

**Adam Watson, Agriculture Extension Agent**

For the safety of our clients and staff, the Washington County Extension Office is-until further notice-closed to public access. Extension staff are working from home and can be reached by phone or e-mail. Please dial (423)753-1680 for immediate assistance. E-mail addresses for each Washington County Extension staff member can be found by clicking [here](#). You're always welcome to reach me, Adam Watson, by email [watson@utk.edu](mailto:watson@utk.edu) or by cell 423-430-6711.

**Success With Tomatoes**

We've finally reached the time when tomatoes can be planted out in the garden with little chance that we'll see a frost or freeze. So here are a few tips for success with perhaps the most popular vegetable.

Tomatoes are an exception to the basic planting depth rule. The best practice for transplanting plants of all kinds (vegetables, woody plants, etc.) is to plant them at the same depth they are growing at. Tomato transplants, however, can be planted deeper than they were originally as their stems will form roots when in contact with the soil.

There are two basic options for taking advantage of this. The first is to simply set the root ball below the soil level by a few to several inches. The second is to plant the tomato horizontally; lay it trench or depression a few inches deep and cover with soil. Be sure to leave the growing tip and a few leaves above the soil surface with both methods and pinch off any leaves that will be covered by soil. Tomatoes planted in this way will quickly establish a good root system and will be less susceptible to fluctuations in soil moisture due to the larger root system.

Blossom end rot of tomatoes is an often seen problem in home gardens. While it is evidence of a calcium deficiency in the tomato fruit its actual cause is uneven irrigation. Calcium is delivered to plants by the water that they take in. A dry period reduces the delivery of water to the fruit and the subsequent deficiency of calcium is seen. While the immediate thought for some is to add calcium to the soil, a better fix is to create even moisture availability for the plants.

Plants should be irrigated as frequently as needed, but

it's best to water deeply and infrequently rather than shallow frequent waterings. You can actually dig down six inches in the soil to see how deeply the irrigation is reaching.

Keep in mind that as plants mature-as well as when temperatures rise-their water use increases so be prepared to increase the volume of water you apply as the season progresses. It's best to apply irrigation at the soil level and not on the foliage of the plants. Drip irrigation and soaker hoses can make irrigating a garden easier.

The use of organic mulch such as straw, or woodchips, help preserves soil moisture longer and will add nutrients over time as they decompose. Organic mulches additionally prevent soil from splashing onto the lower leaves of a tomato; if pathogens are present in the soil then this can prevent some diseases.



DSC05447 blossom end rot calcium deficiency" by Plant pests and diseases under CC PDM 1.0

The Guinness World Record for heaviest tomato was claimed in 2019 with a tomato that weighed 9 lb. 4oz. It was grown by Steve & Jeanne Marley. The variety was Domingo.

## Fertilizer Labels Explained

If the fertilizer is labelled 20-20-20 then,

Nutrient	Nitrogen(N)	Phosphorous(P)	Potassium(K)
Measured	% Nitrogen	% P <sub>2</sub> O <sub>5</sub>	% K <sub>2</sub> O
Actual Content	20%	20%	20%

Fertilizer recommendations may only say P or K rather than P<sub>2</sub>O<sub>5</sub> or K<sub>2</sub>O, but they are still reflective of the measured form of the nutrient.

The numbers on fertilizers reference the nutrient content of the 3 Macro nutrients Nitrogen, Phosphorous, & Potassium. In this example to apply 1 pound of actual Nitrogen then it takes 5 lbs. of 20-20-20.

## Vegetable Garden Fertility

### Preplant Fertilization

It's difficult to apply all the fertility that plants need in one single application. The best practice is to apply half the required fertilizer before or simultaneously to planting with the balance to come as the season progresses. This allows for adequate nutrition to be in place for that plant as it grows but also reduces the potential loss of fertilizers due to run off or leaching.

Of course even that begs the question how much fertilizer do I apply? The best way to answer that is through a soil test. A soil test supplies an actual measurement of various nutrients that are present in the soil and other important factors such as the soil's pH. pH is important to know because it relates to nutrient availability, and certain plants need higher or lower pH's to grow best.

Normally you could bring soil samples by our office where we'd submit them and your payment to the [UT Soil Plant and Pest Center](#). However, given our office closure, we currently have the soil test forms and the sample boxes outside our office in a plastic tote. Simply fill the box sample box, complete the form, then mail it with the \$15 payment-or pay the soil center online-to the [UT Soil Plant and Pest Center](#).

One nutrient omitted from the standard soil test is Nitrogen. Nitrogen recommendations are based on the expected use of the crop planted. For every 1,000 sq feet of vegetable garden space apply 1.5lbs actual Nitrogen preplant. To figure out how much fertilizer to apply:

$$\frac{\text{lbs. of actual N needed}}{\text{needed \% N available in the fertilizer}}$$

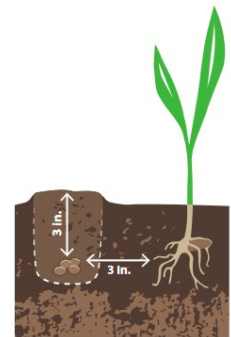
### In-Season Fertilization

Sidedressing — this term refers to fertilizers adding during the crop growing season to provide certain plant nutrients, like nitrogen, that may be more quickly taken up by plants or lost by leaching (water moving through the soil and taking nutrients with it). While sidedressing can be helpful, it should be done carefully because excessive fertilization can actually reduce fruit production. So, follow [directions](#) for specific crop needs and timing during the growing season which can be found in [Getting the Most Out of Your Home Vegetable Garden Soil Test Report](#).

#### In-Season Nitrogen Fertilization for Vegetable Crops

Crop	Timing in season/ fruit or plant size	Application rate/100-ft. row 36-inch centers			
		33-0-0 or 34-0-0 Ammonium nitrate or urea	15.5-0-0 (calcium nitrate)	Bloodmeal, feathermeal (12-0-0) *	Soybean (7-1-2), cottonseed (6-2-1) meal or fish fertilizer (5-1-1)*
Tomato	First fruits are 1 in. diameter	Not recommended	1.5 lbs.	2 lbs.	4 to 5 lbs.

*Find the full chart at the link above for many different garden crops.*



Sidedressing applying fertilizer in a band beside the crop during the growing season.

## Houseplants

It's that time of year when houseplants are poised to come into their own. If you're like me "house"plants is a bit of misnomer as many of my plants stay outdoors during the late spring through to early fall. The quantity and quality of light that they receive outside is tremendously better than I can achieve keeping them indoors given my less than ideal window exposure.

Use caution as you transition plants to outdoors. Placing plants directly in full sun can lead to sun burnt plants. Transition them gradually into full sun (try keeping them shaded at first) over a week to allow them to acclimate to the changing environmental conditions.

It's a good time to examine your plants closely and assess your plants condition. Some may need pruning, others might need repotting. When repotting you want to move up in size to a pot no more than 2 inches greater in diameter. Small plants in a large pot are very likely to remain too wet and lead to root diseases.

Using fertilizers is a great way to ensure healthy robust plants. Keep in mind that too much of even a good thing like fertilizer is bad for plants. Many planting media mixes come with fertilizers included so be careful not to over fertilize plants. Follow the label directions on your favorite fertilizer and remember that some slower growing plants might prefer half strength fertilizer rates (half the amount).

Once outside it's not a bad idea to consider flushing the potted plant particularly if you notice a white or yellowish crust on the soil of your pot. Dissolved minerals exist in water and come from fertilizers as well. Over time these salts can build up to a level which can harm plants.

To flush the salts, use water with no fertilizer to water the plant until the volume flowing from the drain hole(s) is equal to at least 50% of the volume of the container. Don't allow the container to sit in the flushing water; if using a saucer or tray under plants be sure to empty it. This flushing can be done as needed and typically twice a year is sufficient. If the plant is out of doors then heavy rains can sometimes complete this task for you.



## Container

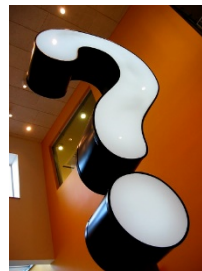
### Myths

Placing gravel or rocks in the bottom of a container does NOT improve the drainage of a container. It only reduces the volume of the container. The best way to ensure proper drainage is to use a potting media formulated for the conditions preferred by the plant. Succulents for instance need well drained medias that are drier than other mixes so they contain higher proportions of perlite,

or other components to aid in drainage.

### Timely Garden Tips

- Leave the clippings on the lawn. They do not contribute to thatch build up.
- Don't mow too short! Lawn height influences health; mow fescue lawns at 3-4".
- Plan to prune spring blooming shrubs like azaleas, flowering quince, and oak leaf hydrangea soon after they've finished flowering.
- Woody perennial herbs like rosemary, rue, and lavender can be cut back as the threat of freezes is now past.
- To save leftover seed for use next year, keep the seed in the freezer. Keeping the seed cold preserves its quality and germination potential.
- Remember! Don't cut spring bulb foliage until it turns yellow and brown; the leaves feed the bulb for next year's show.



**Have a garden question? Send me a picture by text/email or give me call? 423-430-6711**

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# Washington County Home and Garden Newsletter- May 2020

## Upcoming Classes(click the pic to Register)

May 12<sup>th</sup> @ 6:30 pm Herb Thyme: Garden to Table



UT EXTENSION WASHINGTON COUNTY

### HERB THYME: GARDEN TO TABLE

Starting at 6:30 PM via Zoom Online Platform  
May 12th Join Adam Watson & Elizabeth Renfro as they discuss growing your own herbs and how to cook with them.  
Register at: <https://tiny.utk.edu/HerbThyme>

May 21 @ 6:30pm Gardening for Pollinators



### GARDENING FOR POLLINATORS FREE!

Are interested in how you can use your garden to help pollinators? Would you like to learn what to plant in your garden to attract and host butterflies? Then you should join Adam Watson and Michaela Slagle-Saylor for **Gardening for Pollinators on May 21 @ 6:30pm**. To register go to <https://tiny.utk.edu/gardenpollinators>

Real. Life. Solutions.

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Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.  
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### Finding Local Farmers and Farmers Markets

- [Appalachian Resource Conservation and Development Council](https://arcd.org/farmstofolks/) has created a website where you can connect to local farmers in our area.  
<https://arcd.org/farmstofolks/>
- The [Jonesborough Farmers Market](https://jonesborough.locallygrown.net/) is operating an Online Market where orders can be placed Wednesday Noon-Thursday 6:00pm for Saturday pick up  
<https://jonesborough.locallygrown.net/>
- [Johnson City Farmers Market](#) has opened Saturday markets with a few changes to their normal operations [please read this Facebook post for the details.](#)

Following the farmers markets on Facebook is probably the best way to stay up to date on their status.

For questions about your home and garden please feel free to contact me, Adam Watson, Agriculture Extension Agent [watson@utk.edu](mailto:watson@utk.edu) or by cell 423-430-6711. Emailing pictures is a great way to get questions answered while travel is currently curtailed.

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