our mint acres out of the game with Zidua at this point. The largest acreage of frustration comes from the Midwest. This is frustrating and perplexing. The local weed scientists have researched and support the use with reputable data. So, what gives?

In short, there were some crop-injury concerns by the registrant, which made it hard for them to support a label in the Midwest states. This concern is still being discussed as there is some disagreement on the injury data in question. We will continue to discuss this issue with the weed scientists, the registrant and IR-4 with hopes to achieve a label for Midwest mint. I know it doesn't help much now, but bear with us as we dig deeper into this matter.

The last topic to mention here is concerning the new risk mitigation regulations for all paraquat-containing herbicide products you may be using. Paraquat has recently undergone a federal registration review by EPA and new rules affecting you and your use of paraquat went into place officially on November 14, 2019.

As of now, any new paraquat labeled products entering the distribution



Steve Salisbury

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chain must carry the new label. In other words, distributors can only purchase new-label paraquat. However, distributors can sell any remaining old-label paraquat to growers until those inventories are gone. Yes, growers can apply the old-label paraquat they have purchased or have on-hand. This is a phase out of the old-label paraquat. Eventually, there will only be new-label paraquat in use.

Additionally, as of November 14 all applicators of new-label paraquat have

to complete an on-line course through the EPA to become a trained paraquat user. This training applies to the new-label paraquat. Therefore, if you are applying the old-label product, then you can proceed as you have, but if you are applying new-label product, you have to complete the training first.

The last piece of paraquat regulation coming down the line is that closed-system packaging will be required for all non-bulk (<120 gallon) containers of paraquat. This requirement is

expected to happen later in 2020 or early 2021.

I hope that you can join us at the annual MIRC meeting January 22-23, 2020 in Scottsdale, Arizona. I'm very excited about the program we have lined up for you. I also look forward to seeing many of you at the state mint meetings starting here very soon. ♦

MIRC Meeting Scheduled for Scottsdale

The program for MIRC's annual meeting, January 22 and 23 in Scottsdale, Arizona, will have a slightly different bent to it than most previous meetings.

While we're still bringing in researchers to deliver reports on their research, we are branching out in response to grower comments and including more policy-type and consumer-trend topics in the reports we have scheduled. There's no doubt we have a great line-up coming in January.

One of those researchers we have scheduled is Washington State University Extension Irrigation Specialist Troy Peters, who has completed work on a project looking at water conservation in mint production through use of efficient drag hoses.

In addition to looking at the water conservation benefits available in the system, Peters' research looked

at the effect the system has on oil yields, lodging and hay yields in both peppermint and spearmint.

The research had its roots in studies Peters previously conducted into use of low-elevation precision application

irrigation systems in spearmint.

Peters will talk on the opening day, Wednesday, of the two-day meeting.

Also scheduled on the opening day is Jerry Baron, executive director of the IR-4 Project. Baron will address



Jeff Case, Sr. Director Government Affairs, CropLife America speaks at the 2019 MIRC Annual Meeting in San Antonio, Texas.

the many changes that have occurred in the IR-4 Project in recent months, including the move of its headquarters from Rutgers University in New Jersey to North Carolina, and how that has affected the IR-4 Project.

Baron also is expected to talk about IR-4's relationships with industry organizations, like the MIRC, and the importance of those connections.

Staying with the policy-based theme, Sheryl Kunickis, director of the USDA's Office of Pest Management Policy, also is scheduled to provide a presentation as part of the Wednesday program.

Kunickis was invited to last year's meeting but couldn't make it due to the furlough that U.S. government employees were on last January. Her appearance is a follow-up to our Scientific Affairs Committee meeting in September of 2018, where the growers, end-users, buyers and others in attendance were very impressed with a presentation she provided.

This, then, will be an opportunity for other members of the MIRC to learn about the Office of Pest Management Policy: who they are and how we work with them and the importance of their office to our industry.

Growers should feel encouraged, incidentally, to talk to Kunickis and bend her ear about how pesticide policies are affecting your farming practices. She can be a valuable advocate for our industry.

The following day, on Thursday, participants will hear from an executive



Industry reception at the 2019 MIRC Annual Meeting in San Antonio, Texas.

with the Seattle-based consulting firm Bryant Christie on how MRLs, or maximum residue levels for pesticides, are affecting our global markets, and about efforts to synchronize MRLs around the world.

Staying with an international theme, Carl Casale of Ospraie Ag Science will talk about the impacts of tariffs on global trade, in particular how it is affecting mint sales to China in the midst of the U.S.-China trade wars.

Casale is a former CEO of Central Harvest States (CHS) and CFO of Monsanto. He is based in West St. Paul, Minnesota. Casale's current consulting efforts give him a clear perspective on global markets and significant trends that will continue to impact U.S. producers.

Also, on Thursday, Ronda Hirnyck, Extension pesticide specialist from the University of Idaho, who directs

Idaho's IR-4 program, will talk about glyphosate, addressing what the toxicity data really says about glyphosate versus what we are hearing from mass media.

Participants will hear from Colgate on consumer trends in the oral-care products industry. Colgate is also expected to talk about its recent national campaign where they are featuring mint farmers.

With the earliest ever sell out of the convention hotel, Scottsdale is proving to be a very popular meeting location. If by chance you don't have hotel reservations booked, there should be plenty of space at nearby hotels. Please check the MIRC's website for additional information.

We look forward to seeing you in Scottsdale. ♦



Mint Industry Research Council

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