

# LIBERTY COUNTY NEWS

## jointventure

M.S.U. Extension Office—Chester, MT      Liberty County Conservation District

September 2024

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 20-21, 2024 Chester, MT.
- Buying, Selling & Operating Farms & Ranches Seminar Sept. 12-13, 2024, Billings, MT.
- MACo Annual Conference ~ Sept. 16-18, 2024, Missoula, MT.
- 2024 Regenerative Ag. Conference ~ Sept. 24-25, Billings, MT.

### THE LIBERTY COUNTY CONSERVATION DISTRICT

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

**Associate Supervisors:** Robert Pugsley, Rodney Svensson, Ray Morkrid, Geoff Osterman

**Administrator:** Diane Roberts

### THE NATURAL RESOURCE CONSERVATION SERVICE

**Supervisory District Conservationist:** Misty Vermulm

**Technician:** Dan Kultgen

**Soil Conservationist:** Dan Hodges

**Resource Soil Scientist:** Matti Osterman

**Pheasants Forever:** vacancy

### Liberty County Conservation District

18 Main Street  
USDA Building

406-759-5128 ext. 102

Email:  
[libertycountycd@gmail.com](mailto:libertycountycd@gmail.com)

Website:  
[libertycountycd.macnet.org](http://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.

### MSU Extension

111 1st Street E  
Liberty County Courthouse  
406-759-5625

### Liberty County Extension Agent:

-Jesse Fulbright

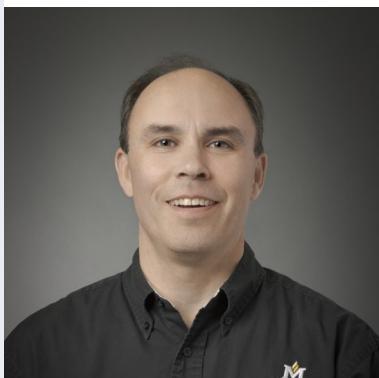
### Extension Administrative Assistant:

-Julie Gagnon

[liberty@montana.edu](mailto:liberty@montana.edu)

## ***Shelterbelts / Windbreaks***

### ***By Jesse Fulbright***



A lot of the trees that get ordered through the Conservation District go towards developing and reestablishing shelterbelts, or windbreaks as they are also called. The primary purpose of most windbreaks is to slow the wind which creates a more beneficial condition for soils, crops, livestock, wildlife and people. According to a publication by the Natural Resource Conservation Service, windbreaks can be and often are designed to serve more than one purpose. However, windbreaks are not a one size fits all practice. The location, orientation to the wind, height, width, density and species selection all play a role in determining the benefits that the windbreak will provide.

There are several types of windbreaks. Field windbreaks protect a variety of wind-sensitive crops, control soil wind erosion, increase crop yields, and increase bee pollination and irrigation and pesticide effectiveness. Field windbreaks can also be designed to spread snow evenly across a field, increasing spring soil moisture. Livestock windbreaks help reduce mortality from cold weather, animal stress, and feed consumption, all of which lead to increased weight gain and milk production. Windbreaks also help reduce visual impacts, noise, and odors from livestock operations. Living snow fences keep roads clear of drifting snow and increase driving safety. Farmstead windbreaks reduce heating costs and improve outdoor working conditions. According to Peter Kolb, MSU Extension Forestry Specialist, shelterbelts around a home reduce home heating costs by about 30% and create a milder microclimate for good gardening and fruit tree habitat.

A common shelterbelt is either a 3-row or a 5-row design, depending on your space and desire. Regardless of the number of rows, you'll want to plan at least 20 feet between the rows to allow for growth of the trees and shrubs as well as allow room for any mowing or other maintenance to be done between the rows. For other details about planting and maintaining shelterbelts, I would encourage people to contact the Extension office or the Conservation District office.

When thinking about what trees and shrubs you want in your shelterbelt, there are a whole host of species. Those in Zones 3 and 4 are best suited for our environment. Common smaller trees and shrubs/hedges include **lilac, caragana, serviceberry, and some junipers**. Those and others are ones that are typically available for purchase through the Conservation District tree orders. **For more information about serviceberries and lilacs, MSU Extension also has MontGuides about their growth and development.**



**Caragana:**  
20 year height: 12 feet  
Growth Rate: rapid  
Drought Tolerance: high  
Shade Tolerance: intermediate  
Flower: small, showy, yellow  
Foliage: green, yellow in fall  
Soils: adapted to all soil types



**Serviceberry, Saskatoon:**  
20 year height: 10 feet  
Growth Rate: moderate  
Drought Tolerance: high  
Shade Tolerance: intermediate  
Flower: white  
Foliage: green, red-orange in fall  
Soils: adapted to all soil types



**Juniper, Rocky Mountain:**  
20 year Height: 12 feet  
Growth Rate: slow  
Drought Tolerance: high  
Shade Tolerance: intolerant  
Foliage: green  
Soils: adapted to medium and coarse soils



**Lilac, Common:**  
Growth Rate: moderate  
Drought Tolerance: high  
Shade Tolerance: intermediate, prefers direct sun.  
Flower: white to purple  
Foliage: green, yellow in fall  
Soils: adapted to all soil types

When planting lilacs, plan to plant rows 10 to 15 feet apart. Spacing of plants for a hedge depends on the hedge height. For a three- to four-foot tall hedge, space plants 18 to 24 inches on center. A six- to eight-foot tall hedge requires spacing of two to three feet on center. For a very tall, informal hedge, spacing could be as far apart as six feet. Plant lilacs at least five feet from buildings, since their root systems can damage foundations over time. With approximately 2000 cultivars to choose from, selecting lilacs to plant is not easy. All of the lilacs described here are hardy in Montana.

#### **Meyer lilac (dwarf Korean lilac) (*Syringa pubescens* and subsp. *microphylla*) (Zone 4a)**

The Meyer lilac is a spectacular and unusual spreading shrub that grows only four to five feet high and suckers freely. This lilac flowers abundantly with heavy, spicy fragrance even when very young. 'Palabin' is a popular cultivar for low hedges. It also can be used as a focal point in a rock garden or where space is limited. The fall color is a nice reddish brown. Meyer lilac is resistant to powdery mildew.

#### **European common lilac and French hybrids (*Syringa vulgaris*) (Zone 3a)**

The European common (or "old fashioned") lilac is the best known lilac. Common lilacs have flowers in most colors, and account for the majority of lilacs planted in Montana. These lilacs are fragrant, very hardy, quite drought tolerant and inexpensive. In general, they sucker more than other species, a characteristic that has allowed them to persist on abandoned homesteads. They are used commonly in shelterbelts and as hedges.

As a group, *S. vulgaris* cultivars are susceptible to more diseases and pests than other lilacs, although these typically cause fewer problems in Montana than in wetter, more humid climates.

#### **Chinese lilac (*Syringa x chinensis*) (Zone 4a)**

The Chinese lilac is a spreading shrub growing 10 to 12 feet tall and six to eight feet wide. Compared to the common lilac, the leaves are smaller and the flowers are more delicate and abundant. Very fragrant flowers bloom with, or just, after the common lilac. Chinese lilacs do not produce many suckers, so they stay "in bounds" more easily than do common lilacs. Some winter injury can occur during very severe winters or in colder areas of Montana. Chinese lilacs are very susceptible to powdery mildew and susceptible to bacterial blight. This is one of the best lilacs for taller hedges.

#### **Manchurian lilac (*Syringa pubescens* subsp. *patula*) (Zone 3b)**

The Manchurian lilac is rare among lilacs in that it provides four seasons of interest. Deep purple buds open to fragrant, purple-blue flowers. Flowering occurs shortly after the common lilac season. Leaves turn burgundy in autumn. The best cultivar, pale violet 'Miss Kim,' is a vigorous, upright shrub that grows from five to seven feet tall. 'Miss Kim' resists powdery mildew.

#### **Preston hybrids (Preston lilac, Canadian hybrids) (*Syringa x prestoniae*) (Zone 3a)**

Preston hybrids are very valuable in areas where spring frosts often freeze the flowers of earlier blooming lilacs. Prestons bloom about a week after common lilacs. Most cultivars have pink or lavender flowers with a unique scent. They grow quickly and have showy blooms and large, dark green leaves which are resistant to powdery mildew and bacterial blight, and mostly free of insects. Among the best cultivars are the purple 'Donald Wyman,' and the blue 'Nocturne.'

Preston hybrids grow strongly 6 to 10 feet high. As shrubs, Prestons are effective along backyard property lines, as corner accents or along garage walls or service areas. By pruning them to three to five upright trunks while still young, they become wonderful small, spreading trees. When planted near small patios or decks, pruned Prestons provide excellent shade and focal beauty.

#### **Late lilac (*Syringa villosa*) (Zone 3b)**

Late lilac grows up to 12 feet tall and wide. Its pink flowers emerge a week after common lilacs, are lightly fragrant, and smell like cloves. Late lilacs are susceptible to powdery mildew. They are unusual in that their flowers are borne on current years' wood rather than the previous'.

#### **Japanese tree lilac (*Syringa reticulata*) (Zone 3a)**

The June blooms of the Japanese tree lilac bring the lilac season to a brilliant close. This small, vase-shaped tree has a refined beauty that is rare among trees that will survive in Montana. The form is graceful with and without leaves, and the showy cream-colored flowers are lightly honey-scented. The glossy, reddish-brown bark is similar to cherry bark. The leaves of some varieties of Japanese tree lilac can be variegated, but they have little fall color. Seed heads persist into winter and complement the branching pattern and bark. This hardy tree grows slowly and may reach 25 feet high and 15 feet wide in 30 years. Japanese tree lilacs can be grown as single-stemmed or multi-stemmed trees. The single-stem form makes an excellent small shade or street tree, and is tolerant of winter salt. The multi-stemmed form can be a fine focal point in larger areas. 'Ivory Silk' is similar to the species except the crown form is narrower, and it flowers at a younger age than most. This lilac resists powdery mildew, scale and borers. Several new cultivars are available.

#### **Pekin lilac (*Syringa reticulata* subsp. *pekinensis*) (Zone 4a)**

The Pekin lilac grows to a 15- to 25-foot tree form and differs from the Japanese tree lilac in its more vigorous growth and interesting peeling bark. There are white and yellow flowering cultivars. Pekin lilac tends to flower heavily in alternating years.

**The following is adapted from an MSU MontGuide titled, *Growing Lilacs in Montana*. For the full publication, please visit the MSU Liberty County Extension office.**



## The Montana Conservation Seedling Nursery



**Tree Sales Open January 20, 2024 for Spring 2025 planting.**

Due to unforeseen circumstances Montana Seedling Nursery will not be taking tree orders until January 20, 2025. You can submit tree orders through LCCD to Lincoln Oaks NOW. The earlier the better. There is a shipping fee on all Lincoln Oaks orders.

- ◆ Visit Liberty County Conservation District office at 18 Main Street in Chester OR  
**phone 406-759-5778 ext. 102 OR email, [libertycountycd@gmail.com](mailto:libertycountycd@gmail.com), to place your orders.**

Plan to reserve your tree orders and avoid shortages. All tree's will be delivered to the USDA building in Chester late April for pick up.



***Did you know that the LCCD has a new Cost Share Program!***

Liberty County CD will consider funding projects up to a maximum amount of \$2500 under the following categories. (Please see the cost share instructions document for a more complete list of eligible projects):

- ◆ Stream/Riparian/Irrigation
- ◆ Weed Management
- ◆ Pasture improvement
- ◆ Urban Natural Resources
- ◆ Tree plantings

The Cost Share Instructions on the website have a more complete list of eligible projects.

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 Liberty County Conservation District's Cost Share Programs can be directed to Diane Roberts via email ([libertycountycd@gmail.com](mailto:libertycountycd@gmail.com)) or phone (406-759-5778 ext.102).

Applications and information can be downloaded from the LCCD website at

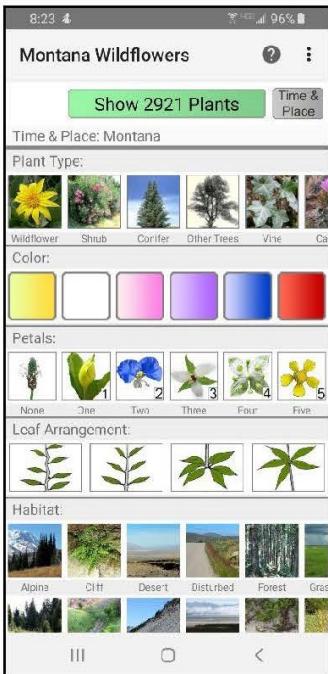
**[libertycountycd.macdnet.org](http://libertycountycd.macdnet.org)**

# MSU Extension Invasive Plants

## Monthly Weed Post, July 2024

### Plant Identification Apps for your Smartphone: 2024 Update

By Noelle Orloff, Associate Extension Specialist and Schutter Lab Diagnostician



Introduction Smartphone apps are available for almost anything these days, including plant identification. Plant ID apps are a helpful tool to have in your botanical toolbox. There are two broad categories of these apps.

Some plant ID apps function somewhat like a traditional key in that they require the user to enter information about the plant in question (picture, left) and based on the information the app lists plants that fit the criteria. Two apps in this category that are especially useful in Montana include [Montana Grasses](#) and [Wildflowers of Montana/Montana Wildflowers](#). The identifications from these apps are only as accurate as the information entered; make sure to only choose a characteristic that fits your plant if you are certain you are correct.

Another group of plant ID apps uses artificial intelligence (AI) technology to identify plants based on photos a user takes with their phone (picture, bottom right). There are a number of these apps available.

Evaluating Plant ID Apps I am often asked which of the AI apps I recommend. Thankfully, Dr. Erin Hill and her students at Michigan State University have [evaluated these types of apps](#) for accuracy, testing them against plants with a known identity. Based on Dr. Hill's criteria, in 2023 [PictureThis](#) was the most accurate app, and [PlantStory](#) and [PlantNet](#) were the second

and third most accurate. There are other helpful apps available; test different apps on known plants in your area and see which one works best for you.

In many cases in Dr. Hill's evaluation, apps correctly identified the genus of an unknown plant, while misidentifying the species. This has been my experience with these apps as well; they often help me get "close" to a plant's identity but require further work to get to the correct species. The study also found that apps are better at identifying mature plants compared to seedlings, and grasses or grass-like plants may be more difficult for these apps to accurately identify compared with broadleaf plants. The group also tested the apps on *Amaranthus* (pigweed) species seedlings and noted that this was the most challenging task for the apps.

Tips for using plant ID apps Whichever app you choose; it is important to use some critical thinking. Double check your identification using a trusted resource. Find accurate photos of many Montana plants online at the [Montana Field Guide](#). The Latin binomial name will be the most helpful search term. Also check the [USDA Plants Database](#) and the [Montana Field Guide](#) to see if your identified plant is known to occur in Montana or not. To check your plant's identification with a person, ask your local Extension office or your county weed district for assistance.





## NRCS Sets Conservation Program Funding Application Dates



**BOZEMAN, Mont., Aug. 12, 2024** – The USDA Natural Resources Conservation Service (NRCS) in Montana is accepting applications for the Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), Regional Conservation Partnership Program (RCPP), Wetland Reserve Easements (WRE), and Agricultural Land Easements (ALE). There are several dates to be aware of for the current funding cycle of these programs.

- ALE Inflation Reduction Act: Oct. 4, 2024
- EQIP: Oct. 25, 2024
- RCPP Land Management and Rentals: Oct. 11, 2024
- RCPP Entity Held Easements: Nov. 1, 2024
- ALE Farm Bill: Nov. 29, 2024
- WRE Farm Bill: Nov. 1, 2024
- CSP Classic: Dec. 27, 2024

“NRCS provides funding and technical assistance to help farmers, ranchers, and forestland owners implement conservation practices that improve their environmental and economic sustainability,” said Tom Watson, NRCS State Conservationist for Montana. “Conservation work focused on local outcomes with the support of local partners and land managers achieves meaningful conservation across a landscape. These opportunities are open to ag operations of any scale.

### ***NEW Tool for Producers and Cooperators on the FarmRaise FSA Educational Hub***

The FSA Program Discovery Tool is now LIVE on the FarmRaise FSA Educational Hub.

**Check out the link below under Programs!**

**([https://www.farmraise.com/usda-fsa/fsaprograms?utm\\_medium=email&utm\\_source=govdelivery](https://www.farmraise.com/usda-fsa/fsaprograms?utm_medium=email&utm_source=govdelivery))**

This tool allows users to find information about FSA programs in an easy-to-navigate directory, and filter by type of program, target demographic, and other criteria. Whether you are looking for funding, resources, or programs specific to the livestock or crops that you raise, this tool guides you to the FSA programs that match your goals and needs.

In addition to the FSA Program Discovery Tool, the hub offers how-to videos, visual aids and other interactive tools that educate producers about FSA programs and prepares them for submitting applications for program participation. Visit the **FarmRaise FSA Educational Hub** today and see the rich assortment of educational tools and resources that are available to cooperators and the agricultural producers you serve! Below is the link:

**([https://www.farmraise.com/usda-fsa?utm\\_medium=email&utm\\_source=govdelivery](https://www.farmraise.com/usda-fsa?utm_medium=email&utm_source=govdelivery))**



## I Might Have A Seep Problem... So Now What?

Saline seeps related to agriculture can be reclaimed with changes to land use upgradient from the seeps. On the other hand, some saline problems are naturally occurring. To determine the difference, contact MSCA for a free, site-specific consultation (see back for details).

The local Conservation District can also help, and both MSCA and the CD will coordinate with the U.S. Department of Agriculture (USDA) and other agencies at your request to provide opportunities for financial and technical assistance in addressing saline seeps.

Two USDA programs are currently available - EQIP and CRP. Contact MSCA for details.



*"An ounce of prevention is worth a pound of reclamation." Holly Taylor*



Saline seeps can grow exponentially if left unchecked. The cost of rotating the recharge area (uphill) to perennial forage must be weighed against the cost of degraded soil, contaminated surface water, weed infestations and lost production. MSCA can help minimize those costs and provide landowners with an efficient reclamation plan.

Two common barriers to land use changes are:

- making arrangements for haying equipment and marketing.
- the lack of an assured yield in a flex-crop system.

Often, these problems are merely perceived, rather than real. Producers generally find that the diversification of hay and alternative crops can improve long-term productivity.



Cover crop research indicates multiple benefits of improved soil health. Contact MSCA for more info on cover crops, including seed mix recommendations and research results.



Saline seeps are caused by a dynamic system; they will resurface eventually if the recharge area is returned to annual cropping. Therefore, perennial forage will need to be rotated back every 10-20 years. Shallow monitoring wells will help predict when the rotation is needed, BEFORE saline problems reach the ground surface. When CRP contracts expire, saline seeps have a high risk of re-emergence, as shown in the aerial photos above.

## What We Do

### Saline Seep Reclamation



MSCA staff provide personalized technical assistance to producers; we investigate the site and create a customized reclamation plan.

For more information contact: MSCA 3615 29th street SW, Great Falls, MT 59404, phone 406-868-1463, email - [mtsalinity@gmail.com](mailto:mtsalinity@gmail.com)

# CoCoRaHS July 2024 precipitation report



## Hotter and Drier than Normal during July in Liberty County

The overall dryness in June continued through July across Liberty County. The average July rainfall for the 22 CoCoRaHS government stations was .47 inch or only 36 percent of the normal 1.28 inches.

Heaviest precipitation was 1.26 inches measured by Lybecks, while several other farms recorded less than 1/4 inch. Measurable rain occurred on an average of 4 days.

For the water year, which began in October, the county-wide average precipitation stands at 9.17 inches, and has fallen 1 percent lower than the normal of 9.23 inches. At the end of July, drought in Liberty County was rated moderate.

Soil moisture at the USDA site southeast of Lothair was at 14 percent in the first 8 inches, compared to 13 percent last year. Sub-soil moisture in the 20 and 40 inch depths averaged only 9 percent, the same as last year. The Army Corps of Engineers site southwest of Chester had topsoil and subsoil moisture at 11 and 24 percent, respectively, compared to 13 and 24 percent last year.

On July 24th, the official NOAA stations in Joplin and at Tiber Dam tied their all-time hottest temperatures with 106 degrees and 107 degrees, respectively. Chester at 104 degrees, was 1 degree shy of its all time record set in August 1961. The Fritz farm northwest of Tiber dipped to 40 degrees for the coldest temperature this July in the county. Overall, temperatures averaged 3 to 5 degrees above normal for the month.

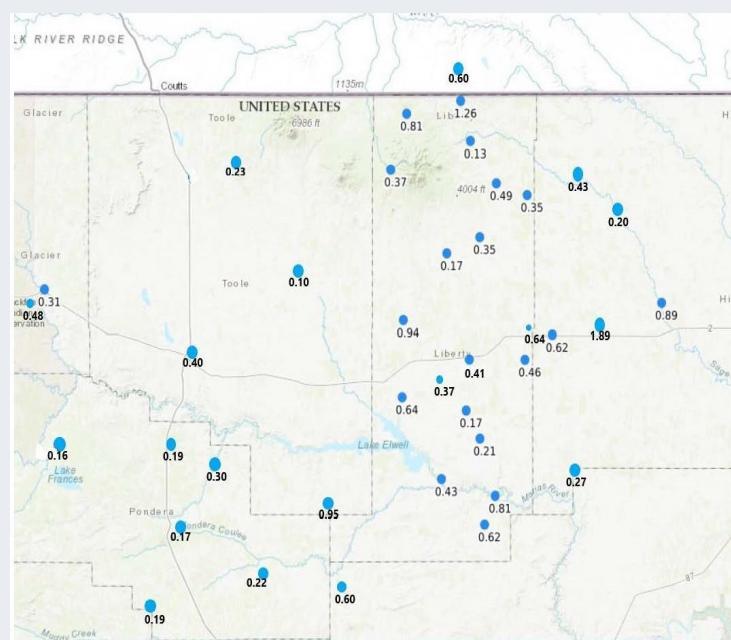
The strongest wind gust reported was 71 mph on July 6th on the Hadford farm northeast of Chester. Strong winds over 50 mph were also observed July 24th and 25th on a few other farms. On July 21 and 22, the air quality index rose into the "unhealthy for sensitive groups" category.

At the end of July, Tiber Reservoir was holding 92 percent of normal volume. The reservoir dropped 3/4 foot in elevation during the month and was about 4 feet below normal. The average inflow to the reservoir for the month was 35 percent of normal, while the average discharge was 39 percent of normal.

For August, the 4th -14th period will likely average wetter and cooler than normal, but as the high pressure ridge builds back over the region around the middle of the month, warmer and drier conditions should return, allowing harvest operations to regain momentum.

CoCoRaHS stands for the Community Collaborative Rain Hail Snow network, comprising over 26,000 active rain gauge volunteers in all 50 states, Canada, the Caribbean, and Guam. More information about CoCoRaHS is available at [cocorahs.org](http://cocorahs.org) or by calling the Liberty County CoCoRaHS Coordinator at 406-759-9157 or emailing [dennish@agweathermedia.com](mailto:dennish@agweathermedia.com)

STATION	JULY	NORM	PCT
Sage Cr Col 4N Lybeck	1.26	1.33	95
Tiber 7NW Fenger	0.94	1.30	72
Whitlash 6NE Engstrom	0.81	1.58	51
Tiber Dam 11ESE Cole	0.81	1.03	79
Lothair 3SE Violet	0.64	1.16	55
Joplin Snyder	0.64	1.34	48
Tiber Dam 12SE Skierka	0.62	1.11	56
Sage Cr Col 8SE Tempel	0.49	1.39	35
Joplin 4S Dahinden	0.46	1.24	37
Tiber Dam 3SE Pugsley	0.43	0.98	44
Chester B. Kammerzell	0.41	1.34	31
Whitlash 4SE Thompson	0.37	1.87	20
Chester 5SW-K. Kammerzell	0.37	1.23	30
Chester 16N Mattson	0.35	1.37	26
Joplin 18N Wood	0.35	1.39	25
Joplin 11N May	0.24	1.29	19
Hill 4E Wolery	0.24	1.30	18
Chester 11S Osterman	0.21	1.10	19
Chester 7S Harmon	0.17	1.20	14
Chester 14N Hendrickson	0.17	1.34	13
Sage Cre Col 1SE Woods	0.13	1.34	10
Tiber Dam 2 NNW Streit	0.13	1.01	13
<b>AVERAGE</b>	<b>0.47</b>	<b>1.28</b>	<b>36</b>





## 2024 Marias County Fair

Liberty County Conservation District and Glacier County Conservation District sponsored a booth at the Marias County Fair in July and even though it was HOT there was fun to be had by all.

Adults were given information on tree sales, 310 permits, and a cost share program for Liberty County producers along with give aways and items to purchase.

Youth enjoyed playing a fishing game and won prizes when they answered conservation questions correctly. Education was given on how to prevent invasive species.

Thank you to Abby Rooney from Glacier County for helping with the booth at the fair.



# ***GROUND BEEF & BROCCOLI STIR-FRY***

**Equipment:** Large deep skillet

## **Ingredients:**

- 1/2 cup reduced sodium soy sauce
- 1 tablespoon honey
- 4 cloves garlic (minced)
- 1 1-inch piece fresh ginger (grated)
- 1 tablespoon corn starch
- 1/2 tablespoon sesame oil
- 1 pound ground beef
- 1/2 medium yellow onion (chopped)
- 1 large head broccoli (cut and blanched)
- 1 tablespoon toasted sesame seeds

## **Instructions:**

- In a small bowl, whisk together the soy sauce, honey, garlic, ginger, and cornstarch. Set aside.
- Add the sesame oil to a large deep skillet over medium-high heat. Add the beef and onion and cook, stirring occasionally, until the meat is just about cooked through, about 5 minutes.
- Pour in the reserved sauce, stir to combine, and cook for 1 minute. Add the broccoli and cook for 1 more minute.
- Divide mixture evenly among 4 plates or shallow bowls, layering rice first, if using.
- Top each with sesame seeds and scallions.

## **Notes:**

To blanch the broccoli— bring a big pot of water to boil. Drop the florets into the water and cook for three minutes until bright green and crisp-tender. Immediately drain in a colander and put in an ice bath, which will stop the cooking process. Once the broccoli is cool, drain in the colander again.

