

LIBERTY COUNTY NEWS

jointventure

**M.S.U. Extension
Office - Chester, MT**

**Liberty County
Conservation District**

September 2025

Montana State University Extension and Liberty County Conservation District are collaborating this newsletter. We will keep you informed on news and events in both offices. As agriculture is a major focus for both offices, we have events that often coincide. Please let us know if you have information on upcoming events and happenings.

Upcoming Events

- Hi-Line Harvest Festival | September 11-13, 2025 | Chester, MT
- LCCD Board Meeting | September 18, 2025 | Chester, MT
- Rocky Mountain Groundwater Conference | October 14-15, 2025| Grand Junction CO
- 110th Annual MT Farmer's Union Convention | October 30 -November 1, 2025 | Lewistown, MT-Yogo Inn

Liberty County Conservation District

18 Main Street
USDA Building
406-759-5778 ext. 102

Email:
libertycountycd@gmail.com

Website:
libertycountycd.macnet.org

LCCD holds monthly board meetings on the third Thursday of each month. The meetings begin at 7:00 p.m. in the USDA conference room. Any member of the public is welcome to join.

THE LIBERTY COUNTY CONSERVATION DISTRICT

Board of Supervisors: Lanny Jones, Rodney Oraw, Tyler Streit, Michael Nelson, Megan Hedges, Tyler Jones, and Kurt Matkin

Associate Supervisors: Robert Pugsley, Geoff Osterman, Diane Roberts

Administrator: Patty Bierma

THE NATURAL RESOURCE CONSERVATION SERVICE

District Conservationist: Misty Vermulm

Technician: Dan Kultgen

Soil Conservationist: Dan Hodges

Resource Soil Scientist: Matti Osterman

Pheasants Forever: vacancy

MSU Extension

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**Liberty County
Extension Agent:**

-Jesse Fulbright

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Have you been sent any seed packages in the mail?

- **Unsolicited Seed Packages in the Homeland Likely Pose Threats to Environment and Agriculture**

Unsolicited seed packages, primarily originating from the People's Republic of China (PRC), received by households across the United States likely pose significant challenges for biosecurity and may inspire intentional attacks using harmful agricultural products and biological materials in the Homeland. Within the past five years, unknown actors with no stated motive distributed several mass mailings of unsolicited mystery seeds across the United States. Unscreened agricultural products, including biological materials pose a threat to the security of the food and agriculture sector, potentially introducing non-endemic bacterial, fungal, and viral vectors to the United States, affecting plant health and the economies of related industries. Recent seed packages received from February through May of this year may indicate an increasing trend, highlighting persistent attempts by foreign actors to introduce agricultural products and biological materials into the United States despite import restrictions. US Customs and Border Protection (CBP) intercepted many of these packages.

 - (U) In April and May of 2025, unsolicited seed packages were sent to residents in Connecticut and California. The Connecticut Department of Agriculture and the Connecticut Agricultural Experiment Station alerted residents on how to safely discard the mystery seeds to avoid environmental and agricultural risks. According to news media, California residents received seed packages that appear to have originated from the PRC or other countries. We have no news media reporting on the origins of the seed packages received by the Connecticut residents.
 - In February and March of 2025, unsolicited seed packages from the PRC were mailed to residents across the United States through Temu, an online shopping platform. The Texas Department of Agriculture collected more than 300 unsolicited seed packages (Figure 1) from 64 locations and submitted them for review to the US Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). APHIS identified some seeds as sacred lotus (*Nelumbo nucifera*), also known as Indian lotus. While generally admissible to the United States, it is an aquatic plant native to Asia and is considered invasive and prohibited in some states.
 - During the summer of 2020, thousands of unsolicited seed packages from the PRC were shipped throughout the United States. USDA warned Americans not to plant or ingest the seeds. The unsolicited seeds, largely common plant species, included some noxious weeds already established in the Homeland. However, according to news media reporting, APHIS analysts also detected two insect pests in addition to six "quarantine significant viruses or viroids" within the seed packages.
- **Unsolicited seed packages containing invasive plant species could likely pose a significant risk to US agriculture.**

These seeds could introduce plant diseases, pests, or pathogens into local areas and harm crops and ecosystems. According to USDA, invasive species specifically pose a persistent threat to US agricultural production, forest resources, global food security, and rural economies.

 - Invasive species can have damaging impacts by overcoming, preying on, and introducing new diseases that cause the decline or extinction of native species.
 - Invasive species that are destructive to the environment and threaten native species are banned by federal legislation and designated as federal noxious weeds by the USDA. For example, *Cuscuta spp.*, found within the unsolicited seed shipments, is regulated as a plant pest because it is a parasitic plant completely dependent on nutrients, carbohydrates, and water from host plants. *Cuscuta* contamination of crops seeds is very common and parasites can reduce crop yields and result in host plant death if infestations are heavy. Additional federal noxious weeds identified in the seed shipments included *Ipomoea aquatica* and *Solanum torvum*.

Federal Noxious Weeds (U) Federal noxious weeds are invasive plant species regulated under the Federal Noxious Weed Act of 1974. The act establishes a federal program to control the spread of noxious weeds and gives the Secretary of Agriculture authority to designate plants as noxious and regulate their movement throughout commerce. The federal noxious weed list includes species that are either aquatic, parasitic, or terrestrial and have the capability of harming national forests, damaging US crops, or disrupting trade if they become established in the United States. More than 100 species are designated as federal noxious weeds based on invasive characteristics, according to USDA. It would be especially damaging if the unsolicited seed packages contained any designated invasive species.

The potential threat from the intentional distribution of invasive, toxic, or fungal contaminated seeds is likely increasing based on the recent increase of unsolicited seed packages received in the United States. Repeated shipments of unsolicited seeds may be an indicator that PRC-based senders are attempting to exploit this shipment pathway by escalating tactics to evade discovery of potentially harmful agricultural products and biological samples entering the United States.

 - Foreign threat actors seeking to disrupt the US agriculture industry may view unsolicited seed mailings as an opportunity to intentionally introduce unidentified or harmful agricultural products and biological materials to the Homeland while minimizing the risk of attribution. Recent media reporting on unsolicited seed packages highlights the threat posed to biosecurity. Increased awareness of these packages could inspire potential threat actors to intentionally introduce invasive species.
 - Escalated distributions of invasive species by mail could create damaging public health and agricultural implications, especially if the seeds are difficult to detect among the volume of international mail. If intentional mailings of harmful seeds evade detection due to enhanced concealment tactics, agencies responsible for agricultural inspection and biosecurity USDA, CBP, and states' agriculture departments could see its resources strained. Public awareness and response efforts may be insufficient to reach all affected individuals, leading to inadvertent planting or improper disposal of the seeds. Additionally, the economy could be affected by potential losses in crop yields, increased costs for control and eradication efforts, and long term damage to agricultural productivity and biodiversity.- **NOTE: If you should have any such seed packages, please bring them to the Conservation District Office for disposal.**



Administration Announces Expedited Congressionally Mandated Disaster Assistance for Farmers

U.S. Secretary of Agriculture Brooke L. Rollins announced that agricultural producers who suffered eligible crop losses due to natural disasters in 2023 and 2024 can now apply for \$16 billion in assistance through the **Supplemental Disaster Relief Program (SDRP)**.

To expedite the implementation of SDRP, USDA's Farm Service Agency (FSA) is delivering assistance in two stages.

This first stage is open to producers with eligible crop losses that received assistance under crop insurance or the Noninsured Crop Disaster Assistance Program during 2023 and 2024. Stage One sign up will start in person at FSA county offices on July 10 and prefilled applications are being mailed to producers starting July 9.

SDRP Stage Two signups for eligible shallow or uncovered losses will begin in early fall.

SDRP Stage One

FSA is launching a streamlined, pre-filled application process for eligible crop, tree, and vine losses by leveraging existing Noninsured Crop Disaster Assistance Program (NAP) and Risk Management Agency (RMA) indemnified loss data.

The pre-filled applications will be mailed on July 9, 2025.

Eligibility

Eligible losses must be the result of natural disasters occurring in calendar years 2023 and/or 2024. These disasters include wildfires, hurricanes, floods, derechos, excessive heat, tornadoes, winter storms, freeze (including a polar vortex), smoke exposure, excessive moisture, qualifying drought, and related conditions.

To qualify for drought related losses, the loss must have occurred in a county rated by the **U.S. Drought Monitor** as having a D2 (severe drought) for eight consecutive weeks, D3 (extreme drought), or greater intensity level during the applicable calendar year.

Producers in Connecticut, Hawaii, Maine, and Massachusetts will not be eligible for SDRP program payments. Instead, these states chose to cover eligible crop, tree, bush, and vine losses through separate block grants. These block grants are funded through the \$220M provided for this purpose to eligible states in the American Relief Act.

How to Apply

To apply for SDRP, producers must submit the FSA-526, *Supplemental Disaster Relief Program (SDRP) Stage One Application*, in addition to having other forms on file with FSA.

SDRP Stage One Payment Calculation

Stage One payments are based on the SDRP adjusted NAP or Federal crop insurance coverage level the producer purchased for the crop. The net NAP or net federal crop insurance payments (NAP or crop insurance indemnities minus administrative fees and premiums) will be subtracted from the SDRP calculated payment amount.

For Stage One, the total SDRP payment to indemnified producers will not exceed 90% of the loss and an SDRP payment factor of 35% will be applied to all Stage One payments. If additional SDRP funds remain, FSA may issue a second payment.

Future Insurance Coverage Requirements

All producers who receive SDRP payments are required to purchase **federal crop insurance or NAP coverage** for the next two available crop years at the 60% coverage level or higher. Producers who fail to purchase crop insurance for the next two available crop years will be required to refund the SDRP payment, plus interest, to USDA.

SDRP Stage 2

FSA will announce additional SDRP assistance for uncovered losses, including non-indemnified shallow losses and quality losses and how to apply later this fall.

To learn more go to the SDRP web page.

<https://www.fsa.usda.gov/resources/programs/supplemental-disaster-relief-program-sdrp>

This announcement follows Secretary Rollins' comprehensive plan to deliver the total amount of Congressionally appropriated \$30 billion in disaster assistance to farmers and ranchers this year. These programs will complement the forthcoming state block grants that USDA is working with 14 different states to develop.

To date, USDA has issued more than \$7.8 billion in **Emergency Commodity Assistance Program (ECAP)** payments to more than half a million eligible producers. Additionally, USDA has provided over \$1 billion in emergency relief through the **Emergency Livestock Relief Program** to producers who suffered grazing losses due to drought or wildfires in calendar years 2023 and 2024.

For more information, contact your local **USDA Service Center**.

This fall marks the end of our Region 3 pesticide applicator cycle. Applicators need 6 recertification credits to renew their license. The only exception is an applicator who obtained their license in the second half of the cycle, then they just need 3 credits. See the front of the envelope for your needed credits, or check them online at <https://mtplants.mt.gov/PesticideApplicator/ApplicationExternalSearch.aspx>.

If you need additional credits to renew your license, you can take online or in person classes, www.montana.edu/extension/pesticides/events/index.html/#recert has upcoming options. One excellent in-person option that will be offered locally around the region includes the Pest Management tour.

The 2025 Pest Management tour is a daylong event around the region (3 points in the morning, 3 points in the afternoon). An agenda for Chester is included on the next page. Locations are as follows if you can't attend locally:

Monday, September 29 – Havre and Chinook

Tuesday, September 30 – Chester and Shelby

Wednesday, October 1 – Cut Bank and Conrad

Thursday, October 2 – Choteau and Great Falls

Friday, October 3 – Fort Benton

If you need information on these locations, please contact me or check out <https://www.montana.edu/extension/pesticides/events/pmt.html>. Each location has varying RSVP deadlines and cost to attend, etc.

To renew your license, in November of this year the MDA mails renewal letters to all recertifying applicators. When you get this letter, you need to follow the instructions on how to renew either by mailing in the application and \$60 license fee or by renewing online. If you have not received a letter by mid-December, please contact the MDA at pesticidelicensing@mt.gov or 406-444-4900.

If your license expires, then you must either take a closed book Montana Private Applicator Exam within 12 months after the license expiration or attend a daylong Initial Private Applicator Training.

Please reach out with any questions at jesse.fulbright@montana.edu, 406.759.5625 or 406.399.2092(c.).





PEST MANAGEMENT TOUR

Tuesday, September 30th

Chester: Our Savior's Lutheran Church Fellowship Hall, 10 E Madison Ave

\$10 fee; Lunch provided

Contact and RSVP: Jesse Fulbright, MSU Liberty County Extension Agriculture Agent RSVP by September 26th.
Phone: 406-759-5625; Email: jesse.fulbright@montana.edu

8:50 Introduction and County Update

Ricardo Pinto, PhD, MSU Precision Agriculture Research and Extension Specialist

9:45 Control of Richardson's Ground Squirrels

Stephen Vantassel, Montana Department of Agriculture Vertebrate Pest Specialist

10:35 Break

10:50 Regulatory Updates & Pesticide Performance and Water Quality Cecil Tharp, PhD, MSU Extension Pesticide Education

11:40 Lunch provided

1:00 Identification and Management of Crop Diseases in Small Grains Raissa Debacker Moura, PhD, MSU Extension Plant Pathologist

1:50 Managing Weeds in a Crop Rotation: Herbicide Carryover, Resistance, Herbicide Choice Tim Seipel, PhD, MSU Extension Cropland Weed Specialist

2:40 Break

2:55 Management of Grasshoppers in Rangelands and Crops

Tiziana Oppedisano, PhD, MSU Extension Agronomic Entomologist

3:45 Closing Remarks & Survey

Jesse Fulbright, MSU Liberty County Extension Agent 4

4:00 Adjourned

Embracing No-Till Gardening: A Small-Scale Guide to Healthier Soil and Easier Cultivation

No-till gardening is not a new method, but has become a rather large trend among avid gardeners. For gardeners seeking to nurture a thriving and productive plot while minimizing effort and environmental impact, small-scale no-till gardening offers a compelling alternative to traditional methods. This approach prioritizes soil health and biodiversity, leading to resilient plants and a more sustainable garden ecosystem. It is not without its drawbacks and issues though and they should be understood before expecting your experience to be trouble free and without any issues. What is considered no-till will vary among growers, but I tend to look to these four principles for my definitions:

First, no-till gardening disturbs the soil as little as possible.

Second, no-till gardening is an effort to increase soil life and biology and increase soil health.

Third, no-till should include extensive diversity. This includes the produce you seek along with nurse and or cover crops.

Fourth, no-till should strive for complete soil coverage, throughout the year not just the growing season.

Jesse Frost, in *The Living Soil Handbook* says, "It comes down to three basic principles: Disturb the soil as little as possible, keep the soil covered as much as possible, and keep the soil planted as much as possible."

No-Till vs. Traditional Tillage: Understanding the Difference

Traditional gardening practices often involve tilling or digging the soil, whether with a shovel, spade, or rototiller. While this initially loosens the soil and incorporates amendments, it also has several drawbacks. You will without a doubt disrupt the soil structure. Tilling breaks apart the natural aggregates and pathways formed by earthworms and other organisms, leading to compaction over time. This by its very nature will damage soil life. The delicate network of fungi, bacteria, and other microorganisms crucial for nutrient cycling and plant health is disturbed and will need time to recover. You may also be releasing carbon. The act of tilling exposes previously sequestered carbon, which has been trapped in the soil to the air. This increases the chances of forming carbon dioxide and contributing to greenhouse gas emissions. And one of the biggest drawbacks to the grower is that tillage actually promotes weed growth, not suppress it. Tilling brings dormant weed seeds to the surface, where they can and will germinate.

Think of a tornado hitting your house during a storm. Everything you knew and what felt safe is now destroyed and scattered. Your life needs to start again. It is the same for microbiology in the soil. It needs to start over, and it will certainly not be able to function as it should for a period of time.

No-till gardening, on the other hand, embraces the idea of minimal soil disturbance, aiming to mimic natural processes where organic matter decomposes on the surface and integrates into the soil over time. This approach cultivates a robust soil food web, leading to numerous benefits: Improved soil structure. The undisturbed soil retains its natural aggregates and pore spaces, promoting better water infiltration, drainage, and aeration. There will be enhanced soil life. Beneficial organisms like earthworms, fungi, and bacteria thrive, enriching the soil with humus and nutrients. You will likely see increased organic matter. By keeping the soil covered, planting nurse and cover crops and allowing plant matter to decompose you will likely see a buildup of organic matter, which will improve soil fertility and water retention. Natural infiltration allows for increased water efficiency. The healthier soil simply absorbs and retains moisture more effectively, requiring less frequent watering which in our drought-prone environments is needed. It is important to remember that it is not how much rain you get, but rather how much you keep in the soil. With better water infiltration and the protective layer of residue keeping the soil covered, you will see reduced erosion. In time you will see a natural weed suppression. The mulch layers and cover crops suppress weed growth, reducing the need for weeding and potentially eliminating herbicide use. And Last, but certainly not least, you will see healthier plants and potentially increased yields. In short, stronger soil leads to more resilient plants, better water infiltration while being able to absorb nutrients and resist pests and diseases.

Getting Started with Small-Scale No-Till

Transitioning to no-till doesn't require a complete overhaul of your garden. You can start small, perhaps with a single bed, and gradually expand as you gain experience. Here's what you may need to get started (note: use what you have, you do not need to spend a lot of money to get started).

Soil test. This is the first step in any changes to your methods. You want to learn what is in your soil to guide your efforts moving forward. It will give you a baseline to see how your efforts are improving (or not) your soil organic matter, nutrients, and soil microbiology. This allows for informed decisions with any future efforts.

Tools - While heavy equipment isn't necessary, a few tools can make the process easier. Some use a Broadfork or digging fork. This tool is used to gently lift the soil for aerating compacted soil without inverting the layers. After a period of time in a no-till system you may not need this tool. You will want to have sharp pruners or loppers: For cutting existing vegetation and old crop residues at the soil line. A basic Wheelbarrow and shovel. There is always something to move around especially compost and mulch. A Rake to smooth the surface after adding compost, mulch, and residue. Materials such as cardboard or newspaper (black & white) for creating a weed-suppressing barrier. It is important to know the source of the cardboard and that the ink is biodegradable. You do not want to unknowingly introduce chemicals into your garden.

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You will want to secure a source of compost. Ensure that it is well-aged compost and tested for both nutrient content and that it is free of residual herbicides or pesticides. Compost is the cornerstone of no-till gardening, supplying nutrients and fostering soil life. Along with compost you will want a steady supply of mulch. This can be straw, shredded leaves, wood chips, or grass clippings help suppress weeds, retain moisture, and regulate soil temperature. Again, testing to know if there are any residual chemicals is very important.

You will want to start your bed preparation in late fall for the next year, or early enough in the spring to allow for weed suppression and the steps to effectively accomplish your goals. By now you should have your area already chosen and cleared, but if not here are some suggestions. Choose a sunny location, protected from wind, and close to your irrigation source. The first step is to cut existing vegetation to the ground with pruners, loppers, or a lawnmower, leaving roots in place. You want to cut it down to the surface if possible. At this time if the soil has not been broken or is compacted, you will want to aerate. Gently work a broadfork or digging fork into the soil to loosen compaction without turning the layers. You do not want to "plow" the soil. Just lift it and then pull the tines out and move forward 4 – 6 inches and repeat.

Once that is finished, then you want to smother the grass and weeds that you previously cut down. Apply a layer of overlapping cardboard or several layers of wet newspaper directly over the cleared area. Ensure complete coverage to block out light and suppress weeds. Black tarps can be used as well but remove them prior to adding compost and mulch. You want the weed seeds to germinate but not be able to grow past the layers laid down. Now add your compost and mulch in a 2 – 4 inch layer over the cardboard or newspaper. On top of that add your chosen mulch material. If you do see any weed or plant growth during this period, you will want to pull it while still in the seedling stage.

After a period, plan on 6 weeks at least if you can, then it is the time you have waited for – planting! Now you can plant your favorite seeds or transplant seedlings directly into the compost and mulch layer by creating small holes or transplanting through the mulch layer.

Ongoing Maintenance

There will be maintenance needed as in any garden system. This often leads to you taking repeated actions and timely effort on your part. You will need to add mulch as needed. You want to maintain a consistent layer of mulch to suppress weeds, conserve moisture, and add to the organic material in your soil. You will likely continue to top-dress with compost. Annually apply a thin layer (about 1 inch) of compost to replenish nutrients and feed soil life. In the early stage of your transition, you will likely still need to spend a fair amount of time in the management of weeds. It will be important to spot-pull any weeds that emerge while in the seedling stage. After the first year you should see a steady decrease in the time and need for weed suppression. Consider Cover Crops as a means of adding mulch and "green manure" planting cover crops as part of your crop rotation, in the off-seasons or between cash crops can further enhance soil organic matter, health and fertility.

Important Considerations

Patience is key. It takes time to build healthy soil. There is no magic bullet and you may even see a drop in production and reduced plant health the first couple of years. Don't expect dramatic results overnight, especially if your soil has been heavily tilled for years. Think of it as an effort to exercise and lose weight. It takes time and consistency to achieve the desired results. Your soil health will be no different.

Monitor and adapt: Observe your plants and soil carefully, and adjust your practices as needed. Continue to soil test so you can track your progress over time. Document harvest amounts as well as timing to see what changes may be happening. Track the weather to see how yearly variations affect your results. Over time you should see that there is a leveling off of production regardless of precipitation or temperatures.

Source your materials carefully: Use organic, untreated compost and mulch to avoid introducing unwanted chemicals into your garden. I strongly recommend having any mulch or compost tested if you are not sure of its integrity.

Now Get Started

By embracing small-scale no-till methods, you can cultivate a vibrant and productive garden while fostering a healthy, living soil that will reward you with bountiful harvests for years to come. Take your time and learn as you grow. You will enjoy your efforts when you sit down to a meal that includes those plants that you grew and nurtured.

Author: Brad Holliday - NRCS Community Ag. Specialist



Watch for Wheat Diseases During Harvest

As wheat harvest progresses across Montana, it's important to keep an eye out for diseases that may have developed late in the season or become noticeable at harvest that can still impact yield, grain quality or seed viability. Identifying disease issues now can help in making post-harvest decisions, planning seed for next season, and understanding potential impacts on grain quality.

Keep in mind: Scouting fields before harvest is a good way to spot sections with visible disease symptoms. Fields--or even patches within fields--showing signs of the following disease may be worth harvesting separately to prevent mixing lower quality grain with healthy grain.

Here are some common issues to watch for as you combine:

1. Sooty Molds and Black Point

What you might see

Ever notice a dusty coating on the heads just before harvest or a dark stain at the tip of the grain? That could be sooty molds (Figure 1) or black point (Figure 2) showing up late in the season. Sooty molds are usually more of a cosmetic issue, with dark fungal growth showing up on the surface of the glumes and chaff (Figure 1). But if rain hits during the final stages of kernel development, those molds can start to colonize the outer layers of the wheat kernel. That's when you might see black point (Figure 2)--a gray to black discoloration, often at the embryo end of the kernel. In more severe cases, the entire kernel can turn gray or black.

Why it matters

While these molds aren't aggressive pathogens, they can still impact grain appearance and potentially affect seed quality. When black point is severe, it may reduce germination and seedling vigor.

What you can do

There's no in-season treatment-- fungicides are long past their labeled application windows. If you plan to save seed from affected fields, seeds should be tested for germination. In cases where germination is reduced, fungicide seed treatments can help improve stand establishment next season.



Figure 1. Wheat head with symptoms of sooty mold. Photo by Crop Protection Network: <https://cropprotectionnetwork.org/encyclopedia/black-point-of-wheat>

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Figure 2. Symptoms of black point on wheat kernels. Photo by Raissa Debacker Moura, Montana State University, MT.

2. Fusarium Head Blight (Scab)

What you might see

Fusarium head blight (scab) can be found in fields where wet weather was present during and after flowering. Scab can cause bleached or tan spikelets, sometimes with pinkish fungal growth near the base of the glumes (Figure 3). At harvest, infected plants produce lightweight, shriveled, chalky kernels--often called "scabby" grain (Figure 4). These kernels may carry the mycotoxin DON (vomitoxin), which affects feed and food safety.

Why it matters

Scabby grain lowers test weight and quality, and high DON levels can lead to price discounts. Fields with noticeable infection should be handled with care to avoid contaminating clean grain.

What you can do

Harvest affected fields separately when possible and consider cutting them early to avoid further DON buildup. Producers should carefully consider whether they want to blend seed from infected and uninfected fields, as this may result in reduced quality of uninfected grain. Adjusting combine fan speeds may help remove lighter, damaged kernels--but don't overdo it, or you risk losing good grain and increasing volunteer wheat. Grain from scabby fields can have germination issues and cause seedling disease. If saving seed, have it professionally cleaned and treated with fungicide to help improve emergence. It's important to know that planting infected seed won't lead to fusarium head blight next season, but it can impact early stand health and vigor.



Figure 3. Symptoms of Fusarium head blight (head scab). Bleached spikelets on the wheat head, orange-colored fungal structures can be seen in some infected heads. Photo by Raissa Debacker Moura, Montana State University, MT.

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Figure 4. "Scabby" wheat kernels after infection of *Fusarium* head blight. Photo by Raissa Debacker Moura, Montana State University, MT.

3. Common Bunt (Stinking Smut)

What you might see

Common bunt is usually first noticed at harvest when the grain has a black, dusty look and a distinct fishy odor. Infected kernels are dark, discolored, and filled with black spores called teliospores (Figure 5). When the combine hits heavily infected areas, it can release a black cloud behind it. Infection actually occurs after planting, when wheat seeds infested with spores germinate; however, symptoms are not present until the dough growth stages.

Why it matters

Even small amounts of bunt can reduce grain quality and lead to discounts at the elevators. In severe cases, the grain may be rejected. Fields with high infection levels may also suffer yield losses.

What you can do

There's no in-season control for common bunt. The best strategy is prevention: plant certified, fungicide-treated seed, or have saved seed professionally cleaned and treated. Skipping seed treatment in bunt-prone areas can lead to serious problems down the road.



Figure 5. Wheat kernels infected with common bunt. Photo by Raissa Debacker Moura, Montana State University, MT.

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4. Loose Smut

What you might see

Loose smut shows up right after heading as black, powdery masses of spores replacing what should be healthy spikelets (Figure 6). By the time harvest rolls around, most of the spores have blown away with the wind, leaving behind a bare central stem (rachis) with no grain. Affected heads are easy to miss at harvest but are completely unproductive.

Why it matters

Although loose smut won't affect grain quality in this season's harvest, it can quietly carry over into next year's crop. Infected kernels may look normal but can carry the fungus internally, leading to infections next season if used for seed. Cool, wet weather during flowering increases the risk of disease spread.

What you can do

If you're saving seed, this is where fungicide seed treatment really pays off. Make sure seed is thoroughly treated--good coverage is essential to stopping the disease from reappearing next season.



Figure 6. Loose smut symptoms on wheat heads. Photo by Raissa Debacker Moura, Montana State University, MT.

5. Ergot

What you might see

Ergot is caused by a fungus that replaces the grain with a hard, dark structure called sclerotia (Figure 7). These structures are usually longer--about 1/2 to 3/4 inch--and more pointed than normal kernels, making them easy to spot in the head or in harvested grain. Inside, sclerotia are white, cream, or gray in color. Ergot bodies can drop to the ground before harvest or be collected with grain.

Why it matters

Ergot alone does not typically cause significant yield loss, but even small amounts of ergot can cause grain to be rejected at elevators due to contamination limits. Sclerotia contain toxic alkaloids that can harm livestock and humans if consumed in large amounts. This disease is most common in areas with prolonged cool, wet weather during flowering, which encourages infection.

What you can do

Avoid using ergot-contaminated grain as seed, as sclerotia can survive in the soil and cause problems in future crops. Some fungicide seed treatments may reduce sclerotia viability. Crop rotation and controlling grassy weeds can also reduce ergot risk, since many grasses serve as hosts and can provide inoculum. Resistant wheat varieties can also help where ergot has been problematic

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Figure 7. Ergot symptoms on wheat heads, showing a dark fungal structure known as sclerotia. Photo by Crop Protection Network: <https://cropprotectionnetwork.org/encyclopedia/ergot-of-wheat>

More Information

Guide to Head Diseases of Wheat and Barley in Montana: <https://www.montana.edu/extension/plantpath/resources/2009-guide-head-disease.html>

Seed Treatments: <https://apps.msuextension.org/montguide/guide.html?sku=MT199608AG>, https://store.msuextension.org/Products/Small-Grain-Seed-Treatment-Guide_MT199608AG.aspx

Montana State Seed Testing Laboratory: <https://plantsciences.montana.edu/seedlab/>

Common bunt: <https://cropprotectionnetwork.org/encyclopedia/common-bunt-of-wheat>

Fusarium Head Blight: <https://cropprotectionnetwork.org/encyclopedia/fusarium-head-blight-of-wheat>, <https://apps.msuextension.org/montguide/guide.html?sku=MT199608AG>

Loose Smut: <https://cropprotectionnetwork.org/encyclopedia/loose-smut-of-wheat>

Ergot of wheat: <https://cropprotectionnetwork.org/encyclopedia/ergot-of-wheat>

Reach out to the Extension Team if you have questions:

Raissa Debacker Moura, Extension Plant Pathologist, raissa.debackermoura@montana.edu, 406-994-7621

Uta McKelvy, Extension Plant Pathologist, uta.mckelvy@montana.edu, 406-994-5572

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CoCoRaHS August 2025 precipitation report



It comes as no surprise that August was wetter than normal, as harvest delays piled up throughout the month. The average August rainfall for the 27 CoCoRaHS and government reporting stations was 2.06 inches compared to the normal of 1.25 inch or 65 percent above normal. Twelve stations measured more than 2 inches with the Wood Farm north of Joplin getting the most at 3.49 inches. The least reported was 1.25 inch at the Engstrom ranch northeast of Whitlash.

Measurable rain was reported by observers an average of 11 days during the month, but on 18 days during August, there was measurable rain occurring somewhere in Liberty County, likely disrupting harvest operations.

For the 2025 water year which began October 1, the total precipitation for Liberty County stands at 10.12 inches, which is 91 percent of the normal 11.08 inches.

Most farms got into the mid and upper 90s on the hottest day which was August 19th. The Troy Harmon residence reached 100 degrees for the hottest reported on that day. The colder mornings saw temperatures in the lower 40s, but a station on 6 mile coulee, 13 miles south of Chester reached 39 degrees on the 23rd and 24th.

Overall, temperatures averaged slightly above normal.

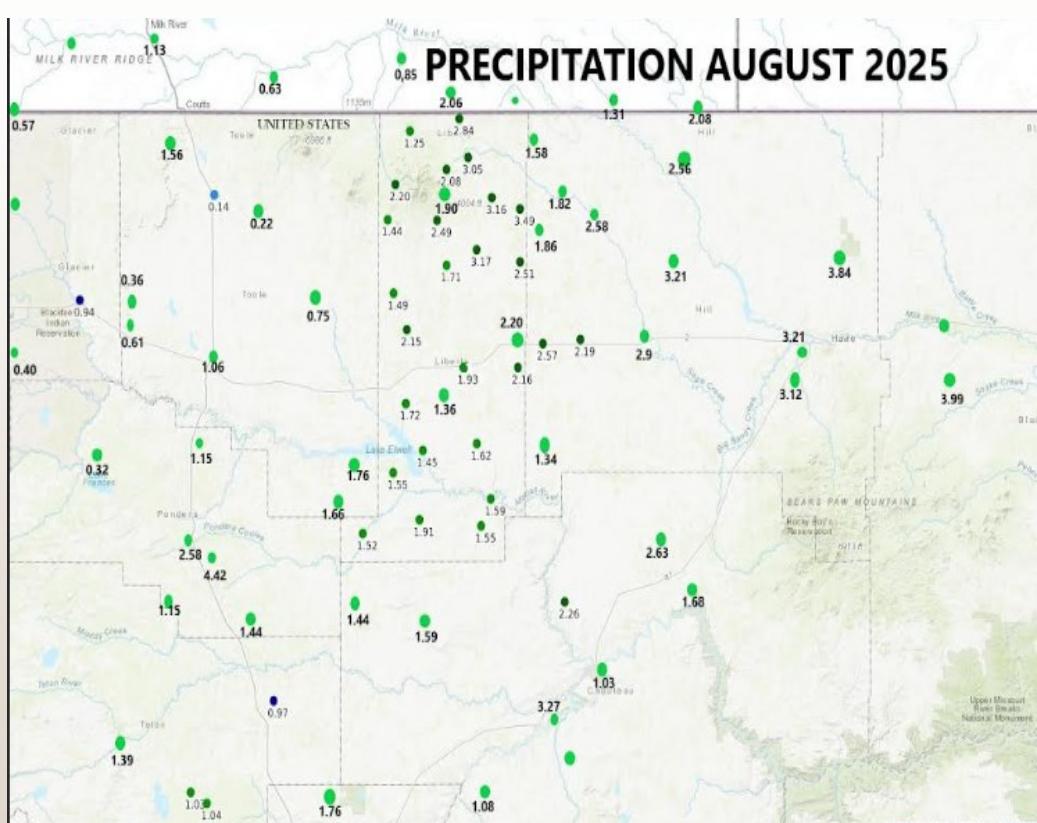
Average topsoil moisture in the first 8 inches was 15 percent at the end of August, down 2 percent in the last month. Average subsoil moisture in the 18 to 40 inch range was 18 percent. The drought monitor still shows moderate drought for western Liberty County and abnormally dry east.

Most farms had peak wind gusts between 35 and 45 mph. A 74 mph wind gust was recorded during the evening of August 19th at the Griffin farm north of Lothair. According to the USBR, at the end of August, Tiber Reservoir was holding 89 percent of normal volume. The reservoir level dropped 1 foot during the month, and was 5.5 feet below normal. The average inflow to the reservoir for the month was 68 percent of normal, while the average discharge was 47 percent of normal.

For September, NOAA's Climate Prediction Center is calling for temperatures to average above normal with near the usual rainfall. Rainfall is typically 1.00 to 1.25 inch, except 1.50 to 2 inches near the Sweetgrass Hills.

More information about CoCoRaHS is available at cocorahs.org or by calling the Liberty County CoCoRaHS Coordinator at 406-759-9157 or emailing dennish@agweathermedia.com. Soil data is provided by the Montana Climate Office (<https://climate.umt.edu/>)

STATION	AUG	NORM	PCT
Joplin 18N Wood	3.49	1.10	317
Chester 16N Mattson	3.17	1.19	266
Sage Cr Col 8SE Tempel	3.16	1.15	275
Sage Cr Col 1SE Woods	3.05	1.22	250
Sage Cr Col 4N Lybeck	2.84	1.14	249
Joplin 11N May	2.51	1.09	230
Hill 4E Wolery	2.49	1.41	177
Whitlash 4SE Thompson	2.20	2.12	104
Joplin Snyder	2.20	1.05	210
Joplin 4S Dahinden	2.16	1.06	204
Tiber 7NW Fenger	2.15	1.08	199
Sage Cr Col 4SW Dafoe	2.08	1.81	115
Chester B. Kammerzell	1.93	1.09	177
Tiber Dam 8S Buffington	1.91	1.07	179
Sage Cr Col 6SW Hawks	1.90	1.97	96
Lothair 3SE Violet	1.72	1.05	167
Chester 14N Hendrickson	1.71	1.17	146
Chester 11S Osterman	1.62	1.05	154
Tiber Dam 11ESE Cole	1.59	1.05	151
Tiber Dam 12SE Skierka	1.55	1.07	145
Tiber Dam 6W Leach	1.55	1.05	148
Tiber Dam 14SW Dellaganna	1.52	1.09	140
Lothair 12N D. Harmon	1.49	1.09	137
Tiber Dam 2 NNW Streit	1.45	1.04	139
Whitlash 8S Wickum	1.44	1.51	95
Chester 5SW-K. Kammerzell	1.36	1.08	126
Whitlash 6NE Engstrom	1.25	1.88	66
AVERAGE	2.06	1.25	165





LCCD Website

The Liberty County Conservation District has a website. This website highlights knowledge of the conservation district and what we can do for you. It includes **monthly meeting minutes**, information about **310 permits** with an online platform for applying for a permit, the **LCCD Cost Share Program** with instructions and a fillable PDF application and Land Management Plan, **Newsletters**, past and present, and pictures of the current board of Supervisors with contact information.

Below is the link and we hope you will check out the website.

libertycountycd.macdnet.org



Did you know that LCCD has a Cost Share program?

Liberty County CD will consider funding projects up to a maximum amount of \$2500 under the Following categories:

- Stream/Riparian/Irrigation
- Weed Management
- Pasture Improvement
- Urban Natural Resources
- Tree Plantings

Please see the cost share instructions document on our website, for a more complete list of eligible projects.

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Applicants must reside within Liberty County CD's jurisdictional boundary.

Applicants are accepted on a rolling basis and must be submitted to the LCCD Board of Supervisors to be approved.

All questions about the Liberty County Conservation District's Cost Share Program can be directed to Patty via email - libertycountycd@gmail.com or phone 406-759-5778 ext. 102.

Applications and information can be downloaded from the LCCD website at

libertycountycd.macdnet.org

Spiced Pear Bread Recipe

Ingredients:

- 1 teaspoon salt
- 1 teaspoon ground cinnamon
- $\frac{1}{2}$ teaspoon ground nutmeg
- 2 $\frac{1}{2}$ cups pears – peeled cored and chopped
- 1 cup chopped pecans
- 2 teaspoons vanilla extract
- 1 teaspoon baking soda
- 1 teaspoon baking powder
- 3 cups all-purpose flour
- 1 cup vegetable oil
- 2 cups granulated sugar
- 3 eggs



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Directions:

- Preheat oven to 350 degrees F.
- Grease two 8x4 inch loaf pans lightly.
- In a large bowl, add the oil, eggs, and sugar, beat until fully mixed.
- Stir in pecans, vanilla, and pears.
- In another mixing bowl, mix flour, baking soda, baking powder, salt, cinnamon, and nutmeg.
- Mix dry ingredients with the pear mixture; Mix until fully blended.
- Pour the batter into the greased loaf pans.
- Bake in the 350 degree oven for 60 minutes, or until toothpick inserted in center comes out clean.
- Remove from oven and leave in pans for about 10 minutes to cool.
- You may want to remove from pans and cool on a wire cooling rack until fully cooled.

HAPPY EATING!!!

