W 436

Tennessee Home Vegetable Garden

2020 Calendar

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2020 Tennessee Home Vegetable Garden Calendar

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This calendar has been developed to assist you in formulating an overall plan for your residential vegetable garden. Utilize the calendar to schedule various planting, harvesting and management practices. However, there are many other excellent resources available from UT Extension that will be an asset to you in planning and managing your garden, so they are linked within this calendar. And, this calendar is also available online as a fillable PDF (extension.tennessee.edu/publications/Documents/W436.pdf).
We hope this calendar is one step in your successful garden vegetable journey.

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Getting the Most from the 2020 Home Vegetable Calendar

Step 1. Be aware of climate and temperature trends in your specific location.
The dates listed in the calendar are averages for different regions of the state. However, there is a large range in growing season length across Tennessee, so it is always good to be familiar with the local climate data to most usefully adapt dates from this calendar.

A brief table is below. Additionally, more detailed information can be found by consulting weather.gov/media/ohx/PDF/frostfreezeprobs.pdf. This National Oceanic and Atmospheric Administration (NOAA) publication will allow you to look at frost/freeze probability data for all stations in Tennessee.

	Bristol	Chattanooga	Clarksville	Crossville	Dyersburg	Jackson	Knoxville	Lawrenceburg	McMinnville	Memphis	Mtn. City	Nashville
Last Spring frost*	May 3	April 17	April 27	May 10	April 15	April 18	April 22	April 30	April 28	April 9	May 26	April 21
First Fall frost*	Oct. 6	Oct. 21	Oct. 4	Oct. 4	Oct. 16	Oct. 13	Oct. 17	Oct. 5	Oct. 6	Oct. 30	Sept. 18	Oct. 10

**The values reported here are the most conservative because they are dates where there is only a 10 percent chance of a frost occurring after (spring) or before (fall) these dates.*

Step 2. Utilize the full selection of UT Extension publications and resources for home gardeners.

Check out UThort.com to find all of these publications and more.

The Tennessee Vegetable Garden Series (W 346-)
A. Site selection and soil testing extension.tennessee.edu/publications/Documents/W346-A.pdf
B. Garden planning, plant preparation and planting extension.tennessee.edu/publications/Documents/W346-B.pdf
C. Managing plant nutrition extension.tennessee.edu/publications/Documents/W346-C.pdf
D. Plant management practices extension.tennessee.edu/publications/Documents/W346-D.pdf
E. Building and using raised beds extension.tennessee.edu/publications/Documents/W346-E.pdf
F. Season extension methods extension.tennessee.edu/publications/Documents/W346-F.pdf
G. Stewardship in soil management extension.tennessee.edu/publications/Documents/W346-G.pdf
H. Growing tomatoes extension.tennessee.edu/publications/Documents/W346-H.pdf
I. Harvest and storage extension.tennessee.edu/publications/Documents/W346-I.pdf

A series of ten crop specific publications on garden vegetables numbers D57-61, D68-71: extension.tennessee.edu/publications/Documents/D57.pdf

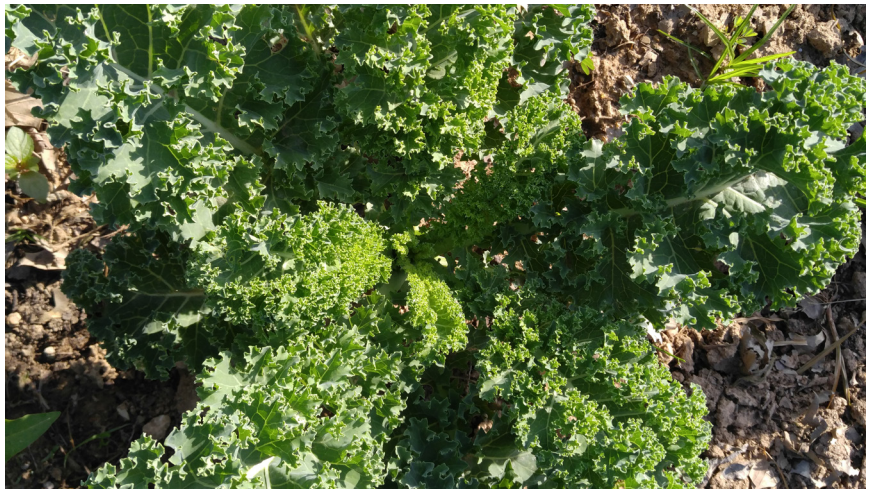
W 661 Conventional and organic garden products extension.tennessee.edu/publications/Documents/W661.pdf

W 316 Home vegetable garden disease control extension.tennessee.edu/publications/Documents/W316.pdf

PB 595 You can control garden insects extension.tennessee.edu/publications/Documents/PB595.pdf

TASKS FOR JANUARY

- Check out this calendar as a fillable PDF to keep records through the year extension.tennessee.edu/publications/Documents/W436.pdf
- Harvest remaining fall cool-season crops still in the garden. Some of the most cold hardy are likely to be spinach and kale (below).
- Work on your garden layout and planting plans for this year. These plans should be based on a rotation among plant families (see December). They should also include any changes that are required due to pest and disease issues that were seen the prior year. extension.tennessee.edu/publications/Documents/W346-A.pdf
- Test germination on remaining garden seed to ensure viability.
- Gather materials for producing transplants (if you grow your own). These materials should include new or sanitized trays and containers as well as a pathogen-free growing substrate designed for seed starting. extension.tennessee.edu/publications/Documents/W346-B.pdf
- Order seeds for your 2020 garden, especially those for transplants. Check out UT trial results to support your selection (see February).
- In some parts of Tennessee, seeds for cool-season spring transplants will need to be started in January.



Getting Started on Your Garden Site — Soil Testing

One of the most useful but overlooked practices for the home gardener is soil testing. Knowing what nutrients are in your soil and the current pH can make a big difference in your garden success.

Sampling: The Where

Remember, the results are only as good as the sample!

- If your area is uniform, you can make one composite sample. Collect 10 to 15 subsamples in a grid or zigzag pattern to make sure the overall sample represents the whole area.
- If the soil appears different in portions of your garden spot, you will need to take multiple samples to represent each distinct area.

Sampling: The How

- If using a soil probe, take soil cores that are 6 inches deep since that is the common rooting depth of many vegetable plants.
- If using a spade, remove a shovelful of soil 6 inches deep. Then take another thin slice of the soil with the spade that covers the whole 6 inches of the hole. The center of that slice is a great soil sample.
- Be sure to remove any grass, rocks and other debris from the sample.
- Mix together all the subsamples in a clean (non-galvanized) bucket/ container and allow them to air dry before packaging.

Sampling: The Who

- The UT Soil, Plant and Pest Center (ag.tennessee.edu/spp) has all the needed testing and mailing information. You can obtain soil test boxes from your local Extension office.

Soil reports: The What

- Soil test reports provide information on current soil conditions and recommendations for amending this soil to reach optimum productivity for the crop. For more info check out this new UT Extension publication: extension.tennessee.edu/publications/Documents/W804-A.pdf

Plus, see the new in-season fertilizer page at the end of the calendar!

JANUARY 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	**2** Review cultivars and crops that performed well last year in your garden.	**3** Six weeks until early date to plant kale in West TN. Seed soon if raising transplants.	**4**
5	**6** Prepare your garden plan—by hand or digitally.	**7** Make sure to follow a rotation of crop families.	**8** Review any new cultivars to try this year and check out the UT garden trial report at uthort.com.	**9**	**10** ○ FULL MOON	**11**
12	**13**	**14**	**15** Test germination of leftover seed from last year.	**16** Prepare seed order for remaining cool-season and warm-season seeds for planting.	**17** Remember that many diseases can be prevented by ordering disease-free seed.	**18**
19	**20** Purchase or gather materials to prepare transplants.	**21** Be sure to purchase pathogen-free media and clean containers.	**22**	**23**	**24** ● NEW MOON These green-colored squares remind you to keep track of your garden.	**25** There are several record sheets at the end of this calendar. There are also boxes on each month.
26	**27**	**28**	**29**	**30**	**31**	
Notes on crops:				Notes on weather:		

TASKS FOR FEBRUARY

- Seed cool-season crops for transplanting if needed. Broccoli, cabbage, cauliflower and similar crops will need approximately 8 weeks from seeding to transplanting. A late March or early April planting will require an early February seeding.
  extension.tennessee.edu/publications/Documents/D59.pdf
- Order remainder of garden seeds for the 2020 garden. Direct seeded crops can be ordered later, but earlier is better for best selection.
- Seed the earliest of warm-season transplants. Peppers often need 10-12 weeks to produce a nice transplant, so an early May transplant date will require a February seeding.
- If conditions allow, you may prepare soil for early seeded cool-season crops. Allow plenty of time for cover crops to decompose as this process is slower under cooler conditions.

Starting Your Own Transplants — Location and Lighting

Location, Location, Location

Where to start home garden transplants depends on two important factors: light and temperature. Home greenhouses can be a great spot because of the good light, but you must also be able to control the temperatures to support good germination, especially for warm-season crops. Since relatively few folks have a home greenhouse, many start transplants indoors. Select a spot that can be kept warm and has good air movement. Then, you will need to focus on lighting. A cold frame or hotbed can also work well for starting transplants, especially cool-season crops.

The Sun or a Substitute?

Most indoor locations don't have enough light for good seedling growth, so supplemental lighting is essential. The most common plant grow lights are florescent lights called T5s. Make sure the growing flat is completely under the light. Lights should be placed 6-10 inches (two-bulb fixtures) or 10-12 inches (four-bulb fixtures) from the top of the plant and run 12-14 hours each day. Small one-bulb fixtures will likely not provide enough light. Watch your seedlings' color and stem length/thickness and adjust lighting if stems are thin or if you see leaf yellowing or burning.

IN THE SPOTLIGHT
The Tennessee Home Garden Variety Trial

Have you ever wondered how variety recommendations for home gardeners are developed? Here in Tennessee, these recommendations are based on research trials at UT AgResearch and Education Centers, and they are also based on data collected from citizen scientists across Tennessee. What better source of great information for vegetable gardeners than from vegetable gardeners, right?

The Tennessee Home Garden Variety Trial program compares home vegetable varieties grown in home gardens across the state. It is a straightforward process that begins with a new set of comparisons each year. Participating gardeners can select the trials they would like to grow. Two cultivars of common garden vegetable crops are compared in each trial and evaluations on germination, yield, taste and crop health are collected. Then, each fall a recommendation publication is created to share this information with gardeners across the state. You can see all the results at extension.tennessee.edu/publications/Documents/W657.pdf. Top performers also are highlighted throughout this calendar and specifically detailed in October.

Join with us for the 2020 trial at extension.tennessee.edu/MasterGardener/Pages/Vegetable Garden Trials.aspx.

The 2019 pickling cucumber trial of 'Cool Customer' (left) and 'H-19 Little Leaf' (right).

FEBRUARY 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2 Six weeks until early date to plant kale in East TN and cabbage/ broccoli in West TN. Seed transplants now.	**3** Investigate trials of vegetables before making purchases.	**4**	**5** Prepare seed order for warm-season direct seeded crops.	**6**	**7**	**8**
9 ○ FULL MOON	**10**	**11** Prepare garden soil in West TN if not too wet. Early seeding can be easier in raised beds.	**12**	**13** Eight weeks from frost-free date in much of West TN. Seed warm-season transplants now.	**14** Six weeks until early date to plant cabbage, broccoli and cauliflower in East TN. Seed transplants now.	**15** Direct seed peas, mustard, kale and collards in West TN if soil can be prepared.
16	**17** Monitor transplants closely to ensure that they are not over- or underwater.	**18** Prepare garden soil in Middle TN if dry enough.	**19** Eight weeks from frost-free date in much of Middle TN. Seed warm-season transplants now.	**20**	**21** Make sure that young transplants are not stretching, which indicates low light or high N.	**22**
23 ● NEW MOON	**24** Direct seed peas, mustard, kale and collards in much of Middle TN if soil can be prepared.	**25** Prepare garden soil in East TN if dry enough.	**26**	**27** Eight weeks from frost-free date in much of East TN. Seed warm-season transplants now.	**28**	**29**
Notes on crops:				Notes on weather:		

TASKS FOR MARCH

- Seed the remainder of warm-season transplants. Tomato transplants require 6 to 8 weeks, so a March 1 seeding provides transplants for a May 1 transplant date under good conditions. extension.tennessee.edu/publications/Documents/W346-B.pdf
- Prepare garden soil if conditions allow. Remember that if you are tilling in a cover crop, a few weeks may be needed to decompose the cover crop material. Also allow time for other organic materials to break down if not fully composted to prevent competition with plants for nutrients. extension.tennessee.edu/publications/Documents/W346-G.pdf
- Seed or transplant cool-season crops. Hardy cool-season crops are usually seeded or transplanted 4-6 weeks before the frost free date, while less cold hardy cool-season crops are usually started 2 weeks prior. weather.gov/media/ohx/PDF/frostfreezeprobs.pdf
- Install row covers or low tunnels over early season transplants to increase day and night temperatures and support season growth. extension.tennessee.edu/publications/Documents/W346-F.pdf
- Don't forget to harden off any transplants (see April) to reduce stress and loss once placed in the ground.

IN THE SPOTLIGHT
Why Didn't My Seed Come Up?

Germination is a complex plant process that requires moisture, air (oxygen) and the right temperature. We want to make sure that our soil or media is moist enough that seeds can take up water to start germination, but not so wet that there is little air movement or increased risk of disease. Gardeners think often about air temperature and frost dates, but soil temperatures are quite important as well for seed germination.

What can gardeners do to support good germination?

1. Don't plant seeds too early when temperatures are below optimum; germination will be slower and chances of seed loss will be higher. See the table below that shows length of time to germination based on temperature.
2. Plant when soils are moist but not saturated. Don't let seeds dry out.
3. Make sure there is good seed-to-soil contact to enable the seed to take up water well and quickly.
4. Don't plant the seed too deeply. Check out W 346-B referenced on the left for information on seeding depth.

Additional note: Sometimes home garden seeds are treated with fungicides to reduce the risk of decay before or during germination. Additionally, a number of biological seed treatments are available for gardeners.

How much does soil temperature really matter?

	Days to germination at 59 F	Days to germination at 77 F
Snap bean	16	8
Sweet corn	12	4
Cucumber	13	4
Lettuce	4	2
Pepper	25	8
Tomato	14	6

**Data from UCANR publication 164220 http://sacmg.ucanr.edu/files/164220.pdf*

MARCH 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 Direct seed peas, mustard, kale and collards in much of East TN if soil can be prepared.	**2** Plant or seed lettuce outdoors in West TN. Plant Irish potatoes in West TN. Also direct seed beets.	**3** Early to mid-March is the best time to plant asparagus. It prefers a 50 F soil temperature.	**4**	**5** Be prepared for succession seeding of cool-season crops.	**6** Use your soil test results to add pre-plant fertilizer applications to the garden.	**7** Keep track of crops on the record sheet at the back of this calendar.
8 **Daylight Saving Time Begins**	**9** ○ FULL MOON Plant or seed lettuce in Middle TN. Also consider planting Irish Potatoes if ground can be well prepared.	**10**	**11**	**12** Direct seed peas, mustard, kale and collards in much of East TN if soil can be prepared.	**13** Time to transplant cabbage, cauliflower and broccoli in West TN.	**14** Row covers or low tunnels can be a great way to push early season crops.
15	**16** Watch for signs of maturity in cool crops such as radish to prevent harvesting too late.	**17** Early date to plant potatoes in East TN.	**18** Maintain succession seeding of cool-season leafy crops.	**19** For a May 10 transplant date, today could be the seeding date for warm-season transplants.	**20** Carrots can be planted in most of the state in March. VERNAL EQUINOX	**21**
22	**23** Early date to plant cabbage and broccoli in East TN.	**24** ● NEW MOON Peas and potatoes should all be seeded by late March in West TN.	**25** Direct seeded cool-season leafy crops should still be able to mature in late April or early May.	**26** Remember, a cover crop needs a few weeks to break down before planting.	**27**	**28**
29	**30**	**31**				

Notes on crops:

Notes on weather:

TASKS FOR APRIL

- Finish site preparation if not completed. Use proper pre-plant fertilizer. extension.tennessee.edu/publications/Documents/W346-C.pdf
- Finish direct seeding and transplanting cool-season crops to prevent them from maturing under hot summer conditions. A 35-day lettuce direct seeded April 1 will need until approximately May 5th to mature. Even early maturing broccoli and cabbage transplants usually take at least 45-50 days from transplanting.
- Harvest may begin on the earliest seeded leafy crops or root crops.
- Begin purchasing transplants of warm-season crops. See right sidebar. extension.tennessee.edu/publications/Documents/D60.pdf
- It is common to seed some direct seeded warm-season crops a bit before the frost free date (beans, corn). Be cautious of soil temperatures, though, especially if you are seeding untreated seeds or supersweet corn.
- Transplants of warm-season crops can be planted in Tennessee in April after frost free dates. However, soil temperatures support root growth, and sometimes early transplant dates are not all that helpful due to cool soils.
- Harden off your transplants before placing them in the garden. extension.tennessee.edu/publications/Documents/W346-B.pdf

Handy Notes for Hardening Vegetable Transplants

Hardening refers to slowly subjecting plants to conditions more like what they will experience in the garden. This practice lowers stress and can increase survival after transplanting. Typically plants are hardened for 1-2 weeks. Homegrown transplants will need to be hardened, and sometimes purchased transplants will as well depending on their environment.

Vegetable	Day temp. (F)	Methods
Broccoli, cabbage, cauliflower	60 to 70	Lower temp.
Lettuce	60 to 65	Lower temp./moisture
Cucumber, squash	70 to 75	Reduce moisture
Eggplant	70 to 75	Lower temp./moisture
Pepper	65 to 75	Lower temp./moisture
Tomato	65 to 75	Lower temp./moisture
Watermelon	70 to 85	Reduce moisture

TALKIN' TRANSPLANTS
What Every Gardener Should Look For

What transplants should I buy?
Tomatoes, peppers, eggplants, cabbage, cauliflower, broccoli and Brussels sprouts are all commonly transplanted. Cucumbers, muskmelons, watermelon and summer squash can be grown or purchased as transplants, but sometimes direct seeded crops perform just as well in the garden.

Where should I buy transplants?
Purchase transplants from garden centers that you trust. Proper handling and care of transplants will pay dividends in your garden through the season as healthier plants transplant better. Plus, there are several diseases that can be seed-borne, so you want to buy plants from growers who buy high-quality seeds and grow in an environment that reduces disease potential.

What should I look for in transplants?
Choose stocky plants that are free from all signs of insects or disease and do not have damaged or yellow leaves. Transplants should be a healthy green color to indicate they are not nutrient deficient. Also, choose plants that are not too old or stunted. Very mature transplants may not produce well after transplanting. This is not the time to shop for bargains because transplant health often directly impacts garden performance.

APRIL 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Nearing the end of dates to direct seed spinach.	**2** It could be a good time to plant beets and peas in East TN.	**3** Consider seeding turnips or mustard in East TN.	**4** Direct seeding of early beans and sweet corn could begin in West TN.
5	**6** Make sure to follow soil test recommendations for pre-plant fertilization.	**7** ○ FULL MOON Prepare mulched beds ahead of time if using plastic mulch.	**8** Don't forget to also prepare irrigation if using plastic mulch.	**9** Nearing the end of dates to direct seed lettuce.	**10** Direct seeding of early beans and sweet corn could begin in Middle TN.	**11** Keep track of the Spring rains in the weather blocks at the bottom of the page.
12 Nearing the end of dates to direct seed kale in West TN.	**13** Many warm-season transplants can be placed in soil in West TN.	**14** Determine how much pest control materials remain from previous year.	**15** If buying transplants, look for stocky, dark green seedlings with no sign of pest or disease.	**16**	**17** Direct seeding of early beans and sweet corn could begin in Middle TN.	**18**
19	**20** Many warm-season transplants can be placed in soil in Middle TN.	**21** Make sure to transplant at a time when the soil temp is warm enough for good root growth.	**22** ● NEW MOON	**23** April and into early May is the time to plant turnips in East TN.	**24**	**25** When was that last frost this year? Make sure to note it!
26	**27**	**28** Okra can be seeded for West TN.	**29**	**30**		
Notes on crops:				Notes on weather:		

TASKS FOR MAY

- Harvest cool-season crops, and watch for pests/diseases (see June).
- Seed succession plantings of common warm-season direct seeded crops, such as beans and sweet corn. extension.tennessee.edu/publications/Documents/D61.pdf
- Prepare beds that will be in plastic mulch prior to planting transplants. Black plastic can warm the soil and speed early growth of transplants. Make sure to provide irrigation if using plastic mulch. Sometimes natural mulches, such as straw, are applied a few weeks after planting as they can reflect light and actually slow soil warming.
- Continue transplanting warm-season crops. Peppers and eggplants prefer even warmer soil conditions than tomatoes and are often planted later. Make sure that young transplants are watered in and given a starter fertilizer solution to support early growth.
- Set up your irrigation system as transplants are placed in the garden. Drip irrigation is best to maintain dry leaves and reduce disease risks.
- Set up stakes, trellises, cages and support systems for your plants. It is best to have these set up at or soon after planting.
- Don't let weeds get started in the garden. Take control early with mulches and proactive management. extension.tennessee.edu/publications/Documents/W346-D.pdf

Summer Squash Standouts

Summer just wouldn't seem real to a gardener in Tennessee if there weren't fresh squash! From green to yellow and crookneck to zucchini, there are many excellent options for the Tennessee gardener. All summer squash are warm-season crops that can be transplanted or direct seeded after danger of frost. Many bear in 40-50 days and can be harvested for several weeks if they remain healthy. Many newer squash have good resistance or tolerance to viruses that are common in southern gardens.

Here are a few cultivars to consider:

Green zucchini: Raven (dark green), Tigress (lighter green), Bossa Nova (light green and mottled, see image in March)

Yellow zucchini: Goldmine, Easy Pick Gold, Golden Star

Yellow squash: Tempest (slightly striped), Zephyr (has green tip) (See image on right where these cultivars are center and right)

Check out our new UT Extension publication on cucurbits in the garden for all the details! extension.tennessee.edu/publications/Documents/D62.pdf

Garden Fertility FAQs

If some fertilizer is good, more is better, right?
Nope, exceeding recommendations for fertilizers will not help your garden. Your soil report recommendations are made based on your soil conditions and will provide nutrients in optimum ranges. Exceeding the optimum can lead to nutrient deficiencies because excesses of some nutrients can lead to poor uptake of others. Plus, there is the waste in terms of money and nutrients lost to the environment. Also remember that if your pH is not in the correct range, you may not get a response from fertilizer at any level.

How should I apply fertilizer before planting?
You can broadcast. This common method of fertilizer application is where the material is spread evenly over the surface of the soil. Tilling can then be done to evenly mix the fertilizer within the top 3 to 4 inches of the soil. Fertilizer can also be broadcast in areas that will not be tilled where rain will move nutrients into the soil.

You can band. This means fertilizer is placed in a band approximately 3 inches on the side of and 3 inches below the planting row. Banding can be used instead of broadcasting if you prefer to grow no-till, if the crop is already planted, or if rows are spaced widely and broadcasting might be less efficient. extension.tennessee.edu/publications/Documents/W804-A.pdf

MAY 2020

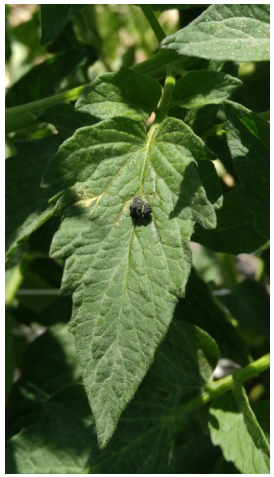
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 Direct seed cucumbers in West and Middle TN.	**2** Many warm-season transplants can be placed in soil in East TN.
3 Do your cool-season leafy crops need any fertilizer side-dressing?	**4** Direct seed cucurbits in East TN.	**5** Some gardeners wait until soil warms to install natural mulches such as straw.	**6** Record your favorite cool-season crops this year at the end of the calendar.	**7** ○ FULL MOON In many parts of Tennessee, heat-loving plants such as peppers and eggplant can wait to be transplanted.	**8** Remember, it is also about soil temps, not just air temps.	**9** Seedless watermelons and supersweet corn will germinate poorly if soil is too cool.
10	**11** Be ready to harvest cool-season crops at the peak of their quality.	**12** This is the early date for seeding okra in East TN.	**13** Succession planting could also be done for zucchini or cucumbers.	**14** Have some common insecticides and fungicides on hand.	**15** Be scouting on a regular basis to prevent getting caught off guard by pests or diseases.	**16**
17	**18**	**19**	**20** Sweet potatoes are often one of the last crops to be planted.	**21** Continue succession seeding of corn and beans.	**22** ● NEW MOON	**23** When you do see diseases or insects, make a record of them at the end of the calendar.
24	**25**	**26**	**27**	**28**	**29**	**30**
31	Notes on crops:			Notes on weather:		

TASKS FOR JUNE

- Be on the lookout for maturity in the first corn and bean plantings (see August). extension.tennessee.edu/publications/Documents/D58.pdf
- Manage soil after cool-season crops are removed. Those areas may be a good location for a summer cover crop, such as buckwheat, to prevent weed growth and add organic matter. If you plant warm-season crops immediately after removing cool-season crops, be sure to follow a crop rotation that moves to a different family (see December).
- Some of the latest warm-season crops to be planted are often watermelons and pumpkins as well as sweet potatoes.
- You can still be succession planting corn and beans.
- Make sure your irrigation system is functioning well and manage weeds. extension.tennessee.edu/publications/Documents/W346-D.pdf
- Scout for any issues with pests or disease at least weekly. extension.tennessee.edu/publications/Documents/PB595.pdf
- If conditions support disease infection or if you see signs of disease, you may need a protective spray program. extension.tennessee.edu/publications/Documents/W316.pdf

Scouting — Playing Sherlock in the Vegetable Garden

- Do it frequently — at least once or twice a week.
- Inspect the whole field in z pattern if large or every plant if you have a small garden.
- Make sure to check the interior of the plants and the underside of leaves; don't just glance over the plants.
- Look for discoloration or distortion and signs of insects (feeding damage or excrement).
- Take a hand lens, markers and bags for samples, as well as a camera.
- Do your own research, but don't be afraid to send in samples to your local Extension office or the UT Soil, Plant and Pest Center. https://ag.tennessee.edu/spp/Pages/PDI.aspx



Excrement of a tobacco hornworm.

Fast Facts about Fungicides in the Home Garden

- Scout early and often so that you know if diseases (like early blight on right) are cropping up in your garden.
- Protective fungicides — from treated seed to protective sprays — are great tools. It is important to time sprays to disease infection windows, cover well with the spray, and follow recommended spray intervals.
- Few garden fungicides have strong curative properties; focus on prevention.
- Fungicides can't replace sanitation, rotation and disease resistant cultivars. Use these practices together for the best effect.

Bacillus subtilis - Serenade Garden Disease Control, Cease	Organic. These products contain live bacteria and can generally be used up to the day of harvest.
Chlorothalonil - Daconil, Bonide Fung-onil, Ortho Garden Disease Control	Best used as a protectant. Specific crops, mixing rates, as well as pre-harvest intervals and maximum number of sprays per year are on label.
Copper (Copper sulfate, fixed copper) - Bonide Liquid Copper Fungicide, Monterey liquid copper, Camelot O	Organic. Some formulations are easier to get in solution and spray. Specific crops, mixing rates, as well as pre-harvest intervals and maximum number of sprays per year are on label.
Mancozeb - Dithane, Manzate, Bonide Mancozeb Flowable w/Zinc	Best used as a protectant. Specific crops, mixing rates, as well as pre-harvest intervals and maximum number of sprays per year are on label.
Neem oil - Garden Safe Fungicide, Monterey Neem Oil	Organic. Botanical extracts with insecticidal activity. Sprays should always be made to avoid flying bees and other pollinators.
Potassium bicarbonate - GreenCure, Milstop, Agricure	Organic. Specific diseases controlled or suppressed are on the label.
Sulfur - Bonide Sulfur Plant Fungicide, Yellow Jacket Special Dusting Sulfur, Espoma Earth-tone 3n1 Disease Control	Organic. Some sulfur products are mixed with an insecticide (Earth-tone 3n1 also contains organic pyrethrin), so sprays should be made to avoid flying bees and other pollinators.

Check out extension.tennessee.edu/publications/Documents/W661.pdf.

JUNE 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 Remove covers over crops if temps get too hot or crops need to be pollinated.	**2** Many warm-season crops, such as corn, and many cucurbits can still be succession planted.	**3** Support your growing tomato plants with stake and twine or cages.	**4** Keep scouting for pests and disease. Check leaf undersides and interior leaves.	**5** ○ FULL MOON If there have been frequent rains or lots of moisture, a protective fungicide might be needed.	**6** Are the fruiting crops flowering yet? Mark it down on the page at the end of the calendar.
7 Succession planting of beans should be nearly done in West TN.	**8**	**9** Don't forget to attend the Fruits of the Backyard field day in Spring Hill, Tennessee.	**10** Early beans may be close to harvest in many areas. Some can mature in only 50-55 days.	**11** Still time to get some okra seeded.	**12** Keep an eye out for cool-season crops to harvest.	**13**
14 Keep track of when you apply fertilizer and how much you apply.	**15** Keep an eye on plant health and be ready with fungicide if needed.	**16**	**17** Harvest summer squash while the skin is still glossy.	**18**	**19** Be ready for side-dressing for many crops that are setting fruit.	**20** Enjoy the longest gardening evening of the year! JUNE SOLSTICE
21 ● NEW MOON	**22**	**23** Keep on picking!	**24** Succession planting of beans should be nearly done in East TN.	**25**	**26** Watch out for early blight on your tomatoes.	**27** Make sure to keep track of anything you spray. A record sheet is found at the back.
28 Keep an eye out for mature sweet corn. A 70-day cultivar seeded on April 20 could be ready!	**29** A summer cover crop of buckwheat can work well behind a spring cool-season crop.	**30** Peppers can be transplanted through June, but later crops may need attention to water.	Time your pumpkin planting to mature in early to mid-fall. August pumpkins are less exciting.	A 100-day pumpkin seeded on June 30 would be estimated to mature around October 10.		
Notes on crops:				Notes on weather:		

TASKS FOR JULY

- Consider succession planting of zucchini or later season tomatoes.
- Pick tomatoes, beans, corn and other warm-season crops (see August).
- Manage irrigation as needed, but try to reduce leaf wetness and overhead watering.
- Manage fertility through proper side dressing and in-season fertilizer applications.
  extension.tennessee.edu/publications/Documents/W346-C.pdf
- Manage weeds.
  extension.tennessee.edu/publications/Documents/W346-D.pdf
- Scout frequently for insect or disease issues and spray as needed. See June.
  extension.tennessee.edu/publications/Documents/W316.pdf
- Select cool-season crops and cultivars for fall and place seed order.
- Some cool-season crops (Brussels sprouts, cauliflower) will likely need to be seeded in July if you are starting your own transplants.
- Pumpkins should be seeded according to maturity. A 100-day pumpkin seeded on July 1 would be estimated to mature October 11.

Intro to Irrigation in the Home Garden

We estimate that our gardens need 1 to 1.5 inches of water per week. Often rainfall is variable and we need to supplement to reach these levels for summer and especially in fall crops. Early growth and fruit set or fill are some of the most important times for carefully monitoring vegetable watering.

Watering Methods

1. Overhead irrigation
Gardeners are often tempted to water their gardens in the same way they water their lawns — with overhead sprinklers. While easy and relatively low cost, overhead sprinklers are not very uniform and can be wasteful. Also, they increase the time plant leaves are wet, which can lead to increased disease issues in our humid and warm climates. We want to avoid overhead watering in the garden if at all possible.

2A. Drip irrigation: Soaker Hose
Soaker hoses are another example of a landscape tool that is often used in the vegetable garden. These hoses are readily available and are certainly an improvement over overhead irrigation. However, they can be expensive and may not evenly deliver water along their entire length of the hose due to pressure or elevation changes.

2B. Drip irrigation: Trickle or Drip Tape
Trickle or drip tape can be a great means of watering for vegetable gardens both large and small. Simple drip irrigation systems can be relatively economical and are often available as kits so that gardeners don't have to piece together all of the components. They are a benefit because leaves stay drier and water is evenly applied to the row. The image on the left shows drip tape installed over straw mulch, but it also can be installed under black plastic. This tape is plastic with a thin wall that has water emitters embedded in the plastic at specific intervals, which can vary based on soil or crop (see image on right). Drip systems can be installed to automatically operate by using timers, or they can simply be connected to a water hose when irrigation is required.

JULY 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Don't forget to get those pumpkins seeded soon.	**2**	**3** Keep scouting; don't get too busy with harvests.	**4** Record those harvests on the record sheets at the back of this calendar.
5 ○ FULL MOON	**6** Make sure that you have enough seed for fall cool-season crops.	**7** Many cool-season crops will need to be seeded in July.	**8** A 6-week-old transplant for an August 22 planting would be seeded today.	**9** You better not miss Summer Celebration in Jackson, Tennessee!	**10** Keep an eye out for mature sweet corn. You must hurry to beat the varmints!	**11**
12	**13** Don't let the weeds get ahead of you. Annual weeds that go to seed only create future issues.	**14** Have you seen any of those pesky tomato/ tobacco hornworms? If so, make a record of them!	**15** Watch the irrigation and make sure that growing plants are not getting too dry or wet.	**16** Practice good sanitation. If a plant is damaged/diseased remove it and place it far from other crops.	**17** Keep on picking!	**18**
19	**20** ● NEW MOON Do you have enough seed for a late planting of summer squash or other cucurbits?	**21** In many parts of Tennessee, late July will be the time to start fall cool-season transplants.	**22**	**23** Don't let disease get ahead of you. There is still much harvest time left if plants are healthy.	**24** Make sure to follow pre-harvest intervals listed on pesticide labels.	**25** Keep a record of your sprays and track their efficacy for future reference.
26	**27**	**28** Are your Brussels sprouts planted? Long season cool crops may need to be planted soon.	**29**	**30**	**31**	
Notes on crops:				Notes on weather:		

TASKS FOR AUGUST

- Keep picking warm-season crops. Proper picking times are critical to enjoy the highest quality in home vegetable crops. Also, timely picking can support the highest level of production for many garden vegetables. extension.tennessee.edu/publications/Documents/W346-I.pdf
- Practice proper canning, freezing or drying to preserve garden produce for later use.
- Don't let the weeds get ahead of you and produce seeds.
- Late plantings of summer squash can be done this month.
- Keep an eye on soil moisture levels, irrigation and any need for side dressing for fruiting crops.
- Prepare soils for fall cool-season crops and maintain crop rotations.
- Transplant fall cool-season crops that take the most days to mature.

Reasons Not to Forget Fabulous Fall Garden Crops

- You get another cool-season crop opportunity.
- Cool temps during maturation can increase crop quality.
- Season extension techniques can provide winter cool-season crop harvests.
- Less sweating!

Secrets to Fall Success

1. Maintain moisture — Seeding during the late summer means that moisture for germination and early growth is critical. Late summer heat and uneven rainfall mean that special attention is required.
2. Manage weeds — Ensure that weeds do not overtake or out-compete.
3. Monitor for disease and insects — Young seedlings may be grown with older plants, so practice close scouting.
4. Apply needed fertilizer — Soil used for spring or summer crops may be low in some necessary nutrients, so reapply N or other nutrients if needed.

IN THE SPOTLIGHT
Proper Picking

Cool Season	
Beets	Often roots 1 ½ to 2 inches in size have the highest quality.
Broccoli	When flower buds are still dark or bright green (not yellow) and are tight (have not begun to open).
Cabbage	When heads become firm and heavy and it is harder to compress leaves.
Carrots	When roots are of appropriate size, firm, and brittle. Tops are often about 1 inch in diameter. Image on left courtesy of Randi Nott, one of our home garden variety trial citizen scientists.
Radish	When firm and brightly colored but less than 1 ½ inches in diameter. Attaining large sizes can lead to a pithy or less firm root.
Turnips	After they reach 2 inches in diameter, but while still tender.
Warm Season	
Beans, snap	While pods snap easily (as opposed to being tough and flexible) and seeds are still green.
Corn, sweet	Kernels should be filled out nearly to the end of the ear and milky if crushed. Silks dried down.
Cucumber	When seeds are small, flesh is still firm, and color is green.
Eggplant	When fruit is still shiny and the color has not dulled. Edible from 1/3 grown until full grown.
Muskmelon	When melons can be lifted and the vine pulls away from the fruit with little resistance (slips).
Okra	When pods are 2 ½ to 3 ½ inches long and tender.
Pepper	When full size and firm. Green is immature, and fruit will color to red, yellow, or orange and contain more sugars when ripe.
Potato, sweet	After reaching desired size, but before moist and cool fall soil conditions reduce quality and storage life.
Squash, summer	When skin is still tender and glossy and the large end (zucchini) is 1 to 2 ½ inches in diameter.
Squash, winter	When rind has hardened and is not easily scratched.
Tomato	When uniformly colored (pink to orange) but still somewhat firm.
Watermelon	When tendrils next to fruit die back and the rind on the underside of the fruit turns from white to a creamy yellow.

AUGUST 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1 Transplants for many fall crops in East TN are planted in early to mid-August.
2	**3** ○ FULL MOON Practice good sanitation in the garden to prevent disease spread.	**4** Record any disease issues and how well disease is controlled by any applied sprays.	**5** Keep on scouting and manage weeds. It can help this year and next year!	**6** How can you determine when to plant fall crops? Example: A zucchini that will mature in 50 days.	**7** Knoxville first frost average is October 22. 50 days + 10 for fall slower growing + 14 days to harvest is an August 9 seeding.	**8**
9	**10** If you are buying fall transplants, look for young, actively growing plants.	**11** Make sure you have the seed for direct seeded cool-season crops.	**12**	**13** When should you plant fall crops? Example: A broccoli transplant that will mature in 60 days.	**14** Nashville first avg. frost is October 28. 60 days + 10 for slower fall growth. We can plan to harvest for a couple weeks after frost. Seventy days back from November 11 is September 2. Or July 22 to grow a 6-week-old transplant yourself.	**15**
16	**17** Get those "best of show" crops ready for the county fair!	**18** ● NEW MOON Direct seeded fall cool-season crops will require attention and water for best germination.	**19**	**20** How can you determine when to plant fall crops? Ex: a lettuce that will mature in 35 days.	**21** Nashville first avg. frost is October 28. 35 days + 10 for slower fall growth. We can plan to harvest for a couple weeks after frost, though. Count back 45 days from November 11. Aim for about a September 27 seeding.	**22**
23	**24** Plan your cover crops for fall and make sure you order enough seed.	**25** Attend the Fall Gardeners' Festival in Crossville, Tennessee!	**26**	**27** Winter squash is ready to harvest when rind hardens. Does it scratch with your fingernail?	**28**	**29**
30	**31**	Notes on crops:		Notes on weather:		

TASKS FOR SEPTEMBER

- Keep picking warm-season crops. Canning, freezing and drying are all options for preservation. extension.tennessee.edu/publications/Documents/W346-I.pdf
- Don't let those late season weeds get ahead of you and go to seed.
- Keep an eye on soil moisture levels and manage pests as some of the warm-season fruiting crop harvests come to a close.
- Later planted beans, tomatoes, summer squash and other warm-season crops may require frequent attention in scouting and pest management to ensure good yields.
- Make sure that fall cool-season crops are properly watered and fertilized. Germination and early growth of leafy crops and brassicas require even moisture and appropriate nitrogen levels. extension.tennessee.edu/publications/Documents/D70.pdf
- Transplant and direct seed fall cool-season crops. Keep in mind that days to harvest estimates often need to be lengthened in the cooler and lower light days of fall. extension.tennessee.edu/publications/Documents/D68.pdf
- Many cover crops are best seeded in September to get good stands.

IN THE SPOTLIGHT
Converting to Cover Crops

Why use a cover crop?

- Improve soil structure by adding organic matter.
- Reduce soil compaction and crusting because of the organic matter additions and actions of cover crop roots.
- Increase infiltration of water and reduce soil erosion.
- Reduce weed growth, and some even provide nitrogen after they die or suppress insect or disease populations.

When can you use a cover crop?

Cover crops can be a great winter cover in your garden to add organic matter and prevent soil loss in the off season. However, they also can also be used during breaks in crops in the main growing season to add organic matter or suppress weed germination and growth. A summer buckwheat crop is shown in the image on the left.

What are common cover crop species?

- Legumes (peas, beans, clover, vetch, alfalfa) have root nodules that contain N-fixing bacteria. This nitrogen will be available for later crops after the legume is killed and incorporated into the soil.
- Grasses (cereal rye, barley, wheat and oats) that would be grain crops if grown to maturity are some of the most common cover crops. They are grown because they are economical, easily established and can produce large amounts of plant material in a relatively short period of time. These crops stabilize the soil, prevent erosion and help break some plant disease or pest cycles in addition to increasing organic matter.
- Buckwheat (in image on left), rape and radishes are examples of cover crops that are neither a grass nor a legume. These crops can increase organic matter, improve soil structure and some have biofumigation properties (decomposing tissue releases compounds to suppress pests or disease in the soil) when incorporated.

extension.tennessee.edu/publications/Documents/W346-G.pdf

SEPTEMBER 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 Early fall is often the driest time of the year in Tennessee. Be prepared to meet crop water needs.	**2** ○ FULL MOON Keep track of how much and how often watering is needed. Without rain, estimate 1-2 inches per week.	**3** Do some research on cover crops to make sure they are best for your system and crop rotation.	**4**	**5**
6	**7** It's Labor Day! Keep on picking those warm-season crops.	**8**	**9**	**10** Keep on eye out for pests/disease on your cool-season crops. Row covers can reduce insects.	**11** Most cabbage, broccoli and cauliflower should be transplanted by mid-September in West TN.	**12**
13	**14** Brassicas, lettuce and many fall crops are fast growing and may need a fertilizer side-dressing.	**15** Are your fall cool-season crops getting enough water?	**16** Have you seen any of those pesky armyworms? If so, record make a record of them!	**17** ● NEW MOON	**18** Want a few leafy crops for fall without managing a whole garden? Build a small raised bed.	**19** Containers can also be a great way to produce a bit of fresh produce for late fall.
20	**21** Many cover crops may produce best in East TN with a September seeding.	**22** Vetch and other legumes benefit from early fall seeding, while rye can be sown later. AUTUMNAL EQUINOX	**23** September through November are the times to plant garlic across Tennessee.	**24** In fact, here in Tennessee, we can grow both hardneck and softneck garlic. See November for info.	**25** Remove warm-season crops as they finish producing to lighten the load of fall cleanup.	**26** If the plants were healthy, it could be a great time to begin a compost pile.
27	**28** It is getting close to the end of seeding for fall leafy crops in Middle and East TN.	**29** A row cover or low tunnel can add a couple of weeks to the fall season.	**30** Watch for high temps under cover on very warm September days.			
Notes on crops:				Notes on weather:		

TASKS FOR OCTOBER

- Continue picking any remaining warm- or early cool-season crops. extension.tennessee.edu/publications/Documents/W346-I.pdf
- Keep an eye on soil moisture levels and manage pests as warm-season fruiting crop harvests finish and cool season begins.
- If you are participating in the Tennessee Home Garden Variety Trial, be sure to send in your evaluations so we can compile reports and recommendations on varieties.
- Ensure that fall cool-season crops are properly watered and fertilized. As temperatures cool, they will need less water.
- Seed/transplant fall cool-season crops with shorter days to harvest.
- October is still a great time to seed cover crops. extension.tennessee.edu/publications/Documents/W346-G.pdf
- Take soil tests and make adjustments to pH as recommended.

The Real Deal on Garden Soil pH

What is pH and does it really matter?
Soil pH, a measure of the acidity or alkalinity, affects how available mineral nutrients are to plants. High or low pH can lead to nutrients in soil not being found in an optimal form for plants to take up. Phosphorus is a good example of a nutrient that can be present in different forms. Under low or high pH conditions (less than 5.5 or more than 7.0), it becomes less available. Important micronutrients can also be less available or even too available at certain pH ranges. For instance, low pH can cause aluminum to be available in toxic amounts while iron and manganese may become less available under high pH conditions. Soil chemistry is important, but soil biology can also be impacted by pH because it can alter the activity of microorganisms. Even the effect of herbicides can depend on pH.

How do gardeners manage pH?
The level of pH is managed by following soil test recommendations for adding lime (to increase) or sulfur (to decrease) pH. Another important factor is timing because these materials need time to act in the soil to adjust pH. Fall can be a great time to address pH in your garden. Want to learn more?
extension.tennessee.edu/publications/Documents/W346-C.pdf
extension.tennessee.edu/publications/Documents/W804-A.pdf

IN THE SPOTLIGHT
Tennessee Top Performers From The Home Garden Variety Trial

Crop	Why We Love It in Our Tennessee Gardens
Genovese basil	Plant health, yield, good for small spaces
Crockett green bush bean	Yield, flavor, health, appearance (dark green color)
Kentucky Wonder pole bean	Quick germination, growth, flavor, yield
Diva cucumber	Appearance (smooth fruit), flavor, yield, pickling
Straight Eight cucumber	Germination, yield, appearance, flavor, pickling
Saladmore cucumber (below)	Flavor, yield, long production season, compact plant
General Lee cucumber	Flavor, yield, plant hardiness, fruit size
Sugar Cube Muskmelon	Flavor, yield, small size for easy eating
Candle Fire Okra	Appearance (beautiful red pod), yield, flavor, health, pods stayed tender longer on plant
Raven zucchini	Early maturity, yield, flavor, appearance, fruit size
Bossa Nova zucchini	Early maturity, yield, flavor, health, vigor, appearance
Tempest summer squash	Flavor, yield, long production season
Zephyr summer squash	Flavor, appearance, shelf life, long season

OCTOBER 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 ○ FULL MOON Make sure to clean up warm-season crops to prevent disease spread.	**2** Keep good notes on the cultivars that did well or not as well in your garden this year.	**3**
4	**5** Getting close to the end of time to direct seed fall crops in West TN.	**6** Remember, cool season crops can survive low temps but may not grow and produce much yield in some areas.	**7**	**8** Be on the lookout for fruit from late seeded warm-season crops.	**9** Also be on the lookout for first frosts in parts of East TN.	**10**
11	**12** Many cover crops can still produce well in East TN if planted in mid-October.	**13** You don't have to seed the whole garden in cover at once. Cool-season sections can be last.	**14** October is a great time to take soil samples.	**15** Take 10-15 sub-samples about 6 inches deep.	**16** ● NEW MOON Make sure that late season crops have adequate (but not excessive) water and nutrients.	**17** What were your favorite peppers and tomatoes this year? Make sure to write down the varieties.
18	**19** Sometimes brassica crops taste better after they are exposed to a bit of frost.	**20** Have you had a frost yet? Write it down in the record sheet in the back of this calendar.	**21**	**22** Bring your tools in from the garden. Clean them well.	**23** Extend the life of your tools with proper sharpening and oiling. See November.	**24**
25	**26** We are getting close to first frosts in many areas of West TN.	**27**	**28** Review soil reports and make additions if needed to adjust pH for next year.	**29**	**30**	**31** Enjoy a homegrown jack-o'-lantern for Halloween!
Notes on crops:				Notes on weather:		

TASKS FOR NOVEMBER

- Finish picking remaining warm-season crops. If frost is approaching, unripe tomatoes can be harvested to preserve the last of the crop. extension.tennessee.edu/publications/Documents/W346-H.pdf
- Make sure to remove crop debris from the garden that was diseased to reduce inoculum.
- Fall is a great time to set up a compost pile with the (disease-free) debris from your garden along with leaf and lawn clippings. www2.ca.uky.edu/agcomm/pubs/ho/ho75/ho75.pdf
- Ensure that fall cool-season crops are properly watered, fertilized and harvested. As temperatures cool, less water will be needed.
- There are some cover crops that can still be seeded in November, so don't assume that a late fall crop prevents you from seeding a cover crop in your garden to protect it for the winter. extension.tennessee.edu/publications/Documents/W235-G.pdf

IN THE SPOTLIGHT — Fall Tasks With Spring Payoff

- Cut and remove all the twine and string before pulling out wooden and metal stakes. Remember that some diseases can remain on stakes, so if you reuse next year, try a different crop family.
- Pull up any plastic mulch; it is much easier when it is still intact.
- Gather all your tools and clean them well. Remove soil and clean with warm soapy water or even a 10 percent bleach solution to sterilize. Cleaning will lengthen the life of the tool and also prevent disease from soil or debris from being spread to crops grown next year.
- For metal, use a wire brush to remove any rust. Coarse sandpaper would work as well. Sand wooden handles if not coated with polyurethane.
- Sharpen your tools carefully with a file or grinder, and be sure to wear eye protection!
- Tools (wooden and metal parts) can be oiled for protection by using a boiled linseed oil.

Garlic in the Garden

Fast facts about garlic:

- It is a monocot in the allium family planted as a clove (bulb) rather than seeds.
- It is planted in the late fall (September through early November) and harvested in early summer. Most varieties require 180-220 days to mature.

Sites and types:

- Choose a loose, friable soil (good organic matter) with pH between 6.0 and 6.5.
- Try a slightly raised bed for good drainage during our often wet Tennessee winters.
- Tennessee is transitional between the hardneck and softneck growing regions, so we can try them all! Hardneck can produce larger cloves and potentially higher yields. It may also be more winter hardy than softneck. Elephant garlic (actually a leek) is also grown in Tennessee. Try several to find one or more that have the hardiness, flavor and size that you like best.

A hardneck garlic called 'Purple Glazer' at harvest in mid-June. (Lucas Holman image)

Planting and management in the garden:

- Often planted in grids of 4 inches by 4 inches with cloves 1-1 ½ inches deep.
- Winter crops can have lower pest levels, but do scout for disease/insects.
- Control weeds; they definitely can reduce yields in garlic crops.

When to harvest and how to cure:

Pull some bulbs in mid-May to mid-June and look for segmented cloves with a tight outer skin. Should have four to six wrapper leaves (which are shells around garlic). Cure in well-ventilated area out of the sun for about 6 weeks.

NOVEMBER 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 **Daylight Saving Time Ends**	**2** Carrots can be stored in ground for a little while, but be sure to pull them before the ground freezes.	**3** Did you get your garlic planted?	**4** Keep harvesting your various cool-season crops.	**5**	**6** Clean up any stakes or debris from the garden.	**7**
8	**9** Even if it is a mid-November seeding, a cover crop like rye can still be of benefit.	**10**	**11** It may even be close to a first frost in Memphis by now!	**12**	**13** Keep notes on the crops and cultivars that performed well for you this year.	**14** Write those notes in the record sheets in the back of this calendar.
15 ○ FULL MOON	**16**	**17** What were some of your pest issues this year?	**18** What were some of the disease issues you faced?	**19** Knowing your gardening challenges is great info to help select crops for next year.	**20** There are many resistant varieties that can help you address disease issues.	**21**
22	**23**	**24**	**25**	**26**	**27**	**28**
29	**30** ● NEW MOON					

Notes on crops:	Notes on weather:

TASKS FOR DECEMBER

- Harvest any remaining fall cool-season crops. Lettuce, chard and beets can be less cold hardy than kale and spinach in some areas.
- Take stock of the completed gardening season and make sure you have good records of problems encountered and control practices that worked well. Use the information from the completed season and rotation guidelines to plan for next year.
- Sort and count any remaining seeds to determine what may need to be ordered.
- While it may seem early, December can be a great time to order seeds for your 2021 garden, especially those you plan to grow as transplants (see January-March).
- Clean any remaining stakes, plants or debris from the garden (excluding any plants that you intend to overwinter). Try to rotate this overwintering area of the garden to make sure that every section receives a cover crop as often as possible.
- Clean, repair (if needed) and store your garden tools for next year.

Tales from the Garden — Fact or Folklore?

- Cherokee Purple tomatoes (image on right) were grown by Native Americans in our region? Well, genetic research puts the truth of the name in question, but there is no doubt that the heirloom seed from a gardener in Sevierville, Tennessee, that ended up in the Seed Savers Exchange catalog in the early 1990s helped an entire generation of gardeners fall in love with tomatoes!
- Always plant potatoes on Good Friday? Sure, some years maybe, but always is a pretty rare garden occurrence in Tennessee!
- Adding sugar to the soil can increase tomato sweetness? The soil microbes might appreciate it, but sugars in the tomato fruit come from photosynthesis and are influenced by genetics, water, nutrition and other growing conditions.
- Planting peppers when you are mad makes them hotter? Probably not, but, scientists have found that getting certain soil bacteria on your hands when you garden can increase serotonin — our natural antidepressant. So, getting your hands in the soil when planting might actually make you happier!

Round and Round We Go: Vegetable Garden Rotation

For the home gardener, rotation involves moving crops to different locations in the garden to prevent the build-up of pathogens in the soil. This type of rotation is most effective against pathogens that survive in soil or on crop remains for a short period of time. It is common for pathogens to infect related crops, so rotation is based on not planting the same families in the same area.

extension.tennessee.edu/publications/Documents/W316.pdf

Crop family	Common home garden crops
Apiaceae	Carrot, celery, parsnip
Chenopodiaceae	Beet, spinach, chard
Cucurbitaceae	Cucumber, squash, pumpkin, watermelon
Poaceae	Corn
Malvaceae	Okra
Brassicaceae	Broccoli, mustard, Brussels sprouts, kale, collards, kohlrabi, turnip, cabbage, cauliflower, radish
Solanaceae	Tomato, potato, pepper, eggplant
Alliaceae	Chives, garlic, leek, onion
Fabaceae	Beans, peas, edamame
Asteraceae	Lettuce, sunflower, endive

DECEMBER 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 There can be great December harvests of cool-season crops in many parts of Tennessee.	**2** Sort and count remaining seeds to prevent over-ordering for next year.	**3** You could even test germination (take percentage of 10-25 seeds) to confirm viability.	**4**	**5**
6	**7** It is almost seed catalog time. Don't be afraid to get some early orders in.	**8**	**9** Clean and store your tools for next year.	**10**	**11**	**12**
13	**14** ○ FULL MOON Start to think about the garden plan for next year.	**15** Map out crop rotations for next year in light of any diseases or pests encountered.	**16** It is a great time to service tillers and other equipment. Sharpen blades and change oil.	**17**	**18**	**19**
20	**21** Gardening hours start increasing from here! DECEMBER SOLSTICE	**22**	**23**	**24**	**25**	**26**
27	**28**	**29** ● NEW MOON	**30**	**31**		
Notes on crops:				Notes on weather:		

In-Season Nitrogen Fertilization for Vegetable Crops

Crop	Timing in season/fruit or plant size	Application rate/100-foot 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	1st fruits are 1 inch diameter	1 lb	2 lb	2.8 lb	5.7 lb
Pepper	1st fruits are 1 inch diameter	0.5 to 1 lb	1 to 2 lb	1.4 to 2.8 lb	2.8 to 5.7 lb
	Later in season (if needed)	0.5 to 1 lb	1 to 2 lb	1.4 to 2.8 lb	2.8 to 5.7 lb
Vine crops (Cucumbers, melons, pumpkins, squash)	Vines are 1 foot long	0.75 to 1 lb	1.5 to 2 lb	2 to 2.8 lb	4.2 to 5.7 lb
Sweet corn	Plants are 12-18 inches tall	1 to 1.5 lb	2 to 3 lb	2.8 to 4 lb	5.7 to 8.5 lb
Okra, eggplant	3 to 4 weeks after seeding/ transplanting	0.5 to 1 lb	1 to 2 lb	1.4 to 2.8 lb	2.8 to 5.7 lb
	6 to 8 weeks after seeding/ transplanting	0.5 to 1 lb	1 to 2 lb	1.4 to 2.8 lb	2.8 to 5.7 lb
Broccoli, cabbage, cauliflower, Brussels sprouts	2 to 3 weeks after transplanting	1 lb	2 lb	2.8 lb	5.7 lb
	5 to 6 weeks after transplanting	0.5 lb	1 lb	1.4 lb	2.8 lb
Kale, collards, lettuce, spinach, mustard	3 to 4 weeks after seeding	0.5 to 0.75 lb	1 to 1.5 lb	1.4 to 2 lb	2.8 to 4.2 lb

**Natural or organic fertilizers will be available more slowly than chemical (often 1-4 months).*

This calendar is also a fillable PDF to enable digital record keeping:

extension.tennessee.edu/publications/Documents/W436.pdf

Crop	Cultivars grown	Date seeded transplants	Seeded or transplanted in the garden	First flower	First harvest	Insect issues	Disease issues	Last harvest

Garden Climate and Management Overview

(Use this page as a summary of notes recorded in the separate month calendars)

General climate	Spring records and last frost	Summer records	Fall records and last frost	Other notes
General climate	Spring temperature trends	Summer temperature trends	Fall temperature trends	Winter temperature trends
Rainfall	Spring rainfall total	Summer rainfall totals	Fall rainfall totals	Other notes
Irrigation	Spring irrigation summary	Summer irrigation summary	Fall irrigation summary	Other notes
Soil management	Spring tillage	Summer cover crops	Fall cover crops	Other notes
Fertilization	Pre-plant fertilization	Side-dressing	Fertigation (fertilizer dissolved in irrigation)	Other notes

Pest and Disease Management Records

(Use this page to keep records throughout the gardening season)

Crop and issue	Date of action	Material and method used	Rate and volume used	Notes on efficacy

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