

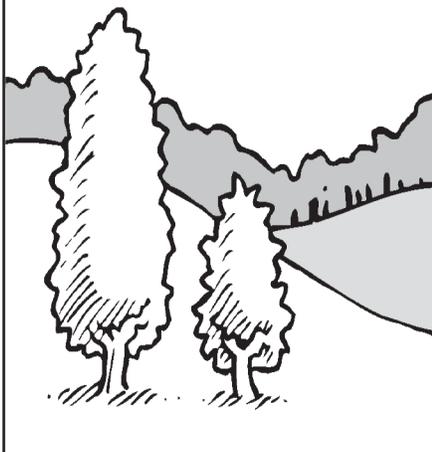


# Maintaining Healthy Lawns, Shrubs and Trees

## Why be concerned?

Landscaping practices affect both the quantity and quality of stormwater runoff. Compacted soils, thatch build-up and overwatering increase the volume of runoff. Fertilizers and pesticides impair stormwater quality. Good soil preparation and low-maintenance plantings reduce the need for irrigation, fertilizers and pesticides. In addition to protecting water quality, minimizing the use of water and chemicals makes good economic sense.

Cobb County UGA Extension has a variety of publications and services available to help develop an environmentally responsible program for any landscape. UGA Cooperative Extension Service handles requests for information about everything from how to select appropriate plantings to the identification and treatment of specific plant diseases and pests. For more information, call the UGA Cooperative Extension Service for Cobb County at 770-528-4070.



## Three Steps to a Strong Soil Foundation

**1. Have the pH and fertility of your soil tested by UGA Cooperative Extension** - your soils may not require *any* fertilizer. If, based on soil testing, it's determined that fertilizing is required, follow the recommendations in **Series #5, Fact Sheet 5.2**.

**2. Test soil compaction.** Compacted soils are unhealthy for plants and can generate as much runoff as pavement. To test for soil compaction, try sinking a screwdriver into the ground. If the screwdriver doesn't penetrate easily, aerate the soil with a hand or mechanical corer. Don't use spike type rollers; these actually make compaction worse. Sometimes, aeration is the only thing that's needed to turn a problem landscape into a thriving one.

**3. Examine soil texture and drainage.** Neither very sandy nor heavy clay soils provide a good foundation for lawns or other plantings. To examine soil texture, squeeze a hand full of soil into a ball. If the soil falls apart it's too sandy; if the soil holds its shape, it has too much clay. In general, soil with good texture is spongy.

To improve soil texture and drainage, amend soils that have too much sand or clay as follows:

Sandy soils: add compost or other organic matter to hold nutrients and prevent leaching.

Clay soils: add organic matter and sandy loam for coarseness. Don't use sand, since mixing sand with clay will produce a soil similar to concrete.



## Water With Care

Overwatering sandy soils can cause nutrients to leach away too quickly. Since heavy soils are easily saturated overwatering clay soils can cause plants and microorganisms to drown. (Microorganisms both aerate the soil and help to break down thatch.)

Proper watering will depend on a number of factors including soils and current weather patterns. (If soils are healthy, turf grass should only need about 1 1/4" of water a week in warm weather.) In general:

- Adjust timers on automatic sprinkler systems every week or so, depending on the weather.
- Avoid overspray onto sidewalks and parking lots.
- Maintain irrigation systems. This may involve repairing leaks, broken heads and risers, and adjusting application patterns and rates to minimize runoff.

## Non-Toxic Pest Control

Maintaining a healthy landscape will enable plants to resist pests and crowd out weeds. If you must actively control pests, select the least toxic methods available. For more information about controlling weeds and pests, see **Series #5, Fact Sheets 5.3 and 5.4**.

## Converting Lawns to Low-Maintenance Plantings

Reduce the need for fertilizers, pesticides, mowing and watering by replacing turf grass with lower maintenance plantings. Most lawns have areas that aren't suited for growing grass (for example, steep slopes or areas that are very wet or shaded). While it's possible to grow grass in these places, higher water and chemical usage is usually needed to compensate for inhospitable conditions. Examine your lawn for opportunitites

to convert it to other plantings. These can range from expanding flowerbeds and other plantings to using turf *only* to fulfill a particular function, such as active recreation. In areas that must be maintained as lawn, plant grass species that are well adapted to our local climate. If you need assistance identifying the plant species that are best suited for a specific site and purpose, contact UGA Cooperative Extension.

## High Mowing, Deep Roots

High mowing will keep lawns thick and healthy and significantly help to crowd out weeds. Adjust mowers so that only the top one-third of the grass blade is cut and/or leave grass at least 3" high. Shorter grass blades don't produce enough carbohydrates to feed root growth. In well prepared soil, roots extend 4" to 6" deep.)

## Recycle Clippings

Clippings left on the lawn provide important moisture and nutrients (clippings can provide up to half the nitrogen needed by your lawn). Since they're about 85% water, clippings quickly break down and *don't* cause thatch.

If your grass grows vigorously, you may need to periodically collect clippings. If they haven't decomposed before the next mowing, remove clippings and recycle them by using them as mulch adding them to soil or mixing them with compost. As the season progresses and grass growth slows, clippings can again be left on the lawn.

## Managing Thatch

Thatch consists of the woody remains of grass roots, stems, and sheaths. Thatch builds up when there aren't enough microorganisms in the soil to break woody grass remains down.

Avoid using insecticides and aerate soil to encourage microorganisms and reduce thatch. If thatch builds up over 1/2", aerate the soil and sprinkle compost or sifted topsoil over the lawn (a practice called top dressing) instead of fertilizing.

## "WEED & FEED" COMBINATIONS: A Dangerous Diet

Many lawn care companies routinely combine fertilizers and pesticides in a series of applications throughout the spring, summer and fall. These multi-step programs are promoted as the sure and easy path to a "perfect" lawn. The pressure to have a perfect lawn, however, has clouded a number of issues and literally mixed ingredients that should be kept separate:

### Routine insecticide application.

Since most insects found on a lawn are beneficial, insecticides should rarely be part of a lawn care program. Research indicates that only about one lawn in 200 will need an insecticide application in a given year. Even on lawns where harmful insects exist, better horticultural practices or other natural controls often can be used to reduce their threat.

### Routine herbicide application.

Weeds aren't the cause of an unhealthy lawn, they're the *result* of one. The best defense against weeds is a thick healthy lawn that comes from proper soil management, watering, fertilizing and mowing. Routine herbicide applications are unnecessary and their effects can be misleading. For example, herbicide/fertilizer combination products are widely used to kill dandelions in the spring, when the flowers are most noticeable. While the curling weeds seem to indicate that the herbicide has been effective, in fact, it probably killed only the top of the weed, not the roots.

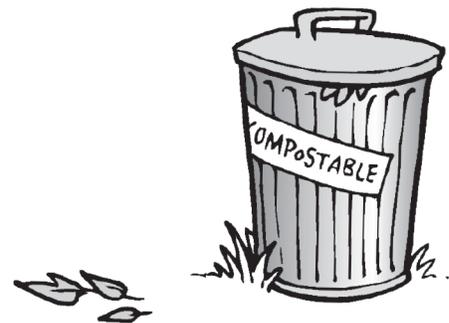
### Routine nutrient application.

Most commercial fertilizers contain phosphorus, a major water pollutant. Yet many soils already contain enough phosphorus for a healthy lawn. This underscores the need for soil testing before applying fertilizer. Low-phosphorus or phosphorus-free fertilizers can provide necessary nutrients while avoiding the threat to water quality. Both garden stores and commercial applicators can provide them.

Given the amount of damage that lawn care chemicals cause to human health and the environment, changing our aesthetic values is one of the most important things we can do to protect water quality.

## Composting

Consider installing a compost facility at your business site. If you're a landscaping contractor, encourage your clients to compost. Be sure to locate your compost area so that it doesn't leach into a stream or storm drain.



## Maintaining Vehicles and Equipment

Keep vehicles and equipment clean and regularly inspect them for leaks. Leaking pollutants can soak through the soil or wash off with stormwater. Don't clean vehicles or equipment where wash water will run into a storm drain or stream. If you aren't sure where a drain leads, call Cobb County Storm Water Management, Water Quality Section for assistance. For more information about maintaining equipment and vehicles, see **Series #3**.

## GETTING HELP

UGA Cooperative  
Extension Service for  
Cobb County .....(770) 528-4070

Georgia Department  
of Agriculture .....(404) 656-3600  
Pesticides Program.....(404) 656-4958

Cobb County  
Stormwater Management....(770) 419-6435  
Water Quality Section. ....(770) 419-6441

Community Partners  
for Healthy Streams .....(770) 419-6303