Colorado State University EXTENSION

Community Garden News

A few weeks ago, a survey was sent out to get some feedback on the community's gardening experience over the years. Thanks to the many folks who participated! I will be featuring the Q & As in the future newsletter. Some of you all have worked together and learned from one another which is fantastic!

Q. What have you learned through gardening over the past few years?

1. The Colorado climate is predictable to some degree from May to October only. Patience will be rewarded.

2. I have never grown veggies before so I have learned about tomatoes (I grew way too many plants from seed for my needs) I learned not to use the small seed starter containers because the seedlings stop growing at about an inch tall. They didn't start growing again until I transplanted them in to the garden bed. Also, I discovered organic gorilla hair mulch at Home Depot which is much finer and decomposes quicker than the wood chip mulch.

3. Best is mulching.

4. Over the past few years of gardening, I have learned that growing produce in Colorado is a lot of work! However, I have also learned that gardening is very therapeutic for me, and although I won't have the most picturesque, organized, perfectly weeded garden, I can produce an amazing amount of wonderful produce and flowers that bring joy not only to my family, but friends, coworkers and others! I can a lot of things (spaghetti sauce, all kinds of pickles, etc) and so we enjoy the taste of summer sunshine all winter long and my Christmas gifts are usually canned goods that everyone always enjoys! Also, I have learned that every year is different. What does really well one year does not do well the next due to weather, or insects, or whatever. Now I don't stress about the fact that a few things won't do well, and focus my energies on whatever it is that is doing really well that year. It's always different and always a surprise! Finally, I have learned that I will always over-commit to what I can keep up with in the summer, so every year by late July, my plots are a bit out of control! I sort of like my crazy, overgrown garden though!

5. What we learned was that there is a science to balancing the soil in its mineral and organic contest so that plants can thrive. Simply balancing pH and supplying NPK are not nearly enough. The crux on which all this is based is that microbes, molds, insects and so on, are nature's way to destroy unfit plants. Therefore, through a healthy, balanced soil releasing nutrients evenly as needed, will actually allow plants to do well in spite of environmental factors. Having said that, there are such bad macro-environmental conditions that even the healthiest plants can't combat. For these large scale attacks, especially of insects, special practices must be employed. A couple of weeks ago I took soil samples from our plot, from 0" to 10" and 10" to 20" and sent them to a friend who will personally have the tests done and give me the guidelines for balancing the soil. I'm certain that in spite of each plot having been treated differently over many seasons, the basic soil structure should be very similar for all.

6 I have learned that gardening in Colorado is so different than gardening in Wisconsin. Temperatures are much hotter, drier, and soil is not as rich.

7. I have learned that if I water my soil without a protective layer of mulch, the sun bakes the soil into a crust that seedlings can't get through.

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Boulder County

Community Service

Thank you Archie for straightening the trellis post for the hops that has been leaning for years. It looks so much better, and will help the hops grow even better! Your initiative is greatly appreciated.

Thank you Gaylynn for our lovely bulletin board design! It is such a friendly welcome to the garden.

We require that each plot donate two hours of community service. This is in addition to the maintenance of your personal gardening area and pathways. We will have community work days listed for those of you who would like to work as a group. You are also free to work on your own with a pre-approved task as some tasks will be already spoken for. ***Please get approval from the Garden Coordinator before you do any projects.***

Ideas for community service work.

We like unique suggestions from you all!

- Weeding in general ... and always.
- Organizing events, talks, seed swaps, pot lucks etc.
- Donations of **needed & approved** items including more hoary hoes, soil amendments, gas & oil for tiller.
  **** We can not accept everything!***
- "Adopted" a certain area of the garden to keep weed free.
- Building repairs, pathway maintenance, recycling scrap metal.

Dates to Remember

Saturday - Sunday May 5-6th.
Growing Gardens Plant Sale
1630 Hawthorne Ave. Boulder

Saturday May 12th
Annual Plant Sale
Boulder Garden Club
(Saturday before Mother's Day)
Unitarian Universalist Church
5001 Pennsylvania Ave. Boulder

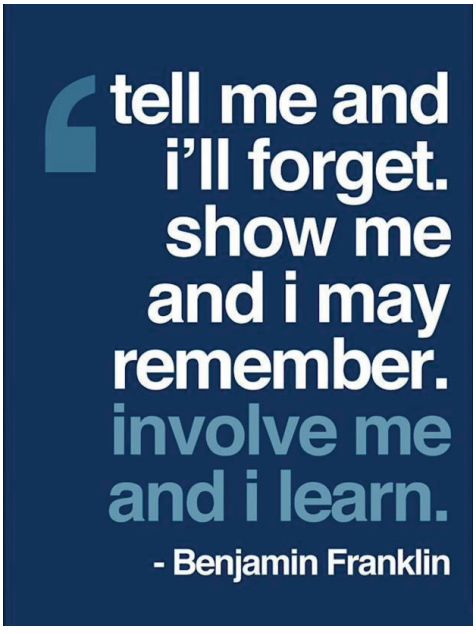
Tuesday May 15th
- Plots must be obviously worked and weed control begun by May 15th

June 8th & 9th (9 am – 3 pm)
The LSO Longmont Symphony Orchestra Guild Garden Tour,

Work days

Group efforts will be on the following dates. *Dates are subject to change – weather delay will be rescheduled TBD. Volunteer time is from 7-11 am. This is to avoid conflict with other plans people may have and to avoid hot weather.*

Saturday, June 22nd



Healthy Garden Tips

To Till or Not to Till?

Colorado's soil begs to be tilled. The hard clay and the scant amount of organic material found in our soils typically need organic input before it is workable. Like any other hotly debated issue, it is easy to find information to support any point of view. For this month's Healthy Garden Tips article, I have researched the subject to share with you.

Some people believe that tilling two times a year, is the best way to go. After all, it does make the soil easier to work with by loosening the clay that is a headache to gardeners all over Colorado. Adding oxygen into the soil's structure AND breaking up the compaction just feels good when you can do it with a power tool. It is a great way of adding amendments like compost, bags of leaves, peat moss, as well as chemical or organic fertilizers. Last but not least, it looks great and ready to go after you are finished with this satisfying gardening task. CSU Extension has said that tilling *can* improve the structure of the soil over time, but there is also opposing evidence.

Similar to over-working bread dough, some believe that over tilled soil can easily become compacted. Many believe that the tilling process destroys the natural structure of the soil by disrupting rotting roots which naturally construct pathways for water, air and nutrients into the soil. There is no question that tilling destroys worms and disrupts other soil microbes. Bacteria, fungi and soil fauna all work symbiotically within the environment and when that environment is disrupted, and it takes a while to recover. Soil ecology is complex.

Without human intervention, the following description is a quick explanation of what happens to create the soil's ability to sustain life: Decaying material builds up on the surface of the soil and begins to rot at the interface of debris and soil. Microbes, insects and worms work up from the earth to eat the decaying plant materials. Live plants are a major contributing health factor for soils. Roots dig down into the soil moving nutrients and moisture throughout the structure. Also affecting the soil's health are; small animals burrowing into the earth and excreting waste, exposure to rain and snow, wind and sun, dead plant or animal material breaking down creates a world of its own. This is natures' way of tilling – and it works very well! Keep this in mind when building your soil. Organic amendments are the best.

In the veggie garden, we must speed up this process if we want to be successful.

Why is our soil so difficult anyway? There is very low organic matter in our soils, typically around 3%. Clay soil is more nutrient dense then average soils, but needs to be amended so that plants can fully utilize those nutrients. Clay soils are slow to warm in the spring, and have a tendency to be alkaline. Our soils cause problems for building structures and roads as well. Expansive soils are fairly common in the area and precautions must be taken to avoid structural problems when constructing roads, buildings and homes. Most of Colorado has either very clayey soils or sandy soils which are essentially very small rocks. Both types of soil are improved by adding organic matter into the soil.

As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance. By farming using soil health principles and systems that include no-till, cover cropping and diverse rotations, more and more farmers are actually increasing their soil's organic matter and improving microbial activity. As a result, farmers are sequestering more carbon, increasing water infiltration, improving wildlife and pollinator habitat — all while harvesting better profits and often better yields.

https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/soils/health/

We all want better tilth in our soils, and tilling seems to speed up this process. It often takes years to create the soil we are all after. Patience and care is needed. Soil tests are always interesting and a great idea, but it is a safe bet that you can add plenty of good, well-rotted compost every year to a veggie garden.

A few precautions could make all the difference to your results: Delay tilling if the soil is too wet. Not only is it physically more demanding, but it can easily compact soils. If the soil feels sticky and slimy it's too wet. If it is too dry, you may not be able to dig in deep enough to make a difference. If it crumbles easily, and does not turn into dust, go for it. Consider tilling when it is still fairly cold outside, but the soil is not frozen. Worms are still in a state of hibernation deeper in the soil and therefore, may not be as disrupted as they are when the soil is warmer.

Once your soil is as healthy as possible in as little time as feasible, you will want to care for the newly tilled space by not walking on it, never over-saturating it and not allowing it to bake in the sun into a hard crust by protecting it with mulch.

Both tilling or not tilling have advantages and disadvantages either way, but there is a happy medium. Many people say that using a special pitch fork to incorporate amendments into the soil is less destructive. Shallow tilling (4-6") may be as affective with less damage to organisms living the soil. Deep tilling seems to bring up problematic clay and can actually damage the machine and perhaps your back as well.

There are many informative articles on this subject. One that I found interesting was, Effects of Implementation of Soil Health Management Practices on Infiltration, Saturated Hydraulic Conductivity, and Runoff (Sept 2016) from the Natural Resources Conservation Service on soils. In summation; soil is improved more effectively by crop rotation, root crop planting such as sugar beets, as well as planting legumes to increase nitrogen levels planting cover crop, adding amendments such as compost and manure, and mulching than by traditional tilling on farm land.

https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/health/mgnt

Community Critters

Coddling Moth

The most common pest of apple and pears. The damage they cause are know as spots which are the entry areas of the larvae into the fruit. The larvae then matures inside of the fruit damaging it and then goes on to reproduce another generation or two per season. Perseverance is needed to get a decent crop of apples.

- The caterpillar of the codling moth is the common 'worm' in a wormy apple or pear.
- Most injury is usually produced by the second generation, which begins in early summer.
- Non-chemical controls that can reduce fruit damage include fruit thinning, prompt removal of infested fruit, bagging of fruit and the use of certain traps.
- Insecticides are useful when applied to coincide with periods when eggs are being laid and before the newly hatched caterpillars borer into fruit.
- Pheromone traps can be useful in timing sprays.

There are great many natural controls of codling moth, including some parasitic wasps and a host of generalist predators of insects. However, they generally do not provide enough support to fend off coddling moth satisfactorily.

A common point of insect entry is where two fruit are in contact. Thinning fruit to prevent this can result in reduced fruit attacks. Thinning of fruit also makes good spray coverage possible and spray programs that are much more successful on properly pruned trees with thinned fruit crops. Fruit that is already infested and that still contain larvae should be picked and destroyed.

Successful pupation of codling moth is dependent, in part, on there being adequate sources of cover. Removing sheltering debris from the vicinity of the base of the tree can deny cover. Flaps of bark that may develop on older trees also provide pupation sites and these should be eliminated. Trunk banding involves purposefully providing areas for pupation, so that the insects can later be destroyed. Bands can be created by cutting strips of corrugated cardboard 1 1/2 to 2 inches wide and long enough to wrap around a branch. Check and replace these traps regularly, otherwise you are providing a nursery for the larvae.

Pheromone Traps. The sex pheromone produced by females to attract male moths can be reproduced and used as a lure. These will attract males only and has no effect on females. Traps that incorporate pheromone lures are routinely used to monitor flight activity of codling moth. However, alone they are not a useful method of control.

Look for info on the following fact sheet on how trapping and calculating "degree days" can affectively support efforts of coddling moth control. Degree days are a measure of temperature highs and lows occurring during a day over a period of time. They are useful for predicting the activity of codling moth (and many other insects) because insects are cold-blooded and development follows temperature.

There are only a very limited number of spray products on the home garden/consumer market that are available for managing codling moth in home orchards. All of these require repeated application, timed for periods when eggs are being laid and are hatching, and thorough coverage of fruit.

The extension office alternates between 2 different types organic sprays every 7-10 days. Other methods of control we will be implementing this season are the thinning of apples, trappings, trunk wraps, dormant oil in early spring, as well as possibly the use of kaolin clay.

http://extension.colostate.edu/topic-areas/insects/codling-moth-control-in-home-plantings-5-613/

Get involved

Is anyone interested in a seed or start swap? If starting your own seeds, it is easy to end up with way too many plants. Please let your Garden Coordinator know if you may have extras and we can set up a date to exchange!

May's Tasks

- Plant carrots, lettuce, potatoes, corn, beans and peas with the exception of the warmer weather crops, can be seeded or planted into the vegetable garden at any time now, or a second seeding if you already have some going.

- Consider waiting to plant your tomatoes until early June unless you use a wall of water, as a late frost can permanently stunt tomatoes.

- Thin seedlings with scissors.

- Divide fall blooming perennials if...

1. Clumps have started to die out in the middle. The classic "dough nut" shape with an empty hole in the center is a sure signal to divide the perennial clump.

2. Flowering performance has declined. The clump may have become congested, or the roots old and woody.

3. Soil nutrients have been exhausted around the clump. Signs of this might be stunted growth, yellowish leaves or lack of bloom. Dividing and moving to a new location is a wise idea.

4. Perennial weeds have infested the clumps. When this happens, the best approach is to dig up the entire clump, divide it, and toss any weed materials.

5. Dividing established clumps can provide new plants for a new garden bed, or to share with friends and neighbors.

In general, it is best to divide spring and summer blooming perennials in the fall, and fall bloomers in spring. By dividing the plant when it is not flowering, all the plant's energy can go to root and leaf growth.

https://www.perennials.com/content/dividing-perennials-in-the-spring/

www.clemson.edu/extension/hgic/plants/landscape/flowers/hgic1150.html

Terms to Know

Trunk banding involves purposefully providing areas for pupation, so that insects can later be destroyed. Bands can be created by cutting strips of corrugated cardboard 1 1/2 to 2 inches wide and long enough to wrap around a branch.

Degree days are a measurement used for the purposes of determining when to begin spraying for coddling moth based on daily calculating the number of degrees that the average temperature (maximum temperature + minimum temperature/2) exceeds the base temperature of codling moth activity (50°F).

Kaolin clay. The use of Kaolin clay in the garden has been found to control insect pests and disease as well as protecting against sunburn or heat stress and may enhance fruit color too.

A natural mineral, Kaolin clay works by creating a barrier film by covering the leaves and fruit with a white powdery film, which adheres and irritates insects, thereby eliminating their scavenging on fruit or leaves. Using Kaolin clay on fruit trees and plants helps repel many types of insects such as grasshoppers, leaf-rollers, mites, thrips, some moth varieties, psyllids, flea beetles and Japanese beetles.

Using Kaolin clay insect control could also reduce the affects of damaging birds by leaving them no delicious bugs to munch on.