Lawn Care: Going Organic

Lawns have been very popular in North America since 1940, when Dr. Scott invented his chemical based Weed and Feed; lawns became an obsession in the 50's when a landscape architect looked at the new housing developments, built on previous farm land for the home coming war veterans, and imagined an unending "lawn scape". This began the quest to keep the "perfect lawn" to keep up with the neighbors and produce that vision of rolling lawn through the developments of homes. With the popularity of the game of golf and new courses developing around the country, Americans have tried to duplicate the "putting green" look in their yards ever since!

Lawns and lawn grasses are not native to America. Lawns are known in Great Britten and Europe as the surroundings of castles where sheep kept the grass low so enemies of the castle could not hide in the tall grass. The elegant look of the grounds caught on. With the advent of large scale Suburban developments after World War 2, a famous landscape designer suggested the "boundary-less suburban lawn" forcing new homeowners to labor over their lawns to keep up with their neighbors. We now have lawns in America, rather than gardens and a dilemma of how to go on from here.

Because lawns are not native in this country, many synthetic fertilizers, pesticides and herbicides have been developed to create the "perfect lawn". More and more people are realizing that these chemicals are dangerous for our environment and our health and are trying to "go organic". This discussion will help the average person to find a way to have a healthier, safer and more beautiful landscape.

To get started evaluate your lawn:

1. What have you been putting on your lawn for the past 3 years?
2. What *use* has each area of your lawn had in the past 3 years?
3. How do you *want* to use *each area* of your lawn?
4. How much of your lawn to you want to maintain? How much time do you have?
5. How much *sun* does your desired lawn area receive?
6. What is *growing* there now?
7. What is your *soil condition*?

With these questions answered, the plan for the process may begin. ***Not all areas of your lawn will be treated the same way***. Not all lawns are the same, so each section will need evaluation on its own.

A synthetically treated lawn has become **addicted to chemicals** while depleting the soil of nutrients and biodiversity. This will take some time to bring it back into balance. Test the soil for acidity (PH). Send a soil sample to a professional soil-testing laboratory to get the whole picture. Often lime, gypsum

and top dressing of compost is the first step. Add any soil amendments recommended by the soil-testing lab.

The **lime** sweetens the soil, reducing acid, to help improve the absorption of nutrients by the grass and reduce the acid loving weeds, such as Dandelions and Violets.

The **gypsum** neutralizes the chemicals, pet damage and road salts, while adding calcium and softens the soil.

A thin layer of **Compost** added to these soils will begin to add important biodiversity and organic matter, which had been depleted by the chemical addiction.

Some lawn areas will require **dethatching**, or even **core aeration** followed by a thin layer of compost cover. The compost layer should only be ¼ to ½ inch per application.

For people who are accustomed to a five step program for their lawn, it might be hard to relax the maintenance program to spring and fall applications and less mowing. An *organically treated lawn will grow more slowly and require less care*, as the microorganisms, earthworms and good bugs will feed the soil and care for the grass.

Most grass types grow best with warm days and cool nights. This is why grass grows best in the spring and the fall.

Starting or repairing a lawn is best done in late August or early September. That time period gives the grass seed the best opportunity to germinate, take hold of the soil and establish a good root system before the time of leaf drop. The grass will then establish deep roots through the winter months to emerge as lush green grass in March. By May the grass will be able to crowd out any broad leaf weeds in the lawn, as long as the mower is set with proper cutting height.

The second best time to repair the lawn is in early March, or as soon as the soil can be worked. For small spots, I make a mix of grass seed and lime in a small bucket and carry it to the areas I need to repair. I scratch the surface of the soil with a small rake, toss some of the seed mix on the soil, the rake it into the soil to cover it lightly. For larger sections, I cover the seeded area with straw and keep it moist for two weeks to germination.

Mowing:

A sharp, clean blade on your mower will give a better cut and prevent damaging your lawn. The first cut of the spring through the lush time of the season, the blade height can be 2 1/2 inches, but the blade is **raised** to at least 4 inches for the dry summer months to protect the base of the grass plants from sunburn. The fall brings us back to optimum growth weather, so drop the blade again to 3 inches, then as short as possible just before the leaf drop and the last cut of the season. It is best to take no more than a third of the grass length at a time for health reasons. Too much leaf loss at a time can cause shock. This means mowing ***as needed***, rather than a fixed schedule, with summer requiring very little mowing during the dry times and more frequent in the spring and fall.

Consider reducing the size of the lawn area by implementing a **meadow** section, or other low maintenance gardens. Alternative low maintenance **ground cover**, or a **shade garden** of moss and perennial flowers are good solutions for shady areas where grass does not always do well. Some people are even replacing lawn area with vegetable and fruit gardens! These creative solutions to high maintenance lawns are starting to be more popular.

When mowing, do not use a **bag attachment** except in late September. By letting the grass clippings fall to the ground between the blades of grass the organic matter will build the soil fertility more quickly. The biodiversity in the soil digest the grass clippings and leave good compost behind. When it rains, the nutrients will go down to the roots of the plants where they can be used. A healthy, organic lawn will rarely have thatch build-up when the biodiversity is balanced and mowing is done only when needed and a small percentage of grass is taken from the leaves.

In **high growth times**, as in the spring, it may be necessary to mow a lawn twice in a week. Once mowed high, and then drop the blade to a lower setting. This will avoid piles of grass clippings and thatch build up.

Some other problem solving:

Dandelions are an acid loving perennial plant that likes the sun. Lawns like a more neutral PH, so the application of lime will reduce dandelions and increase the lawn. The long taproots of the plant require removal by hand, or have some children compete for picking the most dandelion flowers, thus, preventing the further population in your yard.
In defense of the dandelion, the leaves in the spring, before the flowers bloom, are very high in nutrition and have a wonderful flavor. There are 31 other uses for this plant that was brought here by the original colonists

Violets are an acid loving perennial plant that likes shade. Lawns like more neutral PH, so the application of lime will reduce the violets and increase the

grass. The rootlets are short and stubby and may be loosened with a claw or removed by hand or just wait for them to dwindle away. Again, transforming the area to a shade garden may be a better use of the area. In defense of the violet, the leaves and flowers are edible and delicious in spring salads.

Crabgrass is an annual plant that likes the sun and can grow in compacted soil that has low calcium. It germinates in early May with the warm weather, and then dies at the first hard frost in September after spreading hundreds of seeds (per plant) for the following spring.

Crabgrass can be avoided by improving soil conditions, by aerating the soil, adding compost and good grass seed in late August, or early September and using corn gluten in March to prevent seed germination. Mow the lawn with a sharp blade to 3 inches high or more to crowd out the crabgrass, other weeds and to protect the lawn in general.

In late September start using a bag attachment when mowing to pick up the majority of crabgrass seeds.

Most **Grubs** are baby Japanese Beatles. To reduce both problems, use Japanese Beatle traps for four years every June will protect the lawn by preventing the birth of these pests. The other part of the process is to mow the lawn high so the Japanese Beatles cannot lay their eggs on the soil of the lawn. This process will also rid the lawn of moles who feed on the grubs.

Moles tunnel under a lawn to eat grubs. Follow the instructions above for grubs. Having a hunting cat will also remove moles. One other option is to put human hair, pet hair, or chili powder into the holes and tunnels.

Pet damage: Dogs often leave yellow spots in the lawn. Adding gypsum to the area will neutralize the spot. If pets are digging in an area, or you would like to deter animals in general from an area, sprinkle chili powder twice a week for 2 weeks to get them out of the habit.

Ants like sandy soil. In a lawn, add organic matter to the surface of the soil to change the environment. In other areas use clove oil or ground cloves to discourage them.

Compacted soil, often caused by too much foot or vehicle traffic, is treated by aeration and/or applications of gypsum depending on the severity.

Areas along roads and driveways will need gypsum to neutralize road salts from snowplows and by the ice on cars. Rake area well with a springy rake to remove thatch and sand before application. Natural rain will activate the gypsum

Water:

When watering**, water only in the morning to avoid mold and mildew development.** Plants do not drink at night, but mold and mildew love dark, moist places.

Lawns need *infrequen*t, but **deep** watering. A healthy lawn will have deep roots to be able to reach available moisture up to 2 1/2 feet deep in the soil.

When irrigation is more frequent, the water is often shallow in the soil, forcing the root system to be shallow and susceptible to drought burn. When using municipal water supply, the irrigation system is also adding chlorine to the soil which kills natural bacteria that is necessary for good soil production. Well water will not have that problem.

If natural rainwater is less than one inch in a week, an established lawn can be watered *occasionally* for an hour in the morning, to one inch of water. This is not usually necessary except in prolonged hot drought conditions. Another benefit to mowing high is that the blades of grass protect the crown of the plants and encourage the roots to grow deeper into the soil.

A newly seeded area needs daily morning watering for 20 minutes, until full germination (about 2 weeks). Established lawns rarely need irrigation, even in a low rain condition. A rain gage is helpful to see how much water the lawn really has received naturally, as well as monitoring irrigation.

Grass types:

For Sun Perennial Rye, Blue Grass and Creeping Fescue mix makes a great sunny lawn. A small amount of Clover added in will provide natural Nitrogen to the lawn. A general Sunny mix purchased at the local garden center is generally a good choice, but read the ingredients for these seed contents and check the expiration date. As with food, seeds have a shelf life.

For compacted soil, White clover invigorates soils to be able to grow ryes and fescues the following year.

White Clover added to any lawn mix will fix nitrogen into the soil to promote a healthier lawn.

For light shade areas Red Fescue, Chewing Fescue, Tall Fescue and Hard Fescue work well. Consider mulching a shady area to protect the root syste of the trees that are shading the area.

For deeper shade, consider groundcovers, moss, or shade gardens rather than grass. Under pine and spruce trees, it is best to allow the needles of the trees to

drop where they are and rake them within the drip line of the tree to provide the best mulch and free fertilizer for the tree and not fight with the grass that will never do well anyway.

In summary:

- Look carefully at each lawn area
    - Diagnose the conditions by
        - What is growing there?
        - Are there patterns in the lawn?
- Consider each area of the lawn as a separate lawn
    - Consider the use, light
    - Soil conditions
    - View
- Mow when the lawn needs it, not a fixed schedule
- Mow low in spring and fall
- Mow high and less often in the summer
- Work with nature, not against it.
- Keep track of how much rain water is provided to the lawn
    - Use a rain gage
- Consider alternatives to lawn grasses in some areas

These are the most often requested topics for lawn problems, but so many others arise. For more complete lawn problem solving, I also recommend the following books and websites:

"The Organic Lawn Care Manual"
By Paul Tukey
Published by Storey Publishing

And

"The NOFA Organic Lawn and Turf Handbook"
By the Land Care Committee of the Northeast Organic Farming Association, Connecticut Chapter.

A full day Lawn and Turf course is offered in various locations, presented through the NOFA Organic Land Care Program. For information go to OrganicLandcare.net or ctnofa@ctnofa.org