



Country Living

Provided to you by the

OSU Extension Service Columbia County

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The office will be closed Fridays from Noon to 1 p.m.

Website: <http://extension.oregonstate.edu/columbia/>

August 2016

Programs for you . . .

Listen to the Gardening Spot on KOHI (1600 am) radio - Every Saturday, 8:05 to 8:15 a.m.

- Aug. 2 Scappoose Bay Watershed Council. 7 p.m., 57420-2 Old Portland Rd., Warren
- Aug. 4 Demonstration Garden and other MG Extension Projects Planning Meeting. 10 a.m., OSU Extension Classroom, St. Helens
- Aug. 4 Master Gardener™ Board Meeting. 10:30 a.m., OSU Extension Classroom, St. Helens
- Aug. 4-6 Oregon Master Gardener Association Mini-College, McMinnville OR
- Aug. 9 Lower Columbia Watershed Council. 7 p.m., SWCD office-35285 Millard Rd., St. Helens
- Aug. 17 Soil & Water Conservation District. 7:30 p.m., SWCD office-35285 Millard Rd., St. Helens
- Aug. 20 Scappoose GardenFest. 9 a.m. to 4 p.m., Scappoose Senior Center, Scappoose
- Aug. 25 Upper Nehalem Watershed Council. 7 p.m., Vernonia Grange, <http://nehalem.org/> 503-429-0869
- Aug. 27 Pressure Canning Low-Acid Foods. 9 a.m.-1 p.m., Columbia Soil & Water Conservation District, 35285 Millard Rd., St. Helens, classes put on by Jenny Rudolph, OSU Educator
- Aug. 28 Columbia County Master Gardener's Annual Picnic. Noon to 3 p.m., Scappoose Bay Marina, Old Portland Hwy, Warren. RSVP to Vicki Krenz by August 6 at vicki.krenz@oregonstate.edu or 503-397-3462
- Sep 15 OSU Small Farms School. 8 am - 4:30 pm. Clackamas Community College. The OSU Small Farm School is a daylong event with hands-on and classroom workshops geared toward beginning farmers. Speakers include OSU Extension faculty, farmers, government agencies and other agriculture professionals. Registration information at <http://smallfarms.oregonstate.edu/small-farm-school>

FOOD SAFETY/PRESERVATION HOTLINE - July 11 through October 14, 2016

1-800-354-7319

9 A.M. TO 4 P.M.; MONDAY-FRIDAY, except holidays

Certified Family Food Education volunteers and OSU Extension staff will answer your questions.

You can get the OSU Extension Service publications at <http://extension.oregonstate.edu/catalog>, click on nutrition and foods for publications on canning, drying, pickling and freezing too!



Chip Bubl

Chip Bubl, OSU Extension Faculty, Agriculture



Agricultural Sciences & Natural Resources, Family and Community Health, 4-H Youth, Forestry & Natural Resources, and Extension Sea Grant programs. Oregon State University, United States Department of Agriculture, and Columbia County cooperating. The Extension Service offers its programs and materials equally to all people.

In the garden

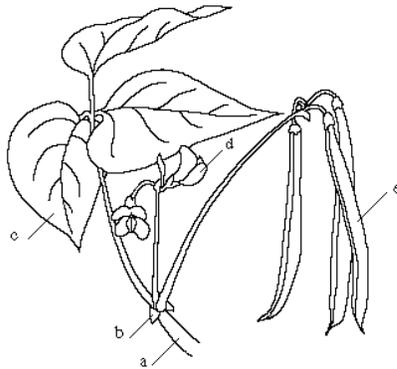
Stress causes flowers to drop

You may have noticed flowers blooming then dropping off without setting fruit on your beans, cucumbers, melons, squash, tomatoes, eggplant and peppers.

What's the problem?

Some flower drop on these garden plants is normal. Plants produce way more flowers than they can support.

But if a vegetable plant keeps dropping flowers throughout the growing season, the plant may be growing too lush, be under stress, or just not be getting pollinated.



Factors that may cause blossom drop include too much fertilizer, especially nitrogen; too much watering; too much heat; lack of pollination; not enough heat - or a combination thereof.

For example, with too much nitrogen and water, tomatoes may grow lush and viney. The plants stay vegetative. But eventually, the fertilizer is used up and the plants settle down and flower - but sometimes too late for a good crop before the rains or fall frost sets in.

Varieties differ in their susceptibility to flower drop. Growing varieties that are proven in your area will help you avoid this malady.

Blossom or flower drop is common in:

- Bean blossoms drop from heat and moisture stress;

- Cucumbers, melons, squash and pumpkins, blossoms are most affected by cool weather, which discourages pollinators such as bees. Also, male flowers always drop off, as they form pollen, not fruit.

Tomato, pepper and eggplants, flowers are sensitive to too cool or too warm temperatures.

Summer sun & the gardener (or farmer)

Several health problems are associated with working in intense, summer sun. A minor heat-related concern is **cramps**, usually in the lower leg and abdominal area. It is due to water and salt losses. Get out of the sun, stretch your muscles gently, and drink plenty of water, slowly, with a small amount of salt (or substitute a sports drink).

A more serious health problem is **heat exhaustion**. You may experience disorientation, nausea, and excessive sweating. Move into a cooler area, lie down and elevate the feet, and drink fluids. Don't get back up when the symptoms subside and start operating power equipment.

The most serious problem is heat stroke. Heat stroke can be fatal. It is a major medical emergency! Danger signals include little or no sweating and a high body temperature, 104° or more. Immediately call for medical help. Get the person into the shade and cool them by loosening or removing clothing and applying water (**BUT NOT ICE!**) to help them cool off.

Avoid these problems by drinking plenty of fluids, taking breaks to cool off, and watching for signs that something is wrong.

Watering vegetables in hot weather

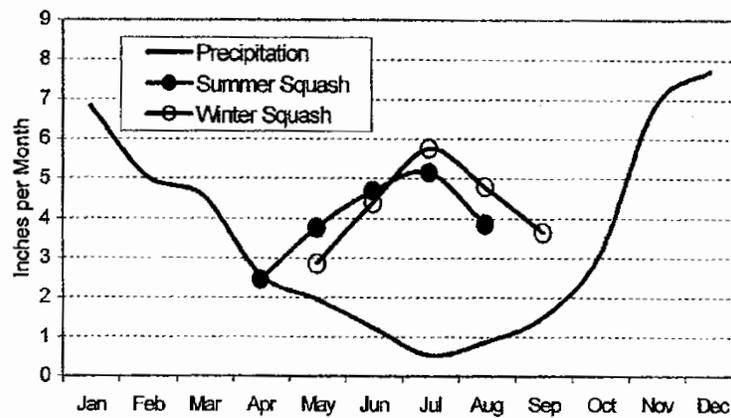
The high temperatures common to August give us a lot of opportunity to test our watering skills. If you are seeding vegetables for fall harvest, it is a challenge to keep the soil surface evenly moist to support germination. Surface

mulches help, as do the use of soaker hoses or drip systems turned on frequently. Overhead irrigated seeds on un-mulched clay soils tended to have a hard time pushing through the soil crusts that formed. Crusts develop from the physical impact of water droplets combined with sun baking of clay.

In the vegetable garden, many crops are in crucial production stages. All vegetables that produce bulbs, flowers, fruit, or seed as the edible part (i.e. beans, squash, tomatoes, peppers, corn, broccoli, onions etc.) experience their highest demand as that edible portion is maturing. Even and ample water is a must.

The evapotranspiration rate of a crop is the amount of soil moisture evaporating through plant leaves (which is most of the water as the crop canopy matures) and directly from the soil. Normal evapotranspiration averages for vegetables in July/August are about 1.50 inches per week (or about .22"/day). But we had some days where the rates exceeded .30"/day or about 2.25 inches per week. The chart above shows the water demand for winter squash (butternuts, acorns, Hubbard, etc.) and summer squash (zucchini, patty pans, etc.) Note the different planting dates projected. The difference between the rain-

fall received and the crop demand at any point in time is what you have to provide.



Typical precipitation and squash evapotranspiration (ET) in the Willamette Valley. Tabulated values of ET are provided on the back of this sheet.

Late blight

As I write this, there are some good weather forecasts. But there are also some hints of a day or several that could drizzle. For those of us growing tomatoes, this is not what we need to

hear. If the drizzle persists more than a day (or two at most), our tomatoes and potatoes are at risk for late blight infections. Peppers are less affected. A full-blown infection can cause the plants to look like they have been blow-torched and all the fruit is ruined. Potatoes developing in the ground can also be infected. So if that drizzle or rain forecast looks like it would come to pass, consider spraying your plants with a copper fungicide (most are considered "organic") before the rain sets in.

Calcium and watering

Blossom end rot, the black ends that sometimes form on tomatoes is caused by the failure of the plant to adequately move calcium into the developing fruit. There are several other calcium disorders that have the same general cause. Rapidly growing large potato tubers will sometimes develop a hollow spot in the center of the potatoes. It is called "hollow heart" and is also a calcium shortage disorder. Summer squash that turns brown at the flower end and stops growing is often (though not always) a calcium shortage. Apples that show small brown sunken spots on the skin, especially on the flower end, have bitter pit, another calcium disorder.

If you haven't limed the soil in a while, that could be part of the problem. In addition, fruit competes with the shoot growth for calcium in all of these garden crops and the shoots generally get it first.

But even watering plays a major role in calcium uptake by the root system. Calcium never moves through the roots system easily. If the root zone is temporarily dry from uneven watering, calcium is the last mineral that moves into the plant when water is available. Pay attention to water for all the vegetable crops mentioned and consider watering your fruit trees. The soil profile around them is now likely quite dry.

Termites fly in August

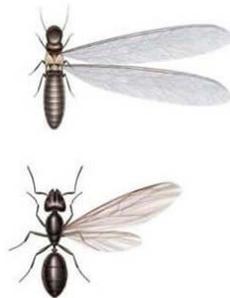
The reproductive forms of the subterranean and dampwood termites fly this time of year to mate. Fertilized queens drop to earth, shed their wings and look for a suitable home.

Suitable is the key. A dampwood termite requires continuously wet wood. If there is no dirt piled up

against your house or leaking pipes in the wall or floor spaces, you don't have to worry about the dampwood termite. They can't live there.

If you have a dampwood colony, correct the source of moisture and replace the damaged wood. No further treatment should be necessary.

The subterranean termite is more devious. It must have moisture. But it can conduct moisture up mud tubes from the earth into your house structure. Crawl under your house once a year to look for these tubes that may travel up foundations or posts that support the floor joists. If subterranean ter-



Termites:

- Straight Antennae
- Equal Length Wings
- Straight Abdomen

Ants:

- Bent Antennae
- Unequal Length Wings
- Thin Abdomen

mites are found, an insecticide will need to be used to control the colony.

Don't get sold a tent job to control termites. They are used for the drywood termite, which is not found here. It shouldn't be necessary to tent in Western Oregon.

Finally, remember that carpenter ants are a much greater risk to the home. They are less specialized about the wood they inhabit and can do a lot of damage. Have your house inspected if you think there might be problems.

Keeping your well water safe

Many rural residents depend on well water for drinking and cooking. It is crucial that the well is examined critically for problems that might compromise the quality of the water. Residents should routinely test the well for coliform bacteria and nitrates.

These are the most likely contaminants and are indicators of flawed well integrity. They can enter the well through breaches in the casing, changes in underground water flow,

or openings for surface water around the well head. The bacteria can move in surface water. They usually come from septic tanks or from manure of livestock or other animals.

Generally, chemicals are not a problem unless there has been a spill or a leaking petroleum tank. However, if you do

sense a change in the taste of the water, consider getting a more complete analysis. A simple bacterial test usually costs \$30 -40 while a broader mineral/chemical screen can cost \$100-200 or more.

For a list of labs that do testing see <https://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Documents/acclab.pdf>

Native plant profile: Nootka rose

Rosa nutkana is fairly common in Columbia County. It produces large pink fragrant flowers from May through early July. There are two large prickles at the base of each leaf but generally few on the stems itself (there are some clumps that have thornier stems).

Nootka rose is a large plant that spreads through both seed and suckers. The suckering



Wikimedia Source: dog walking girl

habit can produce large clumps that can be 6

feet or more wide and up to nine feet tall. The stems are usually erect and robust and are generally green though sometimes they can be tinged with red.

The flowers are borne singly on the end of each stem. They develop into very large red rose hips that have been used as survival food but are somewhat bitter. Picking the hips and allowing them to further ripen and soften may remove the bitterness to a degree. The seeds under the fleshy hip skin are not edible and can be irritating.

Nootka rose is partial to drier upland sites in full sun to light shade. It can also be found in riparian margins where it is dry and sunny enough.

It is very suitable for hedgerow planting if you have enough space and its spreading habit won't cross onto your neighbor's property. It is very attractive to bees for its very high quality pollen. Nectar production is sparse. It is the larval food for the mourning cloak and hairstreak butterflies. Several gall forming insects use Nootka rose includ-

ing the fairly common mossy rose gall. The gall forming insects are beneficial predators of other insects. The larval stage is protected by the gall.



Wikimedia

Deer and elk browse the young leaves and shoots of Nootka rose. The clumps provide cover for a variety of small mammals and birds, many of which eat the hips and seeds in the winter.

Indigenous populations in the lower Columbia used Nootka rose for food and medicine. Young shoots were sometimes eaten. They were also used to cover food streaming over coals to protect the food and perhaps flavor it. European settlers used the hips for tea and jam. Rose hips in general are very high in vitamin C.

The plant can be propagated with cuttings and suckers. Many gardeners have selected forms that have large and showy blooms. For native planting, propagating some plants by seed is advised to maintain the genetic diversity in the plant population. Seeds can be gathered when hips are mature. If sown shortly after collection and not allowed to dry, you may be able to germinate them quickly before winter starts in flat or deep plug trays. Dried seed needs to be stratified in a refrigerator for at least 90 days before it will germinate.

There aren't many Nootka rose cultivars. There is one rose called *Alika* that is thought to have *R. nutkana* as one of its parents. It originally came from Russia. Nootka rose is found wild in eastern Russia along the Pacific margins so it is possible. Here is a link to that rose:

<http://www.paulbardenroses.com/gallicas/ali-ka.html>



That's the Way it Grows

Marathon Gardening and Slowing Down

Aching muscles. Calloused hands. Doan's back pills. Some days gardening really takes it out of you.

In my enthusiasm to get my yard looking great, I often overdo it and end up sore and exhausted. Recently, I've pulled several all-day weeding-digging-planting sessions, even though I always tell myself I won't do it. And I always regret it the next day, when my muscles are aching. But the hard work is paying off, and I'm liking what I see in my yard.

Taking out the scuffle hoe once in a while is keeping down the seedling weeds. A good spray with herbicide in the borders took down the mature weeds. I also couldn't help myself and sprayed dozens of dandelions in my lawn. I now have dozens of brown spots that look like a miniature army of alien ships landed in my yard. But the dandelions are gone.

My tomato plants are starting to produce, and I am still picking asparagus, clear into July! Unfortunately, I didn't get any seeds in the ground until late June, due to a variety of reasons, but largely procrastination. I could have planted most of them a month or more earlier, but I just ran out of time. It seems like everything we do these days is dictated by time constraints. We have to do this, we have to do that. Sort of takes the fun out of everything.

So, I'm making an effort to slow down.

Sometimes, I just forget to take it easy and do a little at a time, to enjoy the process of gardening, instead of making it an all-out battle between me and nature. In that spirit, I've been watering in the evenings.

Why? Well, I already have a great watering system in the vegetable garden and flower beds. All I have to do is connect the hose and turn it on. I even have a timer. But getting out the old fluorescent green watering can and doing it manually is almost therapy.

I like the relaxing process of walking from one plant to another. It allows me time to take a good look at all my plants, to check on their health, look for any pests, yank a few weeds, and sniff lots of flowers. I also find my mental state improves greatly.

And each of those things is very important. I don't want to just see my flowers as I'm driving in and out of the garage. I want to be out among them, get some fresh air, maybe soak up some vitamin D, listen for the hummingbirds, throw bugs to the chickens.



During the winter, I seldom get outside like I do in the summer, and I forget to take the time to enjoy what is right in my garden, instead of dwelling on what is imperfect. Gardening is a lesson in patience. Nature has a miraculous way of doing just what it pleases, taking what you give it and adapting, good or bad.

Just ask the colony of morning glory thriving in the now competition-free area I sprayed.

My goal for the rest of the summer is to slow down and enjoy what is growing and blooming and producing. I need to think of ways that I can pare down the labor-intensive plantings, but I am not ready to give up my irises or fruit trees.

My husband indulged a recent whim to build a small patio to replace the planting bed under the front window of the house. I got a wild idea one night and started digging everything out of the bed, announcing that we were expanding the front porch. It's now completed and landscaped—many of my boxwoods grown from cuttings now have a permanent home. I have several container plantings on the new patio and a new place to sit and enjoy my flowers.

It was a small project, but I may have exhausted my husband's indulgence for this year, so the bigger chicken coop is on next year's list of projects.

But that's okay. I'm taking it slow. I'm going to go sit on my new porch and watch the plants grow.



—Lisa M. Long

Columbia County Master Gardener™

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Smashwords.com/profile/view/LisaMarieLong

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AUGUST

Garden hints from your OSU Extension Agent

Oregon State University Extension Service encourages sustainable gardening practices. Always identify and monitor problems before acting. First consider cultural controls; then physical, biological, and chemical controls (which include insecticidal soaps, horticultural oils, botanical insecticides, organic and synthetic pesticides). Always consider the least toxic approach first.

All recommendations in this calendar are not necessarily applicable to all areas of Oregon. For more information, contact your local office of the OSU Extension Service.

Planning

- Dampwood termites begin flying late this month. Make sure your home is free of wet wood or places where wood and soil are in contact.
- All of Oregon: Optimal time for establishing a new lawn is August through Mid-September.

Maintenance and Clean Up

- Make compost of lawn clippings and garden plants that are ready to be recycled. Don't use clippings if lawn has been treated with herbicide, including "weed-and-feed" products. Don't compost diseased plants unless you are using the "hot compost" method (120° to 150°F).
- Fertilize cucumbers, summer squash, and broccoli to maintain production while you continue harvesting.
- Clean and fertilize strawberry beds.
- Use mulch to protect ornamentals and garden plants from hot weather damage. If needed, provide temporary shade, especially for recent plantings.
- Camellias need deep watering to develop flower buds for next spring.
- Prune raspberries, boysenberries, and other caneberries after harvest. Check raspberries for holes made by crown borers, near the soil line, at base of plant. Remove infested wood before adults emerge (approximately mid-August).
- Monitor garden irrigation closely so crops and ornamentals don't dry out.
- If a green lawn is desired, make sure lawn areas are receiving adequate water (approximately 0.5 to 1.5 inches per week from June through August). Deep watering less often is more effective than frequent shallow watering.
- Prune out dead fruiting canes in trailing blackberry and train new primocanes prior to end of month

Planting/Propagation

- Plant winter cover crops in vacant space in the vegetable garden.
- Plant winter kale, Brussels sprouts, turnips, parsnips, parsley, and Chinese cabbage.
- Mid-summer planting of peas; use enation-virus-resistant varieties, plant fall crops of cabbage, cauliflower, and broccoli.
- Plant cauliflower, broccoli, Brussels sprouts, spinach, turnips, and parsnips.

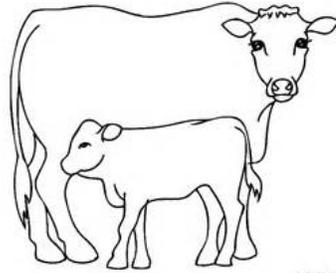
Pest Monitoring and Management

- Continue monitoring peaches, plums, prunes, figs, fall-bearing raspberries and strawberries, and other plants that produce soft fruits and berries for Spotted Wing Drosophila (SWD).
- Check apple maggot traps; spray tree if needed.
- Control yellowjackets and wasps with traps and lures as necessary. Keep in mind they are beneficial insects and help control pest insects in the home garden.
- First week: if necessary second spray for peach tree borer and/or peach twig borer.
- First week: if necessary, spray for walnut husk fly.
- First week: if necessary, second spray of filbert trees for filbertworm.
- Check for root weevils in ornamental shrubs and flowers; codling moth and spider mite in apple trees; scale insects in camellias, holly, maples. Treat as necessary.
- Watch for corn earworm on early corn--treat as needed.
- Control caterpillars on leafy vegetables, as needed, with *Bt-k*, or by hand picking and removal.
- For mite control on ornamentals and most vegetables, hose off foliage, spray with approved miticide if necessary.
- Remove cankered limbs from fruit and nut trees for control of diseases such as apple anthracnose and bacterial canker of stone fruit. Sterilize tools before each new cut.
- Corn may need protection from earworm. Spray new silks with appropriate pesticides if necessary.
- Spray potatoes and tomatoes for early and late blight.

Farm and livestock notes

Getting heifers to weight to breed

What does a heifer need to weigh to be able to come into heat and breed? Recent work with ¾ Angus heifers showed that only 12% of the heifers reached puberty at 50% of mature weight or less. Mature body weight of these cows was projected at about 1,265 pounds.



Only forty-seven (47%) percent of the heifers reached puberty at 55% of mature weight or less. Ninety-one (91%) percent of the heifers reached puberty at 60% of mature weight and 97% had reached puberty by the time they weighed 65% of the mature weight. Producers wanting to be certain that a high percentage (90% or more) of their replacement heifers have reached puberty before the start of the breeding season, need to have heifers weigh at least 60% of the mature weight. In the case of this herd with largely Angus genetics, it was roughly 760 pounds at first breeding.

Low quality forage and protein supplements

This was a difficult year to make high quality hay. The weather just didn't cooperate. Grass in the field matured, reducing its value before it could be put up. Some fields have lots of standing grass that has feed value. Plants become more mature and lower in protein content. However, the protein requirements for growth, milk production, and body condition maintenance of beef cattle do not decrease as the "dog days of summer" arrive.

The micro-organisms in the rumen of beef cows and replacement heifers require readily available protein to multiply and exist in large enough quantities to digest the cellulose in low quality roughages. Protein supplementa-

tion of low-quality, low protein forages results in a "positive associative effect". This "positive associative effect" occurs as supplemental protein available to the "bugs" in the rumen allows them to grow, multiply, and digest the forage more completely and more rapidly. Therefore the cow gets more out of the forage she consumes, she digests it more quickly and is ready to eat more forage in a shorter period of time.

Data from Oklahoma State University illustrates this (see table below). The prairie hay used in this study was less than 5% crude protein. When the ration was supplemented with 1.75 lbs of cottonseed meal per day, retention time of the forage was reduced 32% which resulted in an increase in feed intake of 27%. Because hay intake was increased, the animal has a better chance of meeting both the protein and energy requirement without supplementing other feeds. Because retention time was decreased, one could postulate the protein supplementation in this situation also increased digestibility of the forage.

Effect of Cottonseed Meal Supplementation on Ruminal Retention Time and Intake of Low-Quality Prairie Hay

	None	1.75 lb	Change
Rumen Retention Time, Hr	74.9	56.5	-32%
Voluntary Daily Hay Intake, % of body wt.	1.69	2.15	+27%

As producers prepare their late summer, fall, and winter feed strategies, they can see the importance of providing enough protein in the diet of the cows to feed the "bugs" in the rumen. If the forage is low in protein (less than 8 % crude protein), a small amount of sup-

plemental protein such as cottonseed meal, soybean meal, or one of the higher protein by-product feeds, could increase the amount and digestibility of the forage being fed. This strategy requires that ample forage is available to take advantage of the “positive associative effect”. As the table above illustrates, properly supplemented cows or replacement heifers will voluntarily consume about 27% more forage if they were provided adequate protein. As long as enough forage is available, this is a positive effect of a small amount of protein supplement. *This was slightly edited from a piece by Glenn Selk, Oklahoma State University Beef Specialist*

Changes to Agricultural Worker Protection Rules

The revisions to the Worker Protection Standard cover many different areas. Most of the requirements become effective January 2, 2017 with some provisions implemented a year later. The major revisions include:

Annual mandatory training to inform farmworkers on the required protections afforded to them. *Currently, training is only once every 5 years.*

Expanded training includes instructions to reduce take-home exposure from pesticides on work clothing and other safety topics.

First-time ever minimum age requirement: **Children under 18 are prohibited from handling pesticides.**

Expanded mandatory posting of no-entry signs for the most hazardous pesticides. The signs prohibit entry into pesticide-treated fields until residues decline to a safe level.

New no-entry and application-exclusion zones (AEZ) up to 100 feet (depending on application method and equipment) surrounding pesticide application equipment will pro-

tect workers and others from exposure to pesticide overspray. This provision is complicated and will start January 2, 2018.

Requirement to provide more than one way for farmworkers and their representatives to gain access to pesticide application information and safety data sheets – centrally-posted, or by requesting records.

Changes in mandatory record-keeping will improve states’ ability to follow up on pesticide violations and enforce compliance. **Records of application-specific pesticide information, as well as farmworker training, must be kept for two years.**

Anti-retaliation provisions are comparable to Department of Labor’s (DOL).

Changes in personal protective equipment will be consistent with DOL’s standards for ensuring respirators are effective, including fit test, medical evaluation and training. Specific amounts of water to be used for routine washing, emergency eye flushing and other decontamination, including eye wash systems for handlers at pesticide mixing/loading sites.

Continue the exemption for farm owners and their immediate families with an expanded definition of immediate family.

For more information, go to <https://www.epa.gov/pesticide-worker-safety/revisions-worker-protection-standard>



2016 Summer Food Preservation Class held in St. Helens

Back by popular demand are our summer food preservation classes. These classes are great for both the beginner and experienced canner. The last class will be held in St. Helens at the Columbia Soil & Water Conservation District. Class size is limited to allow for hands-on involvement in the kitchen.

Saturday, August 27th, 9 a.m. to 1 p.m. – Pressure Canning Low-Acid Foods.

Cost to attend is \$30. A small number of scholarships are available.

Payment must be made in advance to hold your spot.

Contact the OSU Extension Service – Columbia County office at 503-397-3462 to register or online at <http://extension.oregonstate.edu/columbia>.



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