Programs for you . . .

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

Columbia County Beekeepers Virtual Meeting  September 3rd at 6pm, via Zoom video conference. Guest speaker: Steve Gomes - winterizing our hives; moisture control, feeding and more. Email for login info: LindaZahl2@gmail.com

Small Farm School Has Gone Online! Small Farm School 2020 has adopted an online platform to deliver its content. Sessions will be delivered as webinars offered twice weekly on Tuesday and Thursday evenings starting on Thursday, September 17th and concluding in mid-November. Registration for Small Farm School is now open. Register HERE.

Just in time for ripe tomatoes and tuna, the food preservation hotline opens: As the OSU Extension Service Master Food Preserver program turns 40, its hotline is once again ready to take calls at 800-354-7319 from 9 a.m. to 4 p.m., Monday through Friday. When the hotline is closed, callers may leave a message. The hotline is staffed by certified Master Food Preserver volunteers. Calls to the hotline are expected to boom during the pandemic as people discover the satisfaction of growing and preserving their own food. Already this year, food preservation questions to OSU Extension's Ask an Expert online service have more than doubled compared to the first half of last year. You may reach Jenny Rudolph, Columbia County food preservation expert at Jenny.Rudolph@oregonstate.edu

OSU Resources & Publications: https://catalog.extension.oregonstate.edu/
In the garden

Missing beans? Rough garlic?

This has been a strange summer, mostly good for many crops but some odd things are showing up. First, I have had a fair number of calls about green beans failing to set pods. All cases involved pole beans. Some gardeners reported that their bush beans were prolific while their pole beans had next to nothing, side by side in the garden. Here is what I think happened. Many of the pole beans are older varieties while the bush beans are of much newer breeding. We have known for a long time that when temperatures get above 90 degrees F, bean flowers may not set. I think that is what happened with the pole beans but the bush beans weren’t as sensitive.

Second, there was a lot of “rough” garlic (see picture). In this case, the bulb is normal except for an outer ring of cloves that developed near the base. The paper sheaths that cover the garlic bulb are missing or partial. All of the garlic makes great eating and, for a home gardener, of no concern. But commercially, they are much harder to harvest and don’t have the “perfect” garlic bulb appearance so may be discounted by the buyer.

The cause is still a little mysterious (garlic is very complicated and keeps its secrets well) but it appears to have been caused by early warm days in late February and March followed by the cool, damp cycle of April and May. Not something that a grower can easily prevent. That said, if gardeners or farmers kept water on their garlic until late June, the crops were excellent.

Divots in your lawn?

If you walk outside and see lots of little bits of soil and grass pulled up from your lawn you have something looking for food. Usually here, it is either skunks or raccoons looking for crane fly larvae. Much bigger divots can sometimes mean bear and also that there were lots of crane fly rewards there. One other note: Many years ago, one of our residents had laid down a sod lawn. The raccoons came by for several nights, rolling the sod pieces partially up so they could look underneath for dinner. They were caught in the act.

Early fall colors?

If you see a maple, ash, or other tree that is now showing early fall color, be warned: that tree is in trouble. Normally most trees start to put on their autumnal colors later in the year, especially after a good brisk cold snap. However yellow, red, or purple leaves at this time of year on trees that are not normally highly colored (such as purple plums) is a symptom of stress.

Look closely – does the tree have bare branches in the upper crown? Is there a wound on the stem from mechanical injury or sunscald? Is the tree in a zone where rooting is restricted? Was the tree never watered this summer? If the answer to one or more of these questions is yes, then it is no surprise the trees are starting to turn already. Root disease, recent disruption to roots from construction or
grade changes, compaction from vehicular or foot traffic, and self-girdling roots can also result in premature fall colors.

Should anything be done? Yes! Try to determine the source of the stress and correct it. Little can be done about wounds that are already present, except to prevent further wounding. Mulching around trees will remove the temptation to mow or weed right up to the trunk. If compaction is a problem, try loosening the soil to a depth of 6-8 inches with a soil aerator (most likely this will have to be done professionally). Adding organic matter or additives such as perlite will help to lighten the soil structure and improve moisture penetration and gas exchange.

Make sure the tree receives sufficient water during the summer. I often hear “But it was so wet all winter!” Yes, it was wet, but normal rainfall in the summer is thin, and during all of July and August there may not have been two inches total rainfall. Eight weeks with a full canopy of leaves and the sun bearing down, increasing evaporation, can be a long time without any supplemental water.

Trees at risk (those showing fall colors now) should be marked for special care next year, including summer irrigation and spring fertilization.

This article is from our excellent OSU Plant Clinic Diagnostician, Melodie Putnam

Whitewash and sunscald

Trees can be injured by sun in either the summer or winter. Reflected sunlight off of snow onto dormant bark can cause sunburn even when air temperatures are quite low. Hot days and the direct rays of sun in the late afternoon also cause sunburn. It is more pronounced on the southwest side of a tree or bush and is especially an issue on trees with a modest leaf cover.

Farmers have painted tree trunks and lower scaffold limbs for years with a calcium mixture called whitewash. There are lots of formulas. A more modern solution is to mix exterior white latex paint 50-50 with water and paint it on the trunk. This treatment will help to protect your trees both winter and summer sunburns. It is particularly useful on young trees.

Oxygen and vegetable roots

Gardeners sometimes forget how important light cultivation is to growing vegetables. Most Columbia County soils tend to seal up after initial tillage and planting unless they have had lots of organic matter added over the years. As soils seal, microbial populations shift and can change nutrient availability. In addition, roots need to be adequately supplied with oxygen to function effectively.

Old research on corn shows a significant increase in yield when it is field cultivated, even if there are no weeds present. Breaking up the crust after the plant is well established improves moisture movement upwards in the soil and allows air into the root zone.
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.

Maintenance and Clean Up

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

Planting/Propagation

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

Pest Monitoring and Management

- Continue monitoring late-season soft fruits and berries for Spotted Wing Drosophila (SWD). If SWD are present, use an integrated and least toxic approach to manage the pests.
- Apply parasitic nematodes to moist soil beneath rhododendrons and azaleas that show root weevil damage (notched leaves).
- Bait for slugs with traps or iron phosphate products that are safe for use around pets.
- Monitor trailing berries for leaf and cane spot. Treat if necessary.
- As necessary, apply copper spray for peach and cherry trees.
- Spray for juniper twig blight, as necessary, after pruning away dead and infected twigs.
- Spray susceptible varieties of potatoes and tomatoes for early and late blight.

Houseplants and Indoor Gardening

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

It is hard to find a kind word for cockroaches. During those perilous nuclear war threats of the late 50’s and 60’s, roaches were widely expected to inherit the earth after the missiles were launched. It is a fact that cockroaches have been virtually unchanged for almost 300 million years. There is good evidence that our residential species evolved in primate nests. There are 3,500 known roach species. I know that is comforting! Fifty-seven are found in the U.S., with five being common and four of those found in the region.

Roaches can contaminate food and their saliva and shed body parts can cause intense allergic/asthmatic reactions in many people.

The cockroach is basically a scavenger of dead plant material. They prefer carbohydrates to protein. They are not picky. Glue, paper, and much of what appears in our waste stream are interesting if it is of organic origin. In addition to food, they need water and shelter. In fact, many of the species prefer, though don’t require, locations that are damp.

Cockroaches have distinctive egg cases, often rather large affairs. There will be from 15-40 eggs in each case, depending on species. The time it takes to go from egg to adult to egg varies widely, with the German cockroach (our most common species in Columbia County pictured above) capable of charging through the formative “years” in 55-60 days while the Oriental cockroach may take 300-800 days for the same process.

So how did you get cockroaches? That one isn’t hard. They love to crawl into beer and soft drink cartons and lay their eggs. They wander in from your neighbors. They come back from the hotel.

The better question is how do you get rid of them?

First, don’t provide them especially nice food, water, and a warm place to lay their heads. The first line of defense is intense sanitation. Once you have done what you can there, start trapping. There are some excellent sticky traps and a range of chemical treatments (often borax-based) to help you get rid of a problem. But remember, food and water first, then treatment!

I wanted to include something from Don Marquis, the author of the archy and mehitabel stories and books. archy is a cockroach who writes nightly on all manner of subjects:

“expression is the need of my soul
i was once a vers libre bard
but i died and my soul went to the
body of a cockroach
it has given me a new outlook on
life”

They are very funny stories, illustrated by George Herriman, creator of the Krazy Kat comic strip of the 1920’s.

there is always
something to be thankful
for you would not
think that a cockroach
had much ground
for optimism
but as the fishing season
opens up i grow
more and more
toeful at the thought
that nobody ever got
the notion of using
cockroaches for bait

One of archy’s maxims
**Farm and livestock notes**

**Processing Meat Animals at Home**

The cost and supply of food is concerning to many these days. Disruptions in the cattle, sheep, and swine markets, particularly in the slaughter-packer sector, have indeed threatened the availability of meat and put pressure on prices at the supermarket and at the livestock producer level. This has caused us to rethink the way we produce and process food. Some are considering backyard slaughter of livestock.

The OSU Extension Service livestock work group realized that they needed to provide information to people who want to process their own meat animals at home. Many important steps need to be taken prior to and after the actual slaughter of any meat animal. These are necessary for welfare, safety, and meat quality. In response to informational needs we have compiled a helpful website collection of resources for at home slaughter and fabrication (dividing of the carcass into cuts) of cattle, sheep, goats, poultry, rabbits and swine.

New materials will be added soon, including videos being produced by OSU on hog slaughter, fabrication and food preservation and safety. Visit the website at: https://extension.oregonstate.edu/animals-livestock/beef/processing-meat-animals-home

**Stock up on hay for winter**

Despite the late hay season, there is a lot of good July hay to be had. It is important to get the winter hay before your animals need it. The current winter weather forecast calls for cool and wet conditions. That generally means a lot more barn time and lot less time in the field, unless you are planning to sacrifice the pasture and re-

Hay is the base of a winter feeding program. A 1200# cow will consume ~2.5-3% of their body weight in dry weight of feed. Plan for 35-40 pounds of hay (90% dry weight) per cow per day plus a supplement of grain and soy meal if the protein content in the hay is low. More on that next month. I usually suggest planning on 5 months or ~150 days of full feeding, which would require 3 tons per cow (40#/day x 150 days = 6,000 pounds). An early winter or late spring can increase that time feeding and increase your need for hay. Feed requirements for sheep and goats are the same 2.5-3% by body weight. They just weigh a lot less.

Horses are a little different but you horse owners know that.

**There is a lot of tansy ragwort**

I got a lot of tansy calls this year. People were upset about some particularly noticeable sites adjacent to several major roads. There are a couple of things in play. First, tansy loves bare ground and most ground already has some tansy seeds there. Tansy seed is viable for 6-8 years and, if deeply buried and then uncovered, may live considerably longer. Second, we have established populations of the cinnabar moth whose caterpillars eat tansy flowers and leaves and the tansy flea beetle whose larvae eat the roots of tansy. But the cinnabar moth does poorly in cool, wet springs and that was the case this year. What caterpillars survived the spring weren’t seen until mid-July or later.

The flea beetle is very slow to recover in a pasture where it once destroyed all the tansy. From a low population, it can take seven years to
develop a big enough population to really impact tansy.

But rest assured, both will return! What can you do in the meantime? First, maintain the strongest pasture you can. There is nothing more important than that to control tansy. That involves thoughtful grazing to keep the grass stand vigorous. Herbicides that control broadleaf weeds in pastures without grass damage can be helpful if you are willing to use them.

Sheep and goats are considered quite resistant to the liver toxicity caused by tansy ragwort though they can pass the toxic alkaloid in their milk. In many parts of Oregon, sheep are used to reduce tansy ragwort in a controlled grazing and overall good pasture management system. Cattle and horses are very susceptible to the tansy alkaloid.

Hand-pulling and destroying flowering tansy will reduce seed spread but may cause the plant itself to live an extra year if enough roots remain.

On forest clearcuts, tansy will thrive until replanted Douglas firs take over. On industrial timberland, herbicides which control tansy are generally used before tree planting.

Finally, there are no Columbia County noxious weed ordinances. There were at one time, but they were taken off the books when they became too expensive to enforce. That said, good neighbors don’t spread tansy ragwort.

Building soil health for vegetables

Vegetable farming is demanding. Planting mostly small seeds, asking them to grow quickly, and keeping them safe from weeds, insects, slugs, and disease is a challenge. But good soils help a lot. Columbia County has basically two major soil groups. Land adjacent to the Columbia River has soil that has traveled down river from Canada and Montana, and all locations in between. These alluvial soils are excellent for all farming and are the best land in the county.

Our other major soil group are those soils that are the result of slow breakdown of the coast range rock with some areas of ancient ocean sediment thrown into the mix. Theses soils are clay rich, acidic and high in iron. The clay holds lots of minerals but can be tough to get dry enough for early spring planting in many years. Standard management tools include liming the ground to raise the “native” soil pH from ~5.6 to about 6.5. Other improvements might include tile drains and/or permanent wide raised bed to speed drainage.

But one wild card is the organic fraction in all soils. This is where biological life resides and plant beneficial fungi and bacteria thrive. The percent organic matter on soil tests give you some insights into the biological capacity. Within the percentage are three types of organic matter: very stable humus which holds minerals and creates soil aggregates that favor drainage and aeration; very active organic matter which is composed of the roots, shoots, leaves of plants and all the micro and macro-organisms that are breaking it down toward humus; and slowly converting to humus organic matter.

The last category has gone through the first high speed decomposition and is now slowly decomposing the more complex materials like lignins and other more stable plant compounds into humus.
There are chemical tests for these fractions but they are complicated and often unreliable. But there is fascinating test called the tea test. Buy some green tea teabags and some rooibos teabags. They should be from the same company so the bags themselves, but not the contents, are the same. The latter tea is from southern Africa and is known to be slow to decompose.

Green tea decomposes very quickly. Bury the tea bags at the same depth fairly close to each other (mark each with flags) for about a month. The soil must be moist or irrigated for this to work. September is a generally a good month but right now, non-irrigated soil is too dry. It might be worth trying it in late May through June. Dig the bags up and see how much each has decomposed. It is simple and quite revealing when compared with much more complex and expensive lab tests.

As you continue to build your soils with routine cover crops and the addition of other organic matter, you should start seeing positive changes in the ease of tilling, water holding capacity in the summer, and plant vigor. This has been crucial for organic and conventional farmers alike.

**Light, love, and day length**

The length of the day and night is very important in the natural world. Plants and animals have highly sophisticated systems for measuring both the change in day-length over time and the actual day length. Doing the right thing at the right season is crucial to survival.

Deciduous plants measure the decreasing day lengths and set in motion a process that causes them to lose their leaves and shut down for winter.

Most of our sheep breeds start to come into heat cycles 4-6 weeks after the longest day of the year (June 21). The cycles will continue until 4-6 weeks after the shortest day (December 21). The largest percentage of eggs are produced from mid-September to mid-October. This coincides with the fall flush of grass and can be somewhat manipulated by the sheep breeder who feeds the ewes well several weeks before turning the ram in. This is called “flushing”.

About five months after conception, ewes give birth. This breeding pattern ensures that lambs will be born in the spring and fatten on the new grass and their mama’s milk.

Chickens go into a funk in winter, molt, and forget about egg laying. You can keep them happy by providing one 40 watt bulb per 200 square feet of coop and keeping it on for 16 hours per day. A timer makes this easy. You must start now. As it will soon be colder, also start offering more feed.
There Might be an App for That!

Need to identify a pasture weed? Get soil survey info? Estimate protein & digestibility in forage… with a photo of cow poop?

It seems that long gone are the days of looking to the sky for a weather forecast… we just check the App on our cell phone! Instead of reading the how-to manual, we watch a YouTube video. And “for sale” or “wanted” ads are placed in Facebook Marketplace instead of the local newspaper. Maybe you’ve even listened to a podcast while driving your climate controlled tractor? In this ever-changing technology landscape, it seems that farmers can keep up with the best of them… Smartphone in hand!

According to most recent Farm Journal Media mobile research survey, nearly all farmers (94%) use a cell phone or tablet! That is an 80% increase since 2009, the first year the survey was conducted.

While we used to communicate across the fields by CB radio, we now can quickly send a text. No more graph paper and pencil for us… we can plan our crop layout online. And during this time of COVID, it seems that even plant and weed identification has gone digital! Extension clients can use a plant identification App and then ask us to verify it for them… all in color photos.

From precise irrigation capability, budgeting a seed purchase, or comparing prices on a tractor implement… it seems there’s an App for it! For reasons I can’t recall, I stumbled upon the “Cow Poop Analyzer” App in the Apple Store the other day. Once my laughter subsided, I read a bit about the functions of it and was quite impressed: using your Smartphone and a pile of cow poop, you can determine your forage quality!

Simply take a photo of a manure pile, then compare it to images in the App. This informs you of the crude protein and digestibility in the forage your cattle are consuming. You can even catalog the information by names, dates, and pasture locations, building a record of forage quality over time. In looking through the stock images, it is apparent that differences in color, texture, shape, height, craters and even folds in the um… cow patties, can help to determine important management issues such as:

- Supplementation, or the addition of protein and energy to the diet, is not required for mature cows. We’re Good!

- This forage should support 1-1.5 # ave. daily gain on heifers & steers. Nice!

- Forage quality is adequate to supply maintenance requirements but digestibility and intake may increase with protein supplementation. Good to Know!

This sounded pretty cool and I wanted to “try it out.” However, I haven’t raised cattle for a while, and so instead I spent a weekend playing with the App while scouting elk for archery season! But it seems that elk droppings don’t really compare to cow poop – even though they are both ruminant species. The results from the elk poop photo comparison gave this result, “Nutrient (protein & energy) availability exceeds the cattle’s requirements for growth, maintenance, or lactation.” I bet it does!

Or, it could be that I didn’t heed the disclaimer in the App that states, “Cows that have been running around or are stressed will have loose droppings. Don’t use those to judge forage quality.”

What Apps do YOU use around the farm these days?

~ By Sonia Reagan, reluctant technology user, but who wrote this article on a computer and who does enjoy the new grill on the deck, controlled by Wi-Fi, of course!
Announcing the annual SBWC Fall Native Plant Sale
Saturday, October 10th 2020 9am-3pm

The sale offers many native plants, at great prices, ready for your landscape! New this year, Pre-Order plants in advance!

If you Pre-Order, you will be able to pick up plants curbside on the day of the sale. Pre-Orders need to be received by Thursday, October 1. For details, see the Pre-Order form on the Native Plant Nursery website: http://www.scappoosebay-wc.org/native-plant-nursery/

Walk-ins are available on the day of the sale but will be limited to meet health guidelines. Face coverings are required. Staff and volunteer availability are limited this year, visit our website to find helpful links about Native Plants. Look for signs behind Scappoose HS - go east on SE High School Way and turn into the parking lot between the school and the school field areas.