

Diggin' in the Dirt: Why OSU Tomatoes Do Well in Our Climate

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Bee class

There will be another bee class at the OSU Extension office in St. Helens (505 N. Columbia River Highway) on Monday, May 21 at 6:30 pm. The class will focus on the Varroa mite, its biology, treatments, and options for the future. The class is free and open to all.

Field to Market workshop

Dream of producing a value-added food product for sale? No idea where to start? "Field to Market" is for you. Learn from experts about Oregon Department of Agriculture (ODA) regulations, recipe selection, labeling guidelines, pH testing, record-keeping, and pricing. Learn about research-based processing techniques. Who should attend? Fruit and vegetable farmers and other food entrepreneurs interested in producing value-added products and those already producing a product and seeking additional guidance. Details of the farm direct value-added law also will be discussed. Date: Wednesday, May 30, 2018 1-4 pm. OSU/Columbia County Extension Office in St. Helens at 505 N. Columbia River Highway. Registration fee: \$25/person, \$40/couple (includes snacks and resources). Scholarships available. For more information, call our office at (503) 397-3462. To register go to <https://tinyurl.com/field-market-5-30-18>

Why OSU-bred tomatoes do well in cool and hot weather

Most fruit (whether it is an ap-



ple, tomato, or squash) is formed in response to flower pollination. Hormones from seeds create the fleshy ovary that surrounds them. There are some exceptions. Bartlett pears can set some fruit without pollination as can the figs we grow here. But these are unusual. Certain varieties of vegetable fruits of tomatoes, peppers, and cucumbers have identified genetic mutations that allow them to produce fruit without fertilization and seed formation. It is called parthenocarp. This gene complex has been selected by plant breeders over the years to assist in the production of greenhouse tomatoes, peppers, and cucumbers where pollination is challenging.

But it is also a valuable trait for outdoor tomatoes grown in cooler climates, like the Pacific Northwest. Standard tomato varieties don't set fruit well if temperatures drop to < 50° F. Flowers simply drop off. But parthenocarpic tomatoes will set fruit in these cooler temperatures. They have been part of the OSU breeding program that produced such varieties as Oregon Spring, Siletz, Santiam, Legend, and others. One of the original breeding lines came from Russia. The first fruits produced by these varieties will have few seeds if the tem-

peratures have been cool but as the season progresses, seeds return as normal fertilization processes take over.

But what if it gets very hot like it did last year (or like it can in a hoop-house)? I had many complaints that tomatoes simply stopped growing during last summer's heat waves. This is where it gets interesting. Many tomato varieties won't set much fruit above about 85°F (picky, this vegetable is) but many of those that can set fruit in low temperatures can also set in high temperatures. Our OSU vegetable breeder, Dr. Jim Myers, has heard that Oregon Spring has done well in the 100°+ F temperatures of an Arizona summer. It might be worth including some of these varieties in your garden for their adaptability to both low and high temperatures. Some good choices would be Oregon Spring, Glacier, and Stupice (not OSU selections) and Legend.

Garden topics

Spring is here, at least as this is being written. But with the roller coaster ride we have been on, nothing is sure. Vernonia's average last 32° frost date has passed, but that doesn't guarantee there still won't be one. Watch your weather forecasts and protect frost tender plants if a frost is possible. Here are some interesting figures on minimum and preferred soil temperatures for planting and the minimum and optimum air temperatures for growth:

Minimum soil temperatures for planting (°F)	
Snap beans	48-50°F
Corn	60-65
Peas	34-36
Peppers	55-60
Potatoes	39-41
Tomatoes	50-55
Carrot	39-41
Eggplant	55-60

Note that all of these seeds will germinate and emerge more quickly with soil temperatures 15-20° higher than the minimum.

Minimum and optimal air temperatures for best growth		
Snap beans	50	80-85
Corn	50	80-85
Peas	45	55-70
Peppers	60	70-80
Potato	45	50-65
Tomatoes	50-60	65-80
Cucumber	50	75-85

Fruit trees are having a tremendous return bloom after so little fruit last

year. Fruit set looks to be excellent. If you treat for codling moth and the apple maggot, you will want to start spraying by early June. I think products containing spinosad (some organic labels) are the best bet for the home gardener. The active ingredient is produced by a micro-organism cultivated to extract the material.

Slug pressure will increase as the weather warms. Mating and egg laying will set the stage for much larger populations. This is the time to trap, bait, slice with a hoe, or eliminate them with whatever your preferred method of control is. Be careful with the "metaldehyde" baits so that dogs or even cats won't consume them. The iron phosphate baits (Sluggo and others) are far less toxic but, in my experience, will be eaten by birds. We have used row covers over baited areas for several days to allow more slug and less bird consumption of baits. Several other "metaldehyde-alternative" baits are showing up. They are based on sulfur or a ferric sulfur compound. They are said to be as safe as the iron phosphate baits. Effectiveness of the ferric/sulfur material is good but the sulfur alone may be less effective.

Take excess produce to the food bank, senior centers, or community meals programs. Cash donations to buy food are also greatly appreciated.

The Extension Service offers its programs and materials equally to all people.

Free newsletter

The Oregon State University Extension office in Columbia County publishes a monthly newsletter on gardening and farming topics (called Country Living) written/edited by yours truly. All you need to do is ask for it and it will be mailed to you. Call (503) 397-3462 to be put on the list. Alternatively, you can sign up for email notification of when to find the latest edition on the web at <http://extension.oregonstate.edu/columbia/>.

Contact information for the Extension office

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Fishing is Free June 2-3 in Oregon

Learn to fish at events statewide

It's free to fish, crab, or clam in Oregon on Saturday and Sunday, June 2 and 3.

During these two days, no fishing licenses or tags (including a Combined Angling Tag or Columbia River Basin Endorsement) are required to fish, crab, or clam anywhere in Oregon for both residents and non-residents. Although no licenses or tags are required, all other fishing regulations apply including closures, bag limits, and size restrictions.

Look for the best opportunities in ODFW's Weekly Recreation Report,

which is updated every Wednesday.

Oregon State Parks are also free to visit on June 2-3, with day-use parking fees waived both days and free camping on Saturday, June 2 (an \$8 reservation is required to guarantee a camping spot).

ODFW and partners are also hosting a number of fishing events around the state. Volunteer angler education instructors will be loaning out fishing gear and giving tips on how to catch and clean fish at most events. For more details and contact information for these events, visit <https://myodfw.com/articles/2018-free-fishing-days-and-events>.



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