

Newsletter

May- June 2023



WSU EXTENSION
Garfield County



Welcome Spring

Welcome to the WSU Garfield County Extension Newsletter!

This is an electronic newsletter highlighting events and topics of interest to residents of Garfield County and the surrounding area. This newsletter can also be viewed on our website: <https://extension.wsu.edu/Garfield/>

Do you have an event or subject you would like added to our newsletter or website? Would you like to be removed from our Extension Newsletter email list?

Contact the Extension Office

Phone: 509-843-3701

Email: mbartlow@co.garfield.wa.us

Contact Us:

Office Location: 757 Main St.
Pomeroy, WA 99347

Mark Heitstuman, County Director
heitstuman@wsu.edu

Mailing: PO Box 190,
Pomeroy, WA 99347

Hours: Monday-Friday 8:30 –5:00
(closed 12:00-1:00)

Sheree Ledgerwood, 4-H Coordinator
sheree.ledgerwood@wsu.edu

Phone: 509-843-3701
Fax: 509-843-3341

Monica Bartlow, Office Manager
mbartlow@wsu.edu

Website: <https://extension.wsu.edu/garfield/>

Washington State University helps people develop leadership skills and use research based knowledge to improve their economic status and quality of life. Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension Office.

Identifying Soilborne Wheat Mosaic Virus

Contributed by Tim Murray & Cassandra Bates

<https://smallgrains.wsu.edu/identifying-soilborne-wheat-mosaic-virus/>

Soilborne wheat mosaic (SBWM) is caused by the Soilborne wheat mosaic virus (SBWMV) and is a relatively new disease in Washington state; however, the virus and disease are not new, having been first described in Illinois in 1919. SBWMV was the first virus known to be soilborne in wheat. It is favored by wet soil conditions and is transmitted by a fungal-like protist called *Polymyxa graminis*. SBWMV survives only in association with spores of *P. graminis* and once a field is infested, it will remain infested; as a result, grain yields may be reduced annually.

SBWM is a disease of fall-sown wheat. Symptoms typically appear in the late winter or very early spring when temperatures are cool and often occur in patches in a field. Over time, patches enlarge to the point where the entire field is infested. Infected plants are stunted and the foliage appears mottled with white to dark green streaks that are parallel with the leaf veins – a symptom known as a mosaic. The mosaic can range from a mild green to a more severe yellowing.

As temperatures rise, the mosaic symptoms disappear but the effect of the disease remains and is apparent at harvest with yields reduced up to 75% in infected areas. Because of its preference for wet soil conditions, it is advisable to check symptomatic plants in low spots in the field for yellowing, speckling, or mosaic-like patterns developing. If you suspect SBWMV, the WSU Plant Pest Disease Clinic is able to test for this virus.

Please visit the clinic's website for more information about sample submission and testing fees.

Fortunately, effective resistance genes are available for SBWMV and planting a resistant variety is the best management practice for this disease. More information about the disease and resistant varieties is available on the WSU Small Grains SBWMV page.

Fine-Tuning Your Beef Cattle AI Program

By: Dr. Ram Kasimanickam & Dr. Dale More
WSU Ag Animal Health Spotlight– Veterinary Medicine Extension| October 2011

Heifers are the most fertile creatures. But they still need to be treated with care to maximize their opportunity to conceive. Through some on farm research, we have some new recommendations that will fine-tune your artificial insemination (AI) program to improve pregnancy rates.

The Research Trial: Over 1000 Angus-cross heifers were enrolled in the study at nine different locations in four states (Washington, Idaho, Virginia, and Wyoming). At each location, heifers were given GnRH at enrollment when the CIDR was inserted and two prostaglandin injections six hours apart when the CIDR was removed 5 days later, and then randomly allocated to be inseminated 56 hours or 72 hours after CIDR removal. The heifers were turned out with Angus bulls (1:30 to 1:40 bull to heifer ratio) two weeks later and examined for pregnancy using ultrasound at 55 to 70 days after artificial insemination. All heifers were examined and scored for body condition at enrolment and about 625 of them also got a heat mount detector placed on their tail head. These heifers were also watched for heat three times a day until insemination.

The Results: For the heifers with the heat mount detectors, more of them that were observed in estrus at or prior to AI became pregnant to the first insemination compared to heifers not observed in estrus (65 vs. 52 percent). The AI pregnancy rates did vary by location of the ranch (from 56 to 69 percent). Controlling for location, AI sire, and insemination technician, insemination at 56 hours after CIDR removal significantly improved AI pregnancy rate compared to insemination at 72 hours by 10 percent - 66 vs. 56 percent pregnant to the single AI.

The Conclusions: Paying attention to the timing of the artificial insemination, particularly reducing the time from insemination after CIDR removal in a CIDR Co-synch timed insemination program from 72 hours to 56 hours can greatly improve beef heifers' conception rates to a single insemination and reduce the whole process time for getting them bred to about 6 ½ days.



WASHINGTON STATE UNIVERSITY EXTENSION

Master Gardener Program

WASHINGTON STATE UNIVERSITY
EXTENSION
Master Gardener Program



Master Gardener Plant Clinics

Free diagnosis and advice! Bring your questions and specimens by the

WSU/Garfield County Extension

Every Wednesday

May 3th through August 30th

1:00 PM to 3:00 PM

757 Main Street, Pomeroy, WA

509-843-3701

mbartlow@wsu.edu

<http://extension.wsu.edu/garfield/>



INFORMATION FROM WSU GARFIELD COUNTY MASTER GARDENER BARB DEHERRERA

All About Growing Tomatoes That We're Afraid to Ask

A quick Google search for “growing tomatoes” resulted in ten links popping up and three videos. This advice ranged from the seed companies, Old Farmers Almanac and University Extension sites.

First-who to believe? As a Master Gardener, we strive to only relay science-based information. Are seed catalogs a reliable source? There was an article written by the University of California Agriculture and Natural Resources staff that talks about this. They agree that there is valuable information to be gained by reading the advice in your seed catalog. This especially relates to the specific variety of tomato you are growing. If, for example, you want to grow Early Darling tomatoes, Gurney is the only company selling this variety for 2023. Your plants may do best if you read their information on your choice of this vegetable to grow. [Wait! Is a tomato a vegetable or a fruit? Botanically, it is a fruit as it is a ripened flower with seeds on the inside, nutritionally it is considered a vegetable.]



Ok, now down to growing tomatoes. Tomatoes (*Solanum lycopersicum*, *Lycopersicon lycopersicum*) are one of the most popular home-grown vegetables. First, know that you will never grow a tomato that tastes like the ones your grandparents grew. You can try, but probably cannot replicate the memories and feelings associated with the that long-ago first of the season bite out of a sun-ripened, warm tomato handed to you by your grandparent as you were standing barefoot in their garden on a warm sunny afternoon.

Tomatoes belong to the nightshade family, which includes potatoes, peppers, eggplants, and tobacco. As a heat-loving plant, they need long days and full sun to best produce. Decide what space you have available to plant. You do not need a garden, you can grow a tomato in a container, you just need a sunny spot. There are over 7,500 varieties (with new ones developed every year!), with differences in color, taste, shape, size, length to harvest and disease resistance.

You need to decide if you want determinate (this is how I remember the difference: they are determined to not grow tall and are determined to all ripen at once) or indeterminate (they can grow as tall as you let them and ripen throughout the growing season.) Determinate are more bush-like and can be grown in smaller spaces. If the variety you like are indeterminate, you can still grow them in a container, but it will take pruning to keep it under control.

Consider your growing season. Read the details of the different choices for tomatoes. In Garfield County, the zones cover 6a, near the Blue Mountains to 8a, at the Snake River border. The [USDA](#) has a hardiness zone, you can enter your address and determine your zone rating. Do not plant out until after your last frost date, even then, you can be surprised by a cold night. Keep an eye on the weather for the prediction for the night. Cover with a piece of plastic, a bucket, an old tarp, anything to give it some protection from a light frost. Even this may not be adequate protection for anything less than around 28 degrees. There are a plethora of sites “predicting” the last frost date. Keep records, you will find it varies year to year. For “tender” vegetables, like tomatoes, err on the side of caution and plant at least a week or 10 days after the last predicted frost date unless you are well prepared to cover them on cold nights.

Whether you start them from seeds or purchase plants, be sure to “harden them off”, or acclimate them to the outdoor temperatures by placing them outside for a few hours each day, building up the time out until planting time. When planting, bury as much of the stem as possible by pinching off leaves about 2/3 up the stem, digging a trench and laying the tomato plant down sideways while gently bringing the top upright. If using supports, place these now to prevent root disruption and branch breaking later. Indeterminate plants do best with support. Water in well.

Water about 1 inch a week [you can research methods to determine this], too much water will cause an increase in foliage and less fruit and can encourage plant diseases. Remove any leaves touching the soil to reduce disease transmission, also avoid overhead watering for the same reason. Mulch around the plant to retain soil moisture.

You may prune indeterminate plants early in the season, it will not produce more fruit, but what it does produce will be larger and earlier. But do prune later in the season when new blooms will not have time to produce fruit before a frost.

If your garden soil is healthy, your tomato plants will not require extra fertilizer, if you choose to add some, avoid too much nitrogen as this will only encourage more foliage growth.

Disease and pests are best controlled by vigilance. Keep watching for damage or signs of wilting, leaf curling, etc. Identify what the issue is early and treat accordingly. Keeping the plant healthy is your best defense. If you are unsure what the problem is, contact your local Extension office and get a Master Gardener to help you.

Good Luck and Happy Gardening!
Your WSU Garfield County Master Gardeners.



Are Weeds Hiding in Your Water Garden?

https://www.nwcb.wa.gov/images/weeds/botanical_bullies.pdf

Some popular and attractive water plants are extremely invasive and damaging to our aquatic ecosystems. These plants often form dense mats of vegetation on the water surface, affecting water quality, native plants and wildlife, and recreational use. These plants can all be spread by plant or root fragments, making them extremely difficult to control. They can escape water gardens when transported by wildlife or flood waters. Never dispose of unwanted aquatic plants by releasing them

Contact the Washington State Noxious weed Control Board for more information: <https://www.nwcb.wa.gov/>

Anne Schuster, Education Specialist
(360) 725-5764

*Indicates plant on the Washington State Quarantine List. It is illegal to distribute, transport, buy, sell or offer for sale plants, plant parts or seed.



Water Hyacinth (*Eichhornia crassipes*) is considered one of the world's worst aquatic weeds.*



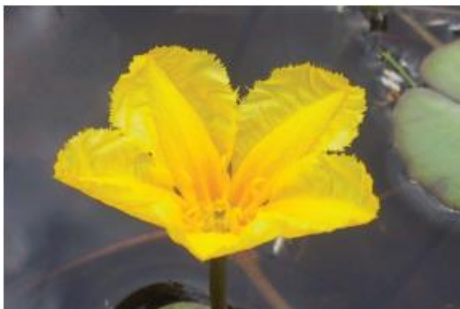
Fragrant Water Lily (*Nymphaea odorata*) is native to eastern North America but invasive in the west.



Water primrose (*Ludwigia hexapetala*) creeps from shoreline out over water.*



Giant salvinia (*Salvinia molesta*) can double its numbers in 2 to 10 days, forming 3' deep mats on the water.



Yellow floating heart (*Nymphoides peltata*) looks like a miniature water lily. Flowers are 1" in diameter.



Hydrilla (*Hydrilla verticillata*) is sometimes transported as a contaminant on water ornaments.*



Parrotfeather (*Myriophyllum aquaticum*) looks like small fir trees growing on top of the water*

Is Your Garden Harboring Botanical Bullies?

They may be pretty, but some non-native garden ornamentals are known for their habit of escaping cultivation and invading natural areas



Policeman's helmet (*impatiens glandulifera*) invades wet land and riparian areas.*



Orange Hawkweed (*Hieracium aurantiacum*) spreads by rhizomes and runners*



Herb Robert (*Geranium robertianum*) invades forest understory.



Bighead knapweed (*Centaurea macrocephala*) is also sold as lemon fluff and globe centaury.*



Butterfly bush (*Buddleja davidii*) displaces native vegetation required by butterflies for reproduction.



Yellow flag iris (*Iris pseudacorus*) invades wetlands.



Invasive cultivars of English ivy (*Hedera helix*) invades parks and forests



Garden loosestrife (*Lysimachia vulgaris*) invades wetlands.*



Clary Sage (*Salvia sclarea*) invades pastures and rangelands.*

People at Risk: Pregnant Women

<https://www.foodsafety.gov/people-at-risk/pregnant-women>

Immune system changes in pregnant women place the women themselves, their unborn children, and their newborns at increased risk of foodborne illness. These illnesses can be worse during pregnancy and may lead to miscarriage or premature delivery. Some foodborne illnesses, such as *Listeria* and *Toxoplasma gondii*, can infect the fetus even if the mother does not feel sick. This is why doctors provide pregnant women with specific guidelines about foods that they should and should not eat.

Advice Regarding Seafood

Women who are pregnant or may become pregnant—as well as breastfeeding mothers and parents of young children – should make informed choices when it comes to seafood. Fish is one source of high quality protein, minerals, and vitamins that are beneficial to overall health. However, it is important to choose fish that are safe to eat and offer health benefits.

Cook seafood thoroughly: All seafood dishes should be cooked to 145°F. Raw seafood may contain parasites or bacteria, including *Listeria*, that can make pregnant women ill and could potentially harm their babies.

Take care with smoked seafood: Refrigerated smoked seafood presents a very real threat of *Listeria*. Don't eat refrigerated smoked seafood unless it's in a cooked dish, such as a casserole, that reaches an internal temperature of 165°F to kill harmful germs.

It is OK to eat smoked seafood during pregnancy if it is canned, shelf stable or an ingredient in a casserole or other cooked dish.

Don't Drink Unpasteurized Juice or Cider

Unpasteurized juice, even fresh-squeezed juice, and cider can cause foodborne illness. These beverages have been linked to outbreaks caused by *E. coli* and other harmful germs. To prevent infection, either choose a pasteurized version or bring unpasteurized juice or cider to a rolling boil and boil for at least 1 minute before drinking.

Avoid Raw Milk, Raw Milk Soft Cheeses, and Other Raw Milk Products

Unpasteurized milk, may contain bacteria such as *Campylobacter*, *E. coli*, *Listeria*, *Salmonella* or the

bacteria that causes tuberculosis. To avoid getting these foodborne illnesses, only consume pasteurized milk and milk products, including cheese. Don't eat the soft cheeses listed below unless they're made with pasteurized milk. Make sure the label says "made with pasteurized milk." Cheese made with unpasteurized milk may contain *E. coli* or *Listeria*. Instead of eating soft cheese, eat hard cheese such as Cheddar or Swiss.

Cook Eggs Thoroughly

Undercooked eggs may contain *Salmonella*. Cook eggs until the yolks and whites are firm to kill germs. If you are making a casserole or other dish containing eggs, make sure the dish is cooked to a temperature of 160°F. Make sure that foods that contain raw or lightly cooked eggs are made only with pasteurized eggs. Do not eat foods that may contain raw eggs, Freshly made or home-made hollandaise sauce.

Don't Eat Premade Meat or Seafood Salad (Such as Deli Chicken or Tuna Salads)

Don't buy or eat premade ham salad, chicken salad, or seafood salad which may contain *Listeria*. These items are commonly found in delis.

Do Not Eat Raw Sprouts

Raw or undercooked sprouts, such as alfalfa, clover, mung bean, and radish may contain *E. coli* or *Salmonella*. Cook sprouts thoroughly.

Avoid Undercooked Meat and Poultry

All meat and poultry should be thoroughly cooked before eating. A food thermometer should be used to ensure that the meat has reached the USDA-recommended safe minimum internal temperature. Visit minimum cooking temperatures for specific details.

Following the minimum recommend internal temperature is important because meat and poultry may contain *E. coli*, *Salmonella*, *Campylobacter*, or *Toxoplasma gondii*. Freeze meat for several days at sub-zero (0 °F) temperatures before cooking to greatly reduce chance of infection. Wash cutting boards, dishes, counters and utensils with hot, soapy water after contact with raw meat, poultry, seafood, or unwashed fruits or vegetables. Wash hands with soap and water.

















Reheat Hot Dogs and Luncheon Meats

Reheat these meats to steaming hot or 165°F before eating, even though the label says precooked. These meat items may contain *Listeria* and are unsafe to eat if they have not been thoroughly reheated.

FOOD SAFETY for Baby and Me

Learn the food safety steps that will keep expecting moms safe from foodborne illness.

FOODS TO AVOID WHILE PREGNANT

Foods to Avoid	Here's Why	Foods to Eat
 Raw seafood	May contain parasites or bacteria	 Fish cooked to 145 °F
 Unpasteurized juice, cider and milk	May contain <i>E. coli</i> or <i>Listeria</i>	 Pasteurized versions are safer alternatives.
 Soft cheese and cheese made from unpasteurized milk	May contain <i>E. coli</i> or <i>Listeria</i>	 Hard cheese & cheese made with pasteurized milk
 Undercooked eggs	May contain <i>Salmonella</i>	 Eggs with firm yolks
 Premade deli salads (egg, pasta, chicken, etc.)	May contain <i>Listeria</i>	 Make these dishes at home
 Raw sprouts	May contain <i>E. coli</i> or <i>Salmonella</i>	 Cook thoroughly
 Cold hot dogs and luncheon meats	May contain <i>Listeria</i>	 Reheat to steaming hot or 165 °F
 Undercooked meat and poultry	May contain <i>E. coli</i> , <i>Salmonella</i> , <i>Campylobacter</i> , <i>Toxoplasma gondii</i>	 Meat and poultry at or above the USDA recommended internal temperature

SAFE INTERNAL COOKING TEMPERATURES

145 °F 
 Beef, pork, veal and lamb steaks, roasts and chops with a 3 min rest time
 Fish

160 °F 
 Egg dishes
 Ground beef, pork, veal and lamb

165 °F 
 Whole, ground, or pieces of chicken, turkey and duck

DANGERS OF LISTERIA AND TOXOPLASMA GONDII

Listeria monocytogenes



Pregnant women are **10 times more likely** to get Listeriosis.

Listeriosis can cause:

-  Miscarriages
-  Premature labor
-  Low-birth weight
-  Infant death

50% of Toxoplasmosis infections in the U.S. are acquired from food.

Toxoplasma gondii



Toxoplasmosis can cause babies to develop:

-  Hearing loss
-  Blindness
-  Intellectual disability
-  Brain or eye problems later in life

These foodborne illnesses can infect your baby even if you do not feel sick.

REMEMBER

CLEAN



Clean:
Wash hands and surfaces often.

SEPARATE



Separate:
Keep raw meat and poultry separate from ready-to-eat foods.

COOK



Cook:
Cook foods to the proper internal temperature.

CHILL



Chill:
Get leftovers to the fridge within 2 hours of being cooked.



For more food safety tips, go to
—FoodSafety.gov—

ADDITIONAL SOURCE: CDC



June 20-23, 2023 • Washington State University in Pullman

High-school aged teens (*those who have completed 8th grade and up*) are encouraged to attend the Washington State 4-H Teen Conference, to be held in Pullman June 20-23, 2023. This will be the first event of its type in several years and we are very excited to offer these opportunities to our WA teens.

Highlights include: touring the beautiful Pullman campus of WSU, staying in college dormitories, eating at WSU's dining center, attending workshops and tours to highlight career pathways and opportunities. Included are workshops to help youth begin preparing for college applications, scholarship applications, choosing a college major, and choosing a career pathway. We will also have opportunities for leadership development, service projects, team-building activities, and FUN!

Registration

Registration is open for all 4-H and non 4-H Youth through May 15th, 2023. Cost is \$295/youth.

Here is the registration link for Teen Conference: <https://extension.wsu.edu/4h/stc/>

If you have questions about registering for Teen Conference, contact Kelly Stewart at: kelly.a.stewart@wsu.edu or (509) 397-6290

Payments

For those registering with 4-H Online, you may complete your payment with a credit card or via check. Check should be payable to **WSU** and should be mailed to the Whitman County Extension Office at:

WSU Whitman County Extension
310 N. Main Street, Room 209
Colfax, WA 99111

Checks must be postmarked by: May 15, 2023



Bi-County 4-H Camp

June 19-23, 2023



Follow us on Facebook!

www.facebook.com/bicounty4hcamp

- Registration is open April 26th to May 26th
- Apply at 4-H Online: 4honline.com
- Campers must be enrolled in 4-H and be 8 years old by October 1st 2022
- Contact your local WSU Extension Office for details



WSU EXTENSION
Garfield County

PO Box 190
Pomeroy, WA 99347
509-843-3701

Mark Heitstuman, County Extension Director
Sheree Ledgerwood, 4H Coordinator
Monica Bartlow, Office Manager
Email: mbartlow@wsu.edu
<http://ext100.wsu.edu/Garfield>

Did You Know Kids' Science and Engineering Day ignites STEM interest?

By Patty Kieburtz, Voiland College of Engineering and Architecture
For full Article: <https://news.wsu.edu/news/2023/04/24/kids-science-and-engineering-day-ignites-stem-interest/>

Nearly 400 local elementary school kids got a taste of outer space during this year's Kids' Science and Engineering Day, an annual event that strives to foster a passion for STEM in the next generation of scientists. The event, now in its 14th year, introduces kids to scientific concepts through hands-on activities. It aims to inspire children to pursue STEM careers and develop an understanding of the role of science & engineering in their world.

The WSU chapter of the Society of Women Engineers (SWE) hosts the event with support from student clubs and local sponsorships. Charlotte Wertz, vice president of SWE, says the event is a catalyst in instilling STEM interest in the students who attended. "The STEM field is growing exponentially and always has new opportunities. Kids getting involved at a young age can lead them to be more confident and successful scientists,"

This year's space-themed event featured a collaboration with WSU's planetarium, which hosted several tours of the galaxy for kids and their parents. Nearly 30 STEM-focused student organizations and their representatives assisted with running each activity booth. Floating building blocks, solar system models and renewable energy demonstrations were among the 40 activities offered. [WSU's Energy Systems Innovation Center](#) and Frank Innovation Zone also provided learning opportunities.

The event was sponsored by Schweitzer Engineering Laboratories, ASWSU and the Commission on the Status of Women.



WSU EXTENSION
Garfield County

Washington State University helps people develop leadership skills and use research based knowledge to improve their economic status and quality of life.

Helping You Put Knowledge To Work

Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported