November 3rd .............Columbia County Beekeepers event: Thursday, November 3rd at 6pm

the CCOB will host a hybrid meeting on zoom and in person at the OSU Extension Office. The topic will be winter clustering and how honeybees survive winter. Everyone is welcome. For information about joining by Zoom, please send them an email.

November 5th .............Nob Hill Nature Work Party: Saturday, November 5, from 9 am to noon and/or 1 to 4 pm. Scappoose Bay Watershed Council and Friends of Nob Hill Nature Park invite you to join our semi-annual volunteer work day on. Come help pull ivy and add native plants along the Fifth Street Right of Way trail and at Nob Hill Nature Park is an oak woodland overlooking the Columbia River. Dress for the weather, including rain gear if needed, which is likely. This work party takes place rain or shine. Please bring gloves, tools, water and snack items if possible; we’ll provide some water and snacks too.

Meet at the kiosk across from city’s water treatment plant at 451 Plymouth Street, in St Helens. All are welcome. Pre-registration is requested by Friday, November 4 by calling Scappoose Bay Watershed Council at 503-397-7904 or by emailing. (For day of event, call 503-349-8586. They look forward to seeing you!

November 15th ..........Chat with Chip: A roughly one-and-a-half hour interactive Zoom program on garden and related topics with Chip Bubl. Tuesday, October 18th from 6:30 – 8pm. You are invited to attend the monthly Zoom presentations, each third Tuesday. Reserve a place: https://beav.es/chat-with-chip
In the garden

The brown marmorated stink bug is back, maybe.

This was a late fall. It slowed the annual parade of insects looking for shelter in our homes. After a few years absence, the brown marmorated stink bug (BMSB) returned to house walls. Why they were gone is a bit of a mystery. The samurai wasp, which lays its eggs in stink bug eggs, probably plays a significant role. The wasp larva consumes the stink bug’s early stage larva. Then it exits what’s left of the stink bug egg as an adult wasp. Samurai wasp numbers have been steadily climbing to the applause of fruit and vegetable farmers everywhere. There are over 170 crops and plants BMSB feeds on.

One other possible cause was the heat dome in late June of 2021. That disrupted lots of insects and possibly hurt BMSBs. It is equally possible that it hurt the samurai wasp which explains for the stink bug return. We will see.

Climate change modeling indicates that the Brown Marmorated Stink Bug (which requires water and warmth) will be able to spread further within the United States. This will make them a pest on crops that previously didn’t have them.

How low will it go?

We have had some weather extremes in the last year and a half: the heat dome of 116 °F in June 2021, the three straight March months this spring followed by a hot summer with no rain from mid-June to late October. So how cold will it get? The average date for the first fall 28°F temperature in St. Helens and Scappoose is the end of November so we are about a month away.

But some winters have gotten much colder! What do the weather gods have in store for us this winter? Well, we have a La Nina weather pattern which generally produces above normal temperatures but can produce serious snow. December 2008 is a good example. But weather is so complex and we could have, if it all breaks bad, seriously cold patches.

Some areas in Columbia County experience colder “lows” than others. This is due to both elevation (generally the higher you were, the colder it is) and wind movement. Wind can mix warmer and colder air masses and tends to moderate low temperatures.

Plants start to harden off for winter in response to cooler temperatures and the shorter days of fall. Leaves export their nutrients down into the root system, trunk, and
branches. Leaf chlorophyll breaks down revealing some of the yellow to red pigments below. Cell layers form at the junction of the leaf and twig which then weaken, allowing the leaves to fall off the tree. Within the woody parts of the tree, cells accumulate sugars that act as cold-protecting antifreeze.

This cold acclimation process takes time. Some plants move through the cycle fairly quickly, others more slowly. If truly cold temperatures show up in December or January there is less potential for injury. However, if we get a very hard cold snap (~24°F or less) Warmish weather in January followed by cold weather in February, will hit plants that have started coming out of dormancy and damage can be immense. In January of 1991, we had temperatures in the high 60s but a week later, the “Arctic Express” hit with single digit readings. It wasn’t pretty.

The best ways to prevent winter injury are:

Buy reliably hardy plants and put them in the right environment. We are in hardiness zone 7-8. Know the zone adaptability of trees and shrubs you buy. The Sunset Garden Book is a good reference for hardiness information.

Keep plants watered if they are under eves or it has been dry.

Protect container plants in cold weather. Roots don’t acclimate to cold and are very vulnerable in containers. Consider bringing containers into a cool garage during extreme weather.

Mulch around plants.

Coverings or blankets may help in frosts but are less effective during sustained cold weather.

The magic of mulch

Real gardeners don’t have weeds. OK, maybe tufts of grass here and there, but they don’t send out a search party each spring for their tulips. And they spend their Saturdays gathering bouquets, not crouched in penance before the flower bed, weeding. Why is this? Real gardeners know about mulch. Mulch is any material spread on the soil to prevent weed germination. It works by preventing light, from reaching the soil surface.

Straw, newspaper, even wool can be used as mulch. But the most common materials are organic by-products from forestry (park products), agriculture (manures), and lumber operations (decomposed sawdust).

The word mulch conjures images of bark chips to most people, but chips, especially the large ones, are one of the least effective and most expensive mulches. Not only can the large chip size allow light to reach the ground more easily, but they also roll down slopes and float during heavy rains.

I prefer arbor mulch, which is a fancy name for the stuff you get from tree companies after it’s been through their chipper. It looks very natural in the landscape, and contains many different particle sizes. The smaller stuff filters down and covers the soil, while the larger pieces knit together in a mat, helping to stay put, especially on slopes. You can
also use compost, either homemade or purchased, and well-rotted animal manures.

**Mulch needs to be thick: at least 3 inches.**

**HOW MUCH MULCH TO ORDER?**

Here’s how to calculate how much mulch to order from a landscape supply yard. Find out the square footage of the area you need to cover, multiply it by 3 or more (this is how many inches thick you will spread it) and divide by 324. This will give you the number of cubic yards of material you should order.

Black plastic and the so-called “landscape fabric” are very effective mulches. Put them down and you won’t have any weeds. But I’d rather have weeds than either of these products in my yard because they create biologically inert soil. They are also a pain to deal with if you ever renovate your yard. Ever tried to rototill where that stuff has been used?

If your weeds are already thigh high, you can still mulch. What I do in this situation is pull all the weeds and leave them in place (dead weeds are mulch, too) Cover them with your chosen material. Instant gratification. Sure, some weeds will come up through, but not as many as you’d think.

One important tip to remember when you apply your thick layer of mulch is that you should keep it away from the crown of the plant (where stems meet roots). **For trees, it’s best to keep the stuff about a foot away from the trunk.** With newly planted plants, I keep the root ball from the nursery clear. If you don’t do this, you can lose plants to crown rot, because their crown will stay too wet. The finer the texture of your mulch, the more this can be a problem.

The first year after application you will still get some weeds coming through, from especially vigorous seeds that were underneath. Once they have germinated, however (and been dispatched), there will only be the weed seeds that land on top of the mulch.

**WHEN TO REPLACE MULCH**

In three to five years after your initial application, depending on your soil and mulch types, an organic material will break down and the decompose to the point where it will need to be reapplied. You’ll know when it’s time. Annual applications can be made for weed control.

The good news about organic mulches is that their decomposition enriches the soil, slowly amending it over time. All mulches also reduce soil compaction by buffering the soil from driving rain, and they help soil retain water by slowing run-off and reducing evaporation. So there are a lot of fringe benefits to this gardener’s secret.

*Edited from an article by Kate Anchordoguy, Landscape Contractor, in the San Francisco Chronicle.* Drawing of mulched tree from Maple Tree Commission and arbor chip mulch picture from WSU.
November garden hints

Oregon State University Extension Service encourages sustainable gardening practices. Preventive pest management is emphasized over reactive pest control. Identify and monitor problems before acting, and opt for the least toxic approach that will remedy the problem.

Recommendations in this calendar are not necessarily applicable to all areas of Oregon. For more information, contact the Columbia County Extension Office 503 397-3462

Planning
- Force spring bulbs for indoor blooms in December.

Maintenance and Clean Up
- Service lawn mower prior to winter.
- Check potatoes in storage and remove any going bad.
- Place a portable cold frame over rows of winter vegetables.
- Place mulch around berries for winter protection.
- Cover rhubarb and asparagus beds with composted manure and straw.
- Rake and compost leaves or use as mulch. Use mulches to prevent erosion and compaction from rain.
- Protect built-in sprinkler systems: Drain the system, insulate the valve mechanisms.
- Clean and oil lawnmower, other garden equipment and tools before storing for winter. Drain and store hoses carefully to avoid damage from freezing. Renew mulch around perennial flower beds after removing weeds.
- Protect tender evergreens from drying wind.
- Tie limbs of upright evergreens to prevent breakage by snow or ice.
- Trim chrysanthemums to 4 to 6 inches after they finish blooming.
- Leave ornamental grasses up in winter to provide winter texture in the landscape. Cut them back a few inches above the ground in early spring.
- Last chance to plant cover crops for soil building. You can also use a 3- to 4-inch layer of leaves, spread over the garden plot, to eliminate winter weeds, suppress early spring weeds and prevent soil compaction by rain.
- Watch for wet soil and drainage problems in yard during heavy rains. Tiling, ditching, and French drains are possible solutions. Consider rain gardens and bioswales as a long term solution.
- Take cuttings of rhododendrons and camellias for propagation; propagate begonias from leaf cutting
- Prune roses to "knee-high" to prevent winter wind damage.

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

Pest Monitoring and Management
- Monitor landscape plants for problems. Don’t treat unless a problem is identified.
- Rake and destroy leaves from fruit trees that were diseased this year. Remove and discard mummified fruit.
- Check firewood for insect infestations. Burn infested wood first and don’t store inside.
- Treat peaches 4 weeks after leaf fall spray for peach leaf curl and shothole diseases.
- Moss appearing in lawn may mean too much shade or poor drainage. Correct site conditions if moss is bothersome.
- Bait garden, flower beds for slugs during rainy periods. Use traps or new phosphate baits, which are pet-safe.

Houseplants and Indoor Gardening
Reduce fertilizer applications to houseplants.
The Natural Landscape

Weeds of the Month: Ornamental plants that escape and invade

Gardeners like to share showy plants that are easy to grow. But sadly, many of these plants are not good neighbors. They spread without much help and can be a real problem in natural areas and other locations. Here is a list of ornamental plants that have escaped in western Oregon. Most have been found feral in Columbia County.

Annuals and biennials

- Policeman’s helmet, jewelweed, or Himalayan balsam (*Impatiens glandulifera*)
- Shiny Geranium (*Geranium lucidum*)
- Garlic mustard (*Alliaria petiolata*)
- Herb Robert (Stinky Bob) *Geranium robertianum*
- Fennel (*Foeniculum vulgare*)

Herbaceous perennials

- Bishop’s weed (*Aegopodium podagraria*)
- Knapweeds (*Centurea sp.*)
- Knotweed species (*Fallopia sp.*)
- Giant hogweed (*Heracleum mantegazzianum*)
- Star of Bethlehem (*Ornithogalium arabicum*)
- Chinese lantern (*Physalis alkekengi*)
- Pokeweed (*Phytolacca americana*)
- Lesser celandine (*Ranunculus ficaria*)
- Italian arum (*Arum italicum*)
- Yellow flag iris (*Iris pseudocarua*)
- Yellow archangel (*Lamiastrum galeobdolon*)

Woody perennials

- Butterfly bush (*Buddleia davidii*)
- Purple loosestrife (*Lythrum salicaria*)
- Running bamboo (*Phyllostachys sp.*)
- English ivy (*Hedera helix*)
- English holly (*Ilex aquifolium*)
- Princess tree or Paulownia (*Paulownia tomentosa*)
- Chinese elm (*Ulmus parvifolia*)
- Old Man’s Beard (*Clematis vitalba*)
- Periwinkle groundcover (*Vinca major/minor*)
- Spurge laurel (*Daphne laureola*)

This list does not include many of the recent aquatic invasive plants (often pond and/or aquarium refugees) nor invasive ornamental grasses.

From my perspective, the worst (currently) are garlic mustard, shiny geranium, the knotweed complex, Italian arum, Lesser Celandine, Yellow flag iris, Spurge laurel, holly, and, the worst of the worst, English Ivy.

There is quite a bit of Old Man’s Beard (*Clematis vitalba*) in Rainier. There also is a lot of pokeweed in St. Helens, for reasons unknown.
Many of these species are spread by birds and/or garden debris tossed by people who don’t want to pay the transfer station for proper disposal.

If you see a lot of a plant growing in a wild or park setting that doesn’t seem to belong there, let either myself at the Extension office or Crystalyn at the Columbia Soil and Water Conservation District know about the infestation. Take pictures with your smart phone and send them to us. You are our eyes and we need your help.

**We know you were there**

**DNA identification technology** is moving rapidly forward. For the last 10 years or so, it has been possible to sample streams and then analyze the DNA fragments found in the sample to determine which species, at the time the sample was taken, were there.

Now, it is possible to use an air sample to identify the DNA of both plant and animal species found when the sample is taken. This is called eDNA with the “e’ signifying environmental fragments.

Data from both sample techniques can save months of physical observation and also focus efforts on understanding where some species seem absent and others are present but unexpectedly so.

What the sample protocols cannot do yet is to quantify the volume of the species in question. This would be especially valuable when looking for salmon populations in various locations or other endangered species. But just knowing they are or aren’t there at a given point in time is a good start.

**A puzzling visitation of tree frogs**

A number of residents had an abundance of 1-inch frogs show up about two weeks ago, right after the first real rain since mid-June. They were attracted to house lighting that brought insects that became frog meals. Frogs were all over the Extension office early in the morning of October 22nd when we had a Master Gardener training. They largely disappeared during the day but have reappeared in lesser numbers since then. I did have one report of an earlier outbreak in Warren during the last week of August. Any info you have would be interesting.

I am still trying to find out exactly what caused all this frog activity. It is possible that the long cool, wet spring may have extended breeding. Then, with the rough conditions of no rain and very warm temperatures from late June through almost all of October, frog adjustments may emerged. If they still had water, tadpoles could have delayed metamorphosis into a frog, which they can put off for 5 months. But in the end, they need insects to eat so they found locations that made that process as easy as possible.

The frogs are Pacific tree frogs and can be brown, green, or mixed brown and green colored. They can even change color from brown to green and back! These frogs are very beneficial and part of our natural landscape. More information on the Pacific Chorus Frog. Picture from ODFW.
Farm and livestock notes

Animals behaving badly

Farming is not an easy game. Prices and weather are unpredictable. The work is sometimes dangerous and always taxing. A good stock farmer looks to reduce risk where possible. Which gets us to livestock behaving badly.

Certain sets of behaviors are instinctive. For example, a male of any species is protective of its turf and harem and is particularly unpredictable during breeding season. Any time of the year, sudden environmental changes elicit fear and flight responses that can put a person at risk.

Farm animals develop behavior patterns in response to their handling. Calm handling and sensible corrals and working facilities reduce stress and anxiety for the animals and managers. A propensity to “cowboy” the livestock will only lead to more jumpy animals.

However, every herd manager has had experience with the animal that is always testing fences or responds to even the mildest handling with skittish behavior. Sadly, the rest of the herd often seems to follow. After many years of visiting with ranchers, it seems clear that it is appropriate to cull for such behavior. No matter how good a calf is produced, a jumpy cow will cause more grief than she is worth. Either through nature (genes) or nurture (bonding) her offspring are likely to be a bit off as well. So the cycle is perpetuated.

These animals need to be culled, the sooner the better for your health and for the health of those working the livestock.

Red maples + horses = trouble

There is good evidence that red maple (Acer rubrum) leaves are poisonous to horses and ponies if eaten during certain periods in the fall or when a branch is cut and the leaves wilt. Wilted or fallen leaves can cause a disorder that destroys hemoglobin in the blood. Don’t plant these trees near horse pastures and don’t graze animals where they are present. Our native big leaf maple does not pose these problems nor do most other cultivated maples species. Red maple trees are not native here but are widely planted around homes. Included in the suspect list are Acer rubrum hybrids.

Human absorption of pesticides

Tests show how different body parts absorb pesticides. Higher absorbency numbers indicate faster skin penetration.

<table>
<thead>
<tr>
<th>Body part</th>
<th>Absorbency</th>
<th>Time</th>
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<tbody>
<tr>
<td>Forearm</td>
<td>1.0</td>
<td>1 hr</td>
</tr>
<tr>
<td>Palm</td>
<td>1.3</td>
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<td>Abdomen</td>
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<td>Scalp</td>
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<td>Forehead</td>
<td>4.2</td>
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<td>Groin</td>
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Please follow all label instructions when using pesticides, either organic or conventional. Wear pesticide resistant gloves at all times when mixing and applying products and wear other protective gear as specified by the label.
**Remove insecticide ear tags in fall**

Insecticide resistance has reduced the effectiveness of fly control ear tags. One way to slow the development of resistance on your farm is to remove the tags in the winter. Fly problems decrease naturally in the winter. Keeping the tags on tends to increase the population of resistant flies. In addition, you can write down the name of the tag (and the active ingredient as well) so that next year you can buy a different chemistry in the tag.

**Cribbing horses**

Why horses like to eat their stall boards has been one of life’s little mysteries. It has been clear for some time that it has nothing to do with something lacking in their diet. Boredom seemed to be the best answer. However, new research indicates that horses, like humans, may respond to endorphins. We produce those opiate-like compounds when we exercise, eat chocolate, or engage in other varied activities. Diets high in proteins and sweetened grains may cause some horses to produce more (or respond more) to endorphins. Then with their head full of these compounds, they do silly things like chew their stalls. Obviously, this may be easier to talk about than to prevent.

**Gentle starts at birth**

Animals imprint on whatever they see immediately after birth, as long as it moves. Usually this is the mother, though there are often comic situations where ducklings imprint on dogs, chicks with cats, and the like. The stock raiser can use this to their advantage. Clear evidence shows that if there is human/newborn contact, the animal will be much more responsive to humans as it grows up. This early contact will not damage the cow, ewe, or mare’s mothering instinct or the offspring’s bonding to them. Rather, it simply adds the human into the mix of objects that are important to that young animal.

Proper imprint training is not just being there visually but handling the animal with slow, repeated motions. The process consists of three per day one-hour sessions, repeated the first three days of the animal’s life. This is said to desensitize the animal to the handling it will later receive. Horse owners/trainers are especially interested in imprinting.

**Ground that fence**

There have been a bunch of electric fences installed in the last few years. The charge from the fence is certainly a deterrent to your stock or a predator. However, to maintain the impact, the system must be well grounded.

When your stock test the fence, the electricity travels through them into the soil and from the soil through the ground rod and back to the charger. The circuit is then completed and the animal gets the wake-up call.

In western Oregon, it is not difficult to complete that circuit when the ground is wet. The dry soils of summer are a much different story. While one ground rod may have been sufficient to complete the circuit in the winter, three may be necessary in the summer.

Therefore, a good installation should have at least three galvanized ground rods pounded six feet in the ground and separated by at least ten feet. If you have a location that stays somewhat moist, so much the better. Use clamps to attach the ground wires to the rods.
Publications from OSU Extension that might be of interest

_Gardening with Oregon Native Plants West of the Cascades:_

Growing a garden in western Oregon is easier when you include native plants. That’s because native plants are adapted to our wet winters and dry summers. Native plants also provide benefits to native pollinators and other wildlife. Learn where to find native plants for your garden, how to care for them and which plants are best for pots and small gardens. This publication also includes an illustrated list of Pacific Northwest native plants that are easy to establish and grow.

_A Horse Owner’s Guide to Pasture-associated Laminitis:_

The key to preventing laminitis in your horses is to regulate their time grazing on grass high in nonstructural carbohydrates. Inadequate exercise is another cause of this painful hoof condition.

_A Guide to Riparian Tree and Shrub Planting in the Willamette Valley: Steps to Success:_

A step-by-step guide to riparian tree and shrub planting in the Willamette Valley. Provides information on project planning, plant materials, site preparation, planting techniques, site maintenance, and monitoring and evaluation. Intended to help landowners, watershed council members, agency personnel, and others communicate about, plan, and implement woodland plantings near streams and rivers.

_What Can I Do with My Small Farm? Selecting an Enterprise for Small Acreages:_

Covers the many factors involved in making decisions related to the use of small-farm property. Discusses the small farm as a hobby, an agricultural tax deferral, and a family income. Explains how to match crop choices to the farm's physical resources, such as soil type, irrigation potential, and climate, and how to choose a production technique, select traditional or specialty crops, and market crops. Emphasizes the importance of considering the family's financial resources, credit options, strengths, and goals. Includes lists of additional resources.