



PFMD UPDATE

A BULLETIN FROM THE PESTICIDE AND FERTILIZER MANAGEMENT DIVISION

SEPTEMBER 2021

Inside this Issue

A Message from Commissioner Thom Petersen	2
Pesticides Detected in Water for the First Time	2
PFMD Update	3
Nitrogen Fertilizer Restrictions Begin September 1 Each Year	3
Implementing Innovative Irrigation Practices to Protect Groundwater Quality and Quantity	4
Select MDA Pesticide & Fertilizer Management Division Enforcement Actions	5
Reuse of Rodenticide Buckets are Prohibited	6
Key Maintenance for Anhydrous Ammonia Application	6
On Farm Bulk Fertilizer Storage Facility Maintenance	7
Do You Fertigate? Permit Requirements and Reminders	7
Pesticide Recertification Workshop Updates	8
Incidents of Interest: Causes, Cleanup, and Prevention	8
MAWQCP RCPP Renewal Fosters New Partnerships	9
Studies Highlight Higher Profits for Ag Water Quality Certified Farms	10
FieldCheck: A Tool to Protect Beehives from Insecticide Drift	11

Director's Notes

Joshua Stamper, Director, Pesticide and Fertilizer Management Division

Humanity owes its existence to 6 inches of soil and the fact that it rains. The agricultural community gets this, and this year's drought has brought this truth into much sharper contrast for the rest of society. Despite all our technological advances in agriculture, Mother Nature sometimes shows up drunk. She has done it before, and she will do it again. Our job in agriculture is to make sure that our systems are resilient enough to weather the storms, pests, and the droughts.

This resilience takes many forms, and our work in the Pesticide and Fertilizer Management Division is predicated on managing risk, whether it is environmental, agronomic, economic, or risks to human health. One risk management approach is integrated pest management (IPM). IPM requires you to know and understand risks and pests, so that IPM practitioners can focus on prevention and avoidance through cultural practices like sanitation or diverse crop rotations. Sometimes pests cannot be avoided, and we use tools like pesticides or medicine to protect the crops or livestock that sustain society. In that case, the scientific method is used to establish economic thresholds, so we know when to hold out until a critical pest level is reached and control is needed to prevent economic loss.

This past year, the Minnesota Ag Water Quality Certification Program (MAWQCP) introduced IPM and Climate endorsements that shine the spotlight on how ag practitioners use these tools to mitigate risk. If you are interested in showcasing how your business or ag enterprise mitigates environmental risk, I would encourage you to consider certification in the MAWQCP. We can't control Mother Nature, but we can make sure that we are prepared when she is ready to party.

A MESSAGE FROM COMMISSIONER THOM PETERSEN



Minnesota weather. It's a topic that's always up for discussion around dinner tables, at local coffee shops, and over the fence rows. Unfortunately, this year's weather talk is often filled with grim stories as the state faces its worst drought in a decade.

As Commissioner of Agriculture, I've toured the state over the past several months to see and hear how the drought has impacted farmers and ag businesses. The difficult decisions farmers and ranchers have been making regarding the wellbeing of their livestock is heartbreaking.

While we can't make rain, there are several steps Governor Tim Walz's Administration has taken to help those impacted by the drought. The Governor has lobbied Washington for federal assistance. The Statewide Drought Plan has been activated, including a convening of the Drought Task Force, a panel of state, federal, tribal, regional, and local experts with water-related responsibilities. The Minnesota Department of Agriculture (MDA) has a seat at the table and has been active in the task force's work.

The Rural Finance Authority (RFA) Board also voted unanimously to make disaster recovery funds available in the form of zero-interest loans for Minnesota farmers whose operations are suffering from lack of rain.

As we transition seasons, we hope that we'll have better news to share during our weather chats with friends and family. Much rain is needed to replenish what we've lost over the past year. However, the MDA will continue to work with all those in agriculture to help with the continued drought or whatever weather situation may come next.

For drought-related resources, visit the MDA's website at www.mda.state.mn.us/drought-resources.

Pesticides Detected in Water for the First Time

Dave Tollefson, Hydrologist

The MDA analyzes groundwater and surface water samples for over 180 pesticide compounds. Many have been analyzed for at least a decade, and new compounds are added each year following a formal review of sales information, chemical properties, and environmental risk factors. The MDA releases an annual water quality monitoring report that summarizes all results, including which pesticides were detected for the first time.

In 2020, a breakdown product of the fungicide chlorothalonil (4-hydroxychlorothalonil) and a breakdown product of the herbicide bentazon (bentazon AIBA) were analyzed and detected for the first time in groundwater, both in less than 10% of the samples. All detections were below the drinking water health reference values; however, three detections of 4-hydroxychlorothalonil were greater than 50% of the reference value.

Seven pesticide compounds were detected infrequently (less than 2% of samples) in surface water for the first time in 2020. Fipronil and cloransulam-methyl maximum detections were 93% and 45% of the United States Environmental Protection Agency benchmark respectively, while the other pesticide detections were well below the benchmarks. Of the compounds detected for the first time in 2020, the MDA began analysis for myclobutanil in 2004, 2,4-DB in 2010, pydiflumetofen in 2019, and 4 hydroxychlorothalonil, bentazon AIBA, cloransulam-methyl, fipronil, and mefentrifluconazole in 2020.

For more information visit www.mda.state.mn.us/pesticide-monitoring-reports or contact Dave Tollefson at 507-206-2882 or David.Tollefson@state.mn.us.

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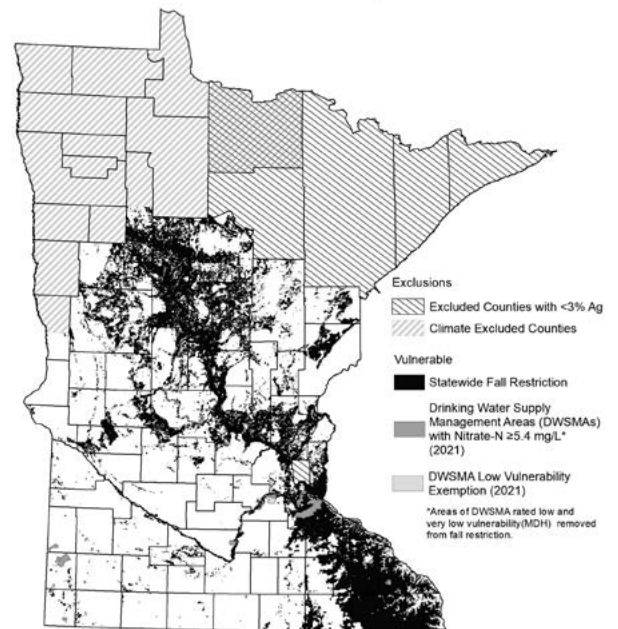
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Nitrogen Fertilizer Restrictions Begin September 1 Each Year

Margaret Wagner,
Fertilizer Non-Point Source Section Manager

The MDA is reminding farmers and landowners that application of nitrogen fertilizer in the fall and on frozen soil is restricted in areas vulnerable to groundwater contamination and in Drinking Water Supply Management Areas (DWSMAs) with elevated nitrate levels. An area with vulnerable groundwater is an area where nitrate



Fall Restrictions Map

can move easily through soil and into groundwater. These areas include coarse textured soils, karst geology, and soils with shallow bedrock. An interactive map showing where fall fertilizer restrictions apply, as well as a list of exceptions to the fall fertilizer restrictions, are online at www.mda.state.mn.us/nfr.

Fall nitrogen fertilizer restrictions are part of the Groundwater Protection Rule. The goal of the rule is to minimize potential sources of nitrate pollution to the state's groundwater and to protect drinking water. The rule went into effect in June 2019 and the fall fertilizer restrictions started in September 2020. Fall fertilizer restrictions begin every year on September 1.

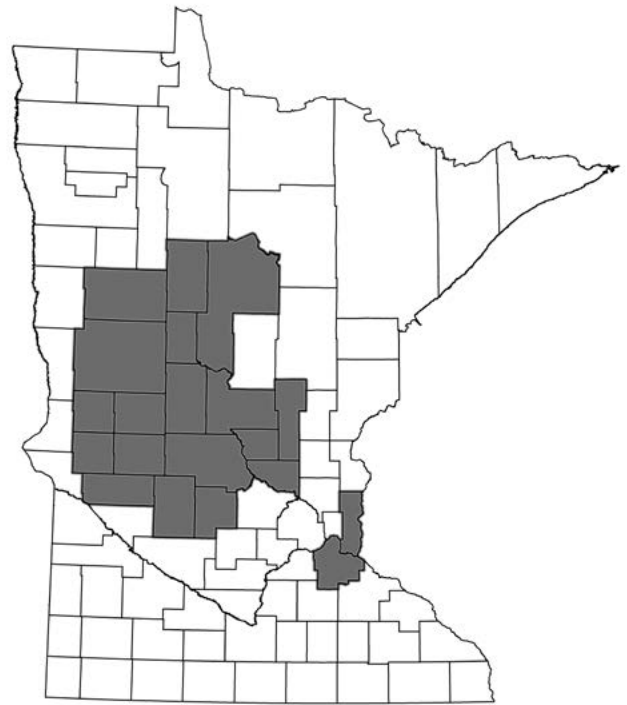
Recent activities to implement the Groundwater Protection Rule include outreach (presentations, direct mailings, and one-on-one conversations) along with convening local advisory teams in DWSMAs with elevated nitrate levels. Local advisory teams are a key strategy to involve the agricultural community in problem solving to address localized concerns about unsafe levels of nitrate in groundwater. Initial meetings with local advisory team members were delayed due to COVID-19 but resumed this summer and will continue in the winter of 2021/2022.

For more information in Southeast Minnesota, contact Larry Gunderson at 651-201-6168, Larry.Gunderson@state.mn.us, or in the Central Sands and southwest regions of the state, contact Luke Stuewe at 218-850-9454, Luke.Stuewe@state.mn.us.

Implementing Innovative Irrigation Practices to Protect Groundwater Quality and Quantity

Luan Johnsrud, State Program Administrator
and Jeppe Kjaersgaard, Research Scientist

Prompted by interest from several Central Minnesota soil and water conservation districts (SWCDs), the MDA and over 30 partners were awarded \$3.5 million to provide financial and technical support to irrigators in 20 counties and the Mille Lacs Band of Ojibwe. Partners include 20 SWCDs, institutes of education, Mille Lacs Band of Ojibwe, state agencies, irrigators' associations, and businesses. This funding is provided through the USDA Natural Resources Conservation Service (NRCS) Regional Conservation Partnership Program (RCPP), plus additional match by all project partners. Funding is expected to be available in 2022.



Project area includes the highlighted areas.

The 5-year project is designed to work directly with agricultural producers using irrigation in the project area to:

- apply conservation practices that protect groundwater quality and quantity,
- promote expanded precision irrigation practices,
- build technical expertise among NRCS and SWCD staff to guide farmers in applying conservation practices,
- promote and organize farmer to farmer learning opportunities,
- use partners' expertise to design innovative approaches to expand conservation efforts, and
- quantify the environmental, economic, and social impacts of the practices used.

The project will focus on conservation irrigation practices with a flexible, tiered approach. Irrigators can participate at the level that works best for their operation, their approach to using technology, and risk:

- The first tier includes installing advanced soil moisture sensors in irrigated fields to enhance water management through irrigation scheduling.
- The second tier includes installing precision irrigation packages, including updates to panel, nozzles, and variable frequency drive pumps.
- The third tier includes an advanced irrigation package along with the newest technology for irrigation water and nutrient management. This will include recent, proven systems using remote operation technology, crop status sensors and variable rate fertigation systems.

For more information visit agcentric.org/rcpp-precision-irrigation or contact Luan Johnsrud at 320-760-6801 or Luan.Johnsrud@state.mn.us.

Select MDA Pesticide & Fertilizer Management Division Enforcement Actions

Corrine duPreez, Agricultural Adviser

Glencoe, MN

An agricultural operator paid a \$3,750 penalty for applying Atrazine 4L herbicide, a Restricted Use Pesticide (RUP), to both sides of a county drainage ditch embankment in violation of pesticide label restrictions. An additional application of the pesticide also resulted in pesticide drift to a nearby property. The application of the RUP was also made without the required license or certification. Atrazine 4L is classified as a RUP due to groundwater and surface water concerns.

Vadnais Heights, MN

A lawn care facility with licensed Minnesota commercial pesticide applicators paid a \$1,250 penalty for making applications to two properties that were not requested and for applying a pesticide inconsistent with the label when the wind speed was greater than 10 mph.

Lismore, MN

An agricultural operator with a Minnesota private pesticide applicator certification paid a \$500 penalty for applying Engenia herbicide without dicamba or auxin-specific training as required by the product label.

Park River, ND

An out-of-state aerial pesticide applicator with a Minnesota licensed commercial pesticide applicator paid a \$1,250 penalty for applying a fungicide in a manner resulting in drift to a private property and onto a public road.

Lindstrom, MN

A pest control company with a Minnesota structural pest control company license and licensed structural pest control applicator paid a \$1,100 penalty for pesticide applications made by an unlicensed employee and for filling pesticide application equipment without required backflow prevention devices.

Willmar, MN

An agricultural operator paid a \$1,500 penalty for a violation of the Worker Protection Standard by applying a pesticide while a person was present in the Application Exclusion Zone (AEZ) and for applying the pesticide in a manner resulting in drift. The AEZ is the area surrounding the pesticide application equipment that must be free of all persons other than appropriately trained and equipped handlers during pesticide applications. The size of the of the AEZ depends on the method of application used.

Atwater, MN

An agricultural operator paid a \$250 penalty for failing to install a backflow prevention device on an irrigation well used for fertilizer chemigation.

Winnebago, MN

An agricultural operator with a Minnesota private pesticide applicator certification paid a \$500 penalty for using a nonapproved tank mix partner with Tavium Plus VaporGrip Technology (Tavium) herbicide. The Tavium pesticide label includes a website that lists approved tank mix partners.

Danube, MN

An agricultural facility with Minnesota licensed commercial pesticide applicators paid a \$1,250 penalty for applying pesticides resulting in drift and for failing to maintain a 30-foot downward in-field buffer required by the Enlist Duo herbicide label.

Henning, MN

An agricultural facility with a Minnesota licensed commercial pesticide applicator paid a \$2,250 penalty for applying pesticides resulting in drift and human endangerment to occupants on a nearby residential property.

Montgomery, MN

An agricultural facility paid a \$250 penalty for reusing a pesticide minibulk container to store used oil, inconsistent with pesticide label container disposal instructions.

Park Rapids, MN

A commercial greenhouse facility paid a \$750 penalty for failing to provide Worker Protection Standard pesticide safety training for employees that performed pesticide handler activities.

Oklee, MN

An agricultural facility with an MDA Fertilizer license and anhydrous ammonia (NH₃) permit paid a \$3,050 penalty for NH₃ storage and equipment violations.

Reuse of Rodenticide Buckets are Prohibited

Christine Wicks, Ag Chem Supervisor

The MDA conducts nonagricultural facility inspections of structural pest control companies. These facilities often have small block rodenticides that are used in ready-to-use bait stations to control mice and/or rats. The products are typically sold in heavy plastic 18-pound buckets which are prohibited for reuse.

Pesticide residue could remain inside the bucket and potentially cause harm (if swallowed) or moderate eye irritation. Reuse of these buckets is prohibited for any purpose even if the container is “re-labeled.” Some examples of prohibited reuse include, but are not limited to, structural application service kits, garbage, auto/equipment parts, used oil, emergency spill kits, or other miscellaneous contents.

An example from a rodenticide label that is attached to these containers states the following:

“Nonrefillable container. Do not reuse or refill this container. [Plastic:] Offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill; or by incineration. In most states, burning is not allowed. [Paper:] Dispose of empty container by placing in trash, at an approved waste disposal facility or by incineration. In most states, burning is not allowed.”

Empty ready-to-use bait buckets must be properly disposed of. For more information, please refer to the “Pesticide Containers: Management & Disposal” fact sheet at www.mda.state.mn.us/sites/default/files/2019-11/pestcontainermgmtdisp.pdf or contact Christine Wicks at 651-201-6390, Christine.Wicks@state.mn.us.



Example of a rodenticide bucket prohibited for reuse. No endorsement is implied in the referencing of this product.

Key Maintenance for Anhydrous Ammonia Application

Ed Kaiser, NH3 Program Consultant

Proper maintenance of hoses and break-away coupling devices (BACDs) are key to ensuring anhydrous ammonia (NH3) is applied safely.

Hoses must be NH3 rated with a pressure rating of 350 psig, be the proper length, and must be immediately taken out of service and replaced when damaged or defective.

It is important that both the withdrawal hose (the hose between the nurse tank and application/toolbar unit) and the “jumper” hose (the hose between the BACD and adjoining application/toolbar unit) be the correct length. Both hoses need to be long enough and positioned to allow the BACD to move freely in its double-swivel assembly. In addition, the withdrawal hose should be long enough that it:

- Trails above the nurse tank hitch tongue, discouraging the use of hose supports, etc.,
- Does not get caught, pinched, or stretched in turns and damaged,
- Minimizes bouncing/vibration, which can cause connection and fitting failure.

Be sure to inspect the outer hose cover and replace it if it has been cut or torn exposing the inner reinforcement (cords), bulges, or there is hose coupling separation.

The BACD must be installed, maintained, operated, and replaced in accordance to the manufacturer’s directions. The BACD must be able to swivel freely in its double-swivel assembly, generally 80 degrees side-to-side and 30 degree up and down.

For more information, please contact Ed Kaiser at 651-201-6275, Ed.Kaiser@state.mn.us or visit www.mda.state.mn.us/NH3.



Break-away coupling device (BACD) and hose often used in NH3 applications

On Farm Bulk Fertilizer Storage Facility Maintenance

Matthew Parins, Permitting Program Adviser

Minnesota farmers who store more than 6,000 gallons of bulk liquid fertilizer or who sell and distribute fertilizer must obtain a bulk storage permit for proper containment from the MDA. Farmers who store less than 6,000 gallons of liquid fertilizer and do not distribute or sell fertilizer are not required to obtain a permit. Regardless if a permit is needed, the law states that stored bulk liquid fertilizer must be maintained and safeguarded at all times to prevent a release of fertilizer to the environment. Failure to maintain storage equipment that results in a release to the environment may in part result in an MDA investigation and a costly clean up.

The MDA strongly recommends replacing mild steel tanks over 20 years of age, unroofed poly tanks over 12 years of age, and roofed poly tanks over 18 years of age. Tank exteriors (including appurtenances) should be inspected annually, while tank interiors should be inspected at least every five years. All inspection records should be kept for each type of tank. Installation of a liquid tight, 3" curbed load pad with a 1,000-gallon capacity is also strongly recommended for all bulk liquid fertilizer handling.

Please remember that a permit is required for any amount of on-farm dry bulk fertilizer storage. Small dry bulk fertilizer spills from daily operations need to be swept up at the end of the day or prior to any precipitation. Any spills of either dry bulk or liquid fertilizer must be reported to the Minnesota Duty Officer at 1-800-422-0798 (greater Minnesota) or 651-649-5451 (metro). For more information, please contact Matthew Parins, at 651-201-6587, or Matthew.Parins@state.mn.us.



On-farm dry bulk fertilizer storage bins

Do You Fertigate? Permit Requirements and Reminders

Jeff Lorentz, Agricultural Chemical Consultant

In Minnesota, you must obtain a chemigation permit if you operate an irrigation system connected to a water supply and inject fertilizer or pesticide. The Minnesota Chemigation Rule has been in place since the late 1980s and was created to protect Minnesota's water resources from fertilizers or pesticides applied through irrigation to crop fields, in greenhouses, nurseries, or on golf courses/athletic fields.

The program is administered by the MDA, and inspectors may conduct permit inspections to verify compliance. The permit holder must certify that the chemigation system is compliant and maintained prior to use.

Chemigation permit requirements include:

1. Submit a permit application with the appropriate fee for the type of chemigation application to be made. Fertilizer = \$50.00, Fertilizer + Pesticide = \$250.00.
2. Install, maintain, and inspect the required anti-pollution devices to ensure that the system is in legal working condition.
3. Comply with chemigation supply tank requirements as prescribed by the MDA and the Minnesota Department of Health. If requirements can't be met, the supply tank will require secondary containment to prevent contamination from a spill.
4. Record and maintain chemigation application records and system inspection records for a period of 5 years from the date of application and inspection. Recordkeeping forms are available on the MDA Chemigation Permit Program webpage.

For more information, please contact Jeff Lorentz at 320-223-6547 or Jeffrey.Lorentz@state.mn.us, www.mda.state.mn.us/chemigation-permit-program.

Pesticide Recertification Workshop Updates

*Jolene Hendrix and Tana Haugen-Brown, UMN Extension
Pesticide Safety and Environmental Education Program Brian
Clark, MDA Recertification Project Manager*

This fall, the commercial and noncommercial pesticide applicator programs will return to hosting in-person workshops. In addition, the University of Minnesota Extension will offer 18 online module-based workshops in multiple categories. New online workshops are available for Category O: soil fumigation, and Category I: anti-microbial pesticides. There will also be a limited number of live Zoom workshops from both the University and non-university workshop sponsors. For those companies hiring new applicators, the University of Minnesota Pesticide Safety and Environmental Education (PSEE) is developing a pre-certification training program for several categories and would love to receive feedback on your needs and interest.

In 2022, the Private Pesticide Applicator Recertification Program will be offering three options for private pesticide applicators to become recertified. Options include in-person workshops, online self-paced courses, and testing. If you will be a private pesticide applicator for the first time in 2022 or your certification has lapsed, you will need to complete either the mail-in or the online exam. The cost to recertify or certify remains the same at \$75. The Private Pesticide Applicator Safety Education 19th Edition Manual is available online or in printed form at most University of Minnesota Extension offices for \$10. Information about the 2022 Private Pesticide Applicator Certification Program, recertification workshop locations, online course, certification exam, and study manual will be posted online later this year at: www.pat.umn.edu.

Sign up to receive PSEE email updates or find more information on commercial, non-commercial, structural and private applicator recertification at <https://extension.umn.edu/professional-certification-training/pesticide-safety-and-certification>.

For more information, please contact Brian Clark at 651-201-6146, or Brian.Clark@state.mn.us.

Incidents of Interest: Causes, Cleanup, and Prevention

Pat Kelly, Agricultural Chemical Consultant

A few incident summaries are included below to highlight spill response. Remember, all incidents are to be reported to the MDA by telephoning the Minnesota Duty Officer at 1-800-422-0798.

If you have questions or want additional information, please contact Matt Jorgenson at 651-201-6506 or Matt.Jorgenson@state.mn.us.

- In February, a firm was relocating shuttles around the facility when an uneven parking lot surface caused the forklift to shift suddenly and drop a shuttle. The shuttle cracked and released 170 gallons of Liberty herbicide. The spill was immediately abated as a dike was built up and absorbents were applied. After excavation, the base soil was sampled and found to contain no detectable levels of glufosinate. The contaminated material will either be landfilled or land applied later this fall.
- In April, an ag chem facility's nurse tank rolled over when the tractor/toolbar was operating on a sidehill and the nurse tank rolled over. Fortunately, because the withdrawal hose and nurse tank valves weren't damaged, there was no release of ammonia. Because of the tank's age the facility plans to scrap the tank.
- In April, a fire department reported a semi-trailer had rolled over and was spilling urea out to a road shoulder and ditch. A vac truck was hired to recover the urea which was then land applied. Since the incident occurred late in the day, cleanup went into the evening and next morning. Information about cost reimbursement for the cleanup (ACRRA www.mda.state.mn.us/grants/disaster/acrra) was provided.



MAWQCP RCPP Renewal Fosters New Partnerships

William Fitzgerald, Field Operations and Training Coordinator

The Minnesota Agricultural Water Quality Certification Program recently entered into a renewed agreement with USDA's Natural Resources Conservation Service and their Regional Conservation Partnership Program. The original five-year agreement was very successful, delivering approximately \$7 million dollars to agricultural producers in Minnesota, assisting them with implementing conservation practices that helped them become certified with MAWQCP. The renewed \$9 million agreement will also deliver financial assistance to farmers but, with changes in the 2018 Farm Bill, will also have funds dedicated to partners who will help with the successful implementation of RCPP.

Good nutrient management is the cornerstone of MAWQCP certification. With this in mind, NRCS will be providing funds for the University of Minnesota to host and develop improvements for a Nutrient Management Planner. This will provide crop advisers and consultants along with conservation planners improved tools to develop plans that can guide producers in their 4-R nutrient stewardship (right rate, source, timing, and placement). Farmers implementing these plans will be on their way to water quality certification.

Also, NRCS can now provide funds for outreach and education. As a result, the Sustainable Farming Association (SFA) of Minnesota has joined the RCPP partnership. SFA will align with other groups such as the Minnesota Soil Health Coalition to promote MAWQCP and the RCPP financial assistance opportunities available to producers. SFA and their partners will also be educating producers on the practices that will help them achieve certification and that are available for financial assistance from NRCS and RCPP.

For more information, please contact William Fitzgerald at 651-201-6159 or William.Fitzgerald@state.mn.us.

Studies Highlight Higher Profits for Ag Water Quality Certified Farms

Danielle Isaacson, MAWQCP Program Operations Coordinator

A new study by the Minnesota State Agricultural Centers of Excellence shows that farmers enrolled in the Minnesota Agricultural Water Quality Certification Program (MAWQCP) had higher profits than non-certified farms. This marks the second year of data highlighting improved financial outcomes.

The “Influence of Intensified Environmental Practices on Farm Profitability” study examined financial and crop production information from farmers enrolled in the Minnesota State Farm Business Management education program. The 2020 profits of MAWQCP farms were an average of \$40,000 or 18% higher than non-certified farms, and in 2019 they were an average of \$19,000 or 20% higher. Other key financial metrics are also better for those enrolled in the MAWQCP, such as debt-to-asset ratios and operating expense ratios. The two years of data serve as an early indicator of a positive return on investment for whole-farm conservation management that farmers implement to become certified.

The MAWQCP is a voluntary program for farmers and landowners that protects the state’s water resources by putting farmers in touch with local conservation district experts to identify and mitigate any risks their farm poses to water quality. Certified producers receive regulatory certainty for 10 years, financial and technical assistance, and recognition as being protective of water quality. Since the program’s statewide launch in 2016, over 1,090 farms totaling more than 780,000 acres have been certified across Minnesota.

Farmers and landowners interested in becoming water quality certified can contact their local Soil and Water Conservation District or visit MyLandMyLegacy.com.

For more information please contact Danielle Isaacson at 651-201-6283, or Danielle.Isaacson@state.mn.us.

Income Statement	2019 Environmental Sort	2019 Benchmark Average	2020 Environmental Sort	2020 Benchmark Average
Gross Cash Farm Income	\$801,282	\$744,078	\$997,573	\$834,622
Total Cash Farm Expense	\$658,545	\$645,752	\$751,565	\$697,094
Net Cash Income	\$142,737	\$98,326	\$246,008	\$137,529
Inv Chg, Deprec, Cap Sales	-\$49,916	-\$24,683	-\$33,116	\$35,158
Average Net Farm Income	\$92,821	\$73,643	\$212,892	\$172,687
Median Net Farm Income	\$40,008	\$33,377	\$111,406	\$100,684

The “Environmental Sort” consists of MAWQCP-certified producers.

FieldCheck: A Tool to Protect Beehives from Insecticide Drift

Larry VanLieshout, Research Scientist

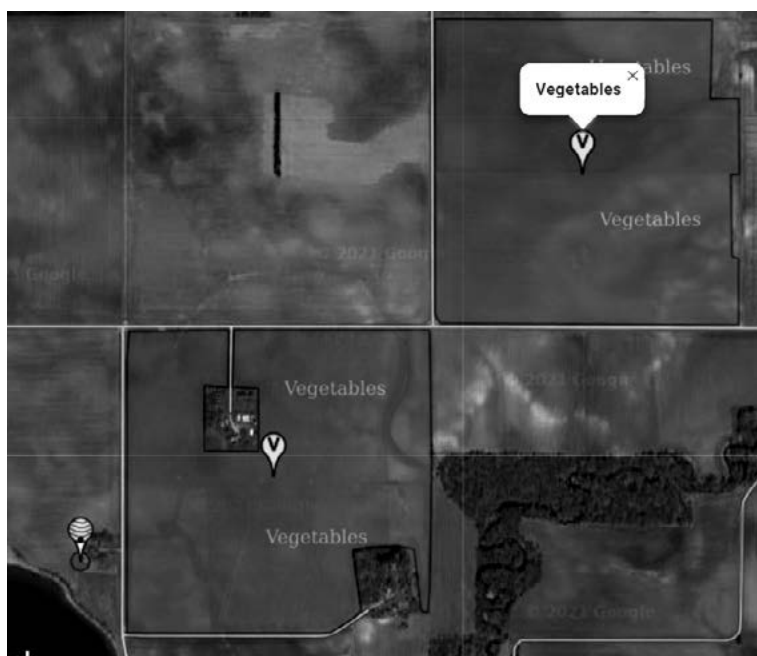
After you scout for soybean aphids, if pesticide treatments are needed, it is important to protect beehives near the application area. This also applies to insecticide treatments to fruit and vegetable crops. Prior to making an insecticide application, check the label for information concerning toxicity to bees. These product labels often carry a bee hazard icon and provide instructions to minimize harm.



Icon used on product labels to indicate product can be hazardous to bees

Notifying beekeepers before you make your insecticide application is also important. Check the FieldCheck/FieldWatch map to determine if hives are located within 2-3 miles of the field, and notify the beekeeper before you spray.

The locations of beehives and specialty crop sites are easy to find using the FieldCheck/FieldWatch map. Users can manually move around the map or enter an address or latitude/longitude in the search bar. Selecting a map pin brings up contact information for the site's producer. It is recommended that pesticide applicators provide notification of a planned insecticide application in the area at least 48 hours prior to application. This allows the beekeepers time to move, cover, or screen their hives, if desired.



FieldCheck/FieldWatch map indicating the location of a beehive and vegetable crops

The FieldWatch map is available to the public at mn.driftwatch.org/map but it may not contain all of the hives. Some beekeepers choose not to display their hives on this map if theft or vandalism is a concern. These hive locations are only displayed for applicators registered with FieldCheck. Register for free at <https://driftwatch.org/signup#applicator>. Links to information and videos about using this service are available at www.mda.state.mn.us/fieldwatch.

FieldCheck is available in most neighboring states. North Dakota uses the North Dakota Bee Map (www.nd.gov/ndda/program/pesticide-sensitive-areas-north-dakota-bee-map).

For more information, please contact Larry VanLieshout at 651-201-6115, or Larry.VanLieshout@state.mn.us.



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