



Spring Gardening Checklist

As soon as the first hint warm days appear in Comal County, the Extension office and Master Gardeners get flooded with questions about when residence can start planting the garden. The weather turns warm early for us in the southern half of Texas, but you

cannot trust the warmer days to be consistent. In February alone each week has flip-flopped back and forth between freezing temperatures and days in the 80s. Backyard gardeners want to get their babies in the ground to heat the coming summer heat, but many jump the gun and end up having death by frost instead. Knowing the historical frost dates helps you to protect and time your plantings for the best success! Frost dates are determined by the average first and last

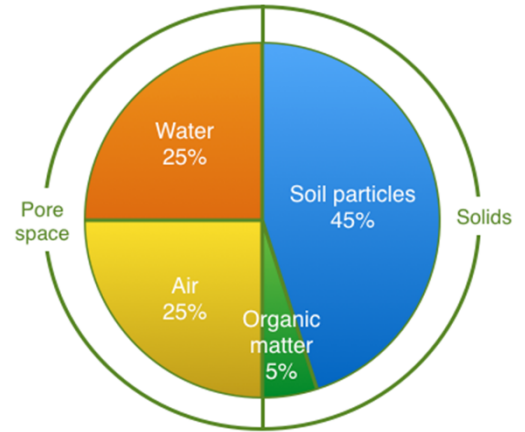


occurrences of a *light* frost day. A light frost, ranging from 29°-32°F (-1.7°-0°C) can be enough to kill tender plants such as lettuce, tomatoes, peppers, broccoli, etc. For Comal County, our typical first frost date is around November 10th while the last occurs around March 18th, giving us roughly a 236-day growing season in total. Of course, this does not take into account mid-summer temperatures, which stops all growth in our gardens.

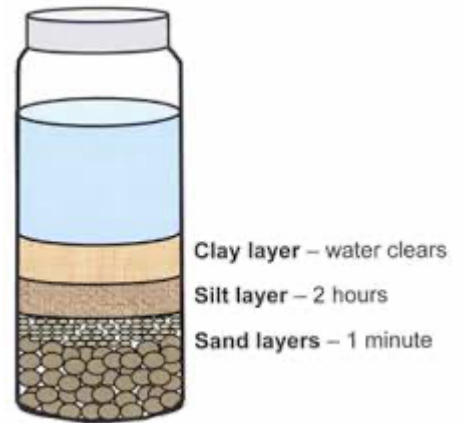
The colder months are the perfect time to start preparing for your spring garden by purchasing transplants of tomatoes, peppers, and eggplants then pot them up into larger containers to prepare for the garden. Since these vegetables have long days until harvest, purchasing transplants is a perfect way to ensure a crop before the summer heat sets in. Starting seeds indoors is also an option when the weather is unpredictable, protecting the delicate seedlings from major temperature swings outdoors. More on that later in the article. The first step is making sure your soil is prepared for your plants, giving them the best start when its time to plant.

Creating a Balanced Soil

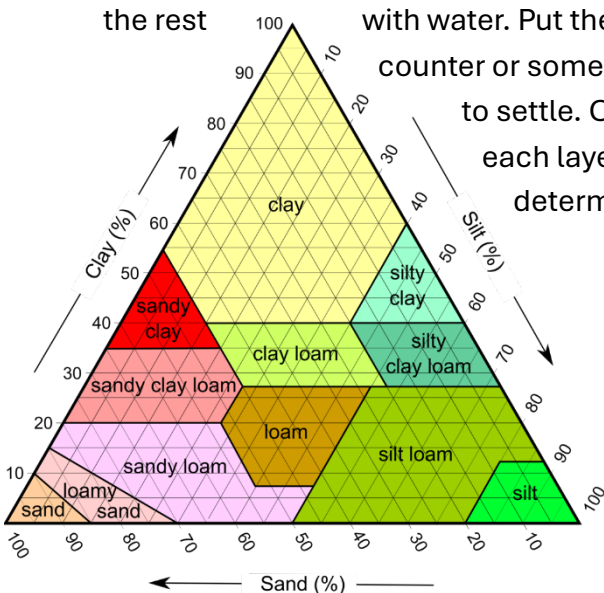
Now is the ideal time to get a soil test to determine fertilizer needs before planting. Investing about \$15 now will save you both money and time later. One of the most common mistakes gardeners make is fertilizing without knowing what the soil needs. This leads to unnecessary money on expensive fertilizer and may cause harm to plants by creating nutrient imbalances. Fortunately soil testing forms and payment are now available all online at <https://soiltesting.tamu.edu/>.



Understanding your soil structure is just as important as knowing nutrient levels. Ideally soil is made up of equal parts solids (soil particles and organic matter) and pore space (water and air). Pore space is so important and is often overlooked, plant roots need to breathe too. Additionally, this pore space is beneficial for soil microbes to be able to move freely, break down organic materials, and provide the soil with more nutrients. To understand your soil composition, if you are planting in the ground, follow this [LINK](#) to look at your soil specifically. Start with choosing your county, the Web Soil Survey website has additional instructions needed, allowing you to look at your home specifically.



For raised beds, you can do a fun experiment to determine your soil structure or really any soil. Take a sample of your bed soil about 6-8 inches down, don't take just the top layer. Find a medium to large jar, filling it about halfway with your soil sample, the rest with water. Put the lid on *tight* and give it a good shake! Leave it on the counter or someplace where it won't be disturbed and allow the layers to settle. Once the layers have completely settled, measure each layer of sand, silt, and clay to find the percentage to determine your type of soil using the soil triangle.





Compost is an essential addition to our gardens, providing the organic material for soil microorganisms and nutrients needed for fruit production. Compost should be high quality, fully finished, and plant derived. To determine quality compost, ensure there are no large chunks of material, dark rich color, a nice earthy smell, and when rubbed between hands, a thin film of humus. Compost should *never* smell bad; this indicates that it is unfinished or not well quality.

Testing your soil and understanding its composition, you will have a better road map to create a healthier and more productive gardening season!

Hand showing thin layer of humus.

Growing Seed for Transplanting

During January and February is prime time to begin seeds for your spring garden indoors to transplant into your garden. This helps to develop a strong, healthy roots system and gives you a jump start on harvesting before the summer months. Tomatoes are a transplant must! Most varieties take about 90-180 days until harvest which falls right into our hottest months, starting seeds inside allows you a sooner harvest. Soil temperatures take longer to warm up regardless of air temperature, there can be a 5-10° difference in temperature. Cooler soils delay seed germination, most vegetables need soil to be 60°-80°F for proper germination. Vegetables that are most often transplants are: Tomatoes, Broccoli, Onion, Peppers, Eggplant, and Potatoes.

Seed trays come in many various sizes (8-72+cells) and materials, including reusable and even compostable options. These trays are available in box stores, feed stores, and online. Choose the one that fits your gardening needs, remember when in doubt, start small! The biggest must is make sure the container has a drainage hole to allow water to drain. When it comes to seed starting, all soil is not created equal. For seeds a good starting mix is needed, which again can be found commercially or can be made at home. A mix of 1/3 compost, 1/3 sand/vermiculite/perlite, and 1/3 coconut coir. Many gardening recipes recommend peat moss (sphagnum), a non-renewable resource harvested from peat bogs worldwide. Research from multiple universities (OSU, WSU, UGA, and others) links its use to climate change. Sustainable alternatives like coconut coir and expanded shale provide similar drainage benefits without the environmental impact.

Fill your seed trays with your soil mix making sure its like and fluffy in each container. Do your best to sow one seed per cell or container, if unable to you will have to thin out the seedlings once they start to grow. Seed packets will have planting information on the back panel of the package, so you know the correct planting depth. Though the general rule is four times deep as the seed's width. There are 2 options when it comes to watering your seed, a spray bottle or bottom watering. If using a spray bottle, wet the soil until moist without washing the soil away. To bottom water, place seed tray or container into a container or sink with 2-3inches of water. Allow the water to move up the container until the top is damp, this can take 30 minutes to an hour depending on the size of the container. Keep the soil damp until the seed begins to sprout, then water as needed. Seeds do not need fertilizer until true leaves are set.



Place seed trays in bright, indirect sunlight or under a grow light for 12 hours daily (8 hours minimum). Keep them warm with a low-heat heating pad or a plant-specific heating mat. Like all babies, seeds need continuous care for them to germinate. Check on them daily to ensure the soil is damp and warm. Once they begin to sprout, remove them from the heating pad and water when the tray dries out.

As the seedlings grow, transplant them into bigger pots to allow root growth, avoiding root bounding. When the threat of frost has passed, transfer your seedlings into your garden, allowing space for mature growth.

Spring gardens start with the right preparations: testing your soil, choosing the right plants, starting seeds indoors, and planning your garden space. Even during cold weather you can start your garden, just not always outdoors. Plan now and enjoy your healthy and beautiful garden all spring long.

For more information or questions contact the Comal Master Gardens on their website: <https://comalmg.org/> or emailing Brittney Meyer, M.S. Horticulture CEA at Brittney.meyer@ag.tamu.edu.

Happy Gardening! Remember everyone enjoys the great outdoors!

