



LOOKING AHEAD JUNE

**WSU COWLITZ COUNTY MASTER
GARDENER PLANT AND INSECT CLINIC
FOR GARDEN QUESTIONS
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WHAT'S IN THIS ISSUE

Start Here: OSU—Garden Tasks for June

- [Flowering Plants](#)-mums, glads, Dahlias, Peonies, spring bulbs, Lavender, hanging baskets, bedding plants, deadheading for rebloom
- [-Shrubs and Trees-](#) time to Prune; Wisteria, Roses, Azaleas/Rhodies, birch tree aphids, pruning pines
- [Fruits](#)-Codling moth, June fruit drop, thinning fruit, summer pruning, care of blueberries, strawberries, raspberries in June
- [Weeds of the Summer](#)
- [Vegetable Gardening](#)—planting, irrigation, mulching, composting, monitoring for problems, shriveling squash?
- [Garden Pests](#)—and what to do about them
- [Beneficial Insects](#)—your best defense against the bad guys! Get to know them; how to attract them
- [Lawn](#)-tips to keep your lawn healthy
- [Vertebrate pests](#)—moles, mice, voles, etc.
- [Resources](#)
- [Diagnostic Resources](#)

FLOWERING PLANTS—PERENNIALS

- **Set up supports** for floppy plants now—E.g., daisies, penstemons, dahlias, peonies
- **Chrysanthemums** continue to pinch back foliage until July to encourage bushiness and lots of blooms.
- **Plant gladiolus corms**—and make consecutive plantings to keep them flowering for longer <https://plants.ces.ncsu.edu/plants/gladiolus/>
- **Plant dahlia tubers** <https://catalog.extension.oregonstate.edu/fs95/html>
- **Peonies**—Are your peony buds drying up, turning black and not opening? Black spots on the leaves? The fungal disease Botrytis is common in our cool wet springs. Snip off the diseased areas, and destroy debris—do not compost. Sanitize clippers with alcohol between cuts. You can use a fungicide to control it: E.g. Monterey Liqui-Cop at 3 Tbsp/gal water. <https://pnwhandbooks.org/plantdisease/host-disease/peony-paeonia-spp-botrytis-blight>

FLOWERING PLANTS- TULIPS, DAFFODILS, HYACINTHS

- Now that your spring bulb plant's leaves have turned yellow, it's okay to trim them back.
- If you want to dig them up and divide them, you can do this now (before the heat of summer) because the bulbs are now dormant.
 - Dig up clumps and separate bulbs by hand
 - When replanting, mix some fertilizer made for bulbs (low nitrogen, higher phosphorus) with the soil
 - Plant daffodils and tulips 4-5 inches apart and 6-7 inches deep. Smaller bulbs can be planted closer together and not as deep.
 - Irrigate when there's no rain
- You can also store them in a cool, ventilated space and replant in October.



• <https://web.extension.illinois.edu/bulbs/planting.cf>
[m](#)

FLOWERING PLANTS-LAVENDER

Lavender-prune after the first summer flowering in June.

- **English lavender**—cut back by $\frac{1}{3}$ to $\frac{1}{2}$
 - Trim back to about 3 inches from where the woody stem begins. Don't cut into the woody stem.
 - You can give it a second light trim after the second bloom, but no pruning after August.
- **Non-English lavender** (with the little “tufts”—trim slightly—they don't grow as fast.
- <https://pss.uvm.edu/ppp/articles/lavender.html>



FLOWERING PLANTS—HANGING BASKETS

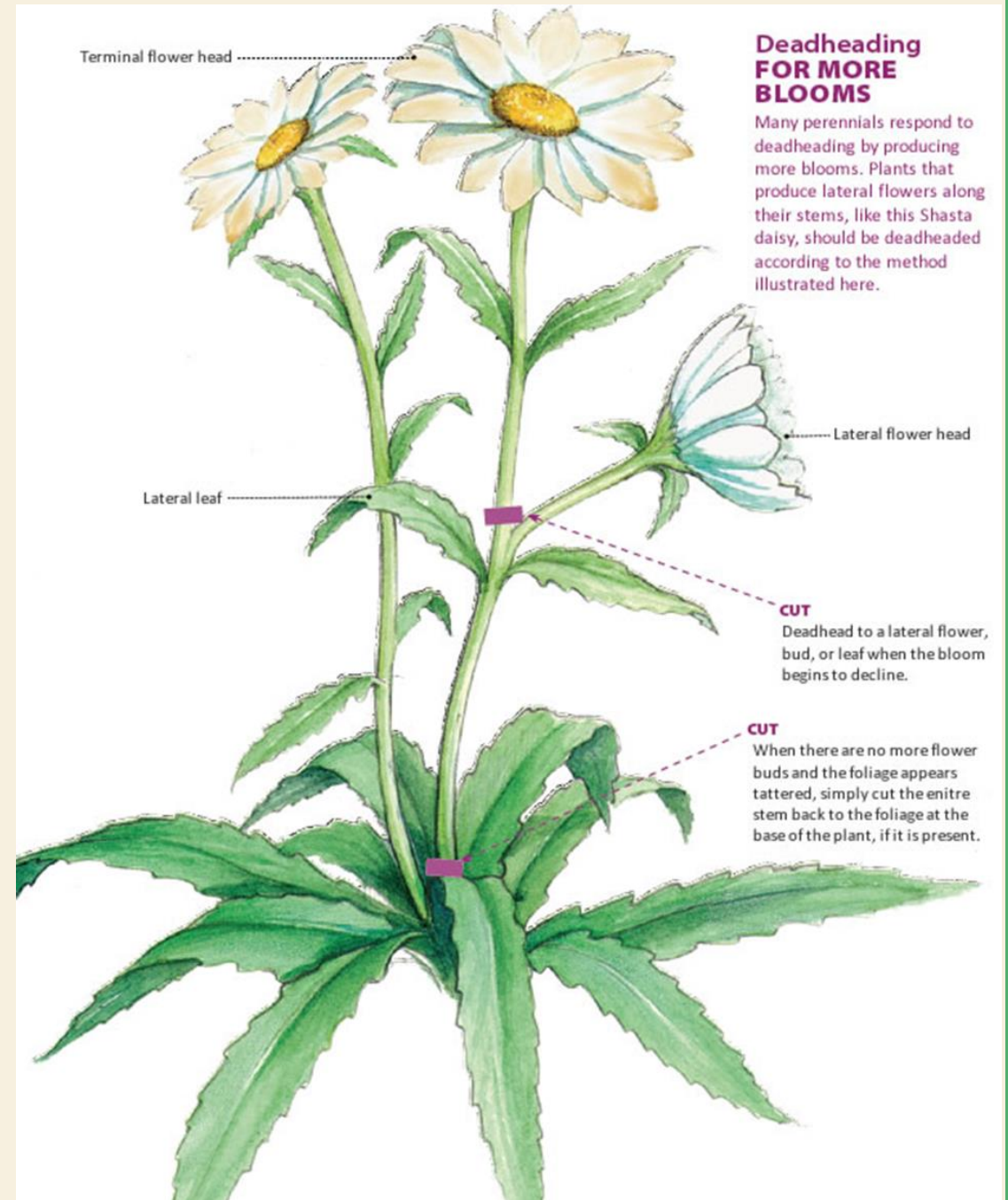
Hanging baskets—keeping them lush and beautiful

- They will need to be fertilized and watered regularly-- water soluble fertilizer with the NPK numbers (Nitrogen/Phosphorus/Potassium) as close as possible to this ratio: 20-10-20.
- Feed them every time you water with $\frac{1}{2}$ strength solution of fertilizer.
- Water early in the morning, if possible, and don't let your plant dry out—the roots will be damaged. You may be able to keep the plants alive, but they will never reach their full potential.
- If you find that you're needing to water 2-3 times a day, only use the feeding solution the first time.
- Water when the top of the soil feels dry.
- Apply more time release fertilizer to the top of the soil in mid-July for an extra boost.
- Give them adequate sun and protect them from strong winds.

FLOWERING PLANTS- HANGING BASKETS

- Deadheading will encourage your flowers to re-bloom, and tidies up the appearance. Here's how to do it.
- For a list of plants that may bloom after deadheading (and which plants do not!), see

<https://www.finegardening.com/article/off-with-their-heads-deadheading-perennials>



FLOWERING PLANTS-ANNUAL BEDDING FLOWERS

- When planting, add good quality compost and granular, time release flowering plant fertilizer to the hole. Follow label directions.
- Keep the soil evenly moist. Using drip irrigation is best, but if you don't use that, try not to get the leaves wet, or water early in the morning so leaves can dry out. Don't overwater!
- Mulch around the plants with an inch of mulch to moderate soil temperatures and help to keep the soil moist.
- Great reference for annuals flowers and their care
<https://web.extension.illinois.edu/annuals/directory.cfm>

PRUNE SPRING-FLOWERING SHRUBS

NOT ALL SHRUBS WILL NEED PRUNING, BUT IF YOU'RE GOING TO PRUNE, TO IT BY THE END OF JUNE AT THE LATEST!

Akebia	Azalea	Weigela	Choisya--Mexican Orange	Daphne	Deutzia
Elaeagnus- Russian Olive	Silverberry	Escallonia	Euphorbia- Spurge	Forsythia	Helianthemum- Sunrose
Hibiscus	Hydrangea	Jasminum-Jasmine	Kerria	Kolkwitzia Beauty bush	Lonicera japonica- Honeysuckle
Magnolia	Mahonia- Oregon Grape	Passiflora- Passionflower	Philadelphus-Mock Orange	Pieris	Rhododendron
Ribes-Currant	Rosemary	Schizophragma- Climbing Hydrangea	Syringa-Lilac	Viburnum-has specific pruning requirements	Wisteria

Portland Nursery Pruning Calendar https://portlandnursery.com/docs/trees/Pruning_Calendar.pdf

SHRUBS AND TREES

- **Roses-** WSU's *Growing Roses in Washington State* series
 - [Planting](#)
 - [Seasonal Calendar](#)
 - [Common Diseases and Insect Problems](#)
- **Azaleas and Rhododendrons**—This publication will walk you step-by-step through finding and treating your problems!
 - [Identifying, Treating, and Avoiding Azalea and Rhododendron Problems](#)
- **Wisteria**—prune after blooming, and check them to train them to your trellis structure. Prune off wandering shoots.

http://marinmg.ucanr.edu/Our_Projects/Leaflet/Proper_pruning_of_wisteria_produces_a_plethora_of_blossoms/



GROWING ROSES IN WASHINGTON STATE:
COMMON DISEASE AND INSECT PROBLEMS

Identifying, Treating, and Avoiding
Azalea and Rhododendron Problems

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ADD TO CART



SHRUBS AND TREES

- **Birch trees** are aphid magnets. If you find a sticky substance on structures, cars, and plants beneath a birch, call for help.
- **Pruning Pines**-We've passed the pruning window for most conifers. However, you can prune PINE CANDLES (new growth) to control the size of the tree. Wait until the candles are 2-4 in. long, then pinch off $\frac{1}{4}$ to $\frac{1}{2}$ of the candle. <https://hort.extension.wisc.edu/articles/pruning-evergreens/> and <https://static.colostate.edu/client-files/csfs/pdfs/618.pdf>
- **Irrigate young trees!** They need 3-5 gallons of water a week during the summer. You may need to water more during hot, dry weather. <https://extension.umd.edu/hgic/topics/watering-trees-and-shrubs>



<https://valeaston.typepad.com/.a/6a011168642488970c01156fa8cda9970c-pi>

FRUIT TREES—JUNE DROP—WHY?

- Especially on apple trees, you'll find a lot of smallish apples on the ground. Don't fret—it's the tree's way of automatically thinning its crop to ensure "survival of the fittest."
- Frequently poor pollination can occur if pollinator trees aren't blooming at the same time, or are too distant from each other, or if there aren't enough pollinating insects buzzing around your trees.
- If insect damage has occurred, the tree will try to shed these, too.
- To help the tree save its resources for the current year, and to balance the load for the next season, it's a good idea to thin the fruit yourself BEFORE June drop.



https://www.starkbros.com/blog/wp-content/uploads/2012/05/FruitDropPlums_LG.jpg

Note: June drop occurs with peaches and plums, too. They should have been thinned in May—3-4 weeks after blooming. If you didn't, the tree will do it for you. Prune plums may need extra thinning-4 inches apart.

<http://homeorchard.ucdavis.edu/8047.pdf>

FRUIT TREES—THINNING APPLE TREES

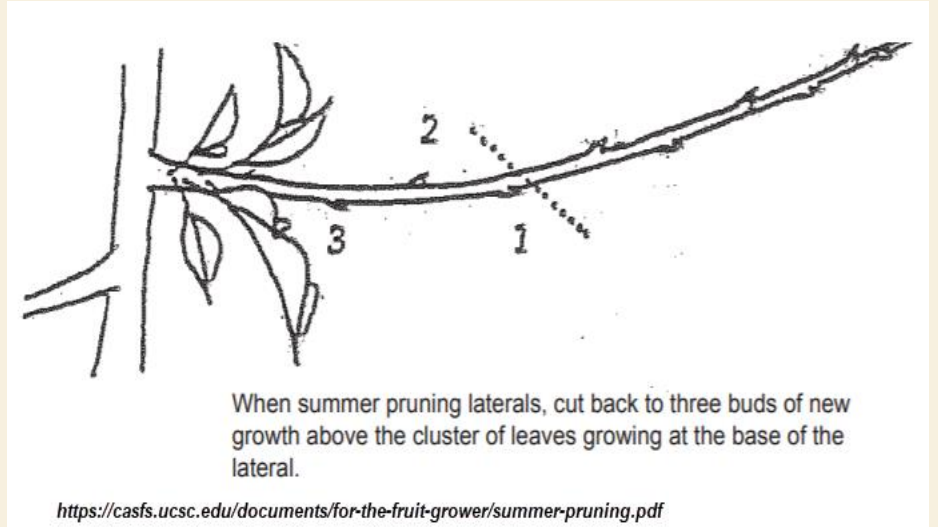
- Sooner you thin the fruit, the less of the tree's resources the apples will use.
 - Early thinning helps the tree form bigger, tastier fruit
 - Less chance of tree injury— keeps too much weight off tree
 - Helps next year's fruit buds form
 - Helps to even out the production from year to year
- Thin to 4-6 inches apart on each branch.
 - Remove smaller apples, and ones that have spots or other signs of damage
 - Break up large clusters, leaving plenty of space for the apples to develop
 - Use your fingers to twist the apples off, or carefully cut them off with pruners.



Fruit thinning. Top drawing: unthinned apple branch. Apples, pears, peaches, nectarines, and Asian pears should be thinned so that they are approximately 4 to 6 inches apart, as shown in the lower drawing.
Nickola Dudley .ncsu.edu

FRUIT TREES—SUMMER PRUNING: WHY DO IT?

- Used to shape the tree without causing vigorous re-growth that you see in dormant season pruning
 - Heading cuts (shortening a branch) may be done now without much growth of wild vigorous vertical shoots
- Keep a small tree small and more manageable. More control over insects and diseases, easier harvesting.
- Prunes out excess branches
- **Peaches**—prune out 50% of this year's new growth—peaches only on previous year's wood. This year's vigorous new growth needs to be thinned for next year's crop. Open up the interior to get light to next year's buds.
- **Apples, pears**—pruning off lateral branches encourages tree to form fruit buds for next year's apples
- Video—pruning peach trees
<https://www.youtube.com/watch?v=ShNGGuOlx4E>
- Summer Pruning: <https://casfs.ucsc.edu/documents/for-the-fruit-grower/summer-pruning.pdf>
<https://extension.wsu.edu/maritimefruit/pruning-tree-fruit-the-basics/>



FRUIT TREES—SUMMER PRUNING: HOW TO DO IT?

Excerpt from [Grow a Little Fruit Tree](#) by Ann Ralph

(HIGHLY recommended!) Last week of June:

- Head back tall, vigorous growth to outward-facing buds.
- Prune upright growth by a half to two-thirds.
- As the tree ages and gets bigger, you may want to remove some upright limbs entirely.
- Shaping and thinning cuts are perfectly appropriate in summer.

You can and should prune the following on any tree at the time you see them-- Branches that are:

- **Damaged**
- **Dead**
- **Diseased**
- **Dysfunctional** (competing branches, crossing, rubbing, water sprouts, suckers, etc.)



ABOVE: (L) A handsome heading cut angles with the direction of the bud and doesn't leave a stub.
(R) Thinning cuts subtract entire branches by removing them at their point of origin.

from *Grow a Little Fruit Tree* by Ann Ralph

FRUITS: APPLES CODLING MOTH



Codling Moth



Codling moth trap



To prevent codling moth damage, it's time to start treatment NOW: Apply about 10 days after full petal fall (all petals are off) or 17 to 21 days after full bloom. (If you didn't have a problem last year, monitor activity with a pheromone lure to head off a problem this year.)

- Several choices-Spinosad ingredient is one organic option—see [Hortsense](#) article.
- Product reapplications following label directions are necessary throughout late spring and summer. You **MUST** reapply two more times in June, once in July, and once in August to prevent infestations!
- To minimize risk to bees, apply in the evening after bees have stopped foraging for the day.

FRUITS: BERRIES

- If possible, place netting or row covers on blueberries, raspberries, and strawberries to deter bird feeding.
- Strawberries—Pick berries regularly to avoid fruit rotting disease, and to get them before the slugs and deer munch on them.
- Pick when they ripen—don't leave over-ripe fruit on the plant or ground.



<https://bonnieplants.com/gardening/protecting-strawberries-from-birds/>



https://cdn.l.bigcommerce.com/s-xj69ljw63/images/stencil/935x701/uploaded_images/blog_images/get-bird-netting-for-blueberries-to-keep-birds-away.png



FRUITS: BLUEBERRIES

Blueberries need their last nitrogen application mid-June. Great info here: <https://s3.wp.wsu.edu/uploads/sites/2076/2017/06/C008-Blueberries-15.pdf>

Age of plants from transplant date	5-10-10 **St. Patrick's Day March 15 - April 15	Ammonium sulfate (21-0-0) May 20 **Mother's Day	Ammonium sulfate (21-0-0) June 15 **Father's Day
Newly set	0	0	0
1 year	2 oz. (1/4 cup)	1 oz. (2 Tbs.)	1 oz. (2 Tbs.)
2 years	4 oz. (1/2 cup)	1-2 oz. (2-4 Tbs.)	1-2 oz. (2-4 Tbs.)
3 years	6 oz. (3/4 cup)	1-2 oz. (2-4 Tbs.)	1-2 oz. (2-4 Tbs.)
4 years	8 oz. (1 cup)	2-3 oz. (1/4 cup + 2 Tbs.)	1-2 oz. (2-4 Tbs.)
5 years	10 oz. (1 1/4 cup)	2-3 oz. (1/4 cup + 2 Tbs.)	1-2 oz. (2-4 Tbs.)
6 years and older	12 oz. (1 1/2 cup)	2-3 oz. (1/4 cup + 2 Tbs.)	1-2 oz. (2-4 Tbs.)

FRUITS: ALL BERRY AND STONE FRUITS

- Be sure to pick raspberries, blueberries, strawberries, plums, etc., as they ripen. Overripe fruit and fruit that falls to the ground is a mighty fine attractant for Spotted Wing Drosophila (SWD). This tiny red-eyed fruit fly pierces the raspberries, lays eggs, and the tiny white thread-like “worms” ruin the fruit.



- <http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=2&PlantDefId=74&ProblemId=790>
- <https://blogs.cornell.edu/berrytool/2017/02/26/raspberries-spotted-wing-drosophila/>

FRUITS: RASPBERRIES

By now, you should have fertilized your raspberries twice—the first time in mid-April when they started growing, again at the end of May, and now it's time to fertilize them again at the end of June.

- What to use? 16-16-16 (NPK) fertilizer.
- Apply 4-6 ounces per 10 ft row.
- Spread the fertilizer on the surface of the soil along the row.
- Water in well.
- Raspberries need 1 inch of water per week.
- Mulch well to keep weeds down and retain soil moisture.
- These are some of the best resources for growing raspberries.
 - <https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/ec1306.pdf>
 - <https://extension.umn.edu/fruit/growing-raspberries-home-garden>

Weed Identification Guide

REVISED ON MAY 2017

This little guide, by Environmental Services, City of Portland, lists many of our common weeds and how to get rid of them. On each page you find a guide to dig or pull it out.



[Hortsense](#) also offers chemical management options. [Cowlitz County Noxious Weed list for 2020](#)



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PLANTING THE GARDEN



- Before planting pay close attention to plant needs (spacing, supporting, size, fertilizer needs, etc.), air and soil temperatures, size of garden area, sun and shade, watering, transplanting (ensure plants are hardened off prior to transplanting) or sowing seeds, staking/trellising requirements, etc.

Great Sites to Assist:

<https://s3.wp.wsu.edu/uploads/sites/2071/2014/04/Home-Vegetable-Gardening-in-WA-EM057E>

<https://s3.wp.wsu.edu/uploads/sites/2073/2014/03/Planting-the-Vegetable-Garden.pdf>

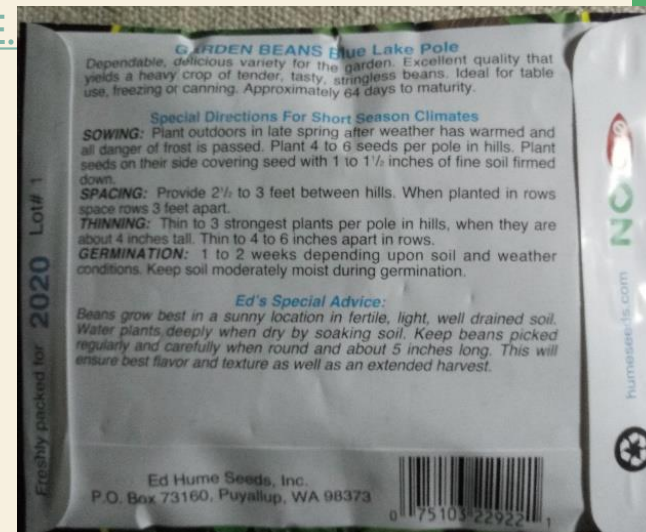
<https://s3.wp.wsu.edu/uploads/sites/2063/2016/03/Grow-from-Seeds.pdf>

<https://s3.wp.wsu.edu/uploads/sites/2080/2014/02/seed-starting11.pdf>

<https://territorialseed.com/blogs/spring-growing-guides>

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/ec871.pdf>

<https://extension.umd.edu/hgic/hardening-vegetable-seedlings>



IRRIGATION

- After planting, the next thing to take care of is watering the plants. If water or hoses have to be toted, chances are watering will not occur (this is where the planning part comes into play).

- Types of irrigation:

Surface (furrows or flooding).	Drip/Trickle
Sprinkler	Manual

- **Great Sites on Irrigation!**

<http://pubs.cahnrs.wsu.edu/publications/pubs/fs030e/>

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em8782.pdf>

<https://water.usgs.gov/edu/irmethods.html>

<https://cwel.usu.edu/irrigation-extension>

<https://nrcca.cals.cornell.edu/soil/CA3/CA0324.php>

<https://extension2.missouri.edu/programs/irrigation/irrigation-system-pros-and-cons>



MULCHING

- After irrigation is figured out, the next task is to cover the bare areas with a mulch (keeping it away from plant stems).
- Mulching deters weeds by blocking the sun, stabilizes soil temperature and saves water by minimizing watering and water evaporation.

Great Sites on Mulching!

<https://s3.wp.wsu.edu/uploads/sites/2076/2017/07/C075-Guide-to-Mulches-15.pdf>

<https://extension.oregonstate.edu/news/mulch-key-no-till-gardens>

<https://ir.library.oregonstate.edu/downloads/6969z0995>

<https://s3.wp.wsu.edu/uploads/sites/2071/2014/04/Home-Vegetable-Gardening-in-WA-EM057E.pdf>



COMPOSTING

Green (Nitrogen) 1 part Some Examples:	Brown (Carbon) 2 – 3 parts Some Examples:
Grass clippings	Shredded paper
Tea/coffee grounds	Straw
Manures	Wood chips
Green leaves	Dried grass and leaves

- Warmer weather is the best time to start and maintain your compost bins/piles.
- Successful composting key points to remember are turning the pile, proper moisture content, temperature, aeration, smaller particles the better and good balance of green and browns.
- Compost is used for amending soil, mixing with potting soil, improves soil structure retains moisture in soil, making compost tea, top dress lawns and the list can go on and on.

<http://pubs.cahnrs.wsu.edu/publications/pubs/eb1784e/>

<https://extension.wsu.edu/chelan-douglas/gardening/generalgardening/composting/>

<https://extension.oregonstate.edu/sites/default/files/documents/12281/gardeningwcompost.pdf>

<https://extension.psu.edu/home-composting-a-guide-for-home-gardeners>



MONITORING THE GARDEN

After planting monitor your plants closely:

Watering needs	Fertilizing needs	Supporting	Nighttime temps
Diseases	Pruning	Plant health	Insects
Leaf discoloring	Leaf distortion	Growth	Mulching
Weeding	Weather	Vertebrate pest damage	

Keeping a Garden Log is the best way to track your success and problems!

<https://extension.umd.edu/hgic/topics/caring-your-garden>

<https://extension.oregonstate.edu/gardening/techniques/june-garden-calendar>

<https://s3.wp.wsu.edu/uploads/sites/2071/2014/04/Home-Vegetable-Gardening-in-WA-EM057E.pdf>

<https://extension.wsu.edu/snohomish/garden/gardening-resources/>



SHRIVELING ZUCCHINI AND OTHER SQUASH?

- The earliest blooms on squash or cucumber plants fall off before they set fruit.
- Squash have male and female flowers, and they both have to be blooming at the same time for fertilization to happen.
- Early in the season, the male and female flowers are often out of sync with each other.
- The little squash you see forming is the ovary on the female flower, and will start to grow, but aborts soon after if fertilization doesn't take place, or if there is inadequate fertilization.
- Soon both the male and female flowers bloom at the same time, usually solving the problem.

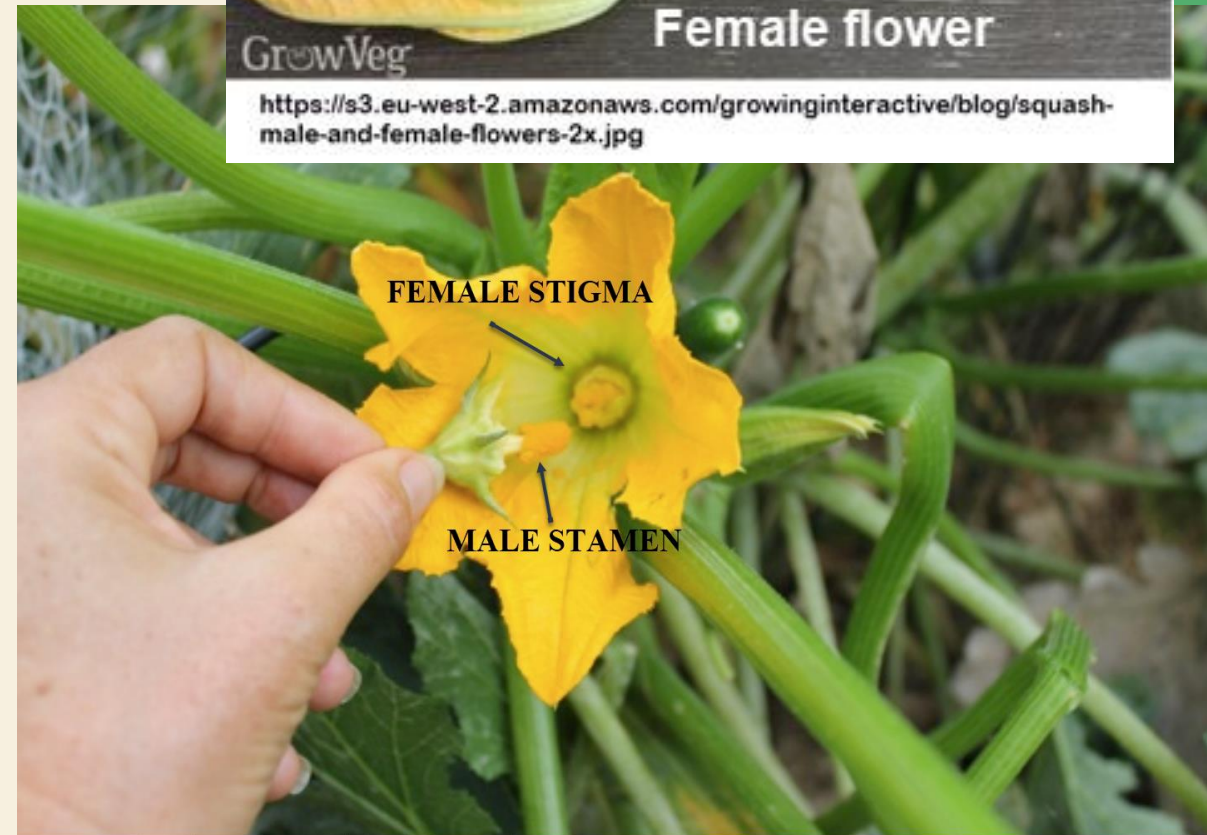
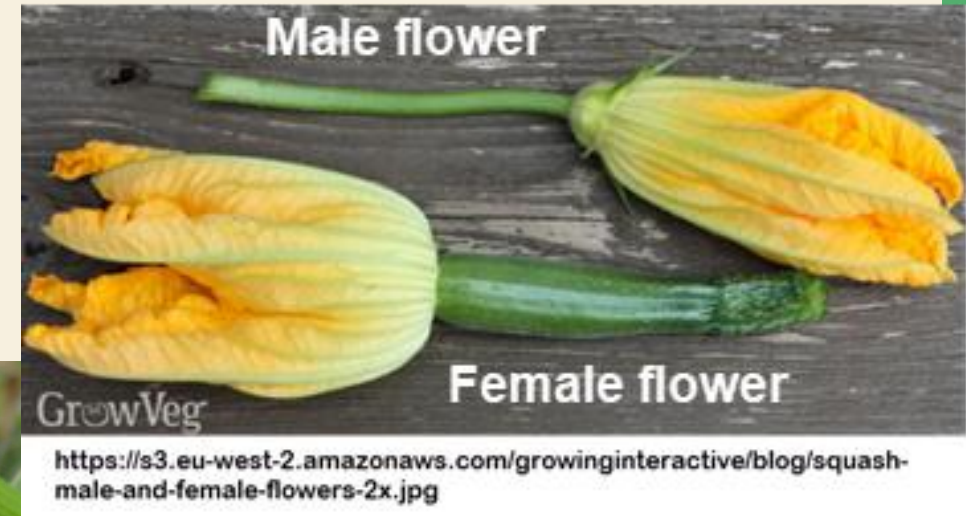


Image by Jennifer Martell via GKH Scavenger Hunt

SHRIVELING ZUCCHINI AND OTHER SQUASH?

What can you do to help?

- Plant [pollinator-attracting plants](#)
- Manually fertilize the squash blossoms!
- How to pollinate squash
 - EARLY morning-
 - Fresh female/male blossoms
 - Close up immediately (gently tape the top of the flower closed if you are saving seeds)
 - Fertilization done by noon
 - More info:
<https://extension.oregonstate.edu/news/mother-nature-may-need-help-pollinate-squash-cucumbers>



<http://theveggielady.com/wp-content/uploads/2014/02/zucchini-pollinate.jpg>

VERTEBRATE PESTS

In the Pacific Northwest there are numerous vertebrate pests that a gardener has to be aware of and plan to deter:

Birds, chipmunks, deer, elk, nutria, opossums, mice, moles, raccoons, rabbits, skunks, voles.

Great links to assist in controlling vertebrate pests:

- <https://wdfw.wa.gov/species-habitats/living/species-facts>
- <https://extension.wsu.edu/snohomish/garden/gardening-resources/vertebrate-management-links/>
- <http://pubs.cahnrs.wsu.edu/publications/pubs/fs094e/>
- <http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=16&ProblemId=6052>



Tony Sirgedas



<http://pubs.cahnrs.wsu.edu/publications/pubs/fs141e/>



U.S. Geological Survey



Jim Cummins



<https://wdfw.wa.gov/species-habitats/living/species-facts/rabbits#>



<https://wdfw.wa.gov/species-habitats/living/species-facts/pocket-gophers>

WHAT'S BUGGING YOUR GARDEN?

- WSU's list of common offenders—and what to do about them!
- <http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=5>

Asparagus * Guide	Lettuce
Bean	Onions, Garlic
Beet, Chard	Pea
Broccoli, Cole crops	Pepper, Eggplant
Cantaloupe, Melons	Potato
Carrot	Radish * Problem solving
Corn	Spinach
Cucumber, Pumpkin, Squash	Tomato
	Turnip, Rutabaga



Cabbage Worm
<https://ag.umass.edu/vegetable/fact-sheets/caterpillars-in-brassica-crops>

Always choose the LEAST TOXIC OPTIONS!

SIMPLE, HOLISTIC, COMMON SENSE METHOD OF MANGING GARDEN PESTS & DISEASES



Spider Mites
<https://extension.umn.edu/yard-and-garden-insects/spider-mites>



APHIDS
<https://extension.umn.edu/yard-and-garden-insects/aphids#garden-aphids-316410>



26-11
 Western Spotted Cucumber Beetle
 PNW Handbooks



Leaf miner damage--spinach, chard
<https://anevidencebasedgardener.wordpress.com/2011/06/16/leafminers-attack/>

MEET THE GOOD GUYS!

NATURAL ENEMIES OF GARDEN PESTS

<http://ipm.ucanr.edu/FAQ/natural-enemies-poster.pdf>

Predators hunt, attack, and kill their prey. Encourage these natural enemies by avoiding pesticides that kill them; choosing plants that provide them pollen, nectar, and shelter; and keeping ants out of pest infested plants. Common predators that eat garden pests are pictured below.



Convergent lady beetles prefer to eat aphids but sometimes eat whiteflies and other soft-bodied insects. Shown here are the adult (left), larva (center), and cluster of eggs (right).



Green lacewing adults eat nectar and pollen. Some species also eat insects.



Green lacewing larvae feed on mites, eggs, and small insects, especially aphids.



Green lacewing eggs are laid on slender stalks in groups (as shown here) or individually.



Predaceous ground beetle adults stalk soil-dwelling insects, such as cutworms and root maggots.



Predaceous ground beetle larvae live on soil and in litter, feeding on almost any invertebrate.



Assassin bugs attack almost any insect.



Pirate bugs attack mites and any tiny insect, especially thrips.



Damsel bugs are predaceous on a wide variety of small insects.



Soldier beetle adults eat mostly aphids; their larvae are soil-dwelling.



Spiders, including this crab spider, attack all types of insects.

MEET THE GOOD GUYS!

NATURAL ENEMIES OF GARDEN PESTS

<http://ipm.ucanr.edu/FAQ/natural-enemies-poster.pdf>



Syrphid fly (flower fly, hover fly) adults eat pollen and nectar.



Syrphid fly larvae eat mostly aphids but also soft-bodied insects.



Sixspotted thrips attack mostly mites.



Western predatory mites attack pest mites.



Adults of predatory wasps, such as this paper wasp, prey on caterpillars and other insects.



Praying mantids don't control pests, because they eat both beneficials and pests.

Parasites live and feed in or on a larger animal (host). Nearly all insect pests have at least one parasite that attacks them. Insects that parasitize other invertebrates (sometimes called parasitoids) are parasitic only in their immature stages and kill their host just as they reach maturity. Most insect parasites are host-specific wasps or flies, and many are so small that often you won't see them. An adult parasite can lay eggs in hundreds of host individuals with a resulting quick reduction in pest numbers.



Some parasites attack insect eggs, such as the *Trissolcus* species wasp.



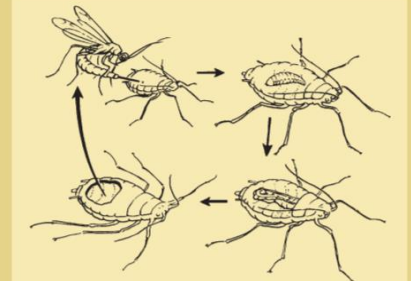
The blackish scale insects have wasp larvae developing within.



Caterpillar parasites include the *Hyposoter exiguae* wasp.



Parasitized aphids die and turn into crusty "mummies" that can be black or beige. The hole in the mummy at left indicates a parasite has emerged. The aphid in the middle is healthy.



Aphid parasite life cycle: The adult lays an egg in an aphid. The egg hatches into a larva that feeds inside. After killing the aphid, the wasp larva pupates then emerges as a wasp.

PHOTOS: J. K. CLARK

PLANT AN INSECTARY GARDEN! SEEDS—WHERE TO GET

- Separate seed packs—Many seed-sellers
- Here are a couple of mixes we've found:
 - “Beneficial Insectary Mix” - www.outsidepride.com
 - “Beneficial Insect Attractant Mix” - www.johnnyseeds.com



Here are a few terrific **free** publications you can download that will help you to get to know who lives in your garden! Search Google for the following:

- 1.) **OSU:** What to plant! [Encouraging Beneficial Insects in your Garden PNW550](#)
- 2.) **OSU:** [Common Natural Enemies of Crop and Garden Pests in the PNW EC 1613-E](#)
- 3.) **WSU:** [Beneficial Insects, Spiders, and Other Mini-creatures in your Garden—how to get them to STAY! EM067E](#)

REMEMBER: AVOID USING PESTICIDES, or “Spot-spray” ONLY severely affected plants—Pesticides kill beneficial insects, too!

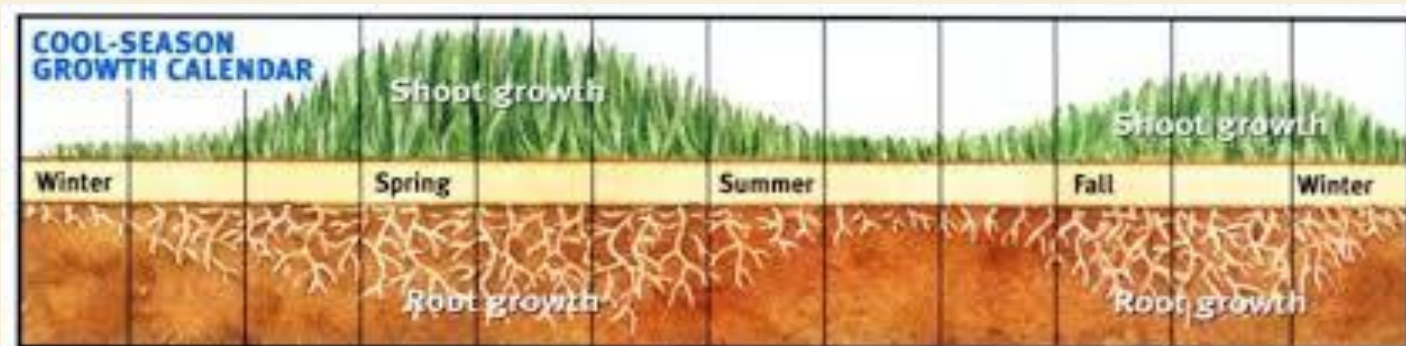
LAWNS

Lawn care is a classic love/hate scenario. We love it in the spring and fall and hate it in the hot dry summers.

Lawns will seasonally ebb and flow in how they look and perform because of our climate and species selection.

We can help them last and persist through tough times by:

- Properly fertilizing at the right times
- Encouraging growth when it is most needed
- Managing weeds
- Reseeding at choice times to rejuvenate the lawn



LAWNS

Mowing frequency should match rate of growth. Do not remove more than 1/3 of the leaf blade in a single mowing and keep your mower blades sharp.

Aerating helps rejuvenate lawns and loosen soil to promote root growth, not to mention removing thatch annually will increase soil oxygen, water penetration and encourages grass root growth.

Biggest problem with lawns is moss due to heavily shaded areas, moles (covered under vertebrate pests), crane fly and army cutworm covered in the links below.

<https://pubs.extension.wsu.edu/home-lawns>

<https://extension.oregonstate.edu/sites/default/files/documents/12281/lawncare.pdf>

<https://extension.wsu.edu/benton-franklin/gardening/lawns/>



JUNE ADDITIONAL RESOURCES

- Many of the topics covered, especially pruning and pest monitoring, in the last couple months are also relevant in the current month:
 - [Looking Ahead: January](#)
 - [Looking Ahead: February](#)
 - [Looking Ahead: March](#)
 - [Looking Ahead: April](#)
 - [Looking Ahead May](#)

Always choose the **LEAST TOXIC OPTIONS!**

SIMPLE, HOLISTIC, COMMON SENSE METHOD OF MANGING GARDEN PESTS & DISEASES

- [Home Vegetable Gardening in Washington WSU EM057E](#)
- <https://pubs.extension.wsu.edu/home-vegetable-gardening-in-washington-home-garden-series> (click on DOWNLOAD NOW)

YOU'RE NOT ALONE

- WSU Hortsense (E.g., search Google (e.g. for “WSU Hortsense apple”) That’s the easiest way. You can also go to the site: <http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx> Always search for the singular, not the plural. “Apple” will get results, “Apples” will not.
- PNW Handbooks (E.g., search for “PNW Handbooks apple”) <https://pnwhandbooks.org/plantdisease/host-and-disease-descriptions> Always search for the singular, not the plural. “Apple” will get results, “Apples” will not. This site also has information for registered pesticide applicators. Only follow chemical advice for “Homeowners.”
- **And of course, you can get in touch with us at the Plant and Insect Clinic!**
 - Call: 360-577-3014 Ext. 8
 - Email: cowlitzmastergardener@gmail.com
 - Submit photos and problem on our website: <https://www.cowlitzcomg.com/plant-and-insect-clinic>
 - PM us on our Facebook page: Cowlitz Master Gardeners



DIAGNOSTIC RESOURCES

- **Hortsense:** <http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx>
- **Pestsense:** <http://pestsense.cahnrs.wsu.edu/Home/PestsenseHome.aspx>
- **PNW Handbooks:**
- Insect Management <https://pnwhandbooks.org/insect>
- Plant Disease Management Handbook: <https://pnwhandbooks.org/plantdisease>
- Weed Management Handbook: <https://pnwhandbooks.org/weed>
- **WSU Plant Pest Diagnostic Clinics:**
- CAHNRS Plant Pest Diagnostic Clinic, Pullman
- WSU Puyallup Plant & Insect Diagnostic Laboratory

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