



# Country Living

Provided to you by the  
OSU Extension Service Columbia County  
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Office hours: Closed until further notice

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

## July 2020

## 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](#) July 2<sup>nd</sup> at 6pm. Guest Speaker Dr. Dewey Caron;  
Email for login information: [LindaZahl2@gmail.com](mailto:LindaZahl2@gmail.com)

**OSU Tree School is Now Online!** Tree School Online is a free 15-week webinar series that will include many of the classes that were set for Tree School Clackamas, along with some new classes developed exclusively for Tree School Online. Register for the free classes and view past webinars here: <https://extension.oregonstate.edu/tree-school/tree-school-online-class-guide>

### Local Columbia County Farmers Markets:

- [Clatskanie](#) Farmers Market: Saturdays 10am-2pm
- [Scappoose](#) Farmers Market: Saturdays 9am-2pm
- [St. Helens](#) Farmers Market: Saturdays 9am-2pm
- [Vernonia](#) Open Air Market: Saturdays 10am-2pm

### OSU Resources & Publications:

<https://catalog.extension.oregonstate.edu/>



**Oregon State University**  
Extension Service  
Columbia County

*Chip Bubl*

Chip Bubl, OSU Extension Faculty, Agriculture

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

## In the garden

### Sonia's tips for growing asparagus from seed

This year is the 3rd time I've started a new asparagus patch from seed and I'll share my tips with you!

I find that contrary to popular belief, asparagus planted from seed can be lightly harvested sooner than planting started "crowns." (I've done both.) Often in year 2, you can lightly harvest the robust spears that are bigger than a pencil. I take care now to only plant male seed (such as a *Jersey* type, i.e. from Territorial), and plant it indoors in 72-cell trays on heat mats under grow lights.

They are very slow to germinate, and about 6 weeks later I can plant them into 3" pots in the greenhouse. Then in late spring, I plant them in very deep holes in a new bed (a raised bed, see below), enriched with compost, bunny poop and slow release fertilizer, and fill in the holes as they grow. I have a bed that has produced for 9 years, grown from seed, that is just now starting to slow down (hence the replacements this year.) And I always pot up a few extra seedlings in gallon pots to replace any seedlings that don't thrive. Next year I want to plant a purple variety!

Asparagus doesn't like wet feet, so a well-drained bed is best (I use simple raised beds). I use male seed so that I don't have to thin the patch of female plants later. Also, I grow them with a bit of afternoon shade and they do just fine. The first year I planted non-sexed *Mary Washington* seeds (back in 2007, seed from Victory) and had many female plants that self-seeded and upset my carefully planted bed.

Other tips: keep very weed-free beds, control slugs, mark female plants to dig up and replace, mulch deeply, harvest by cutting below soil, and cut back fronds after fall freeze. Your seed company should supply plenty of info about starting and transplanting their asparagus seed.

There isn't a lot of info out there about starting from seeds, but here is a neat fact sheet about asparagus growing in general: [https://aggie-horticulture.tamu.edu/organic/files/2011/03/E-503\\_asparagus.pdf](https://aggie-horticulture.tamu.edu/organic/files/2011/03/E-503_asparagus.pdf)

- Sonia Reagan, OSU Extension

### So if you can grow asparagus from seed, why not rhubarb?



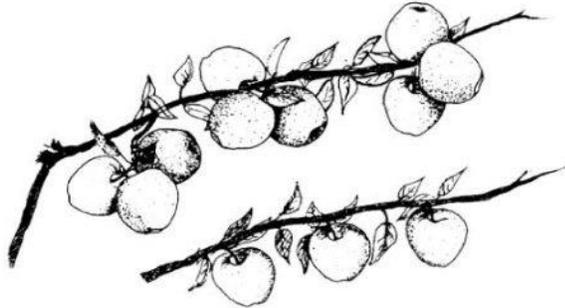
You can, indeed, start rhubarb from seed. Start rhubarb seed about the time you would start tomatoes (Mid-March to early April here) in a greenhouse. It will take one year until first harvest. The advantages to seed starting? Much cheaper plants than purchasing crowns and the avoidance of some diseases that sometimes come with rhubarb crown divisions. The disadvantages: you have to wait longer for the first harvest and the seed will produce a mix of plant types, some with red stems, others with green ones and some in between (green with red speckles). They will all have the same rhubarb taste. The most widely propagated variety from seed is *Victoria*, and English heirloom.

<https://www.southernexposure.com/blog/2015/02/growing-rhubarb-from-seed/>

<https://catalog.extension.oregonstate.edu/ec797/html>

## Heavy apple crop this year

Most gardeners have lots of apples set on trees this year. There are several implications of this abundance. First, most of the apples will be small unless you do some fruit thinning. Second, the weight of all the apples can bring down major or minor limbs, pruning you probably don't want to see. This is more common on younger trees and represents a second reason to thin.



So how much to thin? The smaller the limb, the more you need to thin to preserve that branch. And for standard or better sized apples, thin to about one apple per six inches along a branch. If the limb can stand it and you want some smaller apples, you can leave more fruit. But this year with this heavy load, you should do some thinning.

## Winter vegetables

Winter gardening is a confusing concept. Novice gardeners often expect to be planting after the frost. Not true. The object is to grow crops that survive colder temperatures so you can eat out of your garden during the winter.



Most of those vegetables need to be planted soon. Classic winter vegetables include kale, chard, many types of lettuce, mustard greens, broccoli, cauliflower, beets, and carrots. It is a little late to plant Brussels sprouts. Green beans planted in early August should be ready in late September to early October.

You need to till and fertilize the planting area again. Proper irrigation is critical since hot days can fry seedlings. Soaker hoses work well. Some gardeners start plants like broccoli in transplant trays.

For specific variety choices, look at catalog descriptions. Territorial Seed Company has specialized in offering winter-hardy varieties. Binda Colebrook's *Winter Gardening in the Maritime Northwest* is an excellent reference.

## Why the broccoli didn't "broccle"

Many vegetables, especially in the cabbage family, are biennials which bolt to flower and seed after going through winter. But that trigger is sensitive and transplants, subjected to some stress, may make that decision early and give you some pretty flowers on small stalks but no nice head of broccoli or cauliflower.

The most common triggers are cold temperatures after coming out of a greenhouse, moisture stress (too much in the soil or too little), and/or low fertility, especially nitrogen. To reduce the problem, **plants should be no more than 4 weeks old when they are transplanted.**

They should be given row covers if possible to keep them warmer until outdoor temperatures improve. This year probably has caused more problems for the early gardeners not using covers.

Rain may have moved some nitrogen out of the soil profile early but that probably wasn't enough to cause problems unless you didn't fertilize at all.

Finally, there are some broccoli varieties that bolt more easily and cauliflower is a worse bolter than broccoli.

# The semi-natural world

## Forestry, water, climate, and life

One of the most striking predictions for climate change in northwest Oregon involves rainfall amounts and rainfall patterns. The models predict that the total rainfall in our region will not decrease much but it will come in stronger “pulses”, i.e. more rainfall in short bursts. Pulsed rainfall can’t saturate soils as nicely as more drawn out rain cycles. This pattern will combine with warmer temperatures all year.



So what does it mean? First, while we still aren’t at the greatest risk for forest fires in Oregon compared to other locations, we are entering a time of much higher risk.

Second, some plants that evolved here may not do well anymore. Woody plants can’t just pick up and move like birds and possibly some insects are already doing. Western red cedars in Columbia County and coast-range Oregon north of Eugene are dying at an astounding pace but, to date, forest pathologists haven’t found any disease associated with the die-offs. The working assumption is that a needed moisture buffer in the soil is disappearing and cedars are dying for lack of moisture at crucial times in their yearly growth cycle.

Third, a combination of our changing rainfall cycle and the fact that a huge portion of our county is being managed as short-term harvest timber plantations will affect stream flow and water retention. Impacts will be largest on summer flows but not limited to that season. This will impact the biology of streams in ways that will tend to reduce biological diversity and the total biomass of the system. This will put salmon in deep trouble. It will also reduce water available for domestic use by rural landowners

with wells and communities (Vernonia and Clatskanie) that don’t source their drinking water from the Columbia River.

There are a ton of conversations we should be having. But they are awkward. They traverse boundaries between private land ownership and general public good. They open questions about our obligation to a future that many of us will not live to see. I am an optimist by nature and trust we will find a way forward that will make our collective children and grandchildren proud.

## You thought they were just plants?

Our ability to see, measure, and understand the very smallest part of our environment is progressing rapidly. The human microbiome has gotten all the press (see *Never Home Alone* by Rob Dunn) but now plants are showing off their hidden bacterial flora. There are mixes of colonizing bacteria that improve or decrease resistance to plant pathogens. Other colonies influence plant turgor and allow some plants to photosynthesize longer in adverse conditions to get a jump on competing plants in the same space.

There probably is a lot more to come. It isn’t clear how plants select their colonies of microbiological partners and why some, like humans, seem to make bad choices. It isn’t clear how the different bacteria within the plant leaves play together. It isn’t clear whether the bacteria can evolve (learn new tricks) on an individual colony level or a bacterial community level.

As both a consumer and gardener, I am also interested in how bacterial colonies respond to us when we eat the plants that contain them without cooking them out, as we must have been doing for millennia. And will they play well with the yogurt I eat almost every day! What fun is yet to come? Gut bacteria are now thought to influence some human behavior. Just why was I compelled to write on this topic??? Hmm...

# JULY

## 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

- Mound soil up around base of potatoes. Gather and eat a few "new" potatoes from each hill, when plants begin to flower.
- Early morning is the best time to water vegetable and flower gardens to reduce evaporation. Water the soil, rather than leaves to reduce disease. Water deeply and infrequently to encourage root growth.
- Hanging baskets of flowers or vegetable plantings need careful attention to watering and feeding during extended periods of hot weather.
- Weed and fertilize rhubarb and asparagus beds. A mulch of compost or rotted cow manure works well as fertilizer. Water deeply to develop crowns for next year.
- Mulch to conserve soil moisture with paper, plastic, sawdust, etc.
- Stake tall-growing flowering plants such as delphinium, hollyhocks, and lupine. Stake tomatoes, as necessary.
- If a green lawn is desired, make sure lawn areas are receiving adequate water (approximately 0.5 to 1.5 inches per week from June through August). Deep watering less often is more effective than frequent shallow watering.
- Make compost of lawn clippings and garden plants that are ready to be recycled. Do not use clippings if lawn has been treated with herbicide, including "weed-and-feed" products. Do not compost diseased plants unless you are using the "hot compost" method (120° to 150°F).

### Planting/Propagation

- Midsummer plantings of beets, bush beans, carrots, cauliflower, broccoli, lettuce, kale, and peas will provide fall and winter crops.
- Dig spring bulbs when tops have died down; divide and store or replant.

### Pest Monitoring and Management

- Continue monitoring raspberry, blackberry, blueberry, cherry and other plants that produce soft fruits and berries for Spotted Wing Drosophila (SWD). If SWD are present, use an integrated and least toxic approach to manage the pests. To learn how to monitor for SWD flies and larval infestations in fruit, visit <https://spottedwing.org/>.
- Control hollyhock rust by sanitation, picking affected leaves, or spraying with a registered fungicide. Read and follow label directions.
- Watch for cutworm damage in garden. (In July, climbing cutworms become a problem and large portions of foliage will begin to disappear on established plants.) Use barriers, remove by hand, use beneficial nematodes when soil temperature is above 55°F, or spray with *Bt-k* according to label directions.
- Late this month, begin to monitor for early and late blight on tomatoes.
- Place traps to catch adult apple maggot flies. You can use pheromone traps to monitor presence of pests.
- July 10: spray filbert trees for filbert worm, as necessary.
- July 10-15: spray peach and prune trees for peach tree borer, and peach twig borer, as necessary.
- July 17-23: third spray for codling moth in apple and pear trees, as necessary.
- Cover blueberry bushes with netting to keep birds from eating all the crop.
- Watch for early and blight on tomatoes. Correct by pruning for air circulation, picking off affected leaves, and/or treat with approved fungicide.
- Monitor camellias, holly, maple trees for scale insects. Treat if necessary.
- Monitor rhododendrons for adult root weevils.
- Check leafy vegetables for caterpillars. Pick off caterpillars as they appear. Use *Bt-k*, if necessary.
- Spider mites can become a problem on ornamental plants, vegetables, and fruit plants during hot, dry weather. Watch for dusty-looking foliage, loss of color, presence of tiny mites. Wash infested areas with water or spray with appropriate pesticides.
- Remove cankered limbs from fruit and nut trees for control of diseases such as apple anthracnose and bacterial canker of stone fruit. Sterilize tools before each new cut.

## Plants of the month: What is that yellow flower in the field?

There are two yellow flowering, short plants that I get brought into the office often this time of year. One is a weed, though not poisonous, and the other is a valuable crop. While the flowers and the leaves don't look all that similar on close inspection, the fact that they bloom at the same time causes much confusion.

The weed is most often eyebright (*Parentucellia viscosa*). The leaves are somewhat broadly pointy and are quite sticky, hence the "viscosa" as a species name. It isn't poisonous but livestock won't touch it. The flowers that open in a descending manner from one stem look like mini-snapdragons and the plant once was in that family.



It is an annual plant, germinating where there is somewhat bare ground in the spring. Once it flowers and seeds, it dies. But in seeding, it can shed 12,000 seeds per plant.

One interesting aspect of the plant is that it is somewhat parasitic on

other plants. One target appears to be false dandelion, also known as spotted catsear. False dandelion comes to dominate some pastures because it is a perennial and livestock won't eat it either.

If you want to use an herbicide to knock back both eyebright and false dandelion, apply fairly

early in the spring assuming we get a weather break. Best long-term management approach is to keep a vigorous grass stand so it can't germinate. In a few locations, we have a native plant, also parasitic but this one on grass, that looks a lot like eyebright. It is **not** sticky.

Another pasture plant has leaves that look like a cross between clover and alfalfa, arranged in a bit of a fan. The flowers are bright yellow, thus the confusion. This is often one of the two species of Lotus, also known as trefoil. We have big trefoil and birdsfoot trefoil.



Both were introduced species planted over many years in Columbia County to improve pastures.

They provide the same nutrition to livestock as alfalfa and are easier to establish on our acid soils and (for big trefoil), moister sites. Trefoil is an herbaceous perennial and spreads slowly by increasing crown sizes and seed. If you were to seed trefoil, the first year you would think you failed completely as little germinates in the first year.

But slowly it emerges and can sometimes become a major constituent of pastures. Beef and sheep do well on grass/trefoil pastures and hay with it as part of the mix is excellent winter feed.

Horse owners are a little more dubious of trefoil (as they are of clover), given the rather "tetchy" nature of horse digestive systems (re founder).

## Farm and livestock notes

### Local hay

This has been one of worst hay making years in my time here. As of this writing, probably only 10% of the hay has been harvested and some of that was taken as silage which is put up with more moisture than hay. And once again, the star of the late hay show will be bentgrass, which, while it doesn't yield a lot, is still green and quite nutritious.

For people that need to buy hay, the choices are limited by the closure of Calloway, fewer farmers putting up hay, and fewer acres to cut. I expect prices might be higher though there are fewer horses around due to the poor economy. But secure the supply of hay that you need early.

For cattle and sheep feeders, prepare to supplement local hay with protein in the form of alfalfa hay, or other high protein/energy choices like grain/soy/cottonseed feed mixes. Sheep and goat raisers need to be sure the copper in the grain mixes isn't too high for your animals. If livestock and pastures are still in good condition they won't need much extra feed until it gets cold and rainy in late October or early November.

### Stale seedbeds and flaming

Organic farmers have to innovate to produce vegetables and other crops without conventional herbicides. Tillage can produce a bed without weeds, to start, but weeds generally germinate faster than crops. Then the competition begins and the tools are limited.

One important techniques is use transplants rather than seeds. The transplants are more competitive and give the grower a little (though not much) breathing room.

Another technique is to create a bare bed just before the crop seed emerges. This is called the stale seedbed technique. The bed is seeded and the time to crop emergence is generally predictable at given soil temperatures. Several days before the crop is due to emerge, the bed is cleared of weed seedlings by either very light tillage (takes special equipment, uniform bed heights, and a good tractor operator unless it is being done by hand), use of one of the organic "burn-down" essential oil herbicides, or flaming.

The organic herbicides do work on most young seedlings, weeds and crops (timing is everything) so always read and follow the label on any pesticide. But these products work best on warmish days. They are less effective on very cool, moist days.

The final option to create a stale seedbed is to flame the surface of the bed before crop emergence. This can be very effective and has



become an important control tool for organic farmers. The smaller the weed seedling, the better it works. Once the crop is up, there are special propane flaming tool bars that have adjustable shields to protect the emerged crop and can be

used with minimal crop damage between rows until the crops get too big for shields to protect. One big caution: **Do not flame if it is windy and hot and if dry flammable materials are present that might support a fire that could spread!**

Here are some links to flame weeding tools:

<https://blog-fruit-vegetable-ipm.extension.umn.edu/2019/01/using-flame-weeder-in-vegetable-and.html>

<https://cropandsoil.oregonstate.edu/sites/agscid7/files/crop-soil/em9025.pdf>

## Carrying capacity and stocking rate

Carrying capacity and stocking rate are concepts that are used to determine the proper balance between livestock grazing and pasture plant production. Stocking rate is the number of grazing animals on your pasture for a given period of time. Animal unit month (AUM) is a concept that standardizes the expression of stocking rate. An animal unit month is the amount of feed a 1,000 pound lactating cow - one animal unit- will consume in one month, commonly 780 pounds of forage dry matter. Other animals are expressed as a fraction of an animal unit based on their feed intake relative to the 1000 pound cow.

1 cow = 1.0 animal unit

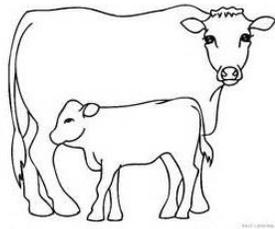
1 500# steer = .5 animal units

1 bull = 1.4 animal units

1 horse = 1.2 animal units

1 sheep/goat = 0.2 animal unit

1 llama = 0.3 animal unit



Carrying capacity is the stocking rate that maintains or improves your pasture plant, soil, and water resources given your grazing system. Carrying capacity depends on the total amount of forage produced and on the percentage that can be harvested without harm to the pasture. There is a grazing rule of thumb in regards to stocking rate: take half, leave half. In most pastures, harvesting half of the total forage can be sustainable. If you manage the length of the grazing period and your stocking rate so you remove half of the forage and leave half of the forage, and then allow a sufficient rest before re-grazing, you will not exceed the carrying capacity of your pasture.

*These comments are taken from an excellent publication titled "Pasture Principles for Smaller Acreages" which is available on-line at: <https://smallfarms.oregonstate.edu/sites/agscid7/files/bul0849.pdf>*

Here are some important considerations:

- Pasture grass lower than three inches will grow much more slowly than grass three inches or taller. Above three inches, there is enough leaf area to efficiently capture sun energy and synthesize the sugars and carbohydrates necessary for leaf and root growth.
- Grass above 8 inches slows as lower leaves are shaded and grass seed stalks mature.
- There are about 300 pounds of dry matter in each inch of pasture height from three inches to eight inches (900 pounds at 3" to 2,400 pounds at 8" in height). This assumes a decent grass stand. Above eight inches, the pounds of dry matter continue to increase but at a slower rate per inch of growth.
- In the spring and early summer, try to rotate off the pasture when the grass is eaten down to about 3 or 4 inches. Put animals back in when the pasture recovers to 6 or 8 inches.

## Remember last winter's mud?

Livestock management becomes immeasurably more difficult in a western Oregon winter. Short days limit the time you have to observe your animals and rain increases their nutritional needs. Pasture growth is non-existent so they can't get much feed there. Animals are better taken off pasture if it is at all possible.

But if you are planning on running your cattle on pastures in the winter, you need to plan feeding and watering areas that won't turn into a mud bath. I recently came across a publication from Kentucky that has a lot of good ideas about building these areas using either concrete or geotextile fabric and rock.

It is online: "[Strategic Winter Feeding of Cattle Using a Rotational Grazing Structure](#)"

## Microbes behaving badly, with our help

I recently read an article about bacterial resistance to antibiotics:

<https://www.cdc.gov/media/releases/2019/p1113-antibiotic-resistant.html>

We have remarkably few tools to combat a major outbreak of a bacterial disease with deep resistance. This is not news to most of you. There is little financial incentive for drug companies to develop new antibiotics which **save** lives but cost a lot to test and produce and have to be cheap to use. Pharmaceutical firms prefer to develop cancer drugs that may **extend** life but also can sell for enormous sums relative to their production costs.



80% of antibiotics (upwards of 18 million pounds) are used in animal agriculture, mostly in cattle, chickens, and hogs. New protocols have gone into effect to reduce antibiotic use in the meat industry and that is beginning to hold antibiotic use down and encourage best management practices that reduce herd or flock disease outbreaks. This will help reduce antibiotic resistance if inappropriate prescribing in medical settings is also reduced. Bacteria don't necessarily maintain resistance if not constantly exposed to the antibiotic.

But now we have the rise of drug-resistant fungi! *Candida auris* is the poster child for a deadly bloodstream fungus challenging to treat and impossible to completely clean from medical facilities. This and other human fungal pathogens appear to have acquired their resistance by the use of fungicides in food production, often applied after the crop has been harvested to reduce post-harvest loss before it is sold. The fungicides were generally what the trade calls "broad-spectrum" which ignores the

need to maintain a population of non-pathogenic fungi (often yeasts) that live and actually can protect some crops. The all-purpose fungicide may also be on the way out in favor of more targeted control methods but that will take some time to develop. The race is on.

Finally, pre-cut salad mixes are shown to foster the growth of *Salmonella* bacteria. Research demonstrated that juices oozing from the cut salad greens encouraged *Salmonella* growth in the mix but didn't encourage other beneficial micro-organisms, giving *Salmonella* the field of its dreams. The *Salmonella* produced biofilms on the greens which were very hard to wash off. For some reason, spinach seems to be able to acquire *Salmonella* if it is present in the field, in the seedling stage where it sits inside the plant leaves. It can't be washed out at harvest. But if it hasn't grown in a salad mix, it generally is thought to not have the population of cells to cause human health issues. Anyway, the answer it appears, is to cut out the cut salad greens.

## Microbes behaving well, with our help

So there had to be some good microbial news. Here is one piece. *Salmonella* is a common contaminant of raw poultry products. It is acquired as the birds are raised. Farmers generally have feeding barns that have litter to absorb poultry manure. Generally, the poultry litter is changed between successive flocks of broilers. But it turns out that litter develops microbial colonies that can actually reduce *Salmonella*. While more research is in progress, the recommendation from the research team is to give the litter two weeks of downtime before bringing in a new set of birds. It is not yet clear how many times this can be done or how much litter might need to be top-dressed for best results.



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**Pressure Gauge Testing:** July 1, 2020 to July 29, 2020, Wednesdays from 9am to 1pm, FREE, at the Extension office in St. Helens. For questions and requests for accessibility-related accommodations please contact: [Jenny.Rudolph@oregonstate.edu](mailto:Jenny.Rudolph@oregonstate.edu).

Pressure canners with a dial gauge need to be tested every year before you use them for accuracy. Canning with a gauge that is off can result in under-processing of home canned foods, which is unsafe. For complete instructions on this opportunity go to: <https://extension.oregonstate.edu/columbia/events/pressure-canner-dial-gauge-testing-service>. COVID-19 restrictions and safety protocols are still in place at our office which is located at 505 N. Columbia River Highway, St. Helens, OR 97051.

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Reading material: EC 631, [Managing Diseases and Insects in Home Orchards](#)

Jay Pscheidt, Heather Stoven, Ashley Thompson, Brooke Edmunds, Nik Wiman, Richard Hilton Revised. This pest management guide is for the home gardener. It recommends management practices for controlling diseases and insects in home orchards. It doesn't meet the exacting requirements of the commercial fruit grower.

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