PB1919

Welcome Home: Gardening in Tennessee

Real. Life. Solutions.™

UTEXTENSION
INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

TABLE OF CONTENTS

04. Tennessee Climates and Soils

06. Selecting Plants for the Landscape

08. Getting Started with Home Food Production

10. Incorporating Edibles in Your Landscape

12. Turfgrass in Tennessee

14. Scaling Up Food Production

15. Talking Trees in the Landscape

AUTHORS

FROM THE RESIDENTIAL AND CONSUMER HORTICULTURE TEAM

Natalie Bumgarner, Professor and UT Extension Residential/Consumer Horticulture Specialist
Bob Ary, Extension Agent Emeritus, Robertson County
Anna Duncan, Digital Certification and Training Program Coordinator, Plant Sciences
John Gunter, Extension Agriculture and Natural Resources Agent, Fentress County
Andrea Ludwig, Professor and UT Extension Stormwater Specialist
Mitchell Mote, Retired Extension Agriculture and Natural Resources Agent, Rutherford County
Taylor Reeder, Extension Agriculture and Natural Resources Agent, Williamson County
Melody Rose, Extension Agriculture and Natural Resources Agent, Sullivan County
Lee Rumble, Extension Agriculture and Natural Resources Agent, Knox County
Celeste Scott, Western Region Horticulture Extension Specialist, Plant Sciences
Justin Stefanski, Extension Agriculture and Natural Resources Agent, Rutherford County
Virginia Sykes, Associate Professor and UT Extension Variety Trialing and Agroecology Specialist
Haley Treadway, Extension Agriculture and Natural Resources Agent, Hamilton County
Gregg Upchurch, Extension Agriculture and Natural Resources Agent, Cumberland County
Seth Whitehouse, Extension Agriculture and Natural Resources Agent, Anderson County

A NOTE FROM THE UT EXTENSION HORTICULTURE TEAM

Welcome home! We want to connect you to great people and programs to get your new adventure in plants, gardens and landscapes in Tennessee off to a great start!

As the local arm of the University of Tennessee that serves all Tennessee residents, UT Extension delivers practical information and education to communities across the state. UT Extension provides a gateway to UT and is the outreach unit of the Institute of Agriculture. The people and resources of UT Extension form a statewide educational organization, funded by federal, state and local governments to bring research-based information about agriculture, family and consumer sciences, and resource development to the people of Tennessee where they live and work.

UT Extension provides Real. Life. Solutions. throughout Tennessee. With an office in each of the state's 95 counties, UT Extension helps Tennesseans to improve their quality of life and solve problems through the application of research and evidenced-based knowledge about agriculture and natural resources, family and consumer sciences, 4-H youth development, and community economic development.

In the context of your home lawn, landscape, vegetable garden or fruit planting, UT Extension can provide a practical introduction to Tennessee for new residents or to gardens and landscapes for new homeowners. This publication is designed to serve as a resource to help you get started in planning and managing your new lawn, landscape or garden.

So, welcome home to gardening in Tennessee!

We hope this publication is a gateway to the great information and people in our Extension system. It has links to many print and online resources, but by far our best resource is our people. Visit utextension.tennessee.edu to find your local Extension office and our county teams dedicated to helping you find information and resources to support your home, family, lawn, garden, farm or community.

TENNESSEE CLIMATE AND SOILS: THE FOUNDATION FOR SUCCESS

"What grows here?" is one of the first questions that new residents or new gardeners in Tennessee ask. It is a great question, with an answer that usually begins with "Well, it depends where you live in the state." Your geographic location in Tennessee can impact not only climate and temperature but also soils. To get you started off well, we want to answer some of the most common questions about plants, soils and climate in the great state of Tennessee.

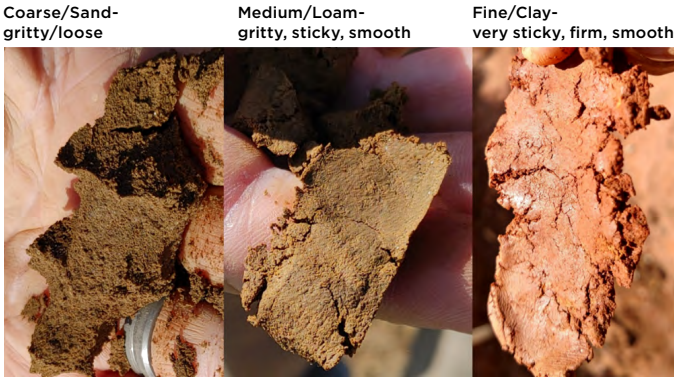
What plants can grow in this climate?

Tennessee has a unique climate with growing zones that vary based on topography and geography. Much of Tennessee is known to be a Plant Hardiness Zone 7, but this varies across the state with latitude and altitude. For example, higher elevations found on the Cumberland Plateau and towards the mountains of East Tennessee may experience later frost events with a Plant Hardiness Zone 6. Yet, urban areas in the southern part of the state will experience a warmer climate with a Plant Hardiness Zone 8. The map on the following page will help you locate the USDA plant hardiness zone for your region.

What are the soils like in Tennessee?

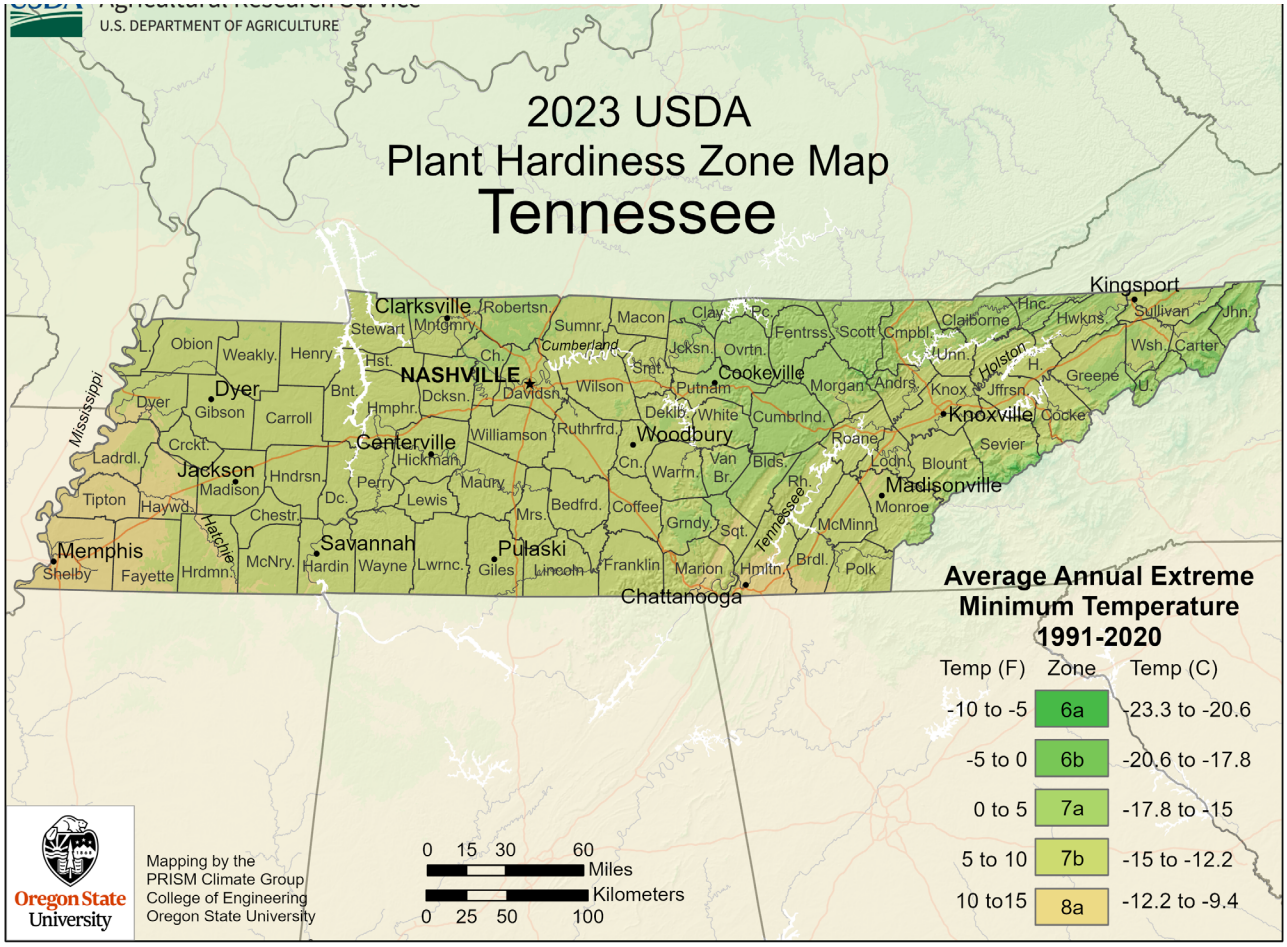
It is important to understand that soils are a combination of minerals, water, air, organic matter and living organisms. Like Tennessee's climate, its soil characteristics vary greatly across the state with nine commonly described soils from west to east: See Soil Areas of Tennessee. Many of our residential soils are a combination of sand, silt and clay. Depending upon your location and the previous activites on the site, these soil percentages and characteristics can vary.

So, what should you look for in evaluating the soil characteristics of your property?



First, determine soil texture by taking a moistened (not wet) sample of soil in the palm of your hand. Rub the soil through your thumb and index finger. How does it feel? If the soil is sandy, it is a coarse textured soil. These soils barely hold together to form a moist ball, if they do at all. If the soil is very firm, hard to press, and makes a very dense ball, this would indicate clay. The higher the clay content the more "sticky" the soil, the greater the ribbon it will form, and greater the mirror shine the soil will possess.

If soil analysis results in some combination falling between the first two examples, that would indicate some type of loam. Loams tend to be most desirable for growing plants and and are the most prominent soil in Tennessee.
The second trait residents should evaluate regarding their



soil is depth. Along our vertical arrangement of soil, the surface soil will dictate the capacity for plant productivity while the subsoil layer is crucial to the overall depth of the soil. The bed rock or impermeable soil parent material impedes the movement of water, air, and overall plant root capacity. Soils that have permeable structure allowing water, air and roots to move beyond 36 inches deep within the profile are best. As the soil becomes more shallow, the potential for growing certain plants will be inhibited. Shallow soils tend to be very dry in the summer and wet in the winter which can negatively impact perennial plants.

How can residents determine soil depth?

Simply dig a hole with "post-hole diggers" when there is adequate soil moisture. The ease or difficulty in digging along with the depth to which you can dig will provide insight on soil depth. Since you now have a hole, go ahead and conduct a permeability test using water. See Climate and Soils. These simple tests provide a basic idea of soil characteristics and water holding capacity.

Preparing your soil!

Knowing your location and understanding your soil is only the beginning to managing plant nutrition. All soils can be amended with organic matter and potentially improved with lime and fertilizer. We encourage residents to complete a soil test to gather specific recommendations for amending the soil to reach optimum productivity. A soil test through the UT Extension Soil, Plant and Pest Center will provide important information regarding soil pH, phosphorus (P) and potassium (k), along with primary/secondary nutrient levels. These soil tests also will provide recommendations for planting and maintenance. Learn more at soillab.tennessee.edu and be sure to visit with your local UT Extension agent. Understanding all of these components is key to managing your unique soils and helping your plants thrive in the landscape.

SELECTING PLANTS FOR THE LANDSCAPE: THE RIGHT PLANT FOR YOUR PLACE

From Tennessee's natural beauty and native flora to the climate's ability to support a wide range of ornamental plants, the state has so much to offer plant lovers. Selecting appropriate plants for garden spaces in Tennessee requires some attention to detail. Beyond choosing plants for the correct hardiness zone, gardeners should consider light, soil moisture and nutrient requirements to ensure success. UT Extension has developed educational materials that serve as a road map to finding the perfect plant for your space. These plant lists can be found on the UT Horticulture website. This database is designed to be user-friendly and assist gardeners with finding research-based information on a wide range of horticulture topics.

We also invite you to visit one of our three UT Gardens locations in Knoxville, Crossville or Jackson to see how plants are performing in your region of the state. These public gardens are free to access and open during daylight hours. They serve the public through plant research and learning opportunities. More information can be found on the UT Gardens website.

Frequently Asked Questions about Tennessee Plant Selection

I have always been a gardener, but I'm not sure what types of plants I can grow here.

From woody ornamentals to perennials and annuals, the options of plant materials that thrive in Tennessee are too numerous to recount here. However, UT Extension has a reservoir of information housed at the UT Horticulture website that can help you become familiar with plants that thrive in our climate. You can peruse lists by type (annuals, biennials, perennials, bulbs) or by functionality (screens, groundcovers, pollinator friendly, easily grown from seed). Our lists always recommend plants that are proven to perform in Tennessee landscapes and feature cultural information as well as tips on placement and purpose.

My soil is so different from what I'm used to. Do I need to do anything special to prepare it for planting?

Soil composition and texture vary greatly across the state. Depending on previous gardening experience, you may perceive Tennessee soils to be an aid or an obstacle to your gardening endeavors. In many situations, the soil you have to work with may not even be the original topsoil! Due to continued urbanization, native soils are often moved off-site during construction, leaving you with compacted subsoil and very little organic matter. In these situations, amending the planting area with organic matter will improve soil structure, increase water and nutrient holding capacity, and aid in drainage. Soil testing can provide insight on nutrient requirements that can help determine what amendments may be added during site preparation. Visit the Soil, Plant and Pest Center website for more information on soil sampling.

When is the best time to plant in Tennessee?

In Tennessee, the planting window is relatively long. We have a lengthy growing season with approximately 20 weeks of frost-free weather. This varies depending on where you are in the state. Warm-season annual flowers should not be planted outdoors until after the danger of frost has passed. The ideal planting time for perennials is spring through summer, while most woody ornamentals can continue to be planted well into the fall. For more information on timing for specific plants, check out the ornamental plant lists on the UT Horticulture website

Online Resources (also viewable at tiny.utk.edu/selectingplants)

Tennessee Smart Yards
W 868 Sustainable Landscapes Planning and Plant Selection
W 869 Leveraging your Landscape
Native Plants for TN
W 874-A Plants for Tennessee Landscapes: Annual and Biennials
W 874-B Plants for Tennessee Landscapes: Perennials
Plants for Tennessee Landscapes: Screens
PB 1636 Butterfly Gardening
W 305 Hummingbird Gardening

TENNESSEE SMART YARDS

Are you hoping to have a biologically diverse landscape?

Are you looking for ways you can help protect nature?

Are you interested in designing and managing your landscape so that humans and wildlife may enjoy it?

Then Tennessee Smart Yards is for you!

Tennessee Smart Yards is an educational and yard certification program for Tennesseans that teaches the "how to" aspects of stewardship to create healthier, more environmentally sound landscapes and communities.

You don't have to be an expert gardener or landscaper to create a Tennessee Smart Yard. All it takes is a willingness to learn and a desire to act. Maintaining a Tennessee Smart Yard mutually benefits the environment and the homeowner by providing natural and functional beauty.

Tennessee is an ecologically rich state with landscapes that boast a deep diversity of plants, animals and habitats. As our state's population grows, it has never been more important for each Tennessean, new and old, to steward our natural resources for enjoyment now and in the future. Learn why Tennessee Smart Yards is the right program for you and our environment at tnyards.utk.edu.

GETTING STARTED WITH HOME FOOD PRODUCTION: SMALL SPACE GARDENS

There is nothing like a tomato from your own garden or a fresh salad with greens you grew yourself. Tennessee has a moderate climate and relatively long growing season, so almost any vegetable can be grown well here. But, food production can seem daunting to begin. You may be wondering where to even start with home food production in Tennessee. Vegetables are a great place to start, and we want to help you address some of the most common questions.

I want to start growing home vegetables. How can I select the best location?

When it comes to selecting the best site, focus on sun and soil.

Sunlight:

- Vegetables need full sun locations for good growth and yield.
- Many small-scale gardens suffer from too much shade, which leads to spindly plants and low production. So, don't skimp on sunlight.
- Fruiting crops require 6 to 8 hours per day. If light is limited, leafy crops may be able to grow with 4 to 6 hours per day.

Soil:

- Vegetables require good drainage, so make sure not to select a low lying area where water pools.
- Plant roots will require at least 6 to 8 inches of soil. Taking soil samples and sending them in for soil testing will enable you to assess depth and get recommendations for nutrient additions.
- Assess the area for compaction that makes soil hard to dig and slow to drain. Good drainage is a must for vegetables.
- Many residential sites have had the most valuable upper layer of soil (topsoil with organic matter) removed during construction. Additions of leaf litter and compost can add organic matter over time and will help hold water and nutrients. Organic matter can even be measured during a soil test, so you know for sure.

What vegetables are planted in each season?

There are three common growing seasons in Tennessee — spring, summer and fall — and two broad categories of vegetable crops. Cool-season crops are those that can withstand frost and grow best in spring and fall but not in the hottest part of summer. We can grow both spring and fall crops in Tennessee. In spring, try lettuce, radishes, kale, collards and peas. In fall, crops like broccoli, cabbage, kale, collards, lettuce, spinach and turnips are great options. Cilantro is a cool-season herb. Warm-season crops are killed by frost but perform well in the heat of the summer. Beans, sweet corn, okra, tomatoes, peppers, eggplant, squash, cucumbers and black-eyed peas are great options for planting after the last frost in Tennessee. Basil is a warm-season herb that is a great addition to small-space gardening. In fact, you can plan your garden tasks for any season with our Home Fruit and Vegetable Calendar.

RAISED BEDS TO THE RESCUE

My soil is a challenge, what can I do?

If your site has compacted soil or other issues, raised beds and containers can be a great way to grow home vegetables. Raised beds can be built from kits or with do-it-yourself instructions. Wood, metal, composite materials, concrete blocks and even rocks can all be used to build functional raised beds.

You can purchase raised bed mixes instead of using the native soil. Purchase mixes designed for raised beds rather than generic potting soil. These mixes should have a range of particle sizes to support drainage and be free from weed seeds and pathogens. These mixes will provide a great place for plants to grow but remember they will need to be watered and fertilized more frequently than in-ground gardens!

What are the best varieties for my garden?

When walking through a garden center or looking through a seed catalog, it is easy to throw whatever catches your eye into the cart. When it comes to optimizing the production potential of your garden, though, this usually isn't the best option. This is especially true when moving to a new location where what was once a tried-and-true option may no longer be the best fit. Growing a well-adapted variety can result in higher yields, more flavorful produce and reduced need to spray to control pests and diseases.

Traditional variety trialing on research stations can provide in-depth information on yield, quality and disease resistance. These types of trials are performed in Tennessee, but the number of crops and locations are limited because of the high labor needs. The Tennessee home garden variety trials are a complementary program that takes a unique citizen scientist approach providing broader geographical representation across the state. Through this program, participants grow two varieties side by side and submit data on germination, plant health, yield and, of course, flavor! These data are reported and released every year in a Tennessee trial report. In this publication, you will find information on variety performance along with data on the proportion of citizen scientists that would recommend each variety to fellow Tennessee gardeners. Tennessee top-performers are found at the end of each publication. This section contains a brief list of small space appropriate cultivars that have been ranked highly. Much more information can be found on our home garden UT Horticulture website.

Some of Our Favorite Small-Space Tennessee Garden Favorites

Cool-Season Crops for Spring or Fall Growing	Warm-Season Crops for Summer Growing
Lettuce: Sandy, Mirlo, Panisse, Salanova series, Nancy, Winter Density, Green Forest, New Red Fire, Two Star	Green Bush Beans: Contender, Provider, Wyatt, Maxibel, Mascotte, Calima, Blue Lake 274, Purple Bush Bean: Amethyst, Yellow Bush Bean- Borsalino
Swiss Chard: Bright Lights, Rhubarb	Pole Bean: Kentucky Wonder, Rattlesnake, Turkey Crawl
Radish: Cherry Belle, Watermelon, Roxanne, Sweet Baby, Easter Egg	Cucumber: Marketmore 76, General Lee, Green Light, Bush Pickle, Spacemaster, Bush Crop
Cabbage: Caraflex, Katarina, Ruby Perfection, Blue Vantage Kale: Toscano, Red Russian, Redbor, Prizm, Winterbor	Green Zucchini: Desert, Green Tiger, Eight Ball Yellow Zucchini: Easy Pick Gold II, Chiffon Yellow Squash: Zephyr, Tempest, Grandprize, Slik Pik
Turnip: Purple Top White Globe, Hakurei, White Lady	Pepper: Revolution, Big Bertha, Carmen, Cornito Giallo Container Tomato: Patio Choice Yellow, Tidy Treats
Collards: Champion, Flash	Basil: Dolce Fresca, Devotion, Obsession, Nufar

Online Resources (also viewable at tiny.utk.edu/smallspacefood)

W 436 Tennessee Home Fruit and Vegetable Calendar
W 1162 Tennessee Home Garden Variety Trial results
UT Horticulture resources on home vegetable gardens

INCORPORATING EDIBLES INTO YOUR LANDSCAPES:
THE BEST OF BOTH WORLDS

Incorporating edibles in your residential landscape is a great way to create a unique and interesting ecosystem in your backyard! Edibles can enhance the landscape by creating year-round curb appeal with a practical use for landscape plants that increase habitats for beneficial insects and pollinators and encourage birds and other wildlife to live in harmony within your edible sanctuary. Edible landscapes are functional, unique and provide beauty throughout all the seasons.

What are some of the benefits of edible landscaping?

- Protect water quality, as plants absorb run-off water thereby reducing the amount of chemicals and fertilizers that end up in groundwater.
- Conserve energy by blocking winter winds and providing summer shade.
- Enhance wildlife by providing food (and shelter) sources year-round.
- Prevent soil erosion by reducing the amount of soil lost during heavy rains.
- Control pests naturally by inviting the birds to your landscape to feast on insects!

Why wait? Create a dynamic ecosystem via an edible landscape in your own backyard! Check out our comprehensive resource guide on Managing Wildlife Around Your Home for great info on bird boxes and food preferences, beneficial shrubs for wildlife, and plants for pollinators!

While growing edibles may seem intimidating for some, consider it an opportunity to simultaneously provide food for both human and wildlife consumption all year long! An excellent method to grow an edible landscape is to increase native plant species. Natives are plants which have stood the test of time by adapting to their current environment. They are able to withstand shifts in weather and require fewer resources to grow successfully.

Our resource guide on Sustainable Landscaping Planning and Plant Selection provides excellent information on creating a balanced ecosystem!

As a new resident to Tennessee, you may be wondering how to identify these native wonders. Because Tennessee itself is so diverse, natives can differ across the three regions, although many species can and will thrive throughout the state. For an excellent list of Tennessee native plants to include in your edible landscape, check out this Native Plants for Tennessee database!

What are some key decisions I need to make before incorporating edible landscaping?

- What kind of wildlife do you want to invite to your backyard? Birds and/or other species (squirrels, rabbits, deer, bears)?
- Think about your space. Remember, even with limited space, you can incorporate a vertical garden complete with vines, various tree sizes, shrubs and herbaceous plants.
- Think about the placement of your edibles. Do you want to view it from a favorite window or patio? Create beauty you can view from your favorite personal spaces!
- How much time will you devote to maintenance? This can alter the species you choose to plant.
- Remember not all species start producing immediately. Fruit and nuts take a few years before an ample harvest occurs (also, choose plants that vary in size and shape for food production year-round).
- Are you choosing native plants? Are they suitable to your specific area in Tennessee?
- Are you planning on sharing your harvest with the wildlife? If not, utilize UT Extension's expert advice on deterring wildlife in your landscape.

What types of plants are good options for edible landscapes?

First off, creating an edible landscape to provide food year-round is a great way to incorporate functional plants with beauty and interest to the overall landscape. Planting fruit and nut trees provide shade and variety of flavor. Depending on your location in Tennessee, pecans, walnuts, apples, pears, plums, quince, serviceberry, persimmon, chokeberry, mulberry, papaw and (sometimes) cherry, peach and nectarine are excellent to grow in the landscape. Be aware they take a few years to start producing and require annual maintenance such as training and trellising, pruning, and/or fertilizing.

Additionally, shrub-like fruit can assist in providing privacy and reducing noise. They include blueberries, elderberry, boysenberries, caneberries, grapes, figs and currants. As with fruit and nut trees, maintenance is required on an annual basis to train and/or trellis, prune, and fertilize. If you have an area that is underutilized or perhaps unsuitable for lawn grasses, consider ground cover edibles like strawberries, caneberries and even hardy kiwi!

There are many options for incorporating edibles into a landscape. Be aware of the time and maintenance requirements for each crop as well as your wildlife pressure and/or preferences when planting to achieve your personal goals. Want more information? Our Landscaping with Fruit and Nut Crops will get you started!

If you are planning on creating an edible landscape for your own personal use, you may be surprised to discover we often have to share (unintentionally) with our wildlife friends. However, there are some tips to get you growing in the right direction if eliminating wildlife from your landscape is of utmost importance.

For many across Tennessee, deer, turkey and bear limit edible species to grow. Knowing plant species which are not favored by or palatable to our furry friends can provide big advantages in the long term. Crafting a creative plan to exclude wildlife is the first goal but determining the problem species is tantamount to determine how to proceed.

Are deer a problem in your landscape? Discover Deer Resistant Plants in this publication to get you off to a great start or check out our resource guide on Managing Wildlife Around Your Home for more information on deterring nuisance critters from the home and landscape.

Lastly, if an edible landscape entices you, be sure to check out the Tennessee Smart Yards program! It provides an opportunity to turn your personal landscape into a more ecologically sound environment for you AND your community. Tap into these great resources and become certified at tnyards.utk.edu.

CONSIDERING EDIBLES FOR YOUR LANDSCAPE

Trees/Large shrubs:
Persimmon
Pawpaw
Red mulberry
Chinese chestnut
Chickasaw plum
Fig

Shrubs:
Blueberry
Hazelnut
Raspberry
Blackberry

Groundcover/low growing:
Strawberry

Vines:
Grapes- bunch or muscadine
Hardy kiwi

TURFGRASSES IN TENNESSEE:
GETTING TO KNOW YOUR LAWN

Managing turfgrass is an area that new residents or homeowners in Tennessee often have questions about. Tennessee is uniquely situated in an area that is commonly referred to as the Transition Zone. It is mid-way between sultry southern climates and wintery northern climates and spans several USDA Plant Hardiness Zones (5b-8a) from east to west. This variation can create challenges in species selection, establishment and management and leave homeowners with many questions. Whether moving from areas to the north or south of Tennessee, you are likely to find managing turfgrass here is different than other places you may have lived. So, we want to help you get started with your new lawn by answering some of the most common questions UT Extension personnel receive. Your county Extension agent is a great place to start for guidance and recommendations on residential lawn establishment and management of home lawns.

Frequently Asked Tennessee Turfgrass Questions

What kind of grass should I grow and when should I plant it?

Bermuda and Zoysia are excellent perennial warm-season grass options for southern and/or middle to western portions of the state. They thrive in hot humid environments and should be established in late spring to early summer.

As you move eastward and north across the state, warm-season grasses will remain in dormancy longer (golden/tan in color), can become cold stressed and in some cases will succumb to cold damage.

W159-H Turfgrass Selection: Zoysia
W159-A Turfgrass Sleection: Bermuda

Turf-type Tall Fescues, which are perennial cool-season grasses, are a better option for the cooler climates of the state and are best established in late summer to early fall. Unlike warm-season grasses, fescues will continue to grow and remain green until late fall/early winter and will green-up more quickly in early spring. However, in warmer regions of the state they can suffer from heat and drought stress during summer months and may require routine over-seeding to maintain a dense stand.

W159-E Turfgrass Selection: Tall Fescue

I have a shady area that won't grow grass. What can I do?

All grasses prefer sunny conditions. Shade will limit the performance of any turfgrass, but some species and cultivars are more tolerant of shade than others. Cool-season grasses like creeping red fescue and fine fescue are more tolerant of shade than tall fescues. Zoysia, a warm-season grass, has several cultivars that are more tolerant of shade including 'Palisades' and 'Meyer.'

From a management standpoint, raising the tree canopy through selective pruning may increase light availability for the grass growing under the tree's canopy and result in more grass growth. In some cases where shade is too dense, establishing mulch beds may be the best option as mature tree roots can outcompete grass for water. More solutions to turf and shade and can found in the publication Managing Trees and Turfgrass.

What should I use to fertilize my lawn?

The most common mistakes in lawn fertilization are over fertilization and improper timing. Fertility programs in Tennessee should be targeted towards the specific grass species' needs and the current nutrient levels in the soil. This will vary greatly across the state. As far as timing is concerned, fertilization should only be administered while the grass is in an active stage of growth. Cool-season grasses should be fertilized in spring and fall, and warm-season grasses should be fertilized in spring and summer. The only way to provide stewardship-focused fertility is to base those applications on test results of a soil sample. Samples processed by the Soil, Plant and Pest Center will measure pH and nutrient levels and provide application recommendations based on those results. Instructions for gathering samples and submitting them for testing can be found online at soillab.tennessee.edu.

What are these weeds, and how can I kill them?

It has been said the best defense is a good offense, and this phrase accurately describes the struggle that homeowners face with weed control in lawns. Nothing out-competes a weed better than a thick healthy stand of turfgrass. So, the primary focus should be on cultural management strategies like mowing, fertilization, irrigation and proper species selection. Broadleaf and grassy weeds in Tennessee are numerous and many are difficult to control even under proper management. Herbicide selection and timing of application will be critical for effective control, and UT Extension has many resources to assist residents in these areas. Detailed information on best management practices for residential turfgrass and weed identification and control options can be found in Lawn and Landscape Weed Control for Homeowners.

Online Resources (also viewable at tiny.utk.edu/TNTurfgrass)

W 1068 Lawn and Landscape Weed Control for Homeowners
Home Lawns Disease Control
W 161-C Developing a Turf Fertilization Plan
PB 1576 Selecting, Establishing and Maintaining the Fescues
D 141 An Example Bermudagrass Lawncare Calendar
UTHORT Turfgrass
Turfgrass Weed Science
Mobile Weed Manual Free App (available on desktop)
Lawn Maintenance Calendar

SEEDING AND SODDING TURFGRASS IN TENNESSEE

Appropriate times for planting will vary slightly across geographic location and years in response to weather trends. Remember that optimum air temperatures to support cool-season turfgrass growth are generally between 60 and 75F, while optimum air temperatures for warm-season turfgrass are generally between 80 and 95F.

- **Sod for cool-season turfgrass (fescues, bluegrasses, ryegrasses)**: Late August through early May, with September, October, and March often considered optimal months.
- **Sod for warm-season turfgrass (Bermudagrass, zoysiagrass)**: Potentially year-round when the ground is not frozen, with May, June and July often considered optimal months.
- **Seed, plugs and sprigs for warm-season turfgrasses**: May through early July
- **Seed for cool-season turfgrass**: Late August to early October. Spring planting may not allow enough time for establishment prior to summer heat.

HOMESTEADING:
CONSIDERATIONS FOR SCALING UP FOOD PRODUCTION

If you enjoy raised bed gardens and appreciate edible landscapes but are interested in increasing the productivity from your property, then you will want to consider some of the selection and management practices that can help you up your game for optimum productivity of vegetable and fruit crops in Tennessee.

What steps are important to scale up from small spaces to larger vegetable garden areas?

1. **Be intentional about your planning, planting and harvesting.**
    - Create a planting plan to support good rotation and efficiency.
    - Consider growing your own transplants.
    - Plant in successions for extended harvest.
    - Also consider season extension techniques.
2. **Manage your soil for the present and the future.**
    - Use tillage only as much as is necessary.
    - Soil test and carefully manage nutrition.
    - Rotate to support soil health.
    - Get converted to cover crops.
3. **Get serious about your management methods.**
    - Utilize mulches—organic and/or plastic—and appropriate weed control.
    - Irrigation can be a big asset.
    - Be serious about your support systems—cages, stakes and such will lower disease and picking time.
    - Know your pest and disease control options.
    - See Disease and Insect Control in Home Fruit Plantings.

What do I need to prepare for if I want to grow home fruit on a larger scale?

1. **Be realistic about the climate, site and your time and money investments.**
    - Check out the realities of home fruit with this simple flow chart to understand the range of management needs.
2. **Select with the location and disease resistance*** in mind to reduce losses.**
3. **Make a plan for the space AND the time you need to grow high quality fruit crops.**

Crop	Estimated ft² per plant	Planting to First Harvest	Planting to Full Crop	Life Expectancy
Apples – semi-dwarf – full dwarf	120-750	3 to 4 years 1 to 2 years	6 to 8 years 4 to 5 years	More than 20 years 15 to 18 years
Grapes – bunch – muscadine	60-160	4 years 4 years	5 years 6 to 7 years	25 years More than 30 years
Blackberries	16-32	1 year	2 years	6 to 8 years
Blueberries	40	3 years	7 to 8 years	More than 25 years
Strawberries – matted row	1-2	1 year	1 year	2 to 4 Years

4. **Get comfortable with the tools and practices of the trade.**
    - Prune like a pro to support good health and light interception for fruit production.
    - Be serious about disease control practices because losses occur quickly.
    - Wildlife protection may become a necessity to protect your investment.

TALKING TREES IN THE LANDSCAPE

Taking Care of Our Long-Term Landscape Residents

Trees are a unique draw in the landscape for their beauty, shade, textures, colors, smells, wildlife support or even nostalgia. However, trees are a long-term commitment and their ultimate survival in our landscape requires us to be proactive because mistakes made early in the establishment of a new tree are hard to overcome.

What do I need to know before selecting a new tree for my landscape?

1. Selection: What is your goal? Flowers, shade, fruit, wildlife support? How much time or money are you willing to invest long-term?
2. Site: What types of soil are present and how is drainage in the area? Are there structures, etc. that could be damaged by roots or tree failure?
3. Planting Season: Will conditions enable the young tree to get started under low stress? Do you have time to establish and manage the young shrub or tree?

In urban and residential environments, these are not always simple questions. Often, tree initial stress and ultimate decline is assumed to be a pest or disease issue. But poor cultural practices can often lead to stress and decline of the plant. Below are some common examples of issues with selection and site including low-quality nursery stock, improper planting depth and/or poor planting practices, and poor siting or mulching.

Selection: When establishing a shrub or tree in your lawn, start with high-quality nursery stock that is free of injuries, diseases or pests. The shape of the tree is also important. Avoid those that have been tipped or topped, trees that are not clearly larger at the bottom of the trunk (called taper), or trees that have roots encircling the trunk (called girdling roots). Once a specimen has been selected, focus next on the planting area.

Site: If at all possible, install trees in planting holes that are wider than they are deep. Narrow deep holes often lead to trees being planted too deeply that suffer from stress (and loss of vigor), moisture retention against the bark, insect infestations, early death or later structural failures if they make it to maturity. Consider planting nearby shrubs or other trees at the same time to prevent future root damage when installing new plants. Once all the plants are in the ground, mulch the entire planting area. Mulch helps to retain moisture and moderate temperature as well as adding organic matter and reducing weeds. Most importantly, mulches help to keep people and their lawn mowers and weed trimmers off the rootzone and safely away from the trunk or roots.

Season: While spring is often thought of as planting time, planting in the fall here in Tennessee can benefit trees and shrubs. Fall planting can enable better root growth and development before the heat and stress of the next summer. Also fall planting occurs when trees are less active as they head into dormancy, so less stress is placed on a plant at a time when transplanting has damaged many of the fine roots that take up water and nutrients.

Remember, trees cannot be planted and forgotten about until a problem arises. Being proactive and monitoring your newly planted trees and shrubs will go a long way in helping to ensure that your plants will last in the landscape for years, decades or even centuries if done right!

WANT TO LEARN MORE?

Get connected with your local UT Extension Office. Check out all of our horticulture resources on the UT Horticulture website.

WANT TO BECOME A VOLUNTEER?

More than 2,700 Tennessee Extension Master Gardener volunteers invest over 175,000 hours of service annually. We invite you to join them! You will help grow Tennessee communities by sharing the horticultural knowledge and expertise you gain from initial and ongoing training conducted by Extension faculty and agents across the state. See Master Gardener website.

FOLLOW UTHORTICULTURE ON SOCIAL MEDIA

Facebook
Instagram
YouTube

Visit the UT Horticulture site.

UTIA INSTITUTE OF AGRICULTURE
THE UNIVERSITY OF TENNESSEE

UTIA.TENNESSEE.EDU

Real. Life. Solutions.™

PB 1919 04/26 26-0100 Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and County governments cooperating. UT Extension provides equal opportunities in programs and employment.