TEXAS GARDENER'S HANDBOOK

ALL YOU NEED TO KNOW TO PLAN, PLANT & MAINTAIN A TEXAS GARDEN

DALE GROOM AND DAN GILL
WITH STEVE DOBBS, JAMES FIZZELL, JOE LAMP'L, AND JOE WHITE

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COOL SPRINGS PRESS
Growing Successful Gardeners™
MINNEAPOLIS, MINNESOTA

CONTENTS

WELCOME TO GARDENING

in Texas

We Texans have excellent opportunities for establishing all kinds of gardens in our great state. Soils and climatic zones are quite diverse, and there are wonderful plants available to all of us. This book will provide an introduction to the many plants you can select for enjoyment in your Texas home landscape. Most of the plants are readily available. Some will be a bit difficult to locate, but all are worth seeking out. Remember that the hunt for those interesting and hard-to-find plants is part of the fun, too! Follow the suggestions in this book for assistance in enjoying your Texas gardening experience.

OUR DIVERSE STATE

Texas has four different hardiness zones, as shown on the United States Department of Agriculture (USDA) Cold Hardiness Zone map (page 17). The state reaches from Zone 6 in the Panhandle, where minus 10 degrees Fahrenheit is common, all the way down to Zone 9 in the valley, where freezes are the exception. Few states in the country have this diversity.

The colder zones are in the northwest areas of Texas, including Wheeler, Randall, and Bailey counties in the Panhandle. The warmer zones are in the south and include Cameron, Hidalgo, and Starr counties of our Rio Grande Valley. Keep in mind that the USDA Cold Hardiness Zone map doesn't tell the whole story of temperatures in our state. Temperatures in urban areas may be 10 degrees warmer than those in rural areas due to asphalt, concrete, masonry, and a denser population—all of which create what are called microclimates.

Microclimates can also be created in our own home landscapes by fencing, shrubbery, and by our homes and structures. You may discover that your yard has a location where particular plants will survive due to a microclimate that has been created, while your neighbor may not be able to grow the same plants.

Temperature range and rate of change greatly affect gardening in Texas. If, for example, one area were to drop to a sub-freezing temperature for a short period of time and climb right back up, plants in that area would most likely receive little harm. But if the temperature dropped suddenly and remained there for several days, great damage could occur. When an unusual freezing spell struck North Texas, some of its live oak trees, which normally would be considered quite hardy in that area, were severely damaged.

The USDA Cold Hardiness Zone map provides general temperature guidelines for the state and each of its zones. Plant hardiness refers to each plant's ability to withstand the freezing temperatures that historically occur in the various zones. A plant that is barely able to withstand the temperatures in Zone 8 should not be planted in the colder Zone 7. Plants that will grow in Zone 6 will often grow in Zone 9. As you can see, Texas is a climatically diverse state, and it is important to pay attention to zone hardiness.

In Texas, one problem gardeners encounter is the challenge of raising plants that have been grown and acclimated in other parts of the country. While some plants will withstand all of our freezing temperatures, they may not be able to handle the blast furnace heat that we have. So, if you are ordering plants or buying them from another part of the country, make sure they will be able to handle Texas summertime heat. For best growing results, plants need to be placed where they will receive the proper amount of light. This book contains light requirements for the plants I have featured. This information can also be found at your local gardening retailer. Even the temperatures in our shade can be too hot for some northern plants, and they may not receive the sunlight needed to grow properly. Texas sun in July and August, for example, will fry some plants that can be grown in full sun in other parts of the country. I noticed an example of this when I was in Winnipeg, Canada, taping a television show in July, and I saw impatiens being grown in full sun. Impatiens grown in the full Texas sun of July would be cooked very quickly. When you read that particular plants can be grown in full sun, make sure the writer is referring to full sun locations in Texas and not New England, the Pacific Northwest, or other relatively cool locations.

FACING THE WIND

There is nothing like a Texas wind to affect your gardening activities. Make sure the plants that you select at your local garden center will be able to withstand the wind that is common in your area. Many Texans experience prevailing southwestern breezes, and in some locations they can be quite strong. I have seen significant landscape plants growing at an almost 45-degree angle due to these prevailing breezes. Make sure that trees or other tall shrubs are staked properly until they are large enough to withstand the strong breezes and are growing in a vertical position. Trees that are properly selected and placed can serve beautifully as breaks to block out strong winds.

THE IMPORTANCE OF MULCHING

Mulching can be a confusing topic for Texas gardeners. Whether it is compost, ground-bark mulch, or another type of material, mulch simply means a blanket of these materials on top of your soil. Whether we are planting vegetables, perennials, trees, or any other plant, mulch is a blanket we put on top of the ground that aids in moisture retention, weed control, and soil improvement.

The amount of mulch that you use is determined by the type. Generally, mulching three to four inches is quite sufficient. Lightweight materials, such as pine needles or clean hay will settle and may require a bit more coverage—but six inches placed between plants is usually adequate. In fact, all of the roses in the City of Tyler rose garden are mulched with pine needles.

Perhaps the most important benefit of mulching for Texas gardeners is conserving water. Plants that are properly mulched require less frequent watering, maintain even soil moisture content, and respond with better overall growth. If you take a walk through the woods, you will notice that our native vegetation is mulched by woodland floor debris or natural mulch. Mulching your finished plantings helps to approximate that natural environment.

Mulching is something that I encourage every gardener to do yearly, and I prefer the organic varieties. There are plenty of mulching materials from which to choose—pine, hardwood, peanut, pecan hulls, or shredded sugar cane. Select the one that works best for you and your plants.

GARDEN NUTRITION

Simply put, fertilization supplies nutrients to the soil for the plant to pick up. This process is sometimes misunderstood. While many gardeners think they are feeding the plant, they are actually adding nutrients to the soil for the plant to absorb. If the soil lacks sufficient amounts of naturally occurring plant nutrients, then your plants will not thrive.

Plants can be fertilized with various products including water-soluble, liquid, encapsulated, and premium-quality, slow-release fertilizers. Many different forms and types are available. Make sure that you read and understand the directions before you apply any type of fertilizer. When a container of fertilizer specifies an amount, we Texas gardeners may say, "Well, if that works well, then doubling that amount ought to be really great!" It doesn't work that way with fertilizers. Make sure you apply only the amount specified on the label.

My granny Miller said that Granddad was known to burn up crops in the vegetable garden by putting on too much cottonseed meal. Cottonseed meal is a 100-percent-natural organic fertilizer, but just because something is organic does not mean that you can't have problems by using too much. Soil nutrients are sometimes categorized as major or minor. Plants need more of the major nutrients than they do of the minor. Nitrogen (N), phosphorus (P), and potassium (K) are considered the three major nutrients. Some horticulturists classify sulfur, magnesium, and calcium as secondary nutrients. The remaining nutrients are called micronutrients because they are used by plants in extremely small amounts. This doesn't mean that major nutrients are more important, just that plants use more of them. Plants do not have the ability to determine where nutrients come from. As far as they are concerned, nutrients come from the soil reservoir. With the

proper application of fertilizers, you can make sure that the soil has the nutrients necessary for good plant growth.

Nutrients occur naturally in our soil, originating from various materials, including stone and organic matter in the soil itself. Perhaps you have heard someone say, "The soil is just worn out." Soil doesn't really wear out, but we can deplete it of nutrients and damage soil structure. By re-supplying nutrients to soil that has been depleted and keeping soil structure in good shape, we can continue to grow in the same soils for generation after generation. If soils are deficient in naturally occurring nutrients, we can apply those nutrients in the form of fertilizers. I always recommend that you water thoroughly after applying any type of fertilizer.

When fertilizing your lawn, apply when the grass blades are dry. Follow label directions and then water thoroughly. You should be rewarded with a nice, thick, vigorous lawn if you also mow properly and water as necessary. Don't forget that your lawn may also need to be aerated if your soils are compacted or are the heavy clay types. Aeration allows oxygen, water, and nutrients to penetrate the soil and reach the root zones. In heavy clay soils or high traffic areas, aeration every two years is usually sufficient.

WHEN TO WATER

When droughts occur in Texas they remind us just how important water is to us. There are many demands on our water supply and water is not available in unlimited quantities. Described as "the essence of life," water is as necessary to plants as to humans in order to survive.

Water your plants deeply and thoroughly. Lawns, for example, need to be watered to a soil depth of six inches, and they prefer to be watered to eight inches. Don't set any of your plants, including your lawn, on a watering schedule. I have seen folks who turn on their lawn sprinklers, for example every morning at 6:38 A.M. for ten minutes. That is not desirable for individual plants, grass, shrubbery, or any other plant.

After watering, don't go back and re-water until your plants tell you they need it. Grass will tell you when it needs to be watered by changing from a nice pleasant green color to a kind of bluish gray. Or perhaps its sides will roll up, or it will not lie flat when you walk across it, not springing back. When you see these signs, water the lawn thoroughly. You can tell when shrubs need to be watered by simply sticking your finger in the soil. If the soil is dry, then irrigate or apply water thoroughly . . . did I mention to water thoroughly? Be sure that you soak the entire root zone of your

plants when watering. If you water your plants frequently and very lightly, they will develop undesirable shallow root systems. When watering containers, water until there are no more air bubbles coming out of them. You will then know that all the pores have been saturated with moisture. The excess water will drain out. Be sure that all your containers drain properly.

Certain methods of irrigation can be good for water conservation; others can be quite wasteful. Sprinklers that throw a lot of water high in the air before the water strikes lawns or shrubs are not as efficient as other methods. Drip irrigation is the most efficient method of delivering water to landscape plants, including trees, shrubs, vines, groundcovers, annuals, and perennials. Drip irrigation can conserve as much as 50 percent of overall water usage. This water conservation translates into cost savings, plus it helps provide a beneficial environment for overall healthy plant growth. I have seen side-by-side comparisons of landscape beds that were planted and irrigated by drip irrigation and sprinkler irrigation. Drip irrigation is by far superior. Many hardware stores, sprinkler supermarkets, and nurseries carry drip irrigation systems, and they can help you select the best one for your home application.

Timing is important for watering at length. If watered at midday—especially with sprinklers that dispense water high into the air before it falls to the soil—lawns can lose a significant amount of moisture through evaporation. Early morning watering helps to prevent some of the evaporation.

THE SCOOP ON SOIL

Soil is the foundation for all of our successful gardening experiences. It is very important that we take care of our soil so it can perform at its best to meet personal gardening goals. Some Texas gardeners dream of running barefoot through the most luxurious lawn possible in the months of July and August. Others want the most gorgeous rose garden, azaleas, or beds of irises. I understand these desires. Soil testing is the tool that will help us obtain our gardening dreams.

It is worth performing soil tests every two years. If you are sampling several areas, the samples will need to be segregated. Each soil test stands alone. For example, your lawn soil needs to be separated from your landscape shrub bed, and from your perennial garden and annual plantings.

Make sure that the soil grade in the area to be landscaped is correct. If grading is necessary on new landscapes, complete the activity before installing grass, landscape beds, or any other plants. Grading can be done with small tractors, hand tools, or other methods.

If you don't feel comfortable performing the grading, contact a landscape contractor. In most communities, there are one or more members of the Texas Association of Landscape Contractors (TALC). When a contractor supplies an estimate, be sure you understand exactly what work is to be done and that you have the estimate and work plan in writing.

Drainage is very important and is one of the reasons we do grading in our landscape. Drainage can be improved with the addition of raised beds, which may necessitate additional soil and lots of organic matter. Soils that drain poorly tend to be oxygen-starved. This particular soil will not allow plants to grow healthy roots, and plants in this type of soil will suffer. Certainly there are plants that grow in damp-to-wet soils—including bald cypress, water-loving plants, bog plants, and weeping willows—but these are the exceptions. The general rule is that the majority of our landscape plants (including trees) need a well-drained soil in order to stay healthy.

SOIL PREPARATION

Before planting anything in your home landscape—annuals, shrubs, perennials, vines, or groundcovers—it is important to know exactly what kind of soil you have and the soil's pH. You may have your soil tested through our agricultural extension service. Most of us call the local representative of the Texas Agricultural Extension Service, "The County Agent." The number is found in the phone directory where all of the county office numbers are listed. Instructions, information sheets,

and soil sample bags can be mailed to you, or you can pick them up. Offices are usually located in the county courthouse or county annex. The county agents' offices in Texas are always worth visiting for the opportunity to meet some good people who can be very helpful to you and your gardening goals. The Stephen F. Austin State University Soil Testing Laboratory is also available to you for complete soil testing. Contact the lab directly at (409) 468-4500. There are also some private testing labs throughout Texas, but be prepared to pay higher fees. After determining the soil's pH, you will need to prepare your soil for planting.

Preparing the soil includes breaking it up in some way. If planting a small area, a shovel or digging fork may be all you need. Those planting in larger areas traditionally use various types of tillers. The incorporation of organic matter into these areas will greatly improve the soil's drainage and moisture/nutrient holding capacity.

The benefits of organic matter cannot be overstated. Brown Canadian sphagnum peat moss, ground bark, compost you have made or purchased, and other types of organic matter will greatly improve the soil. Annuals and perennials usually require more extensive preparation than do shrubs and trees. When preparing for bedding plants, I recommend three inches or more of quality organic matter be blended with native Texas soil.

Trees require a simple loosening of the soil. In most cases, it is impossible to amend the soil in an area wide enough or deep enough for a tree's root system. Still, it is helpful to loosen the soil thoroughly before planting your tree, and be sure that you have selected the right tree for your soil type. The oak family is the number one shade tree grown in Texas, but some oaks do well in all areas, while others are very selective. For example, a water oak will grow in all areas of East Texas, but if you put it in the highly alkaline soils of Central or North Texas, results will be less than desirable.

PEST CONTROL

Pest control has several meanings. Weeds, insects, and diseases are all considered pests by most Texas gardeners. Weeds in our landscape beds can be controlled by the use of mulches. Mulching beds heavily with a three-to-four-inch layer makes it difficult for weed seeds to germinate and grow. In addition, there are various weed-prevention aids available for lawns as well as landscape beds.

Making sure our lawns are well-fertilized, mowed, and watered can also control weeds. A healthy, actively growing, thick lawn will normally have fewer weed problems. A well-selected and well-maintained landscape will have fewer insect and disease problems.

The crapemyrtle is a good example of the benefits of carefully choosing your plant's environment. When properly selected and planted in an ideal landscape location, crapemyrtle has few or no problems with powdery mildew. When planted in areas where there is poor air circulation and frequent watering, crapemyrtle is in a better environment for growth of this fungus.

Before you buy plants at your local nursery, always ask about potential disease and insect problems. If it sounds as if a plant may be too high-maintenance for your taste, make another selection. Remember, plants that tend to have problems in a certain landscape may have fewer problems when placed in other locations within a different environment.

PROPER PLANT SELECTION

Proper plant selection is extremely important for long-term success in Texas gardening. Many plants in magazines, catalogs, and on television will excite the gardener in you. They may look wonderful, but before you spend any money, be sure that these plants will grow and thrive in your area.

Through the years, I have found that the best place to shop for plant material is at local garden centers. These retailers tend to handle plants that do well in their particular area. For a list of trees, shrubs, vines, groundcovers, annuals, and perennials that are well-adapted to your home area, visit your local county agent's office. Additional information on some of the newer varieties and those well-tested is also available.

For long-term success with minimal maintenance, make sure that you select the proper plant. There are some wonderful selections of Texas-friendly plants from which to choose but—if they are shade grown—how much sun they receive can determine whether they thrive or die. The aucuba shrub, for example, is wonderful in shade areas in Texas but will not tolerate our sun. It will burn like my redheaded, fair-skinned wife, Judy.

Here are some questions to ask retailers before purchasing any type of plant:

- How tall and wide does this plant usually grow in my area?
- How much sun or shade is required?
- Does this plant have special soil requirements, and if so, what are they?
- Does this plant require well-drained soils, or will it grow in poorly drained or damp soils?
- Does it bloom? If so, when, for how long, and in what color(s)? In spring, summer, fall, or winter? For two weeks, six months, or longer?
- Does it have fall color? If so, what are the colors?
- Is it resistant to insect and disease pests that usually occur in my area?
- What are the watering/soil moisture requirements? Moist at all times? Tolerant of relatively dry soils?
- How often should it be fertilized, with what, and when?
- Are there any special pruning requirements? (Roses and certain other landscape plants, including edible-fruit-bearing plants, usually require special pruning and/or training to realize maximum benefits.)
- Is it deer-resistant (where applicable)?

SIZING UP YOUR OPTIONS

Most reputable garden centers will guarantee that the plants they sell will perform true to the variety, and that is important. Plants purchased from temporary retailers or other sources may not perform as promised. For the best overall value, buy plant material from the retailer in your area.

Buying from retailers who are members of the Texas Association of Nurserymen (TAN) will put you in touch with qualified help from Texas Certified Nursery Professionals (TCNP) and Texas Master Certified Nursery Professionals (TMCNP). These professionals are available to answer your questions and help you achieve your desired gardening goals.

Fall is for planting and is a wonderful time to landscape throughout our entire state. There is usually sufficient rain after the hot, dry Texas summer. The soil has adequate moisture, and the temperatures are cooler. Often you will find that nurseries put plant material on sale. The root systems of plants that are planted in the fall will continue to grow through the season, and you jumpstart their growth by almost a year.

With so many different sizes of landscape plants available, choices can sometimes get confusing. We use size measurements in the gardening industry that are relatively close to the actual gallon size. You will find plants in 2-, 3-, 5-, 7-, 10-, 15-, 20-gallon containers and larger. Certainly the sizes will be quite large for tree-type shrubs or trees. Sizes larger than twenty gallons are most likely trees.

Tall-growing shrubs such as crapemyrtles are sometimes sold according to height or caliper measurement (the diameter of the trunk). According to the American Association of Nurserymen (AAN), the caliper measurement of trees should be made approximately twelve inches above the soil line. This measurement provides the thickness, thus the diameter, of the trunk. If you see advertisements offering an oak tree of three inches, this is the thickness measurement of the trunk twelve inches above the soil line. You may also find plants sold in six to eight feet, eight to ten feet, and ten to twelve feet height ranges. Certainly the tall crapemyrtles, tall hollies, and some of the smaller-growing trees are classified in these ways.

PRUNING WITH A PURPOSE

From time to time our landscape plantings may require some pruning. But we want to prune for a purpose; we don't want to prune haphazardly. There are quite a few reasons for pruning. You may be pruning to shape a plant. You may want more light coming down through the trees. You may be pruning to do some specialized training. Perhaps you want to train a tree into an espalier or prune a rose for a particular type of growth to enhance selected blooms for shows. We often prune the tips out of the garden mums to induce branching and therefore thicken the overall planting so we have loads of buds that bloom in the fall.

The timing of pruning can be important. If you have a spring-blooming plant such as azalea, you certainly don't want to do any pruning until after the blooming season is completed in the spring. If you happen to have a group of overgrown azaleas that you wish to rework, do it after the major spring bloom is complete, just as you see the flush of spring growth beginning.

When pruning shrubs, select buds that are pointed outward and upward and then remove the branch just above the buds. That will give direction to the plant's branches. You can do similar types of pruning fairly often with certain types of roses. Pruning can be kept to a minimum if plants are selected and placed properly in your home landscape. Shrubs usually look best when allowed to grow into their natural form.

GREAT GARDENING

This book is an introduction to the plants that thrive in our great gardening state. We begin with a look at annuals—different varieties that offer fine possibilities. All can be tried in the home landscape, and don't forget to let little gardeners try their hand with annuals.

Texas gardeners grow a lot of bulbs. We need to be on the lookout for those lesser-used bulbs

that have been around for generations and incorporate those varieties into our landscapes.

Nearly all Texas gardeners like to grow grasses in the home landscape. I've included grasses for every area of Texas. Try some of the ornamental grasses that are on the market, such as blue fescue or fountain grass.

Gardeners may not pay much attention to groundcovers, but if you need an alternative for lawn grass in a heavily shaded area, groundcovers are the answer. I've included some of the best available in Texas for your consideration.

Texans love to talk about our native plants. With a well-earned reputation for being the wildflower state, we also have shrubs, trees, and vines that are all native to Texas, and this book offers a good selection.

Perennials are the plants that re-grow each year and live for three years or more. Some of them grow for generations in our home landscapes. Some plants, such as the achillea or yarrow, are very tough and durable and can stand up to our Texas environment.

We have the world's headquarters for roses in Tyler, Texas, but we can grow roses in all areas of Texas. The American Rose Society (ARS) lists over fifty different classifications. I have profiled some of the most popular and successful ones for our state.

Another area that may interest you is raising your own vegetables, herbs, berries, and/or fruits. Many crops will thrive in our Texas climate, but be advised that raising your own food requires attentiveness and effort—all worthwhile!

There are many different types of shrubs available. I have listed several for your consideration, from abelia to winter jasmine.

Trees are near and dear to my heart. I like to climb trees, build tree houses for my children, and rest in their shade. You will find a good selection of trees in this book. These are generally what we call shade trees, including some that have been used in our landscapes for generations.

We will also take a look at vines and different ways to use them. If you enjoy flowering vines, you will find some interesting selections in these pages.

The Texas Gardener's Resource Guide has something for everyone. Great gardening . . . to YOU!

—Dale Groom, The Plant Groom™

TEXAS CLIMATIC CONDITIONS

CLIMATIC CONDITIONS

The climate of Texas is relatively mild. The United States Department of Agriculture divides the state into four hardiness zones based on the average minimum temperatures experienced during the winter. One-half of our state is in Zones 8 and 9, with average winter lows of 10 to 20 degrees Fahrenheit in Zone 8. Coastal areas around Houston, Corpus Christi, and Padre Island are in Zone 9 and experience average winter lows of 20 to 30 degrees. Our relatively mild climate allows a year-round gardening season for flower and vegetable gardens, particularly in the southern two-thirds of the state. Zone 7 may reach lows of 0 to 10 degrees, and Zone 6 in our Panhandle may reach -10 degrees. Texas is, overall, considered to have a relatively mild winter climate.

AVERAGE FREEZE DATES

Last freeze dates and first freeze dates are of great importance to many gardening activities, but it is important to understand that no one knows when the last or first freeze will actually occur during a particular year. Average dates can be helpful, but freezes can and do occur before the average first freeze date and after the average last freeze date. You must use experience and information from knowledgable local individuals (friends, professional horticulturists, local nurseries, and your County Agent with the Texas Agricultural Extension Service) when making planting decisions.

The first frosts usually occur in northwest Texas in early November, in areas around Dallas/Fort Worth in mid- to late November, and along the Gulf Coast in early to mid-December. Experience shows that first freezes are more likely to occur later rather than earlier than these average dates.

Average last freeze dates are particularly important to gardeners who want to set out tender vegetables and bedding plants in the spring. North Texas freezes generally end in late March, freezes in areas south of Austin usually end in early to mid-March, and freezes along the Gulf Coast generally end in mid- to late February. Late freezes will occasionally occur after these dates. The conservative gardener should consider the frost-free date—when the chance of freezing temperatures is very unlikely—to be about four weeks after the average-last-freeze date.

AVERAGE RAINFALL AMOUNTS

Average annual rainfall is abundant in some areas. Amounts range from fifty-six inches in southeast Texas to nine inches in El Paso. Unfortunately, the rain does not appear regularly. Some areas of the state may receive five to ten inches of rain or more in a single rainfall and then go for weeks or months without significant precipitation. Well-drained beds are needed to handle periods of high rainfall, and proper irrigation is important during dry periods, especially during hot weather.

GARDENING SEASONS EXPLAINED

According to the calendar, spring, summer, fall, and winter begin and end at the same time everywhere in the United States. Common sense tells us, though, that the dates for spring-gardening activities must be very different between Maine and Texas.

Spring begins in early February in south Texas when deciduous trees like magnolias and redbuds begin to bloom and grow. When the calendar tells us that spring has officially begun, we in Texas can say, "It's passed in south Texas and arriving in north Texas," while at the same time in Maine it could be snowing. All Texas gardeners need to divide the year in a way that makes sense for us.

The terms spring, summer, fall, and winter carry strong associations with certain types of weather, and that can be a problem for Texas gardeners. Winter, for instance, brings to mind a picture of snow-covered dormant gardens with little or no activity. What we actually experience in our state are episodes of cold weather interspersed with periods of mild temperatures. Planting and harvesting vegetables, planting hardy annuals, perennials, trees, and shrubs, and controlling weeds and insects may continue throughout the season in some areas of Texas.


CROCUS

To get around these preconceived notions, we can divide the gardening year into seasons that more accurately reflect the weather we have at that time. We can divide the gardening year into a first warm season (spring), a hot season (summer), a second warm/cool season (fall), and a cold/cool season (winter), depending on the zone you live in. There are no sharp boundaries between these seasons, and gardeners should always be aware that unusually high or low temperatures may occur at any time, especially during the season transitions.

The first warm season of the year runs from late March through mid-May. This warm season is characterized by mild to warm daytime highs generally in the 70s and 80s, cool nights in the 50s and 60s, and limited danger of nighttime freezes. It is a lovely time of year that is appreciated by gardeners and non-gardeners alike.

THE WARM SEASON

The first warm season is an excellent time to plant tender annuals and perennials in the landscape.

Trees, shrubs, and groundcovers, as well as lawns, can be fertilized to encourage the vigorous growth that takes place in this season. Tender vegetables such as tomatoes, peppers, squash, and snap beans can be planted now after all danger of frost/freeze has passed. New plantings of trees and shrubs in the landscape should be completed as soon as possible since the hot weather is right around the corner.

The first warm season also includes the peak blooming of the spring bulbs and cool-season bedding plants that were planted several months before, such as pansies, dianthus, petunias, snapdragons, and sweet peas. For new-bed planting, focus on warm-season plants such as marigolds, periwinkles, lantanas, and zinnias that will bloom for a long time, rather than cool-season plants that will play out as temperatures heat up in May.

THE HOT SEASON

May offers a transition into the hot season, which is characterized by brutally hot days in the upper 80s and 90s and warm nights in the mid- to upper 70s. The hot season is our longest season, and it can last through September. High humidity, rainy periods, drought conditions, insects, and diseases combine with heat to make this a stressful time of year for many plants. Numerous trees, shrubs, and perennials that are grown successfully up North cannot be grown here because they will not tolerate the hot season.

Tropical perennials such as hibiscus, gingers, blue daze, banana, and pentas really shine during the hot season, and many gardeners plant them every year even though they are prone to freeze injury or death.

If there is a down time in our gardens, the hot season is it. In July and August, and often September, it is so hot that many gardeners retreat to the air-conditioned indoors and spend less time in the garden than at any other season. But in spite of the heat, the hot season is a time of lush growth and abundant flowers from those plants that can deal with it.

There are a variety of things to do during the hot season. Controlling pests such as weeds, diseases, and insects is an important part of gardening at this time of year. Trees and shrubs grown in containers can be planted in the landscape but will require more care, and their survival is often not as sure as those planted during the cool season. Pruning is important to control the growth of a variety of plants, but avoid heavy pruning on spring-flowering trees and shrubs after June. Provide irrigation to the landscape during hot, dry periods.

THE WARM/COOL SEASON

Late September and early October offer a transition into the second warm season, which may last until late November. The weather at this time of year is similar to that of the first warm season, generally mild and pleasant. This is not the end of the gardening year as it is in the colder climates that have cold, harsh winters. For us, this time of year celebrates the flowers that are still lingering and looks toward a mild cool season.

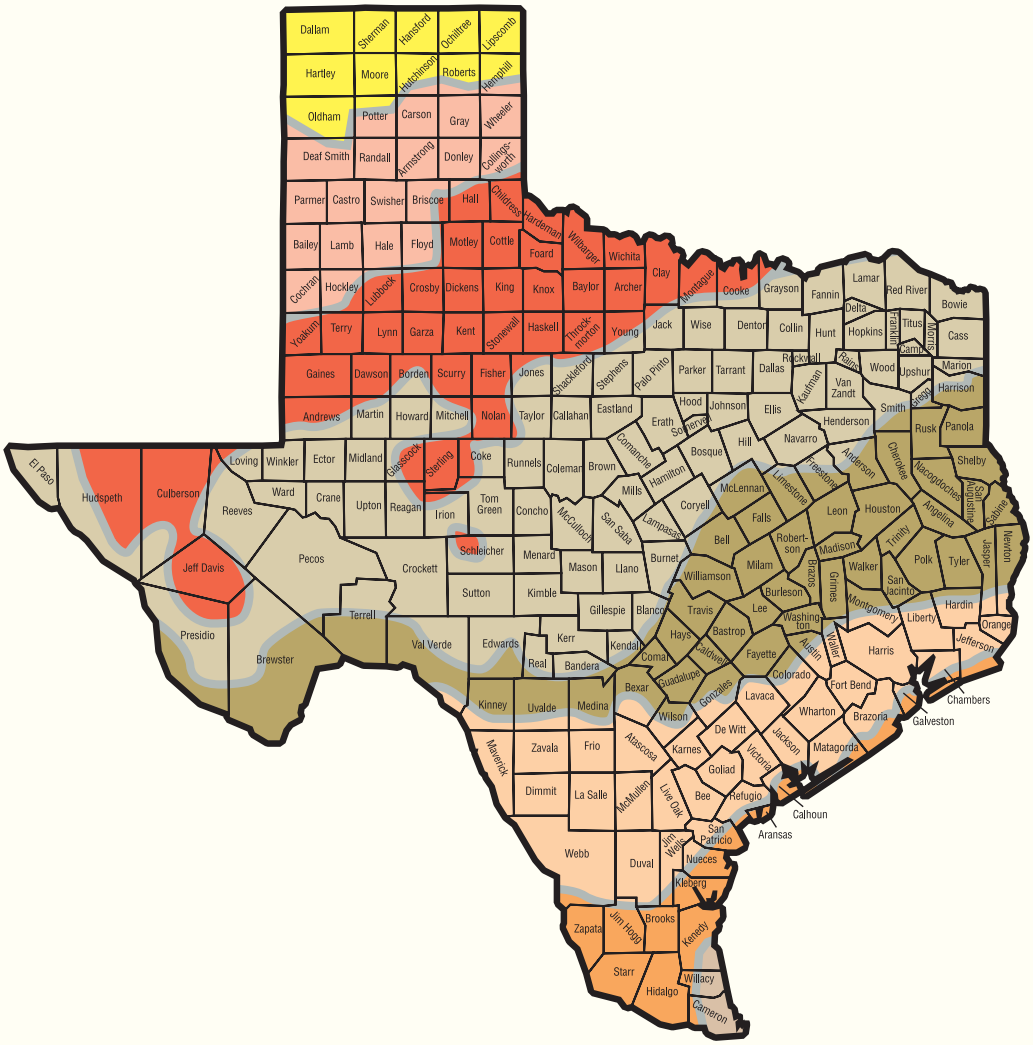
As the heat diminishes, garden activities become more pleasurable . . . and there is lots to do. Many cool-season vegetables like broccoli, lettuce, cabbage, and turnips may be planted now. Flower gardeners can usually plant cool-season bedding plants like pansies, snapdragon, and dianthus. Deciduous trees, shrubs, and perennials begin to lose their leaves in November and finally enter dormancy, but we use so many broadleaf evergreen plants in our landscapes that they rarely look barren.

THE COOL/COLD SEASON

Late November to early December sees the arrival of the cool/cold season and the possibility of freezing temperatures. Although snow and severe freezes in the teens can occur, harsh weather rarely lasts long. Much of the time, the weather is mild with lows above freezing and highs in the 50s, 60s, and even 70s, particularly in the southern half of the state.

Tropical plants can be covered or brought in for protection on those occasional freezing nights. Along the Coast, the planting of cool-season vegetables and bedding plants can continue. This season is by far the best time to plant hardy trees, shrubs, groundcovers, and herbaceous perennials. In March and April, the cool season makes a transition into the first warm season, bringing us full circle.

TEXAS USDA COLD HARDINESS ZONE MAP



HARDINESS ZONES

Cold-hardiness zone designations were developed by the United States Department of Agriculture (USDA) to indicate the minimum average temperature for that region. A zone assigned to a plant indicates the lowest temperature at which the plant can normally be expected to survive. Texas has zones ranging from 6a (the coldest) to 9b. Though a plant may grow in zones outside its recommended zone range, the zone ratings are a good indication of which plants to consider for your landscape. Check the map to see which zone your Texas garden is in.

ZONE	Average Annual Minimum Temperature (°F)
6b	0 to -5
7a	5 to 0
7b	10 to 5
8a	15 to 10
8b	20 to 15
9a	25 to 20
9b	30 to 25
10b	35 to 30

KEY TO ICONS

Each entry in this guide provides information about a plant's characteristics, habits, and requirements for growth, as well as my personal experience and knowledge of the plant. Use this information to realize each plant's potential. You will find such pertinent information as mature height and spread, bloom period and seasonal colors, sun and soil preferences, water requirements, fertilizing needs, pruning and care tips, and hardiness zone and pest information. Each section is clearly marked for easy reference.

SUN PREFERENCES

Symbols represent the range of sunlight suitable for each plant. The symbol representing "Full Sun" means the plant needs 6 or more hours of direct sun daily. A ranking of "Part Sun" means the plant can thrive in 4 to 6 hours of sun a day. "Full Shade" means the plant needs protection from direct sunlight. Some plants can be grown successfully in more than one exposure, so you will sometimes see more than one light symbol with an entry.


Full Sun


Part Sun


Full Shade

ADDITIONAL BENEFITS

Many plants offer benefits that further enhance their appeal. These symbols indicate some of these benefits.


Attracts Butterflies


Has Fragrance


Attracts Honeybees


Attracts Hummingbirds


Suitable for Cut Flowers or Arrangements


Provides Shelter for Wildlife


Provides Edible Fruit


Long Bloom Period


Good Fall Color


Provides Food for Wildlife


Native Plant


Waterwise Choice

LANDSCAPING TIPS & IDEAS

For most of the entries, I offer landscape design ideas as well as suggestions for companion plants and other recommendations to help you achieve striking and personal results from your garden.

WORDS TO THE WATERWISE: CONSERVING WATER IN THE GARDEN

by Joe Lamp'l

Earth is sometimes referred to as the "water planet" because so much of it is covered by water. In fact, many of us learned in elementary school that about three-fourths of the earth's surface is covered by it. Unfortunately what we didn't usually hear was the sentence that should have followed: Even with all that water, 99 percent is unavailable to us as usable water—97 percent is salt water, and 2 percent is frozen (for now) in glaciers and polar ice caps. That leaves a miniscule 1 percent of all the water on earth for us to use for drinking, bathing, washing food, clothes, dishes, and cars, and watering our gardens, lawns, and landscapes. It sounds like a lot of demand on such a small reserve, and it is.

Perhaps if we had been told how precious this limited resource was then, we would have been doing more along the way to preserve and protect this finite supply. We didn't realize then that a global water crisis was looming, and it is here today . . . including in the mild-to-hot climate of the state of Texas.

But when confronted with the impending depletion of such a precious resource as water, we gardeners are not without our own resources—our own creative and significant solutions. The tips that follow are just some of the ways we can start making a difference right away. Now is the time to practice "waterwise gardening."

Please see the back of this book, pages 254 to 258, for further information on waterwise principles and recommended products such as rain barrels.

Supply only the water your plants need—know when to water and how much.

Get to know your plants—they'll tell you when to water.

You may not be aware that more plants die of too much water than not enough. We are literally killing them with kindness through overwatering, and it's simply not necessary. The problem is, most of us don't realize when our plants have received sufficient moisture, and so we overcompensate.

When we overwater, the soil becomes saturated, forcing out vital oxygen and literally drowning our plants. Although it is essential to provide ample water to new plants when they become established, once that is achieved, the water you supply should be reduced significantly.

After plants are established in the landscape, they should require supplemental watering only in the absence of rainfall. A good rule of thumb for many plants is, in the absence of rain, provide one inch of supplemental water each week, or whatever is necessary to make up the difference. Of course, this rule will vary from new seedlings to established, hardy natives.

As simple as it sounds, pay attention to what your plants and trees are telling you. Unfortunately, a plant that is underwatered or overwatered can show the same symptoms: limp droopy foliage, yellowing, and a lack of luster in the foliage. Similar symptoms can also occur in plants suffering from pests and diseases.

Since opposite causes may yield the same visual clues, you will have to do a bit of deductive reasoning. Given what you know, is it more likely that the plant has been getting too much water or not enough?

Just in case you're still not certain, and in the spirit of simplicity, here are a few easy ways to know for sure:

The finger test: Most of the time, you simply cannot tell what the moisture conditions are below the surface simply by looking. In fact, it's impossible if the soil under your plants is covered by mulch. Although not the most scientific approach, that pointer finger of yours can be a good indicator of the moisture conditions in the soil at the root level. Poke your finger into the soil around the base of the plant, down to the second

Less frequent, deep watering is the key to keeping plants healthy.

knuckle. Pull it back out and take a look at your finger. If it's clean (relatively speaking), the soil is dry and in need of water. If your finger came back up with soil stuck to it, then there is sufficient moisture and no supplemental irrigation is needed at the time.

The dig test: Another easy and practical method is to conduct a dig test. Before watering, simply make a note of the moisture level of your soil, six to twelve inches below the surface (the target depth). Ideally, the soil will be dry at this point. Your goal is to determine how long it takes for your irrigation system, whether it's a soaker hose, drip irrigation, watering wand, or overhead sprinkler system, to soak the soil to the target depth. Check frequently, and you'll eventually determine the optimal time to get moisture down to the target level. Remember, the time determined in the above example assumes the soil started out dry. Once your soil maintains a consistent moisture level, it will take less time to keep it there. Note this as well and reduce the amount of time you water to maintain optimum levels.

Water deeply and less often.

Keep plants growing strong—encourage roots to explore deeper into the soil.

In many ways, plants are like some people I know. They don't work any harder than they have to! Consequently, if all the moisture needed is right near the surface, plants won't use extra energy and nutrients to grow roots deeper into the soil where moisture levels are consistently higher.

This is why the key is to water infrequently but deeply. Reducing the overall amount of water to plants (and especially lawns) keeps them growing stronger. Deep watering encourages deep roots, and roots that are encouraged to explore farther into the soil to find sustenance have better access to moisture when the area closer to the surface dries out. This upper layer always dries out first because soil at or near the surface warms faster and is subject to evaporation, and the drying effects of wind.

Now, deep watering doesn't mean turning on the sprinkler and leaving it on while you go and play a quick nine holes! The surface layer of most soils becomes quickly saturated after watering for only a few minutes, and then all the water applied from that point on runs off and is wasted.

Research shows that the most efficient way to get water down deep is to water an area for a short time until the upper surface is saturated—say, ten minutes for most soils (less if it's on a slope)—then stop and let that water soak in for thirty minutes to an hour, and then water again for a few minutes more. This allows the water to be deeply absorbed into the soil while reducing runoff, and ultimately lets you go much longer between watering.

Water at the right time of day.

The time of day that you water can have a significant effect on the water's efficiency.

The hotter it is, the more water is lost to evaporation. Add wind to the equation, and even more water is vaporized in the atmosphere before it ever reaches the ground. Depending on your irrigation system and the timing of when you water, as much as half the water can be lost to drift and evaporation, especially when using overhead sprinklers.

If you water at night, or very early in the morning, temperatures are cooler and winds are calmer. Late at night or very early in the morning is also the best time to use soaker hoses or drip irrigation. The coolness during darkness along with the calm skies allows soils to soak up the maximum amount of water, without the influence of drying winds or evaporating sunlight.

Mulch, mulch, mulch!

Mulch is an important tool for a gardener in more ways than one. As a way to conserve water, it can't be beat.

Mulch is one of the most versatile additions to any garden. It has many uses, which will be referred to throughout this book, but from the standpoint of water conservation, it is a star. A three- to five-inch layer of mulch will provide an insulating blanket that greatly reduces surface evaporation, slows runoff, moderates soil temperatures on hot days, and lowers the moisture requirements of the plants. It also dramatically cuts down on weed production, lowering the demand and competition for nutrients and water.

Mulch can be organic, such as leaves, straw, compost, or bark. It can even be gravel or plastic. In all cases, the mulch holds the moisture in place, in the ground, right where it is needed most.

Eliminate waste when watering your landscape.

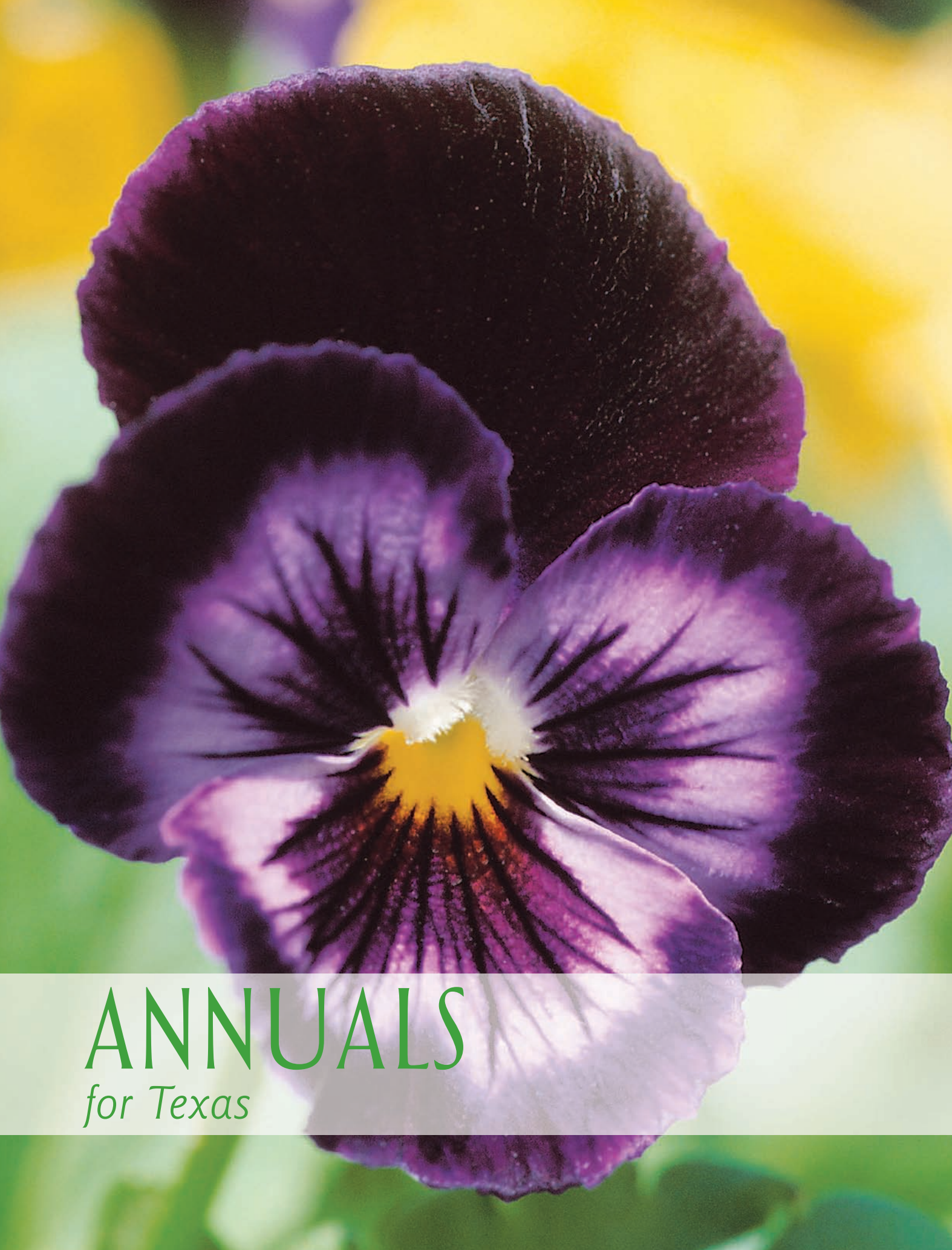
Here are a few more ideas to employ, to make sure the ways you irrigate your plants and lawn are as efficient and waste-free as possible.

1. Fix leaky faucets and hoses. All those drips and drops add up to savings if you stop them. Take time to inspect all your outdoor faucets and connections, and call a plumber if the fixes are beyond your abilities. (Sometimes, all you need to do is replace old, worn-out equipment with new.)
2. Don't use water in place of a broom or blower. It's amazing how much water goes down the drain when we clean our walks and driveways with a hose. Besides saving precious water, broom power is good for you and leaves zero footprints on the environment.
3. Don't leave your hose running while unattended. Even for short periods of time, a running hose wastes hundreds of gallons of water. A hose without a nozzle shutoff can gush ten gallons of water a minute! Look for the nozzles that have spring-loaded automatic shutoffs—let the nozzle go and it shuts off automatically. Now that's easy!
4. If you have one, program your irrigation system to supply the right amount of water. Measure its output to know just how much is enough. If possible, try to fine-tune your system or adjust your spray pattern so all areas are receiving about the same amount each week. You'll be surprised to find how much water coverage may vary from even a single sprinkler head.

Use plants that need less water.

Waterwise gardening involves prudent planting. Many of the plants profiled in this book qualify as drought-resistant, especially once established. When you peruse the profiles in the pages that follow, watch for the "Waterwise Choice" icon with applicable entries. In all cases, the "Water Needs" of each plant are noted, to further inform you and help you decide if this is a plant you want in your home landscape.

See also the list on pages 255-256 at the back of this book.



ANNUALS
for Texas

Annuals are plants that sprout from seeds, grow, mature, flower, set seed, and die in a single growing season. The group is divided into warm-season annuals and cool-season annuals, with classification depending on cold hardiness and heat tolerance.

WARM-SEASON ANNUALS

Warm-season annuals are killed or damaged by freezing temperatures and therefore grow best during the warm to hot months of April to early November. Seeds or transplants may be planted into the garden from late March through August. They usually thrive during the long, hot months, although the performance of some will diminish during the hottest weather in late summer.

Since we have a growing season that is seven months long, it is unusual for true annuals to last from April to November. There is a group of plants called tender perennials that do have the stamina to last the entire season. Since they are often killed during winter freezes, and so last for just one season, these plants are grown as warm-season annuals and are generally grouped with them even though they are perennials. Unlike true annuals, tender perennials are not programmed by their genes to die after flowering and setting seed. Beds planted with tender perennial bedding plants usually will not have to be replanted in July or August as is typical for some true annuals. This makes them a good choice for lower-maintenance landscapes. As a bonus, some tender perennials can survive mild winters and may live to bloom another year. Tender perennials on the Warm-Season Annuals chart (see pages 24-25) are marked with single plus marks (+).

COOL-SEASON ANNUALS

Flower beds can remain colorful through the winter when planted with cool-season annuals, a wonderful group that will grow and bloom from November to May or whenever it gets warm in the spring. Seeds for many may be planted in flats or direct-seeded from August through November. Transplants should be planted from September through February, depending on which hardiness zone you live in.

Cool-season bedding plants will generally tolerate freezing temperatures into the low 20s and even teens without protection (nasturtiums are the exception, as they are damaged by temperatures below 30 degrees Fahrenheit). Some will bloom all winter during mild weather, peaking in March and April. With the onset of hot weather in May, most cool-season annuals are quick to decline. Pansies are the most cold-hardy annuals we use in Texas.

There are several hardy perennials that are commonly used as cool-season annuals. Although foxglove, delphinium, and hollyhock are reliable perennials in cooler zones, they have a hard time surviving our summers. Transplants are set into the garden from October through February for blooms in April through early June. Planting dates are determined by the zone you live in.

GROWING ANNUALS SUCCESSFULLY

Successful annual growth depends on selecting varieties that do well, good bed preparation, planting each type in the growing conditions that it prefers, and paying attention to proper care after planting.

Don't scrimp on bed preparation, as this is essential for plants to perform their best. Good bed and soil preparation is the foundation for successful long-term annual growth and bloom.

First remove any weeds or other unwanted plants from the bed. Growing weeds may be controlled with a non-selective herbicide, which does not leave a residue in the soil. Be sure to follow label directions carefully.

Turn the soil to a depth of at least 8 inches with a shovel, fork, or tiller.

Spread a 4-inch layer of composted, rotted leaves, aged manure, finely ground pine bark, or peat moss over the bed. Blend the organic matter into the top 4 inches of the soil thoroughly, rake smooth, and then plant. Add small amounts of slow-release fertilizer to each planting hole according to label directions.

NASTURTIUM CLOSE-UP

PLANNING THE ANNUAL FLOWER GARDEN

Before you go to the nursery and buy annuals, look carefully at the growing conditions in the area to be planted. Most annuals do best with six to eight hours of sun a day (partial to full sun). Make sure you select plants that will thrive in the light conditions they will receive. Annuals generally need good drainage, so plant in a raised bed if the area tends to stay damp. Measure the size of the bed and calculate how many plants you will need to create the desired effect. Although spacing varies with the plant's known average spread, about 8 inches can be used for estimating.

It is also a good idea to make some decisions on the color or colors that will be used in the flower bed, as well as desirable heights (usually taller plants in the back of beds, shorter in the front) and general layout to meet your desire. You can always make changes or adjustments if necessary, but it is a good idea to have developed your ideas as completely as possible before buying plants.

PLANTING ANNUALS

When planting annual transplants, make sure you space them properly. Too close, and the plants will crowd one another and be less healthy. If planted too far apart, the plants will not grow together to completely fill the bed. Plant transplants so the top of the rootball is level with the soil in the bed. If the roots are in a dense mass, open the mass slightly to encourage the roots to grow into the surrounding prepared soil.

Many annuals are easy to direct-seed into the garden—but in this day of instant gratification, many gardeners don't have the patience for this (or only want a few plants of specific types/varieties) and rely on transplants instead. If you have the patience, plant seeds at the proper depth in a well-prepared bed and keep moist until they come up. When direct-seeding, it is important to thin seedlings so they are spaced properly. Check the seed package for recommendations.

GENERAL CARE

Proper care of annuals will keep the garden attractive for a long time. Annual beds may be relatively high maintenance, and this should be remembered when deciding how many beds you want and how large the beds will be. Water as needed and weed if necessary, although both of these jobs can be reduced with the use of a mulch. A 3- to 4-inch layer of pine bark mulch will work well.

Thorough watering during dry weather, especially when it's hot, is important to keep annuals growing vigorously and blooming. Soaker hoses, where suitable, are a great way to water without getting the flowers or foliage wet. This can reduce disease problems and damage to open flowers.

Whenever it is practical, remove the old flowers to keep the plants looking attractive and to encourage continued flowering. This practice is called deadheading.

Insect and disease problems may occur, especially with warm-season annuals. Keep a watchful eye out for symptoms and act promptly before significant damage occurs. Some annuals will not recover well if badly damaged. Remember, it is important to properly identify the cause of a problem before taking action.

WARM SEASON ANNUALS

Ageratum
Alyssum
Amaranthus*++
Angelonia*
Bachelor's Button/Gomphrena*+
Balsam++
Begonia, Wax
+Blue Daze+++
Celosia*
Cleome++
+Coleus+++
Copper Plant*
Cosmos++
Dahlberg Daisy++
Diascia
Dusty Miller+
Esperanza
Gaillardia*
Geranium
+Impatiens+++
Joseph's Coat
Lantana
Licorice Plant
Marigold*++
Melampodium
Million Bells
Narrow-leaf Zinnia
+Ornamental Pepper*
+Pentas+++
+Periwinkle*
Persian Shield
Portulaca*++
+Purslane*
Rudbeckia*
Salvia (some varieties)+
+Scaevola+++
Sunflower*++
Torenia
Verbena+
Zinnia*++

* Heat tolerant
+ Tender Perennials
++ Easily direct-seeded
+++ Best to buy transplants

At the beginning of the planting season, you can plant seed in flats or directly in beds, or you can use transplants. (Use transplants if you are planting towards the end of an annual's planting season.)

COOL SEASON ANNUALS

Alyssum+
Annual Baby's Breath
Annual Candytuft
Annual Phlox+
Calendula+
Dahlberg Daisy+
Delphinium++
Dianthus
Dusty Miller
English Daisy
Forget-me-not
Larkspur+
Nasturtium+
Nicotiana
Ornamental Cabbage and Kale
Pansy**++
Petunia++
Poppies+
Snapdragon
Statice
Stock
Sweet Pea+
Viola

** The most cold-hardy annual we use
+ Easily direct-seeded
++ Best to buy transplants

At the beginning of the planting season, you can plant seed in flats or directly in beds, or you can use transplants. (Use transplants if you are planting towards the end of an annual's planting season.)

Although many bedding plants prefer partial to full sun (about 6 to 8 hours of direct sun), the following will do well in shade, or even prefer shade to partial shade (about 2 to 4 hours of direct sun).

Warm-season: Balsam*, Cleome*, Impatiens, Pentas*, Salvia* (some varieties), Torenia*.

Cool-season: Forget-me-not, Nasturtium*, Nemophila, Nicotiana*.

* Also will do well in full sun.

COSMOS

ALYSSUM

Lobularia maritima

Color(s)—White, pink, rose, lavender, and purple

Bloom period—Fall, winter, and spring; warm-season

Mature Size (H x W)—4 to 6 in. x 10 in.

Water needs—Water once or twice a week during dry weather, especially the first few weeks after planting when the plants are getting established or if it's hot.

Planting/Care—Plant in full sun or part shade in fall or early spring. If direct-seeding, do not cover the seeds, water daily, and thin to 6 to 8 inches apart. In midseason, plants may begin to look shaggy. Shear to revitalize or tear out and replace with other annuals.

Pests/Diseases—No major problems

Landscaping Tips & Ideas—Indispensible in the spring flower garden, it is outstanding when used as an edging, planted in pockets, or as filler in garden beds. 'Snowcloth' and 'Carpet of Snow' are compact, low-growing white varieties. 'Rosie O'Day' is dark pink. The Wonderland series is known for its especially bright colors.

ANGELONIA

Angelonia angustifolia

Color(s)—Purple, white, and pink

Bloom period—Summer; warm-season

Mature Size (H x W)—18 to 24 in. x 10 to 15 in.

Water needs—Provide irrigation during drought periods to keep the blooms coming.

Planting/Care—Plant after frost is past, in full to part sun. Fine in average soil, but thrives in rich, fertile ground. The blooms are self-cleaning—no pruning or deadheading necessary. Fertilize at planting time; additional fertilizer is generally not needed.

Pests/diseases—Of minimal concern. Watch for aphids and spider mites.

Landscaping Tips & Ideas—Thrives in the heat! The colors complement almost any flower in the landscape. Use them in masses in beds, in containers, and in the garden. Look for 'Carita', 'Angel Mist', or 'Serena'. They come in various shapes, heights, and colors. The 'Serena' ones stay under 12 inches and are excellent for beds.

COCKSCOMB

Celosia argenta var. cristata

Color(s)—Hot colors in shades of red, magenta, purple, pink, and yellow

Bloom period—Spring, summer, and fall; warm-season

Mature Size (H x W)—6 to 36 in. x 6 to 12 in.

Water needs—Maintain a moist, not wet, soil throughout the entire growing season.

Planting/Care—If given a spot in full sun with well-drained soil, it grows easily. Remove any damaged or spent blooms or leaves as needed.

Pests/diseases—Usually has no serious pests or problems.

Landscaping Tips & Ideas—Works well when used in color gardens to outline other varieties and colors. There are basically two types. One is the plume type—they look like feathery flowers. The older of the two is the cockscomb type—these are crested with very tight flowers that resemble the comb of a rooster. Both work well in mass plantings or planters.

COLEUS

Solenostemon scutellarioides

Color(s)—Vivid shades of green, chartreuse, red, pink-white, maroon, bronze, and yellow

Bloom period—Not grown for flowers, grown for colorful foliage; warm-season

Mature Size (H x W)—6 to 36 in. x 12 to 48 in.

Water needs—Maintain a moist soil throughout the entire growing season (apply a layer of mulch).

Planting/Care—Plant in early spring after frost is past. Best in full sun to shade (depending on variety) and moist soil. Pinch back terminals, along with blooms, to induce branching and more colorful foliage. Add a slow-release fertilizer at planting time, or water-soluble fertilizers as needed.

Pests/diseases—Sucking insects may visit. Your local garden center can offer several control possibilities.

Landscaping Tips & Ideas—Works well in front of evergreen shrubbery in shaded areas or in beds among shade trees. Try hanging baskets, tubs, and planters. Most varieties currently available grow in sun, but need constant moisture to survive.

COPPER PLANT

Acalypha wilkesiana

Color(s)—Foliage in copper, red, bronze, pink, and green

Bloom period—Not grown for flowers, grown for foliage; warm-season

Mature Size (H x W)—2 to 4 ft. x 8 to 12 in.

Water needs—Water sufficiently to prevent soil dryness. Do not overwater.

Planting/Care—Very tough! Loves warmth and sun, so do not set them out until the air temperature is consistently above 65 degrees F—70 degrees F is even better—both day and night. Mulch well, and use fertilizer for optimum growth. Pinch back growing tips or terminals to induce fast growth and branching.

Pests/diseases—None serious

Landscaping Tips & Ideas—A wonderful background plant, it will take all the heat the sun can dish out. Use virtually anywhere in your home landscape where there is full sun. Do not plant in heavily shaded areas. In containers, use a lightweight potting mix. Often survives winters in Zone 9.