Programs for you . . .

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

May 2 .......... Master Gardener™ Board Meeting 10:30 a.m. OSU Extension Service, St. Helens.
May 2 .......... Columbia County Oregon Beekeepers 6:00 p.m. Meets 1st Thursday, monthly at CRPUD.
May 6 .......... Office Closed Half Day *The office will be closed until 1:00 pm for an all-staff training.
May 11 ........ Vernonia Community Gardens Annual Plant Sale 1000 Missouri Avenue, 9:00 a.m.-3:00 p.m.
May 14 ........ Lower Columbia River Watershed Council 7:00 p.m. Clatskanie PUD, 495 Hwy 30.
May 14 ........ “Resilient Gardening” 6:30 p.m. at the Vernonia Library. Presentation by Chip Bubl. Tips for planning & maintaining a garden through drought, pests, disease, and other unpredictable weather events; Adaptive gardening techniques to produce more nutrition for the year.
May 23 .......... Rural Fire Safety 7:00 pm, Fern Hill Grange in Rainier. Speakers: Eric Smythe, Columbia River Fire & Rescue and Kelly Niles, Oregon Forestry Department.
May 23 .......... Upper Nehalem Watershed Council 5:30 p.m. at the Vernonia Grange.
May 23 .......... Master Gardener™ Chapter Meeting 6:30 p.m. Guest speaker: Matthew Shepherd, Xerces Society for Invertebrate Conservation presents: “Planting for Bees.” Public Welcome!
May 27 .......... Memorial Day Office Closed – Enjoy your holiday!
May 27 .......... Farm Bureau Meeting 6:30 p.m. OSU Extension Service, St. Helens.
In the garden

Will we have fruit?

Cold weather may have an impact on fruit set. Two factors are in play. First, if at your locations, blossoms faced sub-freezing temperatures, they may be damaged. With apples we can lose a lot of bloom and still have a crop if late or early blooms set fruit. With cherries, we want all the fruit we can get, so each blossom lost is significant.

The bees have been sluggish. Mason bees emerged late and honey bees are spotty. That said, blooms in many locations are slow to develop. We could see a decent fruit year after all.

Corn chatter

Corn and tomatoes are favorite garden crops in this area. Many garden soils are ready to be tilled. Before planting, add 4 pounds of actual nitrogen (organic or synthetic) per 1000 square feet of garden (4/.10 = 40 pounds of the fertilizer where the first number is “10”, like in 10-20-20).

“Supersweet” corn varieties need very warm soil at planting. They are prone to fungal and insect attack if they sit in cool soils. It may be helpful to till up an area and cover it with clear or black plastic for several days to increase the temperature. Clear plastic will give you more heat gain but will also stimulate the weed seeds. Black plastic gives less heat but also knocks out that first flush of weeds if it is kept on there for 8-10 days. You can leave the clear plastic on until you can just see the tips of the corn emerging. Then you can cover the planting with a row cover to speed seedling growth. It will also protect the crop from hungry crows.

Corn spacing is a perennial topic of conversation. I see lots of corn that is jammed too close together to produce well. People can’t bring themselves to thin seedlings. The take-home message is that you should end up with a corn plant about every 8-10” if you have 30” between rows. If you have a wider row spacing (say 36”), you may be able to narrow the “in-row” spacing down to 6”. Don’t try to avoid thinning by planting less corn. Insects, diseases, or crows can knock out some plants so plant enough and go out and thin! Thinned corn can be transplanted into adjacent rows that will mature 2-3 weeks later.

Crusts crush carrots

Carrot seeds are kind of wimpy. They don’t burst through the ground like radishes. Rather, they stumble to the surface over 7-14 days. Or they don’t. If they don’t make it to the sunlight, you have no carrots. What’s going on?

Many of us garden on clay-based soils. When we till the garden plot and plant carrot seeds, surface clay particles may solidify into a tough crust. That makes it hard for those carrot seeds to break through and they die. One gardening trick is to cover carrot seed with potting soil, not garden soil. Our grandparents had other solutions. They placed cut-open burlap bags over the carrot beds to keep seed evenly moist and reduce the “baking” of the clay. As carrots germinated, the bags were removed.

A modern technique is to use floating row covers instead of burlap. It gives the same crust reduction, seems to encourage faster germination, and the emerged seedlings respond to the heat and sun bathed environment under the covers. Of course, weeds flourish as well, so be warned.
Container vegetable topics

Peppers love warm roots. Given happy roots and otherwise normal care, they produce abundantly. So do eggplants. You can get more fruit by planting them in containers.

The planted containers should be placed where they get a decent amount of sun (8 hours or more is best) and where it is easy to water them. Another advantage is that if you have limited space in which to garden, putting these plants on patios or decks can add quite a bit to your total home vegetable production.

There are drawbacks, though, to containers. First, they need much more attentive watering. On very hot afternoons, it may be wise to pull them back into shade to reduce the risk of sunburn.

Second, some plants need to be staked and tied (peppers) or trained in a structure (tomatoes). Staking isn’t too hard in containers but getting or building a stable and large enough tomato cage that won’t topple over in a container is a challenge.

Third, soil straight from your garden doesn’t work well in containers, at least as the only material in pots. Clay-rich soil has very small pore spaces and so it drains slowly which can lead to waterlogged roots, low soil oxygen and poor growth. Most university publications advise against using garden soil.

But it is expensive to buy potting mix for containers. There is a minority opinion that says it is possible to mix good garden loam (with moderate to low clay) with other materials for vegetable containers. I have seen it done with good results. The containers are heavier (so they are less likely to blow over) and seem to be able to go slightly longer between watering. But I need to repeat, don’t use heavy clay soils in the mix or it will get waterlogged.

Here are several soil mix recipes for containers that use garden soil. One calls for equal parts by volume of garden loam (your best soil), good compost, and perlite. Another uses equal parts of potting mix, good soil, compost, and perlite. With any of these mixes, you can add lime at about ¼ cup per four gallons of mix. Slow release organic or conventional fertilizers can also be added or the plants can be watered about every four days with a liquid fertilizer (organic or conventional) at about one-half strength.

Fourth, container shape and size influences how much water a container will hold and what is its potential for waterlogging. Two containers of equal volume, one that is 6 inches tall and wide and one that is 12 inches tall and narrow, drain differently. Both will have perched water at the same height from the bottom. But with the low container, 2” of water on the bottom represents 33% of its volume while the same two inches in the 12” container represents about 16% of the volume. To prove this, take a six inch sponge and soak it, then first drain it on its side and measure the height that drains. Then soak again and drain it upright and it will drain to the same height.

If you use five-gallon buckets or other makeshift containers, drill holes in the bottom and about ½ inch along the side from the bottom to ensure decent drainage. Tomatoes need large, deep containers (at least 12 inches high and five gallons in volume). Peppers can do well in 3 gallon containers but will need very attentive watering. Lettuce and other greens can be planted in lower, wider containers of six-inches or so in height.

Finally, buy a moisture meter. They are cheap, last forever, need no batteries, and have an 8-12” probe. Use them to check your container watering cycle over the summer.
MAY

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
- Prepare and prime irrigation system for summer.
- Use a soil thermometer to help you know when to plant vegetables. Wait until the soil is consistently above 70°F to plant tomatoes, squash, melons, peppers and eggplant.
- Place pheromone traps in apple trees to detect presence of codling moth. Plan a control program of sprays, baits, or predators when moths are found.

Maintenance and Clean Up
- If needed, fertilize rhododendrons and azalees with acid-type fertilizer. If established and healthy, their nutrient needs should be minimal. Remove spent blossoms.
- When selecting new roses, choose plants labeled for resistance to diseases. Fertilize roses and control rose diseases such as mildew with a registered fungicide.

Planting/Propagation
- Plant dahlias, gladioli, and tuberous begonias in mid-May.
- Plant chrysanthemums for fall color.
- Plant these vegetables (dates vary locally; check with local gardeners):
  - Mid-May, transplant tomato and pepper seedlings.
  - Snap and lima beans, Brussels sprouts, cantaloupes, slicing and pickling cucumbers, dill, eggplant, kale, peppers, pumpkins, summer and winter squash, onions, potatoes, tomatoes, watermelon.

Pest Monitoring and Management
- Monitor blueberry, raspberry, strawberry and other plants that produce soft fruits and berries for Spotted Wing Drosophila (SWD). Learn how to monitor for SWD flies and larval infestations in fruit: https://spottedwing.org/
- 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.
- Trap moles and gophers as new mounds appear.
- Leaf-rolling worms may affect apples and blueberries. Prune off and destroy affected leaves.
- Monitor aphids on strawberries and ornamentals. If present, control options include washing off with water, hand removal, or using registered insecticides labeled for the problem plant. Read and follow all label directions prior to or using insecticides. Promoting natural enemies (predators and parasitoids that eat or kill insects) is a longer-term solution for insect control in gardens.
- Spittle bugs may appear on ornamental plants as foam on stems. In most cases, they don’t require management. If desired, wash off with water or use insecticidal soap as a contact spray. Read and follow label directions when using insecticides, including insecticidal soap.
- Control cabbage worms in cabbage and cauliflower, 12-spotted cucumber beetle in beans and lettuce, maggot in radishes. Control can involve hand removal, placing barrier screen over newly planted rows, or spraying or dusting w/registered pesticides, labeled for use on the problem plant. Read & follow label directions when using insecticides.
- Tiny holes in foliage and shiny, black beetles on tomato, beets, radishes, and potato indicate flea beetle attack. Treat with Neem, Bt-s, or use nematodes for larvae. Read and follow label directions when using insecticides.
- Prevent root maggots when planting cabbage family, onions, and carrots, by covering with row covers or screens, or by applying appropriate insecticides.
- Monitor rhododendrons, azaleas & primroses for adult root weevils. Look for evidence of feeding (notching at leaf edges). Try sticky trap products on plant trunks to trap adult weevils. Protect against damaging the bark by applying the sticky material on a 4-inch wide band of poly sheeting or burlap wrapped around the trunk. Mark plants now & manage with beneficial nematodes when soil temperatures are above 55°F. If weevils are a consistent problem, consider removing plants & choose resistant varieties http://cru.cahe.wsu.edu/CEPublications/eb0970e/eb0970e.pdf for list of rhododendrons exhibiting resistance to adult root weevil feeding)
- Control slugs with bait or traps and by removing or mowing vegetation near garden plots.
Insect of the month: Carpet beetles

Carpet beetles are among the most common insects brought to the Extension office. They look like miniature lady beetles, with wing covers of tiny scales that produce a variegated “W”-shaped color pattern. They are quite attractive when seen with a hand lens or magnifying glass. There are three species but the varied carpet beetle is the most common.

Adult beetles gather at windows, looking to go outside or, perhaps, having just come in from the outside, may be a bit confused. For the adult beetles, there is no food inside. They feed on flower pollen and have a rather short life of 2-6 weeks, depending on temperature. Often they lay their eggs in the nests of semi-domestic birds like sparrows or finches. But they do mate (inside or out) and lay eggs inside our homes and therein lies the problem.

Their far less lovely, plump, bristly, crawling larvae feed on the most amazing variety of materials. They have a unique capacity to digest hair, animal or human, extracting useful proteins from keratin and chitins. They also feed on feathers and horns (if you have them lying around), anything leather, fur, dead insects, wasp nests, dried flower arrangements, woolen clothes and blankets, stuffed animals, and dry goods in your pantry.

But, in today’s home, they rarely feed on carpets because they can’t stomach synthetic carpet fabrics. However, if you have true wool carpets or an old horsehair carpet pad, they are profoundly grateful.

Carpet beetles often get their first of many meals in dry dogfood, since the adult female will lay her eggs (100 or so) in places where her offspring will have lots of high quality protein to get them started. They are major warehouse pests so you can bring carpet beetle eggs/larvae home in Fido’s chow.

Carpet beetles do more damage to clothes and other fabrics in Oregon than clothes moths, though we have both pests. Clothes moth feeding leaves visible small webs and small holes. Carpet beetle feeding will be more systematic and stealthy. They can get under an Oriental rug and thin areas down to almost nothing before you notice any damage. Often the damaged patches are quite large.

Carpet beetles go through a complete metamorphosis, with as many as 12 larval instars, eating and molting for weeks and weeks. Shed skins can be seen by alert homeowners. A complete life cycle can be several years. That is a whole lot of feeding time. The pupal stage is much shorter, a couple of weeks. Outside, pupation is timed by increasing day length so the emerging adults have to eat some pollen before they mate. To do that, there have to be flowers around. It doesn’t appear that they are good pollinators because they don’t seem to care which pollen they eat as they fly between different flowers.

We think adults congregating at your window want to get outside, fast. Most don’t, and die. Then you vacuum them up. End of problem? No, because odds are you still have eggs and feeding larvae somewhere inside. In fact, entomologists think that there are continuous indoor breeding populations that don’t have to go outside for pollen. Subjected to indoor lighting, they don’t have a photoperiod response and probably breed after shorter molting cycles. So what should you do?

Pantries seem to host most of the larva so start looking and cleaning in there. Pay particular attention to dry pet foods because the higher protein content is very attractive. Destroy or freeze anything suspect. Then clean and vacuum your house thoroughly and repeatedly, especially if you have shedding pets. Accumulations of desirable (from a carpet beetle standpoint) materials around
baseboards and heating vents deserve special attention.

Insecticides may, in rare cases, be needed but few products can be used directly on things you want to protect. Insecticide “bombs” are rarely very helpful. People have ruined valuable rugs and other artifacts by treatments that stain or otherwise damage the item being protected. Museums have been hard hit by these insects and have developed many techniques to manage them.

Other approaches include caulking window and door frames to keep adult beetles out, storing vulnerable items in very tight containers, purchasing pheromone traps to monitor beetle populations, and as mentioned earlier persistent vacuuming. For most people, these beetles are a nuisance, not a nightmare.

The natural world

Value in viruses

We and the rest of the world are awash in viruses. Number crunching various life forms by broad category gives us 5,500 species of mammals, ~400,000 vascular plants, somewhere between 1-10 million arthropod species (insects and their ilk), 5 million fungi, possibly 1.6 million bacteria, and at least 2-3 viruses for each species of all the life forms just noted! And, to date, only 4,500 virus particles have been molecularly unraveled and systematically classified into evolutionary groupings. It’s not like we have been scientific slackers, it just that the tools to do this work and the computing power to make sense of the data is only recently available.

A virus depends on other organisms to survive. They commandeer the host genetic code, rearrange the plans, and order up more of themselves. Along the way, they sometimes cause real problems for the host, but most often, not. So why should we spend the time and money to learn more about these rather odd “life” forms? First, problem viruses can be really serious. Those have been mostly identified and their secrets slowly unraveled. Vaccinations have been the human front line of defense against many viruses that used to kill us like smallpox, polio, and measles.

However, many viruses appear to function symbiotically with their hosts. Certain viruses may even improve human health by attacking pathogenic bacteria (phage viruses), cohabitating with gut bacteria to help with your digestion (and you thought it was just “you” inside your stomach and intestines), or have lots of useful biochemical skills that we can’t even imagine. This research is worth the time and it starts with seeing them, defining them, and ordering them into logical relationships.

Cats and ants

If you have ever been around a cat (or two), you surely have noticed how they love to rub on smashed ants, particularly the tiny pavement ants. I always thought they craved formic acid, which is released in the smashing. But, no! They don’t respond to formic acid. It turns out that smashed ants are suffused with oleic fatty acids. This compound is in olive oil, insect pheromones, and, apparently cat facial glands. So the smell Mr. T (in our house) is spreading around as he face-rubs the furniture, calls to him when produced by agitated or smashed ants. He rolls, purrs, and repeats for many, many minutes.

Here is the scoop: https://sites.psu.edu/ecologistsnotebook/2014/06/03/signs-of-spring-13-ants-cats-acids-and-aspartame/
Legend of the Woolly Bear

Woolly Bear Caterpillars as Weather Predictors… Just a Myth – or is it?

“If the rusty band is wide, then a mild winter it will be… and the more black that there is, the more severe winter will be.” Right? If you know what I’m talking about, then you are familiar with the Woolly Bear caterpillar - one of the most recognized moth larvae around! These fuzzy little creatures can be seen feeding on a variety of green foliage in the late spring, crossing the roads and sidewalks in the fall, and they curl up into an endearing little puff ball whenever they are disturbed or handled.

Many of us have heard versions of the folklore about the woolly bear’s prediction of the winter to come. Some legends go on to detail that the positioning of the longest black band (on either the head or tail) supposedly indicates which part of the winter season will be colder (earlier or later). Other versions of this folklore even describe the associations of the wooliness of the caterpillars “coat” or even the direction of “travel” as being clues to the winter-to-come.

These legends are so popular in fact, that several towns hold “Woolly Bear Festivals,” complete with parades, an official weather prediction announcement, and even woolly bear races!

Though the “Legend of the Woolly Bear” has been around since American Colonial times, it grew in popularity after Dr. Howard Curran, the curator of entomology from the American Museum of Natural History, did a small study in the fall of 1948. Along with his wife and colleagues, Dr. Curran visited Bear Mountain in New York to count and measure the bands on the caterpillars. He then declared a weather prediction for the upcoming winter – and he did so for 8 more seasons after that… all with great accuracy, too! A local reporter picked it up and the rest, as they say, is history.

However, modern science discounted the legend until recently, when an entomologist resurrected Dr. Curran’s data and realized a link between the severity of the winter and the rusty brown band of a woolly bear caterpillar. He found evidence that the width of the middle band has to do with the AGE of the caterpillar - in other words, how late it woke from hibernation and got around to feeding in the spring. Wow! So, the band does say something about a heavy winter or an early spring. The only thing is … it is telling you about the previous year! And, there you have it, folks. Look to the woolly bear if you want to recall the winter we just had!

Meanwhile, the woolies at my farm are fattening up on dandelions, nettle and thistles, in anticipation of spinning their cocoons and transforming into full-grown moths. Even though most of us recognize the caterpillar stage, few of us know that they grow up to be an elegant Isabella Tiger Moth!

But now YOU do!

~ Sonia Reagan, OSU Extension Staff
Farm and livestock notes

Crop diversification and small farms

How many different products should a farm grow? In that question are layers of variables that will affect your answers. For example, I have seen very small ornamental nurseries that specialize in one type of plant (succulents, herbaceous perennial plants, fruit trees, etc.) or even one group like only Japanese maples. I heard of one gardener couple with a large lot that started propagating only disease resistant dogwood cultivars on their less than an acre lot and sold 800 per year to people within 40 miles of their place. It was a decent retirement income.

I have seen operations that started small and grew very large by continuously adding vegetables/fruits or nursery plants that took advantage of their increasing skills and those of their workers. Their market grew as their productive capacity grew.

I have seen fresh market vegetable farms that, over time, slim down to the produce they are really good at growing. Their bottom line improved. Other fresh market growers reduced their customers or customer types to make sales and distribution easier. Often, they would focus on restaurants and/or some of the higher end grocery stores that could market their produce.

So there are lots of different paths, each with their own unique set of risks and rewards.

Many small farms start as second jobs. You have primary off-farm income as you learn to grow and sell agricultural products. As you get better, your business contacts increase, your reputation as a reliable supplier strengthens, and the option to market a more diverse crop mix seems possible. So how do you make sense of the choices and assess the risks and rewards? There isn’t really a template but there are key questions that need to be considered.

Your first task is to consider how a change in crop mix might alter your use of capital, labor, equipment, and irrigation. Consider carefully if the change will affect your ability to grow and sell your core farm crops. Will you need to hire extra labor for short periods of time? Is that even possible? How do changes in crops affect your cash flow? Can you market through generally the same channels? Or is part of your diversification to reach new markets?

In essence, you are defining your current equipment/labor use pattern and your expense and income cycle to see how they all might line up with proposed growing and marketing changes. The more the moving pieces mesh cleanly, the better the fit.

As with your initial mix of crops, you will become much more efficient with the new enterprises over time. But you need a cash buffer to support the learning curve.

It is important to grow what gives you pleasure. It is difficult to produce something that doesn’t interest you or doesn’t offer much room for innovation.
Diversification can refer to other aspects of a farm’s path including:

- addition of value-added products from an existing crop
- use of another crop to reduce field disease rotation concerns or weed issues
- make better use of the labor force (there are farms that grow crops that don’t make them much money but keep their labor force there in the off season and provide workers with better incomes and fringe benefits)
- cultivate other markets that don’t conflict with your existing markets in time spent transporting per dollar returned
- produce crops (greenhouse or others) that complement current market offerings/options. Examples might be early fresh market options like forced rhubarb or early fresh greens
- diversify cash flow through crop storage (some risk there)
- use some of the same equipment and facilities that don’t tie up labor or equipment for other crops
- use legumes as crops to improve soils and capture nitrogen - this is very important for organic growers; cover crops can play an important role but cash crops, where feasible may be of value
- create a new value chain outside of direct farming by offering something to the farm community they can’t live without; several large Oregon machine companies started in farm shops - farmers are great innovators
- dry farm some vegetables (but significant yield risk that would have to be made up for by possible unique flavor profiles)

But here is what you don’t want to do. You don’t want to compromise an existing successful operation. That means not becoming distracted by the new venture. Find the talent and time to give each of the enterprises your best.

For more information, explore the OSU Small Farms website:

https://extension.oregonstate.edu/smallfarms

Also see What Can I do With My Small Farm, OSU publication at:

https://catalog.extension.oregonstate.edu/ec1529
(Read the PDF)

For direct consultation on diversification, give me a call at the Extension office: Chip (503) 397-3462 or email me at: Chip.Bubl@oregonstate.edu
May 14th 2019 - 6:30 p.m. “Resilient Gardening” Presentation by Chip Bubl

Join us at the Vernonia Library to learn tips for planning & maintaining a garden through drought, pests, disease, and other unpredictable weather events. Discussion on how to adapt gardening techniques through a changing climate & produce more nutrition for the year. Free and open to all!

May 19th 2019 - 1 p.m. “Clematis Tour of the Gardens at Joy Creek Nursery”

Join nursery co-owner Maurice Horn for a FREE tour of the many species of clematis in the gardens at Joy Creek Nursery to learn which is best for your garden. Over the last 29 years, Joy Creek Nursery has been fortunate to be associated with many wonderful clematis hybridizers and collectors. As a result, the nursery garden contains a wide variety of both climbing and herbaceous forms of clematis from many parts of the world. Come to learn about many clematis that are rarely seen in the trade.

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