

# Growing Montana

FALL 2019



**CONVENTION  
ELEVATING  
AGRICULTURE**

**SPEAKER  
TEAM  
NEVER QUILTS**

**WINTERIZING  
SPRAY  
EQUIPMENT**

*A Publication of*  
**MONTANA AGRICULTURAL BUSINESS ASSOCIATION**

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# MABA OBJECTIVES:

- To encourage the proper use of all pesticides, plant food, seeds and other agricultural products.
- To promote educational programs to bring together those who are associated with the aforementioned practices and uses.
- To provide a means for an exchange of information and ideas among persons associated with agricultural business.
- To encourage and support research and educational programs.
- To cooperate with local, state, regional and national agencies, both public and private, in the solution of problems and/or in the proposal of legislation relating to all such practices.
- To sponsor desirable laws and law changes that would be beneficial to the Association and its members.
- To serve as a clearing house for the legislative requests of various organizations regarding programs affecting the Association.



# MONTANA AGRICULTURAL BUSINESS ASSOCIATION

## 2019 BOARD OF DIRECTORS

### **Arleen Rice, President**

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### **Krista Lee Evans, Executive Director**

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mabamgea@Gmail.com

## A Message from the President

As I sit at my desk I'm reflecting at this past season with many thoughts. A few words come to mind immediately and they are, perseverance, empathy, determination, professionalism, change, and challenging. Hopefully everyone is reflecting back, and looking forward to what lies ahead with both the good and the bad. A few things come to mind when I think about the uphill road most of agriculture is experiencing right now, and I have to look back to history and realize the ones that those who came before us were able to persevere through tougher times. It will change because we are determined and dedicated enough to see these challenging times through to protecting the most valuable industry out there in mankind's walk on the planet. We have a big duty on our shoulders, feeding a growing population with safe abundant food supplies. Changes of ownership of farms and ranches, mergers, consolidations are all part of the evolution of our industry. You, I am sure have been the empathetic ear, the counselor, and the understanding partner in their challenge to weather the storms of market and Mother Nature. With this in mind I am telling you I think we have put together one of the most exciting lineups for education, self-help, motivation, agricultural advocacy, and solid business solutions, in this year's upcoming MABA convention.



**Arleen Rice**

*President*

*Montana Agricultural  
Business Association*

We have stepped up with some major speakers, which come at an expense, but I think we can count on the support of companies and individuals to get an abundant value for their participation. After all I am a firm believer in investing in our people, we are the future of Montana Agriculture. We need to be on top of our game to help producers make critical business and agronomic decisions. There is no room in our industry for bad players, or bad advice, to growers relying on us for help. We represent the hours of education, innovative thinking, and progressive implementation of ideas, that keeps Montana Agriculture so well respected around the world. Be a part of the movement that speaks energetically and positive for agriculture, and as you see every day in the news we need lots of agriculture advocacy at many levels.

Having been on many visits, and just returning, from Washington D.C. from our congressional delegation and industry leader meetings, our visit was so rewarding. I can tell you, every person we talked with is fighting for our industry. We are asking you to continue to arm yourself with knowledge and articulate information that helps you bring success and a lighted path forward to your communities. Learn

*President continued on page 4*



### BRIANNE MALCHOW

- Shepherd High School graduate – 2017
- Currently enrolled at Montana State University – Bozeman
- Major – Food Science – Biochemistry
- Brianne father, Wade Malchow is currently employed by MillerCoors – Huntley, MT
- MillerCoors – Huntley




### HALEY JANA E OLSON

- Richey High School graduate – 2019
- Currently enrolled at Dawson Community College – Richey??
- Major – Nursing
- Haley’s mother, Jana Olson is currently employed by CHS Farmers Elevator – Richey, MT
- CHS Farmers Elevator



### LAUREN BURTCHETT

- Geraldine High School graduate – 2019
- Currently enrolled at Montana State University – Bozeman
- Major – Business management and Ag business
- Lauren’s father is currently employed by CHS Big Sky – Kershaw, MT
- CHS Big Sky - Kershaw

**OUR MISSION**

To preserve Montana’s agricultural heritage and to foster its future by supporting and developing sound agricultural practices and promoting the positive impacts of agribusiness on agriculture, the environment, and Montana communities

*President continued from page 3*

how to get involved, at your schools, churches, city councils, county commissions, legislative bodies, all the way up the ladder so you let everyone know how critical it is to protect and nurture our agriculture communities. Arm yourself with the tools it takes to move forward in a positive direction, and I ask you to participate, sponsor, and attend the terrific line-up we have in store for you in Great Falls at this year’s convention. As always

we have a very engaged, what I consider to be top notch board that are diverse in experience and talent that is working hard for you. Please do not hesitate to call or email us at any time for questions and concerns. I get up every day working for Montana agriculture, as I know many of you do too. I thank-you for your dedication and determination and 2020 will be even better with your hard work and support. ■



# Board Met with Montana Congressional Delegation

By Ryan Helmer

October 22-23rd MABA board of directors took time out from a tough harvest and fall seeding season to advocate for Montana agribusiness in Washington DC. MABA President Arleen Rice, VP Luke Dighans as well as board members Dan Brattain and Ryan Helmer made the trip to talk agribusiness with our MT congressional delegates and EPA. An already overwhelming DC had an extra buzz to it with the Nationals in the World Series and impeachment speculation rampant. The team successfully navigated a packed schedule and had impactful discussions while sharing many laughs.

## DAY 1: TRADE GROUP MEETINGS AND EPA

The team traveled to The Fertilizer Institutes office and set up camp for a host of meetings. We met with American Seed Trade association and discussed gene editing in ag crops. That dovetailed into our meeting with BIO and they reinforced gene editing across grain, livestock and outside industry. Allowing science to speak for itself and not letting fear mongering influence policy was a key takeaway.

With CropLife America we discussed. Pesticide Registration Improvement Act (PRIA) allows industry to give EPA up to 45 million dollars through 2023 to help offset funding deficits for product registration. This has been signed but funding is currently hung up in appropriations and has not been released. Federal dollars must be authorized before private funding is available. With ARA we discussed USMCA and its impact on MT ag markets. TFI was a wonderful host and led us in a discussion about their 4R program and DOT hours of service. With Passports and Real ID's in hand we headed for the EPA building.

We did not know what to expect heading in to our meeting with the Ag Advisor to the Administrator of EPA Public Affairs Office but if you would have told me we would all walk out with smiles on our faces I am not sure I would have believed you. The



Ag Advisor and her team are very knowledgeable and excited about all things ag. They shared some of their struggles with timely pesticide registrations to do funding short falls and PRIA being held up. They emphasized the strength of their career scientist that do the day to day work of ensure registered products are not only safe but can be used in a manor that give us freedom to operate. All in all, the EPA group we met with was very eager to listen and learn our pain points. They are trying diligently to be a new farmer friendly EPA.

The highlight of the trip for me was our meeting with Sen. Daines at the RNSC building. This was arranged with CropLife America. We arrived at the meeting locations and were brought up to a conference room to await the Senator. While waiting we had a very informative conversation with his Chief of Staff about future trade negotiations with China. When Sen Daines arrived he was very attentive and interested in who we are and where we are from. We shared with him the struggles we are facing in MT with having to get an emergency exemption for hours of service and how legislation needs to be in place for the entire ag supply chain. We told him how the trade war and USMCA being held up in the house was hurting Montana farmers, ranchers and agribusiness. A point he made on the floor of the US Senate the following afternoon. It was a great meeting and not something I will soon forget.

*Congressional Delegation continued on page 11*

# 4Rs OF NUTRIENT STEWARDSHIP

Economically, Environmentally & Socially Sustainable Crop Nutrition



The 4Rs promote best management practices (BMPs) to achieve cropping system goals while minimizing field nutrient loss and maximizing crop uptake.

## 4R Principles of Nutrient Stewardship



**RIGHT SOURCE**  
Matches fertilizer type to crop needs.



**RIGHT RATE**  
Matches amount of fertilizer to crop needs.



**RIGHT TIME**  
Makes nutrients available when crops need them.



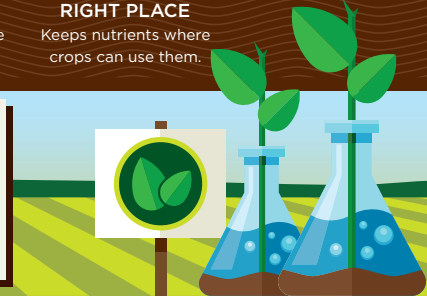
**RIGHT PLACE**  
Keeps nutrients where crops can use them.

## The 4Rs—Guided by Science, Proven by Research

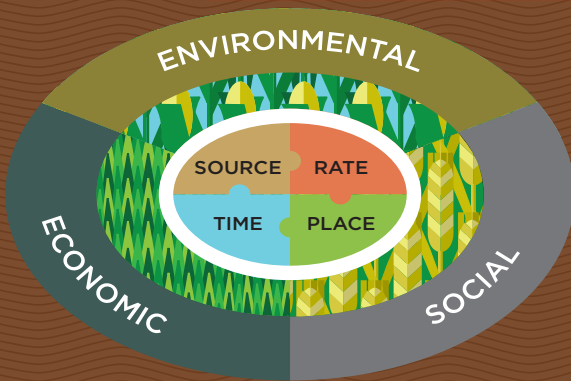
The 4R Research Fund was established by contributions from fertilizer industry members and stakeholders.

### \$7,000,000 COMMITMENT

The Research Fund is an industry-funded effort committing \$7 million to 4R research. A portion of this money has already been raised and implemented in initial research projects.



## IMPLEMENTING 4Rs ON THE FARM



### STEP 1:

Identify farm-specific **economic**, **social** and **environmental** goals that the cropping system objectives should address.

STEP 2: Select BMPs that are specific to the grower's goals, soil, climate and cropping system.

STEP 3: Integrate BMPs for all goals and adjust as needed.

STEP 4: Document the 4R nutrient stewardship plan.



Although goals will vary among farm operations and even among fields, the following are commonly identified grower goals:

**Improve net farm income and regional economic development.**

**Improve the quality of farm family housing, diet and education.**

**Reduce losses of nutrients to the environment.**

## Nutrient Stewardship Across the Nation



### 4R STATE EFFORTS

Several states are helping lead the way for nutrient stewardship by developing governing methods such as certification programs, codes of practice and sustainability programs. State by state, 4R BMPs are gaining ground in local communities through demonstration and outreach efforts.



### 4R ADVOCATE

Each year the Nutrient Stewardship 4R Advocate program recognizes outstanding agriculture retailers and farmers dedicated to sustainable crop nutrition. These advocates travel the country educating local communities about the 4R principles as well as promoting the benefits of sustainable farming to the general public.



### 4R EDUCATION

Industry partners have come together to help producers learn more about sustainable farming. These partners have developed webinars, learning modules and online interactive training to provide essential information about the basic components of soil fertility and nutrient BMPs as they pertain to implementation of the 4Rs.

## 4Rs & THE INDUSTRY

### OUR PARTNERS

Over 90 U.S. organizations are embracing 4R nutrient stewardship and are working to bring you the most current information about fertilizer best management practices. These partners include conservation groups, agriculture equipment manufacturers, agriculture retail companies, fertilizer companies and other various agricultural stakeholders.



### SUSTAINABILITY

The underlying aim of sustainable agriculture is to increase economically viable food production while retaining the ecological integrity of food systems. The fertilizer industry's engagement with Field to Market allows us to collaborate with stakeholders across the agricultural supply chain.



# “Elevating Agriculture”

## 2020 MABA/MGEA ANNUAL CONVENTION AND TRADE SHOW

January 22-24, 2020 – Heritage Inn, Great Falls, MT

The Annual MABA/MGEA Convention - “Elevating Agriculture” – is your chance as MABA members to come together with your peers to learn about opportunities, challenges, and innovation in Montana Agricultural Business. This season was one of the most challenging faced by agriculture in Montana and this is a chance to talk about options and solutions.

If you’ve never been to the convention you should certainly make plans to attend this year’s event. The event is host to professional speakers from across North America and over 500 attendees that are active in Agricultural Business in Montana.

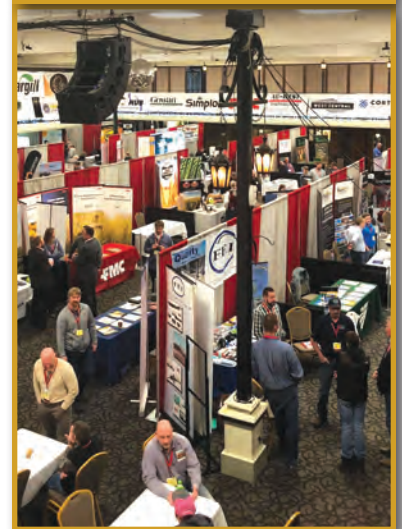
Here’s what you can expect at the “Elevating Agriculture” conference:

- Certified Crop Advisor (CCA) Points;
- MT Department of Agriculture Points;
- Over 60 vendors participating in the trade show;
- Outstanding speakers;
- Information pertinent to your businesses and employees.

MABA takes the needs of its membership very seriously and it is for this reason that the MABA ensures that there are Certified Crop Advisor (CCA) and Department of Agriculture points available for all the sessions!

The “Elevating Agriculture” agenda includes discussions on:

- Taking Food Bullying by the Horns;
- Glyphosate safety and effect of interaction with the human body;
- Hemp Contracts, end use, female/male, processing, hemp rotation;
- 4R Nutrient Management for Seedling Root Health;
- Mental Health in Agriculture;
- What’s lurking beneath the surface of pulse crops;
- Microbiological effects of soil pH;
- Crop Rotation and Pulses;
- Pulse Crop Desiccation – reentry, etc;
- Farm Programs and Cover Crops;
- Yield, Protein and Nitrous Oxide Emissions Response to Split-Application of Enhanced Efficiency Fertilizers.



## Pesticide Recertification and Profession Training Opportunities

*Wednesday morning of the MABA/MGEA Annual Convention and Trade Show is set aside for the Pesticide Recertification Workshop. The 2020 agenda does not disappoint and includes expert speakers and discussions related to New Product, Insecticides in seed, Lessons Learned from 2019, and the EPA Registration Process and Products up for renewal. CCA and Department of Agriculture points will be offered for this event.*

The MABA Annual Convention also provides an exciting opportunity for new agriculture professionals through a meet and greet and luncheon. During the luncheon there will be an opportunity for veterans and new professionals to share challenges, concerns, opportunities and to create relationships to further build the professionalism of our industry. The **New Agriculture Professionals Meet and Greet** is scheduled for Thursday, January 23 at Noon.

The annual convention is a great opportunity for leaders in the Montana Agricultural Business Community to come together and share ideas, solutions, and challenges.

Thursday evening is a fabulous opportunity to support Montana's youth agricultural programs. Each year, MABA and MGEA select an entity to receive the profits from the Thursday night social and

auction. This year the proceeds will go to Montana FFA Foundation and Montana 4H Foundation to support our endowed scholarships with those organizations. Additionally, the Yellowstone Boys and Girls Ranch will receive funding to facilitate their operations.

The MABA/MGEA Annual Convention brings together friends and acquaintances from across the state and provides a significant opportunity for networking. The break out sessions are appropriate for management as well as employees and we look forward to seeing all of you in Great Falls in January!

To sign up to be a sponsor, vendor or to register for the "Elevate Agriculture" Convention please go to the [www.mtagbiz.org](http://www.mtagbiz.org) website and click on the Convention banner or contact the office at [mabamgea@gmail.com](mailto:mabamgea@gmail.com) and we will get you all set up! ■

## Participate in the future of YOUR Association

The MABA/MGEA Annual Convention brings an opportunity for members to reconnect with colleagues as well as gain a better understanding and knowledge of the vast issues facing our industries. One of the most important agenda items that is often overlooked by members is the Annual Meeting! MABA exists to serve the needs of its membership and it is critical that MABA membership provide feedback and guidance to the Board.

The MABA Annual Meeting will give you an opportunity to hear about the work conducted during the previous year, objectives for the upcoming years, financial health of the association, selection of board members, and a general discussion to bring everyone up to date.

Please become an ACTIVE member in YOUR association so that MABA can continue to thrive and represent Montana's agricultural businesses.

**MABA ANNUAL MEETING – WEDNESDAY, JANUARY 22, 2020  
A/B/C ROOMS – HERITAGE INN, GREAT FALLS**





# ELEVATING AGRICULTURE

**2020 MABA – MGEA Convention & Pesticide Workshop**  
Heritage Inn – Great Falls, Montana  
January 22 – January 24, 2020

Detailed agenda/registration online at:

[www.mtagbiz.org](http://www.mtagbiz.org)

## PESTICIDE RECERTIFICATION AGRONOMIC WORKSHOP:

- Product Update
- Insecticides in Seed treat
- Residues in Pulse Crops
- Update from EPA

## JOINT SESSIONS:

- Food Bullying
- Glyphosate safety and effect of interaction with the human body
- Mental Health in Agriculture

## GRAIN SESSIONS:

- Fertilizer Safety
- Malthouse Update

- PNW Market Update
- Feed Industry
- BNSF Update
- Global Market Update

## AGRONOMY SESSIONS:

- Hemp – A Panel Discussion
- 4R Practices and Canola
- What's Beneath the Surface of Pulse Ag Crops
- Microbiological Effects of Soil pH
- Crop Rotation and Pulses
- Pulse Crop Desiccation and Re-entry
- Farm Program and Cover Crops
- Yield, Protein and Nitrous Oxide Emissions



REGISTER ONLINE AT [WWW.MTAGBIZ.ORG](http://WWW.MTAGBIZ.ORG)

or send your registration to:

MABA/MGEA Annual Convention  
PO Box 7325 • Helena, MT 59604

406.227.3523 (o) • 406.227.3745 (f)  
406.439.2215 (c)





**Montana Agricultural Business Association  
 Montana Grain Elevator Association  
 Convention Registration  
 January 22, 2020 – January 24, 2020  
 Heritage Inn, Great Falls, MT (406-761-1900)**



Company \_\_\_\_\_  
 Contact \_\_\_\_\_ Phone \_\_\_\_\_  
 Address \_\_\_\_\_ Fax \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_ Email \_\_\_\_\_

*Refund Policy: A full refund will be given if the request is received in writing by fax, mail, or email at least one week before the convention begins. Beginning Monday of the convention week, no refund will be given except under unusual circumstances such as medical emergencies or death.*

**Late Registration: Registration received after January 10<sup>th</sup> 2020 will be assessed the late registration fee.**

**Option 1: Convention AND Pesticide Workshop – \$160/person (\$170 after Jan. 10, 2020)**

Name	Address	Fee
_____	_____	_____
_____	_____	_____

Please Enter Total (attach additional sheets as necessary) Sub-Total \$ \_\_\_\_\_

**Option 2: Pesticide Workshop Only \$60/person (\$70 after Jan. 10, 2020)**

Name	Address	Fee
_____	_____	_____
_____	_____	_____

Please Enter Total (attach additional sheets as necessary) Sub-Total \$ \_\_\_\_\_

**Option 3: Convention Only \$130/person (\$140 after Jan. 10, 2020)**

Name	Address	Fee
_____	_____	_____
_____	_____	_____

Please Enter Total (attach additional sheets as necessary) Sub-Total \$ \_\_\_\_\_

**Additional Purchases or Contributions – Meals are included with your registration.**

Montana Ag Business Foundation Cash Donation	\$ _____
Silent Auction Cash Donation	\$ _____
Additional Wednesday Lunch Tickets (\$15 each)	\$ _____
Additional Thursday Lunch Tickets (\$15 each)	\$ _____
Additional Thursday Night Key Note Speaker and Dinner Tickets (\$50 each)	\$ _____
Sub-Total	\$ _____

**Total of registration package and additional items** **TOTAL** \$ \_\_\_\_\_

**On Line registration is preferred at [www.MTAGBIZ.ORG](http://www.MTAGBIZ.ORG)**

Credit Card Payment:

Charge to Visa \_\_\_\_\_ Master Card \_\_\_\_\_ or American Express \_\_\_\_\_

Number: \_\_\_\_\_ Exp. Date \_\_\_\_\_

Name on card: \_\_\_\_\_ Address: \_\_\_\_\_

Zip Code: \_\_\_\_\_ 3 or 4 digit code \_\_\_\_\_ Signature \_\_\_\_\_

Please return to MABA/MGEA Convention, PO Box 7325, Helena, MT 59604/Email:mabamgea@Gmail.com/Fax:

406.227.3745/Questions: Call Krista at 406.227.3523(o) or 406.439.2215(c)/REGISTER ONLINE AT [WWW.MTAGBIZ.ORG](http://WWW.MTAGBIZ.ORG)

# Montana Agricultural Business Association

## BOARD OF DIRECTORS NOMINATION FORM

The MABA Board of Directors works diligently to represent, support, and protect Montana's agricultural businesses and all the associated issues. Active participation from MABA Membership is crucial to having a board that represents all facets of this diverse and exciting industry.

Serving on the MABA Board is a great opportunity to increase your (or a coworker's) understanding of environmental, legislative, and regulatory issues facing Montana businesses! This is a great leadership opportunity that will benefit the individual board member but also the company that they represent. Please take a minute and nominate an individual to serve a 3 year term on the MABA Board of Directors.



Name: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Send your form to [mabamgea@gmail.com](mailto:mabamgea@gmail.com) or MABA, PO Box 7325, Helena, MT 59604

After receipt of the nominations from membership the MABA Nominating Committee will identify 2 for each open position and one where members will run against current board members whose 3-year terms are expiring. MABA does not have a limit on the number of terms that a board member may serve. ■

### *Congressional Delegation continued from page 3*

#### **DAY 2: DELEGATE MEETINGS**

We started the morning at Montana Coffee Hour on the top floor of the Senate Hart building. It was a really fun informal time to share a cup of coffee and pastry with Sen. Daines, Sen. Tester and Rep. Gianforte. The view of the Capital building and Washington Monument were amazing. We had a great time talking with not only our delegates but also with the other Montanan's that had come to visit and meet with them. Montana Coffee is every Wednesday morning and open to the public.

Following MT Coffee hour, we went downstairs to meet with Senator Daines staff. We reinforced and elaborated on the issues we shared with the Senator the previous evening. We then went to meet with Senator Tester. We discussed glyphosate and neonics with him and he was very receptive to our points of view. We left feeling very encourage about his stance on these issues. Our last meeting of the day was with Rep. Gianforte. He agreed with us that hours of

service exemptions need to be extended to all aspects of the ag supply chain. He also said it may be difficult to get and we could be relying on state level emergency exemptions to keep us moving. This was the end of our official schedule.

Over the past few days I am still trying to wrap my head around all the new experiences I had in DC. While it seems like things in the legislature move at a glacial pace, it was impressive to see the speed and scope of work happening behind the scenes. I can safely say our Montana congressional delegates are working hard for us and have Montana ag in the forefront of their minds. They are up to speed and aware of all the challenge we are facing and value our expertise and points of view.

It was truly and honor to represent MABA in Washington DC this year. I had a great time with our team and look forward convention in January to share stories with all of our members. ■

## Here Are Your Top 6 Announcements from the ICCA office so you can be In the Know!

- 2020 Renewal fees are ready to be paid and all certificants who have allowed emails have been notified. Mailed invoices are sent to those without emails, and reminders will be made emailed and mailed throughout the season. Renewals are due by 1.31.2020 or a late fee will be charged.
- Is your board chair changing in 2020? Please send your chair's signature to your representative to be digitized for certificates. Signatures should be in black ink, on white paper for the best quality, and new signatures are due by November 30th.
- Meeting minutes and presentations are now posted from the 2019 NA CCA Board meeting in Wichita, KS. We are finalizing the 2020-2022 Strategic Plan, and the updated document will be posted soon.
- Hold the dates for the 2020 North American CCA Board meeting--September 14-16, 2020 in Fargo, North Dakota. Details will be sent next summer!
- Sign-in sheet/QR code update! When a person scans the QR code on a sign-in sheet to receive credit, the extra step of clicking 'sign-in' is no longer needed! Just scan the QR code and the CEUs will be posted on the account within a few hours. You can find a graphic explaining the process here.
- NEW! Live Webinar and Online Classroom Subscription is now available. An annual subscription to our classroom is \$100 for unlimited content! More information can be found here.



Please contact your representative with questions, and Happy Harvest! ■

### Exciting News

#### THE CCA PROGRAM NOW OFFERS OUR EXAMS INTERNET BASED VIA REMOTE PROCTORING!

- Take the exam in the comfort of your own home or office on your computer.
- Take your exam anytime between February 7 – February 14, 2020.

#### You will need:

- Desktop computer or laptop (iPads, Chromebooks, tablets and smartphones do not meet our requirements)
- A working built-in or external webcam and microphone.
- Internet speed must be at least 2 Mbps download and 2 Mbps upload. Hot spots are not recommended. Test internet speed at: <http://www.speedtest.net>
- Have more questions? Check out our Remote Proctor Frequently Asked Questions page.

#### REGISTER NOW!

(Be sure to select both the International exam and your local board exam if needed)

Information on study materials, performance objectives, and exam workshops are available at [www.certifiedcropadviser.org/exams](http://www.certifiedcropadviser.org/exams).

Please contact your certification representative if you have any questions. Registration closes Dec. 13th.

Sincerely, The CCA Certification Team



# Team Never Quit – Captain Fleming – Coming to Montana

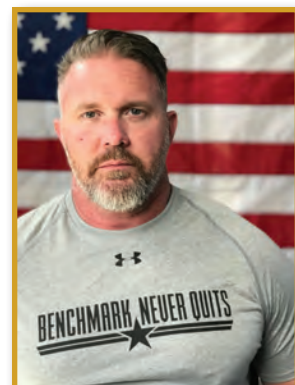
MABA and MGEA are very excited to announce that Captain Chad Fleming will be speaking Thursday evening. This is a phenomenal opportunity for MABA's membership to hear from one of the most respected inspirational speakers of the day. His story is amazing, and we are excited to share his story of perseverance with our membership.

Captain Fleming has been deployed overseas six times with the U.S. Army's elite 75th Ranger Regiment in support of both Operation Enduring Freedom and Operation Iraqi Freedom. He has been wounded in combat on three separate occasions and has undergone 23 surgeries, one of which resulted in a trans-tibial amputation of his left leg. While most would assume this type of injury would conclude someone's service to their country. Captain Fleming has re-deployed five times since his injuries, each time going right back into the fight. He is one of the few amputees who have been able to redeploy into combat as an amputee.

After serving with distinction and receiving numerous awards and decorations, including the Meritorious Service Medal, two Bronze Star medals with

Valor, and three Purple Hearts, he retired from active duty and still serves our country in other capacities.

He has completed marathons, triathlons, tough mudders and cycling events throughout the United States and is also a sought after inspirational speaker. Numerous Fortune 500 companies have asked Chad to bring his message of resilience, perseverance, and his "Never Quit" attitude into their companies to help build their corporate teams. He is a Board Member for the "Lone Survivor Foundation," and travels around the country as part of Marcus Luttrell's Patriot Tour.



**Captain Chad Fleming**

*Motivational Speaker  
Team Never  
Quit*

He was a vital part of the 2010 Olympic Hockey team's run for the Gold Medal. Captain Fleming has spoken to both college and professional sports teams, and he is the spokesman for Under Armour's "UA Freedom" initiative, a corporate initiative that raises money and awareness for our nations wounded veterans. ■

## CAPTAIN FLEMING TICKETS AND TABLE RESERVATIONS - FIRST COME FIRST SERVED!

Captain Fleming with Team Never Quit promises to be an inspirational and uplifting experience for all. In an effort to allow as many MABA and MGEA members as possible to attend the event tickets will not go on sale to the public until December 15.

### Details:

When you register for the MABA/MGEA Annual Convention - entrance to the Captain Fleming event is included (however, this does not guarantee seating).

We are encouraging our members to bring other employees that may not be able to attend the full MABA/MGEA Convention to the Thursday night event. Others have suggested that they plan to buy tickets for growers or clients that they want to share the event with. Either option is fine as growers are welcome at the Thursday night Captain Fleming presentation.

To guarantee seating, tables can be purchased for \$400 for 8 people.

Tickets can be purchased at [www.mtagbiz.org](http://www.mtagbiz.org). ■

# Congressional Comments



**Steve Daines**

*United States Senator  
For the State of  
Montana*

## U.S. SENATOR STEVE DAINES

In early October, I had the opportunity to join President Trump at the White House for the official signing ceremony of the historic trade agreement between the United States and Japan. It was a great day for Montana ag and the product of years of tough negotiations. This monumental trade deal will benefit Montana farmers and ranchers for generations to come.

With this agreement, Montana farmers and ranchers will be able to compete on a level-playing field with Trans-Pacific Partnership (TPP) competitors in selling to the Japanese market. This deal reduces tariffs

on products such as fresh and frozen beef and pork, provides a country-specific quota for wheat and wheat products, and reduces the mark-up on imported U.S. wheat and barley. The deal also ensures that, over time, Japanese tariffs on beef and pork products will drop from 38.5% to 9%.

Our farmers have had tough weather over the years, and I was honored to deliver them some much needed relief in these hard times. In addition to securing this important trade deal, I also urged USDA Secretary Perdue in October to allow farmers in northeast Montana impacted by excessive rainfall and snow to be eligible to participate in the Wildlife and Hurricane Indemnity Program Plus (WHIP+) program, and have the WHIP+ program account for price impacts due to severe quality loss from excessive moisture.

As your voice in Washington D.C., I am committed to fighting for better opportunities for our Ag industry. Ag remains Montana's number one economic driver so it is vital Montanans have a strong voice in Washington D.C. I will continue fighting to secure our farmers and ranchers always have a seat at the table.

## U.S. SENATOR JON TESTER

Farming and ranching is a tough business. I know firsthand - my wife Sharla and I still run our family farm outside of Big Sandy on the same land my grandparents homesteaded more than 100 years ago.

For our family and producers across Montana, working the land that's been passed down for generations has never been about just making a buck—it's a way of life in rural America.

But the reality is that this business comes with real, sometimes overwhelming, uncertainty. This Administration's trade war hasn't made it any easier; in fact, it's been devastating for family farm agriculture in Montana

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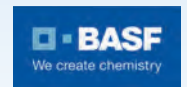


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and across the country.

Now, farmers and ranchers aren't the types to sit around talking about their feelings. We don't let anything keep us from finishing the job.

But the stress is real, and when you're spending hours alone on a piece of equipment, it doesn't go away.

Reports of farmer suicide are increasing. According to the Centers for Disease Control, the suicide rate is 45 percent greater in rural America than in urban areas, and in Montana, our suicide rate is the highest in the nation.

Folks who live in rural Montana have to overcome higher barriers to get mental health services than folks in New York or Los Angeles—we face isolation, we are less likely to be insured, and we don't always know where to find mental health resources if we want them. These issues are made worse by shortages of mental health professionals and a lack of broadband infrastructure, which limits telehealth opportunities.

We've got to tackle the challenges facing farmers and ranchers head on, and my legislation, the *Seeding Rural Resilience Act*, aims to do exactly that.

First, this bill will require the Department of Agriculture to expand a pilot program that provides voluntary training to all farm-facing USDA employees. This training will focus on stress detection and suicide prevention, and it will help the folks who work with farmers every day deescalate tensions, especially when bad news is delivered, and connect producers with the resources that are out there.

Secondly, one of the biggest challenges we face is the stigma around mental health care in rural America. My bill will create a PSA campaign to promote mental health awareness and resources, and it'll be tailored to reach the folks that need to see it—whether it's TV and farm radio ads or a billboard on the interstate.

Finally, we need to get information from folks in rural America about what we can do to support them more effectively. That's why my legislation directs the Secretary of Agriculture to work with state and local stakeholders to create a mental health task force that will determine the best practices to respond to farm and ranch mental stress.

Getting farmers and ranchers the care they need is also good for business.



**Jon Tester**  
*United States Senator*  
*For the State of*  
*Montana*

*Congressional Comments continued on page 14*

*Congressional Comments continued from page 13*

Less time focusing on stress and pressure means more time focusing on doing the work of feeding America and turning a profit.

The *Seeding Rural Resilience Act* will provide better tools and resources for folks in rural America to reduce the stress that comes from working in production agriculture.

And hopefully, our kids and grandkids will not only inherit our way of life, but also the tools to help manage the ups and downs that come with it.



**Greg Gianforte**  
US Representative  
For the State of  
Montana

**U.S. CONGRESSMAN GREG GIANFORTE**

As the harvest comes to an end, many producers are facing tough times. Heavy precipitation has caused problems with crop harvests and given ranchers headaches. I recently reached out to U.S. Agriculture Secretary Sonny Perdue requesting USDA cover quality losses under the Wildfires and Hurricanes Indemnity Program Plus (WHIP+). I also urged him to make all possible efforts to support grain growers who are dealing with these challenges.

There's good news on the trade front. President Trump signed a trade agreement with Japan that's a major win for Montana ag producers. The deal cuts and eliminates tariffs, reduces other barriers to trade, and guarantees U.S. grain and beef products favorable market access.

We have more work to do with trade. Canada is Montana's top trading partner, and we have to keep that market open. Congress needs to quickly consider and ratify the United States-Mexico-Canada Agreement to provide greater certainty to our farmers and ranchers. We need to act and get that deal across the finish line.

While there is positive news, we still have more trade deals to get done. I'll continue pushing negotiators to wrap up talks and announce trade deals that work for Montana.

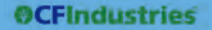
Another piece of good news is the final repeal of the Obama-era Waters of the United States (WOTUS) rule. This latest move completes the Trump administration's efforts to repeal the burdensome old rule that had been blocked in court.

I'll continue to support Montana farmers and ranchers, as well as the businesses that make their work possible. Please reach out to me anytime if I can be of any help to you. ■

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# Department Doings *By Chelsi Bay, Public Relations Specialist*

## HEMP PROCESSING LICENSE NOW AVAILABLE

The department released its Hemp Processor License in mid-September. The license is designed to provide consistency and some regulatory certainty to new businesses. It should also help the department avoid jurisdictional confusion with the Department of Public Health and Human Services (DPHHS). Licensees can produce derivatives that may be included in products for food, fiber, oils, supplements or drugs (excluding THC) for the wholesale or ingredient markets. Depending on the type of processing, applicants may apply for Part A and/or Part B licenses.

It's important to keep these points in mind:

- Licensed hemp growers in Montana may process their own hemp production without a Hemp Processing License;
- Manufacturers purchasing from licensed hemp processors in Montana are not required to possess a Hemp Processing License;
- At the retail level, use of hemp and its derived products in food is subject to the laws and regulations of the United States Food and Drug Administration (FDA) and the Montana Department of Public Health and Human Services (DPHHS).

## COMMODITY DEALER EXEMPTION

The department recognized a need for regulatory flexibility to allow new market entrants in Montana's hemp industry. Consequently, for the 2019 – 2020 calendar year, persons or entities with a Hemp Processing License may contract with licensed growers without a Commodity Dealer License under the following conditions:

- The grower acknowledges the processor is not a licensed commodity dealer in Montana by signing a written statement;
- The total amount of contracted hemp does not exceed \$10 million; or
- The processor is purchasing or processing hemp stalks for fiber.

The hemp industry has associated risks that are not inherent to traditional commodity trading and the department acknowledges there are potential dangers tied to doing business with or as non-bonded processors. To minimize risk, the department encourages buyers to acquire a Commodity Dealer and/or a Commodity Warehouse license and urges growers to vet their hemp crop buyers.

You may view Administrative Rules of Montana (ARM) for the Hemp Processing License and Fee (4.19.201) and Hemp Processing for a Commodity Dealer (4.19.202) on the Secretary of State's website at <https://sosmt.gov/arm/>. The Hemp Processor License application form is available at <https://agr.mt.gov/HempProcessors>. ■

PART A	PART B
Processing hemp floral and root extracts	Processing hemp grain, seed, seed oil, and fiber
Required	Voluntary
\$2,500 per calendar year	\$1,000 per calendar year
Examples of end-use intended market use: Cannabinoid isolate, research, cosmetics, ingredient for further processing	Examples of end-use intended market use: food/beverage, seed oil, research, cosmetics, seed propagation, textiles, ingredient for further processing
Licenses expire on December 31 of each year. Each physical location conducting processing must be licensed separately. Hemp processors must comply with city, county, and tribal ordinances and laws.	



# Worker Protection Standard Application Exclusion Zone

*An application exclusion zone (AEZ) is the area surrounding pesticide application equipment that exists only during outdoor production pesticide applications. The AEZ requirements found in the Worker Protection Standard (WPS) establish minimum exclusion zones around ongoing pesticide applications that workers and other people must be kept out of on the agricultural establishment.*



## PROPOSED UPDATES TO AEZ

In October 2019, EPA proposed narrow updates to the Worker Protection Standard regulation to improve the long-term success of the agency's Application Exclusion Zone (AEZ) provisions. Upon publication of the Federal Register notice, EPA will accept public comments on the proposed revisions for 90 days in docket EPA-HQ-OPP-2017-0543.

The targeted updates would improve enforceability for state regulators and reduce regulatory burdens for farmers. It would also maintain public health protections for farm workers and other individuals near agricultural establishments that could be exposed to agricultural pesticide applications. The proposed updates are consistent with the newly enacted 2019 Pesticide Registration Improvement Act.

Specifically, EPA is proposing to:

- Modify the AEZ so it is applicable and enforceable only on a farm owner's property, where a farm owner can lawfully exercise control over employees and bystanders who could fall within the AEZ. As currently written, the off-farm aspect of this provision has proven very difficult for state regulators to enforce. These proposed changes would enhance both

enforcement and implementation of the AEZ for state regulators and farm owners respectively. Off-farm bystanders would still be protected from pesticide applications thanks to the existing "do not contact" requirement that prohibits use in a manner that would contact unprotected individuals;

- Exempt immediate family members of farm owners from all aspects of the AEZ requirement. This will allow farm owners and their immediate family members to decide whether to stay in their homes or other enclosed structures on their property during certain pesticide applications, rather than compelling them to leave even when they feel safe remaining;
- Add clarifying language that pesticide applications that are suspended due to individuals entering an AEZ may be resumed after those individuals have left the AEZ;
- Simplify the criteria for deciding whether pesticide applications are subject to the 25- or 100-foot AEZ.

For questions about how to comply with the WPS rule requirements, contact Ryne Yarger at [yarger.ryne@epa.gov](mailto:yarger.ryne@epa.gov). ■

## Montana Department of Agriculture recent personnel changes:

- Christy Clark, Agricultural Sciences Division Administrator
- Ian Foley, Commodity Services Bureau Chief
- Andy Fjeseth, Agricultural Development Division Bureau Chief
- Andy Gray, Hemp Program Coordinator
- Chelsi Bay, Public Relations Specialist
- Cassidy Marn, Wheat and Barley Bureau Chief



# Winterizing Spray Equipment and Cold Storage of Pesticides

*Cecil Tharp (MSU Pesticide Education Specialist)*

*Applicators should take time to prepare spray equipment and pesticide supplies prior to long term storage during the winter months. Avoiding servicing spray equipment for winter storage can be a costly mistake. This is accomplished by cleaning sprayers thoroughly, draining pesticide residual from tank, and inspecting sprayer components.*



Figure 1. Photo credit (USDA)

### Cleaning Sprayers.

The outside of a sprayer should be washed, while also rinsing spray tanks. Spray tanks can be rinsed by circulating water through the spray system. Add water up to

10% of spray tank capacity and spraying on a labeled site. Many pesticide product labels will recommend adding select cleaning agents to spray tanks to aid in removing water and oil soluble pesticides (Table 1). Tank cleaning agents work in a variety of ways including: 1) addition of ammonia to raise pH of rinsate solution increases water solubility, 2) addition of chlorine bleach increases the breakdown of many

**Table 1. Cleaning Solutions for Pesticides.\***

Pesticide Used	Step #1 (per 25 gallons of solution)	Step #2	Step #3
Hormone Herbicides (2,4-D salt, amine, brush killers, MCPA, dicamba)	1 qt. household ammonia or	Agitate solution for 15 minutes.	Let stand overnight. Flush with clean water
	1 lb. washing soda (sal soda) or	Agitate solution for 15 minutes.	Let stand for 2 hours Flush with clean water
	2 lb. trisodium phosphate or	Agitate solution for 15 minutes.	Let stand for 2 hours Flush with clean water
	½ lb. fine activated charcoal and ½ cup detergent	Agitate sprayer for 2 minutes.	Let stand for 10 min. Flush with clean water.
Hormone Herbicides ester form (2,4-D, brush killers, MCPA)	1 lb. washing soda (sal soda) + 1 gal kerosene + ¼ lb detergent	Rinse inside of tank and flush small amount through system.	Let stand for 2 hours. Flush and rinse.
Amino Acid Inhibitors (SU's including primisulfuron, prosulfuron, and halosulfuron)	2% household ammonia then circulate for 15 minutes and flush	1% household ammonia, circulate for 15 mins then flush	Rinse tank for minimum of 5 minutes using clean water.
Organophosphate or carbamate insecticides	1 qt. household ammonia + ¼ lb detergent	Flush a small amount through system.	Rinse with clean water.
Other herbicides and insecticides	¼ lb detergent	Flush a small amount through system.	Rinse with clean water.

\*Applicators should always read and follow any pesticide product label cleaning instructions.



pesticide products into inactive compounds, 3) addition of fuel oil or kerosene removes oil soluble pesticides including esters and emulsified concentrates. Nozzles, screens, and strainers should be removed and cleaned separately in a bucket containing water and the recommended cleaning agent once the tanks have been cleaned. Bleach should never be mixed with ammonia as this creates a deadly chlorine gas.

Fuel or kerosene should be followed by a detergent rinse to remove oily residue. Cleaning agents should be washed through entire spray system prior to rinsing with clean water. It is critical that all 'rinsate' be sprayed upon a site written on the pesticide product label or collected into containers and treated as pesticide waste. Always follow the pesticide product label cleaning instructions if available.

#### **Final Inspection and Preparation for Storage.**

Upon final rinse inspect nozzles, hose clamps, screens, valves, hoses and tank for wear or damage. Pay particular attention to discoloration of poly tanks from sun damage, which significantly weakens tank integrity. For larger spray rigs this is the time to grease fittings, inspect engine belts, and clean / remove batteries. To protect sprayer pumps and lines from corrosion and freezing damage over the winter months circulate antifreeze through entire sprayer. A 50/50 mixture of antifreeze and water should be pumped through system for at least 5 minutes.

With the antifreeze mixture still in the system remove some components:

- Remove pressure gauges and check valves. Store in marked container at room temperature over the winter to avoid damage from freezing temperatures. Plug assemblies.
- Nozzles and screens should be removed and placed into a marked container filled with lightweight oil (kerosene or diesel fuel). Correctly plug these assemblies as well.

By capping assemblies, remaining antifreeze will ensure that lines don't freeze and crack. Antifreeze should remain in sprayer through winter months to

avoid air moisture from corroding internal components of sprayer. Sprayer should be ready for storage in a sheltered location away from liquid and dry fertilizers which will corrode paint and hardware.

**Long Term Storage of Pesticide Products.** Dry formulations (ex. granular and wettable powders) are not generally impacted by freezing but should be stored in a dry location. Liquid pesticides may freeze and result in separation of the active ingredients from carriers, which could reduce effectiveness of pesticide product. This reaction may include coagulation or crystallization which may cause further plugging of spray lines. Some frozen pesticide products often retain effectiveness if applicators follow steps when thawing and re-dissolving the suspension.

Pesticide products have different freezing temperatures due to the presence of hydrocarbon solvents in many formulations. Hydrocarbon solvents actually reduce the freezing point below 32 degrees F. Pesticide product labels often explain a pesticides minimum storage temperature, in addition to whether: 1) freezing poses a problem, 2) active ingredients separate from carriers if frozen, 3) effectiveness of a pesticide is reduced if frozen, and 4) the active ingredients and inert ingredients go back into suspension.

Applicators should always be familiar with storage directions on their pesticide product label. For more information consult the chemical manufacturer or read the MontGuide titled 'Cold Weather Storage and Handling of Pesticides' or Maintenance, Cleaning and Storage of Ground sprayers at [www.pesticides.montana.edu](http://www.pesticides.montana.edu) by selecting 'Reference Material'. These can be downloaded and printed free of charge.

**FOR FURTHER INFORMATION:** For a more detailed guide to winterizing spray equipment see the Purdue Extension publication titled "Preparing Spray Equipment for Winter Storage and Spring Startup". Contact the MSU Pesticide Education Program if readers have any further questions (Cecil Tharp, 406-994-5067, [ctharp@montana.edu](mailto:ctharp@montana.edu)). ■

# Points to Ponder Fall 2019



**Don Soper**

*Board Member  
Montana Agricultural  
Business Association*

## WHAT A YEAR

As I was driving to Bozeman for our MABA board meeting, I was thinking of some the things that have happened this last year in the farming and ranching game that most of us are involved in.

So, to start the year off we had an exceptional amount of moisture from snow and early spring rains. Which in turn pushed the seeding dates out several weeks for most of the trade territory that our board deals with on a daily basis. One of the issues with the later seeding dates, is that it shortens the window in the fall to get the crops off in a timely manner. This year is a prime example. This fall we experienced an early snowstorm in September, that was devastating for some areas, where in it laid some of the crops flat on the ground. Other areas didn't get the snow, but caught some very untimely rain events that delayed harvest. The quality of the grain started to decline with every weather episode that occurred. It got so bad that most elevators had to come out with feed wheat bids just to be able to take some of this grain. One feed wheat bid I heard was \$3.00/bushel. Even if the yield was decent, this is a bad deal for producers who get one payday a year. I guess what I am trying to say is, being in the retail game has challenges that we deal with every year, but if our end users can't make what they are doing profitable. It makes it tough for us to be profitable also. ■

## Quick and Easy Contact Information Updates

MABA develops and distributes a membership directory every year in January. One of the biggest challenges with the directory is making sure that the company name and associated contacts are accurate and up to date. As you are all aware, our industry seems to change on an almost daily basis. In an effort to keep our contact information as current as possible we have developed an online form for you to use! Please make sure that you enter the information exactly as you want it to appear in the directory!

Keep us current by going to this link and providing updated information: <https://mtagbiz.org/update-membership-info/> ■

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## PESTICIDE RECORD KEEPING HANDBOOK

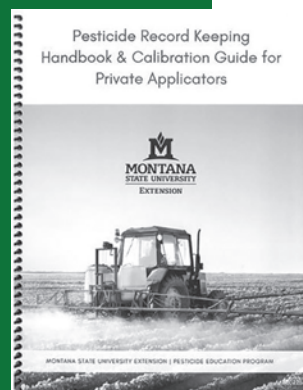
This black and white, spiral-bound 48-page booklet fulfills the legal requirements for private pesticide applicators according to the 1990 Farm Bill and 2015 Worker Protection Standard.

The objective of this booklet is to provide a simple method to manage each federal record keeping requirement for private pesticide applicators. Keeping complete records can save money and improve farm management. This booklet provides tables to fulfill each requirement, maps to sketch pesticide applications if needed, and instructions on calibrating sprayers.

Guidelines in this booklet are not intended to meet the pesticide record keeping requirements for Montana Commercial and Governmental applicators. These professional applicators must record additional information.

You can purchase through MSU distribution for \$6.00. Go to: [https://store.msuextension.org/Products/Pesticide-Record-Keeping-Handbook-and-Calibration-Guide-for-Private-Applicators\\_\\_](https://store.msuextension.org/Products/Pesticide-Record-Keeping-Handbook-and-Calibration-Guide-for-Private-Applicators__EB0228.aspx)

EB0228.aspx ■



## Water Quality & Spray Application

Water is one of the main inputs into a spray operation. The amount of water applied per acre is closely related to spray coverage and pesticide performance. But water quality – a term encompassing its cleanliness and chemical composition – is also critical to the performance of pesticides. Ensuring good performance means testing water and understanding the results.

There are four main water quality indicators related to pesticide performance:

- 1. Water Hardness.** Water hardness is caused by positively charged minerals, primarily calcium and magnesium, but also sodium and iron. These cations can bind to some herbicides (glyphosate is the best-known example, also 2,4-D amine), reducing its performance. Hardness is usually named “Total Hardness (calculated)”, and is expressed in ppm or mg/L of CaCO<sub>3</sub> equivalent. Some tests refer to the older unit “Grains”, which is ppm divided by 17. Monsanto suggests that total water hardness should be below 350 ppm (20 grains) for the low rate (1/2 L/acre equivalent) of glyphosate, and below 700 ppm for the higher rates.
- 2. Bicarbonate.** Sometimes referred to as alkalinity, the bicarbonate ion can inhibit herbicide activity, and also make some herbicides more difficult to mix. The most commonly affected herbicides are members of the Group 1 modes of action, products like clethodim, sethoxydim, and others, as well as MCPA amine and 2,4-D amine. Definite guidelines are hard to find because the antagonistic effect of the bicarbonate ion depends on the presence of other ions such as sodium and calcium.
- 3. pH.** This is a complex parameter because it is related to pesticide solubility, hard water antagonism, and pesticide degradation. In most cases, pH values between 4 and 7 are considered acceptable. But some herbicides, notably those in the Group 2 modes of action, have specific pH needs to dissolve properly. For example, the sulfonylureas (e.g. Refine, Express) and triazolopyrimidines (Frontline, Simplicity) dissolve better at higher pH, whereas the imidazolinones (Odyssey, Pursuit, Ares) tend to require lower pH. Label directions are important, sometimes calling for specific adjuvants. Some pesticides, particularly insecticides, can break down rapidly in higher pH water.
- 4. Cleanliness / Turbidity.** Water may contain suspended solids such as clay. Glyphosate and diquat (Reglone) are sensitive to this, as these chemicals are readily adsorbed to soil particles, and turbid water can reduce their effectiveness. This is also why dust generated by the sprayer can reduce these herbicides’ performance.

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## ENSURING GOOD PERFORMANCE

Select clean water sources and conduct a water test to identify possible problems. Well water is more likely to be hard than surface water. If a laboratory water test is not available, then some quick home testing can provide the necessary guidance. First, use a conductivity meter to test the electrical conductivity (EC) of the spray water. Although this test does not identify the ions present, it shows if a potential problem exists. EC values less than 500  $\mu\text{S}/\text{cm}$  are considered safe. For values above 500, a hardness test is necessary to confirm the presence of antagonizing cations. Paper test strips compared to a color scale are a quick way to determine hardness.

If the water is hard, a generally accepted solution is to add ammonium sulphate (AMS) fertilizer at rates between 1 – 3% w/v of 21-0-0-24 to the spray tank, preferably before adding the herbicide. Spray grade liquid concentrate AMS product is available from Bayer CropScience. The sulphate anions tie up the hard water cations, preventing them from antagonizing the herbicide. Liquid urea-ammonium nitrate (28-0-0) has also been shown to help with hard water, although it is not as effective as AMS.

Caution is advised when adding foliar fertilizer specialty products. Adding a blend of fertilizer salts, combined with associated changes in pH, can result in unpredictable interactions with pesticides and water. Ask for compatibility data, and always conduct a jar test to be sure that the planned mixture does not result in a precipitate that can plug spray nozzles or make the pesticide inactive.

Turbidity is a problem with surface waters, especially in areas of clay soils and after surface runoff. If spray water is taken from a pond, its turbidity can be reduced by adding aluminum sulphate at rates between 10 to 60 mg/L of pond water. Thorough agitation is required, and 80 to 95% removal of turbidity is achieved within 24 to 48 h (technical information here).

Pesticide manufacturers are usually aware of potential problems when their products are used in poor quality water. Consult with your local rep to learn of know issues and solutions before spraying.

## ABOUT THE AUTHOR

NOZZLE\_GUY: Tom Wolf is based in Saskatoon, SK and has 30 years research experience in the spraying business. He obtained his BSA (1987) and M.Sc. (1991) in Plant Science at the University of Manitoba, and his Ph.D. (1996) in Agronomy from the Ohio State University. Tom focuses on practical advice that is research-based to improve the efficiency of producers. He also rides a unicycle to the office every day. ■





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# MABA CALENDAR OF EVENTS

## NOVEMBER

- 1 MABA Board Meeting – Bozeman
- 1-2 MSU Ag Appreciation Weekend – Bozeman
- 10-17 National Split Pea Soup Week
- 13-14 Montana Pulse Day – Bozeman
- 26 Pocket Gopher & Venteneta – MSU Pesticide Ed – Private Credits – White Sulphur Springs

## DECEMBER

- 3 MABA Board Meeting – Great Falls

- 3 Organic Ag Webinar Series: Organic Hop Production at ConservationWebinars.net
- 3-5 Montana Grain Growers Assoc Convention – Great Falls
- 10 Central Ag Research Center: Research Roundup - Lewistown
- 10-12 Montana Stockgrowers Annual Convention - Billings
- 17 MSU Pest Management Tour – Private Credits – Townsend
- 17 MSU Pest Management Tour – Private Credits - Helena

## JANUARY 2020

- 14-16 Montana Weed Control Assoc. Conference – Great Falls
- 21-25 MABA/MGEA Annual Convention and Trade Show – Great Falls
- 27-28 Northern Pulse Grower Association Annual Convention & Trade Show – Minot, ND

## MARCH 2020

- 30-31 Soil Health Innovations Conference – MSU, Bozeman

## MAY 2020

- 15 MABF Scholarship Applications DUE – Helena

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