Colorado State University

# Community Garden News



What pests bothered your crops last year? What methods did you use to slow or stop damage? Which was more successful, you or the pests?

I tried to fight the flea beetles with soapy water on kale, kohlrabi, cabbage and basil, with slow results....

Mexican bean beetles and flea beetles seem to be consistent issues. I use only organic methods, so I usually hand pick bean beetles, eggs and larvae. I can usually do this enough to allow the plants to produce a crop, but by that time, the beetles have pretty much eaten everything so as soon as I harvest I pull the plants. Often I go on vacation and miss a couple of generations, and then it is hard to catch up. Flea beetles definitely won on my potatoes last year. I am looking into other organic pest control methods like neem oil and may try some new things this year. I've been tempted to bring temporary fencing and a couple of my chickens and let them hang out for an afternoon while I am working and help me with insect control! Not sure that would be allowed though, and a little challenging logistically.

Just some bean bugs eating the leaves. I use hand killing. Hope the wasp or some kinds of insect can come to eat them. Not much damage though.

The Mexican bean beetle (Epilachna varivestis) was the worst and they sucked the life out of each leaf of green beans especially, leaving only the "skeleton". I'm reading that diatamacious earth will kill them, and netting (Harvest Guard: 5' x 50' for \$18.50 is very effective but a lot of work if you're picking repeatedly. I'm going to try to plant early and be done early as they are worst in mid summer. Maybe also plant late, but I don't know if that will work in this short season.

Small fleas were a problem – used a spry and also a white cloth cover.

Boulder County

# Do you compost? Have you learned anything that makes the composting process more or less successful? Why do you not compost?

I compost everything from home and garden, what can be cut with small scissors. I spent a lot of time to air my pile and it works well in the summer heat, less well in

the colder days, worms are pretty active, so I get a lot of fibers into my soil.

Dear Gardeners, As usual, we have had unusual weather this summer, starting with lots of rain in spring, followed by many consecutive above 90+ degree days followed by a period of cooler temps and monsoon rainstorms in the afternoons. SO... What now? If anyone has observed any interesting responses from the weather, let me know!!

Thank you, Allison Appelhans Garden Coordinator



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I do compost some at home, but pretty passively (just pile everything and my chickens dig around in it). I mostly use the commercial compost delivered to the garden for my vegetable plots. I also have the city's curbside compost so most of our food scraps go there or to our chickens.

I do worm composting at home. If the garden had a electric wood chipper shredder, it will be helpful. Much of the garden trash can be shredded and be kept in the garden. Certainly, diseased leaves and materials should not be composted. It could save the money to haul away the composting dump load.

I Love composting but don't have room for it in our yard. It's also a lot of work and relatively cheap to buy.

I have 3 compost bins- 2 at home and one here. They can make great compost for the garden and also reduces the amount that goes in the trash.

## Community Service

Thanks to all of you who have donated your time to the garden. I can not tell you how much your efforts are appreciated! We have until November 15th to get those hours completed.

Did you notice that we have been donating some of our extra produce to the Longmont Food Share once a week on Thursday mornings. This organization makes it easy for anyone with extras to give to a worthy cause. If you have extras but are not able to leave it in the cooler outside the gate, feel free to bring it on into the office. We can keep it indoors until Thursday morning.

## Healthy Garden Tips

## *Temperature Tolerance Varies Both by Crop & Variety within Crop*

Just as human productivity can wane at the height of summer, so, too, can that of many vegetable crops.

Vegetables vary in their sensitivity to heat and humidity, and in the stage of growth at which heat can be most damaging. For some, the heat-sensitive stage is seed germination; for others, it's flower bud development, fruit set, or some other period. Understanding these stages is important to plant breeders developing heat-tolerant varieties in response to warming summer temperatures.

Surprisingly, many of the vegetables we think of as cool-weather crops will germinate at very warm temperatures: Brassicas in general germinate very well in a very warm greenhouse, so shade cloth is not generally needed. Cabbage and cauliflower will germinate at 100°F/37.8°C, carrots and onions at 95°F/35°C, turnips at 105°F/40.6°C. But they won't thrive if the temperature remains that high, because there are other growth stages that are more sensitive to heat.

Varieties of a single crop, too, vary in heat tolerance relative to one another.

#### **Cool-Weather Crops**

#### Broccoli

The critical period for heat sensitivity in broccoli lasts just 10 days, during which

time the growing point of the plant shifts from vegetative growth to flower bud initiation. This shift, not externally visible, occurs 10 days before the appearance of a tiny crown in the center of the plant, or about 3–4 weeks after plants are set out. Temperatures above 95°F (35°C) for more than 4 days during that critical period result in uneven, poorly shaped heads. A grower can use this information to choose which broccoli varieties to grow during which time slots, to maximize quality and yield.

#### Brussels Sprouts, Cabbage & Chinese Cabbage

Brussels sprouts, cabbage, and Chinese cabbage varieties perform reasonably well in areas with moderate summer heat.

#### Greens

Mustard Greens that perform well include all of Japanese origin. Southern Giant Curled is a more traditional type.

Shungiku, an edible species of chrysanthemum with finely serrated, deliciously aromatic leaves, is another heat-tolerant green of Asian origin.

Pac Chois also prefer cool weather, but will perform adequatley in warm weather.

#### **Red Malabar Spinach**

Heat-tolerant spinach substitutes include Tetragonia, also known as New Zealand spinach, and Red Malabar Spinach, which is heat-loving.

#### Spinach

For proper spinach germination, irrigation is a must, to keep soil temperatures cool. Spinach really likes cooler weather to germinate and grow, though slower growing varieties can be chosen for late spring and summer sowing. Spinach should always be harvested promptly, before it begins to bolt, or stems will become stringy and flavors will be off. The benefits of irrigation previously described apply to spinach.



#### Lettuce

All the basic cultural practices described in Part 1, including irrigation, shade cloth, and seeding in cooler locations, should be used with lettuce as well.

Whereas most lettuce varieties develop a bitter flavor when summer arrives, the Summer Crisps — also known as French Crisp or Batavia — keep their juicy sweetness. Muir, technically a Batavian type, is the most heat-tolerant. Other Summer Crisps include Concept, Nevada, Cherokee, and Magenta.

#### Carrots

Carrots are grown year-round, but summer heat causes increased bitterness and decreased sweetness.

When it's hot and dry, you can also grow shorter, smaller carrot types that mature relatively quickly.



Growing carrots in the shadier, cooler part of the garden is critical for bringing them successfully through the heat. Sufficiently irrigating carrots from seeding to harvest can help keep soil cool, and flavor better. Roots that are well irrigated will be milder and less bitter.

#### Radishes

Along with holding good flavor, evaluate radishes for heat tolerance by how crisp they stay and how soon they become pithy in warmer weather.

Most small round radishes do not do well in extreme heat. Some specialty types and Daikons work well. Note that the flavor of all radishes will tend to be hotter and harsher in flavor when grown in hot weather than when grown in cool weather. This is especially true of the specialty and daikon types.

Even the most heat-tolerant, cool-weather varieties have their upper limits.

Succession planting plays a fundamental role for a longer harvesting season, including the use of summer-plant for fall-harvest varieties. While succession planting is often regarded as a season extension strategy in principle, in this case, it relates to working in sync with seasonal temperature cycles, leveraging higher germination temperature ranges of certain crops and planning the time of harvest to occur in cooler temps. Brassicas, carrots, and turnips are prime candidates for planting in the heat of summer.

No matter where you grow, putting a plan in place before the arrival of hot, weather will help minimize the detrimental effects of heat on your success. By choosing varieties known to be heat-tolerant, timing your plantings accordingly, following a plan correctly — as well as tracking what works best under which conditions — you can maximize the quality of your cool-weather crops during warm and hot weather.

http://www.johnnyseeds.com/growers-library/ vegetables/heat-tolerant-cool-weather-crops.html



# **CSU** Trial News

## *Possible health benefits of fruit growing in our trial gardens*

Spending many hours picking, weeding, fertilizing and watering the small fruits in our CSU trial plots has promted me to look into what may be the healthiest of our fruits. In addition, Aronia berries, Serviceberries and Elderberries are grown for ornamental value in home gardens in our area. Below is a quick comparison of just some fruits that grow in our region.

### What are ORAC Units?

The ORAC (Oxygen Radical Absorbance Capacity) unit, ORAC value, or "ORAC score" is a method of measuring the in vitro antioxidant capacity of different foods and supplements. More than two decades in the making, it was originally developed by scientists working at the National Institutes of Health (NIH) and USDA. Measuring in vivo (meaning inside the human body) is not possible and for that reason, the exact relationship between the ORAC value of a food/ supplement and any suspected health benefit it may have as a result is unproven. However, many scientists theorize that foods higher on the ORAC scale may be more effective at neutralizing free radicals. Although unproven, according to the free-radical theory of aging, this may slow the oxidative processes and free radical damage that can contribute to age-related degeneration and disease.

| GOOSEBERRY (Dried) | 261500 |
|--------------------|--------|
| CHOKEBERRY         | 16062  |
| SERVICEBERRY       | 15000  |
| ELDERBERRY         | 14697  |
| BLACKBERRIES       | 5905   |
| RASPBERRIES        | 5067   |
| BLUEBERRIES        | 4669   |
| GOJIBERRIES        | 4310   |
| STRAWBERRIES       | 4302   |
|                    | 10 1   |

https://www.superfoodly.com/faq/