

SPRING 2024

# Growing Montana



**MABA 2024  
BOARD  
MEMBERS**

**GREAT MONTANA  
AG RALLY  
GOLF SCRAMBLE**

**MABA  
ANNUAL  
REPORT**

*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

## 2024 BOARD OF DIRECTORS

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## A Message from the President

Greetings,

I would like to begin by thanking every one of our members, vendors, and speakers who attended the 2024 MABA/MGEA convention. It was another roaring success, with near record attendance. I also want to thank all the board members and staff for putting in countless hours to bring it all together and making it a huge success.

As the new board President, I am excited to take on this new role and hope that I can continue building on to the foundation the previous presidents have started. The Montana Agricultural Business Association has been busy the last few years trying to expand our footprint, not only in Montana but within the region and nationally. We have had amazing board members who have brought new and innovative ideas to make the organization stronger every year. It is an exciting time to be part of this aggressive and thoughtful group.

As a new President I, like those before me, have a list of goals that I hope to get implemented during my tenure. At the forefront of that list is to have an open line of communication with all members of MABA. I want to have an open door so that our members can seek me out to express their ideas, concerns or other topics that may be important to them, and the membership. The open exchange of ideas and what is going to make this organization continue to be an effective tool in promoting agricultural related businesses within Montana.

Finally, I would like to thank you all for allowing me the privilege of serving as your President. It is truly an honor to lead such a fine group of people. And please, if there is anything I can do to help you or your business please reach out, my door is always open. ■



**Tanner R. Hoversland**

*President*

*Montana Agricultural  
Business Association*

# MABA 2024 Board Members



**Tanner Hoversland, President**  
*Moore Farmers Oil*

Tanner was born and raised on a farming family in Scobey, MT and graduated Scobey High School in 1996. Attended Carroll College and graduated with a B.A. in History, then continuing his education at Montana State University-Bozeman receiving a B.S. in Agricultural Economics. Tanner worked for the J.R. Simplot Company for five years in Caldwell, ID and Grand Forks, ND. Yearning to be closer to family, Tanner accepted an Agronomist/Sales position with Moore Farmers Oil in 2008 and is currently the Agronomy Manager. Tanner lives in Lewistown with his wife Kelsi, son Keegan and daughters Kit and Renzi.

he started at Kernaghan's Service, Inc. in Great Falls as their agronomy sales representative. At the beginning of 2019 Kernaghan's Service was acquired by Helena Agri-Enterprises LLC. Dan is currently still a agronomy sales representative for Helena Agri-Enterprises Great Falls retail and is helping on his family ranch with both his parents Rob and Cindy, wife Amanda , daughter Teagan, and son Brooks.

**Burl Brawley**  
*Helena Agri Enterprises LLC*

Burl was born and raised in Great Falls MT. He has spent most of his career in the Ag Industry in Montana. Burl has worked in Ag Chemical retail and the majority of his career has been spent in the Wholesale Ag Chemical Business. Burl has spent time as a Truck Driver, Logistics Manager, Outside sales and most recently he is the Location Sales Coordinator for Helena Agri Enterprises LLC at their new facility in Great Falls MT.



**James Baguley**  
*Corteva Agriscience*

James Baguley grew up on a small fruit production operation in west Michigan. While attending Michigan State, James began his work in the ag chemical industry with BASF. Working in Michigan, North Carolina, Tennessee, Missouri, Arkansas, Montana and South Dakota for BASF. In the winter of 2017, James had the opportunity to return to Montana's agriculture industry with Corteva AgriScience as the Territory Manager for Western Montana.

**Don Soper**  
*CHS Big Sky*

Don was born and raised in Larslan MT, a little community south east of Opheim MT where His family farmed and ranched. Don graduated from Opheim High School in 1989. Don then decided to see the country and started a stint on the custom harvesting circuit with his uncle's combining business. After 3 years Don moved back to Montana to start his agronomy career. He went to work for Valco Agri-Services in Glasgow Mt. in 1993.



Don moved to Havre the summer of 1995 and started working for an independent agronomy company. After spending 14 years there, Don moved on in his endeavors, and started a new job in agronomy sales for CHS in 2009, where he is currently residing.

His wife has been a school teacher in Box Elder since 1998. Hobbies include, camping, and spending as much time as possible at their family cabin in Eureka MT.



**JoÚnie Scott, Secretary**  
*Syngenta Crop Protection*

Johnnie Scott works in northern MT as a sales rep for Syngenta Crop Protection. He holds a bachelor's degree in Agribusiness from Texas A&M-Commerce. Although a native Texan, Johnnie is very passionate about Montana Agriculture. He has been fortunate to work in the industry across several states including: Texas, Arkansas, Mississippi, and Montana. He is always up for new challenges, and works diligently to promote and advance agriculture.

**Tim Takes**  
*KALO Inc.*

Tim was born and raised on a farm in Power MT. He attended Northern MT College and obtained a degree in Ag-Business. After college he worked a year for USDA Soil Conservation Service in Havre. He decided government work was not for him and began his ag business career with Harvest States as a pesticide applicator in the Billings area. In 1995, he moved to Stevensville, where he currently resides, to be a



**Dan Brattain**  
*Helena Agri-Enterprises LLC*

Dan grew up in Great Falls Montana helping on his family's ranch and graduated from CMR High School in 2007. He attended Montana State University-Bozeman from 2007-2012 and graduated with a B.S. in Agriculture Business and a minor in economics. After college Dan worked for CHS in Kalispell as an agronomy sales representative from 2012 to the end of 2014. At the beginning of 2015



field agronomist for Farmers Exchange - CHS. Afterwards, he spent 9 years managing the agronomy division of CHS Mountain West. In 2011, he made the move to the wholesale side of ag business and worked for CHS Wholesale Crop Nutrients supplying fertilizer to ag retailers in MT, ID, WA, OR, and UT. Following company restructuring and a departure from CHS after 24 years, he spent a year working outside of the ag industry. Feeling that ag had always been his professional calling, in 2019 he became the Northwest Area Manager for KALO, an adjuvant company, where he helped test and bring new technology to Ag retailers across the northwest to improve the performance of their crop protection products. Tim has and still does spend time sitting on other ag based organizations and boards including Ravalli Co Weed Board, Montana Weed Control Association, CPDA ( Council of Producers and Distributors of Agrotechnology), and Far West Ag Business association. He married with a son and daughter. He spends his free time working and playing golf at the local course, fishing, camping, hiking and enjoying all the great outdoors of western Montana has to offer.

## NEW BOARD MEMBERS

### Gwynn Simeniuk

*Agronomy Sales | PRO Co-op*

I was raised on a commercial beef cattle ranch just outside Killdeer, Saskatchewan. Since that time, my work in agriculture has been south of the border in Montana. I received B.S. degrees in Agricultural Education and Animal Science from Montana State University and later a Masters in Science Education from Western Governors University. I spent five years at the Montana FFA Foundation building leadership programming and industry partnerships in support of agricultural education students. The plains of the platinum rectangle eventually began calling to me. I returned to northeast Montana in the spring of 2022 where I joined PRO Co-op as an Agronomy Sales Rep and live in Glasgow. When my mutt, Annie, and I aren't in the field, we're often found playing amateur chemists in the kitchen trying out new baking recipes (Annie is a great taste tester) while watching football and cheering on the Cats!



### Patrick Nelson

*Account Manager for CHS Agronomy*

My name is Patrick Nelson and I currently live in Hysham with my wife (Jayme) and our four kids (Isabel, Colter, Chase, and Easton). Outside of work we enjoy spending time chasing the kids around for numerous activities including 4-H and countless sports. Any free time we have we spend at the lake or on the farm in Eastern MT.



I'm currently an Account Manager for CHS Agronomy, covering the Crop Protection business for Montana and Wyoming. Prior to this role I worked for a local cooperative for 8 years on the retail side of the business. For the past nearly decade I've had the privilege of watching several colleagues and friends serve on the MABA Board, and I feel that it is my time to step up and help out. The boards tireless efforts to strengthen our industry in MT is quite remarkable. I'm honored to help serve in those efforts!

### Rory Lewis

*Helena Agri-Enterprises*

Rory was born and raised in Reed Point MT on a cow/calf cattle ranch where his passion for animals and landscapes set seed. From the ranch he went on to study Agricultural Business and Farm and Ranch Management at Sheridan College and finished his B.S. at Montana State University. Upon graduation in 2018, he began working as a Sales Representative for Helena Agri-Enterprises. Rory currently lives with his wife Kendra and daughter to be in Laurel. ■



### Luke Neal

*Rocky Mountain Supply*

Luke is the Agronomy Division manager for Rocky Mountain Supply. He has been with the company since 2019.

Before working for Rocky Mountain Supply, he worked for three other co-ops in Washington, North Dakota and Montana. He has worked in the Ag retail industry since 2010.

Luke is originally from Augusta MT, where he was raised on a ranch 6 miles west of Augusta. He graduated from UMW-Dillon.



### Christian Guenther

*Agronomy Sales Representative for CHS-Big Sky*

Graduated from Montana State University with a degree in Crop Science. While in college worked a summer internship with Fehringer Ag Consulting, and after graduation it became a full time position. Covered from Central to South-east MT and occasionally out of the state for projects. Received job

opportunity with Valley Farmers Supply as a sales agronomist in 2020 based out of Worden, Hysham area. In 2023 accepted position with CHS.

Reside outside of Moccasin, MT with wife Taylor as we prefer our time outdoors hunting, fishing, and hiking as free time allows.

# Pam Langley Memorial Scholarship

The Pam Langley Memorial Scholarship has long been an MABA activity - one that the association has been very proud to promote and support. Starting in 2017, MABA and its membership worked hard to establish the Montana Agricultural Business Foundation (MABF). The MABF was formally established in the fall of 2018 and is now in operation.



One of the benefits of MABF is that it is organized as a charitable foundation therefore removing any question regarding the appropriateness of providing scholarships to our membership and their children. In 2019, the Pam Langley Memorial

Scholarship transitioned away from MABA and to MABF for administration and granting. This is a great opportunity for MABA members to provide funding to MABF to bolster these types of activities.

The current MABF Board of Directors include: Nichole Drake, Chris Barge, Tom Burchett, Nathan Brooks, Nate Fairbanks, and Branden Stone. Please reach out to any of them for additional information or to provide funding for the foundation and its activities.

Please spread the word to your employees and others in your business so that this scholarship opportunity isn't missed. The deadline for applications is May 15. ■



At the Montana Agribusiness Foundation (MABF) we encourage and support the legends of tomorrow. We strive to provide scholarships to the next generation of Montana agriculturalist. These scholarships are designed to aid students in achieving their educational goals and to help them prepare for their future and the future of Montana agriculture.

**We had two great board members retire this year Victoria Marsh and Christopher Barge. We thank them for their years of service and dedication to bettering the community. Replacing them on the board are, Shane Barrett and Amelia Siroky.**

*Thanks to everyone that has donated to our efforts of giving back to the community.*

Go like and follow our Facebook page to stay up to date with our current happenings. Please email us at [mtagribusinessfoundation@gmail.com](mailto:mtagribusinessfoundation@gmail.com) with any questions about our foundation or about the process to donate. If you are interested in being a part of the MABF please send an email to us to get started. Thank you for your continued support of our Montana youth.

Nathan Brooks, President MABF



# Montana Agricultural Business Foundation SCHOLARSHIP APPLICATION



## PAM LANGLEY MEMORIAL SCHOLARSHIP

Deadline: May 15

**There is no longer a requirement that an applicant be entering their second year – the student must be enrolling in next semester.**

### ELIGIBILITY:

Three \$2,500 scholarships will be awarded to students in pursuit of post-secondary education. Scholarships are not limited to in-state schools or to any field of study. The applicant or legal guardian of applicant must be employed a minimum of 800 hours per calendar year or be retired from a career with a business that is currently a member of the Montana Agricultural Business Association and its adjoining states. A student receiving a scholarship may reapply for subsequent years but will not be awarded a scholarship more than twice.

### SELECTION:

The selection committee policy does not advocate, permit nor practice discrimination based on sex, race, age, color, national origin or handicapping condition. The selection committee shall consist of at least three members of the MABF Board of Directors. Committee members should not have potential applicants. The president may select committee members from the general membership if necessary. Winners will be announced and funds awarded before the fall semester.

### PERSONAL INFORMATION:

Name \_\_\_\_\_

Current Phone \_\_\_\_\_

Marital Status \_\_\_\_\_ # of Dependents \_\_\_\_\_ Email: \_\_\_\_\_

Current Address \_\_\_\_\_

Permanent (home) Address \_\_\_\_\_

Name of Parent or Guardian \_\_\_\_\_

Parent or Guardian Address \_\_\_\_\_

Parent or Guardian Phone \_\_\_\_\_ Parent or Guardian Email \_\_\_\_\_

Number of brothers and sisters: older \_\_\_\_\_, younger \_\_\_\_\_, # in college now \_\_\_\_\_

### MABA MEMBERSHIP INFORMATION:

Parent or Guardian Employer \_\_\_\_\_

MAMA Member:  Yes  No

MABA Employment Location \_\_\_\_\_

MABA Employment Address \_\_\_\_\_

*over*



## PREVIOUS EDUCATION:

1. High School \_\_\_\_\_ Town \_\_\_\_\_  
High school rank: \_\_\_\_ of \_\_\_\_ in class. Year graduated \_\_\_\_\_
2. Post Secondary Education (if any):
  - A. School \_\_\_\_\_ Town \_\_\_\_\_  
Years completed \_\_\_\_\_ Degrees earned \_\_\_\_\_ GPA \_\_\_\_\_
  - B. School \_\_\_\_\_ Town \_\_\_\_\_  
Years completed \_\_\_\_\_ Degrees earned \_\_\_\_\_ GPA \_\_\_\_\_

## ACTIVITIES AND ACHIEVEMENTS:

1. What has been the nature and extent of your participation in activities of: (answer for both your high school and post-secondary years; use additional sheets if needed.)

Your School:

Your Community:

2. List any special recognitions or awards you have received.
3. Why do you feel you deserve this scholarship?
4. What work experiences have you had?
5. Write a paragraph or two indicating what your career plans are.
6. In which School and Program do you intend to enroll in seeking this scholarship?  
Name of School \_\_\_\_\_  
Major \_\_\_\_\_  
Option or Area of Concentration \_\_\_\_\_
7. Are there any other circumstances, financial or otherwise, which you would like the committee to consider as an additional reason to grant aid?

## REFERENCES:

Give the names, positions and addresses of three persons (not relatives) as references. It is preferable that at least one be a person for whom you have worked.

Name and Position:

Address:

_____	_____
_____	_____
_____	_____

Attach two letters of recommendation, your high school and postsecondary transcripts and a photo (the winners photos will be used for publicity). Return to Scholarship Committee, PO Box 7325, Helena, MT 59604 by May 15. **Preferred method: Application materials may also be submitted to: [mabamgea@gmail.com](mailto:mabamgea@gmail.com)**

I understand that this application is for \$2,500 in aid for the next school year. Any breach in enrollment or other unsatisfactory performance in my course of study will result in cessation of aid.

Date \_\_\_\_\_ Signature of Applicant \_\_\_\_\_



The MSU Foundation Seed program provides foundation seed to statewide producer partners, primarily from the university's spring and winter wheat and barley breeding programs in addition to oats, safflower, peas and lentils. We are an extension of MSU's breeding programs and strive to increase recommended varieties with the assurance of genetic purity and quality standards.

Seed varieties are developed based on the needs of Montana growers facing climate, pest and soil challenges in the diverse agro-ecosystems of the state. The university responds with varieties specifically bred and adapted to meet these challenges, initially released as MAES varieties in the foundation stage of production.



## Foundation Seed Program

### MT WARCAT

- Hard red winter wheat
- High yield potential
- Improved winterhardiness
- Moderate tolerance to sawfly
- Aluminum tolerance in low pH soils

### MT CASH

- Hard red winter wheat
- Early maturing forage variety
- High forage yield and good seed yield
- Tall
- Awnless

### MT RASKA

- Durum
- Early Maturing
- High yield
- Maintains test weight under very dry conditions
- Good standability under sawfly pressure

### MT BLACKBEARD

- Durum
- High yield potential
- Very high protein
- Standard height
- Very good end use quality

### MT 457

- Green pea
- Good standability
- High protein
- High grain yield
- White flowers

### MT COWGIRL

- Forage barley
- High performance forage line
- Tall
- High forage yield
- Earlier heading

### MT BOY HOWDY

- Feed Barley
- Awned
- High performing variety
- Longer grain fill period due to earlier heading
- Higher percentage of plump seeds compared to Haxby

### MT ENDURANCE

- Malt barley
- High performing variety in dryland conditions
- Stable plumps, protein and extract under dryland conditions
- Well suited to dryland production in malt producing regions
- Low grain protein

### MT CARLSON

- Hard red spring wheat
- High yield potential
- Moderate wheat stem sawfly resistance
- Good tolerance to aluminum soils
- Resistance to common races of stem rust
- Good end use quality

### MT DUTTON

- Hard red spring wheat
- High yield potential
- Good protein content
- Moderate tolerance to aluminum soils
- Moderate resistance to fusarium head blight
- Good resistance to foliar diseases



# Congressional Comments



**Steve Daines**

*United States Senator  
For the State of  
Montana*

## U.S. SENATOR STEVE DAINES

### Less Federal Control and More Local Authority

The work Montana farmers and ranchers put in every day fuels our state's economy and helps feed families in our local communities and around the world. While the Treasure State is known for its vibrant natural resources, our farms and ranches make for unmistakable landmarks

for anyone passing by.

I know 2023 was a difficult year due to soaring inflation and more regulation coming from Washington, D.C. Everywhere I go in Montana, folks are all too familiar with the high cost of everything from gas to groceries, and for our farming and ranching communities this also means high input costs that threaten already thin profit margins. I know from talking with many of you that this inflationary turmoil hits really close to home. That's why I'm doing all I can to stop the runaway spending that caused it and pass pro-growth policies that will help grow our ag economy.

When it comes to Montana ag on a global scale, it's no secret our ag products are envied around the world, so it's important that we maintain good relationships overseas to cultivate these trade markets. Fighting for lower tariffs and reduced barriers to trade on Made-in-Montana and Made-in-the-USA products, encouraging export growth and advocating for favorable market access is key in staying competitive on the world stage. I'm also strongly opposed to proposals that would breach Snake River dams, as they support Montana agriculture and ensure our commodities can get to market.

I appreciate your continued advocacy and feedback when it comes to advancing policies that will work for you, not against you. Eliminating harmful federal estate taxes, strengthening risk management tools, combatting labor shortages and minimizing barriers to entry for folks starting out in the ag industry are among my top priorities in Congress. It's imperative that the next Farm Bill includes sufficient protections for ag producers that will support them in times of disaster.

Food security is national security, and I will keep using my voice in the United States Senate to ensure big government stays out of the way of Montanans' ability to get their jobs done.



**Jon Tester**

*United States Senator  
For the State of  
Montana*

## U.S. SENATOR JON TESTER

As a third generation Montana farmer, I can tell you firsthand that plenty has changed in agriculture since my great grandparents first homesteaded the land that Sharla and I still farm today.

In the early 20th century, when my great grandparents started planting, dirt farming largely consisted of animal labor and extra elbow grease.

When my parents took over in the 1940's, basic tractors were becoming the norm, catapulting dirt farming to the next level of productivity.

Now, when Sharla and I plant and harvest every year, there's still plenty of elbow grease involved, but tractors built with microchips and monitors have become the norm – leading to the most efficient form of farming that the world has ever seen.

But there's still plenty of technological improvements coming down the pipeline – and because of my work on the CHIPS and Science Act, which



delivered Headwater Tech Hub to the Treasure State, plenty of those technological improvements are going to be homegrown in Montana.

When negotiating the bill, I fought tooth and nail to ensure that rural states like Montana weren't left behind and had the opportunity to compete for a Tech Hub designation. Now, with collaboration between businesses, universities, and economic development groups, Montana's newly designated Headwaters Tech Hub is off and running. That means that down the road, we can expect to see even more growth in groundbreaking technology coming from right here in Montana.

Montana already leads the nation in photonics and

sensor technology, which will significantly boost precision ag research and development.

Better technology will increase profits for farmers and businesses alike, and is a win for agriculture in Montana and nationwide.

I'll always fight in Washington to ensure that rural America isn't left behind, and because of our work to ensure that Montana could compete for Tech Hub funding, we'll be leading the pack in precision ag R&D for generations to come.

I look forward to working with Montana's Agricultural Businesses as we see this R&D get off the ground, and if I can ever be of help, please don't hesitate to reach out.



**Ryan Zinke**

*US Representative  
For the State of  
Montana*

## U.S. REPRESENTATIVE RYAN ZINKE

Across the nation, but especially in Montana, natural resources are a critical part of our daily lives. I am a firm believer that the path to better management lies in the states, and not letting federal bureaucrats control rivers, streams and cow ponds on the other side of the country they've never seen. As someone who depends on the land to provide for yourselves and others, you know this.

But the attacks, land grabs and overreaching management strategies has started to take a toll and Biden's latest takedown has been fixed on removing the four Lower Snake River dams. To be clear, it's one of the worst ideas I've ever heard, both environmentally and economically. They are multi-use systems that provide power, drought control,

flood control, irrigation, and recreation and are a reliable zero-emission energy producer thousands depend on.

I don't think there's a rancher, farmer, or member of the ag community who doesn't understand how important management is, but there are some folks in this administration who have no clue. The target they are aiming for has been set by radical eco zealots who are not taking into consideration agriculturists like you who depend on multiple water sources to put food on tables and clothes on backs. But for me, you're front focus. I've met with folks in the ag community weekly this last Congress and we have the tools and information we need to continue the fight. I look forward to continue working alongside the folks of the MABA so that we always have a little more Montana in Washington and not the other way around. ■

# Biofertilizers: Looking Forward to Renewed Growth

By Eric Sfiligoj

Things were a little different for biofertilizers in 2023. According to the data from the 2024 CropLife® Biologicals Survey, usage among ag retailers and their grower-customers declined from the 2022 growing season — down from 50% to 41%. This marked the first such drop for the sector since the magazine started polling readers on biofertilizer use back in 2018.

The question, of course, is why did this segment see such a pull-back from market users? According to Mick Messman, President/CEO of DPH Biologicals, part of the explanation for this might tie back to a natural evolution of the biofertilizers sector in the minds of users.

“Growers are interested in biofertilizers, but are demanding more from them, as they should,” says Messman. “Short shelf life, special handling requirements, and the inability to mix with other inputs — or inconsistent data around product benefits — are simply not going to make the cut in this competitive market.”

Matt Sowder, Director of Global Agronomy at Mosaic Biosciences, agrees with this assessment — and highlights a few other reasons why biofertilizers might be experiencing some marketplace sluggishness. “As long as fertilizer represents such a significant portion of costs per acre, the pressure will always exist to maximize return-on-investment — specifically, return on fertilizer investments,” says Sowder. “Interest and awareness has improved slightly, [but] overall it is difficult to discern if there is increased market penetration rather than consolidation of usage from competitive products with similar value propositions.”

Despite this fact, however, DPH’s Messman says many companies that do business in the biofertilizers sector did see their markets for such products expand during 2023. “Farmer interest in biofertilizers

continues to grow and biofertilizers are becoming a critical component for profitable Corn Belt production,” he says. “In the last year, DPH Biologicals has secured sales and distribution agreements with leading channel partners and added more than 30 new retail partners in the U.S. ag market alone.”

Andrew Duff, General Manager — North America at Groundwork BioAg, agrees. “Since joining Groundwork BioAg in 2023, I’ve talked with many growers across the Midwest and Midsouth who are trying biologicals on a significant portion of their farms,” says Duff. “Based upon demand, we [have] expanded our North American sales team to support farmers and help them tap into the benefits of our biofertilizer, Rootella.”

Furthermore, he points out that according to various biological category research reports, the global market for biologicals is expected to achieve a compound annual growth rate of 13% over the next four years. As a result, the company is rapidly expanding its production capacity around the globe.

“Groundwork BioAg has expanded commercialization in the U.S., Brazil, India, Canada, and other countries in Europe,” says Duff. “With the addition



of China, Argentina, and South Africa in 2023, the company and its local partners offer farmers access to the most highly concentrated mycorrhizal inoculant products available for mainstream agriculture.”

## MARKET DRIVERS IN 2024

Moving into the 2024 growing season, Mosaic’s Sowder predicts commodity prices could play a big part in how well or poorly biofertilizers perform. “Perhaps the driver that pushes cost awareness most for production is still depressed commodity prices going into 2024, as we see in corn futures today,” he says.

Still, DPH’s Messman says that interest in biofertilizers among ag retailers and their grower-customers should remain high this year for two simple reasons — yield and profitability. “Yield and profitability have been, and will continue to be, the most critical drivers of biofertilizer sales in 2024,” he says. “We’ve had a few good years of high crop prices that have helped offset inflation and costs.

“But with so many future unknowns — be it the supply chain, political and regulatory impacts, climate extremes, or harvest prices — growers are more cautious to add any new cost or change to their operation — be it biofertilizers or anything else,” continues Messman. “They [need to] come with clear, specific benefits and an acceptable return-on-investment.”

To this end, Messman says DPH has taken steps to improve the availability of its TerraTrove SP-1 Classic to customers. “Unlike so many of the crop input products that farmers depend upon, SP-1 Classic is domestically produced in DPH’s Illinois production facility, mitigating global supply chain issues,” he says. “That means growers can trust SP-1 Classic will be available — when they need it, even if other products are in short supply or skyrocket in price. We’ve already seen first-hand the immediate impact of that in 2022, with many growers using SP-1 Classic for the first time to offset a portion of their fertilizer inputs without taking the risk of

sacrificing yield.”

In addition, DPH is planning to launch some new offerings for the marketplace during the upcoming growing season as well. “DPH Biologicals is advancing several new technologies in the biologicals category,” says Messman. “The 2024 launches will be primarily focused on biocontrols, while we intend to advance a next generation easy-to-use biofertilizer product to pre-launch status in 2024.”

## WILD CARDS, WEATHER

Given these positives, are there some so-called “wild cards” or “black swan events” that could negatively impact the biofertilizers sector in 2024? Of course, says Groundwork BioAg’s Duff.

“Climate, conflict, and cost have been among the many environmental and financial challenges growers face to produce the food, fuel, and fiber the world demands,” he says. “The predictions we are hearing indicate 2024 will be no different.”

But according to DPH’s Messman, the biggest wild card potentially affecting the biofertilizers sector in 2024 will be the same as it tends to be every year for agriculture — weather extremes. “The increasing occurrence of weather extremes will continue to be a reason growers use biofertilizers, especially in drought and extreme temperatures,” he says. “However, they also want products with specific benefits to defend against weather stress as well as offer other benefits.”

He adds that the company’s SP-1 Classic is specifically formulated to aid with weather extremes. “For instance, when soil-applied SP-1 Classic improves soil tilth, structure, and compaction optimizing conditions for early season moisture retention and uniform crop establishment,” says Messman. “[And when] applied as a foliar, SP-1 helps plants focus their energy on growth and improve their water-use efficiency, improving crop resiliency to heat, drought, and salinity stress.”

*Biofertilizers continued on page 14*

*Biofertilizers continued from page 13*

A few other market drivers could have a positive impact on the biofertilizers sector in 2024, says Groundwork BioAg's Duff. "Following the high fertilizer prices in 2022, growers needed a replacement that offered the strongest return-on-investment," he says. "In addition, many growers I talk with are looking to boost profitability with the help of passive income, such as carbon credits."

To tap into his desire, adds Duff, Groundwork BioAg in 2023 invited farmers across the Midsouth and Midwest with a minimum of 250 acres to participate in a pilot program using Rootella Carbon. "Rootella Carbon is proven to sequester significant amounts of carbon in cropland and is open to all farmers," he says.

According to Duff, participation in this program instantly qualified growers for carbon credits without requiring changes to existing land management practices.

"[It offered] clear benefits to crops and the land above and beyond carbon revenue," he says. "As early adopters and stewards of their lands, these farmers understand there is more they do to improve soil health than the public may realize." ■



**REMEMBER . . .**  
**IT'S THAT TIME OF YEAR AGAIN!!**



**Know what's below.  
Tap, Click, or Call  
811 Before you dig.**

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## Worker Safety on Trucks and Trailers

Often in the season, we get very busy and have employees doing many different tasks on fertilizer tenders, and grain trailers. At the end of the deliveries, the drivers often climb up to sweep out the hoppers or blow out the grain trailers to make sure different varieties of seed are not being contaminated. These trucks and trailers have ladders on them, and some even walkways along the side to assist the drivers in these tasks.

OSHA requires that elevations four feet or higher, have fall protection. If it is a walkway on the truck, it would require a railing. If there is not a walkway like most tenders or grain trailers, it would require a safety harness and some sort of a way to tether the harness to something solid that would prevent a fall to the ground.

Now, understanding that very few pieces of equipment have this ability on them, I would like to offer tips for the future:

- Recommend that there is always three points of contact while on the equipment.
- Avoid climbing ladders when wet or covered in frost.
- For fertilizer tenders, look at eventually rotating them with stainless steel, steep walled tenders, where you don't have to climb to clean.
- Install an overhead cable to hook to in the truck yards, so you can pull under them if access is needed.
- Look at installing a pop-up cable railing along walkways.

Now knowing that many of these trucks do not have this equipment available. I would suggest slowly moving towards the above listed suggestions to get your fleet in compliance. It is really only a matter of time before someone falls and gets hurt without these things in place.

Please have a profitable and safe year! ■



**Luke Neal**

*Board Member  
Montana Agricultural  
Business Association*

## Points to Ponder



**Gwynn Simeniuk**  
*Board Member*  
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It's been a dry few years and an open winter. Borrowing from the bank costs a shiny penny these days. Wheat and corn prices have tanked. If a farmer had his woman up and leave, his dog got run over, and was bellied up telling the bartender his story, he'd be living every part of every sad country song. That same farmer could have his wife by his side, dog riding shotgun, spend very little time at the local watering hole and would still be hard pressed to muster much optimism for the growing season.

It goes without saying this isn't the first or only time we have found ourselves challenged on multiple fronts, but the compounding effect of all of these obstacles makes this year's outlook feel uniquely

bleak. I suppose that can also be said for a lot of tough farming years. I'm not quite old enough to remember the drought, crippling interest rates, or the biblical hopper-apocalypse of the '80's, but I watched the effects it had on our family's operation and our neighbors growing up: intense risk-aversion. Farming practices and economic opportunities have evolved since then, but what we're facing today feels a bit congruent with the challenges that generation faced.

So how do we help growers believe it's still worth betting on themselves under these conditions?

We are often growers' trusted advisers for their pre-season planning and in-season decision making. To be a trusted advisor often entails a cyclical relationship with your growers where you are continuously providing ideas and solutions to earn that trust. Not always a simple, linear process, particularly when it's dry in dryland country. This year, we could find ourselves more in the "prove it" or "show me" portion of the cycle in discussions with growers because of the economic and environmental constraints pressuring their willingness to take calculated risks. Fair enough.

What does that look like? I think there's a lot of ways these conversations can manifest themselves. As much as growers are still spending on fertilizer, whether they are deciding to fertilize to full yield potential or cut back and try to use up the carryover in the soil, they want the confidence that what they're putting down is getting into their crop. Subsequently, for guys who want to manage their nutrients throughout the growing season more closely, they want an accurate snapshot of

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what their crops are short on mid-season. For me, this looks like packing a lot more tissue sampling bags when walking fields. It's a tool a lot of us are already utilizing, but it could become more consequential in our planning discussions with growers. But it takes time during a period when time isn't abundant.

Trial data is something we all pay attention to when considering which products fit our geographic areas. We are fortunate to have some growers in northeast Montana who are willing to trust our recommendations and adopt new products. However, they are often doing so without seeing how these products perform in the field until it's in their field. Splitting a field to have side-by-side comparisons is a powerful visual in determining product efficacy for growers. We can have the best intentions to work with our growers to plan several of these demonstrations before the growing season, but when the wheels start turning in the spring it gets tough to slow down enough to follow through on our ambitious ideas. But growers count on us to expose them to new options, and the logistics of consistently delivering on this is something we need to figure out. That might look like retailers working more with suppliers on managing these plots with our own growers or making available (and more accessible) more field days to growers. This is something we could be asked to do more often, and we should be forming a feasible plan to make it happen.

Keep in mind, I'm speaking only to what we see regionally. Your challenges and opportunities may look a lot different in other parts of the Big Sky. Ultimately, this could be a year we see more requests calling for out-of-the-box solutions and tools we may not have tried before. Or maybe we just haven't tried them in our own backyard to let growers see products and practices that may fit their operations.

Just like our folks in the '80's and the pioneers who settled this country at the turn of the century, we decided to stick in dryland country, whether by choice or by chance, despite how unforgiving this place can be. If we wanted our jobs to be easier, we could move somewhere else where it rains more. By being here, part of our nature is to innovate and persist. Tough country makes for tough people, and they are some of the best you'll find.

That said, as I'm writing this, we still have a few weeks until spring. I am hopeful we receive some moisture (even if it's to go from "bone dry" to "still pretty dry") between now and when drills are in the field. It's amazing what a little shot of rain at the right time can do for raising hopes and raising crops. ■

# Greeneye Makes Impressive Debut

By Tom Wolf (*nozzle\_guy*)

## Green-on-Green Sprayer Competes with Blue River and Bilberry

One distinguishing feature of the new agriculture is the rapid development of new technologies. Ideas move from concept to implementation at record pace, helped by an influx of talent and capital into this profitable sector.

**Greeneye TecÚology** is an example of this pace. Founded by entrepreneurs who met in the Israeli armed forces, they developed a software platform that identified crops, weeds, and other objects in agricultural fields from drone imagery. They recognized the opportunity to transition their software to a sprayer platform, and in 2017 decided to join the race, most notably competing with Blue River, Bilberry, Carbon Bee, and Xarvio, to create a green-on green spot sprayer.

Greeneye, in an amazing display of efficiency and speed, has been a commercial product for approximately one year in the US and has sold several units in Nebraska, Minnesota and Oklahoma, and next year will expand to North and South Dakota, Iowa, Illinois, Kansas and Texas. Having consulted for the company in its early years, I paid a visit to Peterson Farms Seed near Fargo, ND in early July 2023 to see the sprayer first hand at a field demo. By the way, kudos to PFS for bringing this technology to their customers to see. Have to love a business so committed to the cutting edge.

The Greeneye system was mounted on a Hagie STS 12 sprayer (1200 US gallon tank) with a custom 120' boom manufactured for Greeneye by Millennium. Recognizing the agronomic need to broadcast pre-emergence herbicides along with a post-emergent spray, they company retained the existing plumbing system (tank, pump, wet boom) for this purpose. They added a smaller spot spray tank (240 gallons) with its own pump and wet boom for spot spraying.



Figure 2: A smaller spot spray tank was added to the Hagie. If necessary, spray mix can be pumped from the larger tank to this smaller tank.

This approach permits the flexibility of broadcasting a pre-emergent herbicide during burnoff alongside a post spot spray on emerged weeds. The agronomist in me likes this a lot. Broadcast pre-emergent herbicides are an important part of resistance management, particularly in the US.



Figure 1: The Greeneye system was mounted on a Hagie STS 12 sprayer.



Figure 3: The second (spot spray) boom is mounted behind the factory wet boom.



The new wet boom has a nozzle spacing of 10", is fitted with three-nozzle-turret TeeJet bodies. The 10" spacing allows for higher resolution of the spot spray, increasing potential savings compared to a 20" spacing.



Figure 4: The spot spray nozzles are mounted at 10" (25 cm) spacing.

The spray was metered through custom-made TeeJet DG4003 tips using Gevasol solenoids running at a speed-dependent frequency, maximally 100 Hz, with turn compensation.



Figure 5: Solenoids activate the spray when a weed is detected in that nozzle's lane.



Figure 6: These Drift Guard nozzles are custom-made for Greeneye by TeeJet. Figure 6 (top): These Drift Guard nozzles are custom-made for Greeneye by TeeJet.



Figure 7 (bottom): The blue DG pre-orifice meters the flow at 0.3 US gpm at 40 psi.

DG Nozzles use a pre-orifice to meter the flow at the rated amount, with an exit orifice slightly larger. This creates a pressure drop, resulting in a lower drift spray.

Looking at the spray quality and coverage on water-sensitive paper I thought the deposit looked just right. Spot sprays shouldn't be too fine for risk of displacement from their intended band. We're not seeing bundled nozzles with other spot spray systems, who leave nozzle selection to the operator. That can pose difficulties and possibly **forfeit either weed control or savings.**



Figure 8: The spray deposit shows adequate coverage and a good droplet size distribution for good placement accuracy.

Sectional control retains the plumbed resolution at this time, although nozzle-by nozzle resolution is in the pipeline. Cameras are mounted at 1.5 m intervals and can run up to 50 fps. Camera resolution is proprietary, but the company claims that weeds as small as ¼" diameter can be detected. In its current configuration, weed diameters of 1" are detected, leaving smaller weeds for the pre-emergent products.

*Greeneye continued on page 20*

*Greeneye continued from page 19*

LED lights flash to illuminate the camera field of view, improving image consistency and permitting the system to run at night. The Greeneye system analyzes a captured image just once to make a spray decision, and does not use segmentation in its algorithm.



Figure 9: The camera and lights look ahead to provide the necessary time for the on-board computer to make the required calculations that determines the plant's identity. Note the aspirated lens cleaner.

Like its competitors, the user can select from individual nozzle activation or, in "windy mode", the addition of the adjacent two nozzles to create a three nozzle broadcast. The length of the band is automatically selected by the software, with no user input available. Sensitivity adjustments are currently by request to the factory, but will be available for operator control in 2024.

Greeneye provides its own cab monitor that works with the sprayer monitor on sectional control. The Greeneye monitor keeps track of the spray volume usage and provides an ongoing report to the operator.

The software is able to report back whether a detection was a grassy or broadleaf weed, a powerful piece of information for keeping track of weed patches and monitoring for emerging problems. Weed maps are already being produced as a proprietary tool, and will be generally available in 2024.

New Greeneye customers have their sprayer picked up at the yard and transported to Greeneye facility where the new boom, tank, and digital components are installed. The customer receives the converted sprayer, calibrated and ready to go.

In my judgement, the install was clean and tidy. Camera mounts are welded on, and an air jet can be used to keep the lenses dust free. Brackets for the GPU and other control boxes are unobtrusive, although the wiring does get a bit crowded in places. Everything is accessible.

Cost is \$239,000 US at time of printing (July 2023). This gets the customer a Greeneye system for a 120 foot boom, a brand new aluminum

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boom, retrofit of the sprayer to dual tank, installation and warranty. Return on Investment (ROI) for a spot sprayer will depend on farm size and herbicide use. Based on observed savings to date, Greeneye estimates that for a farm larger than 3,000 acres the ROI would typically be less than 2 years.

Greeneye does not charge subscription fees for its algorithms. This last aspect is interesting as John Deere and Bilberry both charge for use of their algorithms on a per acre basis. John Deere, for example, charges \$3/acre US for corn, and \$4/acre for soybeans and cotton, each time you make a spot spray pass with See & Spray Ultimate.

Available Greeneye algorithms are for Green-on-Brown, and Green-on-Green in corn and soybeans as of July 2023. Cotton and milo will be available in 2024, and Greeneye is working on canola and wheat as well. Like Bilberry, they capture images from the cameras for use in algorithm learning, and accuracy and hit rate should be improving with time. Travel speeds of 15 mph are working well according to Greeneye.

As for performance, the proof will be in the pudding. The company in its wisdom did commission an independent evaluation at the University of Nebraska, Lincoln, and has made a summary of the university report available on its website. According to UNL, broadleaf weed control in corn with the spot sprayer was equivalent to the broadcast treatment, and grassy weed control was slightly less effective. UNL researchers noted herbicide crop injury ("Status", dicamba + diflufenzopyr) was reduced with the spot spray. Of course, savings will be a function of weed density and the detection threshold chosen by the operator, but the addition of reduced crop injury resulting in greater yields could also be very valuable.

A recent investor and business partner is Farmers Business Network (FBN). FBN sees the opportunity for a spot sprayer to act as a scouting platform that helps evaluate the success of new pest management strategies.

Support on the ground is in the form of US staff with backgrounds in the spraying industry. Software development and digital troubleshooting remains in Israel.

Although I no longer have business links to Greeneye, I was happy to see this sprayer operating as well as it did. I remain convinced that spot sprays will be an essential part of our spraying future, for sustainability and resistance reasons. It is heartening to see these early successes and it will be interesting to see them continue to evolve. ■

*Tom Wolf is based in Saskatoon, SK and has 33 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.*

# Fertilizer Advisory Update

The Montana Fertilizer Advisory Committee met on campus February 1 to contemplate research proposals for fiscal year 2024. For this period the committee’s research priority areas were: nutrients related to oilseeds; precision nutrient management in forages; strategies for amending chloride deficiencies and economics; and potash management in high potassium and low chloride soils. Board chair Chris Larson said that the decisions made by this year’s board will increase the sustainability of our cropping systems by supporting a diversity of fertilizer research in crops and forages as well as continuing support for the Environmental Analytical Laboratory, a key resource for soil and water analysis at MSU. A proposal by Hayes Goosey will investigate questions producers have about sulfur use in forages to reduce the risk of nitrate toxicity. Adam Sigler will work with producers to adjust irrigation scheduling to reduce nitrate leaching and reduce water loss. The funds support continuing research as well as several new investigators at Montana State University.

Those selected for funding in FY24 are as follows. Information and history of the Montana Fertilizer Advisory Committee can be found at <https://agriculture.montana.edu/mfac/index.html>. ■

## FY 2025

Investigators	Project Title	Funding Amount
Chengci Chen	Fertility management for optimum yield and quality of soy and dry beans in eastern Montana	29,228.00
Michael Giroux	Testing Dibutylidithiophosphate as a Seed Treatment to Boost Plant Growth without Increasing Fertilizer Use	52,900.00
Stephanie Ewing	Research Analytical Chemist, Environmental Analytical Laboratory	35,000.00
Sue Mondal	Examining the impact of physiological leaf spot in winter wheat and the role of chloride in reducing symptoms	24,990.00
Clain Jones	Sulfur source and rate effects on yield and quality of wheat, pea, and canola	37,414.00
Perry Miller	pH Remediation by Perennial Forages following 18 yr of N Management in Alternative Crop Rotations.	19,434.00
Perry Miller	Winter canola seeding date and fertilizer application timing in Montana	53,236.00
Jamie Sherman	Relationship between fertility and water management, production and quality of advanced spring forage, feed and malt barley lines	69,736.00
Hayes Goosey	Assessing Sulfur Fertilization as a Means to Improve Statewide Forage Quality and Value by Reducing Nitrate Accumulations in Cereal Forages	33,636.00
Adam Sigler	Quantifying Nitrogen Leaching in Irrigated Fields	37,944.25

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## Montana Agriculture Innovation and Investment Summit:

### A HIGHLIGHT OF CELEBRATE AG WEEKEND

Mark your calendars for an exciting event coming up on November 6, 2024, as Montana State University's Celebrate Ag Weekend hosts the second annual Montana Agriculture Innovation and Investment Summit. Set to take place in the prestigious Inspiration Hall in the Norm Asbjornson Engineering building; this summit promises to be a pivotal gathering for the agricultural community.

With agriculture as the backbone of Montana's economy and identity, the summit aims to foster innovation and investment in this vital sector. It will provide a platform for farmers, ranchers, researchers, entrepreneurs, investors, and policymakers to come together, exchange ideas, and explore opportunities for growth and development.

The summit will feature keynote speakers, panel discussions, and networking sessions, covering various topics such as emerging technologies, market trends, and investment strategies. Attendees can expect to gain valuable insights, forge new partnerships, and be inspired by success stories from leaders in global agriculture.

Furthermore, the Montana Agriculture Innovation and Investment Summit aligns perfectly with the mission of Celebrate Ag Weekend, which celebrates the rich heritage and future potential of agriculture in Montana. This event underscores the importance of collaboration and collective action in driving agricultural innovation and prosperity by bringing together academia, industry, and the community.

Register today at [www.mtagtechinvest.io](http://www.mtagtechinvest.io) and participate in this world-class event by your Montana Agricultural Business Association. ■

**Montana AgTech INNOVATION & INVESTMENT SUMMIT**

**2024 AgTECH SUMMIT**  
The Montana Ag Technology Innovation and Investment Summit explores the nexus between research, innovation, and investment opportunities through a compelling sector that has the power to alter the course of the global food and agriculture system. Join researchers, entrepreneurs, capital allocators, fund managers, and agribusiness executives to network, collaborate, discover, raise capital, negotiate deals, and lean into developing the Ag Technology and Innovation ecosystem. The full-day agenda ends with a speed-pitch competition that recognizes, assists, and creates exposure opportunities to agriculture technology investors and funders.

**WHO:**  
The Montana Ag Technology Innovation and Investment Summit is a strategic opportunity to bring cutting-edge agriculture technology and innovation to the forefront of North America's agriculture economy. The summit is brought to you by the Montana Agricultural Business Association Foundation.

**WHEN:**  
Wednesday, November 6th, 2024  
Bozeman, Montana

**SPONSORSHIP OPPORTUNITIES:**  
Collaborate and curate an opportunity to position your company and its innovation team members to grow visibility and be a part of growing and accelerating agriculture's portfolio in Montana and beyond.

The sponsorship categories are \$25K, \$10K, \$5K, and \$1K with exhibit space, and print/web space included.

**SCAN BELOW TO REGISTER:**

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# Pesticide Update

EPA's Office of Chemical Safety and Pollution Prevention

## EPA Outlines Implementation Approaches for Endangered Species Act Pesticide Policies

Today, the U.S. Environmental Protection Agency (EPA) announced the latest steps to incorporate stakeholder feedback and collaboration with federal partners, ensuring the Agency's work to protect endangered species from pesticides is practical, flexible, and supports the agricultural community. Assistant Administrator Michal Freedhoff described these steps in a speech to the National Association of State Departments of Agriculture.

"Protecting endangered species and ensuring we have a safe and abundant food supply can go hand in hand," said Assistant Administrator for the Office of Chemical Safety and Pollution Prevention Michal Freedhoff. "The steps we're announcing today are designed to meet this dual obligation of providing the agricultural community with the tools and flexibility they need while ensuring pesticides aren't harming endangered species."

When registering pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA must also comply with the Endangered Species Act (ESA) to ensure pesticides do not harm endangered species or their critical habitats. For most of EPA's history, the Agency has almost never met these duties for its FIFRA decisions. This has resulted in considerable litigation against the Agency, creating uncertainty for farmers and other pesticide users, unnecessary expenses and inefficiencies for EPA, and delays in the protection of endangered species.

In April 2022, EPA released its ESA Workplan, which establishes strategies and actions to adopt those protections while ensuring farmers, public health authorities, and others have access to pesticides. In addition to other actions, EPA proposed a vulnerable species pilot and draft herbicide strategy in 2023. Stakeholders have expressed concerns related to the implementability of these strategies and urged EPA to make needed adjustments before finalizing the approaches.

Today, EPA announced its plans to address key concerns, expand its partnership with the U.S. Department of Agriculture (USDA) and seek additional stakeholder engagement in the coming months as it continues to address this decades-old challenge of protecting endangered

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species from pesticide exposure.

## IMPROVED SPECIES MAPS

In June 2023, EPA announced draft mitigations for 27 species that are part of the Agency’s Vulnerable Species Pilot project, an effort to protect species that are particularly vulnerable to pesticides. EPA received feedback that some of the maps included areas that endangered species do not live in, and that the areas in which pesticide mitigations would be required under the Pilot were thus overly broad.

Today, EPA announced that it will not implement the Vulnerable Species Pilot protections for a species until a more refined map of its habitat is developed. EPA is also announcing that it is working with the U.S. Fish and Wildlife Service (FWS), USDA, the University of Georgia, and other stakeholders to develop maps that better reflect where these species actually live and where protections from pesticides are needed. In April, EPA plans to hold a workshop to facilitate and prioritize the development of these maps, and EPA will also develop guidelines that the public can use to develop and submit refined maps for hundreds of other endangered species.

## CREDIT FOR USING VOLUNTARY USDA CONSERVATION PRACTICES

USDA’s Natural Resources Conservation Service (NRCS) helps farmers carry out voluntary practices that improve environmental health and quality, many of which also reduce pesticide drift and runoff, which could benefit endangered species. Yesterday, EPA signed an MOU with USDA describing how EPA can include NRCS conservation practices on pesticide labels as one way growers who voluntarily perform those practices can use them to help fulfill pesticide label requirements. EPA and USDA are planning meetings and workshops in the coming months to further discuss the MOU and gain input from producers about mitigation options that may count toward fulfilling pesticide label requirements.

Regarding the MOU, Robert Bonnie, USDA Under Secretary for Farm Production and Conservation, said, “Farmers who use strong conservation practices developed by NRCS should be given credit for all of the benefits these practices provide, including reducing the off-site movement of pesticides. NRCS’s programs remain entirely voluntary and producers will not need NRCS approval. Collaboration between USDA and EPA through efforts such as this MOU and additional stakeholder conversations will help to keep safe, effective pest management tools in farmers’ hands.”

*EPA Updates continued on page 26*

*EPA Updates continued from page 25*

This effort responds to suggestions received on EPA's July 2023 draft herbicide strategy and would also apply to other ESA initiatives. This would provide more flexibility for growers on the type of practices they can use to protect endangered species and ensure EPA's proposed mitigations can practically be implemented. For example, EPA is already considering which mitigations, if any, are needed on land that is dry or flat or both.

### ONLINE MITIGATION MENU

Currently, if EPA needs to add new mitigations to pesticide labels, the Agency must update hundreds or thousands of paper labels every time the menu of mitigation options is expanded – a process that can take years. EPA will launch its first online mitigation menu that will allow the Agency to quickly add new mitigation measures options, thus ensuring that growers can use those new options promptly. This year, the Agency plans to release a draft online menu for public comment, and then update that menu based on feedback later this year.

### OFFSETS FOR ENDANGERED SPECIES PROTECTIONS

EPA is working with stakeholders to determine how to use “offsets” when avoiding or minimizing pesticide exposure to an endangered species is impossible or impractical. In those situations, it may be possible to offset the impact to the species through activities like funding habitat restoration for the species, contributing to a captive rearing project at a zoo for the species, or other steps to conserve the species. EPA, other federal agencies, and stakeholders are participating in a workshop later this month to discuss how to bring offsets into EPA's ESA-FIFRA work. This initiative should give pesticide registrants and users more flexibility to meet label requirements to protect endangered species, while directly contributing to recovering those species. ■

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## EPA Update on Next Steps for Chlorpyrifos

In light of the November 2, 2023, Eighth Circuit Court of Appeals' decision to vacate the U.S. Environmental Protection Agency's (EPA) 2021 final rule effectively prohibiting the use of the pesticide chlorpyrifos on food or feed crops, EPA is issuing an update on its intended next steps. Read the press release [HERE](#) for more background. Upon issuance of the Eighth Circuit's mandate, all chlorpyrifos tolerances would automatically be in effect once again. In conformance with the Eighth Circuit's ruling and after issuance of the mandate, EPA intends to issue a notice correcting the Code of Federal Regulations to reflect the court's reinstatement of chlorpyrifos tolerances. The Eighth Circuit's decision stated that EPA should have considered modification of tolerances in addition to complete revocation and noted that the Agency had "identified 11 specific candidates" of food and feed crop uses whose tolerances could be so modified in a Preliminary Interim Decision EPA issued in 2020. Consequently, the Agency expects to expeditiously propose a new rule to revoke the tolerances associated with all, but the 11 uses referenced by the court. These uses may be found in the December 2020 Chlorpyrifos Proposed Interim Decision. EPA is also engaged in discussions with the registrants to further reduce exposures associated with the 11 uses of chlorpyrifos that were referenced by the Eighth Circuit, a process that will

also include considering the 2020 draft document and public comments received thereto. This approach would allow use on alfalfa, apple, asparagus, cherry (tart), citrus, cotton, peach, soybean, strawberry, sugar beet, wheat (spring), and wheat (winter) with potential additional restrictions for geographic location, rate of application, farmworker and other vulnerable populations, and vulnerable species and their habitats that may be needed to address safety of the tolerances. In addition, chlorpyrifos is currently under registration review and the Agency continues to work to implement the National Marine Fisheries Service's 2022 Biological Opinion on chlorpyrifos, diazinon, and malathion. EPA will continue to work to protect farmworkers, endangered species and their habitats, and the nation's most vulnerable populations (including children) through its ongoing registration review and Endangered Species Act processes for chlorpyrifos uses. At this time, final cancellation orders, including their terms for existing stocks of products subject to those cancellation orders and related return programs for chlorpyrifos products, remain in place, unless and until amended by EPA. EPA will continue to keep the public updated as it evaluates and takes any actions related to chlorpyrifos pesticide use. Find more information about chlorpyrifos on the EPA website. ■

## EPA Registers Novel Pesticide Technology for Potato Crops

The EPA has registered biopesticide products containing the new active ingredient Ledprona for three years, a timeframe that is consistent with EPA's approach to other novel biopesticide products. Ledprona is a new type of pesticide that relies on a natural mechanism--called RNA interference (RNAi)--used by plants and animals to protect against disease. Ledprona is a sprayable double-stranded ribonucleic acid (dsRNA) product that targets the Colorado potato beetle (CPB), a major pest of potato crops grown

in the United States, including in the potato-growing states of Colorado, Idaho, Maine, Michigan, Minnesota, North Dakota, Oregon, Washington, and Wisconsin. The CPB feeds heavily on potato plant foliage. If left uncontrolled, CPB will eat and destroy the leaves of the plant. If this occurs around the time of flowering, the plant may not produce potatoes. The CPB is also known to rapidly develop resistance to chemical-based insecticides.

*Potato Crops continued on page 29*



# Montana Department of Agriculture Training Update

The Montana Department of Agriculture (MDA), in conjunction with Broadwater County MSU Extension, will be hosting an agricultural vertebrate pest workshop June 13th, 2024, in Townsend, MT. The training will cover management of pocket gophers, prairie dogs, ground squirrels, and even elk. Pest identification, population estimation, bait station design, trap selection, trap placement and more will be covered. The training will be a mix of classroom style learning and hands on practice in production fields. Up to 6 credits will be available for select applicators.

Registration will be open in April on the MDA training webpage <https://agr.mt.gov/Pesticide-Training-Recertification-Program>.

Our MDA training team will be traversing the state again this fall for our Fall Recertification Series (ref-

erence image). The Fall Recertification Series gives applicators in expiring categories a last chance to grab credits before their cycle ends. Expiring applicator categories for 2024 include Aerial, Agricultural Plant Pest Control, Mosquito Abatement, Public Health Pest Control, Agricultural Animal Pest Control and Other. Registration and detailed agendas for the MDA Fall Recertification Series will be available come this summer.

Curious where you stand on credits? Your credit standing can be checked by entering your license number here: <https://mtplants.mt.gov/PesticideApplicator/ApplicationExternalSearch.aspx>.

If you need credits by the end of the year, upcoming trainings can be found here: <https://mtplants.mt.gov/PesticideApplicator/MeetingSearch.aspx>. Be sure to check back in as courses are added regularly.

**PESTICIDE RECERTIFICATION TRAINING FALL 2024**

**Save the Date!**  
Details will be updated this summer!

October 17th Kalispell 6 credits	October 18th Missoula 6 credits
October 22nd Billings 6 credits	October 23rd Glendive 4 credits
October 24th Glasgow 4 credits	October 25th Havre 4 credits
October 30th Belgrade 4 credits	TBD Helena 4 credits

MONTANA DEPARTMENT OF AGRICULTURE

## MDA Waste Pesticide Disposal Program – Spring and Summer Events in the Columbia River Basin:

The Montana Department of Agriculture (MDA) is facilitating spring pesticide disposal events in the Columbia River Basin region during the week of April 10th-12th, 2024, in Libby, Polson, and Butte. Summer disposal events are set for July 9th-11th, 2024, in Eureka, Clearwater Junction, and Butte. These additional pesticide disposal events were made possible by the Environmental Protection Agency's (EPA) Columbia River Basin Restoration Program grant.

This grant enables the development and implementation of a comprehensive and collaborative Pesticide Stewardship Partnership Program (PSP) for the Upper Columbia River Basin of



Montana, led by Flathead Lake Biological Station assistant professor Dr. Rachel Malison. More information on the PSPP can be found at <https://flbs.umt.edu/newflbs/monitoring/mt-pspp/montana-pesticide-stewardship-partnership-program/>.

Annual pesticide waste collection events have collected nearly 780,000 pounds of pesticide waste from over 1,800 participants since the program's inception in 1994.

"Montana has very limited options to get rid of pesticide products," said Carli Davis of the MDA's Pesticide Disposal and Container Recycling Programs. "This program is one way of assuring the waste product is properly disposed in a manner that is also environmentally friendly."

The MDA program was designed to assist individuals with disposing of any pesticides that are unusable as originally intended, or cannot be used for any other purpose, in an environmentally responsible way. In effect, the Pesticide and Waste Disposal Program protects Montana's ecosystems and groundwater, as well as families, pets, livestock and drinking water from potentially hazardous materials.

## 2024 Pesticide Waste Collection Dates and Locations:

### Spring Event

Wednesday, April 10th – Libby, MT

Thursday, April 11th - Polson, MT

Friday, April 12th- Butte, MT

### Summer Event

Tuesday, July 9th- Eureka, MT

Wednesday, July 10th- Clearwater Junction

Thursday, July 11th-Butte, MT

The pre-registration deadline for the spring event is Monday, April 1, 2024, and the pre-registration deadline for the summer event is Monday, July 1, 2024. Registrations for pesticide waste collection events are accepted on a first come, first-serve basis. There is no charge for the first 200 pounds of material; amounts over 200 pounds are assessed at \$1.00 per pound, and products are weighed on site. Additional fees may apply to pesticides with dioxins or dioxin precursors.

Please visit the Montana Waste Pesticide Disposal Program page to register. For more information, please visit [agr.mt.gov/Pesticide-Waste-Disposal-Program](http://agr.mt.gov/Pesticide-Waste-Disposal-Program) or contact Carli Davis at (406) 465-0531. ■

### *Potato Crops continued from page 27*

This sprayable dsRNA product kills the pest by "silencing" the CPB gene needed to produce the PSMB5 protein, whose role is essential to keeping the CPB alive, without resulting in a genetically modified organism. This RNAi-based pesticide is the first sprayable dsRNA pesticide in the world allowed to be used commercially and sprayed on plants. Novel pesticide technology can offer alternatives to chemical-based pesticides that may pose higher potential risks to human health or the environment or have reduced effectiveness because of resistance issues. Registered and recommended conventional active ingredients for foliar use against immature and adult CPB currently include the neonicotinoids (e.g., thiamethoxam), the

spinosyns, abamectin, novaluron (an insect growth regulator), the diamides (e.g., cyantraniliprole), and some pre-mixes of these (e.g., abamectin and cyantraniliprole). EPA has conducted a robust evaluation and determined there is no risk of concern to human health and the environment, including no effects to listed species under the Endangered Species Act. In considering the risk for RNAi technology, such as Ledprona, EPA engaged with international partners and experts in the field via its leadership in the Organisation for Economic Co-operation and Development. To read more about this registration, comments received and the response to comments document, see docket EPA-HQ-OPP-2021-0271 at [www.regulations.gov](http://www.regulations.gov). ■

# Annual Report



**Krista Lee Evans**

*Executive Director  
Montana Agricultural  
Business Association*

Dear MABA Membership –  
The Montana Agricultural Business Association had a great 2023 with increased membership and participation in local, state, and national issues. The interaction and involvement of our membership improved the MABA Board's ability to prioritize needs and areas to become more active.

Our industry continues to be faced with challenges ranging from increased price pressure on our products, supply chain challenges, driver shortages, outside pressure on our ability to continue to develop crop protection products needed by our customers. Agricultural is an amazing industry that always steps up to the challenges and continues to produce healthy and abundant food.

I look forward to 2024 and the opportunities and projects that MABA is focusing on. In 2024 the

Board allocated time and resources to the MT AgTech Innovation and Investment Summit as well as collaborating with Homestake on agricultural technology opportunities through the Headwaters Technology Hub.

Keep your eyes open in 2024 for information on the industry led regenerative agriculture and soil health coalition. MABA is working with our industry partners to develop a program that is clear, concise, and meaningful to our memberships.

In these challenging times MABA has brought our industry closer together by providing innovative opportunities for continuing education and networking, and spearheading opportunities for new collaborations. MABA is committed to continuing to evolve and grow as the face of agriculture evolves and grows.

As we look forward, remember that we are agriculture, we are resilient, and we are a team. Together we can accomplish so much. ■



## Account Summary

### Asset Allocation



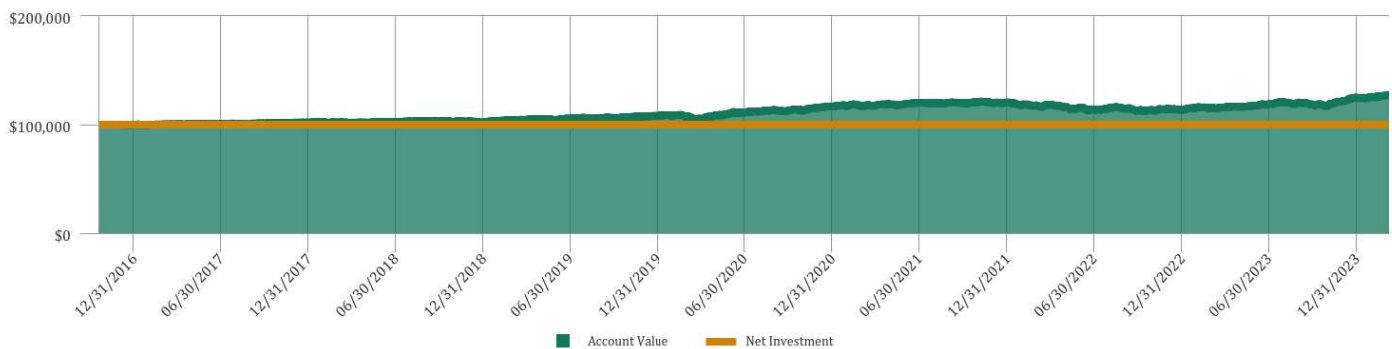
Asset Class	Current Value	Current Percent
Equities	\$45,690.91	35.82%
Fixed Income	\$79,394.06	62.24%
Cash & Equivalents	\$2,485.59	1.95%
<b>Total</b>	<b>\$127,570.56</b>	<b>100.00%</b>

### Performance Summary

	Quarter to Date	Year to Date	Inception to Date (10/18/2016)
Start Value	\$124,883.78	\$124,883.78	\$0.00
Contributions	\$0.00	\$0.00	\$100,000.00
Withdrawals	\$0.00	\$0.00	\$0.00
Capital Appreciation	\$2,260.24	\$2,260.24	\$11,563.82
Income	\$585.04	\$585.04	\$20,608.38
Management Fees	(\$88.00)	(\$88.00)	(\$2,795.00)
Change in Accrued	(\$70.50)	(\$70.50)	(\$1,806.64)
Ending Value	\$127,570.56	\$127,570.56	\$127,570.56
Net Investment Gain	\$2,686.78	\$2,686.78	\$27,570.56
Account Return (Net TWR)	2.15%	2.15%	3.35%

Returns for periods exceeding 12 months are annualized.

### Portfolio Value Vs Net Investment



1 of 3

Please compare your quarterly Stockman Wealth Management statement to your Custodian statement and contact us at (888) 696-6660 if you should notice any differences. Not FDIC Insured. No Bank Guarantee. May Lose Value.

## Giving

MABA has been extremely active in promoting opportunities in the Agricultural Business profession. The primary giving campaigns are supporting endowed scholarships through the Montana FFA Foundation, the Montana 4H Foundation, and supporting the MT Agricultural Business Foundation. Proceeds from the MABA/MGEA Annual Convention Auction contribute to supporting the FFA and 4H Foundation endowed scholarships. Portions of proceeds from the Annual MABA Golf Tournament supports the MT Agricultural Business Foundation's mission. It is critical that MT's young professionals recognize the opportunities in our industry. ■

# MABA/MGEA ANNUAL CONVENTION - HUGE SUCCESS!

The Annual MABA/MGEA Convention was a huge success and provided a great opportunity for MABA members to learn, share experiences, and collaborate with colleagues. We had an amazing slate of speakers that were topped off by keynote speaker Dr. Kevin Elko - So What- Now What?

The 2024 show had the largest number of vendors in recent history, and we are very thankful for their commitment and engagement with MABA and our membership!

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Thurs. Auction/Reception  
Fri. AM Break

### Additional Sponsors

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Education Program  
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## MABA Annual Golf Tournament

I hope this newsletter finds everyone well, and we have warmer temperatures by the time this reaches you. The last couple years we have had a really successful golf tournament to help supplement MABA and the Montana Agricultural Business Foundation's ability to continue giving and running a strong organization. Each year our tournament has grown, and we are hopeful it continues to do so. This year will be our fourth annual golf tournament and we will once again be working with MABF (Montana Ag Business Association Foundation), giving them the opportunity to fundraise, and continue to be our giving arm for scholarships and other worthy causes.



**Dan Brattain**  
Golf Committee  
Montana Agricultural  
Business Association

The purpose of the MABA Annual Golf Tournament is to offer an event to our members to break up the monotony after our spring season, but before our fall season kicks off. This event has been well sponsored, attended, and received. THANK YOU to everyone that has participated in one way or another. Stay tuned for the opportunity to register your four-person team, and to sponsor the tournament.

We received a lot of suggestions about the tournament last year and we are going to implement several of them for the 2024 tournament. There will be two teams per hole, who will switch score cards and keep track of the other team's score. There will be different flights and teams will be paired up together based on similar handicaps. We will have the event at Hickory Swing golf course in Great Falls again. This course is close to hotels, and is a quicker pace course than the others ones in town.

This year we have decided to have a more social/networking tournament with only one day of events and have also decided this is an opportunity to bring any promotional items you may have had for years in the shed and get rid of them. We will have tables set up like a "garage sale" to be able to promote your business while freeing up your storage shed or garage. Other big changes are, there will not be a Calcutta, but there will be prize money and hole prizes. We will conclude the tournament with awards immediately after the tournament at the golf course. We know your time is valuable and we appreciate all of your support.

Without you this would have been a one and done event, so thank you again. As a board, we feel it is very important to hear your suggestions, compliments, concerns, and any other ideas that you feel may add to this event. No suggestion is too small/big and will be discussed at a board meeting. Thank you all for your time and commitment to MABA. ■



# GREAT MONTANA AG RALLY

## SCHEDULE OF EVENTS:

July 25

7:30 am - Breakfast Available at Clubhouse

8:00 am - Rules and Shotgun Start

Midday - Lunch at the clubhouse at the Turn

3:00 pm - Purse and Hole Prize Awards at the Clubhouse

# MABA Great Montana Ag Rally Golf Scramble

JULY 25, 2024 | HICKORY SWINGS GOLF COURSE

You may register a four-man team or as an individual golfer.

We ask that each team have at least one MABA member.

Please register on our website: [mtagbiz.org](http://mtagbiz.org)

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

Contact Address: \_\_\_\_\_

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

## TEAM OR GOLFER REGISTRATION

**GOLF TEAM** | Team Fee - \$450.00

*4 players, includes course fee, Golf Day breakfast and Golf Day lunch*

Do you need a cart or carts? | Golf Cart Rental - \$50.00 | How many carts \_\_\_\_\_

**INDIVIDUAL GOLFER** | Individual Golfer - \$150.00

*Includes course fee, Golf day breakfast and Golf day lunch*

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

Player #1: Name: \_\_\_\_\_ Handicap \_\_\_\_\_

Player #2: Name: \_\_\_\_\_ Handicap \_\_\_\_\_

Player #3: Name: \_\_\_\_\_ Handicap \_\_\_\_\_

Player #4: Name: \_\_\_\_\_ Handicap \_\_\_\_\_

## Golfer Registration includes all meals:

Breakfast - Provided by local 4H Club | Lunch - Burgers at the Turn

Additional meals for guests available for purchase at the event





## Great Montana Ag Rally Sponsorships

Golf tournament partners receive acknowledgment in the MABA Growing Montana Magazine and at the event. Sponsorships are first come/first served.

**Please go to [www.mtagbiz.org](http://www.mtagbiz.org) to sponsor!**

You can also fill out the form below and email to: [agbusinessmt@gmail.com](mailto:agbusinessmt@gmail.com)

*Thank you for supporting MABA!*

### COURSE SPONSORSHIPS

- Platinum Sponsor - \$1,000
- Gold Sponsor - \$750
- Silver Sponsor - \$500

### HOLE SPONSORSHIPS

A prize valued at \$100 is awarded on the sponsor's behalf immediately following the golf tournament. The sponsor may donate the prize or pay an additional \$100 and MABA will purchase the prize.

- Hole Sponsorship - \$500
- MABA Purchase Prize - \$100

#### DETAILS

- Golfers will see your company name displayed at the tee box of the sponsored hole - can't miss it!
- 18 hole sponsorships are available.

### DRINK TICKET SPONSORSHIP

- Golf Day Drink Tickets - \$1,500

**DETAILS — *The Drink Ticket sponsor is a popular person!***

- Your company logo will be displayed prominently on the drink tickets; one given to each golfer.
- Drink Ticket sponsor receives extra tickets to hand out during the event.
- Verbal Acknowledgment as drink sponsor.

### LUNCH SPONSORSHIP

- Golf Day Lunch - \$2,000

#### DETAILS

- As the exclusive meal sponsor, your company's name will be displayed on a large sign at the event.
- You will have an opportunity to be introduced and say a few words at the event.

### OTHER PARTNERSHIP OPPORTUNITIES

- Mulligans - \$500

#### DETAILS

- Mulligans: includes company name/logo on mulligan cards distributed to every team.

While we would prefer you sign up for a sponsorship through the website,  
hard copy forms can be returned to: [agbusinessmt@gmail.com](mailto:agbusinessmt@gmail.com)

Please submit payment to: Montana Ag Business Association | PO Box 7325 | Helena, MT 59604



P.O. Box 7325  
Helena, MT 59604

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Permit No. 221

Growing Montana is paid for by the Montana Agricultural Business Association | PO Box 7325 | Helena, MT 59604

**MABA**  
CALENDAR OF EVENTS

**MAY**

15 MABA Scholarship Applications due

**JUNE**

5 MABA Board Meeting in Fort Peck 8:00 am to 12:00 pm  
5 Joint Meeting with MGEA in Fort Peck 1:00 pm to 5:00 pm Convention Planning  
20 3:00 p.m. MSU Field Day Northern Agricultural Research Center - Havre  
24-27 Summer Convention with the Pacific and Washington/North Idaho Seed Associations-Coeur D'Alene Casino Resort & Hotel  
26 8:30 a.m. MSU Field Day Central Agricultural Research Center - Moccasin  
27 8:00 a.m. MSU Field Day Eastern Agricultural Research Center - Sidney

**JULY**

9 Pesticide Disposal Event – Eureka, MT  
10 Pesticide Disposal Event – Clearwater Junction  
10 10:00 a.m. MSU Field Day Western Triangle Agricultural Research Center- Conrad  
11 Pesticide Disposal Event – Butte, MT  
11 11:00 a.m. MSU Field Day Northwestern Triangle Agricultural Research Center- Creston  
17 8:00 a.m. MSU Field Day Post Farm- Bozeman  
25 Golf Tournament in Great Falls

**AUGUST**

29 Bart & Horticulture Farm - Bozeman  
17 National Lentil Festival, Pullman, WA

**SEPTEMBER**

12 MSU Field Day Western Agricultural Research Center - Corvallis  
MABA Board DC Trip Late in the Month

**NOVEMBER**

5-9 MSU Celebrate Ag- Bozeman  
6 MT AgTech Innovation and Investment Summit  
7 MABA Board Meeting 8:00 to 5:00 Bozeman Grandtree Hotel  
10-16 2024 National Split Pea Soup Week  
28 in Great Falls

**DECEMBER**

3-5 MGGA Convention & Trade Show – Great Falls

**JANUARY 2025**

29-31 Convention in Great Falls