

4-H Improving Community, One Youth at a Time

By **Mitch Lies**,
GROWING Editor

There was a time when the idea of speaking before a crowd froze Travis Hinz in his tracks.

“You wouldn’t have caught me even close to being in front of a crowd,” said Travis, 16.

A few weeks ago, however, some might have recognized that voice announcing a Corvallis High School swim meet as belonging to Travis.

“We needed an announcer and Travis volunteered,” said his mom, 4-H leader Kathy Hinz, “and everybody just loved it.”

“Especially lately,” Travis said, “I’ve been doing a lot more public speaking, and I’ve been like, ‘Hey, I can do this.’ And I like that.”

Gaining the confidence to speak before a crowd is one of the many benefits of participating in 4-H, according to Travis.

There also are the skills developed in guide-dog training, one of several ventures Travis pursues



The Hinz family, from left, Shawn, Travis and Kathy, with guide dog trainee Gravity, are picture in front of the Benton County Extension Office in Corvallis. Kathy, a 4-H leader, has been involved in 4-H Youth Development most of her life and has passed her enthusiasm for the program down to her sons.

in 4-H, and the rewards of working with younger kids and teaching them life skills.

“When I first started getting into more

leadership roles in 4-H, there were a couple of kids that stood out to me, and that made me want to be like them,” Travis said. “So now, being able to mentor

and help the younger kids, it is really nice.”

Travis is among thousands of youth that participate in Benton County 4-H each year,

and he’s part of a family tradition. In addition to Travis and his mom, his maternal grandparents, Les and Sally Ishikawa, participated in 4-H for many years. And Travis’ brother, Shawn, 17, is an active member.

Kathy has participated in 4-H since third grade, and has been a leader for most of her adult life, including the last dozen years.

Shawn, like Travis, said his participation in 4-H has helped him grow more confident in public situations.

“In some of the clubs I’m in, like 4-H Ambassador, I get to do a lot of public speaking, which is my favorite part,” Shawn said. “It just makes me more confident in public.”

Kathy tells the story of how Shawn, who has a learning disability, inspired a large group of 4-H youth camp participants to sing along to his piano playing at 4-H camp one year.

“That was a place where he has found a lot of success, and he moved up, and now he is adult staff at

Continued on Page 8

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: 541-766-6750. Fax: 541-766-3549. <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. Seed Certification phone 541-967-3810. <http://extension.oregonstate.edu/linn>.

Program Staff Phone Numbers

Linn County 4-H Youth Development	Robin Galloway	541-730-3469
Linn County 4-H Youth Development	Andrea Leao	541-730-3534
Benton County 4-H Youth Development	Carolyn Ashton	541-766-6750
Benton County 4-H Natural Science and Benton County Leader	Maggie Livesay	541-766-6750
4-H Latino Outreach Coordinator	Ana Lu Fonseca	541-766-6750
Field Crops*	Vacant	
Livestock & Forages*	Shelby Filley	541-672-4461
Dairy*	Janifer Cruickshank	971-600-1222
Commercial Swine & Forage*	Gene Pirelli	541-623-8395
Small Farms*	Melissa Fery	541-730-3538
Small Farms*	Amy Garrett*	541-766-6750
Small Farms & Groundwater Education*	Chrissy Lucas	541-766-3556
Community Horticulture*	Brooke Edmunds	541-730-3470
Community Horticulture*	Pami Opfer	541-730-3471
Forestry, Natural Resources*	Brad Withrow-Robinson	541-967-3871
Forestry and 4-H Youth	Jody Einerson	541-766-6311
Family & Community Health (FCH)*	Jeanne Brandt	541-730-3544
FCH & SNAP Ed*	Tina Dodge Vera	541-730-3541
SNAP Ed*	Brooke Jackson	541-967-3871
SNAP Ed*	Constanza Maureira	541-766-6750
FCH & EFNEP*	Leonor Chavez	541-730-3542

* Multi-county assignment

Administration and program support serving Linn County

Office specialist	Laurie Gibson	541-248-1088
Office specialist	JoLynn O'Hearn	541-967-3871
Office manager & Linn County Leader	Michele Webster	541-248-1087
Seed certification	Doug Huff, Tamara Fowler	541-967-3810

Administration and program support serving Benton County

Office specialist	Kelly Cotter	541-766-6750
Office manager	Liz McGovern	541-766-6750
Office specialist	Andrea Watson	541-766-6750

Regional Administrator	Derek Godwin	541-967-3871
GROWING editor	Mitch Lies	541-967-3871

Oregon State University Extension Service offers educational programs, activities and materials without discrimination based on race, color, religion, sex, sexual orientation, national origin, age, marital status, disability, disabled veteran or Vietnam-era veteran status. Oregon State University Extension Service is an Equal Opportunity Employer. Reasonable accommodations to persons with physical or mental disabilities will be provided. Please notify the Extension office five working days prior to the event you are interested in attending to request reasonable accommodations.



Extension Service

Letter to readers

Dear Benton and Linn County Residents,

We are taking this opportunity to thank our many volunteers and residents for your support. This publication is our way of saying thank you. We hope you will become more aware of the many different education programs and services we provide, and we hope you will join us in making a difference in your community.

OSU Extension Service has been helping local residents for more than 100 years. The partnership and funding from our counties enable Oregon State University to obtain state and federal funds dedicated to hiring Extension staff that serve our local communities. In general, every **\$1** of county funds leverages an additional **\$4** of state, federal and grant funding, and an additional **\$2** in value of volunteer time. Stable county funding is critical for continuing these services.

Please read through our special community report, identify education programs of interest, and contact us to learn more or sign up for events.

Would you like to help? Many of our programs rely on training volunteers who in turn teach others. Last year, our volunteers reported more than **50,000 hours** of service in Benton County and **15,000 hours** in Linn County. This is equivalent to **31 full time employees!!** We would love your help in sharing educational resources and supporting other residents.

Don't be a stranger – come visit our office, call or email us, and visit our website for information on our programs.

Thank you again for your support!

Derek Godwin
Regional Administrator

Maggie Livesay
Benton County Leader and
4-H Natural Resources

Michele Webster
Linn County Leader and
Office Manager

**Benton County
volunteers contributed
over \$1,000,000 worth of
volunteer hours in 2016!**

450 Extension Volunteers



253 4-H Leaders

Master Gardeners

103



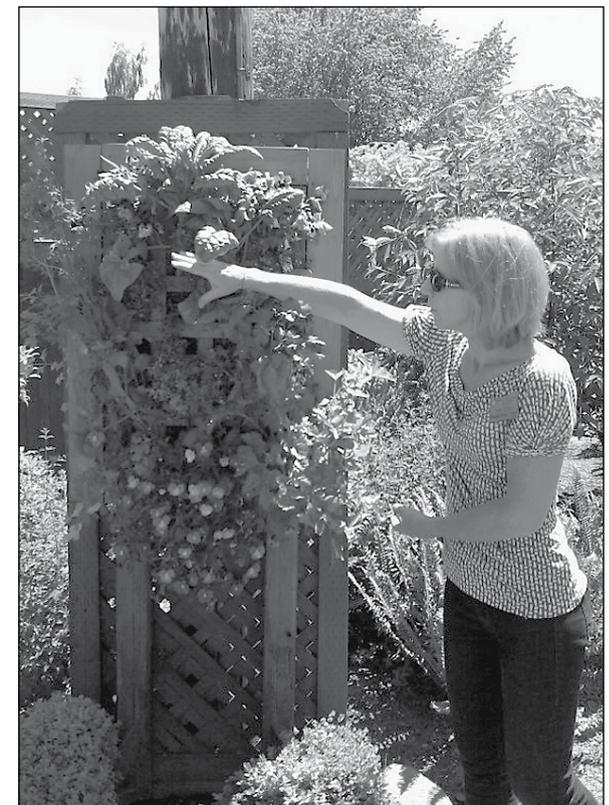
37 Master Food Preservers

Master Woodland Managers

20



37 Trained Season Trackers



Master Gardener volunteer at the Demo Garden.



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



Pami Opfer
541-730-3471
pamela.opfer@oregonstate.edu

Community Horticulture



March-April Gardening Calendar for Western Oregon

MARCH

Planning

- Plan your vegetable garden carefully for spring, summer, and fall vegetables that can be eaten fresh or preserved. If you lack in-ground gardening space, plan an outdoor container garden.
- Use a soil thermometer to help you know when to plant vegetables. Some cool season crops (onions, kale, lettuce, spinach) can be planted when the soil is consistently at or above 40 degrees Fahrenheit.

Maintenance and clean up

- Lawn mowing: Set blade at 0.75 to 1 inch for bentgrass lawns; 1.5 to 2.5 inches for bluegrasses, fine fescues and ryegrasses.
- Compost grass clippings and yard waste, except for clippings from lawns where weed-and-feed products or herbicides (weed killers) have been used.
- Spread compost over garden and landscape areas.
- Prune gooseberries and currants; fertilize with manure or a complete fertilizer.
- Fertilize evergreen shrubs and trees, only if needed. If established and healthy, their nutrient needs should be minimal.
- If needed, fertilize rhododendrons, camellias, azaleas with acid-type fertilizer. If established and healthy, their nutrient needs should be minimal.
- Prune spring-flowering shrubs after blossoms fade.
- Fertilize caneberrries using band fertilizer, broadcast fertilizer or a complete fertilizer or manure.

Planting/propagation

- Divide hosta, daylilies and mums.
- Use stored scion wood to graft fruit and ornamental trees.
- Plant insectary plants (e.g. Alyssum, Phacelia, coriander, candytuft, sunflower, yarrow, and dill) to attract beneficial insects to the garden. For more information, see *Encouraging*

Master Gardeners Give and Receive

By Mitch Lies,
GROWING Editor

Seven years ago, as the U.S. was just emerging from the Great Recession, Corvallis residents Pat Wray and his wife, Debbie, decided to enter the Oregon State University Extension Service's Master Gardener program.

"We joined the program because we felt it was important and an opportunity to help people,"

Pat Wray said. "There was a real concern on people's part about finding enough food back then, and a tendency for people to look in their backyards and become better gardeners."

The Wrays have since helped many people become better gardeners through help-desks and at clinic tables at events like farmers' markets, and they have distributed food to the needy on a regular basis in a program called Plant a Row

for the Hungry.

They've also enjoyed the fruits of their labor on their own dinner table.

"Home grown, organic and fresh food is quite a bit better than anything you can buy in a normal grocery store," he said.

Also, since becoming better gardeners, the Wrays have dramatically increased the amount of food they grow in their half-acre backyard.

"It was an amazing

Continued on Page 5

Continued on Page 4

Let Garland Nursery get you in the garden groove!

Enjoy 6 acres of:

- Perennials, Annuals, Trees & Shrubs
- Fruits, Vegetables & Herbs
- Gifts & Garden Supplies
- Houseplants & Bonsai
- Garden Art & Furniture

Garland

NURSERY

Since 1937

5470 NE Hwy 20, Corvallis 97330
(541) 753-6601
GarlandNursery.com

Beneficial Insects in Your Garden (PNW 550): <http://bit.ly/PNW-550>

- If soil is dry enough, prepare vegetable garden and plant early cool-season crops (carrots, beets, broccoli, leeks, parsley, chives, rhubarb, peas and radishes). Plant onions outdoors as soon as the soil is dry enough to work.
- Berry crops (strawberries, raspberries, blueberries, blackberries, currants, gooseberries and other berry-producing crop plants). See OSU Extension publications for berry varieties: <http://bit.ly/OSUberries>

Pest monitoring and management

- Monitor landscape plants for problems. Don't treat unless a problem is identified.
- Spray trees and shrubs for webworms and leafrollers, if present.
- Protect new plant growth from slugs. Least toxic management options include barriers and traps. Baits are also available for slug control; use with caution around pets. Read and follow all label directions prior to using baits or any other chemical control.
- Learn to identify the predatory insects that can help to keep aphids and other pests under control.
- Spray to control leaf and twig fungus diseases in dogwood, sycamore, hawthorn and willow trees.
- Prune ornamentals for air circulation and to help prevent fungus diseases.
- Monitor for European crane fly and treat lawns if damage has been verified.
- Start rose blackspot control tactics at budbreak. Control rose diseases such as black spot. Remove infected leaves. Spray as necessary with registered fungicide.

Houseplants and Indoor Gardening

- Trim or shear heather when bloom period is finished.
- Start tuberous begonias indoors.
- Take geraniums, begonias and fuchsias from storage. Water and fertilize. Cut back if necessary. Move outdoors next month.

APRIL

Planning

- Write in your garden journal throughout the growing season.
- Prepare garden soil for spring planting. Incorporate generous amounts of organic materials and other amendments, using the results of a soil analysis as a guide.
- Prepare raised beds in areas where cold soils and poor drainage are a continuing problem. Incorporate generous amounts (at least 2 inches) of organic materials.
- Use a soil thermometer to help you know when to plant vegetables. When the soil is consistently above 60 degrees Fahrenheit, some warm season vegetables (beans, sweet corn) can be planted.

Maintenance and clean up

- Allow foliage of spring-flowering bulbs to brown and die down before removing.
- Apply commercial fertilizers, manure or compost to cane, bush (gooseberries, currants and blueberries), and trailing berries.

Continued on Page 5

Extension Program Sows Food Security

By Mitch Lies,
GROWING Editor

Six years ago, with her daughter battling cancer, Master Gardener Sophie Grow of Philomath, found gardening to be therapeutic.

"It was a way for me to process and destress," Grow said. "It was a form of therapy for me to garden. And not only did it help me cope, but it also helped me feed my family, and I thought, man that felt so good. I need to teach other people how to do that."

"I wanted to show families that thought they couldn't do it, that they could," Grow said.

Grow's daughter, Grace, today is a healthy cancer survivor, and Grow is doing what she set out to do six years ago: Through the Linn Benton Seed to Supper program, Grow is teaching others how to garden and how to use their garden's bounty in meals.

The program, a partnership between the Oregon State University Extension Service and the Oregon Food Bank, increases food security of low-income residents by providing education and support that empowers participants to grow their own fruits and vegetables.

Grow said her participation in Seed to Supper has been as rewarding as she initially conceived.

"I love to see families come back and say, 'Oh, we're on our second garden, and we're doubling the size. The children are really excited to eat zucchini straight out of the garden, and they are picking vegetables, and they are not whining, like I thought they would, and they are not destroying the garden. They are actually caring for it, and it is a family experience,'" Grow said.

The Seed to Supper program has emerged as a valuable tool for providing low-income families access to healthy meals within a state that consistently ranks as one of the top-five in the U.S. for persistent hunger, said Brooke Edmunds,



Seed to Supper teaches beginning gardeners to grow and harvest their own produce. Here a group of Master Gardeners harvest Yakon.

Extension community horticulturist for Benton, Linn and Lane counties.

According to recent reports, emergency food pantries across Benton and Linn counties have provided assistance to a record number of people in the past year, Edmunds said. She added that one out of every five families in the two-county area depends on emergency food-pantry assistance at least once a year.

The Seed to Supper program includes six two-hour sessions in both English and Spanish at no cost to participants. The sessions are taught by trained volunteer garden educators, and cover topics such as planning a garden, planting the garden, caring for it and harvesting its bounty.

"We try to teach them the U.S.D.A. (Healthy Eating) Plate," Grow said. "Here is what we need in terms of these vegetables and fruit, and here is what we can grow here."

Grow said the biggest concern she hears from participants is "fear of having a black thumb."

"They'll ask a lot of questions about that, such as what do I need to do to get this plant to not die," Grow said. "We explain to them, first of all, it's okay if something dies in your garden. It is okay to fail, and you should keep trying to push past that."

"Gardening can be pretty intimidating," Grow said. "If

you haven't been taught as a child, it can seem like a large task to take on. And people have busy lives.

"We give them the basics, what they need to get a good start," she said. "Then we give them some seeds, and we give them some starts, and we say, 'Call us. Email us. Come to our follow-up workshops. We want to help you if you have struggles during the growing season.' So they feel supported and know that if they do have a problem, they can call Master Gardeners and bring in a sample, or show them a picture and get help."

This past year, through funding provided by a Hoecker Innovation Grant, the program also included hands-on-cooking and food-preservation classes.

Also in 2016, the program partnered with Strengthening Rural Families, a Benton County program, to offer youth gardening activities during two Seed to Supper classes. Called Kids Grow, the youth education program allowed families to strengthen communication and bond around a shared learning experience, Edmunds said.

Overall, the Seed to Supper program reached approximately 200 families in the past three years, Edmunds said, with encouraging results. A 2015 survey of participants found that 92 percent of respondents had a reduced food bill, and 80 percent reported an increased consumption of vegetables.

Going forward, Grow has high hopes for Seed to Supper.

"I want to normalize growing food," she said. "I want it to be like another part of your house, like your kitchen. And if you know what you are doing in your kitchen, you feel pretty good about teaching your kids."

"So I want to teach parents to do that in their garden," Grow said, "so we can have a new generation of kids growing up knowing where their life source is coming from."

transition for us,” Wray said. “We had been gardening all of our lives, but, it turns out, not very efficiently. The Master Gardener classes have made us a whole lot better, and we are much more involved in gardening. We have increased our fruit trees by quite a bit. We built raised beds. Our output, in terms of vegetables and fruits, has grown probably by a factor of three or four.”

The Wrays are among dozens of Benton County residents who participate in Benton County Extension’s Master Gardener program.

According to Brooke Edmunds, a Community Horticulture Extension agent, who oversees the Master Gardener program in Benton, as well as Linn and Lane counties, the program provides Master Gardeners tools to become better gardeners, as well as an opportunity for people with similar interests to connect.

A recent survey showed that among other program benefits, more than 60 percent of Benton County Master Gardeners increased their use of sustainable home horticulture practices after just one year of training. A similar percentage reduced the amount of their food waste by utilizing unused produce as compost. And 67 percent reported that they increased practices



Master Gardeners work with seedlings in a greenhouse. In 2016, Benton County Master Gardeners donated 7,290 pounds of produce to organizations that support the needy.

that enhance a garden environment for beneficial insects, bees and butterflies.

They’ve also supported the hungry. The just over 100 Benton County Master Gardeners in 2016 donated 7,290 pounds of produce to organizations that support the needy.

The 2016 report also noted that the county’s Master Gardeners put in 9,194 volunteer hours, which were valued at \$209,163, providing gardening information to 3,665 people last year.

Statewide, Master Gardeners donated just under 75,000 pounds of fresh produce to food banks and other sites that serve the needy in 2016, and volunteers donated 214,984 hours in support of the program, while providing gardening advice to 105,811 individuals.

In the program, which

started in 1978, OSU Extension specialists, Extension agents and other Master Gardeners provide prospective Master Gardeners 66 hours of training over an eight-week period. After completing the course, individuals are required to return 66 hours in volunteering gardening information to the public or remit \$500 to the program.

Most, however, like the Wrays, volunteer for much more than the required 66 hours. Pat and Debbie even went so far as to create a training program called Plant Problems Scenario that received international recognition.

“It developed into quite a successful program,” Wray said.

The program won the Oregon Master Gardener Association’s 2013 Search for Excellence award and the 2015 International Master Gardener Association’s Search for Excellence award in the Innovative Project category.

And, of course, the Wrays say they’ve never eaten better than in the years since they became Master Gardeners.

“We absolutely eat more fruits and vegetables than we ever did before, and they are better tasting and better for you than what you can get at a grocery store,” Wray said.

- Place compost or well decomposed manure around perennial vegetables, such as asparagus and rhubarb.
- Cut back ornamental grasses to a few inches above the ground, in early spring.
- Cover transplants to protect against late spring frosts.
- Optimum time to fertilize lawns. Apply 1pound nitrogen per 1,000 square feet of lawn. 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.
- Optimum time of year to dethatch and renovate lawns. If moss was a problem, scratch surface prior to seeding with perennial ryegrass.
- Prune and shape or thin spring-blooming shrubs and trees after blossoms fade.

Planting/propagation

- Plant gladioli, hardy transplants of alyssum, phlox and marigolds, if weather and soil conditions permit.
- It’s a great time to start a vegetable garden. Among the vegetables you can plant, consider: Broccoli, Brussels sprouts, cabbage, carrots, cauliflower, chard, chives, endive, leeks, lettuce, peas, radishes, rhubarb, rutabagas, spinach and turnips.

Pest monitoring and management

- Clean up hiding places for slugs, sowbugs and millipedes. Least toxic management options for slugs include barriers and traps. Baits are also available for slug control; use with caution around pets. Read and follow all label directions prior to using baits or any other chemical control.
- Monitor strawberries for spittlebugs and aphids; if present, wash off with water or use insecticidal soap as a contact spray. Follow label directions.
- If necessary, spray apples and pears when buds appear for scab. See *Managing Diseases and Insects in Home Orchards* (PDF - EC 631).
- Cut and remove weeds near the garden to remove potential sources of plant disease.
- Use floating row covers to keep insects such as beet leaf miners, cabbage maggot adult flies and carrot rust flies away from susceptible crops.
- Help prevent damping off of seedlings by providing adequate ventilation.
- Manage weeds while they are small and actively growing with light cultivation or herbicides. Once the weed has gone to bud, herbicides are less effective.
- Spray stone fruits, such as cherries, plums, peaches and apricots for brown rot blossom blight, if necessary.

Agricultural Business Management • Agricultural Sciences
Animal Science • Animal Technology
Animal Technology: Horse Management
Crop Production • Equine Science
Horticulture • Profitable Small Farms
Veterinary Assistant
linnbenton.edu/programs





Food Preservers Find Bounty in Extension Program

By Mitch Lies,
GROWING Editor

Prior to last year, Carol Walsh hadn't had any hands-on instruction in food preservation "for probably 25 years," she said.

So, freshly retired and with a desire to grow and can her own food, the Corvallis resident thought of the Benton County Extension Service's Master Food Preserver program.

"I knew there had been some changes in the recommendations, and I also was not aware of new gadgets and ways to simplify the process, so I wanted to learn that," Walsh said.

"Plus, the class teaches how to can tuna and other fish, which I had never done before," she said. "And I didn't have any hands-on experience making jerky or cheese or yogurt, and, while it is easy enough to read how to do it, it is just so much better when you can experiment with other people, and it doesn't feel like the mistakes are as costly."

Today Walsh is a Master Food Preserver and Master Gardener, having completed courses in both disciplines, and is busier than ever with food preservation.

"It broadened my ideas of what to do with items from my garden, so I can maximize the yield, rather than feeling like I might



Master Food Preservers learn a variety of methods to safely preserve food. Pressure canning meat and making dried fruit leather are two examples.



PHOTOS BY JEANNE BRANDT

waste something," she said.

Walsh is part of a growing number of participants in the Benton and Linn County Extension Master Food Preserver programs. Last year, 14 volunteers completed the eight-week, 48-hour Master Food Preserver volunteer training in the two-county area and 23 were recertified, allowing them to continue their efforts as certified Master Food Preservers.

Cost of the program is \$125, which includes materials, with reduced fees available on a need basis. Participants also are required to give back 48 hours of volunteer time, which may include staffing

information booths at farmers' markets, helping conduct workshops or manning a hotline the program offers communities between mid-July and mid-October each year.

"The give back hours are really nice," Walsh said, "because that puts me out with other people to share the research-based recommendations, and helps them with where to find those resources. I find that a very valuable part of the program: It's not just what I get from it, but how I can share what I get with others."

In a year end report from Jeanne Brandt, who heads the Extension Service's

Family and Community Health programs in Linn and Benton counties, it states that volunteers logged just under 900 hours of volunteer time last year through, among other activities, staffing tables at 40 community events, testing the safety and accuracy of 133 pressure canning gauges, and assisting with 46 demonstrations and workshops. In all, the two-county's Master Food Preserver program had a total of 3,721 contacts with Benton and Linn community members last year.

Volunteer respondents reported that the top

reasons they participated in the program were because it gave them "a sense of personal satisfaction," followed by "allowing them to eat a variety of foods all year long; control the sugar, salt and additives in their food; and prevent food from going to waste."

Every respondent reported they had made changes in their practices of preserving food, with the greatest changes occurring in the areas of handling food safely, canning fruits, and drying foods.

Brandt noted that recruitment is currently underway for volunteers interested in the Master Food Preserver program. Training will be held starting April 11. Interested parties can call the Linn County Extension Office for more information, 541-730-3544.

Participants may be surprised at what they accrue from the course. Walsh noted she even is using ideas gained from the Master Food Preserver program for gift creations.

"We are gifting things that come from our garden," she said. "For example, we grew more dry beans last year and made a bean soup mix for our family, and made a spiced herb packet to go along with it. We're also giving apple sauce to neighbors.

"Just things like that are fun to do," Walsh said.

Extension's Nutrition Education Making a Positive Impact

The Supplemental Nutrition Assistance Program Education (SNAP-Ed) and Expanded Food and Nutrition Education Program (EFNEP) are two programs that are working to improve the health of low-income residents through Oregon State University Extension Service.

SNAP-Ed and EFNEP works with community partners in Linn and Benton counties to provide health- and nutrition-related lessons, activities, and materials to both parents and youth. Through their work, a number of positive changes have been seen in the communities that they reach. Sixty-five percent of parents who worked with EFNEP reported an increase in fruit consumption, 48 percent reported an increase in vegetable consumption, 84 percent reported safer food handling practices, and 35 percent reported increased physical activity. Meanwhile, first graders who participated in SNAP-Ed programs reported an increased ability to identify healthy foods and drinks (8-21 percent), as well as a 6 percent increase in physical activity, and a 19 percent decrease in daily video games and TV.



PHOTO PROVIDED BY TINA DODGE VERA



SNAP-Ed Food Hero recipe taste at local elementary school during 2016. Results: Pumpkin pudding is kid approved. The recipe can be found here <http://www.foodhero.org/recipes/pumpkin-pudding>.



Creamy Potato Leek Soup

Ingredients

- 3 leeks (about 3 cups diced)
- 3 potatoes (about 3 cups diced)
- 2 Tablespoons butter or margarine
- 4 1/2 cups chicken broth
- 1/4 cup 1% milk
- 2 garlic cloves, minced or 1/2 teaspoon garlic powder
- 1/2 teaspoon black pepper

Directions

Remove root and green tops from leeks. Slice in half lengthwise and rinse well under running water. Slice crosswise into 1/4 inch slices.

Scrub potatoes well; cut into small cubes.

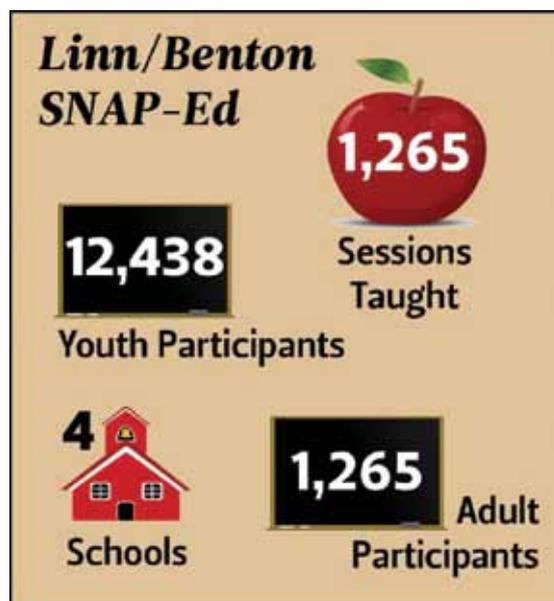
Melt butter or margarine in a 2-quart saucepan over medium heat.

Add garlic and chopped leeks. Cook until softened.

Add potatoes and enough broth to cover. Cover pan and simmer until potatoes are soft. Mash with a potato masher or fork until potatoes are fairly smooth.

Add remaining broth, milk, and pepper. Simmer for about 5 minutes.

Refrigerate leftovers within 2 hours.



Become an OSU Extension Service Volunteer Master Food Preserver

- Learn all aspects of food preservation
- Serve as a community resource, assist with hands-on classes, share information at events
- No experience necessary

Training starts April 11 and goes for eight consecutive Tuesdays. Participants agree to return 48 hours of volunteer time in their community. Registration cost is \$125. Download the application at <http://extension.oregonstate.edu/linn/>.

For more information, contact Jeanne.brandt@oregonstate.edu, or call 541-730-3544.

Free Community Education Programs in Lebanon

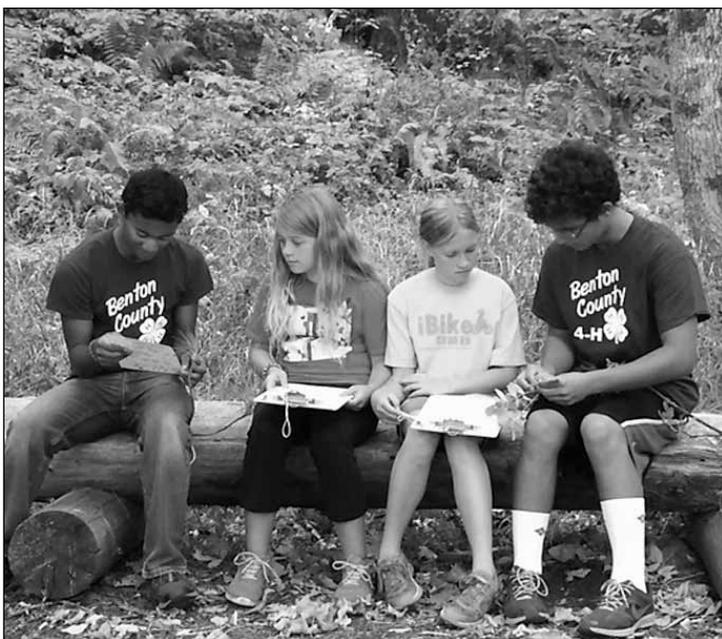
March 30 – Our Love Affair with Salt

One-hundred years ago, salt was one of the most sought-after commodities in the world, necessary for our survival. More recently, we make efforts to limit it in our diets. Come learn about the history of salt, some creative uses for it in our homes, and some tips for controlling it in our diets.

April 27 – Food as Medicine and Other Keys to Healthy Aging

Many chronic diseases could be avoided by following a healthy diet, participating in physical activity, and avoiding tobacco. Explore the lifestyle traits and food choices practiced by people around the world living long, healthy, and productive lives.

Classes are held at the Lebanon Senior Center, 80 Tangent St., Lebanon, Oregon, from 9:30–11 a.m. Please call the OSU Linn County Extension office to reserve your space in one or both of these classes.



Teens as Teachers.

4-H Improving Community, One Youth at a Time

Continued from Page 1

camp,” Kathy said.

“4-H will find a niche for everybody,” Kathy said. “It will help you find your strength, and it will help you grow in that way.”

Statewide, approximately 50,000 youth participate in Oregon State University Extension Service’s 4-H youth development program. Nationally, almost 6 million youth participate in 4-H.

The Citizens for Benton County Extension, a group of Extension volunteers, has worked with Benton County commissioners to put a measure on the ballot in May that would form a Benton County Extension and 4-H Service District. If passed, the service district would cost a home owner \$16 per year if their house and property are assessed at \$200,000. These funds would help pay for the county’s 4-H Youth Development and other Extension programs.

As an organization, 4-H dates to 1902, when it was designed as a means for agricultural youth in Ohio to meet in after school clubs and participate in fairs. Today 4-H serves youth in rural, urban and suburban communities in every state and its many programs, camps and clubs provide youth opportunities to explore a variety of subjects, including multiple STEM (science, technology, engineering and math)

opportunities in everything from agricultural and animal sciences to rocketry, robotics, environmental protection and computer science.

“The 4-H idea is simple,” the 4-H national website states: “Help young people and their families gain the skills needed to be proactive forces in their communities and develop ideas for a more innovative economy.”

4-H relies on a vast network of volunteers to serve as leaders and assistant leaders. Kathy Hinz is among more than 6,300 volunteers in Oregon to serve 4-H in 2015, which is the latest year for which statistics are available. Doing so can be time consuming, she said, but rewarding.

“The part I love most is watching kids grow,” Kathy said. “I have kids coming up to me that were in our club when they were kindergarteners, and now they are seniors in high school, and it is so inspiring to see their growth, and their change, and how much they love what they are doing.

“The kids are not just learning about something like foods, or how to raise a goat,” she said. “They are learning how to present themselves. They are learning how to help others. They are learning how to teach others, how to take on a responsibility, and follow it from beginning to end.”

Kathy, in fact, believes the benefits Travis, Shawn and others attain through 4-H extend well beyond their immediate circle.

“It can be very inspiring for others to see the changes in these kids,” Kathy said, “and it helps show other kids that it can be done. I believe 4-H has incredible community-wide benefits.

“There are clubs that adopt families and that are getting out there all the time helping their community, cleaning, organizing fundraisers,” Kathy said. “All the kids learn leadership skills and how to help others, so that when their school needs help with something, they can be leaders in those efforts.”

The 4-H Guide Dogs for the Blind club that Travis and Shawn participate in involves raising guide dogs from puppies to the point they are ready to be delivered to their host.

To date, the family has raised 11 such dogs.

“The best part is when (the dogs) graduate and you get to meet the person they are going to,” Shawn said. “They are super happy. Sometimes they even cry.”

“When you give the dog back, you are sad,” Kathy said, “but then you’re like, ‘Oh my gosh, that was totally worth it. That just changed their life.’”

“It makes you feel really good,” Shawn said, “so you keep coming back.”



Chrissy Lucas
541-766-3556
chrissy.lucas@oregonstate.edu

Groundwater Protection Education

Extension Helping Ensure Groundwater Safety

In 2014 and 2015, the OSU Extension Service in Benton County partnered with the Benton County Environmental Health Department on a grant that was received from the Oregon Health Authority Domestic Well Safety Program to encourage an increase in domestic well testing, and provide education to increase the likelihood that homeowners would maintain a regular testing schedule. This funding allowed for 90 wells to be sampled.

This program has made a significant impact on those residents in Benton County who participated, and demonstrated the importance of promoting proper well maintenance and regular testing.

One particular story involved a family that purchased a home in 2009, a year before Oregon added arsenic as a requirement to the Real Estate Transaction law. The law, which was passed in 1989, requires testing for coliform bacteria and nitrate during a property transfer to ensure property buyers are aware of any potential issues. It was amended in 2010 to include arsenic in the testing process.

Within a week of testing, the results revealed the family's

well had levels of arsenic well above the 10ppb (parts per billion) that EPA deems as safe for consumption, and a level of nitrate that, while under the EPA limits, was concerning, due to the presence of small children in the home. After the initial shock, the homeowners discussed possible abatement procedures and what conversations they should have with their health provider regarding their family. A reverse osmosis system was installed on the water system to decrease the amount of arsenic and nitrate exposure to the family.

Arsenic occurs naturally in the geology in some of the Willamette Valley aquifers, and is odorless and tasteless, so must be detected by testing. Exposure to arsenic at high levels poses potential serious health effects, as it is a known human carcinogen, or cancer-causing agent. Nitrate, which comes primarily from fertilizers and septic systems in this region, have been associated with Blue Baby Syndrome. Blue Baby Syndrome occurs because nitrate ingestion interferes with the body's ability to transport oxygen through the bloodstream to vital tissues and organs in the body causing

Figure 1. Organizations in Oregon with regulatory mandates that are involved in groundwater quality, domestic wells, and promoting domestic well water safety.



a bluish tinge to the skin. Little is known about the long-term effects of drinking water with elevated nitrate. Some research has suggested that nitrate in drinking water, even below 10 ppm, may play a role in the development of some cancers in adults, and in thyroid disorders, spontaneous miscarriages, and birth defects.

Another resulting story shows the value of education on the interaction of wells on one another and the aquifer that they are drilled into. One well fed an in-ground storage tank located just off the well house. The access to this large 1,500-gallon water tank was loose and the cows kept knocking it off exposing the

reservoir. This well serves the needs for the house, so a sample was taken at that site. It came back positive for coliform, but negative for e-coli.

After discussing the need to seal the tank properly, the intern team observed a dry pond and looked at the other well on the property. This well is very short and sits on the edge of a dry pond between a drainage pipe from the road and a grey water drainpipe. The well had the seal removed and pump disconnected, leaving it exposed, next to the pond that floods every year. As a result, surface water was likely contaminating the aquifer during the rainy season.

The homeowner was not

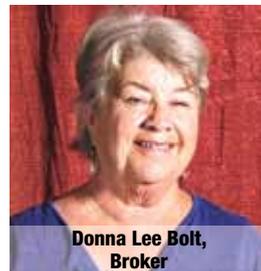
aware that these two wells could cause any problems in the conditions that they were in. The participant was happy to have an assessment of their wells and to get recommendations for any corrective action that might be needed to maintain the safety of the water being consumed.

Twenty-three percent of Oregonians and 90 percent of all rural residents in the state rely solely on groundwater for their drinking water. Residents with domestic wells are completely responsible for monitoring their well for water quality issues. Unfortunately, groundwater in the Willamette Valley is susceptible to natural and point/non-point sources of contamination that can cause health effects.

Stories like those recounted here are not uncommon in the Willamette Valley. Benton and Linn county residents are some of the only residents that have a local community educator to reach out to with questions and requests for educational programming about groundwater protection, well water testing, septic systems, and other land-use issues that could affect their water quality.



Barbara Hartz,
Principal Broker/Owner



Donna Lee Bolt,
Broker



Janet Hendrix,
Broker



Mitch Robison,
Broker



Office Hours: Mon-Fri. 9:00-5:30
Sat. 10:00-3:00

405 Landmark Drive,
Philomath, OR 97370

(541) 929-2586 • 800-346-0630

Big enough to handle all your
needs, small enough to care

Servicing the real estate needs of rural property owners and buyers since 1978, Our responsive and attentive Brokers are extremely knowledgeable about zoning, wells, septic systems, soils, flood zones, water rights, and other unique facets of buying and selling rural properties.



Upcoming Educational Programs

Reproduction in Beef Cattle

Thursday, March 16, (6:30-8:30 p.m.) at the **Oldfield Animal Teaching Facility on the OSU campus.**

Pre-registration and a \$10 fee is required. See <http://extension.oregonstate.edu/linn/> <https://tinyurl.com/zctme8g> for on-line registration. If you do not have Internet access, stop by or call the OSU Extension Linn County office 541-248-1088 for assistance. Speakers will be Shelby Filley, Regional Livestock & Forage Specialist, OSU Extension Service, and Adrienne Lulay, Instructor at OSU and Select Sires Representative.

Topics in the class include Biological Cycle of the Cow, Calving Interval, Calf Weaning Strategies, Reproductive Physiology & Anatomy, Nutrition, Cow Body Condition, and Reproductive Efficiency, Genetics, Selection, Synchronization and Breeding Systems, Bull Selection, Evaluation and Testing. The objective is to help beef producers achieve the primary goal of the cow-calf operation, to efficiently produce a live, vigorous calf every year.

OSU Forage Management Series (Five parts)

Each part consists of an evening *classroom* presentation at the **Oldfield Animal Teaching Facility on the OSU campus**, followed

Continued on Page 15

Sheep Growers Find Answers through Extension

By **Mitch Lies**,
GROWING Editor

The heavy rainfall that has permeated Western Oregon so far this winter has made for a particularly tough lambing season, according to Douglas County rancher John Fine.

But thanks in part to techniques he's picked up at a lambing school co-sponsored by Oregon State University Extension Service and the Oregon Sheep Growers Association, Fine has been able to keep his lambing losses to a minimum.

"We try not to lose any, but little things that we've picked up from the school and incorporated have helped us reduce our number of losses," Fine said. "This year, I think we've only lost three lambs (or under 5 percent).

"We were losing up to ten percent some years," he said.

Fine is among dozens of producers who have participated in the lambing school, which, since 2014, has been held each January in Douglas County. Participants range in age from 4-H teens to veterans like Fine, who's been lambing for more than 50 years.

"It seems like every year, listening to (veterinarian) Paul Bailey or (OSU Extension agent) Gene Pirelli or (sheep rancher) Ernie Kahle, I pick up something new that I either knew at one time and forgot, or didn't know, and I'm able to use it," Fine said.

"I know that other people who have participated in the school, who have less



Ernie Kahle, (right center) Mon Alto ranch manager, giving shots to a lamb.

experience, get a tremendous amount of information that they use right away," he said.

The lambing school is among several outreach events OSU Extension livestock agents conduct each year.

Another such event, conducted last year, showed ranchers and dairy producers that planting clover in pastures increases nutrient content for animals, while enhancing pollinator habitat and large-scale native bee conservation.

Those findings, based on Extension research, ring of particular importance, given the population decline of native bees in recent years, Pirelli said.

Working with Washington State University, in 2015, OSU Extension also put together a three-day "farm-to-table" workshop, titled LAMB 300. The workshop included instruction on production,

on live-animal assessment, and on meat processing. The inclusion of processors and chefs in the workshop helped instruct lamb producers on a full-range of opportunities for improvement.

The lambing school actually dates back to the 1980s, when it was held annually in the Willamette Valley. It was discontinued in 2010 and resurrected in 2014 after evaluations of another program put on by Extension, the Mentor Program, showed people wanted more information on lambing.

"They wished they had an opportunity to get more instruction on lambing, because that is where they felt they had the least amount of knowledge," Fine said. "Gene (Pirelli) and I talked, and we decided to make an effort to put on a lambing school, and we've been filling the class every year since. We already have six people signed up for

next year."

Class sizes are kept small to maximize the educational benefits of hands-on demonstrations. Still, Pirelli estimates that more than 500 people have participated in the one-day lambing school over the past 30-plus years.

And, he said, evaluation surveys have shown that the school has delivered on its desired results. Producers reported that they have increased the number of live lambs born from 5 to 100 percent, and that ewe mortality decreased by a range of 4 to 100 percent.

"There are many techniques that can be used to increase the number of live lambs born, as well as increasing lamb survival," Pirelli said. "But many sheep producers do not take advantage of these techniques, either because they are unaware of the procedures, or do not understand the value of adopting these techniques."

Fine, a past president of the Oregon Sheep Growers Association, said the information that Pirelli provides in the school and outside it has been invaluable for his operation.

"You can ask him questions about nutrition and pastures and lambing," Fine said.

"He also has put together a lambing-school handbook, and we've taken that and put all the information in it onto a thumb drive, and every person who comes to the lambing school takes home that thumb drive," Fine said.



Melissa Fery
541-730-3538
melissa.fery@
oregonstate.edu



Amy Garrett
541-766-6750
amy.garrett@
oregonstate.edu

Commercial Agriculture Small Farms

Extension Showing the Fruits of Dry Farming

By **Mitch Lies**,
GROWING Editor

Joelene Jebbia, production and irrigation manager for Gathering Together Farm in Philomath, Oregon, had her consciousness raised a little last summer.

Through participation in a Dry Farming Project through the Oregon State University Extension Service, Jebbia said she learned that reducing irrigation, in some cases, could have positive effects on her production.

“It definitely made me think about all the other watering I do on the farm,” Jebbia said. “I actually watered our potatoes less last year, and I think we had less disease. The potatoes were a little smaller, but were higher quality.”

Jebbia’s experience with the four-year-old project is one example of how farmers are benefiting from it. Funded in part by a federal grant, the project hopes to show that by utilizing drought-resistant varieties and certain soil conservation tactics, farmers can sustain and even increase crop production during periods of water scarcity.

“It is like raising consciousness,” Jebbia said. “I got to thinking that maybe I am creating more problems with diseases and insects by possibly providing too much water, and that I can alleviate some of that by being a little more conscious about watering.”



Amy Garrett, who serves Benton, Linn and Polk counties as an assistant professor of practice for Extension Service’s Small Farms Program, said farmers throughout Western Oregon and Northern California have adopted, or plan to adopt, changes in their irrigation

management after attending Dry Farming workshops.

The planned changes farmers identified in a survey, include putting more thought into using cover crops and selecting sites for dry farming on the basis of soil characteristics. Also, several respondents said they plan to reduce water use through deficit irrigation or other irrigation conservation techniques.

Jebbia said the project helped inform her on when crops can sustain production without water, and the most important times to provide water to crops.

“I’ve been learning this all along for the past thirty years, just by paying attention,” she said. “But it is nice to have somebody throw something out there that maybe I hadn’t thought of before.

“It gets me thinking,” she said.

Last year’s project included eight workshops and three dry-farming field days at trial sites in Philomath, Aurora, and Southern Oregon’s Central Point. The project also led to the formation of a Dry Farming Collaborative, made up of growers, Extension educators, plant breeders and other agricultural professionals that are partnering to increase knowledge and awareness of dry farming management practices.

Garrett noted that the project started with case studies, but has

Continued on Page 15

*In case you missed it at the
Oregon Small Farms Conference....*

Save the Date

March 9th

Benton County Sunset Building
Introduction to Planning and
Record-Keeping for Farm
Business Management

This workshop will focus on using business plans and records as integral tools for business management, emphasizing the process of setting goals, making projections, monitoring progress, and measuring results as vital for decision-making and continuous improvement. Workshop participants will be introduced to the basic components of a business plan with an emphasis on the financial components. We’ll explore how to come up with initial financial projections to get your farm business started. We’ll also look at the key farm financial records that you’ll want to keep along the way and how to use these records in combination with your plans and projections to manage your farm business.

Tanya Murray, Oregon Tilth
Registration will open soon.

For more information
visit: <http://smallfarms.oregonstate.edu/south-valley/events>

Go Local!
COVER CROP MIXES AVAILABLE



**AUSTRIAN PEAS
COVER CROP**



**CEREAL GRAINS
COVER CROP**



**CRIMSON CLOVER
COVER CROP**



**PASTURE
MIX**



**COMMON VETCH
COVER CROP**

Spring Seed Available

- Louise Wheat
- Alturas Wheat
- Cayuse Oats
- Everleaf Oats

**Field Contracts
Available**

Corvallis
Feed & Seed

Seed/Division Hours:
Monday-Friday
8:00am-5pm

541-928-1923

Call us today! Or visit us at 30685
HWY 34 SW, Albany, OR 97321



South Valley Field Crop Notes March/April

General management

- Seed certification: The deadline for Crop Inspection Sign-ups is April 15.
- Scout for slugs, especially if spring planting, and bait pre-plant. Remember the basic principles of slug baiting in relation to weather and timing.
- Scout for vole activity and spot treat with zinc phosphide down holes according to label. Timing of above-ground use in grass seed crops for 2016 will not be decided until late April, so stay tuned for news.
- Scout for aphids and cereal leaf beetle in wheat and grass seed fields through May
- As temperatures warm, prevent phenoxy drift problems by using less volatile formulations, drift reduction nozzles, and good spraying practices.
- Watch for leaf spot diseases in brassica crops, including turnip seed fields. Contact your fieldmen or OSU Extension for fungicide recommendations in order to avoid infections reaching the seed.

Grass

- Complete fertilizer N applications to grass seed fields to match crop demand. Peak N uptake is late March/early April for tall fescue (TF), while peak N uptake for perennial ryegrass (PRG) is mid April.
- On saturated soils, spring N application can be delayed until late March and April without reducing grass seed yields. It is best to delay applications where soils are saturated or ponded.
- Complete Rely herbicide treatments on PRG and TF seed fields by early April.
- Begin thinking about plant growth regulator applications. OSU research indicates the best seed yield responses in PRG and TF were reached with PGR applications between early stem elongation and early inflorescence emergence.
- Scout for billbug damage in orchardgrass seed fields in late March and use insecticides in early April if needed.
- Application of Bravo at boot and early head emergence remain the most cost-effective times to control headblight in orchardgrass. Look for boot stage in mid-late April.

Mint

- Sample mint fields for nematodes. Vydate will still be hard to come by this year.

Continued on Page 13

Growers Reap Benefits of Extension Research

By Mitch Lies,
GROWING Editor

Benton County farmer Peter Kenagy, like many growers, always questioned whether he needed to apply nitrogen fertilizer to his pea crops, and, if so, how much.

While field peas were grown extensively in the Southern Willamette Valley decades ago, the crop is relatively new to current production systems, and optimal management practices are still emerging, according to recently departed South Willamette Valley field crops Extension agent Clare Sullivan, who has taken a position in Deschutes County.

Questions over the nitrogen needs of peas are compounded by the fact that field peas, like other legumes, fix their own nitrogen to soil. Sullivan noted that the only fertilizer guide for field grown peas in Western Oregon, which was revised in 1983, does not recommend any nitrogen inputs for a properly-inoculated legume crop. However, Sullivan said, growers typically apply an average of 50 pounds of nitrogen per acre, and current rate recommendations vary from 20 to 100 pounds an acre.

“With peas and other legumes, there has been conflicting information about how much nitrogen they actually need,” Kenagy said. “Typically, to play it safe, you put some on your peas.”

Research conducted last year by Sullivan, however, has shown that growers may



Field peas from the nitrogen fertilizer rate trial being swathed in early morning.

be able to get by without applying nitrogen to field peas. The trials, conducted in April 2016, showed absolutely no yield increase in field peas grown for the sprouting market.

“The 2016 results indicate that a successful pea crop can be grown with zero N fertilizer,” wrote Sullivan in a research report.

The findings, while preliminary, in that they only encompass one year of data, nevertheless have convinced Kenagy that he may not need to apply nitrogen the next time he grows field peas.

“With this research and those findings, it gives a guy confidence to not put any nitrogen on,” Kenagy said. “That is a savings for the grower, plus a savings for the environment.”

Sullivan’s research into field peas is one example of the input of Oregon State University Extension on farming in the South Willamette Valley.

Kenagy said he also appreciates grower meetings that Sullivan and other

Willamette Valley Extension agents and Extension specialists pull together twice each year.

“Those grower meetings are how I keep up on the latest practices, the latest in fertility requirements, disease control and other management guidelines,” Kenagy said. “They are one of my primary sources of information for those things.”

Last year, Sullivan also was involved in evaluating herbicide trials in the hopes of finding alternative products for controlling volunteer annual ryegrass in annual ryegrass seed crops outside of the standard Axiom row-spraying treatments.

A 2013 survey showed that greater than 50,000 acres of annual ryegrass, or just under half the crop’s total production acreage in Oregon, were row-sprayed that year with Axiom. With Axiom also a key herbicide in perennial ryegrass, tall fescue and winter wheat production systems, finding alternatives

Continued on Page 13

ORGA Meeting a Success

We would like to send a special thank you to everyone that attended, presented, and sponsored the 56th Annual Meeting of the Oregon Ryegrass Growers Association (ORGA) on Jan 18. It was a successful meeting that could not have been pulled off without a diverse business community supporting our ryegrass seed industry.

This year, the Oregon Ryegrass Growers Association presented David McCready from Wilco with the 2017 Service Award, recognizing his many years of work with the grass seed industry.

The board wishes to thank their sponsors for their generous donations that make this meeting possible:

- Ag West Supply
- Agri Seed Testing, Inc.
- Ampac Seed Company
- AmVac Chemical Corp.
- Barenbrug USA
- Bayer Cropscience
- Brim Tractor Company, Inc.
- Carson Oil Company, Inc.
- Citizens Bank
- Columbia Bank
- Crop Production Services
- DLF Pickseed USA Inc.
- DOW Agro Sciences
- Fitzmaurice Fertilizer, Inc.
- Grassland Oregon
- Hilton Trenching, Inc
- Integrated Seed Growers
- Lewis Seed Co
- Linn Benton Tractor
- Marion Ag Services
- Northwest Farm Credit Services
- Opel Family Farms
- OR-CAL
- Oregro Seeds, Inc.
- Pennington Seed
- Polk County Farm Bureau
- Seed PAC
- Simplot
- Smith Seed Services
- Syngenta Crop Protection
- Tangent Seed Lab Int'l
- Turf Tech, Inc
- Vista Seed Partners, LLC
- West Coast Seed Mill
- Seed Co



The ORGA board consists of nine grass seed growers. They are: l to r Darren Hayworth, Joe Kirk, Clare Sullivan (advisor), Mark Beitel, Jesse Rue, Marie Bowers, Mitch Biegler, Lee Gilmour. (Not pictured: Michael Hartenstein, Jeff Henshaw, and Mary Hood). The primary purpose of the group is to plan and organize the January annual meeting, which has become a great venue to learn about current topics affecting the grass seed industry in Oregon.

- Western Ag Processors
- Improvements, Inc.
- Willamette Community Bank
- Wilco Winfield Bank
- Willamette Biomass
- Willamette Valley Bank

Growers Reap Benefits continued from Page 12

could be key to delaying the buildup of weed resistance to the herbicide.

The researchers so far have analyzed one year of data for herbicide efficacy and crop safety.

“The 2016-17 trials will be harvested in the summer of 2017,” Sullivan said, “and based on present evaluations, we are expecting to see treatment differences for volunteer annual control. Matrix, Everest, Kern and Alion (herbicides) are all treatments being evaluated that would diversify the modes of action currently used in the annual ryegrass

system, which could be rotated with Axiom to help mitigate herbicide resistance.”

Last year, Sullivan was also involved in researching the yield effect of plant growth regulators in tall fescue seed, which is another crop grown extensively in the South Willamette Valley.

In general, plant growth regulators boost yield by reducing plant height, which can help the plants stand upright longer in a season, thus increasing opportunities for pollination and, in turn, increasing seed yield.

In four large-scale trial

plots last summer, OSU Extension researchers found that significant yield increases in tall fescue seed were reached where the plant growth regulator Palisade was used alone, and an additional yield bump occurred when it was used in combination with other plant growth regulators.

Sullivan said another year of research will be needed to evaluate results. If all pans out, however, South Willamette Valley may have another tool to increase yields and, ultimately, improve their bottom line, thanks, in large part, to Extension.

Crop Notes continued from Page 12

Wheat

- Complete N fertilizer applications on winter wheat if you have not already done so. Rapid N uptake begins at jointing (Feeks GS6), which often begins early March.
 - Watch for stripe rust in winter wheat fields, especially early plantings and susceptible varieties.
- Control septoria on winter wheat when flag leaf is emerging (Feeks GS8). Make use of SDHI chemistry at this critical timing to combat septoria fungicide resistance, but be aware SDHIs are not effective rust control.
- Apply phenoxy herbicide herbicides to winter wheat before the 2-node stage if the label allows treatment after jointing starts.
- Plant spring grains as soon as possible, and include 20 lbs N/ac with the seed. Seeding rate depends on seed size, aim for 33 seeds/ft (~120-150 lbs/ac).
- To help prevent lodging limit total N on spring wheat to 75-80 lbs/ac. Fertilizer can be applied anytime between planting and jointing.



Plant a Garden for Pollinators

Your success is our number one priority!

Pollinator Plants | Seed Starting Supplies | Beekeeping
Classes & Consulting | Landscape Design

6600 SW Philomath Blvd, Corvallis
541-929-3524 | www.shonnards.com

Mon-Fri: 9 a.m. - 5:30 p.m. | Sat: 9 a.m. - 5 p.m. | Sun: 10 a.m. - 5 p.m.



LCB 5718



Extension, H.S. Robotics Behind Mechanical Harvester

By Mitch Lies,
GROWING Editor

It's a project with a lot of moving parts – both figuratively and literally. It engages high school students in developing real-life solutions. And it may provide a critical answer for Oregon farmers facing a labor shortage.

The development of a mechanical harvesting system for broccoli also offers a glimpse into the role Oregon State University Extension Service plays in the state's economic well-being.

Without the system, it may only be a matter of time before broccoli no longer is grown commercially in Oregon, a development that could force food processors to abandon the crop or truck it up from Mexico or California at considerable cost.

Farmers, meanwhile, could lose a high-value rotation crop, limiting their ability to control weeds and diseases in a profitable manner.

At the heart of the project is a Corvallis high school robotics team that has ventured outside its normal curriculum to pursue the development of



Members of the Crescent Valley High School Robotics Team in front of a mechanical broccoli harvester. The team is developing software and hardware to automate the control and operation of the machine.

a mechanical harvester for a broccoli industry long reliant on an ever-shrinking pool of farm labor.

The Crescent Valley High School team set out to develop a prototype harvester last year after receiving funding from an USDA grant administered by the Oregon Department of Agriculture. The Oregon Processed Vegetable Commission helped by submitting the grant proposal after hearing a presentation on the project by three principals, including OSU Extension

Vegetable Specialist Alex Stone.

"It was an opportunity for the students to do development, and for someone to help fund them to do it, because, obviously, buying prototype hardware and all the wiring and metal doesn't come free," said Peter Mes, a father of two boys on the robotics team and a plant breeder, who is helping coordinate the project.

"The Oregon Processed Vegetable Commission immediately saw the value in

this project, so they offered support," Mes said.

Developing the mechanical broccoli harvester involved writing software that utilizes vision technology to identify and determine the appropriate height to cut mature broccoli plants, and then mating the software with the harvester hardware.

The students already have built what is known as a single-pass prototype, and are now working on a multiple-pass prototype that enables farms to better capture the full value of a broccoli planting, which typically has plants maturing at different stages.

"They've done the vision software, proven the software works in the field in rainy conditions and sunny conditions," Mes said.

The next step, expecting to be completed this year, involves building a second, more sophisticated prototype that identifies and cuts only mature broccoli plants, leaving the rest to mature for a second, or third cutting.

Mes added that GK Machine of Donald, Ore., has been watching the robotics team progress with the intent of possibly constructing the

harvester for commercial use. "They want to see if this technology works, and whether they could be using it," Mes said.

The idea of developing a mechanical broccoli harvester has been in the works for about two decades, according to Jim Myers, a vegetable plant breeder in the Department of Horticulture at OSU. That it only now is coming to fruition is due in part to the fact that only now are breeders ready to release a broccoli plant with a long stem and other characteristics that accommodate mechanical harvest.

"Breeding takes a long time," Myers said. "I generally figure it takes me ten years from the time I make a cross to when I might release something that comes out of that cross."

Myers noted the department today has a hybrid suitable for mechanical broccoli harvest, and is in the process of producing the volume of seed needed to meet the needs of the industry.

Ultimately, Myers said, he expects to further refine

Continued on Page 15

CITIZENS BANK
Good Business. Good Friends.

Let us help with all your agriculture business banking needs!
Our local Commercial Loan Officers can help you with the financing of new farm machinery as well as operating lines of credit. Contact us today and let us be partners in your success!

Albany (East) 541-967-1992 • Albany (West) 541-812-6178
Corvallis Area 541-752-5161 • Philomath 541-929-3228

www.citizensEbank.com



PROUD TO SUPPORT OREGON FARMERS AND AGRICULTURE SINCE 1957

Survey Shows Grass Seed Acres Down

By Mitch Lies,
GROWING Editor

Oregon turf grass seed acres are showing a dramatic decline from 2016, according to the results of the National Agricultural Statistics Service Grass Seed survey released last month.

The NASS report shows that perennial ryegrass acres are down fourteen percent, with just 75,000 acres available for harvest in 2017, compared with 87,000 acres harvested in 2016. And tall fescue turf types are down eight percent, with just 93,000 acres available for harvest in 2017, compared

with 101,000 acres harvested in 2016.

Annual ryegrass seed acres remained relatively steady, with 119,000 acres available for harvest in 2017, compared with 118,000 acres harvested in 2016.

Tall fescue forage seed acres also were similar between 2016 and 2017, with 19,000 acres available for harvest in 2017, compared with 18,000 acres harvested in 2016. Tall fescue K-31 and other acres went from 8,000 in 2016 to 9,000 available for harvest in 2017.

At least some of the drop in turf acres is being attributed to a wet fall, which, in some

cases, resulted in fields not getting planted. Some growers in Washington County also reported that regrowth for established grass fields was slowed and some newly planted fields froze due to freezing winter weather, according to NASS. High pressure from slugs, winter cutworms, geese and mice also led to crop damage, NASS reported.

Overall, the acreage figures show a marked decline from as recently as three years ago. The 2014 NASS survey showed perennial ryegrass acres dropping from 104,790 in 2013 to 99,000 in 2014, and

tall fescue acres dropping from 138,000 in 2013 to 134,680 in 2014.

Even annual ryegrass acres, long the most consistent of the top three species, were considerably higher three and four years ago, as the NASS 2014 survey showed annual acres down from 128,000 in 2013 to 126,060 in 2014.

Survey response was similar in the 2014 and 2017 surveys, as seventy-four percent of those contacted responded to the survey in 2017 and seventy-five percent responding in 2014, according to NASS.

*Mechanical Harvester
continued from Page 14*

the hybrid to better meet the needs of mechanical harvest by working with the Crescent Valley robotics team on trial plots. The plots will inform both the team and breeders, he said.

“Part of the process is to refine the equipment to fit the plant,” Myers said. “But also, the process will tell us what kind of changes we need to make in the broccoli plant itself. It will inform the breeding program.”

“This is going to help all of us,” Mes said of the project. “It is good for the state of Oregon, for the agricultural industry, for the manufacturing industry. And, as far as the students are concerned, it is an opportunity for them to get experience doing something that they had never done.”

“All of these kids are doing things like computer programming and building electronics, but often they don’t see where the applications are,” he said. “Also, a lot of them don’t realize that there is a whole agricultural industry out there that is waiting for technology applications.”

As for Extension’s role in the project, Mes said Stone and vegetable crops Extension agent Ed Peachey have been invaluable in moving it forward.

“Ed has been working with these vegetable growers for years, and talking with them about how to help the industry,” Mes said. “He sat down at the beginning of this project and helped instruct the students on what the growers needed.”

“Ed and Tony acted as very valuable liaisons between the research and the commercialization that helps the industry,” Mes said.

Upcoming Educational Programs continued from Page 10

by a morning *field* practical at a local outdoor location. Class meets Wednesdays (6-8:30 p.m.) and Thursdays (10 a.m.-noon) – Topics for each month are April 19 & 20 – Farm and Forage Assessment, May 24 & 25 – Harvest Management, June 28 & 29 – Irrigation, August 16 & 17 – Fertility, September 20 &

21 – Renovation Techniques.

Pre-registration and a \$30 fee per part per *ranch* is required. There is a discounted price of \$120 for signing up for all five parts. Visit <http://extension.oregonstate.edu/linn/> for on-line registration. If you do not have Internet access, stop by or call the OSU Extension

Linn County office, 541-248-1088 for assistance.

Speakers will be Shelby Filley, David Hannaway, Serkan Ates, and Troy Downing, plus other OSU faculty, plus local experts.

This series will focus on a “project ranch” that we work on together, including site visits and on-line document

sharing and blog. The project ranch will be the Wilson Farm, the OSU sheep facility with sheep and cattle grazing the pastures. You can also work on your own ranch as a side project if desired. The objective of the series is to improve knowledge about managing forage on properties in the Willamette Valley.

Fruits of Dry Farming continued from Page 11

blossomed into a regional movement with an engaged group of stakeholders from Oregon, Washington, California and beyond.

“Together we are co-creating the future of how we manage water on our farms, and proactively adapting to a changing climate,” Garrett said.

Jebbia, meanwhile, said she is going to increase production of tomato varieties that thrive in a water-restrictive environment. The dry-farmed Early Girl and Big Beef tomatoes, which Growing Together Farm produced in a small trial plot



last year and sold at farmers’ markets, were hits with consumers.

“The tomato was smaller than a tomato that has been farmed with water,” she said, “and the yield was less, but they were a hit. People seemed to be excited about the better flavor.”

Ultimately, Jebbia doubts Gathering Together will switch to dry farming on a farm-wide scale, but, she said: “It is nice to know that you can grow some stuff without irrigation if you have to. And there might be a niche for a better tasting vegetable grown under dry farming.”

Forestry and Natural Resources

Brad Withrow-
Robinson
541-766-6750
brad.w-r@
oregonstate.edu



Jody Einerson
541-766-6311
jody.einerson@
oregonstate.edu



Cultivating Better Woodland Management through Extension

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

As covered in the previous edition of Growing, the Forestry and Natural Resources (FNR) Extension program in Benton, Linn and Polk counties aims to help family forest landowners and others in the community understand and improve sustainable woodland management practices around the mid-Willamette Valley.

We do this by offering a variety of learning opportunities and resources in person and on-line to help address the broad range of needs and interests represented among a diverse clientele of landowners and public audiences.

Life is busy, so many people find on-line self-study most convenient. OSU has a large and growing catalog of practical Extension publications, including many that address common woodland ownership

issues, including enhancing woodland wildlife habitat, planting trees and shrubs, and wildfire prevention. Many can be found through links on our website <http://extension.oregonstate.edu/benton/forestry>. Most can be downloaded free.

Among the many in-person learning opportunities such as classes, workshops and tours are many seasonally and locally inspired events done with our local partner groups. Others are part of FNR's "Core Curriculum" such as the Basic Forestry Shortcourse, Management Planning and Ties to the Land. Forestry and Natural Resources Extension is a long-time leader in what is now called "peer-to-peer" learning, where landowners and volunteers learn and share together through programs like Master Woodland Managers and the Women Owning Woodlands network.

These Core programs have been developed by a team of FNR county agents, Extension specialists, and other colleagues in response to common and recurring needs. These programs become part of our local county offerings, leveraging effort and expertise from across our state-wide group to address local needs. Let me introduce some of these Core programs.

The Basic Forestry Shortcourse

The shortcourse is ideal for anyone who is just starting out taking care of a woodland property. It is a survey course, meant to introduce a wide range of concepts, practices and terms.



Master Woodland Managers learn about bark beetles from Forest Health Extension Specialist David Shaw.

Topics covered include: Assessing your property and defining your goals, understanding tree biology and forest ecology, tree planting, care for an established forest, weed control, safety, timber sale logistics, and laws and regulations. The course is typically done in five evening sessions, generally in the spring. Look for it again in 2017.

Woodland Discovery Plan

This two-part workshop helps families discover the potential of their property and explore their relationship with their land. It also serves as a first step towards a written management plan.

The Woodland Discovery Plan will help you collect and organize information about your woodland. You will ask yourself – and answer – key questions about your property:

- What do I know about my property and its history?
- How would I describe my forest to others?
- What do I want to do with or get

from my property?
• Where can I get help?

Offered in Dallas and Corvallis.

Master Woodland Managers

The Master Woodland Manager program (MWM) is both an educational and a service program, modeled on the highly successful Master Gardener program. MWMs volunteers are experienced woodland owners who go through an extensive training on woodland management, and, in return, volunteer their time in service to their community.

We have about 20 active volunteers in our three county area. Each year they collectively contribute around 2,000 hours of service in a variety of ways, including leadership, public outreach and woodland owner education, which may include site visits to local woodland properties.

A visit from a MWM volunteer is a great way for a new landowner to take stock of their situation. Seeing your property through the eyes of a more experienced landowner can help you identify opportunities and needs on your property in a timely manner, giving you information and guidance to make more informed decisions. To request a site visit with a Master Woodland Manager, call the Benton County OSU Extension office at 541-766-6750.

Ties to the Land

The Ties to the Land program focuses on succession planning –



Learning in the Woods

Here are some of the woodland events offered by OSU Extension in partnership with local Chapters of OSWA and other supporting organizations. All are open to the public. Find registration and other information on the Upcoming Events page of the Forestry and Natural Resources page of the Benton County Extension website: www.extension.oregonstate.edu/Benton/forestry/events and watch for the Needle.

Woodland Information Night

Wednesday, March 1, 6:30 to 8:30 p.m., Linn County

Extension office, Tangent. Free.

Young Stand Thinning Tour

Saturday, March 18, 9 a.m. to noon, Philomath.

Others to follow in Linn and/or Polk counties.

Oregon Season Tracker Training

Participants take an on-line training at home and then attend a local face-to-face Q&A and skill-building session.

OST Online Training opens March 10 (work on your own schedule). **OST skill-building sessions (attend one):**

- March 22, 6-8 p.m., Stayton.
- Date tbd. 6-8 p.m., Philomath/Wren. See website.
- May 13, 10 a.m.-noon, Portland
Cost: \$40 per individual or family sharing materials. Includes program-approved rain gauge. \$30 for Linn County residents requesting a LCEA grant-funded discount.

Woodland Discovery Plan

Dallas: Thursdays, April 6 and 20, 6:30-8:30 p.m., Dallas.

Corvallis: Thursdays, April 13 and 27, 6:30-8:30

p.m., Corvallis.

Cost: \$20 per individual/\$25 per family sharing materials.

Georgia Pacific Mill Tour

Monday, April 24, 10:30 a.m., Philomath. Registration required.



Oregon Season Tracker collecting data.

**Oregon
Season
Trackers**



Trained in 2016

55 Adults

133 Youth

37 Active Adult Volunteers

Cultivating Better Woodland Management continued from Page 16

the human side of estate planning. The workshop focuses on strategies to maintain family ties to the land from one generation to the next; building awareness of the key challenges facing family businesses; and motivating families to address the challenges. It is a facilitated and interactive workshop with DVD-based components and accompanying workbook that provides effective tools families can use to decide the future of their land.

WOWnet

The Women Owning Woodlands Network (WOWnet) was created to help the growing number of women, who are taking on a wide array of active woodland management roles, to be successful. It supports women in

forest leadership, women who manage their own woodlands, and all who facilitate the stewardship of forests. The network helps raise basic forestry and decision-making skill levels among women woodland managers through hands-on educational opportunities. It aims to support and increase women's access to forestry-related resources, and to encourage communication among Oregon's women woodland managers through the development of statewide and local networks. Contact our office or go on line to find out how to connect with WOWnet locally.

Oregon Season Trackers

Who hasn't noticed that it has been a wet winter so far? Do you know how much rain you had?

The Oregon Season Tracker (OST) program is a new collaborative citizen science program we have developed to link natural resource managers, educators, researchers and others in the community to the science they use. OST citizen science volunteers gather scientific data on daily precipitation and seasonal plant changes (phenology) at their home, woodland, farm, ranch or school to share with other observers and research partners statewide. Data is entered through two web platforms of our national partners (CoCoRaHS and National Phenology Network) where it can be used by national or local research teams, including our partners at the HJ Andrews Experimental Forest. Just two years into

the program, OST now has over 175 volunteers contributing to a better understanding of weather and climate.

We are offering new OST trainings this spring in Benton and Linn Counties. Take an on-line training at home and then attend a local face-to-face Q&A and skill-building session. Trainings are co-sponsored by the Marys River Watershed Council, the North Santiam Watershed Council, and the Linn County Extension Association. Please see "Learning in the Woods" for more information.

Several of these Oregon originals are nationally recognized programs, widely used or copied in many other states including Master Woodland Manager, Women Owning Woodlands and Ties to the Land.

Of course not all of these programs can be offered every year, especially when serving multiple counties. The mix of events changes by season and year. All are posted on our website <http://extension.oregonstate.edu/benton/forestry>, but the best way to know what is coming up is to subscribe to the Woodland Compass and Needle so that you will receive timely reminders of the programs as they are scheduled. To subscribe, email Jody Einerson jody.einerson@oregonstate.edu, or call the Benton County Extension Office 541-766-6750, and please give us your name, email, and physical mailing address and phone (this helps keep our email lists current).

We look forward to seeing you in the woods.

Benton County 4-H Youth Development

AnaLu Fonseca
541-766-6249
anal.fonseca@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 citizens of their respective counties. Please check with your county Extension Office if you have any questions about participation eligibility for specific programs.



Fashion Revue - 4-Hers Runaway with Style

Come cheer on 4-H members as they walk the runway and showcase their clothing and sewing projects. Fashion Revue will take place on Saturday, April 22, at 7:30 p.m. in Milam Auditorium (2520 SW Campus Way) on OSU Campus. 4-H members are judged earlier in the day on their projects and then take to the stage for a free public viewing.

More information about the event can be found on our website.

4-H Basic Bread Baking Class

Saturday, March 4, 10 a.m.-noon
Corvallis High School
Pre-registration required!
Register early as space is limited.
See our website for all of the details.

Teens are Health Advocates in 4-H Program

By Mitch Lies,
GROWING Editor

Four years ago, Crescent Valley High School senior Kevin Lee decided to participate in what was then a new Benton County 4-H program, the Youth Advocates for Health - Teens as Teachers program.

"I was looking for some extracurricular activities that weren't so common," Lee said. "The YA4-H! was suggested by my school, and it seemed like a fun activity to teach kids and gain some teaching skills."

In the program, teens, under the guidance of adults, teach elementary school students about nutrition, and physical and environmental education.

"Research shows that teens enjoy teaching younger youth, especially when they can work in collaboration with supportive adults and other teens," Carolyn Ashton, Benton County 4-H faculty, said. "Teens typically describe several reasons for wanting to teach younger children, including a desire to expand knowledge, gain experience, build their resumes, improve relationships, and add variety and interest to their lives."

"In addition, there are often limited opportunities for elementary aged youth to participate in healthy living, nutrition, exercise and environmental education programming," Ashton said.

YA4-H! is just one of many 4-H programs that serve Benton County youth. Last year, approximately 3,500 youth ages 9-19 participate in Benton County 4-H, Ashton said. In addition, more than 250 adult volunteers helped deliver and support the youth development programs.

In a nutshell, Ashton described 4-H as "a positive youth development program ... that uses an active, learn-by-doing approach as a way to build the skills and confidence in young people that will help them to become



contributing, productive and self-directed members of society."

Other popular 4-H programs include Junior Leader Training, Junior Toastmasters Public Speaking, Teen Weed Spotters, 4-H Wildlife Stewards Program and a STEM (Science, Technology, Engineering and Math) Beyond School program.

Highlights from the past year include:

- The 14th annual 4-H Wildlife Steward Summit drew 209 students to the one-day conference that showcased students' natural-science research projects, and facilitated hands-on educational activities organized by natural resource agencies and older youth. "These research projects bring science alive for my students and are excellent work samples for meeting state standards in speaking, research and process and production skills," said Kristen Silbernagel, a fourth-grade teacher at Jefferson Elementary School in Corvallis, of the Summit.
- The 4-H Camp provided knowledge and confidence in the outdoors for 129 camper participants, who also met new friends, canoed, swam and enjoyed other activities at the four-county resident camp;
- The 12th Annual Know Your County Government Day saw 40 middle-school students learn about civic engagement by meeting with local government officials, touring the county courthouse, putting on a mock Teen Court hearing and visiting the local jail and 911 call center;
- The Forests, Organisms, Creeks U Study program, titled FOCUS, saw 170 students explore a variety of habitat types, learn about food webs and chains and native-species identification in a five-hour interactive field-based natural science program offered in partnership with Benton County Parks and Natural Areas. "FOCUS was an invaluable hands-on learning experience for my students and gave them an opportunity to learn science standards in an engaging atmosphere," said Katie Berg, a fourth-grade teacher at Mountain View Elementary School in Corvallis. "Field staff was well organized, knowledgeable and worked well with students. The FOCUS program reviewed third-grade standards, taught fourth-grade standards and prepares students for fifth-grade standards."
- The 4-H Presentations Contest saw 25 youth exercise their public speaking skills by providing a demonstration, an illustrated talk, public speech or impromptu speech;
- The 4-H Food Contests had 47 youth showcase their culinary talents;
- The Service to Community program saw hundreds of 4-H youth engage in community service through supporting local families in need, visiting assisted living facilities and raising money for local charities; and
- Get Outdoors Day drew more than 520 youth to the one-day natural resource educational event, which is designed to get youth and families outside for outdoor learning and fun.

Continued on Page 21

4-H Program Engages Second-Language Learners in STEM

By **Mitch Lies**,
GROWING Editor

Second-language learner elementary students engage in science, technology, engineering and mathematics (STEM) and gain confidence in their ability to express themselves in English through participation in a nationally recognized Corvallis-based education program.

Their teachers, meanwhile, who are students in Oregon State University's College of Education, gain experience teaching math and science to culturally and linguistically diverse children.

The win-win accomplishments of Families Involved in Education Sociocultural Teaching and STEM, or FIESTAS, are profound, according to Ana Lucia Fonseca, OSU Extension 4-H Latino outreach coordinator.

"The FIESTAS program has been instrumental in providing a rich educational experience at two of our highest-need schools, while allowing these beginning teachers an opportunity to learn how to more effectively teach science while working with diverse populations," Fonseca said.

The program received national recognition in 2015, when it won a White House Bright Spot in Hispanic Education award.

"There has been notable progress in Hispanic educational achievement, and it is due to



the efforts of these programs and organizations working throughout the country to help Hispanic students reach their full potential," said Alejandra Ceja, executive director of the White House Initiative on Educational Excellence for Hispanics, in announcing the award.

In the program, OSU College of Education students teach math and science to third, fourth and fifth graders at Corvallis elementary schools Lincoln and Garfield in after-school settings.

Participation largely involves Latino youth, but not entirely. In 2014, then OSU junior Rayan Alrasheed was recruited to translate Arabic for four students.

"The first time I met with the children, I could see they were trying to engage with the material, but they didn't have anyone who could communicate with them," Alrasheed said in a 2014 interview.

"They were frustrated and sometimes would rather not speak up than try to figure out what to say. Now when they're trying to say something, they turn to me first with questions so they can feel more confident, then speak in English to the teachers."

Today, OSU student Albatool Alfnais, is in charge of translating science and mathematics materials into Arabic for the program.

In FIESTAS, students examine topics – such as the stages in the life-cycle of a tree or the nature of energy – in a more relaxed and more personalized setting than that of a classroom. They may take field trips to examine how science and math is used at local gardens, restaurants, bike shops, bakeries and grocery stores.

The program, a partnership between 4-H, the Corvallis School District, the College of Education and the Boys & Girls Club of Corvallis, is funded through the Benton County Extension Service, the OSU College of Education, and through local and federal grants.

The program also includes several Families Math and Science Nights, where teachers interact with parents and children while engaging in science, math and engineering activities.

"We really learn from (the parents) about what would be helpful for their kids and make this program culturally relevant,

Continued on Page 23

4-H Summer Camp

4-H Summer Camp will be June 25-30. For scholarship and other information, please visit the Benton County 4-H website.

Benton County 4-H

55 4-H Clubs **VOLUNTEER**

 **4-H Leaders 250**

4-H Members

665



13 Teens as
Teachers
Taught

840 Youth

1,350

**4-H Natural
Science/Outdoors**

Summer Conference - Experience College Life at OSU!

4-H Summer Conference is June 21-24, (Wed-Sat) on the OSU campus. Summer Conference is an opportunity for more than 400 youth, grades 7-12, to explore campus life, make new friends, stay in a dorm, and have lots of fun. While there, participants attend classes on a wide variety of subjects, participate in a community service project, pool party, and a dance.

Cost is \$200 per person. The first 10 Benton county registrants will get \$50 scholarship towards their \$200 fee. Current County/State Ambassadors and National Congress applicants will receive partial scholarships (amount to be determined). Registration and instructions can be found on our website. Registration opens on May 15. Contact the Extension office for more information.

NORTH CORVALLIS
2855 NW Grant
(541) 452-3115

SOUTH CORVALLIS
1007 SE 3rd St
(541) 753-3115

Open daily
7am-10pm

ANYONE
CAN SHOP AT
THE CO-OP

www.firstalt.coop

First Alternative
NATURAL FOODS CO-OP



FRESH, LOCAL, ORGANIC

Linn County 4-H Youth Development

Robin Galloway
541-730-3469
robin.galloway@oregonstate.edu



Andrea Leao
541-730-3534
andrea.leao@oregonstate.edu



Hosting Opportunities Available for 4-H Japanese Exchange Program

In July, Oregon will be hosting youth delegates between the ages of 11 and 18 and adult chaperones from Japan. They are coming to live with a host family and experience life in Oregon. Host families need same gender youth within two years of age of a Japanese delegate. When the Japanese delegates are in Oregon, there are also adult chaperones needing host families. Hosting Japanese adult chaperones is a way to get involved for families who don't have youth of the same age. Each adult is matched with two host families for stays of about two weeks with each family.

This is a great opportunity for families to learn more about another country and culture. Families/individuals hosting adults may be of any age with or without youth in the household. Complete information and application materials are on the 4-H website at: <http://oregon.4h.oregonstate.edu/programs/global-citizenship/exc-in/japan>. If you have any questions, contact the State 4-H International Programs Coordinator (Summer Inbound Japan Program) at 541-573-2506. Special thanks to the new Linn and Benton County coordinator Jennifer Bradford. She will be working with the hosting families this summer.

Steer-A-Year Tour a Success



Meeting a friendly steer.



The Linn County 4-H members and the tour guides, Eduardo Santa Cruz and Michael Drake.

By Maddie & Meg Neuschwander,
Linn County 4-H Leadership members

On Saturday Feb. 11, local 4-H members had the opportunity to have a guided tour of Oregon State University's Steer-A-Year program. The club consists of about 45 Oregon State students majoring in anything from animal nutrition to marketing. This is a student-run club, which receives donated, weaned calves from producers across Oregon and Northern California to feed out for harvesting. The calves vary in age, breed, and

genetics. These calves, which are mostly steers, are fed out in a feedlot environment solely for the purpose of harvesting for meat. Each student is in charge of daily and weekly tasks, consisting of health checks, feedings, vaccinations, weighing, and other important jobs.

This is an amazing opportunity for students, already experienced with raising cattle - and even more for those who aren't. They learn about proper nutrition, practices, and components of a successful and efficient feedlot operation.

On the tour, we learned about feeding rations for

the calves, the daily jobs, difficulties, and learning opportunities this club offers. For example, besides the hands-on experience with raising cattle, there is also important marketing experience, along with great opportunities for attending conferences, public speaking, and meeting influential individuals in the industry.

This was a great tour for our 4-H members to learn more about a feedlot, as well as the opportunities that OSU offers future students. We would like to give a big thank you to our student tour guides, Eduardo Santa Cruz and Michael Drake.

Junior Master Naturalist Camp

Spring Break, March 27-30

The OSU Extension Service in Linn and Lane counties are sponsoring a Junior Master Naturalist camp during spring break, March 27-30. The camp will be held at the Oregon 4-H Conference and Education Center near Salem. All Linn county youth in 5th and 6th grade are eligible to attend, and transportation is provided.

Thanks to a grant from the Oregon 4-H Foundation, the cost is only \$25/child. Campers will stay in cabins, participate in hands-on classes, learn about natural resources, and having fun! For more information contact Robin Galloway at 541-730-3469 or e-mail robin.galloway@oregonstate.edu

Southside RV Repair & Shelter Factory

GALVANIZED STEEL SHELTERS "TOUGHER THAN WOODPECKER LIPS!"



Whatever your need, we can cover it! RV, Farm Equipment, Animal Cover, Auto, Patio or Industrial. 26 Gauge-40 Year Roofing.

541-754-9390
Call for More Info!



Near Avery Park & Marysville Golf. Free Local Delivery with this coupon! Expires 3/31/17

Second Annual Western Region Livestock Education Day

On Jan. 28, more than 200 youth and adults gathered at the Polk County Fairgrounds for the 2nd Annual Western Region Livestock Education Day (WRLED). Lane, Linn, Benton, Marion, Polk, Yamhill, Lincoln, Washington, and Tillamook counties were represented

at the event. Throughout the day, attendees participated in a discussion of the new Veterinary Feed Directive and what biosecurity practices that they should be using with their projects. There were also hands-on quality assurance activities for members to complete that emphasized biosecurity

and animal identification. Volunteers brought in sheep, goats, swine, and cattle for the participants to look at while there was a talk about selection and proper feeding of livestock projects for county fair. Thank you to Coastal Farm and Ranch for sponsoring the day.



PHOTO BY GARISSA WIGGETT

Ryan Scholls with the Oregon Department of Agriculture came and talked about the importance of practicing good biosecurity.



PHOTO BY GARISSA WIGGETT

Boden and Isabel Sayer, and Bailey Womack learn about drug residue through an experiment using chocolate milk.

Outer Space... At 4-H Camp!

Registration is open for the 2017 Linn-Benton-Lincoln-Lane and More 4-H Camp. Youth from all Oregon counties are welcome at the residential camp held at the 4-H Center near Salem. Youth currently in 4th-8th grade may attend.

Camp will go from Sunday, June 24-Friday, June 30. The cost is \$235, and financial scholarships are available for Linn County residents. For the first time registrations are on-line at: <http://extension.oregonstate.edu/linn/4-h-camp>. For more information



PHOTO BY ANDREA LEAO

contact the OSU Extension Linn County office at 541-967-3871, or email robin.galloway@oregonstate.edu.

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

Health Advocates continued from Page 18

Benton County 4-H also provides an international connection, hosting Japanese youth for one month in the summer in an inbound-participation program, as well as outbound participation for 4-H members going to Japan, Costa Rica, Mongolia, Samoa, and Finland in the 4-H International Program.

Being just four years old, the YA4-H! is one of Benton County 4-H's newest programs. It has grown steadily since its introduction in Benton County in 2013. Last year, 766 youth and 218 adults participated in the program's 26 sessions and 92 hours of educational instruction.

In a survey distributed to students in all 10 Oregon counties that participated in YA4-H! last year, teens reported that the program improved their knowledge of the healthy behaviors they taught to the younger youth, and, in many cases, led to their adoption of the behaviors.

Teens also reported increases in teaching skills, speaking, planning and leadership skills.

4-H teen teacher Kevin Lee said he wasn't all that comfortable being in front of elementary youth when he started the program, but noted he has become more comfortable and self-assured over time.

"With my ability to learn the behaviors of kids, I somewhat familiarized myself with the atmosphere that allowed me to explore ways that I could teach lessons easier and more efficiently over the course of the years," he said.

He added that his experience in the program far outdistanced his expectations.

"I got very involved, and I began to like it more and more," Lee aid. "Personally, teaching these kids about nutrition and health was an eye opener. I felt like I was contributing to our community in a way that made me feel good about myself. And, above all, I enjoyed it."

Go Local!
COVER CROP MIXES AVAILABLE



**AUSTRIAN PEAS
COVER CROP**



**CEREAL GRAINS
COVER CROP**



**PASTURE
MIX**



**COMMON VETCH
COVER CROP**

Spring Seed Available

- Louise Wheat
- Alturas Wheat
- Cayuse Oats
- Everleaf Oats

**Field Contracts
Available**

Corvallis
Feed & Seed

Seed/Division/Hours:
Monday-Friday
8:00am-5pm

541-928-1923

**Call us today! Or visit us at 30685
HWY 34 SW, Albany, OR 97321**

Linn County Extension Association

President
Sheryl Casteen



2016-2017 LCEA Membership List

We are very thankful for your donations. Below we have listed our members with donations received as of Feb.. Your contributions are going to Extension programs, helping Linn County residents enjoy these projects. Thank you.

Sponsorship Members:

- Joy Brown
- Wayne & Joann Chambers
- Mike & Robin Galloway
- Mark & Jody Gordon
- Gene & Jeannette Hartl
- Don & Rachel Herb

Yes, I want to support Linn County Extension Association!
Enclosed is my tax-deductible gift.

I am making a one-time donation of:

- __ \$250 Sponsor
- __ \$100 Benefactor
- __ \$50 Sustaining Member
- __ \$25 Contributing
- __ Any Amount \$_____

I want to be a monthly donor and give \$ _____ per month for ____ year(s).

Make check payable to LCEA and mail to: 33630 McFarland Rd, Tangent OR 97389

Name _____
Address _____
Email _____
Phone _____

(Email address will be used to forward confirmation of your donation)

We realize you have many donation choices, thank you so much for choosing to enhance Linn Extension Service!

- Susan & Eugene James
- Joyce Kanoff
- Peter Kenagy
- Lebanon Animal Hospital
- George & Chery Pugh
- David & Amelia Rhiger

Benefactors:

- Wade Biegler
- Dr. Ben Braat
- Loyal & Deborah Burns
- Jim & Deborah Clark
- Phyllis Fifeld
- Donald Fisher
- Max Hoefer
- Howard & Marilyn Johnson
- Veldon & Dorothy Kropf
- Rob Miller
- Laura & Lon Rankin
- Connie Schmidt & Ken Walling
- Emily Woodcock
- Norm Younger

Sustaining Members:

- Emmett Barnes
- Leo & Barbara Baumgartner
- Bill Bentley
- Mary & Robert Brendle
- Michael & Sheryl Casteen
- Joyce & Floyd Chase
- Wade & Danelle Cox
- Dorothy Gassner
- Marvin & Mary Glaser
- Paul & Noni Harcombe
- Lyle Jack
- Judy Keller
- James Merzenich & Karen Wilson
- Betty Nichols
- Timothy & Debbie Nofziger
- Dennis & Nellie Oehler
- Eric & Cindy Purkey
- Tim Rice
- Heather & Juan Saucedo

- Edward & Martha Scheffel
- Glen & Zoe Silbernagel
- Ronald Strong
- Jeanne Taylor
- Clayton Wood
- Dale & Joan Wood
- Linda Ziedrich
- Leonard & Sharon Zucker

Contributing Members:

- Neal Bell
- Barbara Boenzli
- Liz Brooks
- Ronald & Ingrid Cooper
- Patrick & Elizabeth Dadey
- Alyce & Michael Doughton
- Thomas & Phyllis Fencil
- James Foglesong
- Larry & Helen Freepons
- Suzy & Phillip Garman
- Stan Gerig
- Fred & Jeanne Gilbertson
- Bonnie Gray
- Beverly Hall
- John & Verna Halstead
- Lucinda Huntley
- Rhonda & Patrick Hynes
- Patricia Jaworsky
- Wayne & Virginia Johnson
- Alana Kenagy
- Steve Kilber
- Lyle Krabill
- Jerry & Karen Lackner
- Frank & Sudy Lamb
- Dean & Betty LeClerc
- Cheryl Lundquist
- David & Janet McFetridge
- Dorothy Nosler
- Jodi O'Brian
- Karen & Michael Odenthal
- Paul & Phyllis O'Driscoll
- Joe Perry
- Steve & Cindy Reese
- Lorraine Scott



GROWING COMMUNITY
Connect • Inspire • Advocate

- Donna Short
- Bennie Silbernagel
- Carl & Delores Stavang
- Jimmy Sullivan
- Robert & Vickie Thayer
- Anna Torgersen
- Gary & Rita Wagar
- Carla & Doug Wall
- Jack & Ione Watkins
- Rane & Marc Webb
- Sandra Weingarten
- Christine Westgaard
- James & Terry Wheeler
- Everett & Norma Winter

Whether LCEA works actively in the community or by scholarship or grant our goal is to improve Extension outreach and programs through information.

Growing Community means creating an environment that is more economically and socially viable. OSU Linn County Extension Service teaches:

- People how to grow their own food, prepare it for immediate use or preserve it for future consumption.
- How to manage and care for trees around your home or a whole woodlot.

- Children how to raise livestock, cook their own meals, sew their own clothes, camp outdoors or build robots with an eye toward science and the future.
- Novice farmers how to plan, start and prosper in an agriculture business.
- Farmers and ranchers the latest developments for handling pests and disease issues.
- A series of 'Master' programs – Master Gardeners, Master Food Preservers, Master Woodland Managers, and Master Beekeepers, to name a few.

Check out the courses that interest you.

All volunteers are given OSU scientifically research-based information during their training. For information on other programs, go to extension.oregonstate.edu/linn. There is a wealth of information there on all the programs, and if you missed a copy of GROWING, it is there online.

Calendar of Events for Linn and Benton Counties

March 2017

- * Linn and Benton Master Gardener Training, Thursdays, February 2-March 23, IBEW Electrical Training Center, Tangent.
- 1 Benton County 4-H Presentations Contest, 3-9 p.m., Benton County Fairgrounds.
- 4 BEEvent Pollinator Conference, 8 a.m.-4 p.m., Linn County Fair and Expo Center, Albany, registration required.
- 4 4-H Basic Bread Baking Class, 10 a.m. to noon, Corvallis High School. Pre-registration is required, call the Benton County Extension office, 541-766-6750.
- 4 Small Farms Farm Tour, registration required.
- 4 Wild at the Wetland, 4-H Wildlife Stewards Educator Workshop, 9 a.m.-3 p.m., Benton County Extension Office, registration required.
- 8 PNW Brownbag Spring series, Oregon Spiders: Fact & Fiction, noon-1 p.m., Albany Public Library, 2450 14th Ave SE, Albany.
- 9 Tracking and Using Cost of Production Information, 6-8:30 p.m., Benton County Extension Office, registration required.
- 15 PNW Brownbag Spring series, Fruit Trees for Small Spaces, noon-1 p.m., Albany Public Library, 2450 14th Ave SE, Albany.
- 16 Reproduction in Beef Cattle, 6:30-8:30 p.m., Oldfield Animal Teaching facility, OSU campus. Pre-registration required.

- 18 Linn County 4-H Communications Contest, OSU Linn County Extension service, Tangent.
- 20 Benton County Master Gardener Association Membership Meeting, 6-8 p.m., Sunset room of the Benton County Extension Office. Topic: TBA. Open to the public!
- 22 PNW Brownbag Spring series, Best Plants of 2017: Known & Unknown, noon-1 p.m., Albany Public Library, 2450 14th Ave SE, Albany.
- 29 PNW Brownbag Spring series, Treating Storm Water Run-off with Rain Gardens, noon-1 p.m., Albany Public Library, 2450 14th Ave SE, Albany.
- 27-30 Junior Master Naturalist Camp, Oregon 4-H Conference and Education Center, Salem. For more information visit <http://extension.oregonstate.edu/linn/events> and click the link to the camp.
- 30 Free class, Our Love Affair with Salt, 9:30-11:30, Lebanon Senior Center, 80 Tangent St, Lebanon. Call the Linn County Extension office to register.

April 2017

- * Linn and Benton Master Food Preserver Training, Thursdays, April 11-May 30, Linn County Extension Office.
- 1 Snow Shoe Special 4-H Small Animal Show, 8 a.m.-2 p.m., Benton County Fairgrounds
- 6 PNW Brownbag Spring series, Best Plants of 2017: Known & Unknown, Lebanon LBCC

- Center, 44 Industrial Way, Lebanon.
- 13 PNW Brownbag Spring series, Fruit Trees for Small Spaces, Lebanon LBCC Center, 44 Industrial Way, Lebanon.
- 17 Know Your County Government, 8 a.m.-3 p.m., Corvallis Public Library.
- 17 Benton County Master Gardener Association Membership Meeting, 6-8 pm, Sunset room of the Benton County Extension Office. Topic: TBA. Open to the public!
- 20 PNW Brownbag Spring series, Oregon Spiders: Facts & Fiction, Lebanon LBCC Center, 44 Industrial Way, Lebanon.
- 22 4-H Fashion Revue, Public Revue, 7 p.m., OSU Campus, Milam Auditorium.
- 27 Free class, Food as Medicine and Other Keys to Healthy Aging, 9:30-11:30, Lebanon Senior Center, 80 Tangent St, Lebanon. Call the Linn County Extension office to register.
- 27 PNW Brownbag Spring series, Treating Storm Water Run-off with Rain Gardens, Lebanon LBCC Center, 44 Industrial Way, Lebanon.

Save the Date

- May 6 Benton County Master Gardener Plant Sale and Clinic, 9:00am-2:00pm, Benton County Fairgrounds

4-H Program Engages Second-Language Learners continued from Page 19

so we can come up with a method and design that celebrates their culture through science, as well," Fonseca said.

"We want the pre-service teachers to understand that students aren't just in the classroom," said SueAnn Bottoms, a College of Education assistant professor in science education, who, along with 4-H's Fonseca, has been with the program from its inception. "They have families and a background, and it is good to understand roots of the kids they are teaching."

Bottoms said the program's effect on the participating pre-service

teachers has been noticeable.

"The pre-service teachers gain a sense of confidence and self-efficacy about their ability to teach science, and they start to have at least some beginning conceptions of what it means to be working and teaching with culturally and linguistically diverse children," Bottoms said.

"In Oregon, and across the country, the teaching force is still predominately white, middle class, but the students are not," Bottoms said. "There is a changing demographic. The students are becoming increasingly diverse."

The 60 or so pre-service

teachers annually involved in the program gather regularly to reflect on their experiences.

"It is a model that seems to work," Bottoms said. "It supports the professional development of the pre-service teachers, and provides them a context of how to teach science and math to a culturally diverse group of young children."

Fonseca agreed: "These experiences may challenge (the pre-service teachers') ideas of science, teaching and learning, and may be used in their work in the classroom once they graduate, and go on to impact thousands of lives in their schools."



Ana Lu Fonseca with FIESTAS program.



MENNONITE VILLAGE

Assisted Living at Quail Run

Set on 275 scenic acres with lakes, meadows, oak groves, and views of the Cascade Mountains, Mennonite Village is an inclusive community of amazing people.

Quail Run at Mennonite Village is Albany's only not-for-profit assisted living facility. The building is specially designed to accommodate the changing needs of its residents over time. Spacious studio and one-bedroom suites with kitchenettes combine convenience and comfort with 24-hour availability of personal assistance and support. Mennonite Village and its employees foster the respect, care, dignity, and worth of every resident by providing freedom of choice and opportunities for physical, intellectual, emotional, and spiritual growth.

Each apartment offers generous amenities and services:

- Three farm-fresh meals served daily, from 7 AM to 6 PM
- Private dining rooms available for family dining
- Weekly housekeeping and linen service
- Utilities, including cable television and air conditioning
- Pull-cord call system and other optional call systems
- Ample closet and storage space
- A variety of daily wellness and social activities, both on and off campus
- Scheduled bus service within Albany city limits
- Laundry room for personal use
- Whirlpool bathing options
- Full-service salon and nail care options

Mennonite Village is an "open campus" that welcomes new residents to all areas of our Village. You do not need to start in independent living. Should a need arise for additional health services, they're available on campus, and you'll pay only for the services you use.

Mennonite Village is proud to be a smoke-free, tobacco-free community.

Mennonite Village is subject to the federal Fair Housing Act, which prohibits any preference, limitation, or discrimination because of race, color, religion, sex, handicap, familial status, or national origin, or intention to make such a preference, limitation, or discrimination.



Mennonite Village Assisted Living

2525 47th Ave. S.E., Albany, OR

541-928-1122

www.mennonitevillage.org

www.facebook.com/mennonitevillage

