



# Growing Points

*Gardening Ideas from Colorado Master Gardeners*

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<http://elpasoco.colostate.edu/horticulture>

## Testing Your Soil

**Deb Ross, Colorado Master Gardener**

Different plants have different fertilizer needs, so a soil test can help a home gardener decide what fertilizers and organic amendments are needed for starting lawns, flower beds, or vegetable gardens. A soil test can be full of complex information about nutrient requirements and reclaiming salt or sodium affected soils. However, a soil test report also interprets the results and offers soil management suggestions.

A standard soil test will not identify the most common garden problems related to over-watering, under-watering, poor soil drainage, soil compaction, diseases, insects, weed competition, environmental disorders, too much shade, poor varieties, or just neglect.

A soil sample may be taken at any time of year, although spring and fall sampling are usually the most convenient. The results of a test are no better than the sample sent to the lab. The sample must be representative of the yard or garden being considered. Gardeners who try to shortcut the sampling procedure will not receive a reliable reading.

Colorado State University performs soil tests that provide gardeners with a variety of soil nutrient information. Soil can be tested to measure:

- soil pH, determined by the 1:1 soil:water method. This indicates the acidity or alkalinity of soil based on a scale of 0 to 14. On the pH scale, 7.0 is neutral, values below 7.0 are acid, and those above are alkaline.

Most Colorado soils are alkaline, having a pH between 7.0 and 8.0. A pH value above 8.5 indicates that the soil may contain excess sodium.

- organic matter (reported as a percent of the total soil) About 2/3 of a pound of nitrogen per 1,000 square feet will be released (mineralized to nitrate) during the growing season for each one percent organic matter present.
- soluble salts
- nitrate nitrogen
- micronutrients: phosphorus, potassium, zinc, iron, copper, manganese, lime
- soil texture (estimated by the hand-feel method)
- gypsum and the sodium adsorption ratio (SAR)
- lime

Submit a sample for each yard area that receives different fertilizer and soil management treatments. For example:

- A sample from front and back lawns should include sub-samples taken from each and mixed together.
- Garden areas are managed differently from lawns. Garden beds that receive different amounts of fertilizer should be sampled separately.
- Samples are most easily collected using a soil tube or soil auger. A garden trowel, spade, bulb planter, or large knife also works.
- Discard any sod, surface vegetation or litter.
- Each sample should be a composite of sub-samples collected from randomly selected spots within the chosen area.
- Collect the sub-samples in a clean plastic pail; mix the soil thoroughly. Place about one pint of the soil mix into the sample bag or box.
- Label the sample container (for example front lawn, vegetable garden, and flowerbed) and keep a record of the area represented by each sample taken. Send the samples to the soil-testing lab.
- Sampling depth is critical and varies for the type of test taken and for various labs. Follow sampling depth directions given by the lab. For example:
  - Garden (vegetable and flower) 6 inches
  - Lawns, new (prior to planting) 6 inches
  - Lawns, established 3 inches

For more detailed information on the variety of available soils tests, the information each variety provides, and the costs of each test, go the Colorado State University horticulture link at:

<http://www.ext.colostate.edu/pubs/garden/pubgard.html>

# Problems with Landscaping on Expansive Soils

**Kathryn Meinzer, Colorado Master Gardener**

Three years ago we moved to a property which has expansive soils in the northwest part of Colorado Springs. I had no idea what expansive soils were until I tried digging holes to plant. I found that a pick was needed to penetrate the soil and rocks, and lots of time was needed to plant several plants. If you have expansive soils, it is a good idea to pre-dig your planting holes when bringing home large numbers of new plants at one time. Otherwise, you'll find many of your small plants die before you can get them in the ground.

I add amendments such as compost, peat moss, and perlite to the planting hole when planting, but often find that I must throw away the existing soil from the hole and mix the amendments with soil purchased in bags from big box stores. This helps native and xeric plants to get a start, but most likely will cause a soil interface problem for the plant's roots as the plants mature. This is a chance I'm willing to take.

Expansive soils shrink when dry and swell when wet. The dry soil is the consistency of cement; the wet soil is the consistency of bubble gum. It is very difficult to amend expansive soils, and sometimes you should not amend depending on your property's conditions. The Colorado State University Cooperative Extension fact sheet no. 7.236 entitled "Landscaping on Expansive Soils" is an excellent resource for those of us whose houses are located on expansive soils. This fact sheet talks about construction impacts on landscaping, landscaping impacts, plant selection, water management, and site maintenance. For example: sprinkler systems should spray no closer than 5 feet from your house and garage foundations. Hand watering or drip irrigation systems may be acceptable for watering next to foundations. It is safer to either avoid planting near foundations or planting only extremely drought tolerant plants near foundations to minimize the amount of water near your building's foundations.

Expansive soils do not swell and shrink if the moisture content remains constant, so avoid over- or under-watering near foundations. Most properties with

expansive soils are mulched with rock or pea gravel near building foundations. Do not change the grade on your property from that which the developer provided. Changing the grade could cause water to run into unintended places such as window wells.

Gardening with expansive soils is a challenge, but it is not impossible to have a garden if you follow the guidelines in fact sheet no. 7.236. It can be found on the Colorado State University Extension website at [www.ext.colostate.edu](http://www.ext.colostate.edu) .

## **What are insect traps and how are they useful?**

**Deborah Ross, Colorado Master Gardener**

Insect traps can be used to monitor or even reduce insect populations. Traps are an environmentally sound manner for pest control. They use a variety of lures to attract insects. They don't injure other animals or humans or leave a residue on foods. No insecticides need to be used and beneficial insects rarely become trapped. Traps use a variety of lures such as:

- Food: for example beer attracts snails, slugs and some insects.
- Visual lures such as lights, bright colors, and shapes
- Chemical attractants or pheromones which are the substances female insects use to sexually attract males

Most traps use a sticky surface and/or a funnel-shaped entrance to capture the insect. The funnel-shaped entrance lets the insect enter easily. They then have difficulty finding their way out again. The sticky adhesive also contains the chemical attractant. This attractant lures only specific species, thus sparing beneficial insects.

Yellow sticky traps can be useful to reduce the number of insect pests that fly – whiteflies, winged aphids, and fungus gnats. These traps are sold commercially or you can easily make them by cutting bright yellow cardboard and covering it with petroleum jelly or some other sticky material. However, trapping alone will not entirely eliminate problems because much of the insect population, including the younger larval stages, remains on or about the plants.

Insect traps help determine when pests emerge, how many there are and where they are coming from. This information can make it easier to control insects at the earliest possible time. In many cases traps alone can control pest populations before they cause economic damage and traps eliminate the need for more toxic chemical controls.

Traps are used for at least three purposes:

1. To detect the presence of an exotic pest (an insect pest not previously known to inhabit a state or region).
2. To estimate the relative density of a pest population at a given site.
3. To indicate the first emergence or peak flight activity of a pest species in a given area, often to time an insecticide application.

An example of an insect that can be controlled with an insect trap is the type of wasp known as a yellowjacket. Commonly sold wasp traps only are effective for the western yellowjackets. They will not attract paper wasps or hornets and will not assist in control of these types of wasps. The western yellowjacket is attracted to the chemical heptyl butyrate, which is included as a lure in many wasp traps. Such traps can be helpful when used early in the season, June and early July, when the number of yellowjackets is small and the colonies are struggling to become established.

## Colorado Master Gardener Help Desk Hours and Contact Info

**Gardening in the Pikes Peak Region is a unique challenge.  
When you have questions, we have the answers.**

Do you have gardening/ landscape questions or problems?

- plant ID
- insect ID
- disease diagnosis

We can help:

- ❖ Gardening Hotline – Colorado Master Gardener Help Desk – 636-8921
- ❖ Walk-in Diagnostic Clinic – 305 South Union Blvd., Colorado Springs (same complex as El Paso County Dept of Health across from Memorial Park)  
  
Hours: Monday thru Thursday – 8:30 am to 4:30 pm
- ❖ E-mail questions – [csumg2@elpasoco.com](mailto:csumg2@elpasoco.com)
- ❖ *Gardening in the Pikes Peak Region*: Classes offered in the afternoon or evening in the Fall and early Spring.
- ❖ **Speaker's Bureau**: a variety of horticultural topics available for presentation to your group or meeting.
- ❖ El Paso County Horticulture Web Site:

<http://elpasoco.colostate.edu/horticulture/>

## Colorado State University Cooperative Extension "On the Web"

**From the Extension Home Page:** [www.ext.colostate.edu](http://www.ext.colostate.edu)

**Natural Resource Options:** Click on "Natural Resources" at the top of the page. Follow the links for information about wildlife, forestry, and range management.

**AnswerLink:** [www.answerlink.info](http://www.answerlink.info)

**Plant Select**<sup>®</sup> Annual selections of landscape plants suited to Colorado conditions. **Plant Select**<sup>®</sup> is a program designed to seek out and distribute the very best plants for gardens from the high plains to the intermountain region. It is a cooperative program administered by **Denver Botanic Gardens** and **Colorado State University**, together with landscape and nursery professionals throughout the Rocky Mountain region and beyond.

[www.plantselect.org](http://www.plantselect.org)

## Our Community Partners

### **Xeriscape Demonstration Garden**

Colorado Springs Utilities  
719-668-4555  
2855 Mesa Road, Colorado Springs,  
CO 80904  
[www.csu.org/environment/xeriscape](http://www.csu.org/environment/xeriscape)

### **Colorado Springs City Forestry**

719-385-5942  
1401 Recreation Way, Colorado Springs  
[www.springsgov.com](http://www.springsgov.com)  
Follow the links through Parks & Recreation to "Forestry"

### **El Paso County Solid Waste Management**

719-520-7878  
3470 N. Marksheffel Rd., Colorado Springs  
Hours: 7:30 – 4:00 weekdays  
[http://adm.elpasoco.com/Environmental\\_Services/Solid\\_Waste\\_Management/](http://adm.elpasoco.com/Environmental_Services/Solid_Waste_Management/)

### **El Paso County Forestry and Noxious Weeds**

719-520-7654  
2880 International Circle, Colorado Springs  
Hours: 7:30-4:00 weekdays  
[http://adm.elpasoco.com/Environmental\\_Services/Natural\\_Resources/](http://adm.elpasoco.com/Environmental_Services/Natural_Resources/)

### **Horticultural Art Society (HAS) Demonstration Garden**

719-475-0250  
Located in Monument Valley Park at the NE corner of Glen Avenue and Mesa Road,  
just south of the City greenhouses.  
<http://www.hasgardens.com/>