



# GROWING

Extending Knowledge and Changing Lives in Linn and Benton Counties

## Bee License Plate Proving a Hit with Oregonians

By Mitch Lies,  
*GROWING* Editor

Oregon's latest custom license plate, Pollinator Paradise, is attracting widespread attention from Oregonians and could soon help fund bee research.

The license plate, which is expected to be available to Oregon motorists beginning this fall, in fact was a hit from the moment it was introduced to Oregonians, said Andony Melathopoulos, pollinator health specialist for OSU Extension Service.

"When we saw the presales coming in, we were just astounded," he said. "I didn't know Oregonians were so excited about bees."

Melathopoulos said he had hoped to generate 3,000 presales, which Oregon DMV requires to launch a new license plate, within a year of presenting the opportunity to Oregon motorists. Instead, in a little over two weeks after presales opened - in record time - Oregon DMV had the required number of presales to put the plate into production.

The plate includes a drawing by Marek Stanton of Eagle Rock, Oregon, who was 15-years old at the time he created the plate, of a honeybee and a bumblebee pollinating red clover.

"People like the plate story," Melathopoulos said.

"It seems very Oregonian, like it's not just a generic abstract bee. It's a bee in an Oregon landscape that is familiar to people. And people like bees and know they are in trouble."

The idea for the plate arose in 2015 during a meeting of the Pollinator Health Task Force, a group assigned by the Oregon Legislature to look into pollinator health. It didn't gain traction, however, until 2019 when a beekeeper in Phoenix, Oregon, put up a Facebook post stating in essence: Look, there's a whale plate: We should have a bee plate.

"And we said, yeah, why don't we?" Melathopoulos said.

At that point, Sarah Kincaid, a research faculty assistant at OSU, picked up the ball and started working out the logistics of getting a new Oregon license plate off the ground. "That was about a year process," Melathopoulos said.

### The Artist

Melathopoulos got to know Stanton, the plate's artist, while engaging with him in the Extension Service's Master Melittologist (beekeeper) program.

"We were online during the pandemic, and this person named Marek asked detailed questions of bee



Marek Stanton, a bee enthusiast from Eagle Rock, Oregon, created the artwork for the Pollinator Paradise license plate. He was 15 years old at the time.



Oregon's new Pollinator Paradise license plate.

biology, and I was sure he was 65 and retired or something," Melathopoulos said. "He turned out to be this 15-year-old kid."

Melathopoulos later learned that Stanton was an illustrator and the two

started working on art for the plate.

"We said we wanted three things," Melathopoulos said. "We told Marek that there has to be a clover field in there, there has to be a honeybee and there has to be

a bumblebee."

Melathopoulos wanted clover depicted on the plate because of its importance to bee diversity, a theme he hopes resonates with Oregonians. "We are such a major clover seed producer for the nation, and the bumblebees are part of the reason for the success of that," Melathopoulos said. "But the reverse of that is true as well. The clover is why we have so many bumblebees. We really wanted to get across that connection between our bees and our crops.

"I think for most people who live in the city, they don't quite realize how important and precious this agricultural landscape is to bee diversity," he said. "We hope the plate will be an educational entry point into that and that people will recognize that we have to maintain this agricultural profitability and the success of these farmers if we're going to keep these bees doing well."

So far, Melathopoulos said the plate is accomplishing all he had hoped: the story of the Pollinator Paradise plate has been covered by multiple media outlets, including the *Oregonian* and other urban newspapers. "We have been able to go into the heart of Portland and show people

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# Who We Are

The Oregon State University Extension offices in Linn County and Benton County offer practical, lifelong learning experiences. We sponsor conferences, workshops, demonstrations, tours, and short courses. We recruit, train and manage volunteers who assist us with community outreach and education. Our Extension faculty and volunteers answer questions and give advice by phone, in person, through e-mail, and on our Websites. We provide brochures and flyers with specific information on a variety of subjects. We are funded by a cooperative partnership between Oregon State University, the U.S. Department of Agriculture, and our local counties.

## Office locations and hours

The Benton County office is located at 4077 SW Research Way in Corvallis. Office hours are 8 a.m. until 5 p.m. Monday through Friday. Telephone: 541-713-5000. <http://extension.oregonstate.edu/benton>.

The Linn County office is located at 33630 McFarland Rd (on the corner of Old Highway 34 and McFarland Road), in Tangent. Office hours are from 8 a.m. to 5 p.m., Monday through Friday. Phone 541-967-3871. <http://extension.oregonstate.edu/linn>.

## Program Staff Phone Numbers

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Benton County 4-H Youth Development and Benton County Liaison	Carolyn Ashton	541-713-5000
Benton County 4-H Youth Development	Elli Korthis	541-713-5000
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Livestock & Forages*	Shelby Filley	541-672-4461
Dairy*	Jenifer Cruickshank	971-600-1222
Small Farms*	Melissa Fery	541-730-3538
Small Farms*	Teagan Moran	541-713-5000
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\* Multi-county assignment

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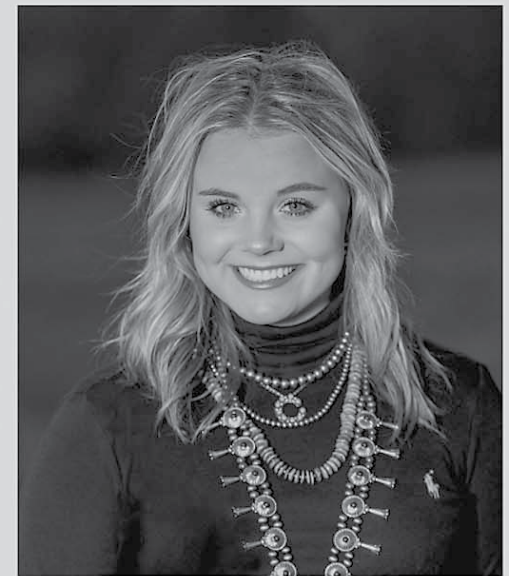
## CONGRATULATIONS TO OUR

## 2023 LCEA SCHOLARSHIP WINNERS



### Clancey Krahn

Clancey graduated from Scio High School. She will be attending Linn Benton Community College for one year and then transferring to Oklahoma State to pursue a career in agriculture. She has been active in 4-H for the past twelve years, participated in FFA, and was crowned the 2023-2024 Oregon Dairy Princess Ambassador.



### Cian McMullen

Cian graduated from Central Linn High School. He is seeking an Associate of Applied Science in Machine Tool Technology and has been accepted to attend Linn Benton Community College. Cian has been a 4-H member since 2012 with Goat Lover's and friends.

## Bee License Plate Proving a Hit with Oregonians

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that the agricultural industry really matters when it comes to bee health," Melathopoulos said.

And because most of the plate's surcharge is dedicated to bee research, the hope is the plate will provide long-term funding for honeybee research, and specifically a bee biodiversity project, for years to come.

"We are documenting these strange bees all over the place through the Oregon Bee Atlas," Melathopoulos said. "And this (funding) is going to make sure

that we hold on to that and that it grows over time."

"If we are able to bring in \$100,000 a year, that would cover the expense of a bee taxonomist and make this program robust into the future," he said.

If sales to date are any indication of what is to come, researchers should have no problem achieving their goal. The Oregon Coastal Playground license plate, for reference, which features a gray whale

and her calf, has generated approximately \$1.5 million in sales and renewals since its release in February of 2019, according to the Hatfield Marine Science Center.

The Pollinator Paradise plate will cost an extra \$40 on top of regular title, registration and plate fees, with \$35 of that going to bee research.

For the latest information on the plate or to see the research it supports, visit [www.oregonbeeplate.org](http://www.oregonbeeplate.org).



Chrissy Lucas  
541-713-5009  
chrissy.lucas@oregonstate.edu

# Groundwater Protection Education

## National Groundwater Day is September 5th

We all rely on groundwater in some way, and groundwater relies on us to protect it.

Every year we ask our communities to promote and protect their groundwater supply and this year we are urging you to focus these efforts in your own backyard.

Ask yourself, when was the last time I tested my water? What actions have I taken to ensure my family's water is safe and protected from contaminants? More than 43 million people—about 15 percent of the U.S. population—rely on domestic water wells as their source of drinking water and experts recommend having these systems inspected every year.

Protect Your Groundwater Day serves as an annual reminder for water well owners to test, tend, and treat their private water systems. NGWA encourages annual inspections of private water systems by certified water well contractors to ensure systems are operating correctly and producing safe and healthy water.

Today IS the day to take action and take the first step to protecting your groundwater!

ACT — acknowledge, consider, take action  
Use this day to begin



doing your part for protecting one of our most important natural resources — groundwater.

### 1. Acknowledge the causes of preventable groundwater contamination

#### Everyone

- These are common to households.
- Most household water use occurs in a few areas around the home.

#### If you own a water well

- Wellheads should be a safe distance from potential contamination.
- Septic system malfunctions can pollute groundwater.
- Poorly constructed or maintained wells can facilitate contamination.
- Improperly abandoned wells can lead to groundwater contamination.

### 2. Consider which apply to you

#### Everyone

- What specific hazardous substances

are in and around your home?

- Where do you and your family use the most water?

#### If you own a water well

- Is your wellhead a safe distance from possible contamination? Is your well/septic system due for an inspection?
- Are there any abandoned wells on your property?

### 3. Take action to prevent groundwater contamination

#### Everyone

- When it comes to hazardous household substances: Store them properly in a secure place Use them according to the manufacturer's recommendations Dispose of them safely
- When it comes to water conservation: Modify your water use (more water saving tips).

#### If you own a water well

- Move possible contamination sources a safe distance from the wellhead
- Get current on your septic system inspection and cleaning
- Get your annual water well system inspection
- Properly decommission any abandoned wells using a professional

## Are You Water Wise? Try a Water Use Calculator

Increasingly, Americans are becoming more aware of the importance of using water wisely. The biggest question many water users have is are they doing a good or a poor job of conserving, or not wasting water?

This is one of my favorite water use calculators to use. It is easy, free, and fun for the whole family. You can go room by room, explore your landscape, and pool or spa usage. The Water Calculator is a collaborative project of the Alliance for Water Efficiency and The Field Museum and was made possible by a grant from the Home Depot Foundation. <https://www.home-water-works.org/calculator>

### How A Water Footprint/Use Calculator Works

Home water conservation is easy once you understand how and where you can use less. The quick and easy Water Calculator shows you which water uses in your home are efficient and which are not and offers simple conservation tips that save water and energy.

The Water Calculator compares your water use to a similar average and efficient house in your region. The Water Calculator estimates the energy savings and carbon footprint of your hot water usage, and helps identify specific areas for improving overall household water efficiency. Water conservation is easy and the Water Calculator gets you started right away. Through a series of simple questions about household size, daily routines, the age of your home, and more, the interactive tool accounts for your estimated water you use from the tap.

For a deeper understanding of your water footprint, the website also has pages about all things conservation for both indoor and outdoor use.

Adapted from <https://www.home-water-works.org/calculator>

## FREE NITRATE SCREENINGS

### ALBANY FARMERS MARKET

**When:** Saturday, September 16, 9am-1pm  
SW Ellsworth St & SW 4th Ave Albany, OR 97321



### SCIO SATURDAY MARKET

**When:** Saturday, September 23, 9am-1pm  
38764 N Ash St, Scio, OR 97374



**What to Bring:** 1/2 cup of unfiltered well water in clean cup  
**Why?** Nitrate has been associated with a type of blue-baby syndrome, and there is emerging concerns about other potential health problems associated with nitrate in drinking water. An educator will be on-site to answer questions about domestic wells and septic systems.



Oregon State University  
Extension Service

**TEST TAKES ABOUT  
10 MINUTES**



## Free youth mental health first aid and QPR

For members of Linn, Benton, and Lincoln Counties, Oregon State University Center for Health Innovation recently received funding for a Mental Health Awareness Training Grant from SAMHSA (Substance Abuse and Mental Health Services Administration). A focus of the grant involves delivering Youth Mental Health First Aid and Question, Persuade, Refer (QPR) trainings to adults who work with youth in the tri-county area.

If you are unfamiliar with these trainings Youth Mental Health First Aid and QPR are evidence-based practices. Youth Mental Health First Aid (6.5-hour training) is designed for adults who regularly interact with youth to give assistance to youth who are in crisis and non-crisis situations. Topics covered include anxiety, depression, substance use, and other mental health related disorders. QPR (1.5-hour training) is a suicide prevention training focused on recognizing the signs of suicide and how to appropriately intervene and refer those who may be contemplating suicide to get help.

If you or the organization you are affiliated with are interested in us hosting a free training, please contact Heather Stewart at [heather.stewart@oregonstate.edu](mailto:heather.stewart@oregonstate.edu).

## Flourishing mental health

Theories and models help us broadly recognize how people interact with their social and physical environments. The Social-Ecological Model (SEM) shows five different levels of influence and factors related to people's health and behavior. A large body of evidence supports that, over our life course, health and well-being behaviors are more an outcome of social and physical environment opportunity as they are a product of individual choice.

When the social and environmental contexts where people live, grow, and grow older support healthy behaviors as easy and safe, by choice or chance, then people are more likely to be healthy. To make the most of time, efforts, and budgets, Extension programs need to work across levels, including collaborative policy, system, and environment (PSE) strategies that positively affect the organizational, community, and county spaces and places where people live, learn, work, and play.

To target work around behavioral health in individuals and populations, an interdisciplinary team from the University of Minnesota proposed a social ecological model for "Flourishing Mental Health and Well-Being." They contend that behavioral health interventions need to do more than aim education at



Socio-ecological model: influences of behavior

every SEM level so that mental health and well-being flourishes for all. In non-clinical practice, we understand mental health as a "self-appraisal" of individual well-being, described by positive and/or negative feeling states. Everyone has variable states of mental well-being outside of any mental health clinical illness, diagnosis, or treatment. If our individual, social, and environmental contexts support positive mental health and well-being, then we will flourish.

For more information, please visit University of Minnesota's Extension <https://mch.umn.edu/resources/mhecomodel/>

individuals. Interventions aimed to improve mental health need to influence positive changes across

Flourishing Mental Health and Well Being SEM	Examples of influences – Everyday...
Individual	<ul style="list-style-type: none"> <li>Learn something new</li> <li>Play</li> <li>Give service to others</li> <li>Socialize</li> <li>Feed your spirit</li> </ul>
Relationships	<ul style="list-style-type: none"> <li>Expanded social support systems</li> <li>Strengthen family and peer relationships</li> <li>Equal access to social determinants of health</li> </ul>
Community	<ul style="list-style-type: none"> <li>Strengthen protective health factors</li> <li>Improve safety for everyone</li> <li>Access to safety-net services and programs</li> <li>Housing stability</li> </ul>
Societal	<ul style="list-style-type: none"> <li>Policies that address oppression, racism, discrimination, marginalization</li> <li>Resource allocation to alleviate poverty</li> <li>Social media messaging</li> <li>Improve eco-system and environmental factors</li> </ul>



## Fall Is For Planting - Trees, Shrubs, Natives And More!



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# Master Food Preservers Learn New Skills

By Jennie Gilbert

The Newport OSU Extension Office hosted the 2023 Master Food Preserver (MFP) Conference on July 26. More than 60 MFP volunteers and OSU Extension staff and faculty attended the one-day conference. Attendees had choices of classes to participate in, as well as a tour of the Newport commercial fishing docks called “Shop the Docks.”

The keynote presenter, Dr. Christine DeWitt from the OSU Seafood Lab in Astoria, gave a presentation on how Oregon’s local seafood is safely processed and what to look for when buying fresh seafood and processing your own seafood at home.

One of the most popular classes was fish filleting. Chef Enrique and master fish filleter Amber from Local Ocean, a fish market and restaurant located in Newport, gave an excellent demonstration. Amber has been filleting fish for over 30 years and showed several techniques for filleting Pacific salmon, halibut, sole, and tuna. Chef Enrique explained what parts of the fish could be canned, frozen, smoked, and used to reduce waste.

Joy Waite-Cusic, associate professor from OSU Food Safety Systems, taught a fascinating class on cheese making. Participants made Mozzarella and Ricotta cheeses from milk cultures and learned the science and process behind turning milk to cheese.

Danita Macy gave a class on exploring wild edibles. She works closely with the Siletz and Grande Ronde tribes in the PNW. She explained how wild edibles are used in traditional native diet and healing.

Mark Farley hosted attendees on a tour of the commercial fishing docks at the Newport bayfront. He explained the

types of fishing boats and equipment and explained how to go about buying freshly caught seafood from the docks.

OSU Extension hosts this conference yearly for MFP volunteers and staff always in a different part of the state. It is a great opportunity for continuing education and exploring new subjects of interest.

## Interested in becoming a Master Food Preserver?

Master Food Preservers (MFPs) are trained volunteers with the OSU Extension Service that support their communities with timely and relevant information about food access, food safety, and food preservation. In addition to an intensive 7-week training course, MFPs complete 20-40 hours of service annually by conducting community education, outreach, and organizing. Types of volunteer service might include:

- Supporting food preservation workshops taught by Extension faculty,
- Answering consumer

questions about food safety on our hotline,

- Working with gleaned groups to reduce food waste on local farms,
- Helping a cultural organization to access and preserve traditional foods,
- Volunteering in a food pantry to talk with clients about cooking with unfamiliar foods

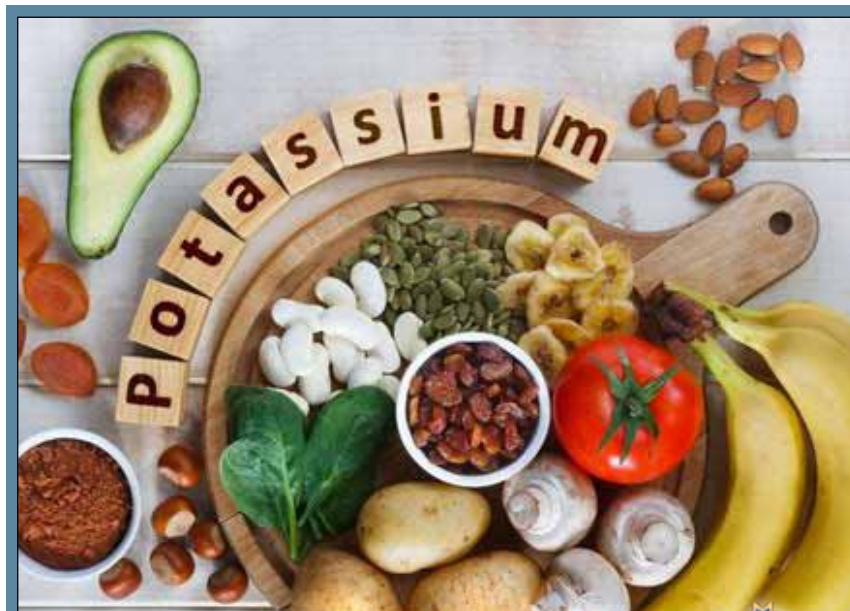
The MFP volunteer training course will be offered this fall in a hybrid format that includes online lectures, homework assignments, and in-person labs in 8 locations in western Oregon. Visit our website to find out more and to apply to join the program. <https://extension.oregonstate.edu/mfp/master-food-preserver-training-courses>



Amber and Chef Enrique demonstrate how to fillet and prepare a Pacific Salmon.



Participants had the opportunity to make cheese during the conference.



## Food Hero for Older Adults: Focus on Potassium



Visit [www.foodhero.org](http://www.foodhero.org) for Food Hero targeted information for older adults.

Potassium is a mineral needed by all the cells in your body. It helps regulate fluid balance, muscle contractions, and nerves signals. Potassium supports healthy blood pressure for reduced risk of stroke and heart disease. Eating enough potassium may improve bone health and reduce risk of kidney stones. Also good for heart health is daily physical activities, such as walking and climbing stairs. Aim for 150 minutes each week!

Eat a variety of Fruits and Vegetables. Potassium is available in many foods such as fruits and vegetables, including leafy greens and starchy vegetables, and beans, nuts, dairy foods. Foods that contain more than 200 milligrams per serving would be considered a good source.

How much potassium do you need each day?

Aim for 2,600 mg each day for adult women or 3,400 mg each day for adult men.

## Peach Yogurt Smoothie

Makes 3 cups Prep time: 10 minutes

### Ingredients

- 1 cup low-fat yogurt (plain or flavored)
- ½ cup nonfat dry milk
- ½ banana
- ¾ cup orange juice
- ½ cup frozen peaches

### Directions

1. Wash hands with soap and water.
2. Put all ingredients into a blender and blend until smooth.
3. Refrigerate leftovers within 2 hours.



Nutrition Facts	
3 servings per container	
Serving size 1 cup (200g)	
Amount per Serving	
<b>Calories</b>	<b>160</b>
% Daily Value*	
<b>Total Fat</b> 1.5g	2%
<b>Saturated Fat</b> 1g	5%
<b>Trans Fat</b> 0g	
<b>Cholesterol</b> 10mg	3%
<b>Sodium</b> 190mg	8%
<b>Total Carbohydrate</b> 26g	9%
<b>Dietary Fiber</b> 1g	4%
<b>Total Sugars</b> 23g	
<b>Includes 0g Added Sugars</b>	0%
<b>Protein</b> 10g	
<b>Vitamin D</b> 1mcg	6%
<b>Calcium</b> 318mg	25%
<b>Iron</b> 0mg	0%
<b>Potassium</b> 630mg	15%
<b>Vitamin A</b> 102mcg	11%
<b>Vitamin C</b> 54mg	60%

\*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

# Community Horticulture

## Upcoming Linn & Benton Master Gardener events

### SEPTEMBER

- 7 Gardening in the PNW series – Seed Saving, presented by Betty Goergen, noon-1 p.m., Linn County Extension office, Tangent
- 7 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville
- 12 The Healthy Gardener: Preventing Injuries and Staying Fit (Growing Oregon Gardeners) – noon-1 p.m. online. RSVP: beav.es/S68
- 12 Plant Clinic – Sweet Home Farmers Market – 2-6 p.m., Sweet Home Library – 1101 13th Ave, Sweet Home
- 14 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville
- 16 Plant Clinic – Albany Farmers Market, 9 a.m.-1 p.m., 4th & Ellsworth, Albany
- 21 Gardening in the PNW series – Bee In The Know, presented by Raneeb Webb, noon-1 p.m., Linn County Extension office, Tangent
- 21 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville



- 23 Plant Clinic – Corvallis Farmers Market, 9 a.m.-1 p.m., 1st & Jackson Street, Corvallis
- 23 Tomato Fest, 11 a.m.-4 p.m., Lebanon Senior Center, 80 Tangent Street, Lebanon
- 26 Plant Clinic – Sweet Home Farmers Market, 2-6 p.m., Sweet Home Library – 1101 13th Ave, Sweet Home

- 27 Plant Clinic – Corvallis Farmers Market, 9 a.m.-1 p.m., 1st & Jackson Street, Corvallis
- 28 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville

### OCTOBER

- 5 Gardening in the PNW series – Year-round

- Gardening, presented by Karin Magnuson, noon-1 p.m., Linn County Extension office, Tangent
- 5 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville
- 10 Picky Fruit: Establishing Blueberries in a Home Garden (Growing Oregon Gardeners) – noon-1 p.m. online. RSVP: beav.es/S68
- 12 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville
- 14 Mason Bee Cocoon Harvesting Class, Ankeny National Wildlife Refuge, Jefferson. Time TBD
- 17 Mason Bee Cocoon Harvesting Class, 10 a.m. to noon, Old Mill Center, Corvallis
- 18 Mason Bee Cocoon Harvesting Class, 10 a.m. to noon, Linn County Extension office, Tangent
- 18 Mason Bee Cocoon Harvesting Class, 2-4 p.m., Kirk Room, Brownsville Library, Brownsville
- 19 Gardening in the PNW series – Native Plants, presented by Melissa Selby, noon-1 p.m., Linn County Extension office,

- Tangent
- 19 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville
- 21 Plant Clinic – Albany Farmers Market, 9 a.m.-1 p.m., 4th & Ellsworth, Albany
- 21 Mason Bee Cocoon Harvesting Class, Lane County Extension office, Eugene. Choose one session, 10 a.m. to noon or 1:30-3:30 p.m.
- 24 Mason Bee Cocoon Harvesting Class, 6-8 p.m., Old Mill Center, Corvallis
- 26 Mason Bee Cocoon Harvesting Class, 1-3 p.m., Sweet Home Senior Center, Sweet Home
- 26 Plant Clinic – Brownsville Farmers Market, 3-6 p.m., Park Ave & Main St, Brownsville
- 28 Mason Bee Cocoon Harvesting Class, 10 a.m. to noon, Linn County Extension office, Tangent
- 28 Plant Clinic – Corvallis Farmers Market, 9 a.m.-1 p.m., 1st & Jackson Street, Corvallis



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# September-October Gardening Calendar for Western Oregon

The Oregon State University Extension Service encourages sustainable gardening practices.

We emphasize preventive pest management over reactive pest control. Identify and monitor problems before acting and opt for the least toxic approach that will remedy the problem. Favor biological control agents (predators, parasitoids) over chemical controls.

Use chemical controls only when necessary and only after thoroughly reading the pesticide label. Consider cultural first, then physical and biological controls. Choose the least-toxic options (insecticidal soaps, horticultural oils, botanical insecticides, and organic and synthetic pesticides — when used judiciously).

Trade-name products and services are mentioned as illustrations only. This does not mean that the Oregon State University Extension Service endorses these products and services or intends to discriminate against products and services not mentioned.

## SEPTEMBER

### Maintenance and clean up

- Harvest winter squash when the “ground spot” changes from white to a cream or gold color.
- Pick and store winter squash; mulch carrots, parsnips and beets for winter harvesting.
- Protect tomatoes; pick green tomatoes and ripen indoors if frost threatens.
- Reduce water on trees, shrubs and vines east of Cascades to harden them for winter.
- Stake tall flowers to keep them from blowing over in fall winds.
- Dig, clean and store tuberous begonias if frost threatens.
- Harvest potatoes when the tops die down. Store them in a dark location.
- Optimal time for establishing a new lawn is August through mid-September.
- Aerate lawns.
- Early-September: Apply 1 pound nitrogen per 1,000 square feet to lawns. Reduce risks of run-off into local waterways by not fertilizing just prior to rain, and not over-irrigating so that water runs off of lawn and onto sidewalk or street.
- Stop irrigating your lawn after Labor Day to suppress European crane fly populations.
- Recycle disease-free plant material and kitchen vegetable and fruit scraps into compost. Don't compost diseased plants unless you are using the “hot compost” method (120 degrees to 150 degrees Fahrenheit).

### Planting and propagation

- Divide peonies and iris.
- Plant or transplant woody ornamentals and mature herbaceous perennials. Fall planting of trees, shrubs and perennials can encourage healthy root growth over the winter.
- Plant daffodils, tulips and crocus for spring bloom. Work calcium and phosphorus into the soil below the bulbs at planting time. Remember when purchasing bulbs, the size of the bulb is directly correlated to the size of the flower yet to come in spring.
- Plant winter cover of annual rye or winter peas in

vegetable garden.

### Pest monitoring and management

- Apply parasitic nematodes to moist soil beneath rhododendrons and azaleas that show root weevil damage (notched leaves).
- Control slugs as necessary. Least toxic management options include barriers and traps. Baits are also available for slug control; use caution around pets. Read and follow all label directions prior to using baits, or any other chemical control.
- Monitor trailing berries for leaf and cane spot. Treat if necessary.
- As necessary, apply copper spray for peach and cherry trees.
- Spray for juniper twig blight, as necessary, after pruning away dead and infected twigs.
- Continue monitoring late-season soft fruits and berries for Spotted Wing Drosophila (SWD). If SWD are present, use an integrated and least toxic approach to manage the pests. Learn how to monitor for SWD flies and larval infestations in fruit.
- Spray susceptible varieties of potatoes and tomatoes for early and late blight.

### Indoor Gardening

- Clean houseplants, check for insects, and repot and fertilize if necessary; then bring them indoors.

## OCTOBER

### Planning

- If needed, improve soil drainage needs of lawns before rain begins.

### Maintenance and clean up

- Recycle disease-free plant material and kitchen vegetable and fruit scraps into compost. Don't compost diseased plants unless you are using the “hot compost” method (120 degrees to 150 degrees Fahrenheit).
- Drain or blow out your irrigation system, insulate valve mechanisms, in preparation of winter.
- Use newspaper or cardboard covered by mulch to discourage winter and spring annual weeds or remove a lawn area for conversion to garden beds. For conversion, work in the paper and mulch as organic matter once the lawn grass has died.
- Clean and paint greenhouses and cold frames for plant storage and winter growth.
- Harvest sunflower heads; use seed for birdseed or roast for personal use.
- Dig and store potatoes; keep in darkness, moderate humidity, temperature about 40°F. Discard unused potatoes if they sprout. Don't use as seed potatoes for next year.
- Harvest and immediately dry filberts and walnuts; dry at 95 degrees to 100 degrees Fahrenheit.
- Ripen green tomatoes indoors. Check often and discard rotting fruit.
- Harvest and store apples; keep at about 40°F, moderate humidity.
- Place mulch over roots of roses, azaleas, rhododendrons and berries for winter protection.
- Trim or stake bushy herbaceous perennials to prevent

wind damage.

- To suppress future pest problems, clean up annual flower beds by removing diseased plant materials, overwintering areas for insect pests; mulch with manure or garden compost to feed the soil and suppress weeds.
- Cover asparagus and rhubarb beds with a mulch of manure or compost.
- Clean, sharpen and oil tools and equipment before storing for winter.
- Store garden supplies and fertilizers in a safe, dry place out of reach of children.
- Prune out dead fruiting canes in raspberries.
- Harvest squash and pumpkins; keep in dry area at 55 degrees to 60 degrees Fahrenheit.
- Spade organic material and lime into garden soil, as indicated by soil test results (if necessary and the weather permits).

### Planting/Propagation

- Dig and divide rhubarb. (Should be done about every 4 years.)
- Plant garlic for harvesting next summer.
- Propagate chrysanthemums, fuchsias, and geraniums by stem cuttings.
- Save seeds from the vegetable and flower garden. Dry, date, label, and store in a cool and dry location.
- Plant ground covers and shrubs.
- Dig and store geraniums, tuberous begonias, dahlias, and gladiolas.
- Pot and store tulips and daffodils to force into early bloom, indoors, in December and January.

### Pest monitoring and management

- Remove and dispose of windfall apples that might be harboring apple maggot or codling moth larvae.
- Rake and destroy diseased leaves (apple, cherry, rose, etc.), or hot compost diseased leaves.
- Spray apple and stone fruit trees at leaf fall to prevent various fungal and bacterial diseases. For more information, see Managing Diseases and Insects in Home Orchards (PDF - EC 631).
- If moles and gophers are a problem, consider traps.
- Control fall-germinating lawn weeds while they are small. Hand weeding and weeding tools are particularly effective at this stage.
- Monitor landscape plants for problems. Don't treat unless a problem is identified.

### Houseplants and Indoor Gardening

- Early October: Reduce water, place in cool area (50-55 degrees Fahrenheit) and increase time in shade or darkness (12-14 hours) to force Christmas cactus to bloom in late December.
- Place hanging pots of fuchsias where they won't freeze. Don't cut back until spring.
- Check/treat houseplants for disease and insects before bringing indoors.



PHOTO BY SCOTT MITCHELL © OREGON STATE UNIVERSITY

Bee on common snowberry (*Symphoricarpos albus*).



PHOTO BY LAURA OGCEI

Adding plants that bloom in the fall and winter to your garden, such as witch hazel, will provide bees and other pollinators with important nourishment when sources are scarce.

## Maintain a bee-friendly garden in fall and winter, too

Many of us put much thought and planning into attracting bees to our summer flower and vegetable gardens. But come fall and winter, we often seem to forget about our buzzing friends!

The approach of fall is the perfect time to start preparing our gardens to keep the bees happy through the coming seasons. Here are a few ideas.

**Many types of bees nest in the ground and in other natural matter like hollow and pithy core twigs and stems.**

As you clean up the garden, be sure to leave

some bare and untidy areas along the garden edges. And instead of cutting those withering plants all the way

back to the ground, consider leaving the dead stems standing at least 12 inches. A bee might just make one their next home!

**Add some late and early season plants with bee-friendly flowers.**

This will provide bees and other pollinators with important nourishment when sources are scarce, and you will be rewarded as the blooms will bring some brightness to the dreary, gray Pacific Northwest winter days.

Witch hazel will add deeply fragrant, spidery

flowers of yellow and copper to your garden.

Oregon grape provides a pop of bright yellow followed by blueish-black berries.

Purple, pink, and golden heaths and heathers are bee magnets.

In the vegetable garden, leave mustard, cabbage, and other brassicas alone so they can bloom into the winter.

**Plant a cover crop in your vegetable garden.**

Consider fava beans, crimson and white clover, and hairy vetch – these cover crops are simple to grow and will make sure your garden continues to provide flowers for bees and pollinators during the off-season.

They will also improve your garden soil by

supplying rich nutrients, breaking up soil and suppressing weeds.

You will be happy that you had the foresight come spring!

**Clean up any garden debris that may harbor disease.**

If you can start off with a healthy garden next year, you will avoid the temptation to use pest control methods that may be harmful to bees and other beneficial insects.

While it is good to leave some hollow and pithy stems in place for nesting bees, other plants like tomatoes, peppers, squash and cucumbers are best removed. The same goes for fallen fruit.







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# Commercial Agriculture Dairy

We are investigating the effects of wildfire—particularly smoke—on cattle health and performance, in order to develop strategies to alleviate that stress.

We invite you to explore our website  
**[livestockwildfirehub.org](http://livestockwildfirehub.org)**  
 to learn more about this hazard and our  
 research and outreach projects.



## LIVESTOCK — AND — WILDFIRE RESEARCH GROUP

### Our team:

Amy Skibiell, Pedram  
 Rezamand, Denise Konetchy



Juliana Ranches, Jenifer  
 Cruickshank, Katie Wollstein



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 WEBSITE:



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 USDA National Institute of Food and Agriculture.

# Commercial Agriculture Small Farms

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## Farm Tour and Networking at Commonplace Farm

By Sophia Nowers and  
Teagan Moran

On July 16, OSU Extension Small Farms Program co-hosted a tour of Commonplace Farm with its owners, Jeremy and Ashli Mueller. Commonplace Farm (<https://www.commonplacefarm.com/>) is located just north of Corvallis, on 24 acres, with 13.5 acres under cultivation. Jeremy and Ashli specialize in organic salad greens, providing produce to about 50 grocery stores from Portland to Eugene.

The tour was well attended, with twenty people. Most were farmers from up and down the Willamette Valley, a couple from Washington, and there was even one attendee all the way from Vermont who had made a business trip to attend the farm tour. In addition, there was representation from agricultural organizations in the Willamette Valley who had been working with the farm, including the Benton County Soil & Water Conservation District.

Jeremy took the group on a tour of the greenhouses, the fields, and the packhouse,



Farm owner Jeremy Mueller took the group on a tour of the greenhouses, the fields, and the packhouse, retracing the journey of the greens from seed to sale.

retracing the journey of the greens from seed to sale.

Attendees asked questions about weed management, transplanting, processing and packing the greens for sale, crop rotation practices, and how to scale up a farm operation. Jeremy provided great insight into how he and Ashli have run the farm to avoid pest problems, take care of the soil, and produce delicious greens. Jeremy also offered insight into how they accessed the land, how they grew from hand cultivation to mechanization and how scaling up impacted what and how

they grow.

The tour was a great networking event, as participants shared popsicles and refreshing drinks after the tour. New connections were made, some between neighbors, and farmers getting connected to OSU Extension. If you want to learn about other tour opportunities in this region and you're not on our Small Farms mailing list, please reach out to Teagan at [Teagan.moran@oregonstate.edu](mailto:teagan.moran@oregonstate.edu) and she can put you on it!

Thank you to Commonplace Farms and Jeremy and Ashli for their time and expertise.

## Regional Farm Tour and Networking at Goodfoot Farm

October 1, 2023 2-4:30 p.m. • Kings Valley, OR

**\$5.00 - Scholarships are available, contact [Teagan.moran@oregonstate.edu](mailto:Teagan.moran@oregonstate.edu)**

Register here: <https://extension.oregonstate.edu/smallfarms/events/regional-farm-tour-networking-event-goodfoot-farm>

We will gather at 2:00 p.m. for a farm tour and networking opportunity for regional farmers and ranchers, followed by time to socialize over an optional potluck. Goodfoot Farm (<https://www.goodfootfarm.com>) is a small family farm located in the Hoskins area of Kings Valley, Oregon (20 miles NW of Corvallis). A certified Biodynamic, diversified fruit and vegetable market farm that integrates livestock. They sell through a CSA and at the Corvallis Farmers Market.



## Regional Farm Tour and Networking at County Line Flowers

September 20, 2023 10 a.m. to noon  
Cost: **\$5.00, scholarships are available**

Register here: <https://extension.oregonstate.edu/smallfarms/events/regional-farm-tour-networking-event-county-line-flowers>

This is a farm tour and networking opportunity for regional farmers and ranchers. We will gather at 10 a.m. for a farm tour, followed by time to socialize over an optional potluck. County Line Flowers is a small flower farm on 5 acres in the southern Willamette valley between Coburg and Harrisburg. They grow on only about 1/3 acre in the field and also manage a passive greenhouse where they propagate their own starts and grow some flowers in crates. They focus on growing bulbs, cool season annuals, drought tolerant summer annuals and perennials for their cut flowers. They sell mixed bouquets at the farm stand and events, bulk flowers at U-pick events, custom arrangements, and also do small weddings or events.

## Military Veteran Farm Tour at Sunwave Farms

September 29, 2023 5:30-7:30 p.m.  
Junction City, Oregon

Register here: <https://extension.oregonstate.edu/smallfarms/events/military-veteran-farm-tour-sunwave-farms>

For Veterans and/or partners to Veterans who are currently farming or hoping to! An opportunity to learn, share, and network. Come learn about Dahlias! From cuttings and seed, greenhouse and field grown. Then stay for an optional potluck and farmer to farmer networking.

Farm website: <https://www.facebook.com/SunwaveFarms/>

# Organic Grains and Pulses Field Day

By Sophia Nowers

On August 3, Organic Grains & Pulses Field Day took place at the OSU Lewis-Brown Horticultural Farm at the organic grains and pulses trial plots. There were several speakers, including Dr. Brigid Meints, an assistant professor (senior research) at OSU in the Department of Crop and Soil Science; Nick Andrews, an OSU Organic Vegetable Extension specialist; and Dr. Jim Myers, an endowed professor in the Department of Horticulture. Chefs and cooks from the Willamette Valley also attended to share their grains and pulses dishes and demonstrate varietal differences for wheat, barley, and beans.

About 50 people attended the field day, mostly organic grains and pulses farmers from Western Oregon. They



heard from Dr. Meints about her research on oats, wheat, barley, and beans and her collaborations with local chefs and growers. Some of her research includes breeding barley for organic systems and for disease resistance, and breeding beans for organic dry

bean production. Attendees also heard from Dr. Myers about his work breeding bean varieties for consumers that are resistant to mosaic virus and curly top virus, and from Andrews about the OSU Organic Extension program and its cover crop research.

At the end of the field day, everyone sampled recipes from six chefs & local food businesses that showcased grain and pulse varieties researched at the OSU test plots. There was sourdough bread, shortbread, yakisoba noodles, pasta salad with beans, and more.

Thank you to everyone who came to the field day, the speakers, cooks, and especially to Dr. Brigid Meints for organizing it! We look forward to seeing you next year.

## For the Love of Farming - Season 2!



We are excited to have released the first three episodes in Season 2 of For the Love of Farming. One of the episodes features Beth with Goodfoot Farm, you can take a listen and have an opportunity to tour their farm on October 1st! You can find Season 2 and catch up on Season 1 here: <https://podcasters.spotify.com/pod/show/fortheloveoffarming>. This series is all about connecting listeners to small scale farmers and ranchers. We come together to talk about their why, how they came to be where they are, challenges, joys, and how they keep going. We are grateful to the individuals who were generous with their time, willing to get a little personal, share their wisdom and lessons learned, and yes - their love of farming with us all. This is a project of Oregon State University Extension, Small Farms Program.



## Warm Season Forage Field Day

By Sophia Nowers

On August 10, the Warm Season Forage Field Day was held at the USDA Plant Materials Center near Corvallis, Oregon. The 15 attendees toured the trial plots of safflower, lablab, sweet blue lupin, Bermuda grass and other species while Dr. Shayan Ghajar spoke about his research. He is growing annual and perennial warm season forage species in both irrigated and dry farmed plots to test their suitability for Oregon's summers. Dr. Ghajar said that currently the number of warm season forage species used in Oregon are limited due to a lack of research. Through his work, he hopes

to expand the options for producers with forage-based operations, helping them adapt to the weather extremes and uncertainties caused by climate change. So far this season, he has experienced the most success in the trial plot where he planted all nine warm season forage species he is researching together, suggesting that species diversity increases forage yields.

Please reach out to Dr. Shayan Ghajar at [shayan.ghajar@oregonstate.edu](mailto:shayan.ghajar@oregonstate.edu) if you are a forage grower who would like to trial the forage species being researched. Thank you to Dr. Ghajar for putting on this event, and we look forward to having it again next year!

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## South Valley Field Crop Notes for September-October

### General Management

- Test soil pH and lime as needed. Watch for pH and nutrient stratification in fields that have not been tilled.
- Monitor soil test P and K levels, especially if removing straw.
- On fall planted wheat and grass seed crops, limit N and K placed with the seed to 25 lbs/ac each or less.
- Aim for timely burndown of weeds prior to planting. Efficacy of herbicides increases when plants are actively growing after some moisture (0.5-1" rain).
- Begin scouting fields for slugs, European crane fly, armyworms, cutworms, and winter grain mites once 2-3" of rain have fallen (or in irrigated fields). Armyworm chewing may appear before fall rains.
- Plan to deploy slug bait when soil is moist (>2" of rain) but before steady rains begin.

### Grass

- September 15 is the last day for broadcast application of zinc phosphide bait for vole control. Baiting down holes may continue throughout year.
- Best window for carbon seeding grass fields is late Sep - early Oct
- In established grass seed fields without irrigation, complete pre-emergence herbicide applications by early Oct for maximum effectiveness and crop safety, coinciding with the onset of fall rains. Optimum control of sprout and grass weeds occurs when 0.5 inches of moisture is received within 10 days of the herbicide application.
- Scout for adult billbugs and leaf feeding in orchard grass and control (Oct 15-30).

### Wheat

- Consider the traits you are interested in for 2023 wheat varieties. Attend the fall Extension meetings and learn more about your variety options (see inset for dates).
- Soil pH below 5.4 can limit wheat growth. Check for pH stratification if planning to no-till plant.
- Winter wheat planting should be delayed until mid-Oct to fall planting.
- Although armyworms and cutworms may appear before fall rains, scouting and management decisions should be made for these and others once 2-3 inches of rain has fallen. This provides enough moisture to penetrate the soil and "wake up" slugs to signal food is ready at the soil surface.
- Plan to deploy slug bait at this time to ensure they are not solely feeding on fall regrowth. Later applications may be more difficult and less effective as steady rains and saturated soils cause rapid bait degradation.
- Make sure you attend the OSU Fall Seed Crop and Cereal Production meetings this month to learn more about these topics and many more.

## Fall 2023 OSU Extension SEED AND CEREAL CROP PRODUCTION MEETING

### Agenda:

#### What Do We Know About Vole Control?

Christy Tanner – OSU Extension Agronomist

#### New Pests and Old, Insects To Watch For This Year

Navneet Kaur – OSU Extension Entomologist

#### Winter Wheat Varieties and Management in the Willamette Valley

Ryan Graebner – OSU Extension Cereal Scientist

#### Greenhouse Gas Emissions in Tile Drained Fields

Jennifer Moore – USDA Soil Scientist

#### Wheat Disease Management

Chris Mundt – OSU Plant Pathologist

#### Challenges With Pre-emergent Herbicides

Pete Berry – OSU Weed Scientist

2 ODA pesticide  
recertification credits  
anticipated

**Roth's Hospitality Center**  
1130 Wallace Rd, West Salem  
**Wednesday, September 13<sup>th</sup>**  
8:30 a.m. – Noon

**Central Electrical Training  
Center \*New Location!**  
33309 OR-99E, Tangent  
**Wednesday, September 13<sup>th</sup>**  
1:30 p.m. – 5:00 p.m.

**Forest Grove Elks Lodge**  
2810 Pacific Ave, Forest Grove  
**Thursday, September 14<sup>th</sup>**  
8:30 a.m. – Noon

Please register at <https://beav.es/TmK>

Need help registering? Call Laurie Gibson at 541-248-1088

Questions? Call Christy Tanner at 541-570-5642



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Extension Service

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## Harvesting Grass Seed

### By Sprout Mahoney

The Willamette Valley is a major producer of grass seed which gets sold throughout

the US and throughout the world. Our climate is great for production of cool season grasses because of both our

mild wet winters and dry summers. The cool rainy season allows the grasses to grow well

*Continued on Page 15*



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# Commercial Agriculture Tree and Small Fruit

## Fall Hazelnut, Apple and Pear Pest Management

With summer coming to an end, it is time to start looking towards some hazelnut and tree fruit management practices for the fall. Late September is the beginning of harvest season for hazelnuts. To reduce mold, harvest before the fall rains arrive if possible and keep the totes dry by covering or shielding them from the rain. Bacterial blight (*Xanthomonas arboricola* pv. *corylina*) and Eastern Filbert Blight (*Anisogramma anomala*) should also be managed in the fall, following harvest. Young hazelnut trees are particularly susceptible to bacterial blight, which if severe enough can girdle and kill young trees. In the spring, leaves develop small round or angular reddish-brown spots. Infected buds may turn brown and fail to produce leaves; and dark green lesions, which later turn reddish-brown, may appear on current-seasons shoots. Newly planted and young drought stressed trees are particularly susceptible, so irrigating young trees in the summer is recommended. In the fall, trees should be sprayed with copper following harvest and prior to the onset of fall rains. Copper does not have a curative effect, but it can help prevent spread of the disease.

For those that grow cultivars that are susceptible to eastern filbert blight (EFB), fall and winter is the time to scout orchards for infected branches with cankers and dead leaves on them. Infected wood should be pruned out at least one to three feet below the cankers. It is best to remove severely infected trees. Destroy pruned



Branch dieback in hazelnut orchard infested with EFB.

out and infected wood by burning or chipping them before budbreak in the spring. For those planting new orchards in the fall, select and plant EFB resistant cultivars. For a list of cultivar susceptibility to EFB, refer to <https://pnwhandbooks.org/plantdisease/cultivar-tables/hazelnut-cultivar-susceptibility>. For more on hazelnut pest management, refer to the OSU Extension publication EM 8328, which is available online or in app form at <https://extension.oregonstate.edu/catalog/pub/em-8328-2023-hazelnut-pest-management-guide-willamette-valley>.

Fall is also an important time for managing two important pests of apple and pear trees, anthracnose and scab. If you grow apples or pears, then you have probably seen scab. In apples, scab (*Venturia inaequalis*) causes brown spots on the leaves and fruits. The spots can vary in

size, from a small pinpoint to larger spots that develop a cork-like appearance. Scab overwinters in fallen leaves and fruit. Good sanitation is important to managing scab, rake up and remove fallen leaves and fruit. Anthracnose (*Cryptosporiopsis curvispora*, sexual: *Neofabraea malicorticis*) is another common fungal disease of apples and pear that causes cankers on stems and branches, and post-harvest fruit rot (also known as Bull's-eye rot). Infection occurs in the fall when fall rains spread the fungal spores to young limbs and twigs, though the cankers won't appear until the following spring. To prevent the spread of the disease, spray a fixed copper before the onset of fall rains, and prune out and destroy infected branches and rotted or mummified fruit from the trees.

Pruning is an important measure for reducing disease presence in most orchards. It is

ideally done in the dormant season before bud break to remove congestion and increase air flow which speeds drying of leaves and fruit after spring rains.

### Picking and Storing Apples and Pears

If you grow apples, you are probably watching them size up on the tree and wondering if they are ready for picking. Some varieties, such as Gravenstein and Chehalis, mature and ripen up in late August, whereas other varieties, such as Jonagold and Liberty, mature in September and October. If you are uncertain of the variety you have, or are trying to figure out if the fruit is ripe, there are some indicators of ripeness that you can look for. Obviously, taste is one way to determine ripeness, but color can be another indicator. A yellow variety will turn from green to yellow once it is mature. For reddish varieties

or those with red stripes, the non-red portion of the fruit will generally change from green to yellowish when mature. Another indicator is how easily the fruit separates from the tree, with mature varieties separating easily. When harvesting apples, twist the fruit upward with a rotating motion instead of pulling downward. Finally, when a few apples begin dropping to the ground, the apples on the tree are nearly mature.

Unlike apples, pears generally don't ripen well while still on the tree, and some varieties, such as Anjou and Bosc, require cold storage in order to ripen properly. For more information about harvesting apples and pears, you can access a publication titled "Picking and Storing Apples and Pears" from the OSU Extension Catalog online at <http://catalog.extension.oregonstate.edu>.



Scab lesions on apples



## Protect Yourself from Wildfire Smoke

By Carrie Berger, OSU Extension Fire Program

Adapted from: EM 9404

Increasingly often, smoke from regional wildfires creates bad air quality during the summer and fall in the Willamette Valley. You can take simple steps now to protect yourself and your family from wildfire smoke.

Wildfire smoke is a mix of gases, water vapor, and small particles from burning trees, plants, buildings, and other material. Breathing in wildfire smoke can hurt your health. People with asthma, lung disease, or heart disease; and older adults, children, and pregnant women may be especially sensitive to the negative effects of smoke.

### How can wildfire smoke affect you?

Particulate matter (PM) is a mix of small solid particles and liquid droplets that are in the air we breathe. Some particulate matter like smoke, dust, or dirt is large enough to see. Fine particulate matter (referred to as “PM2.5”) is so small – narrower than a single hair from your head – that they pass through the nose and throat and enter the lungs. Once inhaled, these particles can affect the

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Figure 1: Air Quality Index, and the different levels of health concern. Credit: AirNow, <https://www.airnow.gov/aqi/aqi-basics/>

lungs and heart and cause serious health effects.

Wildfire smoke can also cause the following health effects:

- Watery or dry eyes
- Persistent cough, phlegm, wheeze, scratchy throat, or irritated sinuses
- Headaches
- Fatigue
- Mental health related effects like depression or anxiety
- Shortness of breath, asthma attack or lung irritation
- Irregular heartbeat or chest pain
- Heart attacks

If you experience severe symptoms, like difficulty breathing or chest pain, call 911 or go to the hospital emergency room immediately.

### How do you know when there is hazardous air quality?

The Air Quality Index is a tool for reporting daily air quality. AQI values range from 0 to 500. The higher the number, the greater the level of air pollution and the greater the health concern. When AQI values are above 100, air quality is unhealthy for sensitive groups. It is unhealthy for everyone when it is above

150. It’s a good idea to stay informed about air quality levels during a wildfire to limit your exposure to smoke. If you have a smartphone or a tablet you can download the free OregonAir app, which uses smiling or frowning face emojis to show air quality across the state.

### How can you reduce health risks from wildfire smoke?

To protect yourself from smoke in the air, try to stay indoors and minimize outdoor activity as much as possible when the air quality is poor.

At home, use an

air cleaner like a high efficiency particulate air (HEPA) filter. If a HEPA filter is not an option, you might consider making a “do it yourself” (DIY) air filter. You can make a DIY air filter by attaching a furnace filter to a box fan, as shown here. For safety reasons, turn off the DIY filter when you leave your home.

If you are among those that are particularly sensitive to the effects of smoke, you should first check with your doctor or nurse about what you need to do to protect yourself when there is smoke in the air from wildfires.

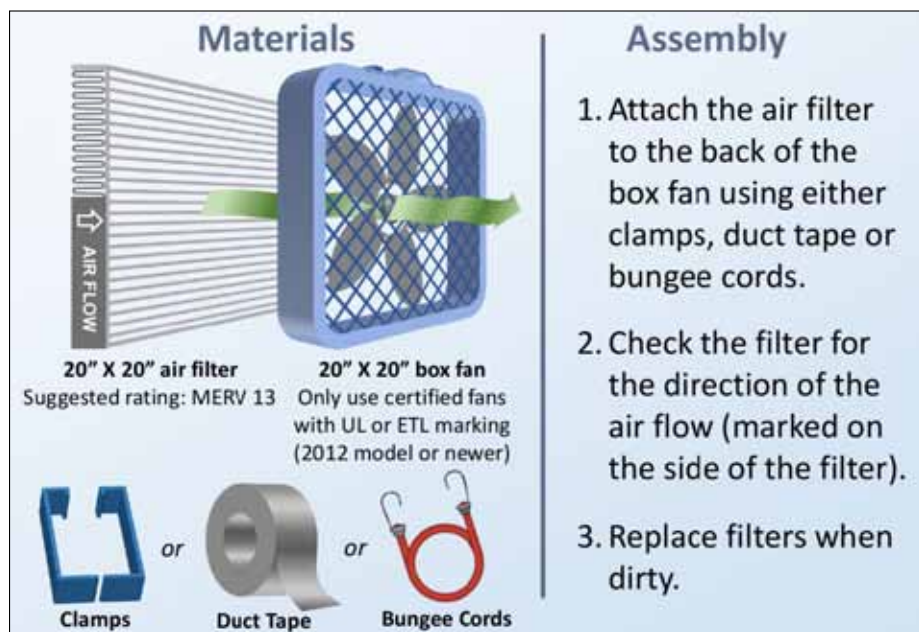


Figure 2: Credit: AirNow: <https://www.airnow.gov/wildfires/be-smoke-ready/>

Consider setting up a cleaner air space where you live by following these general guidelines:

- Choose a room to be your cleaner air space.
- Prevent smoke from entering the room (close the windows)
- Keep the room cool by using fans or an air conditioner.
- Filter the air in the room with an air cleaner or DIY air filter
- Avoid activities in your home that create smoke or other particles (like burning candles, vacuuming, frying food, etc.)
- Spend as much time as possible in the designated room.

There are also cleaner air shelters and spaces in some communities such as churches and libraries if you cannot create a cleaner air space in your home.

Do you work outdoors?

If so, it is a good idea to understand your employee rights if you will potentially be exposed to unhealthy or hazardous levels of wildfire smoke. The Occupational Safety and Health Administration (OSHA) requires employers to provide training and approved filtering facepiece respirators.

### Want to learn more?

Consider checking out these resources if you want to take a deeper dive into wildfire smoke preparedness.

- Frequently asked questions: Wildfire smoke and your health, <https://sharedsystems.dhsoha.state.or.us/DHSForms/Served//le8626.pdf>
- Oregon Smoke Information blog in multiple languages, <https://www.oregonsmoke.org/>
- Air Quality Index (AQI) Basics, <https://oraqi.deq.state.or.us/home/text/80>
- Air quality monitoring map, <https://oraqi.deq.state.or.us/home/map>
- Do it yourself (DIY) air filter, <https://www.oregon.gov/oha/PH/PREPAREDNESS/PREPARE/Documents/Fact-Sheet-DIY-Air-Filter.pdf>
- Key requirements: Oregon OSHA's permanent rules for protection from wildfire smoke, <https://osha.oregon.gov/OSHAPubs/factsheets/fs92.pdf>

## Harvesting Grass Seed

*Continued from Page 12*

while the summer heat helps the seed to dry quickly so they do not have to be dried after harvest.

Summertime brings the harvest and we see a lot of activity in local grass fields.

Harvest typically takes place in July. When the grower determines that the seed is at the right maturity and moisture content, the grass will be swathed (cut and piled into long rows called swathes, or windrows). The decision of when to swath is important. Since a field will not be perfectly uniform, the swathing time is a trade-off between giving younger seeds more time to mature and not losing the older, drier seeds to shattering. If the mature seeds shatter out of their protective spikelets then there can be extensive loss of yield as the seeds are lost on the ground.

The grass is left to dry out in the field in the swathes. Proper drying is essential to reduce moisture content and ensure seed quality. Once the grass is sufficiently dry it is combined. A modern combine is designed to perform multiple harvest operations. In the case of grass seed these are the steps of threshing and winnowing: removing the seeds from the straw and then from the chaff and other debris. After combining, the seed still has impurities such as small pieces of plant material, soil, weed seeds and immature or damaged seeds which are unlikely to germinate. The grass seeds will go through a cleaning process to remove these impurities, debris, and unwanted material.

The cleaning step is crucial for the purity and quality of the grass seed as a product. The goal is a high-quality seed that is free of noxious weed, of uniform size, and in viable condition for planting. There are many types of seed-cleaning machines, and which are used will depend on what crop is being cleaned as well as the presence and quantity of other seeds in the mixture. Generally, an Air Screen Cleaner is used as a first step followed by separators to finish the job. This device will use fans and screens to separate seed based on size, shape, or density. Chaff and light seed that may be broken or immature will be blown off while seeds of the wrong shape or size, such as those from weeds, will be screened out.



A modern combine is designed to perform multiple harvest operations. In the case of grass seed these are the steps of threshing and winnowing: removing the seeds from the straw and then from the chaff and other debris.



An Air Screen Cleaner will use fans and screens to separate seed based on size, shape, or density. Chaff and light seed that may be broken or immature will be blown off while seeds of the wrong shape or size, such as those from weeds, will be screened out.



OSU's Seed Lab conducts tests for pests and disease as well as tests for vigor, genetic traits, variety identification, and more. Testing is a prerequisite for seed certification, a requirement for selling seeds to some countries.

When the seed has been cleaned and sorted it can then be tested for germination and purity, including the amount of inert material such as soil, and weed seed. The seed is packaged into bags or containers for storage or sale. Proper conditions including temperature and humidity are maintained to preserve the seed's viability. Before being sold the seed might also undergo quality testing to ensure it meets industry standards and regulatory requirements. For example, OSU's Seed Lab conducts tests for pests and disease as well as tests for vigor, genetic traits, variety identification, and more. Testing is a prerequisite for seed certification, a requirement for selling seeds to some countries.

# Benton County 4-H Youth Development

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## Horse Fair

The Benton County 4-H Horse Fair took place on July 13-16. 4-H horse project members demonstrated their skills and knowledge of riding and showing their horses (and mule).



Horse judge chats with 4-H contestant



Horse Knowledge Team State Champions recognized



Members and their horses cooling off under misters

## 2023 Benton County 4-H Shows

The "Ridin' Rockin' & Ropin" Benton County Fair was four days jam packed full of fun!

4-H members showcased the projects that they worked so hard on throughout the year. Members were able to show their beef, sheep, swine, goats, rabbits, poultry, pigeons, cabbies, dogs, and family consumer science, art, and science projects to

judges. Thanks to all of the members, leaders and 4-H

families for making 2023 a terrific Fair.



Large Animal Master Showmanship participants



Benton County Fair Rodeo Queen Cheyanne Phillips greets the public



4-H members host the Information Booth



4-H members watch other shows



Parents and faculty participate in adult showmanship



Members participating in herdsmanship



Members try their skills on the agility course



# 2023 Lee Allen Memorial Youth Market Auction

The Lee Allen Memorial Youth Market Auction was held on Saturday August 5.

Auction buyers spent over \$1,015,000 to support 237 participating 4-H members! These buyers purchased prize winning livestock raised by Benton County 4-H members. The buyers are supporting youth who are learning to produce high quality food for their tables. Being responsible, engaging in financial obligations and learning how to manage their own business operations only scratch the surface of the educational benefits Benton County 4-H members receive from participating in the program.



Champion Market Goat sells in auction

## 4-H Open House - Discover Yourself in 4-H

The Benton County 4-H Open House will take place on Thursday, October 5 at the Benton County Fairgrounds. 4-H is America's largest youth development organization serving over 6.5 million youth annually. Benton County 4-H serves over 3,000 youth annually through community clubs, school programs and camps. 4-H empowers youth with hands-on learning experiences to help them grow and thrive. By creating a safe and welcoming environment, youth develop

the skills needed to make a positive impact on the world around them.

Members are guided by caring adult volunteer mentors to lead hands-on projects in areas such as science, health, agriculture, and citizenship.

The 4-H year begins October 1st! Youth who are 9-19 years of age as of September 1, 2023 are eligible to join 4-H. We also offer a 4-H Cloverbud program for children 5-8 years old as of September 1, 2023. Cloverbud members explore a variety

of topics, while developing social skills in a non-competitive environment.

Join us Thursday, October 5, 6:30 p.m., at the Benton County Fairgrounds Solar Building for our annual 4-H Open House to learn about the Benton County 4-H Program, meet our members & volunteers and explore the majority of the projects available. If you cannot attend, but would like more information, please visit our website, or contact our Benton Extension office.

## Papa's Pizza 4-H Fundraiser - Wednesday, October 11

An easy way to help raise funds for your Benton County 4-H Program is to go and dine in or takeout food from Papa's Pizza in Corvallis on Wednesday, October 11. All

you have to do is provide the cashier with the Benton County 4-H Papa's Pizza

fundraiser flyer, and Papa's will donate 50 percent of the proceeds! Please visit



our website or contact our Benton Extension office to receive a flyer. Thanks in advance for your support!

# Volunteer Today. Inspire for a Lifetime.

4-H volunteers are the key to a successful 4-H program and create positive life-changing experiences for youth. 4-H offers endless opportunities to volunteer. Most volunteers commit to on-going service as leaders, while others may assist with a single event or activity. Oregon has more than 6,000 adult and teen volunteers who offer their time and talents to our program. Benton County 4-H is home to over 160 of those volunteers.

We are actively searching for adults who want to share their time and talents with our members! New volunteers receive a comprehensive orientation and training specific to their role, no knowledge or experience is required. Discover how you can become involved and make a difference for the youth in your community.

There will be several upcoming volunteer trainings this fall. The exact dates will be announced soon. If you are interested in learning more about how to get involved, please visit our website, or contact our Benton Extension office.

## National Arts in Education Week - September 10-16

Whether you are a student, educator, parent, or principal, you can find a way to celebrate the arts during National Arts in Education Week. This week was designated by Congress in 2010 and showcases the transformative power of the arts and how they can be used in educational settings to benefit youth.

The Communications and Expressive Arts Working Group from the national 4-H professional association has created "Grab-N-Go" lessons for the public to use and encourages anyone accessing the resources to share them with others. Anyone is welcome to use these resources, not just during the national week. These lessons were created by 4-H professionals from around the country and incorporate a variety of other subjects.



- **Geometry in Art Design:** <https://4hartshowcase.wordpress.com/2017/09/28/geometry-in-art-design/>
- **Communication Through Photography:** <https://4hartshowcase.wordpress.com/2018/05/25/what-do-you-see-photography/>
- **Artist Trading Cards:** <https://4hartshowcase.wordpress.com/2020/05/21/art-trading-cards/>
- **Virtual Museum Tour:** <https://www.louvre.fr/en/online-tours>
- **Journaling Art:** <https://4hartshowcase.wordpress.com/2018/05/25/express-yourself-journaling/>
- **Art in Exercise:** <https://4hartshowcase.wordpress.com/2018/05/25/measure-make-and-move/>

# Linn County 4-H Youth Development

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## Simonis G.R.I.T. Award

This is an award in memory of Caleb and Shelbi Simonis whose love for all animals showed every day. These siblings lost their life tragically in a car accident in 2020. Between these two outstanding youth we saw Mules, mini donkeys, swine, sheep, and beef at our Linn County fair.



Caylee Arp

This award is to be determined by leaders and presented during the awards ceremony during livestock fair and horse fair. This award is given to a 4-H'er that shows passion and GRIT. Someone who does the best they can with what they have. Willing to put in the time and effort rain or shine, tears of joy or frustration. Willing to help others, and above all, practice amazing animal husbandry and compassion. It's not about what they have or have given to them, it is about what the youth does with what they have available.



Dixon Willard

The determining factors to look for when awarding this award is what Shelbi and Caleb brought with them to fair and learned at home.

### G.R.I.T. Guts - Resilience - Integrity - Tenacity

- **Guts**, the capacity to process courage.
- **Resilience**, the capacity to recover quickly from difficulties, toughness.
- **Integrity**, the quality of being honest and having strong moral principles; the state of being whole and undivided.
- **Tenacity**, the quality, or fact of being very determined, persistence.

For 2023, two G.R.I.T. awards were handed out. During the livestock fair Dixon Willard was the recipient. Dixon had a positive attitude the entire fair even when things were difficult and uncomfortable. He was a first-year member that wasn't sure what to expect when he got to fair. He came in with a broken leg and a crutch and found himself in a pen towards the back of the barn. Dixon took it in stride and even though we knew he was in pain, he showed up every time there was a call for volunteers. Everything he did, he did with a smile on his face and a can-do attitude. He even received a call back in showmanship!

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## All Things Fair 2023

The 2023 fair season has come to an end and there was lots of fun had by all. During the Linn County Fair, we had 561 exhibitors participating between 4-H and FFA – exhibiting everything from cavies to cattle, jam to photography, and lots of things in between. Even though fair brings with it competition, our goal is always to build relationships. Youth got many opportunities to do that as they played cards in the tack

areas, participated in lawn games set up each evening by our 4-H ambassadors, or put together teams for the Barnyard Olympics and Milk chug-a-lug.

A special thanks goes out to all the volunteers that made the fair such a success. We appreciate the volunteers that showed up to set up livestock pens before fair, the superintendents that worked diligently to organize and run the shows, and the Linn County

Youth Livestock Auction Committee that hosted a phenomenal auction for the exhibitors.

Our horse members and dog members got to have time in the spotlight after the Linn County Fair. Horse fair was held July 31 through August 2, at the Linn County Fairgrounds. Our dog members joined in with the Benton County 4-H dog members to compete during the Benton County Fair August 3 and 4.



# 4-H Club Leader Extraordinaire - Heather Loveall

By Jody Hill, OSU Linn County Extension 4-H staff

**What does it take to be a club leader in 4-H? Heather Loveall, leader of not one but two 4-H clubs and chair for the Horse Leadership Committee and 4-H Executive Counsel in Linn County, talks about her experiences.**

**Linn County 4-H:** How did you become involved in 4H?

**Heather:** It all started with my love for horses. My parents had me join a 4-H club when I was 5 years old. There used to be a one-day show during the fair for what is now called Cloverbuds. We got to ride with the club all year long. Then nine years of regular 4-H. I was a junior leader and a teen leader during that time. Went to college for a couple years and came back to become a leader.

**Linn County 4-H:** What makes you passionate about 4H?

**Heather:** The amazing friendships that last a lifetime – the amazing connections I still have today. 4-H has opportunities to learn an abundance of skills such as record keeping, public speaking, hands-on skills, etc. 4-H has shaped me into the person I am. I want the youth to experience all the same things in their own way.

**Linn County 4-H:** You've worn a lot of hats through your

years in 4H. What drives you to try new roles?

**Heather:** Being voluntold. Haha. I try to fill in where there is a need when it's something I can do.

**Linn County 4-H:** Horse fair is sometimes eclipsed by the County Fair. As a participant of both, how do you feel about that? Is there an anecdote from either fair you would like to share?

**Heather:** That is a tough one. A lot of horse youth cross over to livestock. Both fairs are super busy on their own. When together it was hard to get the 4-Hers in classes they needed and be able to fit their animals. So, in that sense it is nice to be separated. On the other hand, I wish the equine only 4-Hers could experience the full effect of fair.

**Linn County 4-H:** The 4H Program strives to promote leadership and community involvement in our members. In what ways do you facilitate this goal?

**Heather:** I try and encourage anyone and everyone to be a leader or help in clinic. Many people I come across have talents that would be an asset to the 4-H youth. Even just to help educate the general public about all the areas! Over half are perfect for urban living. My son started with a pocket pet, drop cookies and Legos before moving into horses, pigs, and



meat goats.

**Linn County 4-H:** Is there a moment that you can recall where you felt you had truly made an impact on a child through 4H? If so, describe the incident.

**Heather:** It is all the everyday things, the youth's achievements I see big and small. I love seeing goals achieved. A recent moment was when a former youth texted me asking if she could bounce some things off me because she felt I was the closest person to a mom she has had. I felt very blessed.

**Linn County 4-H:** Would you recommend becoming a volunteer to others? Why or why not?

**Heather:** Absolutely!! The question is why not? There is no reason not to. Something as simple as volunteering your spot in a checkout line can make someone's day. The best part about doing volunteer work is that it can be as simple as a few moments of your time. I honor everyone who has given to me over the years every time I give back.

## 4-H Fair t-shirt design winner

New for 2023 was the opportunity for all 4-H and FFA youth attending Linn County Fair to enter a t-shirt design contest. The work was required to be original with no tracing or copying. The winner met with a professional designer from NoDinx to help create the final image that was then printed on the t-shirts generously donated by Coastal Farm. A big thank you to Coastal Farm and NoDinx for this opportunity! Congratulations to Jodi Jorgensen for her winning design.



Jodi Jorgensen and family proudly wearing t-shirts with Jodi's winning design.

## Empowering Education Through 4-H Classroom Embryology Program

Igniting curiosity and fostering hands-on learning, the Linn County 4-H Classroom Embryology project is back for the 2023-2024 school year! This project offers students a captivating journey into the world of life sciences, as they witness the mesmerizing transformation of eggs into living organisms right in their classrooms. Participating classrooms stand to gain a multitude of advantages from the Embryology Program.

Firstly, it nurtures a profound understanding of the life cycle, as students follow the miraculous transformation from embryo to chick, gaining insights into the intricate processes of growth and development. Additionally, the program instills a sense of responsibility and empathy, as students take on the role of caretakers, tending to the developing embryos with care and dedication. This firsthand experience connects theory with practice, fostering critical thinking and problem-solving skills that extend beyond the realms of science. Moreover, the Embryology Program aligns with the Next Generation Science Standards, integrating seamlessly with classroom curricula. By engaging in authentic scientific practices and cross-disciplinary learning, students explore concepts like inheritance, variation, and adaptation, while refining their abilities to analyze data and construct scientific explanations. As educator trainings approach, the prospects for invigorating classroom experiences and empowering future scientists through the Embryology Program are boundless.

Educators interested in participating in the project are invited to attend our free training on Tuesday, October 17 at 5:30 p.m., or Saturday, October 28 at 10a.m. Trainings are virtual and open to all educators.

Register online for the training at: <https://beav.es/TmB>.

## Unleash Curiosity with the 4-H Cloverbud Explorers Program

Calling all young adventurers and inquisitive minds! The 4-H Cloverbud Explorers program is gearing up to embark on a journey of discovery and wonder. Designed for children aged 5 to 8, this innovative program offers a dynamic platform for young learners to dive into interactive activities that

foster creativity, teamwork, and a love for learning. Mark your calendars for the inaugural meeting on October 3, where the exploration begins!

The Cloverbud Explorers program is a gateway to exciting experiences tailored to the unique interests of our youngest learners. From

hands-on projects that spark imagination to cooperative games that cultivate essential social skills, every activity is thoughtfully designed to make learning a joyful adventure. With the first meeting just around the corner on October 3, young participants can anticipate

*Continued on Page 20*

**Benton County and Linn County Extension programs may offer opportunities that are only open to the residents of their respective counties. Please check with your county Extension Office if you have any questions about participation eligibility for specific programs.**

## Linn County 4-H Seeks New Volunteers as Program Continues to Expand

The Linn County 4-H program, known for its transformative impact on youth development, has been experiencing remarkable growth over the last two years and is now seeking dedicated volunteers. With an ever-increasing number of young participants, aged 5 to 18, the program is in need of individuals who are passionate about guiding and nurturing the next generation. Volunteers play a pivotal role in shaping the futures of these budding talents by offering mentorship, expertise, and support across a range of activities.

Specifically, the 4-H program in Linn County is actively searching for volunteers in various capacities. From the vibrant energy of the Cloverbuds group, designed for youth ages 5 to 8, to the dynamic arena of shooting sports and the captivating world of static projects, there's a role to suit every interest and skillset. Linn County's 4-H program prides itself on offering an array of project areas, including livestock, small animals, natural science, expressive arts, food, and consumer sciences, sewing, and communications, among others. This diverse range of opportunities ensures that both volunteers and participants can find a niche that resonates with their passions.

As the enrollment period for 4-H starts on October 1, the program is extending an open invitation to new members and volunteers alike. Prospective members can fill out a new member interest form on our website, which will then help 4-H staff place the child in a club. Interested volunteers can fill out a 4-H Volunteer Application and send it to our office. By becoming a 4-H volunteer, individuals not only contribute to their local community's growth and development but also gain the satisfaction of making a lasting impact on the lives of young learners. As the program continues to flourish, the collective efforts of dedicated volunteers will undoubtedly serve as the cornerstone of its success.

For more information, please reach out to Andrea Leao or Abby Johnson.



## Simonis G.R.I.T. Award

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During horse fair, Caylee Arp was awarded the G.R.I.T. award. She has spent countless hours working with a rescue horse for her fair project and was looking forward to bringing her to fair to show off how far they have come together. However, a couple of weeks before horse fair Caylee got a surprise. Her horse had a baby and that meant she wasn't going to be able to show. So, instead of showing at fair Caylee showed up and volunteered to help with every part of the fair. She scooped poop, helped set up the arena, and even worked with the judges and did scribing for them, all with a smile on her face.

# EMBRYOLOGY IN THE CLASSROOM

**23-24 Teacher Training!**

Over a 21 day period your classroom can incubate and hatch chicken eggs! This program allows youth of all ages to investigate the life cycle of a chicken and participate in hands-on learning on topics including animal needs, genetics, technology, physiology, record keeping, and much more!

This program aligns with both Next Generation Science Standards and Common Core standards. Additionally, we have successfully adapted this program for classes ranging from K - 12th, and would love to bring it to your school!

## REGISTER TODAY:

<https://beav.es/TmB>

- Tuesday, October 17: 5:30pm ZOOM Training
- Saturday, October 28: 10:00am ZOOM Training

**What You Receive:**

For a \$25 fee your classroom will receive the following for the duration of this project:

- Incubator, automatic egg turner, related supplies
- Fertile chicken eggs
- Educational materials and lesson plans
- Record keeping Supplies
- Support throughout the incubation and hatching

**Oregon State University**

Contact your local 4-H office for information:  
Linn --- [Abby.Johnson@oregonstate.edu](mailto:Abby.Johnson@oregonstate.edu)  
Marion --- [Kelly.Noack@oregonstate.edu](mailto:Kelly.Noack@oregonstate.edu)

OSU EXTENSION SERVICE PROHIBITS DISCRIMINATION IN ALL ITS PROGRAMS, SERVICES, ACTIVITIES, AND MATERIALS.

## Unleash Curiosity with the 4-H Cloverbud Explorers Program

*Continued from Page 19*

a vibrant space where friendships flourish, and young minds are nurtured. Through fun and engaging activities, the program lays the foundation for a lifelong love of learning while providing a safe and

supportive environment where Cloverbuds can flourish. Don't miss out on this opportunity to unleash curiosity and embark on a journey of exploration with the 4-H Cloverbud Explorers program!

Cloverbud Explorers is open to all youth, ages 5-8 years old. Register online at: <https://beav.es/TsE>

If the workshop fills, a second workshop will be scheduled for participants on the wait list.