March 2019

Programs for you . . .

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

March 5 .......... Scappoose Bay Watershed Council 6:30 p.m. 57420 Old Portland Road, Warren.
March 7 .......... Master Gardener™ Board Meeting 10:30 a.m. OSU Extension Sm. Conf. Room, St. Helens.
March 7 .......... Field to Market Workshop 9 a.m.-1 p.m. $25, details & to register: http://bit.ly/2019FTM
March 9 .......... CCSWA 21st Annual Tree Seedling Sale 8:30 a.m. Pacific Pride, Hwy 30, St. Helens.
March 12 ....... Lower Columbia River Watershed Council 7:00 p.m. Clatskanie PUD, 495 Hwy 30.
March 20 ...... Beekeeping Workshop 6:00 p.m. “The Spring Build Up” What’s happening in the hives during Springtime here in Oregon? Workshop led by Linda Zahl at the OSU Extension Service.
March 25 ...... Farm Bureau Meeting 6:30 p.m. Extension Service, Small Conference Room.
March 28 ...... Master Gardener™ Chapter Mtg 6:30 p.m. Author Donald Olson shares his presentation on “Five Remarkable Women and Their Four Remarkable PNW Gardens!” Public Welcome!
March 28 ...... Upper Nehalem Watershed Council 5:30 p.m. at the Vernonia Grange, 425 North Street Oregon Wild is presenting a talk on the Oregon Forest Practices Act.
April 6 .......... Caring for Your Large Pond 8:30-4pm $30 Sauvie Island Grange - see back page for details
April 13 .......... Spring Native Plant Sale, SBWC Nursery Behind Scappoose High School, 9 a.m.-3 p.m.
April 27 .......... 24th Annual Master Gardener Spring Fair & Plant Sale St. Helens High School 9a.m.-3p.m.

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.
Gardening starts in earnest

This is the month for **dormant sprays**. Almost all our fruit trees and berries can benefit from these sprays. **Sulfur** and/or the copper products are the most helpful. Both these compounds have “organic” label formulations. These products are not cure-alls. Trees and berries may well show disease symptoms, even with the most persistent spray program. But it is worth doing. Young trees are especially vulnerable. You shouldn’t spray trees when it is freezing and ideally, there will be 24 hours of drying weather after you spray to more completely stick the spray to the stems and buds.

If you have **Marion, Logan, or Boysen berries** that didn’t get pruned last fall, this is the time to get that project done. You should do it before you spray for leaf and cane spot with lime sulfur. These berries are not very complicated. Remove the canes that bore fruit last year (they look fairly dead now) and train the new canes that came up last year onto the wire.

**Lichens and moss** on trees and shrubs concern gardeners. There are several things to know about these interesting plants. First, they are not parasites. They attach to trees and shrubs but take nothing from them. Second, their volume does build up over time. It generally takes about 3-5 years for new growth to get its first lichen or moss colonies. Very slow growing trees may look like they are being inundated with lichens but that is because they either aren’t vigorous by nature or need rejuvenation pruning to force more growth. They tend to be more abundant in shady or moist locations. Trees that are shading themselves because they are overgrown are good candidates lichen growth and also good candidates for pruning to improve air circulation. Third, lots of species make use of lichens. One local hummingbird covers the outer surface of its nest with lichen “shingles” to keep it a bit drier. Finally, lichens and moss will be removed, albeit slowly, from trees and shrubs when you use dormant sulfur or copper sprays. You can also pull off moss and lichens without damaging the plant.

**Rose pruning** is generally done toward the end of February to avoid any damage from a late winter cold snap. Roses can also be sprayed with the dormant sprays mentioned above.

Our two perennial vegetables, **rhubarb and asparagus**, can be fertilized now. If you have access to manure, it can be top-dressed over the plants. Two to three inches ought to be good. If you want to use a natural product but don’t know someone with livestock, consider using bloodmeal or alfalfa meal. Conventional fertilizers will also give these plants a boost and are much cheaper to purchase.

This is the right time to be **starting “cool season” vegetables** from seed. That said, it is not the time to be transplanting them out into the garden unless you are prepared to keep them protected when we get our cold snaps. Starting vegetables inside is a little bit challenging. Light intensity inside houses is generally not good enough to do more than get them germinated. Then the low light intensity causes them to become spindly and of generally poor quality to transplant. After germination, they need either artificial lighting or a plan to take the trays outside during the day and bring them back inside in the evening. I have found that slugs, chickadees, towhees, and chipmunks like young spring greens as well so the trays may need some protection when they are outside.

**Garden soil preparation starts with lime.** Our soils are acid. Hill soils are more acid than those along the river, except in Clatskanie where there are peat-based soils that are quite acid. It is important to lime your garden every three or four
years. A soil test, which costs about $40 from a private lab, will tell you the soil pH (the measure of soil acidity) and the lime buffering capacity of your soil (how much lime is needed to raise the pH a certain amount). But without a test and assuming you haven’t been putting wood ashes on the garden, you can safely apply 80-100 pounds of lime per 1000 square feet of garden once every 3-4 years.

Lime does several things. First, it supplies calcium that plants need for normal growth. Second, it raises the soil pH. As the soil pH goes up, important minerals in the soil (like magnesium, phosphorus, potassium, and boron) become more available to the plant. Third, lime tends to increase the biological life of the soil, speeding composting and nutrient turnover. Finally, there are several minerals that actually hurt plant growth, especially aluminum. We have a fair amount of aluminum in our hill soils. When you lime, these minerals are tied up and not free in the soil to affect plant roots. So liming is a good thing and it can be applied to the surface now and worked in later. But don’t put lime around acid loving plants like blueberries and rhododendrons.

Berries in containers

Can (and should) berries be grown in containers? Raspberries do well in containers that are 15 gallons or more in size. They will be less prone to root rot than those grown in the soil here. Careful attention to summer watering is important and movement to new ground each fall prevents rooting in soil directly, lowering the disease risk. It isn’t clear how much heat transferred from the sides of the containers the plants can take, but anecdotal information indicates they are pretty tough if kept watered. Besides the plants, the biggest cost would be the pots and the container potting mix in them. It seems (and is) expensive but if you love raspberries and have lost planting after planting, it might be worth it. Commercial compost combined with wood chips that have weathered for several years, may be able to substitute for some of the container potting mix. Annual fertilizing is needed with all potting soil types but costs are modest.

All of the above works for blueberries except that they need a bit more acidic soil and total attention to summer watering. But with blueberries, the question is why containers? They grow so well in our soils, it doesn’t make much sense. But if you are on a small lot and have a patio that you would like to populate with edible plants, it might just make perfect sense.

Speaking of fertilizing berries, the general recommendation for established raspberries and blackberry type varieties are 3 to 4 cups per 100 square feet of a 10-20-10 type fertilizer by late March or early April. Blueberries are best given a mixed fertilizer like 10-20-10 at about an eighth of a cup for young plants and ¾ of a cup for mature plants. For blueberries, follow this with a mid-May and mid-June application of ¼ cup of ammonium sulfate (21-0-0) to provide more nitrogen and help acidify the soil. Water in the later applications.
Adding heat to vegetables

Mild temperatures and moderate rainfall are in some forecasts so this gives us hope that this might be a good spring for vegetable growing.

Soils aren’t dry enough to till yet. To know if your soil is ready, dig some and form it into a ball. If it remains crumbly when squeezed, it is ready. If not, wait. Otherwise you can create almost unbreakable clods.

After you till, cover the soil with black plastic until you are ready to plant. That keeps soil moisture manageable and will stop weed growth, at least for a while. Several days before you want to plant, switch to clear plastic. The soil will rapidly warm up to the time you remove the plastic to plant or transplant. This speeds seed germination and produces more vigorous transplanted vegetables.

Cover fine seeded vegetable seed like the carrots with either row covers or potting soil to prevent soil crusting. Clay soils, which most of us have, form crusts after tilling. Small seeds die before they can break through. Potting soil doesn’t crust and row covers slow or stop crusting.

Don’t get too excited about planting corn, beans, or squash. They need to wait until the weather is more reliably warm. But onions, cabbage family transplants, lettuce (with some protection), potatoes (also with protection), and peas can all go in the ground now. Again, using clear plastic before transplanting or seeding combined with row cover afterwards will really improve plant growth.

Transplants are a great way to get the vegetable garden producing earlier. You get the benefit of 4-5 weeks plus in a greenhouse or cold frame. The plants imagine that they are starting their lives in Georgia! They need to be hardened off before they are transplanted into their cooler Oregon landscape.

Cutting “seed” potatoes

As all gardeners know, potatoes are clones, planted from tubers or pieces of tubers grown and stored from the year before. “Seed” potatoes that are larger than eggs are generally cut into egg-sized pieces before planting. This saves on the seed needed since one large potato could easily provide four seed pieces.

The process of cutting and curing the cut seed is important. First, never use a potato with any signs of disease, either cut or uncut. Second, after cutting, let the potatoes cure in a paper bag at 50-65 degrees for 4-6 days (gently shake the potatoes at day two) to develop the “corky” surface that will help protect the seed from disease once it is planted. Third, consider dusting the seed pieces with sulfur at planting to further reduce disease concerns and to help protect the plant from potato scab. Finally, plant as soon as the potential for a 28-degree frost is over (usually about the third week in March but no guarantees). Cover with row covers if a frost is imminent.
MARCH

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

Maintenance and Clean Up
- Lawn mowing: set blade at ¾ - 1” for bentgrass lawns; 1.5 to 2.5” for bluegrasses, fine fescues, and ryegrasses.
- Compost grass clippings and yard waste, except for clippings from lawns where weed-and-feed products or herbicides (weed killers) have been used.
- Spread compost over garden and landscape areas.
- Prune gooseberries and currants; fertilize with manure or a complete fertilizer.
- Fertilize evergreen shrubs & trees, only if needed. If established & healthy, their nutrient needs should be minimal.
- If needed, fertilize rhododendrons, camellias, azaleas with acid-type fertilizer. If established and healthy, their nutrient needs should be minimal.
- Western Oregon: Prune spring-flowering shrubs after blossoms fade; Fertilize caneberries (broadcast or band a complete fertilizer or manure).

Planting/Propagation
- Divide hosta, daylilies, and mums.
- Use stored scion wood to graft fruit and ornamental trees.
- Plant insectary plants (e.g. Alyssum, Phacelia, coriander, candytuft, sunflower, yarrow, dill) to attract beneficial insects to the garden. See PNW550 (Encouraging Beneficial Insects in Your Garden) for more information.
- If soil is dry enough, prepare vegetable garden and plant early cool-season crops (carrots, beets, broccoli, leeks, parsley, chives, rhubarb, peas, radish). Plant onions outdoors as soon as the soil is dry enough to work. Plant berry crops (strawberries, raspberries, blueberries, blackberries, currants, gooseberries, and other berry-producing crop plants). See OSU Extension publications for varieties.

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

Houseplants and Indoor Gardening
- Trim or shear heather when bloom period is finished.
- Start tuberous begonias indoors.
- Take geraniums, begonias, and fuchsias from storage. Water and fertilize. Cut back if necessary. Move outdoors next month.
Free Gardening Workshops - March 16-17, 2019
Cowlitz County Expo Center – Fairgrounds

In conjunction with the Home and Garden Show

Workshops sponsored by WSU Extension and WSU Cowlitz County Master Gardeners

3/16: 9:30 a.m.  Growing Vegetables, where to start! - WSU Master Gardener Billie Bevers
What to do in your vegetable garden to plan and prepare it for planting: when to plant, how to start get an early start and what to takes to maintain healthy plants to get a great harvest.

3/16: 11:00 a.m.  Extending the Gardening Season - WSU Master Gardener Helen Redmond
Harvesting your garden, extending the growing season: seed saving, cover crops, & winter gardening. Learn how to continue raising vegetables throughout the fall.

3/16: 12:00 p.m.  Spice of Life (Growing Herbs) - WSU Master Gardener Terrie Phillips
How to plant, grow and harvest the most popular herbs that you can enjoy fresh from your own garden. Post harvest: preserving, storage and easy usage of these flavorful plants.

3/16: 1:00 p.m.  How to Grow a Red Tomato - WSU Master Gardener Alice Slusher
Tips to produce a bountiful crop of red tomatoes: how to get your tomatoes off to get an early start and what it takes to produce a great harvest of tomatoes.

3/16: 2:00 p.m.  Attracting Beneficial Insects with Plants - WSU Master Gardener Alice Slusher
How to attract beneficial insects to the garden: incorporating specific native plants into the landscape, encouraging helpful insects and birds to visit.

3/17: 11:00 a.m.  Tips to control moles - WSU Master Gardener Bryan Iverson
Effective techniques for getting rid of moles: what works and what products fail to get results

3/17: 12:00 p.m.  Do-it-Yourself “Irrigation” - WSU Master Gardener Jerry Winchell
How to construct a simple and inexpensive sprinkler system that can be used for your vegetable garden, hanging baskets, porch plants and for other situations.

3/17: 1:00 p.m.  Basics of Composting - WSU Master Gardener Tom Welch
How to effectively compost food wastes and garden material: different ways to compost and the advantages of each method, how to prepare your garden for next year without spraying or tilling.

Reasonable accommodations will be made for persons with disabilities and special needs who contact the office at least two weeks prior to the event. Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office. Persons with disabilities who require alternative means for communication or program information or reasonable accommodation need to contact Gary Fredricks at 360-577-3014 Ext.3 or garyf@wsu.edu at least two weeks prior to the event.
Native plants of the month: Willows—pollinators love them, so do beaver!

Willows are thick in this river bottom country. There are at least 8 species found along the Columbia. Most are basically large shrubs but some can become medium-sized trees in the right setting. Most readily form multiple trunks though a few can grow tall single trunks. Some species have key characteristics which seem to blend into others, driving taxonomists crazy and leading to some confusing botanical keys.

But this much we know: Willows are deciduous. They propagate by seed or plant pieces that readily root on moist, sunny soil. They are a primary colonizer along sunny river banks. A few species can grow in some shade but most willows won’t do well there. The species found in Columbia County include Salix fluviatilis, S. hookeriana, S. lasiandra, S. piperi, S. rigida, S. scouleriana, S. sessilifolia, and S. sitchensis. For more information on identification and pollination timing, I highly recommend A Field Guide to Common Wetland Plants of Western Washington and Northwest Oregon by the Seattle Audubon Society, with Sarah Spear Cooke as the editor. The picture of the Hooker willow is from that book.

Non-native ornamental species (mainly Salix alba and cultivars) have been introduced from Europe, Asia, and the eastern U.S. but only a few have become a concern and none of those have much of a presence in native landscapes in Columbia County yet.

Willows provide pollinators their first real feast in the spring. They have monecious flowers, which means that they bear separate male and female flowers on the same plant. The male catkins which shed pollen, usually swell and open first. Often they are quite “furry” prior to opening. The term “pussy-willows” refers to these unopened male flowers. After opening, there is an big display of stamens with pollen. The female flowers aren’t always furry, though they may be, but are generally larger than the male flowers. Our various willow species can potentially produce pollen and modest nectar from late February through July as the different species cycle into bloom.

Willow leaves are abundant browse for a number of butterfly and moth caterpillars as well as deer and domestic livestock. Beaver love young willow shoots but rarely does their browsing kill the clump since willows regenerate new shoots so well from latent buds.

Native American populations make extensive use of willows as a medicine, especially for the salicylic acid (aka aspirin) it contains. Additional uses include inner bark for rope and the stems and wood for basketry, fishing lures, and many other products.

Plant propagators have, for hundreds of years, known the virtues of willows as an aid to propagating plants from cuttings. Willows themselves root easily from cuttings. Just cut some willow branches an inch or so thick from last year’s growth, stick them in the ground (right end up) with only the top third showing, and watch them grow. Restoration projects use “willow bundles” to stabilize stream banks.

The following is an excerpt from an article written by a Master Gardener in Coos County who talks about willows as a natural way to assist the rooting of plant cuttings:

There’s an easy way to put willows to work as we propagate and start young plants.

The Science: There are two hormones found within all varieties of willows that help with plant propagation. Indolebutyric acid (IBA),
present in high concentrations in the growth tips of willow branches, is a root growth stimulant. Salicylic acid (SA) triggers a plant’s internal resistance response that helps defend against bacteria, fungus and viral disease.

By using the actively growing parts of a willow branch, cutting them, and soaking them in water, significant quantities of IBA and SA will leach out into the water. Then this tonic can be used to give cuttings, starts and seedlings a strong start on life.

The Recipe: Collect about 2 cups of willow branches, choosing young branches no thicker than a pencil - Remove all the leaves - Cut the twigs into pieces 3 – 6” in length and place in a heat tolerant vessel - Boil 1 gallon of water and pour it over the willow trimmings - Let the brew steep for 12-24 hours - Pour the steeped liquid into glass containers with tight closing lids and discard the willow pieces - The tonic can be used immediately. Store unused quantity in the refrigerator for up to two months.

To Use: Soak the bottom tips of cuttings in the willow brew for several hours before planting, giving them a chance to take up the hormones. Then plant the cuttings as you normally would. Willow water can also be used to water propagating medium after planting. Watering planted cuttings twice with the tonic should be enough to give them a strong rooting start.

Add about ½ cup of the willow rooting brew to 1 gallon of water and use the mixture to water young seedlings during the first few weeks of growth. Read her full article for more information: Rooting Tonic, By Judy Jackson [https://extension.oregonstate.edu/gardening/techniques/how-make-rooting-tonic](https://extension.oregonstate.edu/gardening/techniques/how-make-rooting-tonic)

**Deer repellants**

This is the time of year when the nutritional needs of our female blacktail deer are at their highest. They are in the last third of their gestation where the fawn puts on most of its growth. Once the fawns are born, the does need a high quality diet to produce enough milk to support their babies. It is not a coincidence that the fawns are born when new grass is starting to grow and woody plant leaves and buds are at their nutritional peak of protein and digestibility. Gardeners go to a lot of effort to protect their woody plants from browsing deer. Fences offer complete protection but are expensive and can be visually quite intrusive.

Which gets us to repellents. There are many commercial mixes with a variety of ingredients. The most effective seem to be the “rotten” formulations. These are generally protein-based fermented products. The most famous is Big Game Repellent (BGR) which is sold to homeowners as Deer Away and other products. The active ingredient is rotten eggs (they actually don’t smell that badly). Another is a fermented bloodmeal product called Plantskydd.

I have experience with both and have found both effective if used early and often. Other products worth a trial include Bobbex and Deer Fence.

In a pinch, sour milk, an egg or two, and some water can work as well. Any experience (works or doesn’t work) you have with repellents would be very useful. Email me with your methods and results: Chip.Bubl@oregonstate.edu.
Whether your pond or a pond on property you manage is for irrigation or fire suppression, whether it’s neglected and weedy or a meticulously landscaped amenity to your property, you’ll find lots of important information packed into this one-day workshop.

The workshop will be most relevant to landowners/land managers with existing sizable ponds or small lakes. (Small decorative ponds in urban gardens are a topic for another day and the focus of this workshop will be on enhancing existing ponds, not building new ones.)

Topics will include:
• Vegetation control
• Mosquito control
• Sedimentation
• Water quality
• Creating habitat
• Attracting songbirds, turtles and other wildlife

Part of the day will be spent walking around a pond, so wear appropriate footwear.

Registration:
A $30 registration fee will include coffee, snacks and lunch. Pre-registration is required by Wednesday, April 3 at www.wmswcd.org/event/caring-for-your-large-pond/

Some scholarships are available.

More Information:
For more information email pondsworkshop@gmail.com.

Sponsored by:
Farm and livestock notes

Grass tetany, spring grass, & fertilizer

Grass tetany is a metabolic disorder of sheep, cattle, and sometimes goats. The root cause is a lack of magnesium in lush spring grass. It is a serious disorder that can lead to livestock death if not caught and treated very promptly.

It has been known for some time that nitrogen and/or potassium fertilizers applied in the early spring can aggravate grass tetany on grazed pastures. Too much potassium (K) can interfere with the uptake of the relatively low amounts of magnesium already present in the soils. Applications of nitrogen can push the growth of the grass while at the same time diluting the amount of magnesium present in the grass leaves. There are good reasons to apply nitrogen to improve forage productivity. But supplemental magnesium needs to be readily available to all the animals, either in the form of mol-mag blocks and/or magnesium oxide in salt or other mixtures. Talk to your veterinarian about the right approach for your farm. For more information about grass tetany, visit: ag.ndsu.edu/publications/livestock/grass-tetany

Cold winters make larger calves

There is a fair amount of literature indicating that colder winters tend to produce larger calves in spring-calving herds. In fact, the relationship show that there is a one pound increase for every one degree decrease in average winter temperatures from the long-term winter months averages. It might be worth calculating the average for your area and compare it with the monthly averages.

Where this could make a difference are with the first calf heifers. They are generally structurally smaller than they will ultimately be which can lead to calving complications. Larger cows that may be a bit short on condition at this time may fatigue more quickly at calving. Both may require assistance and the earlier that assistance is given when it is clearly needed, the better the outcome for both the calf and the cow.

What is the right weight for lambs?

Lambs generally dress out at 50% of their live weight. An optimal size is the size your market wants and generally, one that, for your herd, is the point where the right amount of fat “cover” is present but not into the weights where additional feed is being turned into more fat than muscle. For many of the traditional small to medium sized breeds, that is between 90-110 pounds live weight. For bigger framed lambs, especially Suffolks, that optimal live weight could be as high as 130-140 pounds.

Why is this important? At a certain point in the lamb’s growth and development, more feed is going proportionally to fat and to muscle growth. With additional feed being converted by the lamb into excess fat, someone will have to remove much of it when the carcass is broken down into the various primal of finished cuts. That can be expensive and will often lower the live weight price paid per pound significantly. The overly fat lamb may provide the consumer with a less optimal experience when cooking and eating it. That may dampen their enthusiasm for lamb. In addition, if you purchased extra feed for those extra “fatty” pounds, the math gets even worse.

Some of the most competitive lamb exporters in the world are Australia and New Zealand. Australian lamb carcasses average 39-52 pounds and those from New Zealand 35-44 pounds. Most are completely grass-finished. They know what they are doing. As a side note, one study some ten or so years back indicated that it cost less to ship a lamb carcass from New Zealand to San Francisco by ship than one from Oregon to San Francisco by truck. The energy costs of ship transport are very favorable.
Local food premiums

There is a lot of talk about local foods and the demand for them is increasing, both in Oregon and in many other states. In surveys, consumers have stated an interest in supporting local farms, perceived local food quality, and local farm production practices as motivating their purchasing choices. For the farm, the bottom line is critical. Will these consumers pay a premium for locally produced food and, if so, to what extent?

A number of surveys asked hypothetical questions to consumers. Respondents generally indicated willingness to pay premiums of 9-50% over products with no local labeling. A recent survey from Cornell looked at this question more directly. They surveyed prices at various locations around the country for specific products. They also tried to tease out differences between pricing for “local” and “organic” labeling. The results show a fairly consistent premium for local and a generally higher one for organic. The Cornell researchers acknowledged that other factors were very important in the pricing, especially sale location type (farmers markets, natural food stores, and conventional supermarkets). That detailed data is not yet available.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>% LOCAL PREMIUM</th>
<th>% ORGANIC PREMIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2% milk</td>
<td>16%</td>
<td>83%</td>
</tr>
<tr>
<td>Blueberries</td>
<td>9%</td>
<td>28%</td>
</tr>
<tr>
<td>Spring greens mix</td>
<td>21%</td>
<td>13%</td>
</tr>
<tr>
<td>Ground beef</td>
<td>21%</td>
<td>43%</td>
</tr>
<tr>
<td>Apples</td>
<td>none</td>
<td>18%</td>
</tr>
</tbody>
</table>

Food safety & farm direct marketing

It is impossible to overemphasize the importance of following good food handling protocols and keeping detailed records of your direct market crops. If there is a food-borne illness problem, attorneys for the injured parties look for negligence, which translates into whether you can prove you were following industry production standards and have the records to back that up. If your misconduct caused harm, you will lose any lawsuit. You need to know what could go wrong, invest in the right equipment, and train and monitor staff in the right handling processes to ensure your food is as safe as possible. A plan on paper that is not implemented will not save you from liability. It is interesting that, nationally, food borne illnesses have often originated from farms with a history of rule violations. For more information, call us at the Extension office. We can help you think through your food safety procedures.

A peek into the future of grazing

Cow “families” will be selected that produce high butterfat milk, thus converting the grass into a higher energy source for their calves for pumped up early gains. Pastures may be planted with a mix of broadleaves (chicory, salad burnet, true dandelion, clovers, lotus or trefoil, and others) and grasses for maximal productivity. The focus will still be on grass (“grass is king”) however, with newer, more palatable varieties of tall fescue and other species gaining traction on hill pastures.

The grass crown matters. Roots and tillers are built from enough leaf area left at various points throughout the year to capture sun energy to produce structural carbohydrates. The following chart below details fat lamb gain (ADG = average daily gain) on pastures of various grass heights:

<table>
<thead>
<tr>
<th>Grass height</th>
<th>Hours grazing</th>
<th>ADG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 inches</td>
<td>11 hours</td>
<td>&lt;.2#/day</td>
</tr>
<tr>
<td>2.5 inches</td>
<td>9.5 hours</td>
<td>.4#/day</td>
</tr>
<tr>
<td>3.5 inches</td>
<td>8 hours</td>
<td>.6#/day</td>
</tr>
</tbody>
</table>
Columbia County Small Woodlands Assoc. 21st Annual Seedling Sale - Sat. March 9th 2019
Pacific Pride (Lawrence Oil) Parking Lot, Hwy 30, St. Helens 8:30 a.m. – 1:30 p.m.  Come Early!
-----------------------------------------------------------------------------------------------------------------------------

Caring for Your Large Pond (and the Wildlife That Use It!) Workshop - Sat. April 6th 2019
Sauvie Island Grange 8:30 a.m. - 3:45 p.m.  wmswcd.org/event/caring-for-your-large-pond/
Whether your pond is for irrigation or fire suppression, whether it’s neglected and weedy or meticulously landscaped, you’ll find lots of important information packed into this one-day workshop. Topics will include: Vegetation control, mosquito control, sedimentation, water quality, creating habitat, attracting songbirds, turtles & other wildlife. Part of the day will be spent walking around a pond, so wear appropriate footwear. $30 registration fee includes coffee, snacks, and lunch. Pre-registration is required by April 3rd. Scholarships are available: contact pondworkshops@gmail.com with any questions and/or to request a scholarship.

Oregon State University Extension Service offers educational programs, activities, and materials without discrimination based on age, color, disability, gender identity or expression, genetic information, marital status, national origin, race, religion, sex, sexual orientation, or veteran’s status. Oregon State University Extension Service is an Equal Opportunity Employer.  OSU Extension programs will provide reasonable accommodation to persons with physical or mental disabilities. Contact the Columbia County Extension office at 503.397.3462 to request reasonable accommodation. This publication will be made available in accessible formats upon request. Please call for information.