

## Test soil for garden

Understanding your soil's composition and nutrient content helps you take better care of your garden and landscape. Once you know what's in your soil, you can learn what to feed it to keep your plants happy. In the video above, This Old House landscape contractor Roger Cook covers various soil types and explains the ins and outs of soil testing. Soil is more than dirt. It's a living organism composed of various elements that affect plant growth. The three main mineral components of soil are sand, silt, and clay. Each type has distinct characteristics that influence water retention, drainage, and nutrient availability. You can notice sandy soil by its large particles that create pore space between them. Look for the following qualities: Drains quickly, sometimes too rapidlyFeels gritty to the touchMay not retain nutrients wellRequires frequent watering and fertilizationClay soil consists of tiny, plate-like particles that pack tightly together. These are its characteristics: Difficulty for roots to penetrate when compacted Feeling sticky when wet and forming hard clumps when dryHigh nutrient-holding capacityPoor drainage, leading to soggy conditionsLoam is typically the best soil type for most plants, containing a balanced mixture of sand, silt, and clay. It offers the following:Easy root penetrationExcellent structure for plant growthGood water retention and drainageHigh nutrient contentSoil testing helps you maintain a healthy landscape. It provides valuable information about your soil's nutrient content, pH level, and potential contaminants. Regular testing helps with the following: Avoid over-fertilization because it can harm plants and the environmentDetermine the appropriate fertilizers and amendments neededDetect potential soil contaminants, such as lead, in urban areasIdentify and correct pH imbalancesThere are several methods to test your soil, ranging from simple do-it-yourself (DIY) kits to professional laboratory analysis. You can find home soil test kits at garden centers and hardware stores. These kits typically test for nitrogen, phosphorus, potassium, and pH levels. To use a home soil test kit, follow these steps: Collect soil samples from various areas of your landscape. Mix the samples thoroughly. Add the soil, water, and reactive agent to the test chamber as directed. Shake well and wait for the color to develop. Compare the resulting color to the provided chart to interpret the results. For more detailed and accurate results, consider using a professional soil testing service. Many universities and cooperative extension offices offer soil testing for a nominal fee. These tests provide the following: Comprehensive analysis of macro and micronutrientsPrecise pH measurementsOrganic matter contentRecommendations for soil amendmentsRegular soil testing may feel like a chore, but it's a proactive way to ensure your garden's health. Cook recommends testing soil on the following schedule: Annually, for existing lawns and established treesBefore major landscaping projectsIf plants show signs of poor growthWhen establishing new garden beds or lawnsHow often you test your soil also depends on what it's being used for. Vegetable gardens usually need more frequent testing, while established lawns or perennial beds could be assessed every few years. This keeps nutrient levels optimized and monitors any gradual changes. Understanding your soil test results is key to making informed decisions about your lawn and garden. Soil pH affects nutrient availability to plants. Most plants prefer a slightly acidic to neutral pH range of 6-7. For acidic soils (below 6), adding lime can help raise the pH. for alkaline soils (above 7), introducing sulfur or peat moss can lower the pH. These are the three primary macronutrients: Nitrogen (N): Promotes leafy green growth Phosphorus (P): Supports root development and floweringPotassium (K): Improves overall plant vigor and disease resistanceYour soil test results will indicate whether these nutrients, including elements like iron, manganese, zinc, and copper, help support plant health. Imbalances in these nutrients can lead to chlorosis, poor growth, and reduced yield. Soil tests often reveal which micronutrients are lacking, guiding appropriate fertilization strategies. Organic matter improves soil quality, water retention, and nutrient availability. If your soil is low in organic matter, incorporate compost or other organic amendments to improve soil quality. This addition helps soil aeration and microbial activity, promoting a healthier environment for plants. Based on your soil to create the best growing conditions for your plants. Regardless of soil type, adding organic matter is almost always beneficial. It improves soil structure, increases water retention in sandy soils, and improves drainage in clay soils. Some excellent sources of organic matter include the following: CompostLeaf moldPeat moss (use sparingly, as it's not a renewable resource) Well-rotted manureThese amendments contribute to a more resilient and fertile garden ecosystem. Modifying soil pH can optimize plant health and nutrient uptake. To raise soil pH, try the following methods: Add lime (calcium carbonate) for a gradual, long-lasting effect. Use wood ash for a quicker effect, especially in small areas. Incorporate sulfur for a slow, steady decrease. Based on your soil test results, you may need to add specific nutrients:Nitrogen: Use compost, blood meal, or synthetic fertilizers.Phosphorus: Incorporate bone meal or rock phosphate.Potassium: Add greensand, wood ash, or potassium sulfate.Always follow the recommendations provided with your soil test results to avoid over-fertilization. Over-application of nutrients can lead to runoff, water pollution, and negative effects on plant health. Besides chemical properties, soil texture and compaction directly influence plant growth. Assessing soil texture determines the proportion of sand, silt, and clay. root penetration and drainage. In addition to testing and amending, consider the following soil management tips: Implement rainwater harvesting to reduce irrigation needs and improve water quality. Mulch gardens to prevent nutrient depletion and pest buildup.Utilize cover crops during offseasons to add organic matter and protect soil structure.Soil testing is essential for any gardener or landscaper. By understanding soil composition and nutrient content, you can make informed decisions about amendments and fertilizers. Regular testing and appropriate soil management will lead to healthier plants, more productive gardens, and a better landscape. Proper soil care transforms your garden into a vibrant, thriving space for all types of plants. Analysis of soil For other uses, see Geotechnical investigation. A horticulture student taking a soil sample in a garden near Lawrenceville, Georgia A soil test is a laboratory or in-situ analysis to determine the chemical, physical or biological characteristics of a soil. Possibly the most widely conducted soil tests are those performed to estimate the plant-available concentrations of nutrients in order to provide fertilizer recommendations in agriculture. In geotechnical engineering, soil tests can be used to determine the current physical state of the soil, the seepage properties, the shear strength and the deformation properties of the soil tests may be used in geochemical or ecological investigations. In agriculture, a soil test commonly refers to the analysis of a soil sample to determine nutrient content, composition, and other characteristics such as the acidity or pH level. A soil test can determine fertility, or the expected growth potential of the soil which indicates nutrient deficiencies, potential trace minerals. The test is used to mimic the function of roots to assimilate minerals. The expected rate of growth is modeled by the Law of the Maximum.[1] Labs, such as those at Iowa State and Colorado State University, recommend that a soil test contains 10-20 sample points for every 40 acres (160,000 m2) of field. Tap water or chemicals can change the composition of the soil, and may need to be tested separately. As soil nutrients vary with depth and soil components change with time, the depth and timing of a sample may also affect results. Composite sampling can be performed by combining soil from several locations prior to analysis. This is a common procedure, but should be used judiciously to avoid skewing results. This procedure must be done so that government sampling requirements are met. A reference map should be created to record the location and quantity of field samples in order to properly interpret test results. In precision agriculture, soil samples are collected using a distribution that allows for the estimation of the geospatial variability of the soil area where the crop will be grown. Many different distributions and resolutions are used, depending upon many factors including the goals of the geospatial nutrient analysis and cost of sample collection and analysis.[2][3] For example, in the United States corn and soybean growing regions a grid distribution with a resolution of 2.5 acres per grid (one sample for each 2.5 acre grid) is offered by many precision agriculture soil testing. Soil chemistry changes over time, as biological and which chemical processes break down or combine compounds over time. These processes change once the soil is removed from its natural ecosystem (flora and fauna that penetrate the sampled area) and environment (temperature, moisture, and solar light/radiation cycles). As a result, the chemical composition analysis accuracy can be improved if the soil is analyzed soon after its extraction — usually within a relative time period of 24 hours. The chemical changes in the soil can be slowed during storage and transportation by freezing it. Air drying can also preserve the soil sample for many months. Soil testing is often performed by commercial labs that offer a variety of tests, targeting groups of compounds and minerals. Laboratory tests often check for plant nutrients in three categories: Major nutrients: nitrogen, phosphorus, and potassium Secondary nutrients: sulfur, calcium, magnesium Minor nutrients: sulfur, calcium, magnesium Minor nutrients: nitrogen, phosphorus, and different countries have different standard methods. Just in Europe, more than 10 different soil phosphorus tests are currently in use and the results from these different tests are not directly comparable.[4] Do-it-yourself kits usually only test for the three "major nutrients", and for soil acidity or pH level. Do-it-yourself kits are often sold at farming cooperatives, university labs, private labs, and some hardware and gardening stores. Electrical meters that measure pH, water content, and sometimes nutrient content, and sometimes nutrient content, and sometimes nutrient content of the soil are also available at many hardware stores. Laboratory tests are more accurate than tests with do-it-yourself kits and electrical meters. An example soil sample report is provided for reference by Wallace Laboratories LLC. In order to avoid complex and expensive analytical techniques, prediction based on regression equations relating to more easily measurable parameters can be provided by pedotransfer functions. For instance, soil bulk density can be predicted using easily measured soil properties such as soil texture, pH and organic matter.[5] Soil testing is used to facilitate fertilizer composition and dosage selection for land employed in both agricultural industries. Prepaid mail-in kits for soil and ground water testing are available to facilitate the packaging and delivery of samples to a laboratory. Similarly, in 2004, laboratories began providing fertilizer recommendations along with the soil composition report. Lab tests are more accurate and often utilize very precise flow injection technology (or Near InfraRed (NIR) scanning[6][7]). In addition, lab tests frequently included in a lab report may outline any anomalies, exceptions, and shortcomings in the sampling, analytical process or results. Some laboratories analyze for all 13 mineral nutrients and a dozen non-essential, potentially toxic minerals utilizing the "universal soil extractant" (ammonium bicarbonate DTPA).[8] In geotechnical engineering, a soil test can be used to determine the physical characteristics of a soil, such as its water content, void ratio or bulk density. Soil testing can also provide information related to the shear strength, rate of consolidation and permeability of the soil. The following is a non-exhaustive list of engineering soil tests. Water content Specific gravity Grain size analysis (sieve analysis or hydrometer method) Atterberg limits Free swell index Swelling pressure Dry density Triaxial shear test Direct shear test Relative density Oedometer test for consolidation California bearing ratio (CBR) Permeability tests (constant-head, falling-head, etc.) Vane shear test Common mineral soil contaminants include arsenic, barium, cadmium, copper, mercury, lead, and zinc. Lead is a particularly dangerous soil component. The following table from the University of Minnesota categorizes typical soil concentration levels and their associated health risks.[9] Children and pregnant women should avoid contact with soil estimated total lead levels above 300 ppm Lead Level Extracted lead (ppm) Estimated total lead (ppm) Low 3000 The following is a non-exhaustive list of recommendations to limit exposure to lead in garden soils: Locate gardens away from old painted structures and heavily traveled roads Give planting preferences to fruiting crops (tomatoes, squash, peas, sunflowers, corn, etc.) Incorporate organic materials such as finished compost, humus, and peat moss Lime soil as recommended by soil test (a pH of 6.5 minimizes lead availability) Discard old and outer leaves before eating leafy vegetables; peel root crops; wash all produce Keep dust to a minimum by maintaining a mulched and/or moist soil surface Base-cation saturation ratio Fertilizer Geotechnical investigation Liming (soil) Plant tissue test SESL Australia ^ Sumner, Malcolm E. 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ISSN 1614-7480. ^ On-the-spot, easy and affordable soil testing for Kenyan smallholder farmers ^ "wlabs.com". Wallace Laboratories LLC. Retrieved 2012-11-08. ^ Carl J. Rosen. "Lead in the Home Garden and Urban Soil Environment". Extension.umn.edu. Retrieved 2012-11-08. Pollutants/Toxics > Soil Contaminants Colorado State University Extension Service Mail-in soil test kits and nutrient management/fertilizer reports Field Book for Describing and Sampling Soils Retrieved from "There's no need to guess what your garden needs for optimal results. Take a soil test this spring to create the right conditions for your garden from the start. A simple soil test will help prevent problems later in the season. By following the recommendations in your results, you can give your plants a strong start, leading to better growth, bigger blooms and a more rewarding harvest. A soil test provides a complete picture of what's going on beneath the surface in your garden. You will get information on the pH of your soil, how much organic matter is present and the levels of phosphorus, potassium, magnesium and other macronutrients and micronutrients. fluctuates due to biological activity and weather conditions. With the test result information, you can make informed decisions about what to add to your garden soil before you plant. The University of Vermont (UVM) Agricultural and Environmental Testing Lab conducts soil testing for home gardeners and commercial farmers. Visit its website at If or the submission form and additional information. The cost for a basic nutrient soil test is \$17 per sample. To begin collecting your soil sample, you will need to have a clean trowel or small shovel, a clean bucket and a plastic bag. The bag needs to be able to hold 1/2 to 1 cup of soil. It is important that all materials are clean to avoid contamination. Choose the area you want to sample. If your garden beds have different purposes, collect a sample for each space you want to test. For example, if you have one bed for annual flowers and another for garden vegetables, you may want to sample these separately as they have different nutritional needs. In the chosen area, identify about 10 different spots to collect soil. These should be distributed throughout the space. Dig a small hole about 6 to 8 inches deep (The root zone for most plants). Then, take a slice of soil along the side of the hole. Put this sample in your results will represent the average conditions of your garden. Thoroughly mix the samples in your bucket. Then scoop 1/2 to 1 cup of soil and place it in your sample to the lab for testing. Include the completed soil test submission form and mail your sample to the UVM Agricultural and Environmental Testing Lab for analysis. You'll receive your results in two to three weeks by email or mail, according to your garden soil and offer recommendations for amendments to maximize the quality of your soil for gardening as well as includes resources to help you interpret the results of your soil test. The UVM Extension Master Gardener Helpline also can help you make sense of garden and lawn soil test results. Complete the form on the website, upload a copy of your soil test can save you time, money and frustration. Instead of guessing what your garden needs, you'll know exactly how to help your plants grow healthy and strong. It's a small step that can make a big difference and it's worth doing every few years. Tony O'Neill, expert gardener and best-selling author of the famous "Simplify Vegetable Gardening," "Composting Masterclass," and "Your First Vegetable Garden," combines lifelong passion and expert knowledge to simplify gardening. His mission? Helping you cultivate a thriving garden. More on Tony O'Neill {"statusCode":401,"message": "License key missing"} What you're thinking about is all the flowers, fruits, and vegetables you want to plant there. But trust me! Testing your garden soil is just as crucial as sowing seeds or harvesting. Testing soil provides critical information is used to amend soils that aid productive plant growth. It saves time and money by removing the guesswork on your garden's requirements. Your garden soil is like a camel traveling through the desert. Once hydrated, it can survive for weeks. But sooner or later, it's going to tumble. Like that, your garden soil may work great for years and years, but eventually, it'll need your attention to test the ground before you make amendments. You'll see the signs. Off-color leaves, the yellowish coloring between leaf veins, stunted growth, and even your harvest will have volumes to say. The idea of testing is to know what you're getting into before planting! If something is lacking, we can balance it before it's too late! Remember: Feed your soil, not your plants. Everything plays a part in the collective good of the garden. From thorns to the worms, nothing is insignificant. Soil is one of the most overlooked and critical parts of the garden. Healthy soil means a healthy harvest. To avoid issues, I recommend testing it before planting anything. A soil test usually shows you two main things: the pH value, the nutrients present, and their quantities. Testing soil for PH and Organic Content The concept of soil testing spans beyond testing for organic content and pH. We must check for structure, compaction, soil organisms, worms, and drainage. The perfect garden soil is easily workable and porous to allow aeration. A compact patch doesn't support soil life and is difficult to maintain. We also check for worms in the soil sample. These worms move across the soil, eat from the organic matter, and their waste works as a nitrogen fertilizer. The presence of earthworms naturally means that the soil is fertile and alive with microorganisms. Taking the correct sample is crucial to get the right results. To take a sample for testing. Make sure that the soil is fertile and alive with microorganisms. Taking the correct sample is crucial to get the right results. deep holes at various locations in the garden. Take a fistful from each hole and add it to a bucket. Mix the various samples and separate a cup of soil for testing. Leave the final piece to dry for 24 hours before testing. You can conduct a soil test at home with a DIY kit or send the sample to a lab. The test determines the soil sample's organic content (nutrients) and pH value. The organic content tells you which macronutrients and micronutrients and micronutrients and micronutrients. This solution of fertilizers and compost you must add to cover the deficient nutrients. This saves you a considerable amount of money otherwise wasted on unwanted fertilizers. The fertilizers. The fertilizers. The fertilizers. The fertilizers. The fertilizers of civilization. Albert Howard Soil pH determines whether your garden soil is acidic (below 7) or alkaline (above 7). A value of 7.0 is considered neutral on the pH scale. Most plants thrive in a slightly acidic or neutral (6.5-7.0) pH range. Some plants, like blueberries, prefer acidic soil, and planting a neutral plant in acidic soil or vice versa is a recipe for disaster. The proper pH enables plants to use soil nutrients from the soil test helps you decide if your garden soil is ready for planting. It determines the fertility and health of the soil. My years of experience in the garden have taught me that every plant is different. A specific habitat is needed for them to grow, and they even die if those conditions aren't met. Soil testing takes the guesswork out of gardening. You won't waste money on fertilizers that aren't needed. Nor plant anything in the wrong place. It tells you, Structure. Percentage of organic matter. Nutrients. pH value. As we're on the topic of whether we should or shouldn't test the soil. Let me give you five reasons why testing is something you won't regret doing. DID YOU KNOW? It takes 500 years to produce just under an inch of topsoil, the most productive soil layer. The first reason why you should test the soil is to avoid any surprises. Testing your samples gives you a solid number to work with. Even if the allotment is unused, the weeds may swallow water and nutrients over the years. You can't just keep using the nutrients. There is time to take, and there's time to give. There may or may not be a problem, but it's better to make sure than regret later. The soil test report tells you which nutrients and micronutrients. In that way, you can prepare your soil for planting. In case of a nutrient deficiency, the test recommends the amount of fertilizer you should use. You can save money on fertilizers that you don't need. The soil test also gives you the pH value of the sample. The pH value to sustain most plants is between 6.5 and 7.0. Many plants can't sustain acidic or alkaline soil. In this case, it helps you decide which seed you should or shouldn't sow. Soil texture is important for several reasons. The perfect garden soil allows air and water to pass to the roots and keep them hydrated. Worms and soil life are essential for aeration and drainage. Not every soil is a good place for these microorganisms and earthworms. Without understanding your soil structure, you won't know if the ground is suitable for crops. And what kind of crops will grow better in your garden? A simple soil test can tell you if your garden alive with earthworms is supposed to be healthy, and having earthworms also indicates beneficial microorganisms. The movement of these worms creates tunnels that allow oxygen and water to pass through. Remember, One plant's poison. Taking a good soil sample is critical. How else are you supposed to get the right results? The soil sample should be about one and a half cups, even for a small garden. It needs to be the perfect representative of the entire garden soil. To achieve that, Dig at least half a dozen 6 inches deep holes at various random locations in your garden. other scraps from the soil's surface before digging. Suppose you're taking a sample from a greenhouse with various crops. Take soil sample should be moist but not wet. Collect a fistful of soil from each hole and mix all the pieces in a container. Clean the sample's stones, insects, roots, and weeds before drying. Let it dry for about 24 hours before testing. Wear clean garden gloves to avoid contaminating the soil sample, and it's time to test it. There are two ways to approach soil testing. Send the soil sample to a lab for testing. Rest assured, if you're a seasonal gardener and want to test your soil. The process is pretty simple. I prefer the Luster Leaf Soil pH Kit, which tests the pH level and pushes nutrients into your soil. The kit is fantastic, as it will give you 200 tests. 200 Tests, 50 ea PH, N, P, and K Simple, Easy To Use Sturdy Plastic Moulded Case PH Preference List for hundreds of plants. Tips on altering soil conditions at home. If you're a home garden owner, DIY soil testing is perfect. Several laboratories, and Agrolab or Lancrop is an excellent option for those living in the United States. You get the test results back in about a week. We're testing the soil to determine the nutrients and pH value of the earth. Soil pH determines the acidity of your garden soil, and it's measured on a scale from zero to 14. Zero is highly acidic, 14.0 is highly acidic, 14.0 is highly acidic, 14.0 is highly acidic. Blueberries and azaleas are among the acid-loving crops. Growing them in alkaline soil is not recommended. You can test the pH values with a DIY soil kit or send the sample to a laboratory. AcidicNeutralAlkaline0 - 7.07.07.0 - 14.0 Organic Content: To stay healthy and to grow, your body needs certain nutrients. Blood tests confirm whether we're in good shape or need supplements. Our gardens are no different from ours! They also need proper care and supplements (fertilizers) occasionally. Soil tests reveal a nutrient deficiency in the soil and recommend the appropriate fertilizers) occasionally. ground, usually about 0.1%. Only trace amounts of Micronutrients are found and needed in your garden soil. Any home kit can measure the top three essential nutrients (Nitrogen, phosphorous, and potassium). You must address any deficiency in these three ASAP. The micronutrients aren't tested in the DIY kits, and lab tests are the way to go if you want to test for them. MacronutrientsNitrogen (N)Iron (Fe)Phosphorus (P)Manganese (Mn)Potassium (K)Zinc (Zn)Calcium (C)Copper (Cu)Magnesium (Mg) Sulfur (S) Soil is at the bottom of the food chain, yet it is the cornerstone of life on earth. The soil is the first thing that catches your eye, and the color, texture, and especially the smell are mesmerizing. Today, I'll share four simple soil tests you can do at home without any testing kit. To test the composition and structure of your garden soil is classified into three basic categories. Among the three types, loamy soil is considered perfect for gardening. TextureNutrientsAerationDrainageSandy SoilSmall particles, smooth yet grainy.Nutrient-rich.Very good.Moderate drainageClay SoilVery fine grains.nutrient-richVery bad.Slow drainage. Sandy Soil. The sand particles are fairly grainy and will fall apart as soon as taken out of the container. Loamy Soil. The soil particles in clay soil. The particles in clay soil are very finely grained, nutrient-rich, and hold too much water. Clay is not suitable for gardens. A strong presence of worms means your soil is healthy. Earthworms do more than half our jobs in the garden, breaking the organic matter and aerating the soil. Their presence usually means your soil has a thriving ecosystem with the most beneficial bacteria and fungi. You can confirm the presence of earthworms by digging a 6-inch hole Make sure that the soil is moist. It shouldn't be wet or dry. Please take out the shovel and count the number of earthworms on it. If it's ten or above, your soil lacks organic matter to feed the organisms. Productive agricultural soil contains between 3% to 6% organic matter and uses compost to make up for the organic matter. The video below discusses nine reasons you should make compost at home. This can help to amend the soil after testing your soil. But it explains the importance of soil life. Water drainage is not something your soil test can report, and it's crucial because many plants, specifically culinary herbs, can't survive in wet soil. To test the drainage, dig a six-inch hole, fill it with water, and let it drain. If it takes 4 hours to drain, your soil has a drainage issue. Insects and diseases can kill a perfect harvest. An active presence of soil organisms means there is less chance for pests and diseases. These issues show signs in several ways. To test the soil for pests and diseases. Gently dig the area around a plant, preferably a weed. Pull it out once you've reached the root depth. Look out for, Brown/yellow mushy roots. Stunted growth. Sometimes, the soil test doesn't correctly identify the issues. Moisture. Inadequate water drainage. Plant disease and pests. Sampling depth. Crop removal. The best way to avoid improper results is to take special care of the sample. We average the result by mixing pieces from the garden overall. Pro Tip: If your garden suffers from a disease or has a pest issue, it's better to take care of the problem before sampling for a soil test to avoid misguided results. A soil test to avoid misguided results. A soil test to avoid misguided results. disease or pest issue. Consider testing more often (once a year). I would also recommend trying again if you've regularly used compost and fertilizers to monitor the progress. Soil testing is a simple and inexpensive procedure. You can test your soil at home with a DIY soil kit or send it to a laboratory for a more in-depth analysis, and there are homemade tests to test soil without a soil kit too. We've already discussed some simple tests earlier, but you can also test the soil's pH with vinegar. If it fizzes, your soil is alkaline with a pH of 7 or 8. If it doesn't fizz after the vinegar test, add distilled water in 2 tablespoons of the soil and half a baking soda cup. If it fizzes, you have acidic soil (with ph values of 5 or 6). If it doesn't fizz at all, then congrats! Your soil is neutral (7.0 pH). The plants in our garden continuously need nutrients and water, and they get those from the soil, which is why the soil needs fertilizer and compost. You can add a couple of things to your garden soil before planting. Fertilizers. Composted organic matter, and mulch. Soil is the life and soul of your garden. Better soil means a better harvest. To improve the guality of your soil. Add 4 to 5 inches of well-rotted compost or organic matter to the soil. Cover the organic matter with wood chips, straws, and bark. The mulch retains water on the surface and invites earthworms. Use fertilizers if necessary. Add a 3-4 inch compost layer annually or every six months. Grow cover crops or green manure. Baking soda doesn't pose any apparent harm to plants, and it helps prevent powdery mildew and foliar diseases in plants. Experienced gardeners recommend regular use of baking soda during spring to fight plant disease. It's also used as a fungicide to disrupt the ionic balance in the fungal cells. The solution of sand, silt, and clay. The fine grainy texture allows the loam to hold an adequate about of water without getting too wet. It's also rich in nutrients, and retaining soil life. Is a soil test necessary? soil to see if it is capable of supporting plant life. A soil test should be tested every three years on good ground or yearly while amending the soil. When should soil be tested? Soil should be tested? Soil should be tested? to ensure you are not over or under-fertilizing. What does a soil test tell you? A good soil test will tell you the pH, NPK, and micro and macro nutrients available in the soil and their amounts. A soil test will provide the information required to balance the soil in your garden. How long is a soil test good for? A soil test is good for at least a year and up to three years. This depends on whether you are amending the soil: one years for maintenance. Is a soil test expensive? Soil tests are not expensive? Soil tests are not expensive? Soil test your soil at home; These give the basics of NPK and pH. For a little more budget (starting around \$35), you can have a lab test your soil, which is more in-depth. I know you are itching to start planting out in your new garden. But take the time to do a soil test; it will save you so much money, heartache, and time later in the season. It will also confirm that you're doing it right for your plants and your garden's overall health