OSU Small Farms Program Among Nation’s Best

By Mitch Lies, GROWING Editor

Thirteen years ago, Garry Stephenson, then the sole Oregon State University Extension agent serving small farms, saw an opportunity to expand the university’s commitment to small farms.

“There was a moment, and these moments don’t occur very often, where there was some extra money in the Extension Service that had to be spent, so I stepped up and said, I have an idea,” said Stephenson, now the director of the OSU Small Farms Program.

Today Stephenson and others refer to that moment in 2005 as “the big bang,” and understandably so. Three Extension agents joined Stephenson in serving small farms that year: one in the north Willamette Valley, one in the mid-valley and one in Southern Oregon. Two more were added the following year. With 15 university personnel working on small farms in some capacity, including 11 full-time-equivalent positions, and with a nationally recognized small farms conference, OSU’s Small Farms Program today rivals any in the country.

Stephenson said the program has grown largely because regional administrators have recognized the need for small farms agents and because the program delivers.

“The performance of the program was such that regional (Extension) administrators ... saw the impact the program could have, so they wanted to add it. And that is related to a recognition that the Small Farms Program is a team, so when someone adds a small farms position to their region, they don’t just get a person, they get everybody that is in the program, plus they get a great quarterly newsletter that is nationally recognized, plus they get a great website, plus they get a nationally recognized conference. It comes as a package,” he said.

To date, 18 of Oregon’s 36 counties participate in OSU’s Small Farms Program, the majority of which are in Western and Central Oregon.

The program provides multiple benefits for a wide variety of farm communities, Stephenson said, including everything from helping small-scale commercial farmers improve their bottom line to helping landowners, who have off-farm jobs and aren’t looking to earn a living off their land, manage their holdings.

“There are a lot of different kinds of small farms in Oregon,” said Amy Garrett, small farms agent for Benton, Linn and Lane counties. “There are non-commercial small farmers that are homesteading, people farming part-time that have off-farm income, which is the majority of small farms, and there are some fulltime farmers. There is a full spectrum and a lot of interest in the sustainability and the future of farming.”

The program offers several classes to the general public, including a Living on the Land series, which is designed for landowners new to managing small-scale farms. Class topics for the series might include weed management, soil health, managing water resources and pasture and grazing management. Courses for more advanced farmers might look at recordkeeping or designing financial strategies for tightening up a business model.

“We have worked on trying to assess and address the needs of these different stages of farming,” Garrett said.

Participants in the OSU Small Farms Conference typically share information outside of sessions, which has been identified as a significant benefit for conference attendees.

Continued on Page 2
OSU Small Farms Program Among Nation’s Best

Continued from Page 1

“People that are one to three years into farming are just trying to figure out how to grow things and see what their markets are and figure out how to market. People that are ten years in are ready for some more advanced topics.”

While farmers who sell at farmers’ markets are the most visible small farmers, the landowners who aren’t participating in commercial agriculture also are important to the program, said Melissa Fery, small farms Extension agent for Lane, Benton and Linn counties.

“When you think about the number of small acreage holdings out there that individual people or families are managing, it is quite a lot of acreage,” Fery said. “And, collectively, that could have a pretty big impact on soil and water quality. They are composting manure, managing pastures, managing weeds. They are looking at ways that they can minimize soil erosion going into steams. There are a lot of processes happening even when they are not in a production-style farm.”

A little-known benefit of the program is discouraging people who may not be cut out for farming to desist from the venture, said Chrissy Lucas, outreach program coordinator for the OSU Small Farms Program.

“One of our mottos is we are okay with you coming to one of our classes and deciding farming is not for you,” Lucas said. “In that case, we’ve done our job, because we don’t want to see someone sink a lot of money and effort and time into an endeavor that they are not going to be happy with or is not going to be successful. We are very good at bringing the harsh realities to folks.”

The 2019 conference, OSU campus at the LaSells Stewart Center and the CH2M Hill Alumni Center, includes 27 sessions, including a presentation from Josh Volk, author of Compact Farms, a critically acclaimed book subtitled “15 Proven Plans for Market Farms on 5 Acres or Less.” Conference organizers expect 35 vendors for the 2019 event.

The conference draws mostly from Western Oregon, Lucas said. “But we get a lot of folks from Southern, Central, and Eastern Oregon, as well, so we try to have something for everybody.”

As for the future of the university’s Small Farms Program, Stephenson said it may be near capacity in terms of personnel, but he sees continued improvement.

“I think we’ve satisfied most of that (personnel) demand at this point,” he said. “Right now, I think the main thing that we are going to continue doing is using the geniuses that we have in our program to continue to develop great applied research and educational programs that keep us relevant and keep our farmers farming profitably.”
November-December Gardening Calendar for Western Oregon

The Oregon State University Extension Service encourages sustainable gardening practices. Preventive pest management is emphasized over reactive pest control. Identify and monitor problems before acting and opt for the least toxic approach that will remedy the problem. The conservation of biological control agents (predators, parasitoids) should be favored over chemical controls. Use chemical controls only when necessary and only after thoroughly reading the pesticide label. First consider cultural, 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.

**NOVEMBER**

**Planning**
- Force spring bulbs for indoor blooms in December.

**Maintenance and Clean Up**
- Service lawn mower prior to winter.
- Check potatoes in storage and remove any going bad.
- Place a portable cold frame over rows of winter vegetables.
- Place mulch around berries for winter protection.
- Cover rhubarb and asparagus beds with composted manure and straw.
- Rake and compost leaves that are free of diseases and insects. Use mulches to prevent erosion and compaction from rain.
- To protect built-in sprinkler systems, drain the system and insulate the valve mechanisms.

Continued on Page 4

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**Your Winter Gardening & Gift Headquarters**

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**Community Horticulture**

Apply by Nov. 30 for Master Gardener Volunteer Program

“The Master Gardener program is a wonderful opportunity for me to learn from knowledgeable people. I have been able to apply quite a few things that I learned in the classes to my everyday work.” – PJ

In the OSU Extension Linn and Benton County Master Gardener program, we believe there is no single right way to garden, but that there is an ever-evolving best way for each individual gardener — whether you grow on a windowsill, on an acre, or somewhere in between.

Whether you are new to growing things or have been doing so for many years, you can help grow knowledge, plants, and communities as a Master Gardener volunteer. We grow plants for food and beauty. We share tested and trusted resources for growing. We learn how to solve plant problems. And we teach what we discover. Please join us!

Classes meet Thursdays 8:30 a.m.-1 p.m., Jan. 17-March 21. Applications for 2019 Master Gardener training are open until Nov. 30. For all of the details, please visit:
- Linn County: https://extension.oregonstate.edu/mg/linn/how-join
- Benton County: https://extension.oregonstate.edu/mg/benton/how-join

http://extension.oregonstate.edu/linn
- Clean and oil lawnmower, other garden equipment and tools before storing for winter. Drain and store hoses carefully to avoid damage from freezing. Renew mulch around perennial flower beds after removing weeds.
- Protect tender evergreens from drying wind.
- Tie limbs of upright evergreens to prevent breakage by snow or ice.
- Trim chrysanthemums to 4 to 6 inches after they finish blooming.
- Leave ornamental grasses up in winter to provide winter texture in the landscape. Cut them back a few inches above the ground in early spring.
- Last chance to plant cover crops for soil building. You can also use a 3- to 4-inch layer of leaves, spread over the garden plot, to eliminate winter weeds, suppress early spring weeds and prevent soil compaction by rain.
- Watch for wet soil and drainage problems in yard during heavy rains. Tiling, ditching, and French drains are possible solutions. Consider rain gardens and bioswales as a long-term solution.
- Take cuttings of rhododendrons and camellias for propagation; propagate begonias from leaf cuttings.
- Prune roses (tea and floribunda, but NOT climbers and ramblers) to around 3 feet in height to prevent winter damage.

**Planting/Propagation**

- Plant window garden of lettuce, chives, parsley.
- Good time to plant trees and shrubs. Consider planting shrubs and trees that supply food and shelter to birds (sumac, elderberry, flowering currant, and mock orange).
- Still time to plant spring-flowering bulbs, such as tulips, daffodils, hyacinths, crocuses. Don’t delay.
- Good time to plant garlic for harvest next summer; and to transplant landscape trees and shrubs.

**Pest Monitoring and Management**

- Rake and destroy leaves from fruit trees that were diseased this year. Remove and discard mummified fruit.
- Check firewood for insect infestations. Burn affected wood first and don’t store inside.
- Treat peaches four weeks after leaf fall spray for peach leaf curl and shothole diseases.
- Moss appearing in lawn may mean too much shade or poor drainage. Correct site conditions if moss is bothersome.
- Bait garden, flower beds for slugs during rainy periods. Use traps or new phosphate baits, which are pet-safe.
- Monitor landscape plants for problems. Don’t treat unless a problem is identified.

**Houseplants and Indoor Gardening**

- Reduce fertilizer applications to houseplants.

**DECEMBER**

**Maintenance and clean up**

- Do not walk on lawns until frost has melted.

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**Insects and Spiders Out to Find Shelter for Winter**

By Kym Pokorny, 541-737-3380, kym.pokorny@oregonstate.edu, on Twitter @OregonStateExt

This time of year, insects and spiders are out and about – some in large numbers – looking for places to hunker down for winter.

“Just like us, they’re coming inside to get warm,” said Brooke Edmunds, a horticulturist for Oregon State.

Continued on Page 8

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**Benton County Master Gardener™ Association**

**A fun day of research-based classes**

**20+ exhibitors**

**For new and experienced gardeners!**

**Saturday February 9, 2019**

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**INSIGHTS INTO GARDENING**

Presented by

**Oregon State University Extension Service**

- Edibles
- Ornamentals
- General interest
- Gardening 101

For more information visit extension.oregonstate.edu/benton

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**Deciduous Trees**

- A deciduous tree is a tree that sheds its leaves each year.
- Deciduous trees are the most common type of tree in the world.
- They provide shade and beauty to landscapes.
- They are also important for wildlife, as they provide food and shelter.

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Meet Master Gardener volunteer Debbie Lauer. A native Oregonian, Debbie has gardened worldwide during her upbringing in a military family and during her own military service. Debbie has volunteered more than 4,000 hours as a Master Gardener volunteer since 2001 and has been a Master Gardener in Oregon since 2006. We spoke in June 2018.

OSU Extension: Tell us about an early gardening experience.

Debbie Lauer: My dad would always plant petunias and it was my job to pick off the dead flowers. I used to hate it because they were so sticky. If you look in my garden today, you will find very few petunias – I am done with it. Dad also was in the army and planted a garden everywhere we travelled. We had gardens in Alabama, Kentucky and Texas. Also in Panama, where we grew pineapple.

I come from farming families. My grandfather was a dairy farmer by what is now the Albany airport… Mother’s dad was a Shedd grass seed farmer. Both sides of the family had flower and vegetable gardens, so it is ingrained all the way through.

OSU: I recall that you also had a military career. Where have you had gardens?

DL: In Germany where I was stationed… we had balcony tomatoes. I would plant tulip bulbs where the landlord would let you. I also gardened in Texas …the standard little window boxes would melt by noon so I figured I’d better join Master Gardeners and learn what would grow there. I had gardens in Alaska, that’s where I really got into it. Up here (back home in Oregon) I have been challenged by the breadth of the plants you can grow.

OSU: What’s a favorite garden memory—a sound, sensation, smell or taste associated with a favorite garden in your life?

DL: My “favorite or most memorable” moment came when I was in middle school, then it was called junior high. My dad was in Viet Nam, we were living on Colorado Lake Drive. We went out to my grandparents’ farm in Shedd. We were walking through the vegetable garden and my mom pulled a carrot from the ground, took it to the water faucet, rinsed the dirt off, broke off a piece of it and gave it to me to taste it. I had never eaten anything harvested so recently before and I will never forget the earthy smell or the wonderful taste of that warm carrot.

Another memorable moment came the second year after my MG class in Oregon. Don (my husband) pulled out his first potato, a huge one, from the dirt. From the look on his face I knew in that instant he had just become a vegetable gardener for life.

OSU: What does being a Master Gardener volunteer mean to you?

DL: Being a Master Gardener is about sharing gardening with other people. I have learned so much since I first became a Master Gardener in Texas in 2001. The longer I volunteer the more I enjoy sharing my experiences in the garden and helping other people come to appreciate the joys and understand the challenges of gardening.

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Identity Theft…
What to Know, What to Do

Is someone using your personal or financial information to make purchases, get benefits, file taxes, or commit fraud? That’s identity theft.

The Federal Trade Commission has a very helpful website that will walk you through the recovery steps if you feel you have been a victim of identity theft. IdentityTheft.gov is the federal government’s one-stop resource for identity theft victims. The site provides detailed advice to help you fix problems caused by identity theft, along with the ability to:

• get a personal recovery plan that walks you through each step
• update your plan and track your progress
• print pre-filled letters and forms to send to credit bureaus, businesses, and debt collectors

Go to IdentityTheft.gov and click “get started.”

There’s detailed advice for tax, medical, and child identity theft – plus more than thirty other types of identity theft. No matter what type of identity theft you've experienced, the following steps tells you what to do right away.

Step 1: Call the companies where you know fraud occurred.

• Call the fraud department. Explain that someone stole your identity. Ask them to close or freeze the accounts. Then, no one can add new charges unless you agree.
• Change logins, passwords, and PINs for your accounts.

Step 2: Place a fraud alert and get your credit reports.

• To place a fraud alert, contact one of the three credit bureaus. That company must report the fraud alert to the other two.
• Get your free credit reports from Equifax, Experian, and TransUnion. Go to annualcreditreport.com or call 1-877-322-8228.

Step 3: Report Identity Theft to the FTC.

• Go to IdentityTheft.gov, and include as many details as possible.

Source: Federal Trade Commission, IdentityTheft.gov

Keep creeping things out this winter

As outside temperatures cool, it’s time to move in for winter. This includes a lot of crawling things we would prefer did not join us in our homes. Here are some good guidelines for preventing and managing unwanted intruders.

Rodents — https://catalog.extension.oregonstate.edu/em9062 (While the title says schools, these same measures are effective for all homes and buildings as well.)

Controlling pantry pests — https://lancaster.unl.edu/pest/resources/pantrypests304.shtml
The Anti-Inflammatory Diet - What’s the Big Deal?

By Audrey Hester,
OSU Dietetic Intern

What is inflammation and how is it related to chronic disease?

Inflammation is an important defensive response in the body that sends more blood flow to an injured area and that area swells and gets warm. Chronic inflammation occurs when inflammation in the body continues over a long period of time and can cause damage to the body’s organs. Many chronic diseases have been linked to chronic inflammation. The question we are asking today is: can my diet affect my risk for chronic inflammation and chronic disease? Hint – the answer is yes!

What is an anti-inflammatory food versus a pro-inflammatory food?

An anti-inflammatory food helps decrease inflammation in the body, while a pro-inflammatory food can increase inflammation. The Dietary Inflammatory Index is an evidence-based measure that tells how anti-inflammatory a food is. Foods that are rated as the most anti-inflammatory are packed with vitamins like fruits, vegetables, and turmeric. Research has shown that each person’s overall dietary pattern is more important than the individual foods. It is important to eat a majority of healthy foods such as fruits, vegetables, lean protein, fish, whole grains, and healthy fats and to eat less saturated fat, trans fat, and refined sugar. The anti-inflammatory diet has a lot of overlap with what is already considered a healthy diet and it suggests eating more fruits, vegetables, fiber, omega-3 fats and less processed meat and less foods with added sugar. Two examples of an anti-inflammatory diet are the DASH (Dietary Approaches to Stop Hypertension) diet and the Mediterranean diet. A general western diet would be considered a pro-inflammatory diet because it is high in saturated fat and added sugar.

Why eat an anti-inflammatory diet?

Consuming a dietary pattern containing mostly foods that are “anti-inflammatory” has been shown to decrease the production of inflammatory markers in the body. An anti-inflammatory diet has also been shown to decrease the risk of cardiovascular disease and death when compared to a pro-inflammatory diet.

You can have a healthy dietary pattern that is also considered anti-inflammatory by eating more fruits, vegetables, lean meats, fish, and whole grains. You can decrease your consumption of pro-inflammatory foods by choosing leaner proteins, unprocessed meat, and foods without added sugar. Paying attention to the dietary inflammatory index and choosing foods that are anti-inflammatory could help you eat a healthier overall diet.

What about Gluten and Dairy?

There are various lists of pro-inflammatory foods on the internet and some of those include dairy and gluten while others do not. People who have Celiac disease, a gluten allergy, or a dairy allergy would have increased inflammation from gluten and/or dairy. If you do not have an allergy or sensitivity to gluten or dairy, then they can be included in a healthy dietary pattern.

References


Monitor houseplants for adequate water and fertilizer. Wa-

Protect poinsettias from cold, place in sunlight, don’t let leaves touch cold windows; fertilize with houseplant fertil-

Monitor spruce trees for spruce aphids. Treat if present in large numbers. Read and follow pesticide label directions.

Turn the compost pile and protect from heavy rains, if necessary.

During heavy rains, watch for drainage problems in the yard. Tilling, ditching, and French drains are possible short-term solutions. Consider rain gardens and bioswales as a longer-term solution.

Check stored flower bulbs, fresh vegetables, and fruits for rot and fungus problems. Discard any showing signs of rot.

Tie limbs of columnar evergreens to prevent snow or ice breakage.

Make sure that landscape plants in protected sites receive water regularly during the winter.

Planting/propagation

Good time of year to plant trees, and landscape shrubs.

Pest monitoring and management

Monitor landscape plants for problems. Don’t treat unless a problem is identified.

Check for rodent damage around bases of trees and large shrubs. Remove weeds to prevent rodents from using them as hiding places. Use traps and approved baits as necessary.

Avoid mounding mulching materials around the bases of trees and shrubs. The mulch might provide cover for rodents.

Monitor spruce trees for spruce aphids. Treat if present in large numbers. Read and follow pesticide label directions.

Houseplants and Indoor Gardening

Protect poinsettias from cold, place in sunlight, don’t let leaves touch cold windows; fertilize with houseplant fertil-

Monitor houseplants for adequate water and fertilizer. Water and fertilizer requirements generally are less in winter.

University Extension Service. “They’re not feeding on homes or humans, they’re just looking for cracks or crevices. Most are minding their own business. They aren’t aggressive toward people, not even the spiders.”

That explanation often isn’t comforting when insects find your house the perfect spot for a long winter’s nap. Boxelder bugs can swarm the side of homes and outbuildings by the thousands, giving homeowners a fright. Spiders, which are looking for mates, can also cause anxiety.

However, of the 700 to 800 species of spiders in Oregon, only the black widow has the potential to cause serious harm to humans. This spider is found in the drier areas of southern Oregon and east of the Cascades more commonly than in the Willamette Valley, according to Gail Langellotto, OSU Extension entomologist. One brown widow was found recently, probably a hitchhiker from another area. Hobo spiders, research shows, are not venomous, but their bite may cause pain, redness and itching. Poisonous brown recluse spiders do not live in Oregon.

The distinctive red and black boxelder bug has long been the bane of homeowners, who find them piled on top of each other on the warm south- or west-facing walls of buildings. They don’t do much damage in the garden, unlike the shield-shaped brown marmorated stink bug, which feeds on a large number of plants, including blueberries, raspberries, apples, figs, hazelnuts and many ornamental plants.

In addition to brown marmorated stinkbugs and boxelder bugs, other insects most likely to be found invading your home right now are Mediterranean seed bugs and springtails, both very small.

“Springtails are tiny, like pieces of dirt but they move around,” Edmunds said. “They get their name because they can jump up to several inches by means of a tail-like mechanism.”

Springtails live in soil, especially soil amended with compost, in leaf litter and organic mulches and under bark or decaying wood. They feed on decaying plant material, fungi, molds or algae. They love moist environments and if they do make it indoors, you can often find them in sinks, bathtubs, floor drains, damp basements and crawl spaces. Unless they find moisture, they’ll soon die.

Mediterranean seed bugs, which can be identified by distinctive black triangular and diamond-shaped markings on a tan body, are commonly found among tall grasses and weeds and feed on a wide variety of seeds.

To help keep all of these insects outside, caulking openings and cracks around doors and windows and repair screens, Edmunds recommends. Get rid of debris and leaf litter near the house, especially around foundations, to reduce the shelter they need to overwinter. Vacuum up any bugs that get inside, seal and dispose of the vacuum bag or empty it into a bucket of soapy water.

“Insects get through spaces so small you don’t even think about them,” she said. “You want to keep as many out as possible and then vacuum up the rest.”

There’s no need to suck up spiders, which are beneficial in the garden and can just be ushered back outside.

Insecticide sprays are generally not recommended for these insects. They are often no more effective than vacuuming, and repeated applications may be required. At best, pesticides will provide only temporary relief. Pyrethroid insecticides are available for treating foundation walls around the perimeter of buildings. If required, these applications are best done by a professional.

Source: Brooke Edmunds, 541-730-3470, brooke.edmunds@oregonstate.edu

Insects and Spiders Out to Find Shelter for Winter continued from Page 5

Want to Learn More? Take a Gardening Class! continued from Page 5

Mason Bee Cocoon Class

Mason bees are excellent pollinators in gardens, farms and nature. Learn how to care for their cocoons so these bees can benefit your plants.

Registration required: https://tinyurl.com/ybg45q76

- Thursday, Nov. 1, 6:30-8:30 p.m. Old Mill Center, 1650 Southwest 45th Place, Corvallis. Free.
- Saturday, Nov. 3, 10 a.m. – noon. Linn County Extension Service, 33630 McFarland Road, Tangent. Free.
- Thursday, Nov. 8, 10 a.m. – noon. Old Mill Center, 1650 Southwest 45th Place, Corvallis. Free.

The garden in winter: Sweet Home Saturday Garden Class

Learn gardening tips and tricks from the experts! This class will show you what to do with your garden during colder months.

- Saturday, Nov. 10, 11 a.m. – noon. Hoy’s Hardware, 3041 Main Street, Sweet Home. Free
Winterizing your Water Well System

Winter is coming and we need to be prepared for it to hit hard around the Willamette Valley. Freezing temperatures lasted for more than a week at a time last winter, and many calls have come into our offices with questions about how to unfreeze pipes, deal with broken pipes, and safety of drinking water. If you haven’t already, it’s time to winterize your water well system to prevent frozen pumps, pipes, and stop potential damage to your water system.

Frozen Pumps and Pipes

A frozen water pump causes more than the inconvenience of losing water for a while; it can also mean burst pipes, cracked water pumps and flooding once the frozen pipes warm up again.

The root cause of this problem is when air surrounding a water pipe drops below freezing, any heat in the water will transfer to the air and cause the water to freeze. The smaller pipes always freeze first because of the larger relative surface area. Therefore, the 1/4 inch lines to the pressure switches, which turn the pump on and off, will be the first to freeze. A frozen pressure switch will not start the pump. A small heat source, like a heat lamp or heater directed at the pressure switch will remedy this. Just remember that heat sources should be used prudently as overheated materials can ignite and start a fire. Always follow manufacturer’s instructions.

Structural Protection

Pumps that are above ground usually have a small well house built over them to protect the pump from the elements. A well-built pump house, whether built of wood, blocks or metal should have insulation in the walls, the door and the ceiling. Seal any cracks or other openings. If your pump house has windows – add a layer of plastic inside and out. Bubble wrap can also be used as a layer of protection, lightly spray the window with water, place bubble wrap with the bubble side to the glass and it will stick until you remove it. Bubble wrap can be used with the additional plastic covers.

It is important to have some heat in the pump house such as a thermostat controlled baseboard heater, heat lamp, or other heat source. The temperature doesn’t need to be super warm, but enough to hold between 35 and 42 degrees at the minimum. Make sure all openings and doors are closed properly, keeping the heat in and the wind, which wicks the heat away, out.

Insulation for a Well House Pump and Pipes

Insulation of any type will help to slow the transfer of heat in the water to the surrounding air but spending a little extra for thick fiberglass or foam rubber sleeves specifically designed for this purpose is worth the cost. Covering your pipes with foam insulating sleeves will prevent freezing for a number of hours even in a power failure. Heat tapes are also available to wrap around pipes and use on the very coldest of nights to keep the pipes from freezing up.

Tips for inside faucets

Letting a faucet drip during extreme cold weather can prevent a pipe from bursting. It’s not that a small flow of water prevents freezing; this helps, but water can freeze even with a slow flow. Opening the faucet reduces pressure that builds between the faucet and an ice blockage. If there isn’t excessive water pressure, the chances of the pipe breaking is reduced even if it completely freezes.

Yes, a dripping faucet wastes some water, so only pipes vulnerable to freezing (ones that run through an unheated or unprotected space) should be left with the water flowing. The drip can be very slight. Even the slowest drip at normal pressure will provide pressure relief when needed. Where both hot and cold lines serve a spigot, make sure each one contributes to the drip, since both are subjected to freezing. If the dripping stops, leave the faucet open, since a pipe may have frozen and will still need pressure relief.

You can also help keep pipes from freezing by opening cabinet doors and letting warmer air into places, such as under the bathroom sink.

If you do experience a frozen pump, pipes, or faucets call a professional to help remedy the situation without damaging your water system.
**A Farmer Should Not be in Regular Pain!**

By Teagan Moran

I was inspired to write this article after having an emotional conversation with a very young farmer (not even 30 years old) who had to leave their job and farming all together due to disabling back pain associated with a musculoskeletal disorder (MSD). They had worked a position that required long repetitive tasks, at the time they had not known about the danger of (MSDs) associated with their job or the ergonomic practices that could have prevented them.

This farmer is not alone; work related (MSDs) are the leading cause of disability across industries, and farmers are at particularly high risk (Walker-Bone and Palmer, 2002). MSDs are injuries and disorders that affect the human body’s movement or musculoskeletal system (i.e. muscles, tendons, ligaments, nerves, discs, blood vessels, etc.). MSDs are caused by prolonged exposure to physical stresses such as repetition, forceful exertions, kneeling, lifting, squatting, bending, vibrations and twisting (NIOSH, 1997). When a worker is exposed to these physical stresses, they begin to fatigue. When fatigue continues past the body’s ability to recover, then they develop a musculoskeletal imbalance. If that imbalance continues and the body still doesn’t recover, then the musculoskeletal disorder develops.

Now, you may be thinking - the physical stresses listed sound just like a job description for most farm labor. Even as I sit to write this, I am nursing a tweaked shoulder from a particularly vigorous weed whacking venture on my farm. The good news, as reported by the National Institute for Occupational Safety and Health, is that MSDs are preventable, there are tangible steps we can take to reduce the risk of MSDs on the farm and ergonomics plays a leading role.

**What is ergonomics?**

You may have heard about an ergonomic car seat or keyboard, but there is more to it than the design of products. Ergonomics is an applied science that aims to learn about human abilities and limitations. It applies those ergonomic principles to design workplaces, equipment, and systems so that they fit the people who use them. Ergonomics aims to reduce stress on the body while increasing efficiency and comfort in the workplace. Specialists in the science of ergonomics have demonstrated that there are simple and cost effective solutions that can have significant impact on the health of farm workers overall (Sestos, Module VIII).

**Why should we care?** Pain should not be a regular part of a farmer’s job. The impact of MSDs (which can develop slowly over time) can result in permanent or long-term disability, lifelong pain, and significant loss of income. For small farms where labor may be on the shoulders of only one or two people – this can destroy the farm business.

**What is stopping us?** It is important to acknowledge the barriers to implementing ergonomic strategies on farms. Some barriers are related to the belief that the pain is just ‘part and parcel’ of the job. Sometimes there is even pride in those sore muscles at the end of the day. This attitude is a dangerous one, because it tends to gloss over the seriousness of MSDs and deprioritizes the solutions that could make farm work safer (Baron, et al. 2001). Many farming practices have been passed down through generations, and changing habits related to ‘how things get done’ is difficult or is viewed as an inconvenience.

Additionally, even acknowledging the presence of injury and symptoms can be a barrier. Symptoms are often ignored until they interfere with one’s ability to perform their job and by then the MSD has taken root. As a farmer myself, I must admit that I often take better care of my pruners than my own hands. When profit margins are slim, speed can take precedence over safety. I have been guilty of feeling shame when I slow down, even if it is to protect my body. To counter some of these barriers we need to talk about the seriousness, cumulative impact, and causes of MSDs and that farmer focused ergonomics offer one way towards safer farm work. The cost associated with these changes should be viewed in relation to what can be saved in the long run, the farmer’s health, and farm viability.

**What can be done?** Small changes on a daily basis can have a big impact. Multidisciplinary teams of researchers and Extension staff across the country have collaborated to develop intervention and prevention programs with ergonomic approaches. More research is needed as the science of ergonomics is actually quite young, but we now have some practical alternatives and affordable strategies to counter the ‘back breaking’ norm.

For a comprehensive list of these strategies including the guidelines shared below check out Simple Solutions for Farm Workers published by the U.S. Department of Human Health – Center for Disease Control and Prevention.

**Prevention Strategies:**

- Modifying tasks, changing routines, and finding the right equipment/tool (or modifying a tool) for the job can all help prevent MSDs. If tools and work stations are ergonomically designed – meaning designed so that they meet the physical capabilities of the worker – then injuries are prevented as a natural result of less repetition, improved posture, and reducing the force used by the body.
- Posture has a huge impact. Limit or eliminate the need for stooped work: Alternate with one knee, Redesign the job to avoid if possible, Break up the job with other tasks, Move into opposite positions. There is strategy of ‘Reversal’ where you reverse the position you are in even if just for 10 seconds to allow your body to recover and reset. So if you are stooped over then you stand up and stretch back to reverse the action.
- Reduce long exposure to vibration or the need to stand up and stretch back to reverse the action.
- Allow a tool to do the work and make sure the tool fits the body. What is a good fit?
- A tool that supports good posture, such as one with a...
If you are an experienced goat person or hope to be, this event is for you!

**TIME:** 8:00am — 4:30pm  
**DATE:** Saturday November 3rd  
**Pleasant Hill High School**

**Workshop Topics:**
- Cheese Making for the Home Dairy
- Pasture Management
- Livestock Guardian Animals
- Common Diseases in Goats
- Managing Internal Parasites
- 1,2,3's of Milking
- Raising Goats for Meat
- Getting Started with Milk Certification
- Herbal Nutrition and Health

**Cost:** $25/Person or $40 for two people from the same farm

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smallfarms.oregonstate.edu/south-valley/events

**Or Contact:**
541-766-3553  
Teagan.moran@oregonstate.edu

Event sponsored by the Emerald Dairy Goat Association and OSU Extension Service Small Farms Program

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**The Oregon Pasture Network: What’s in Store for Farmers and Eaters**

**By Lindsay Trant, Oregon Pasture Network Program Manager**

In June 2016, Friends of Family Farmers, a nonprofit organization that supports and advocates for family farms, launched the Oregon Pasture Network (OPN). The program connects Oregon’s pasture-based producers to each other, as well as to resources and expert assistance on sustainable grazing systems that are healthier for animals, the environment, and their farms. The OPN also connects these producers to the growing crowd of eaters who care about the source of their food and want to purchase their meat, eggs, and dairy from pasture-raised animals.

Two years later, there are now nearly 60 members of the Oregon Pasture Network and the benefits keep growing. Every member of the OPN is listed in the OPN Product Guide for free (available at www.oregonpasturenetwork.org), allowing Oregonians to locate and purchase products raised in a more environmentally sound manner, on pasture. We plan to keep evolving this Product Guide as the program grows. Most recently, we made it easier for shoppers to find pasture raised meat, eggs, and dairy directly from OPN producers in their area.

In addition to upgrading the Product Guide, we hosted a series of InFARMation events in the Portland area through the Fall of 2018 for a deep look into the benefits of raising animals on pasture – for the environment, for farmers, for animal welfare, for consumers, and for your health. Local eaters came out to hear about pasture-raised beef, poultry, pork, and dairy directly from members of the OPN, restaurant owners, health professionals, and other experts.

For farmers, being a member of the OPN means access to a number of benefits. We sponsor classes to provide expert assistance for producers dedicated to continually improving their pasture-based systems and want to deepen their understanding of the art and science of responsible grazing. Last year we worked with Dr. Woody Lane of Lane Livestock Services to offer an 8-week in-depth forage and pasture management course and OPN members got a 50 percent

**Continued on Page 22**
Looking Forward to a Beef Harvest

By Shelby Filley, regional livestock and forage faculty

Raising weaned calves to sell for beef can be rewarding, but there are several things to consider so that the process is efficient and the product is excellent. The type and weight of calf, time of year to purchase, purchase price, rate of weight gain, feeding methods, and harvest date all need to be carefully planned so that the animal can be fed properly to meet your goals. This article discusses a few of the important factors on which I get many questions.

Calves come in many sizes and shapes. Small framed cattle will be ready for harvest at a lighter weight and with less days on feed than medium or large framed cattle. Calculate frame size from hip height and age using on-line calculators. You want to choose calves that have good beef character with a lot of muscling ability verses calves that have a lot of dairy character.

If you purchase calves in the fall of the year, the cost will be at a seasonal low because many cow-calf producers wean their calves in the fall and the market is flooded with a large supply. Conversely, we see prices at a seasonal high in the spring because few producers fall calve / spring wean their cattle. Most weaned calves will weigh about 400 to 500 lb. Try and get individual weights on the animals you purchase.

Alternatively, you can purchase an older, heavier calf, but it will cost you more to do so. Someone else has put that extra weight on the animal. The price per pound is higher for these lightweight calves compared to older calves in the 700 to 800 lb range.

Select a target weight at which your beef animal will be ready for harvest. That weight should depend on its frame size and sex (See table 1. Frame Size and Weight to Grade Choice). Then use the current and target weight to calculate the total weight gain needed.

Next, decide on an expected harvest date. You want the calf to develop muscle and lay down a proper amount of fat at a relatively early age so that the carcass is acceptable and the beef is tender. Your job will be to feed and manage the calf so that it grows and finishes around 20 months of age. If it is grass finished, 18.3 months is a suggested target age. You may grow cattle to an older age, but there is significant risk of decreased tenderness if harvested over 30 months of age.

Determine the rate of gain over the growing and finishing period. Rate of gain (pounds per day) does not have to be the same over the entire period; it just needs to be positive gain especially at the end. To calculate the average daily gain (ADG), divide the gain needed by the number of days until you will harvest. This is the number of pounds per day the cattle need to gain in order to reach the goals you set for it.

For example, if the starting weight of a steer is 515 lb and the target weight is 1,200 lb, then the total weight gain needed is 685 lb. If the beginning of the feeding period is November 1 and the target finish date is November the following year, there will be 360 days to gain the desired weight. Average daily gain would need to be about 2 lb/day. That is, ADG = 685 lb / 360 days = 1.9 lb/day. If the calf were born in March, it would be 8 months old in November of the first year and 20 months old in November of the second year.

A typical scenario with growing calves in Oregon is where they are grazed on fall pastures, over-wintered on harvested forages (good quality hay or balage) where they gain at a slow rate (0.5 lb per day), then turned out weighing about 600 lb onto non-irrigated, spring pastures to take advantage of abundant, high quality forages. Here they gain an average of 2.5 lb per day. The range in daily gain can be anywhere between 1.0 and 4.0 lb depending on the month. When the spring grass dries up, they are usually about 750 lb Usually these stocker cattle are sold to a feed lot where they are finished between 90 and 120 days on a ration consisting mainly of grain and alfalfa hay.

However, if we keep these calves at home to finish out ourselves, we have work to do. At this point, there are about 150 days to gain the 450 lb to reach a target weight of 1,200 lb. Calculate that out and you will find the cattle need to gain 3.0 lb per day at a time when the grass is dry and weather is hot.

Therefore, we see that a different approach is necessary to reach our goals. One option is to give the cattle more time to gain the weight, but that means carrying them over another year and having issues with meat tenderness. Another option is to feed a high energy, good protein ration so the cattle can make these large gains. It would take irrigated pasture and/or supplements such as grain and seed meals. This is expensive and may be difficult to do in the heat of the summer.

A third alternative option is choose small framed cattle to finish at a lighter weight (1,100 lb) and earlier date and to improve the gain over the first winter. This can be done by feeding fall and winter rations to increase

Table 1. Frame Size & Expected Weight to Grade Choice

<table>
<thead>
<tr>
<th>Frame Size</th>
<th>Steers</th>
<th>Heifers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large +</td>
<td>1,250</td>
<td>1,150</td>
</tr>
<tr>
<td>Large -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium +</td>
<td>1,100</td>
<td>1,000</td>
</tr>
<tr>
<td>Medium -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small +</td>
<td>1,100</td>
<td>1,000</td>
</tr>
<tr>
<td>Small -</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continued on Page 13


All are welcome to join us for the Fall Forage Festival in Corvallis, Oregon, November 16th and 17th, 2018.

If you grow or feed hay, work with livestock, manage pasture or have interest in the science and human energy that goes into the sward or bale, this is the gathering for you!

Interact with the Northwest’s finest hay growers, livestock managers, forage seed producers, Extension educators and researchers, agricultural consultants and livestock farmers.

Nov 16th: nutrient value of hays, hay storage & its impact on quality, matching hay to livestock class, coping with drought, current research, resources in the Pacific Northwest

Nov 17th: Hay King Contest- an extravaganza of hay, from many different farms, will be assessed visually and compared to chemical analysis of nutrient content and digestibility. The judges will keep you enthralled! To enter your hay: http://oregonhaygrowers.com/

Friday, Nov. 16th 8:30am-4:30pm at Guerber Hall, Benton County Fairgrounds, 110 SW 53rd, Corvallis OR 97333 lunch included.

Register by email to Jerome Magnuson: jmagnuson@dlfna.com Include Fall Forage Festival 2018 in the subject. Indicate name(s) and affiliation. Friday registration of $30 is payable by check or cash at the door on Nov. 16th. No charge for students with valid id.

Saturday, Nov. 17th 9am at the Oldfield Animal teaching Facility, 3521 SW Campus Way, Corvallis, OR 97333. Parking & admission for no additional charge on Saturday.

Looking Forward to a Beef Harvest continued from Page 16

the usual rate of gain from 0.5 lb per day to about 1 lb per day. That way the calf is closer to 875 lb at the beginning of summer and only needs to gain 225 lb to reach target weight in 150 days (June to November). Calculate that out and find that the rate of gain is now less than 1.5 lb per day. This is more realistic than the previous scenario.

See Beef Nutrition Workbook at https://catalog.extension.oregonstate.edu/em8883 and contact me if you need assistance with balancing rations to improve fall and winter gains. Check out last month’s newsletter article on planting drought tolerant forages. This will help increase the rate of gain over the summer. Good luck growing and finishing your calves!

2018 Livestock Forage Disaster Program (LFP)

By Linn-Benton-Lincoln-Lane County Farm Service Agency

Linn, Benton, Lincoln, Lane and neighboring counties have been approved for drought forage assistance. If a producer’s livestock has grazed in one of these counties during the normal grazing period, they could potentially be eligible to receive assistance with a payment that represents feed values.

Eligible livestock

Livestock owned, leased, purchased, or contract grown during their counties eligible dates. Livestock must be for commercial use – not pets, for home consumption, or other pleasure uses.

Eligible pasture

Improved non-irrigated and native non-irrigated pastures are eligible for LFP compensation. Livestock must have been or normally physically located and grazed in the County eligible during the normal grazing period to be considered eligible.

Payments are calculated as the lessor of the following, and reduced by 60 percent

- Number of Eligible Livestock X payment rate (see below)
- Pasture Acres ÷ Animal Units x $28.07
- All payments will be sequestered 6.6%

The following provides the monthly payment rate per head by covered livestock category.

<table>
<thead>
<tr>
<th>Kind of Livestock</th>
<th>Type</th>
<th>Weight Range</th>
<th>2018 Payment Rate Per Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>Adult</td>
<td>500 pounds or more</td>
<td>$28.07</td>
</tr>
<tr>
<td></td>
<td>Nonadult</td>
<td>Cows and Bulls</td>
<td>$21.05</td>
</tr>
<tr>
<td>Dairy</td>
<td>Adult</td>
<td>500 pounds or more</td>
<td>$72.98</td>
</tr>
<tr>
<td></td>
<td>Nonadult</td>
<td>Cows and Bulls</td>
<td>$21.05</td>
</tr>
<tr>
<td>Buffalo/Beefalo</td>
<td>Adult</td>
<td>500 pounds or more</td>
<td>$28.07</td>
</tr>
<tr>
<td></td>
<td>Nonadult</td>
<td>Cows and Bulls</td>
<td>$21.05</td>
</tr>
<tr>
<td>Sheep</td>
<td>All</td>
<td></td>
<td>$7.02</td>
</tr>
<tr>
<td>Goats</td>
<td>All</td>
<td></td>
<td>$7.02</td>
</tr>
<tr>
<td>Equine</td>
<td>All</td>
<td></td>
<td>$20.77</td>
</tr>
<tr>
<td>Alpacas</td>
<td>All</td>
<td></td>
<td>$23.12</td>
</tr>
<tr>
<td>Emus</td>
<td>All</td>
<td></td>
<td>$14.37</td>
</tr>
<tr>
<td>Llamas</td>
<td>All</td>
<td></td>
<td>$10.25</td>
</tr>
</tbody>
</table>

Required Livestock Producer Documentation

- Livestock inventory list
- FSA-578, Acreage Report of Commodities (Must be filed by Dec 1, 2018)
- Lease(s) for rented land. If no written lease available, form CCC-855 can be accepted.
- Other required Producer Eligibility Forms will be completed in office

Due to high volume of applicants, appointments are mandatory.

Please call 541-967-5925 x2 today!

http://extension.oregonstate.edu/linn
General management
• Seed certification: remember to sign up new plantings within 60 days for seedling inspections or crop history.
• Slug bait timing is critical: begin as soon as weather conditions are favorable. Baiting is most effective in the evening, with night temperatures above 45°F, wind speed less than 5 mph, and in the absence of heavy rains.
• Monitor field edges for winter cutworm damage such as notched leaves or plants cut through the stem at soil level.

Grass
• In established grass seed fields complete sequential pre-emergence herbicide applications by late November for maximum effectiveness on grass weeds and to ensure crop safety.
• Fall/winter herbicide application in established grass seed fields can help manage tough-to-control bluegrass species, especially roughstalk bluegrass. November application timings of Outlook or Dual following earlier pre-emergence applications have shown improved roughstalk bluegrass control.
• If established grass weeds are present, glufosinate can also be added to Nov/Dec pre-emergence applications.
• Consider November-early to mid February applications of Outlook and Dual to control ryegrass and roughstalk bluegrass.
• Consider controlling broadleaf weeds in newly established grasses if weed pressure is high. There are numerous broadleaf herbicides that can be used at this timing.

Wheat
• Increase seeding rates to 33 seeds/ft² (100-150 lbs/ac depending on seed size) for winter wheat plantings after November 1. Complete winter wheat plantings by late November if possible.
• If planting wheat in November/December, pick varieties that are suitable for later plantings (e.g. LCS ArtDeco, LCS Biancor, LCS Drive, Goetze, SY Assure).
• In winter wheat, use Axiom, Zidua or Anthem Flex for control of grass and broadleaf weeds. Read labels carefully as each product has slightly different application timings for use in wheat. Ensure wheat is seeded 1-1.5” deep to ensure crop safety.
• Reduce Axiom rate to 8 oz/ac if planting winter wheat late in November/December.

Mint
• Control grass weed patches in mint with clethodim or sethoxydim before heavy frosts set in. Watch for weed escapes and spot spray. Prepare for dormant timing herbicide applications in mint.

CORE Pesticide Credit Opportunities
As the end of the year approaches, remember to check your recertification credit hours. Licensed private pesticide applicators in Oregon must obtain 16 credit hours within each 5-year recertification period, of which 4 must be CORE credits. These core credits cover the basic safety and usage of pesticides. The OSU PSEP (go.usa.gov/3Muu3) will be providing 4 CORE credits Dec. 12 at county Extension offices across the state. The Willamette Valley Ag Expo (wvaexpo.com/classes) will also offer courses providing 4 CORE credits on Nov. 13 and 15. The classes will cover worker protection standards, human health risk assessment, and an update from the ODA.

CORE credits earned exceeding the required number will still be counted towards your regular credit hours. You can check your recertification credit history online (go.usa.gov/3Muu3) using your license number.
REAL Oregon Launch Exceeds Expectations

Program Provides Leadership Tools for Ag Leaders

By Mitch Lies, GROWING Editor

About twenty years ago, Oregon farm, forest and fishery interests launched a program that backers hoped would prepare participants for leadership roles in the natural resources industries.

The program was patterned after a similar program in Washington that included 24 classes over two years and a national and an international field trip. Prior to the end of year two, however, the Oregon program dissolved.

“It was a fantastic program,” said Greg Addington, who at that time was a Farm Bureau government affairs specialist and who participated in it. “But we were running before we knew how to walk, and it just wasn’t a sustainable program at that level at that time.”

Flash forward to last year and natural resource leaders in Oregon once again launched a program to prepare participants for leadership roles. With just five sessions over five months and no international or national field trips, the new version was more modest than its predecessor. But, said Addington, project leader for REAL Oregon, which stands for Resource, Education and Agricultural Leadership program, it was equally fantastic.

“The first year exceeded my expectations,” Addington said. “I wasn’t sure what to expect when we started, but it was awesome. I really enjoyed it, and I think the participants all enjoyed it and looked forward to those sessions. They really connected with one another. It was great fun.”

Linn County resident Macey Wessels, one of several grass seed growers to participate in the program’s first year, found the experience beneficial on several levels.

“I think this is exactly what Oregon needs,” Wessels said. “Oregon needs people within the natural resource industries to really stand up and give a voice to the natural resources, and this provides the training to do so.

“Also, natural resources have historically not worked well together within Oregon. We have all kind of stood in our own little silos. This definitely crosses those lines and allows us within the natural resources industries to see each other’s issues and work together toward common solutions, because we are all kind of facing the same dilemmas,” Wessels said.

Linn County also is represented in the second class of REAL Oregon. The class, which the organization recently announced, includes Kirk Burkholder, a grass seed grower from Albany; Katie Glaser, producer/owner of Glaser Farms in Lebanon; and Mallory Phelan, of Albany, executive director of Oregon Aglink.

On its website, REAL Oregon is described as a “leadership program that brings future leaders from agriculture, fishing and forestry together to learn leadership skills and gain a greater understanding of Oregon through a series of statewide sessions.”

Program participants commit to five two- and one-half-day sessions held once a month from November through March in different parts of the state. Tuition is $5,000, but the program picks up half the cost.

“The time commitment is significant,” Wessels said, “but it is worth it to travel around the state and see how diverse we are. I mean, I knew we had timber, but I had never seen timber from that angle before. I knew that we had fisheries, but I had never seen what they go through on a day-to-day basis.

“That was invaluable to see the diversity across the state firsthand,” Wessels said.

Addington said he originally was hoping the program could attract a pool of about twenty for its first year. “I figured that would be doing pretty good in year one,” he said.

Instead, more than thirty applied, and the program’s board had to narrow the pool through a selection process.

“Part of the selection criteria is to try and get as much diversity among the industries as possible,” Addington said. “A huge component of this is bringing people together across industries to network and learn about issues affecting the different industries.”

In addition to providing the natural resources industries a voice outside of their industries, the program works to provide leaders tools for working within the industries in positions such as board or commission members, Addington said.

“I think the industry as a whole has always thought, ‘Who is our next Farm Bureau Board member? Who is our next Blueberry Commission Chairman? Are we developing a solid bench of people to lead? And, if so, are we giving them the right tools to be successful?’” he said.

In the program’s first year, participants heard presentations from people inside and outside of the natural resources industries, participated in group sessions, were trained in public speaking and went on field trips designed to instruct participants in issues affecting different industries.

“In each area, we covered issues affecting industries in that area,” Wessels said. “In Ontario, for example, we heard about the Owyhee Monument and the grass roots effort that they put forward on that issue. In Medford, we talked about labor, because our pear industry is hand-harvested and hand-pruned. And we heard a lot down there about what the spotted owl did to the timber industry.”

At the end of the fifth and final session of the 2017-18 program, held in Pendleton in March, participants were given a message, Addington said.

“The message they got from that meeting is it is your obligation now to go back to your community and get involved, get engaged,” he said. “It may not be in the natural resources industries. It could be on a city council, or a planning commission. The message was to get engaged and get involved and be ready to say yes when that phone call comes asking you to serve on a board or a commission.”
By Brad Withrow-Robinson, Forestry & Natural Resources Extension agent for Benton, Linn and Polk Counties.

Roads are an important asset for a woodland owner. Roads give access to a property by foot or vehicle, for some or all of the year. This allows for recreation, management activities such as planting, weed control or harvest, and also fire protection. Roads are an important piece of a property’s infrastructure along with buildings or ponds, and represent a significant financial investment.

Like other assets such as your house, car, pond or barn, roads need to be maintained to keep the practical values noted above, as well as value of investment. But in contrast to the buildings or other infrastructure on your property, along with the roads, a woodland owner takes on some legal responsibilities to maintain them. That is because, for all their benefits to a landowner, road systems also have the potential to do significant harm to the environment by creating barriers to fish passage or allowing erosion and delivery of sediment to streams. A forest landowner is expected to keep roads in good repair to prevent such harm. The type, timing, and intensity of maintenance will depend on the type of road, location, construction and its use: A rock road used to haul logs down a valley in the winter is very different from a dirt road along a ridge with light seasonal use.

But in both of those situations, the goal is to avoid delivering sediment to our streams. Key objectives embedded in both road design and maintenance activities are to get water off the road surface quickly (avoiding ruts), and draining that water onto the forest floor well away from streams.

That is why after heavy use, roads are often re-graded to eliminate ruts, and recreate an outward slope, with culverts, water bars, or other features built in to interrupt surface flow and take it off the road in desired locations. Seasonal dirt roads are often also seeded with a grass cover crop.

A key piece of annual maintenance done at the start of the rainy season is to survey all the cross drain culverts. These are the small pipes that carry water from the uphill side ditch, under the road and onto the forest floor. Debris built up in the ditch and culvert basin during the year can block the culvert opening. A blocked culvert can cause water to back up and flow over and erode the road, or even in rare cases, lead to a serious blow out.

So, as we enter the rainy season, I encourage all landowners to take a couple trips along your roads this fall with a rake and shovel. Check and clear blockages before the heavy rains come. Then get out there again in your raingear, and check your work. It is best to catch any problems and fix them when they are small.
New Publication: *Competition and Density in Woodland Stands*

By Brad Withrow-Robinson, Forestry & Natural Resources Extension agent for Benton, Linn and Polk Counties.

Many know I am an outspoken advocate of thinning woodland stands, suggesting that for many (not all) family landowners “thin early, thin often” is the path to the future forest they envision.

There are many reasons for and benefits that thinning provides to family forest landowners. This single practice applied with purpose, at the appropriate times, can shape a young forest into a uniform timber stand... or a complex and chaotic habitat for wildlife. The choice is really up to you.

OSU Extension released a new publication this summer to help landowners better understand, visualize, and apply thinning decisions to their properties. *Competition and Density in Woodland Stands* EM 9206, (which can be found online at catalog.extension.oregonstate.edu/em9206), describes the effects that different levels of competition have on a developing stand of trees, introduces Relative Density as a way to determine the level of competition, and presents a unique new style of stand density table as a way to apply this information in the field. The publication provides examples of how the tables can be used in determining if, when, and how many trees to remove in a thinning, according to the objectives of the landowner. It includes printable stand density tables for six different Oregon tree species.

Make this publication part of this winter’s reading list.

Seedling Sale and Goods from the Local Woods Fair

The Linn County Chapter of Oregon Small Woodlands Association is once again sponsoring its annual Seedling Sale on Saturday, Feb. 2, from 8 a.m. to noon, or while supplies last. The 2019 Goods from the Woods, a local woods products fair, is also returning, and will feature many products and crafts on sale that are made from native local woods. Location of both events is the Santiam Building at the Linn County Fair and Expo Center on Knox Butte Road in Albany.

The sale is a service to the community, providing a great opportunity for local homeowners and landowners to purchase small amounts of trees and shrubs, including native plants that may otherwise be hard to obtain. Some of the species are suited to smaller places around a home, with spring flowers and/or nice fall colors. A large portion of the money earned each year is used to help fund educational programs for youth in Linn County, including 4-H and college scholarships.

The plant list/information sheet and seedling order form will be available online, as of mid-November, when links will also be available on the Linn County Extension website, Forestry and Natural Resources page. Seedling pre-orders are always encouraged. For questions, additional information, or to be added to the seedling sale email list, please contact Bonnie Marshall at bonniem@wvi.com or 503-769-6510.
**Making Waves in 4-H Afterschool Club**

**By Lindsay Walker, 4-H Latin@ Outreach**

Part of the 4-H Food + Fun Club (CYFAR Grant) programming includes planning a field trip that introduces new concepts and experiences for youth as it relates to food and nutrition. The Linus Pauling 4-H Food + Fun club youth chose to plan a field trip to the Oregon Coast to learn about where our seafood comes from and to get a closer look at the practices of harvesting seafood.

The day started off in Newport, with a tour by Marine Discovery where the youth participated in throwing crab pots as we ventured towards the ocean waters. For many of the youth, this was their first trip to the coast and/or to be in a boat in the ocean. They received the opportunity to see some gray whales, jellyfish, and of course the crabs they pulled back up from the crab pots. We learned the difference between the endemic crab species, and how to identify whether they are male or female. The youth were taught that you can only keep males of a certain size as long as you have a license.

Our last stop was at the Oregon Oyster Farm, just outside of Newport on the Yaquina Bay. The owner spoke with us about their operation including how the oysters were farmed, harvested, and processed. Some youth even got to taste a raw oyster!

At the end of the day, everyone had learned something new or tried a new seafood. All in all, it was a great experience for everyone: no one got seasick and we can’t wait for the next food-centric field trip!

Students participating in the 4-H Food + Fun Club, had the opportunity to go out on a Marine Discovery tour where they had the opportunity to experience throwing crab pots, while also getting to see some gray whales, jelly fish and, of course, crabs.
Can I join 4-H?
Children with special needs are encouraged and welcomed

By Andrea Leao, 4-H Youth Development Coordinator

“I am looking for information on 4-H, can you help me?” When the phone rings, this is the question that is often on the other end of the line. As the conversation goes along, we talk about the age of the youth, what their interests might be, what part of the county they live in, and then eventually, the availability of a club to meet their interests. There is a question that is often asked that I am most excited about answering: “my child has special needs, does 4-H have anything to offer him or her?” Yes, 4-H is available and inclusive to all youth ages 5-19 years of age!

As the parent of a special needs child, I understand the apprehension or anxiety that the parent on the other end is feeling when they ask if 4-H is a good option for their child. There are many times when your child comes home from school with flyers for sports or other activities that doesn’t really fit your child. Many of our focus areas in 4-H are applicable to the life skills that these children are already learning, and this is a great way for them to demonstrate what they know.

My daughter, Jackie, has autism and has been a member of 4-H for the past eight years. The 4-H program has given her the opportunity to learn and demonstrate many life skills as well as finally participate and compete along with typical peers. Jackie has done everything from photography and art to showing chickens and sheep to public speaking at the state fair. 4-H has given her the confidence to try new things and meet new people. She is so proud of her accomplishments, and of course, there have been some accommodations made for her to reach these successes.

There are many avenues that 4-H can take to reach children. One of the more typical ways that most people are familiar with is the traditional club setting, where members participate and demonstrate skills that they have acquired, usually being showcased at the County Fair during the summer. 4-H can also take place after school or even as an enrichment class during the school day.

I have worked with many children with special needs throughout the 4-H program, and it is always so fun to see them interacting with their peers and sharing the same interests. This is a program that these kids can thrive in, be as competitive as they want, or they don’t have to be competitive at all if they don’t want to. They can work at their own pace and most all of our project areas can be adjusted to make accommodations to these kid’s needs.

Our goal in Linn County is to make 4-H accessible to everyone and educate our volunteers on the best ways to lead the youth in their clubs. If you have questions or are interested in the 4-H program, please contact Andrea Leao at 541-967-3871, or andrea.leao@oregonstate.edu.

Linn County Shooting Sports on the Rise

The Linn County Shooting Sports 4-H program is growing thanks to some great volunteers and amazing donations. This past year our program received two grants, one from the NRA and another from the Oregon 4-H Foundation. With these grants we were able to purchase new shot guns, rifles, and a pistol so that we could expand our program.

Thanks to a very generous donation from Coastal Farm and Ranch, we now have our very own gun safes to store our equipment. None of this would be possible without the huge support from the Albany Rifle and Pistol Club. They have become amazing partners with Linn County 4-H and working with our volunteers.

The 4-H program would not be successful without our volunteers and community partners. The old saying goes that it takes a village to raise a child...it also takes a village to provide such great opportunities to the 4-H members of Linn County.

Rural Escape
• 2 bed, 2 full bath, 1461 sq ft home
• 6.52 acres
• Recently partially logged- ready for replanting or new ideas!
• WVMLS 740025
• $379,790

Quiet Country Living
• 4 bed, 3 bath 1900 sq ft home
• 6.79 wooded acres
• Two stall barn for all your critters
• Nice shop w/ amenities
• WVMLS 738504
• $399,900
4-H Youth Development

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.

Benton County 4-H Youth Development

Elli Korthuis
541-766-3552
elli.korthuis@oregonstate.edu

Carolyn Ashton
541-766-3555
carolyn.ashton@oregonstate.edu

Maggie Livesay
541-766-3550
maggie.livesay@oregonstate.edu

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.

4-H Youth Practice with Poultry

By Elli Korthuis,
4-H Youth Development

Our 4-H volunteers provide a great deal of education within the clubs for 4-H members. In addition, the Benton County 4-H program is able to offer clinics throughout the year to further provide educational opportunities for our many projects and areas.

A recent clinic was the Regional 4-H Poultry Clinic, held Sept. 29, at the Benton County Fairgrounds. Three expert presenters taught 4-H members from Benton, Lane, Lincoln, Hood River, and Josephine counties. Jim Adkins, Sustainable Poultry Specialist, taught about choosing birds based on your needs, breeding, incubation, and showmanship. Dr. Jim Hermes from the Oregon State University Animal & Rangeland Services department educated 4-H members about poultry diseases and biosecurity. Heaven Roberts, a Ph.D. candidate from Oregon State University, covered the topic of poultry nutrition.

Along with their own clinic, 4-H members were able to attend the Fall Poultry and Homesteading Faire occurring on the same site at the Benton County Fairgrounds. After spending the day learning from the speakers about choosing the correct bird, and how to take care of it. 4-H youth were able to look at, and if they and their families chose, purchase a bird from the vendors. More clinics will be held in the future based on the needs and requests from youth and volunteers.

4-H Youth Practice with Poultry

Teens As Teachers now Accepting Applications

Apply now! This program is for 9th–12th graders who are interested in receiving training on how to teach elementary aged youth about nutrition, exercise, and environmental health related topics. Teens will learn how to create and teach lesson plans while gaining leadership, public speaking, facilitation skills, confidence, and team building. Interested teens are encouraged to complete an application (due by Nov. 15), and attend training on Saturday, Dec. 1, from 9 a.m.–2 p.m., at the Benton County OSU Extension Office. If selected to participate in the program, team members will be given additional subject matter training in nutrition, exercise, and environmental health related topics. Applications can be found on our website.
Adult Volunteers Wanted

The Benton County 4-H Program is actively looking for adults who want to share their time and talents with youth, aged 5–19.

Are you interested in making a positive impact on youth? Do you have an expertise that you want to share? Do you want to learn new skills? Volunteers will receive training, support from OSU faculty and staff, and from other 4-H volunteer leaders, as well as access to project and resource books and materials.

We are especially looking for adults to start 4-H Cloverbud Clubs. Our Cloverbud program is for youth ages 5–8 years old. If you are interested in volunteering with the Benton County 4-H Program, please contact our office for more information. Our next training will be on Tuesday, Nov. 27, from 6–8:30 p.m.

Congratulations to Lindsay and Elli

Two of our 4-H staff were honored with awards at the National Association of Extension 4-H Agents (NAE4-HA) conference in Columbus, Ohio in October.

Congratulations to: Lindsay Walker, Latin@ Outreach Coordinator in Linn and Benton Counties, received the Achievement in Service Award and Elli Korthuis, Benton County 4-H, received an award for Promotional Package for her 4-H photos with her dog, Tucker.

Your hard work paid off.

Benton County 4-H Scholarships

There are 10 Benton County 4-H scholarships totaling $15,000 available to current 12th grade 4-H members. All graduating seniors are eligible to apply. Applications are due Jan. 15, to the Benton Extension office (except the Horse Leaders Scholarship, which is due April 15). For more information, visit our website.

Scholarship Donors

- Moos Family – In Memory of Steve Moos
- Decker Family
- Hitchcock Family
- Bateman Family
- Benton County 4-H Horse Project Leaders Committee

Benton 4-H Enrollment

Oregon 4-H enrolls youth based upon their age as of Sept. 1, 2018

- 5–8 year olds are Cloverbuds
- 9–11 year olds are Juniors
- 12–14 year olds are Intermediates
- 15–19* year olds are Seniors (*Students who are 19 on 9/1 and have not yet graduated from high school may participate in upcoming 4-H program year.)
- Membership Fees: Early Bird – $40 per member by Jan. 15, 2019, for the first 2 family members (the 3rd & additional family members will be $10 each)
- Regular enrollment – $45 per member after Jan. 16, 2019, for the first 2 family members (the 3rd & additional family members will be $10 each)
- Check or Cash is accepted. Checks payable to: OSU Extension Service – Benton County (Once processed, no fees will be refunded.)

Members with Special Needs

All youth are welcome in 4-H! Clubs are encouraged to invite youth with disabilities into their groups, enriching the lives of all the youth involved. If you have members in your 4-H club with disabilities or special needs who require accommodations for participation in 4-H activities, please contact the OSU Extension Service at 541-766-6750 well in advance of any activity. Our goal is to reach all youth who wish to participate in 4-H.

4-H Wilco night
**MAKE A PLAN:**

Disaster can strike quickly and without warning. Families can cope with disaster by creating a disaster plan. Knowing what to do is not only your responsibility, but is the best protection for your family.

**PLAN:**

- Meet with your family and discuss the importance of preparing for disaster.
- Explain the dangers of fire, severe weather, and earthquakes to children.
- Discuss the types of disasters that are most likely to occur. Explain what to do in each case.
- Discuss what to do in an evacuation.
- Plan how to take care of pets.
- Pick two places to meet:
  - Right outside your home.
  - Outside your neighborhood.
- Ask an out-of-state or out-of-town friend to be your “family contact” – after a disaster it’s often easier to call long distance. All family members should know the contact’s phone number.
- Inquire about emergency plans at places where your family spends time (work, daycare, school, etc.).
- Determine the best escape routes from your home. Plan two exits from each room.

**ASSEMBLE SUPPLIES**

- Create simple, one page emergency instructions and keep them updated. Include information on fire extinguishers, exits, and utility shut offs.
- Instruct each family member on how and when to turn off the water, gas, and electricity at the main switches.
- Post emergency phone numbers by the telephone or in a common area (such as the refrigerator or kitchen cabinet).
- Teach children how and when to call 911.
  - Stock emergency supplies and prepare a disaster supplies kit.
  - Plan for 7-14 days of food, water, shelter in your kit
  - Don’t forget to make an emergency kit for animals
  - Have fun items in your kit to occupy children

**GET INFORMED**

- Call your local emergency management office or health department to find out what types of disasters are likely to occur in your area.
- Request information on how to prepare for each.
- Find out what warning system your community has in place. Subscribe to the alerting system to receive notifications to your cell phone.

**PRACTICE AND MAINTAIN**

- Attend a basic first aid and CPR class
- **Every month** – Test your smoke alarms.
- **Every 6 months** – Go over family disaster plan and do escape drills. Quiz children.
- **Every year** – replace batteries in smoke alarms (unless your smoke alarm uses long-life batteries).
- **Every year** – Replace food items and water in your disaster kit (sooner if necessary due to storage conditions or expiration dates)
### November

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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>3</td>
<td>Dairy Goat Day, 8 a.m.-4:30 p.m., Pleasant Hill High School</td>
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<td>3</td>
<td>Mason Bee Cocoon Cleaning Workshop, 10 a.m.-noon, Linn County Extension Office, Tangent, online RSVP required at <a href="https://tinyurl.com/ybg45q76">https://tinyurl.com/ybg45q76</a></td>
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<tr>
<td>6</td>
<td>Benton County 4-H Awards Banquet, 6-8 p.m., Benton County Fairgrounds Auditorium</td>
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<tr>
<td>9</td>
<td>Linn/Benton Master Gardener Achievement Celebration, 6 p.m., Albany Senior Center, 489 NE Water Ave, Albany</td>
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<tr>
<td>10</td>
<td>The garden in winter: Sweet Home Saturday Garden Class, 11 a.m.-noon, Hoy’s Hardware, 3041 Main Street, Sweet Home</td>
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<td>10</td>
<td>4-H International Exchange - Outbound Applications due, to the State 4-H International Program Office, Ballard Hall, 541-737-1303</td>
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<tr>
<td>12</td>
<td>Linn and Benton County Extension Offices closed for Veteran’s Day</td>
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<tr>
<td>13-15</td>
<td>Willamette Valley Agriculture Expo, Linn County Fair and Expo Center</td>
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<tr>
<td>16-17</td>
<td>Fall Forage Festival, Guerber Hall, Benton County Fairgrounds, and Oldfield Animal Teaching Facility, OSU. See the Livestock page for more information.</td>
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<td>17</td>
<td>Regional 4-H Horse Judging and Hippology Contest, 9 a.m.-12:30 p.m., Benton County Fairgrounds</td>
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<td>22-23</td>
<td>Linn and Benton County Extension Offices closed for Thanksgiving</td>
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<tr>
<td>26</td>
<td>Benton County 4-H Teens as Teachers applications due, Benton County Extension Office</td>
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<td>27</td>
<td>Benton County 4-H New Leader/Volunteer Training, 6-8:30 p.m., Benton County Extension Office</td>
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<tr>
<td>29</td>
<td>Benton County 4-H Horse Bowl Contest, 5:30 pm registration, 6 p.m. start, Benton County Extension Office</td>
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### December

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<tr>
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<tr>
<td>1</td>
<td>Benton County 4-H Teens as Teachers Training, 9 a.m.-2 p.m., Benton County Extension Office, registration required</td>
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<tr>
<td>10-11</td>
<td>Oregon Seed League Annual Convention at the Salem Convention Center.</td>
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<tr>
<td>13</td>
<td>Benton County 4-H County, State &amp; National Scholarship &amp; Awards Workshop, 6-8 p.m., Benton County Extension Office</td>
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<tr>
<td>24-25</td>
<td>Linn and Benton County Extension Offices closed for Christmas</td>
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<tr>
<td>31</td>
<td>Linn County Extension Office closed for New Year’s Eve</td>
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### January

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<th>Date</th>
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<tr>
<td>1</td>
<td>Linn and Benton County Extension Offices closed for New Year’s Day</td>
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<tr>
<td>8 &amp; 9</td>
<td>Winter OSU Extension Seed Crop and Cereal Production Meetings in Albany, West Salem, and Forest Grove.</td>
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<tr>
<td>16</td>
<td>Oregon Ryegrass Growers Association Annual Conference at the Linn County Fair and Expo Center in Albany.</td>
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### A Farmer Should Not be in Regular Pain! continued from Page 12

- Provide handles on the larger objects that have to be lifted close to the body. Provide handles that are large enough to grip comfortably, yet not so large that they are difficult to move. Provide a wide range of handle sizes and shapes to accommodate different grip strengths and needs. Keep handles between hand and shoulder level. Keep handles at least 18 inches above the ground. Provide handles on trucks to limit vibrations and impact on the body. Invest in motor vehicle seats with good seat positioning and lumbar support. Limit twisting and reaching. For example, be aware of where harvest containers are in relation to the body. Items should be within 17 inches of the worker’s body. Avoid placing needed tools or other items above shoulder height. Keep bag or box weight below 50 pounds. Keep bag or box weight below 50 pounds.

For more details on these strategies, MSDS, and on farm system design recommendations see:

- Preventing Musculoskeletal Disorders (OSHA Ergonomics) https://www.osha.gov/SLTC/ergonomics/

### References:


http://extension.oregonstate.edu/linn
EXTENSION OPEN HOUSE!

On Wednesday, October 17 the OSU Linn County Extension office held an open house for the public to come and learn about what we have to offer. There was a good turnout with Master Gardeners busy doing soil tests, and we had well water nitrate screening. People enjoyed checking out the historical timeline in our main hallway, too.

We invite you to come and visit us. Our office hours are Monday-Friday from 8 a.m. to 5 p.m. We do well water tests for nitrates, test pressure canner gauges, and do pH testing of your garden soil for free – year round.

The staff at the OSU Linn County Extension office want to thank everyone who came out to visit us at the open house. From left to right Ed Peachey, Jennifer Kruickshank, Chrissy Lucas, Laurie Gibson, Maggie Livesay, Tom Manning, Tina Dodge Vera, Michele Webster, Brooke Edmunds, Elizabeth Records, Andrea Leao, Jeanne Brandt, Will Jessie, Brad Withrow-Robinson, Yosvan Campos. Kneeling left to right: Teagan Moran, Monica Echeverri, Lindsay Walker.

Folks enjoyed looking at all the historical photos of Linn Extension during our open house. The collages start at 1919 and go through the 70’s. Photos and captions were pulled from Extension annual reports. Extension agents compiled an annual report for many years that were typed and bound into notebooks (of course, in today’s digital age, we don’t do these reports in this format). Staff looked through those old reports and pulled out interesting photos and stories to create the collages. Come on down and take a look!

Visitors had the opportunity to make their own smoothie using the Food Hero blender bike.