



Insight

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Irrigation Research Project Finds Extensive Support

A mint research project that could lead to improved water conservation, lower energy costs and better yields has received backing from several sources, including the Mint Industry Research Council (MIRC), Alberta mint growers, Mars Wrigley Confectionery, Oregon Mint Commission and Washington Mint Commission.

The backing shows the importance mint growers place on water conservation, according to Steve Salisbury, research and regulatory coordinator for the MIRC, and highlights the industry's progressive outlook on mint production.

The project involves irrigating mint with drag hoses in the latest iteration of irrigation research projects in mint from Washington State University Extension Irrigation Specialist Troy Peters.

Preliminary data with drag hoses shows an increase in oil yields of about ten percent per acre, Peters said. In water-short years, researchers were able to show an even greater

difference between crops irrigated with drag hoses and those under conventional irrigation.

"It is much more efficient," Peters said of the drag hose irrigation technique. "You get more water to the soil."

In conventional systems, between 15 and 20 percent of water is lost to evaporation, Peters said. In the drag-hose system, water loss is estimated at about three percent.

Preliminary research also shows savings in energy costs given that the system runs on lower pressure than conventional irrigation systems.

"There are water savings, energy savings and better yields," Peters said.

Peters also is looking at the effect the system has on lodging. "We think because we aren't getting the canopy wet, it will result in less lodging," he said.

And Peters is looking at hay yields.

The drag-hose system requires about twice as

many sprinklers on each pivot to compensate for the wider application patterns in standard mid-elevation spray application (MESA) systems. Peters estimates it will cost growers about \$1,000 per pivot span to transition to the drag hose system. But, he said, growers should recoup their costs in a matter of a few years.

The two-year project has its origins in a project Peters conducted for the Washington Mint Commission on low elevation precision application (LEPA) irrigation in spearmint production. "This is an expansion of that," Peters said. "It is a bigger project and we are doing it in both peppermint and spearmint."

Peters said he received considerable support from Salisbury in developing and promoting the proposal and he noted that he finds it encouraging that the project received backing from so many sources.

"It feels good that a lot of people find it useful and are interested to see the results," he said.



Four Honored at Annual Meeting

Four individuals were honored at the MIRC's Annual Meeting in January for their contributions to the MIRC and the mint industry.

Sonya Johnson of Mars Wrigley Confectionery was honored for her nearly 27 years on the MIRC Board of Directors, where she served as an alternate to John Buckley, and as a long-time member of the Scientific Affairs Committee. The meeting in January was her last with the MIRC.



Sonya Johnson, Mars Wrigley Confectionery and Greg Biza, MIRC Chair

"On behalf of the Mint Industry Research Council, it is my pleasure to wish Sonya Johnson a happy and healthy retirement," said Board Chair Greg Biza. "Although now retired, she will remain personal friends with many of us and always a friend to our industry."

Johnson said she enjoyed her years with the MIRC and had high

praise for the Council. "I think it is a good organization and it is almost altruistic in the amount of help the MIRC gives farmers," she said.

Johnson said she and her husband are moving to a small farm they recently purchased near the small town of Rushville, Illinois.

"There are a lot of reasons for it," she said. "We have a lot of family in the area, it fits our needs and we wanted to have a simpler life." The couple plan to lease out the farm's production acreage.

Les Toews, who has retired after more than 25 years with Callisons, also was honored for his contributions to the industry. Toews finished his career as Vice President of Purchasing for the Chehalis, Washington, company. The position involved purchasing North American peppermint and spearmint oils, managing operations of four field offices and overseeing variety trials.

His involvement with the MIRC goes back to the early 1990s and included serving for many years as chairman of the Integrated Pest Management Committee and as an alternate to the Board of Directors.

"On behalf of the Mint Industry Research Council, it is my pleasure to wish Les Toews of Callisons a happy and healthy retirement," Biza said. "His knowledge of mint and its agronomy will surely be missed by our industry. We wish him well in all his endeavors."



Les Toews, Callisons and Steve Salisbury, MIRC Research and Regulatory Coordinator

Steve Weller, who retired June 30, 2017 after 37 years at Purdue University, was honored for his work in advancing weed science for the mint industry.

"Steve was instrumental for many years in helping Midwest growers with their weed-control efforts," said Steve Salisbury, research and regulatory coordinator for the MIRC. "And he also had a passion for mint that went beyond weeds. He wanted to be involved in helping anywhere he could, from varietal improvement to general agronomy. He was a real champion for mint in the Midwest and beyond."



Steve Weller, Purdue University



Salisbury added that when nearing retirement, Weller worked hard on identifying a successor at Purdue to continue research into mint. “That says a lot about how he felt about the mint industry,” Salisbury said. “He will be greatly missed.”

Rick Boydston, weed scientist at the USDA Agricultural Research facility in Prosser, Washington, also was honored at the annual meeting for his many years of service to the mint industry.

“Rick was kind of the go-to guy for us in weed science, especially out West, but also throughout the industry,” Salisbury said. “He worked in the field with growers, as well as on the (USDA ARS

Prosser) station. Registrants were always talking to him, seeking his expertise and input on potential new herbicides. And when we started the Cooperative Weed Management Project for the MIRC, Rick took the lead role.

“He is highly regarded by many people in the mint industry and the weed science community and is certainly leaving a huge hole out in the West and in the entire industry,” Salisbury said.



Rick Boydston, WSU

Boydston said he was surprised and humbled to receive the award.

“It is quite an honor and something I wasn’t expecting,” Boydston said. “We are a service research agency. We work for the growers and the consumers and it is nice when they recognize your work.”

Boydston added that he enjoyed working with the mint industry.

“They have been my favorite group to work with,” he said. “They have been very supportive of our research all through my career and I appreciate that. I owe them a lot.” ♦

New Committee to “Get Out in Front of Issues”

The Mint Industry Research Council has formed a Risk Mitigation Committee to collect, review and advise the Council on issues that could threaten the North American mint industry, particularly in areas of regulation and legislation.

MIRC Chairman Greg Biza, who originally proposed the committee, said the panel will monitor and report on local, state and federal issues from bodies such as the Environmental Protection Agency and the Food and Drug Administration, including issues arising from the Food Safety Modernization Act (FSMA) or the Global Food Safety Initiative (GFSI).

As of late May, Biza said five MIRC members had volunteered to serve on the committee, which will be made up of a team of individuals representing the

MIRC membership and the mint industry. The members are Gloria Sheldon, Mars Wrigley Confectionery; Tracy Bariexca, Colgate Palmolive; Devin Dekker, RCB International; Kevin Allen, Norwest Ingredients and Dr. Ruewei Strange, Labbeemint.

“Their charge will be to report out twice per year – at the fall Scientific Affairs Committee Meeting and Annual Meeting – issues that are arising that may threaten the sustainability of our industry,” Biza said.

“We believe this is an important committee which will allow us to get out in front of issues as they arise,” he said. “We look forward to their participation and your support of their mission.”

The committee is expected to issue its first report at this fall’s Scientific Affairs Committee meeting. ♦



Morlan, Carlson Join MIRC Board of Directors

In the mid-1970s, as a young mint farmer still attending college, Mark Morlan recognized the importance of centralizing mint research.

Today, as CEO and co-founder of Essex Laboratories in Chehalis, Washington, that is still the case.

Morlan, who co-founded Essex with Doug Walker, Bob Franke, Joe Carlson and Dick Jones, is one of two new MIRC Board members. He and Richard Carlson of Young Living Essential Oils of Lehi, Utah, joined the Board at the MIRC Annual Meeting in January.

With his experience as a mint farmer and a flavor-house executive, Morlan brings a unique perspective to the Board which, he said, helps shape his opinions regarding which research projects to back and how to approach political issues.

"I have a unique perspective of a customer, dealer and grower and I believe I can help direct research that is really meaningful and meets the needs of the industry as a whole," he said.

Morlan's experience with the MIRC dates back to when as an officer of the Oregon Essential Oil Growers League, he collaborated with Dick Carrington, head chemist with Callisons at the time and one of the driving forces behind the formation of the MIRC, on the need for centralizing mint research.

"Back then, all the different states were doing their own thing and I was in the process of trying to unite all the different states to get together to try to get funding for a mint-breeding program," Morlan said. "I saw that we had fractured research going on between states and it included a lot of duplication.

"I saw the need for coordination of the research," he said.

Morlan noted that he attended the very first MIRC meeting in Chicago in the mid-1970s.

Asked why he rejoined the MIRC, Morlan said, "We saw the benefits in joining and the need and responsibility to pay our fair share."

Carlson, who described Young Living Essential Oils as an aromatherapy company, said the company decided to join the MIRC because it wants "to be more involved in the mint community and to give back."

"We are immensely interested in the growing of mint," Carlson said. "A component of Young Living is we partner with growers and we are farmers ourselves. They are small farms relative to the MIRC growers, but we do grow mint.

"Young Living wants to be involved in the science of growing and producing mint products and to be a good steward of mint," Carlson said.

"Peppermint is something everybody loves," he added. "It is one of our most popular products."

"I love being part of the MIRC and being part of the cusp of everything mint," he said. ♦

SAVE *THE* DATE

MINT INDUSTRY RESEARCH COUNCIL

Annual Meeting

JANUARY 23-24, 2019

SAN ANTONIO

Texas

ST. ANTHONY HOTEL
300 EAST TRAVIS STREET, SAN ANTONIO
usmintindustry.com/meetings

Turnover at EPA, USDA Raises Importance of Annual D.C. Trip

MIRC Administrator Bryan Ostlund and the Council's Research and Regulatory Coordinator Steve Salisbury moved up by three weeks their annual visit to Washington, D.C. this year. Being in D.C. the third week of June, just ahead of when budget decisions are made, helps ensure MIRC priorities are given voice, Ostlund said.

Particularly this year, with a large turnover in key positions, the D.C. visit is important to both establish new relationships and connect with established contacts in a timely fashion.

"People come and go," Ostlund said. "Going back there once a year is minimal to making sure you have these relationships with key people and that you don't let it go stale. You go back there and talk to as many people as you can because there is going to be turnover."

Ostlund and Salisbury have scheduled meetings with key personnel in several federal agencies important to mint, as well as with key congressional personnel. Among items on their agenda, one involves lobbying for support of several USDA Agricultural Research Service (ARS) facilities that are in danger of being shuttered.

"Around 20 percent of the capacity of the IR-4 Program is in the ARS," Salisbury said, "so if they cut those ARS facilities, that is a big loss. It is critical to make sure that ARS understands that it is important

for the mint industry that we keep those facilities running."

Also on the agenda is connecting with the new director of the National Institute of Food and Agriculture (NIFA), which administers funding for the IR-4 Program. USDA Acting Deputy Undersecretary for Research, Education and Economics Chavonda Jacobs-Young on April 20 named Thomas Shanower as NIFA's new acting director.

Ostlund and Salisbury had a good connection with the outgoing director, Sonny Ramaswamy, who was dean of the College of Agricultural Sciences at Oregon State University before taking the NIFA directorship in 2012. The two hope to establish the same type of working relationship with Shanower.

Ostlund and Salisbury also will meet with personnel in both the EPA and the USDA's Office of Pest Management Policy, which provides benefit analysis on behalf of growers as part of EPA's review of pesticide registrations.

"We maintain those relationships to make sure they know who to contact if there is a mint issue," Salisbury said. "If that occurs, we can provide a voice for them, which is something we just recently did on a pesticide product (Tough herbicide) now labeled on mint."

"This is an active relationship," Ostlund said. "It is not something where we sit back and are being reactive."

"If they have a question on mint, they know who to pick up the phone and call," Salisbury said. "They can attach a name with a face and you have that open dialogue with them, whether it is through email, phone calls or in-person visits once a year. And that is a big deal."

"Quite frankly," Ostlund said, "if we did not have a presence there, if no one from the mint industry in the last five years had gone in and met with the EPA to start that discussion, (the Tough herbicide file) would just be a dead file. Nothing would have happened. EPA has plenty to do, and if you aren't in there championing your issue, good luck."

The two also plan to meet with personnel at the EPA's Office of Pesticide Programs, which reviews pesticide registration requests and registers pesticides. "Those folks are key players," Salisbury said. "Everything we do at IR-4 goes to the Office of Pesticide Programs at the EPA. All of our pesticide registration requests are approved or denied there. It's very important for the mint industry to have healthy relationships in this agency."

As for congressional visits, Ostlund said they are planning to meet with senators and representatives from key mint-producing states, as well as with members of key committees, such as the House and Senate committees on agriculture.

"We want to make sure that they know what our priorities are," Ostlund said. ♦



Interest in Mint Scent Research Increasing

The benefits of mint scent have long resonated with Bryan Raudenbush, a physiological psychologist at Wheeling Jesuit University in Wheeling, West Virginia.

Now those in the mint industry are paying attention.

Raudenbush has recently provided presentations on his research to the Oregon Mint Commission, to Takasago's U.S. headquarters in New Jersey and is expected to speak to professionals at Young Living Essential Oils in Lehi, Utah. Raudenbush also spoke at the last two MIRC annual meetings and is a regular presenter at the annual meeting of the Association for Chemoreception Sciences, a research organization dedicated to understanding the science of senses such as taste and smell.

It was at an Association for Chemoreception Sciences meeting where MIRC Board member Carter Green of Takasago met Bryan.

"I got to talking to him about all of the research he has done in mint and encouraged him to submit a proposal to MIRC," Green said. "And it just took off from there."

After two years, Green said all seems to be going in the right direction. "I think he has a good following among the farmers and other members of the MIRC. People think what he is doing is good for the MIRC in helping to promote additional benefits for mint oil."

In more than 20 years of researching how scents can influence human performance, 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.

The underlying reason, Raudenbush said, is that peppermint scent has a physiological effect on an area of the brain known as the reticular activating system. "If you monitor what is

"There is an untapped market out there in the use of mint and maybe Bryan helps us with that."

Carter Green, Takasago

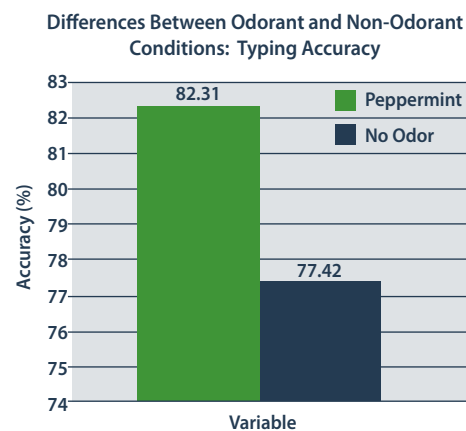
happening in that area of the brain when people sniff peppermint, what you find is there is a lot of activity going on," he said. "This area, when active, is responsible for sending out stimulation or general arousal to the other parts of the brain and into the muscle system. So, just stimulating this one part of the brain can

lead to an overall body stimulation."

The MIRC has backed proposals from Raudenbush now for two years and, to date, Green said he has been happy with Raudenbush's work.

"I think he is very mindful of the proposal process and getting reports in and being accountable for the dollars that he receives," Green said.

Raudenbush said he plans to continue to submit research proposals to the MIRC.

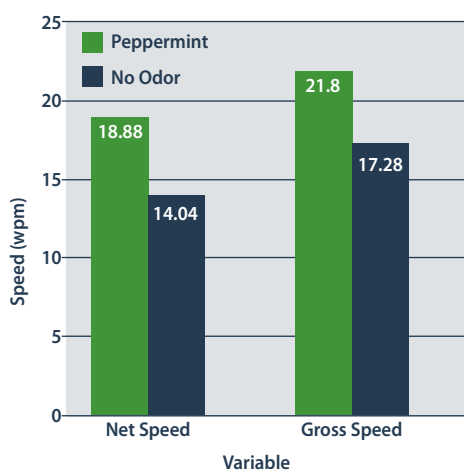


Dr. Bryan Raudenbush, Human Psychophysiology Laboratory



Dr. Bryan Raudenbush, Human Psychophysiology Laboratory

Differences Between Odorant and Non-Odorant Conditions: Net Speed & Gross Speed



“That is my goal,” he said. “We always like to see our research being made into a product and MIRC seems to be doing that for us.”

Green sees tremendous potential in utilizing findings from Raudenbush’s research, including expansion of traditional mint markets into areas such as personal care, in which mint is not used in high amounts.

The scent of mint already is viewed as clean and fresh, Green said. “Bryan’s research could contribute to use of mint in laundry detergents, soap, hair care and other personal care products.” Add in the mood and emotional benefits

Raudenbush’s research is showing for mint scent and the potential for further expansion of mint’s uses widens even further.

“Who is to say you couldn’t have a product line for your morning shower or your evening shower,” Green said. “I believe Bryan’s research expands how we think about using mint and that it becomes the challenge of the (MIRC) members to go out there and try to tap into these markets and for the MIRC to try to promote it that way.

“There is an untapped market out there in the use of mint and maybe Bryan helps us with that,” Green said. ♦

San Antonio Site of Annual Meeting

The 42nd Annual Meeting of the Mint Industry Research Council will be held on January 23-24, 2019, in San Antonio, Texas.

The meeting will feature two days of special invited guest speakers from around the country, in addition to industry research reports and updates. The meeting comes to a close with a Thursday evening industry reception, which allows the opportunity to socialize in a relaxed and enjoyable atmosphere.

Make plans now for a January get-a-way to San Antonio and attend the 42nd Annual Meeting of the Mint Industry

Research Council where all segments of the mint industry gather.

Make your hotel reservations directly:

St. Anthony Hotel
300 East Travis Street
San Antonio, Texas

Online Hotel Reservations
or call 855-811-0218

When you call, ask for the MIRC Annual Meeting group rate to receive the special room rate of \$219 (plus tax) single or double occupancy.

Deadline for hotel reservations:
Friday, December 21, 2018 ♦



New SAC Chair Sees Challenges and Opportunities Ahead

Eric Dowd, the new chair of MIRC's Scientific Affairs Committee (SAC), sees challenges and opportunities ahead for the U.S. mint industry and he believes the MIRC can play a significant role in securing positive results in both arenas.

"In a small specialty crop it is critical to get the critical mass together that you need to effect change and prioritize needs and areas to focus on," Dowd said. "And I think the MIRC is uniquely positioned to do that."

"Within the MIRC you have almost a consortium of everyone from the growers to the mint suppliers to the flavor houses all the way up to some of the consumer product manufacturers," Dowd said. "I think the MIRC and the SAC play a really important role in this industry."

Dowd, Senior Manager Flavor/Mint Science at Mars Wrigley Confectionery, has been with the Chicago-based company for 15 years, starting in product development for the legacy Wrigley company and taking on a variety of positions over the years, including

positions in Project Management, Gum Formulation Technology and Science and Technology.

In his current position, he is responsible for managing a team of scientists and research programs within the Global Science team for Mars Wrigley Confectionery.

"In a small specialty crop it is critical to get the critical mass together that you need to effect change and prioritize needs and areas to focus on. And I think the MIRC is uniquely positioned to do that."

***Eric Dowd, Chair
MIRC Scientific Affairs Committee***

Dowd holds a bachelor's degree in chemistry from Kalamazoo College in Kalamazoo, Michigan.

"For me, personally, mint is something pretty near and dear to my heart," Dowd said, "and for Mars Wrigley, mint is a really critical ingredient. It goes into around 65 percent of our gum and mint formulas."

As chair of the Scientific Affairs Committee, Dowd said he hopes to ensure that the panel prioritizes research programs that "are well linked into the needs of the industry."

"I want to make sure that we are addressing the current and future challenges and opportunities that are out there for the industry in a way that ensures we are getting the most bang for our buck," Dowd said.

Among challenges, Dowd identified issues with pests and diseases that can affect the long-term sustainability of the U.S. mint crop.

As for opportunities, Dowd said, "I believe there are opportunities out there to increase the use of mint in different products around the world, which is always a good thing for the industry." ♦

Several Changes Occur Within the Board of Directors

Between new faces joining the Board and the familiar ones changing positions, several changes are taking place within the MIRC Board of Directors.

Among the more significant changes, Sonya Johnson of Mars Wrigley Confectionery has retired. Johnson served Mars Wrigley Confectionery and the mint industry for 29 years and served the MIRC for nearly 27 years on the Scientific Affairs Committee and as the Alternate to the Board of Directors.

"Sonya's dedication and knowledge of mint

is well recognized by all that have had contact with her over the years," Biza said.

"While as an alternate to John Buckley she did not sit at the Board table, she was very active in committee work and very much a player," said Bryan Ostlund, administrator of the MIRC. "She certainly had a voice at the MIRC level and she will be missed."

Johnson retired this spring.

Another significant change involves Karla Farina of Labbeemint, who has taken a position on the Board's Executive Committee. Farina, who joined the

Board in 2016, moves into the position of Secretary/Treasurer, replacing Dana Wendel, who moved into the Chairman-Elect position. Wendel replaced Greg Biza as Chairman-Elect, while Biza took over as Chairman.

The Board also welcomed two new members at the 2018 MIRC Annual Meeting in New Orleans as Mark Morlan of Essex Laboratories in Chehalis, Washington, and Richard Carlson of Young Living Essential Oils in Lehi, Utah, joined the organization. ♦

Chairman's Report

Greg Biza

First and foremost, I'd like to say thank you to the Board of Directors of the MIRC and the membership for allowing me to have the opportunity to serve as the Chairman of the Board for a second time. It is truly an honor and I will endeavor to lead this organization as you desire during my tenure as Chairman.

Reality Check

Historically, in the MIRC we've oft time neglected the world view of our approach to the business of the MIRC. We rely on member groups to bring challenges and issues to the organization and "react" accordingly. In the global environment in which we operate today, there are few things that can't be gleaned from some time in reflection about where we are headed as an industry.

The goal and objective of the MIRC is to fund and direct research and activities needed to sustain and enhance the productivity of a high quality and economical North American mint.

Translation – Sustainability of North American Mint

Regardless whether it is related to pesticide use, water utilization, distillation research, FSMA/Regulatory compliance or varietal improvement by any means, at the end of the day it's about sustainability. It has been difficult keeping the enthusiasm around the MIRC in recent years as there has been little thought beyond the North American Mint Industry and our needs. We live in a global economy and must think that way when directing research. I am happy to say that there appears to be a turnaround in that area as our meeting in January had a larger attendance than we've seen in many years. Interest by our end-user members, flavor companies, dealers and growers is on the rise. Having

recently attended a FEMA (Flavor Extract Manufacturers Association) leadership meeting recently there is an outreach to member companies to solicit information and data to support GRAS (Generally Recognized as Safe) reviews to maintain the current status. However, this rejuvenation will be short lived if we do not direct our efforts in tangible areas that make an impact for all members.

Regulations are being increased by governmental bodies throughout the world for either safety or economic reasons. As I mentioned in January, NGOs (non-governmental organizations) are filing more and more disclosure lawsuits as

"Regardless whether it is related to pesticide use, water utilization, distillation research, FSMA/Regulatory compliance or varietal improvement by any means, at the end of the day it's about sustainability."

**Greg Biza,
MIRC Chair**

people around the world want to know exactly what they are consuming. These challenges **and opportunities** to tell our story and promote our industry shouldn't be squandered.

We must seek out research within our organization and outside that brings real, measurable and useful agronomical techniques and information to our mint community that allows us to continue to compete worldwide.

As an example, perhaps rather than trying to implement certain projects alone we align our group with crops that have similar interests to obtain funding for

pesticide residue studies. Steve Salisbury mentioned in January that the IR-4 has designated mint as the model crop for essential oil crop residue studies. While it's a big crop in comparison to others, there are other crop organizations or growing associations that could potentially pool funds to get labels for registrations.

Bridging into other organizations like FEMA and IOFI (International Organization of the Flavor Industry) or IFRA (International Fragrance Association) to provide insight in areas of research or support to meet the challenges ahead of us is one way to focus research projects and make a relevant difference to our industry. To support this notion, any new varieties produced and intended to be used for flavors will need some measure of review by FEMA. This is not a difficult process but, none-the-less, a process that needs attention.

In summary, we as an organization are evolving from a research council with a singular focus on North America to one that although chartered to support and sustain the North American mint industry must be ever mindful of our global strengths, challenges, opportunities and weaknesses. Our Board, committees and membership should be focused on this and respond accordingly. ♦



Greg Biza

Research & Regulatory Update

Steve Salisbury

I know it's been a while, but it seems like January was just the other day and we were in New Orleans at the annual MIRC meeting. The meeting was very well attended and certainly considered a great success. We appreciate all your feedback and time to attend and/or participate to make it a great meeting. In addition to a solid program, it was very nice to acknowledge and celebrate some key people who have made significant contributions to the MIRC. And, who can forget the specialty mint-drink bar at the reception sponsored by our friends at Belchim Crop Protection, the registrant for Tough herbicide! It truly was a successful annual meeting and reflected the positive momentum of the MIRC.

One of the goals within the MIRC each year is to grow our membership. We are pleased to welcome our newest members to the MIRC, Essex Laboratories and Young Living. The MIRC truly appreciates their passion for mint and their interest in advancing the industry through the MIRC. Both have jumped right in and began providing excellent input to committee and board discussions. In 2018, we will continue our efforts in sharing the values and achievements of the MIRC with other prospective members.

We welcome in a new Executive Committee including the new MIRC Chairman, Greg Biza with Callisons. Greg will serve as the chairman for the next two years and we are eager to see the MIRC continue to grow under his leadership. Dana Wendel, RCB International, is serving as Vice-Chairman after holding the Secretary-Treasurer position for the past two years. And, we welcome Karla Farina with Labbeemint into the executive committee as the new Secretary-Treasurer. This new slate of officers will provide great

leadership for the next couple of years. A big "thank you" to Jason Stromme, Norwest Ingredients, our past chairman, as he did a terrific job leading the Council for the past two years. We appreciate his leadership and we thank Norwest for allowing Jason the time to serve the MIRC as chair.

The Council is still serving its purpose of funding mint research. The Scientific Affairs Committee (SAC) recommended a strong slate of funding proposals to the Board. Our proposal submissions continue to be competitive and make it increasingly difficult for SAC members to make funding decisions due to the high quality of projects presented. We appreciate the interest in mint from the research communities and we continue our efforts to expand interest in mint to new potential scientists who may be able to contribute to the mint knowledgebase.

Irrigation management and water conservation continue to be an area of focus for the MIRC. This focus is a result of the FieldRise industry stewardship survey that we all participated in 2016. Since then we have been working on building interest by irrigation specialists to conduct useful and applicable research. Dr. Troy Peters, Washington State University, submitted a proposal that was discussed in the January SAC meeting. The committee and Dr. Peters diligently worked to revise the proposal to ensure the potential value to the grower and the industry with the research outcomes.

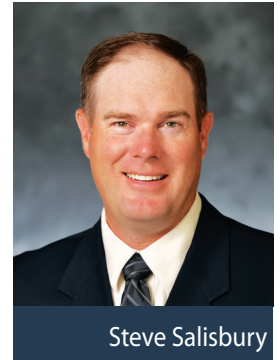
The revised proposal was approved for funding and the research is underway in the 2018 crop season. This is another notable example of cooperative interests and efforts and a few MIRC members stepping up and investing additional funds into a project that is addressing an important industry-wide topic. The scope

is focused on irrigation water and energy conservation while maintaining oil production. The treatment comparisons will evaluate differences between the low-elevation precision application (LEPA) using drag tubes versus the common mid-elevation spray application (MESA) sprinkler heads on center pivot.

Previous research demonstrated that LEPA is able to get 15–20 percent more water to the ground per gallon pumped than MESA. Therefore, the LEPA drag tube system will be designed so that 15–20 percent less water is applied than the MESA treatment. Equivalent or better yields in the LEPA sections would validate the water savings. Furthermore, energy savings are achievable and expected with the LEPA treatment. These savings will be calculated in this project.

Overall, the MIRC has a great deal of good momentum right now. The Council has a lot of productive collaboration happening amongst members which is really a positive quality for the industry. The Council will continue to coordinate its members' efforts to keep building on this momentum, which in turn will provide greater benefit and value back to the industry and its members.

As always, this is your industry's council. Your input is important so please contact me if you have any questions or comments. Thank you for being involved.



Steve Salisbury

Tough™ Herbicide Update

The 2018 Section 18 registration has been

approved for Oregon, Washington and Idaho. At press time, we are still waiting for authorizations in Wisconsin, Indiana and Michigan.

Keep in mind this authorization is for double-cut mint acres and only for application to be made between cuttings. That is why the use window is limited by the EPA. The effective use dates by state are: Washington – May 21-August 31; Oregon and Idaho – June 20-August 10. Please adhere to the label application dates.

It is required that you complete and submit the waiver agreement at the time of purchase. This form and labels can be found on the MIRC website, www.usmintindustry.com under the “News”

section. Please be sure you complete the form and send it to the MIRC office. You can email a scanned copy to info@mircnews.org, or fax it to (503) 581-6819, or mail it to Mint Industry Research Council, PO Box 4059, Salem, OR 97302.

As of now, Tough herbicide is still on track for a full federal label for mint in 2019. When we get that federal registration, the herbicide will be labeled in all of our production states. Additionally, that full label will allow for use on all mint, both single and double-cut, and up to two applications per season.

The Pre-Harvest Interval (PHI) is still 49 days. I appreciate everyone providing

input on what PHI would be best for your production. We have submitted a request to IR-4 to conduct the residue studies needed to reduce the PHI to 30 days. That request is supported by Belchim and we will attempt to get this research prioritized for 2019 in the IR-4 program.

Please let me know if you have any questions regarding the status of Tough. It is a great tool to have in your arsenal and we certainly want to keep it on track to a more permanent registration. Thank you again to our friends at Belchim Crop Protection for supporting us with Tough.





Mint Industry Research Council

P.O. Box 4059, Salem, OR 97302

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