

LAWN CARE AND MAINTENANCE

By: Steven Boos and Armando DeSousa

I - What is a Lawn?

A lawn may be thought of as any desired grassy area. Crab grass can be a lawn, but most people prefer something that looks better and is more comfortable for walking and playing on. The best grasses to grow around New York are the Bluegrasses, Fescues and Bents, which can tolerate harsh conditions. Most grass seed packages are mixes of:

Merion Kentucky Bluegrass. Has a high resistance against leaf spot diseases, the summer heat, and may be cut low.

Roughstalk Bluegrass. Is a shade-tolerant grass that does well under moist conditions.

Pennlawn (Fescue). Has excellent turf-building ability, great density, a wider range of climatic adaptation and is more disease-resistant than other Fescues.

Alta (Fescue). Is a tall grass that can withstand hard use. Thus, it is good for playgrounds and athletic fields. Alta can tolerate a wide range of climates.

Bent grasses. Are a group of fine grasses which grow well in the Northeast. The better species include Redtop, Highland, and Penncross. They should be cut ¼” – one inch high.

A “different” lawn could consist of chamomile, strawberry and clover plants.

II - Buying Seeds

There are many varieties of grasses on the market; you should select the proper grass for you particular conditions. A good way to choose the best seed is to discuss your lawn with a competent salesman in a garden center. Different varieties may take more or less seed per square foot than others; the square footage will be on the label. Be sure you know the area of your garden to be seeded before you visit the store. Don not guess – measure it!

III - Soil

All lawns need to grow in soil that will give them the correct nutrients. Nutrients may be supplied by chemical fertilizers and good soil. Before a lawn is planted, the soil must be tested. A pH is used to determine the degree of the soil’s acidity or alkalinity. A pH test can be done with an inexpensive pH testing kit.

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| Cornell University Mrs. Creighton Soil Testing Laboratory Plant Science Building Cornell University Ithaca, N.Y. 14853 | You can buy this box at the Council if you like. |
| Cooperative Extension Service 300 Hempstead Turnpike West Hempstead, N.Y. 11552 | Nominal fee |
| Cooperative Extension Service 205 Post Office Building White Plains, N.Y. 10602 | Nominal fee |

The tests include pH results and any deficiencies of the major elements necessary for plant growth. The sample

should be taken from two – four inches below the surface of the lawn, where the grass roots grow. You should take samples from several different areas because conditions may vary.

All grasses do not require the same soil pH, but most grasses flourish in soils that are mildly acid, 6.0-7.0.

Correcting pH consists of adding either lime or sulfur. If the soil is too acid (low on the scale), add lime. Dolomite lime is the best type to use because it has a greater neutralizing capacity and also contains magnesium, an element which is essential to photosynthesis. The addition of lime at a rate of 50 lbs. per 1000 square feet or five lbs. per ten x ten feet area (100 square feet) will raise the pH 0.5. Do not apply more than 50 lbs. per 1000 square feet at one time; make a second application if needed four – six months later. If too much lime is added at once, it will upset the soil's chemical balance.

If the soil is too alkaline (high on the scale), add sulfur – either the pure yellow powder or in such compounds as ferrous sulfate. The application should be followed immediately by a thorough watering. About ten lbs. per 1000 square feet will usually lower the soil's pH by 0.5.

Lime or sulfur also improve the soil by breaking down clay, making it easier for roots to move in search of moisture and nutrients.

If necessary, fertilizer may be added to the soil before planting to provide missing nutrients (see under V – Maintenance).

Finally, the soil must be prepared for new seeding or sowing. Spade the soil, turning it over with a shovel, to a depth of at least 12 inches. Discard any rocks and break up clumps. Rake the soil to a fairly smooth but slightly pebbly consistency. While spading, add three bales of peat moss (about 20 cubic feet) per 1000 square feet of soil – or two cubic feet per 100 square feet. Fertilizer can be added at this time. (see V – Maintenance). Be sure that lawn area has good drainage and that soil is a bit sandy.

IV – When and How to plant

Seed – The best time to plant grass from seed is late August or early September. During the spring is also acceptable, and in fact grass may be successfully planted at any time as long as it is kept moist. Some gardeners swear by sowing seed atop snow, and as the snow melts the seed is ready to grow. To plant seed, sow it uniformly over the area. Each species has its own recommended rate, but they average about three lbs. of grass seed per 1000 square feet. Lawn spreaders are convenient, inexpensive and accurate; be sure to overlap the wheel tracks to avoid gaps. Half the seed may be spread in one direction and the other half at right angles, whether by hand or by spreader. If you want to save money, a dixie cup with a small hole in the bottom will achieve the same result but will, of course, take much longer.

The seed should shift into the soil. If the soil is unusually sandy or full of clay, the seed must be scratched into the soil to a depth of ¼". If the soil is very fluffy, the seed may need to be rolled in. A lawn roller can be borrowed from the CENYC Tool Library. It must be filled with water so that it is heavy. Generally, however, only thorough watering is necessary to start the newly seeded lawn growing. The best time to seed is before a heavy rain is expected.

Straw laid on top of the seeds (after the first thorough watering) will protect against wind, erosion and hungry birds. Black thread can be stretched over area planted in some sort of pattern, such as checkerboards, to frighten away the birds.

Sod – This is grass that has been grown in a nursery solely for the purpose of being cut out into sheets for relaying where necessary. This is real grass that helps the gardener avoid the initial step of planting the seed and ever germination. The soil preparation and maintenance is the same as starting from seed. Sod should be put down either between March 15th to June 15th, or between September 15th to November 15th. Sod can be ordered from: L. DeLea and Sons, 444 Elwood Road, East Northport, N.Y. 11731.

To lay sod, the soil must be prepared in the same way as for sowing seed (see under III – Soil), except that all stones must be removed. Laying sod is best done on a cloudy, cool, not windy, day. Open a piece of turf and quickly press it

into a position without stretching – lining it up in a straight rows like bricks, as shown in this diagram:



The turf should be laid in rows, which should be staggered to prevent erosion. Lay a plank against the edge of each succeeding row to kneel on while laying the next row. Only work one line at a time. Be sure that there is no overlapping or gaps between sod pieces. Sprinkle a section with water while you work on the second section. When the entire lawn is laid out, roll twice: once parallel to the rows of turf, and once at right angles. Sweep the lawn to raise the flattened grass and to get rids of debris. Finally, edging may be done, if desired, with a linoleum knife or a half-mooned edging tool, cutting at an angle to give the lawn a precise shape.

Be sure to water heavily! One schedule is to water the lawn for three hours. Skip a day and then soak for three hours. Skip two days and soak for three hours. Skip two days and then start watering for twice week until the sod is established. Do not walk on it except as necessary until the roots have had a chance to spread. This takes about four to six weeks. Sod should not be permitted to grow above 2½ inches during this period – keep it mowed after the second or third week.

V - Maintenance

Watering – The key to maintaining a nice lawn is to prevent it from drying out. The lawn will definitely need water during dry, hot seasons. However, while you want to water enough so as to prevent the lawn from turning brown, too much water and poor drainage can also kill a lawn. Always water thoroughly and evenly, so that the water soaks in six – eight inches. Automatic sprinklers, especially those that sweep back and forth, are suitable for most lawns. The only good times to water are early in the morning or at dusk. If mushrooms spring up, the lawn is getting too much water. A wet lawn should not be mowed, nor played on nor walked on.

Weeding- Weeds will compete with the grass for water and nutrients. Healthy lawns will not allow many weeds because a thick, dense turf will deter them. To slow down the germination of weeds during the height of the growing season, set the mower blades high so that less sun reaches the surface of the soil.

To get rid of weeds simply grasp them by the stalk as near to the ground as possible, and lift them out with as many of their roots as possible. There are special weeding tools such as a grubbing tool that may help with plantain.

Chemicals may also be used that will kill weeds as soon as they sprout (“pre-emergent weed killer”) or after they sprout (post-emergent weed killer). There are two main categories of weeds, broad – leaved and grassy. If you must buy the weed killer, be sure to be selective and choose one which is safe and specific for the identified weeds. Chemical weed killers must be applied when the air is still, and according to the manufacturer recommends. Do not get the chemicals on yourself, other animals, plants, water or food supplies. Be careful! Read the label, always wear gloves and consult a professional.

Mowing – Grass should be mowed to the desired height periodically. Basically, only a quarter to a third of the total grass height is removed at one time. The lawn should be gently raked free of grass clippings after each mowing with a fan rake only, so that they will not mat down and smother the lawn.

Fertilizing – Most lawns – because the grass is cut close and crowded together – will starve – and lose its color unless fertilized periodically. Most lawn fertilizers contain the three major nutrients most apt to be lacking: nitrogen,

phosphorus and potassium. Labels on bags specify the percentage of those elements in the order given above, for example

“10-6-4” fertilizer is 10% nitrogen, 6% phosphorus and 4% potassium.

The average lawn requires about three – four lbs. of nitrogen per 10,000 square feet (100 x 100) over a year’s time. It is best to use organic fertilizer because it is slow to release its compounds. Slow release fertilizers do not have to be applied as often, but more is put down at one time.

To apply fertilizer, spread it uniformly over the lawn and then water thoroughly (unless a rain is guaranteed). Otherwise the fertilizer will burn and perhaps kill the grass. Lime should be added three to four times, seven to ten days apart, during October and November to neutralize the fertilizer.

SCHEDULE OF FERTILIZATION

| Type of Fertilizer | Time | Amount |
|--------------------|--|-------------------------------|
| 10-10-10 | February or March | 4 lbs. per 200 square feet |
| 10-10-10 | By May 15 th | 3-3½ lbs. per 200 square feet |
| 16-8-8 | September 20 th to 25 th | 5 lbs. per 200 square feet |
| 16-8-8 | November or December | 5 lbs. per 200 square feet |

Edging – This finishing touch may be done a couple of times a year. Mechanical lawn edgers, either powered or hand-operated, make short work of lawns growing over their borders. The chore will be simplified if you install a border of plastic or brick around the edges of flower beds and the bases of trees. These borders can be purchased at garden centers. Edging can protect flower beds, pavement and the like from the encroachments of healthy lawns.

VI – Special Problems

Insect and disease control – Insects, fungi and viruses may attack grass. Raking will help prevent insect infestation.

The cure for fungus infection may depend on the type of fungus. Unhealthy lawns are the most vulnerable, especially during hot, humid weather. A fungicide can be applied in the beginning of the season; early spring is usually the best time. These are poisons, so be careful! Be sure that a certified expert assists you.

Repairing Bald Patches – Occasionally a patch of your own lawn may lose its grass. This could be caused by: 1) too much traffic across the lawn, 2) a patch that had been torn up, 3) some object lying on the spot, 4) diseases, 5) fertilizer burn, 6) usage when soggy or wet; and the like. Whatever the reason, it is unsightly and should be repaired. To do this, simply remove the dead grass, roughen up the soil, sow new seed and lightly rake the seed into the surface of the soil. It should be kept moist! A sign, of course, should be posted.

Reseeding Bald Patches – If the lawn is constantly under stress, some of the individual grass plants may die. It is a good idea to reseed (just like the first sowing but with a much lower pound-of-seed-to-square-foot ratio) about once a year, in the spring or fall. Fencing and signage will help to increase community awareness and cooperation. Explain why and for how long lawn if OFF LIMITS.

VII – References

These sources were consulted in the development of this sheet. We recommend that you purchase one of these or other publications for reference.

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| The Time Life Encyclopedia of Gardening Lawn and Ground Covers Time Life Books, N.Y. 1971 | Joan Lee Faust, ed. The New York Times Book of Lawn Care Alfred A. Knopf, New York, 1969 |
| Herbert S. Conover Grounds Maintenance Handbook McGraw-Hill, New York, third edition, 1977 | Donald Wyman Wyman's Gardening Encyclopedia MacMillan Publishing Co., New York, 1971 |
| Reader's Digest Illustrated Guide to Gardening The Reader's Digest Association, Inc. Pleasantville, New York, 1975 | |