## Fall Lawn Maintenance

If you examine the way nature works you will see that most plants come to life in the spring, bloom at their appointed time during the growing season, and go to seed. At their predestined time, these seeds will germinate and repeat the cycle. Also, tree leaves and dying plants fall to the ground in the fall, decay and enrich the soil. This explains why fall is the ideal time to plant and feed cool-season grass lawns.

The most important step of this maintenance process is to do a soil sample in July or early August. The soil test will tell you the pH of the soil and what nutrients are available to the plants. This is important because if the pH is not correct the plants cannot use what nutrients are available. It will give recommendations as to what and how much fertilizer to apply. In this area, the soil is probably acidic and the test will tell you how much lime to add to get the ideal 6.2 pH. You can get sample boxes and instructions from the local Extension Office. Tests should be done every 2 to 4 years and do separate ones for the front and back yards and the gardens.

Before planting or fertilizing the ground needs some preparation. Thatch over 1/4 inch thick can be removed and the soil loosened so nutrients and grass seed roots can penetrate it. You can do this with a rake or use a de-thatching machine. The de-thatching machine will make small grooves in the soil to give good soil contact and hold seed and fertilizer. Aerification with a core aerator also helps prepare a lawn for renovation by pulling up little cores of soil onto the thatch. This reduces compaction, and makes holes in the soil that hold the fertilizer, seed and moisture. De-thatching after aerification helps break up the cores and provides an even better seed bed. These machines can be rented from hardware stores or rental companies. This is also a good time to remove rocks and debris from the yard and fill any holes with topsoil.

It is usually recommended to use fertilizer with an analysis ratio of 4-1-2 or 3-1-2. Examples of these would be fertilizers with 16-4-8, 20-5-10, or 12-4-8 on the bag. (Note: these are multiples of 4-1-2 or 3-1-2) The table below shows the amounts of these types of fertilizers to use to apply certain rates of nitrogen per 1,000 square feet. If you are using a different fertilizer and need help calculating the amount to use or have questions about a specific soil test analysis call the Extension office. They can also give you instructions to calibrate your spreader to put down the right amount of fertilizer or lime.

Fertilizer Analysis	Analysis Ratio	Desired lbs. of nitrogen /1000 sq. ft.		
		1	1.5	2.0
12-4-8	3-1-2	8.3 lbs	12.5 lbs	17.0 lbs
16-4-8	4-1-2	6.2	9.4	12.0
20-5-10	4-1-2	5	7.4	10

Slow-release nitrogen fertilizers are recommended because they release smaller amounts of nutrients over a longer period of time with less chance of burning plants. If you want to use a "weed & feed" product this should be done for the October feeding only because its fertilizer content is too high for other applications.

If the soil test recommends lime, you should apply this in increments of no more than 50 lbs/1,000 sq. ft. at one time, 1 to 6 months apart, do not apply lime at the same time as seed or on new seedlings because of the burn potential, and make applications of fertilizer and lime 2 to 3 weeks apart. Pellet form is easier to spread on a lawn but use pulverized when you are tilling the soil.

If you are seeding bare spots or over-seeding, the recommended grasses for this area are the improved turf-type tall fescue blends for sunny areas and fine fescue blends for shady areas. To plant bare areas use 4 to 6 pounds per 1,000 square feet and use 2 to 3 pounds per 1,000 square feet for oveseeding. Call the Extension office for the current recommended varieties.

The grass seed needs to be kept moist to germinate. If it starts to germinate and is allowed to dry out it will be the end of that seed. It will need sprinkling every day unless it rains and maybe a couple of times on very hot days. It is a good idea to use a light straw mulch in large bare areas to help keep the seed moist. A light covering of straw will not need to be removed.

Cool-season grasses should be mowed at a 2 to 3 inch height and should be cut often enough that not more than one-third of the grass blade is removed per mowing. Lower mowing heights limit the amount of food the plant can manufacture and often lead to increased weed populations. Keep your mower blade sharp! Mowing causes a wound to the grass blades that require food reserves to heal. Mowing with a dull blade creates severe wounds that require even more food reserves to heal. Eventually there are not enough food reserves to heal the wound and it becomes a site of fungal entry leading to disease problems. It is advised to return the grass clippings to the lawn for nutrients unless they are so heavy that they will smother the grass. Tree leaves should not be left on the lawn over the winter because they will smother the grass.

If you need to do a fall weed treatment, do not do it until newly planted grass has been mowed at least twice. It is best to have one sprayer marked and used for 'weed killer only' because residue could kill plants if you use that sprayer later for insects or diseases.

If you have a lot of grubs eating the grass roots or attracting moles to your yard, early September is the time to apply grub control. Call the Extension office for the current chemical recommendation. Follow directions on the bag and do not allow children or pets to play on the area until it has been watered into the ground.