



HOW-TO BOOKLET #3095

LAWN FERTILIZERS



TOOL & MATERIAL CHECKLIST

- Fertilizer Products
- Spreader Equipment
- Stakes
- Chalkline
- Markers
- Garden Hose

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in The Basics Listed Above.

As to lawn care, many homeowners start out with good intentions in the spring and settle for almost anything that looks green by midsummer. Some even have thoughts of asphaltting the lawn area and painting it green before the growing season is over. But what is usually lacking at the outset—when the seed catalogs come in the mail and the shelter magazines start touting weed and insect control—is a planned approach to lawn management. Turf fertilizers are part of this overall plan, and that’s the subject of this How-to Booklet.

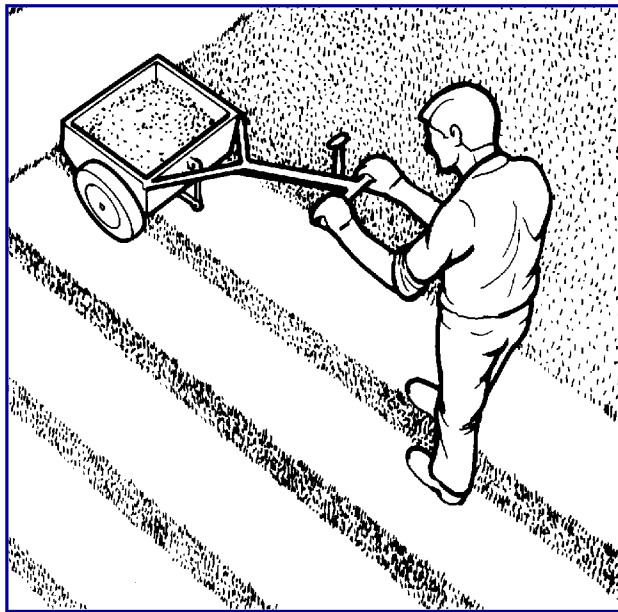
There are three basic types of turf or lawn fertilizers that you will find in stores: organic, slow release, and soluble synthetic. They are not as difficult to understand as the names imply. Of these three, you probably will use the soluble synthetic type if only for convenience, availability, and price. But look over the other two before making a buying decision.

READING THE LABELS

Bags of fertilizer are labeled by the manufacturer and give a basic analysis of the contents. Below is a brief description of what you’ll find and how to interpret it:

The formula. The formula will be in numbers such as 20-4-8. The numbers stand for the percentage of chemicals in the content of the bag. The first number is always nitrogen. The second is always phosphate, and the third is always potash—and always in that order. It never changes.

So that you’ll always remember this, we’ve put together a little “saying:” UP, DOWN, ALL AROUND.



The first number is nitrogen. It makes the grass grow green and UP. The second number is phosphate and it makes the root system grow DOWN and healthy. The third number is potash and it makes the grass propagate or grow AROUND. Thus: UP, DOWN, and ALL AROUND. You can apply it this way: If you want the grass to grow UP and green, you want a high first number. If you want to build a hearty root system, you want a high second DOWN number. If you want the grass—especially newly established grass—to propagate, you want a high ALL AROUND third number. An example: 16-10-10. You will get some greening, but the roots and propagation will be the benefactors. 22-6-4. Lots of greening, some roots, little propagation. A high first number will give the grass a quick shot of green-up. (The above are examples.)

This type of fertilizer is termed “balanced.” The word “balance” refers to the chemicals. Example: grass needs three to five times more nitrogen as phosphorus and twice as much potassium as phosphorus. That’s why you will usually see this formula in numbers such as 21-7-14 or 24-4-8, although not always since soil and climate may play a role in the product’s formula. Sometimes there will be a high first number and low second and third numbers. Or there will be a fairly low first number a high second number, and a low third number, or a low first and second number and a high third number. By applying UP, DOWN ALL AROUND to the numbers, you will know what the fertilizer is intended to do: green the grass (or plant), build the root system, or propagate it. And this is about as technical as you need to get unless you want to get into the chemical, climatology, and other elements of turf building and maintenance.

Also, for your information, all fertilizers are numbered in the same way. If you have houseplants, for example, the fertilizer for them will be ranked by number; 6-8-8 (for example)—high in phosphate and potash for roots and plant development; low in greening.

On the label of turf fertilizer, primary nutrients of the contents will be noted. Typical would be urea, ammonium sulfate, ureaform, ammonium phosphate, and muriate of potash.

Potential acidity also is listed. An example: “Potential Acidity 800 pounds. Calcium Carbonate Equivalent per ton. Net weight 20 pounds.” This means in the above example that the fertilizer has a slightly acid action. Calcium carbonate is limestone. About 8 pounds of limestone would neutralize the acidity of this 20 pound bag.

ORGANIC FERTILIZER

This is the real stuff: fertilizer obtained from plants and animal, or human waste (actually sewage sludge).

Organic is a “balanced fertilizer” but its drawback is that it is slow-acting and lacks a lot of punch: a formulation of 1-1-1 is common. The slow action actually can be beneficial since you usually can’t burn out the grass with too much nitrogen.

Prices of organic fertilizers are generally lower than the man-made materials, which can be an advantage if you have time for the slow organic reaction. Organics work best in warm weather; unfortunately, warm weather is not the time most lawns should be fertilized.

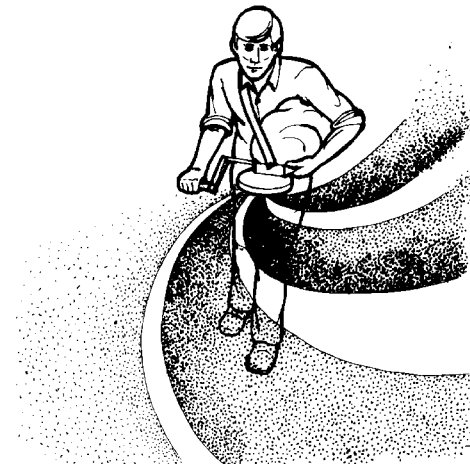
SLOW RELEASE FERTILIZER

You’ll know these fertilizers by the label: “WIN,” which stands for water insoluble nitrogen. They have a very high percentage of nitrogen—enough to burn grass to a frazzle. However, since the chemical is slowly released, it is really not a problem (if properly applied, of course) since the nitrogen doesn’t release into the plant in one sudden surge.

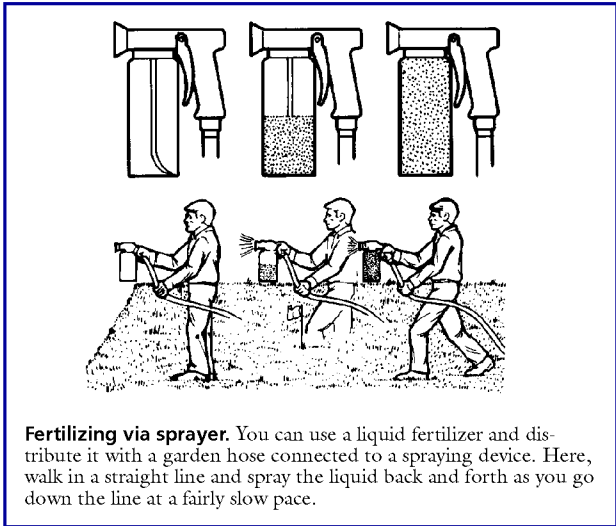
The big advantage of slow release fertilizer is that you can douse your lawn with a large amount of the product at one time so you don’t have to come back often for re-application. WIN, in spite of its high nitrogen content, does not green grass fast, because of its slow-release feature. This might be a consideration when you go shopping.



Hand broadcasting. Walk the lawn slowly, marking with stakes or your eye where you’ve cast the fertilizer. Work in parallel strips first. Then criss-cross these strips at right angles. Try to keep the application as even as you possibly can.



Hand-held broadcasting machine. This inexpensive equipment flips out the fertilizer as you turn a hand crank device. The trick is to walk in straight parallel lines and turn the crank at an even rate. The equipment will throw fertilizer 15 ft. or so.



Fertilizing via sprayer. You can use a liquid fertilizer and distribute it with a garden hose connected to a spraying device. Here, walk in a straight line and spray the liquid back and forth as you go down the line at a fairly slow pace.

SOLUBLE SYNTHETIC FERTILIZER

You get a lot to like with these products. But first, the negative points: You probably will have to apply the fertilizer more often because a normal lawn requires a certain amount of nitrogen annually (about 8 pounds) so you have to spread more to meet requirements. If applied properly there is no fertilizer burn; if the product is overlapped when applied, there is danger of fertilizer burn. If the lawn is wet when the fertilizer is applied or if the lawn is not watered after application there can be trouble with fertilizer burn.

The good news includes this: the products are not cost prohibitive—in fact, they are competitive among manufacturers. The products are predictable in that you know before you apply them what the results will be. They are easier to handle than other fertilizer types. You can buy them with “additives.” For example, fertilizers that hype dandelion control. The fertilizer must be applied at a certain time to be effective. Another example is crabgrass control. The additive in the fertilizer coats the crabgrass seed, preventing it from sprouting. The coating doesn’t stop desirable turf grass from germinating. If the crabgrass preventer is not applied in early spring, before

germination, it is worthless as a crabgrass control. However, you can use other chemicals after the crabgrass is actively growing. They can be applied with a spreader or they can be sprayed on the turf grass.

Some of the weeds controlled by fertilizers plus additives include dandelion, crabgrass, common chickweed, ground ivy, mouse-ear chickweed, wild garlic, goosegrass, henbit, knotweed, nimblewill, plantain, quackgrass, and sheep sorrel.

THE TIME TO FERTILIZE

The best authorities all agree that Spring is the best time to fertilize a lawn or turf grass. There are other suggestions, too:

Do not feed cool season grasses in the mid-summer months. Instead, feed these grasses in the Fall months. The grasses include these:

- 🏠 Kentucky bluegrass, including improved variety
- 🏠 Creeping bentgrass
- 🏠 Tall fescue
- 🏠 Red fescue
- 🏠 Chewings fescue
- 🏠 Hard fescue
- 🏠 Annual ryegrass
- 🏠 Perennial ryegrass
- 🏠 Colonial bentgrass

The same fall feedings apply to the warm-season grasses. The grasses include these:

- 🏠 Bermudagrass
- 🏠 Bahiagrass
- 🏠 St. Augustinegrass
- 🏠 Zoysiagrass
- 🏠 Centipedegrass
- 🏠 Dichondra

🏠 **Carpetgrass**

What about lime? Turf grass does best, as a general rule of thumb, in soil with a pH of 6.0 to 6.5. This on a scale is mildly acid soil. Number 7 on a pH scale is a neutral rating. Ratings lower than 7 mean that the soil is acid. Numbers higher than 7 mean that the soil is alkaline or sweet. You can have the soil in your lawn tested by the county agricultural agent for about \$5. Or, you can buy a testing kit and do the testing job yourself. The kits are inexpensive.

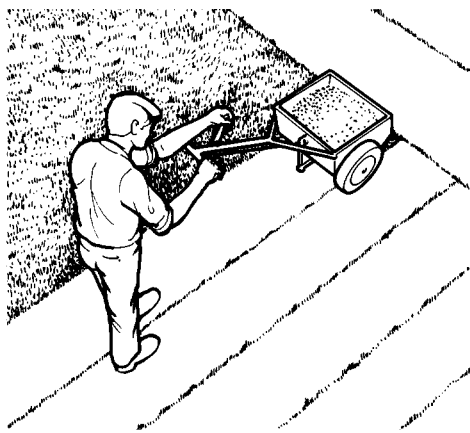
If there is a lot of rainfall in your area, chances are the soil will be highly acid. If so, the soil will need lime to sweeten it. But you can’t know for sure without the test. If the soil needs lime, you can buy this product in bags and apply it with a spreader. Use ground stone, hydrated lime, or oyster shell lime. Hydrated lime is fast acting and should be avoided. The other types act more slowly, but you will need more of these types than hydrated to do the job. Aluminum sulfate or sulfur are the choices if you need to make the soil more acid. The chart on page 4 shows how the pH changes with the various products.

Keep in mind: Limestone conditions the soil. It is not a fertilizer. It will help loosen hard, clay soil, and it helps humus decay faster. Do not apply lime and manure fertilizer at the same time. Ideally, the manure should be plowed or spaded under the soil, and then the lime applied on top of the soil.

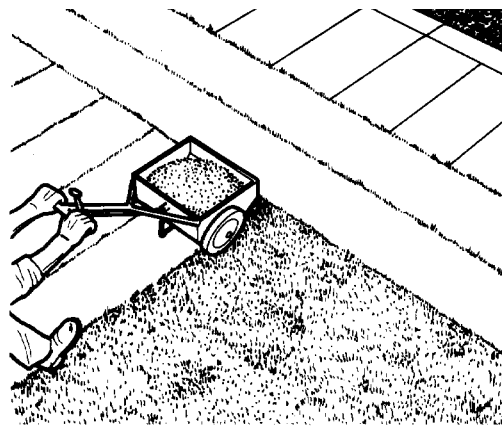
SPREADER INFORMATION

You have a choice in the way you can spread fertilizer on turf grass:

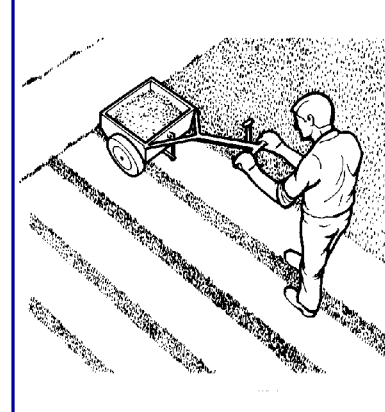
- 🏠 With a drop spreader that you push like a lawnmower.
- 🏠 A broadcast spreader that can either be pushed like a lawnmower or hand-held and “cranked” like an old-fashioned coffee grinder.
- 🏠 By the handfuls.



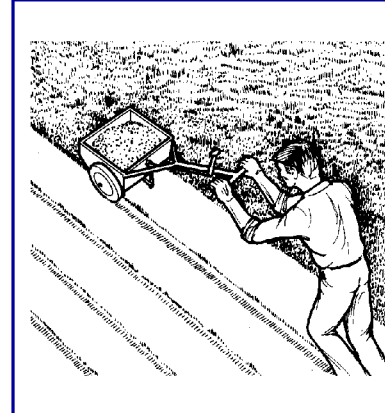
With a drop spreader, first lay two strips of fertilizer at each end of the area. Then, in single strips, distribute or “fill” in the area with the fertilizer. The trick is not to overlap or underlap the strip series. Shut off the hopper at the end of each strip laid.



The completed end strips lets you turn the spreader, after you shut it off, without overlapping the end areas. We recommend that you use moveable stakes that you drive into the ground for the proper spreader alignment as you strip lawn.



Avoid overlapping strips and take special care so you don't. Use stakes and even chalk-line, if necessary. Some spreaders are equipped with a powdered chalk marker that keeps rows even. Although it costs extra, it's well worth the money.



When you start with a strip, keep moving at an even gait. If you don't the fertilizer will be thick in one spot and thin in another spot. The grass won't grow properly in the thin spots; the grass will burn out and turn yellow or brown in the thick spots.

We recommend either of the first two: the drop spreaders. With them, you have reasonably certain control over the amount of fertilizer being distributed on the lawn. With hand broadcast method, distribution is almost a guessing game and there is a wide margin for error—such as burning out the grass from too much nitrogen.

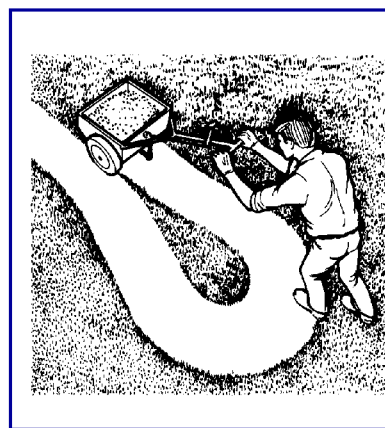
The push-type spreaders have adjustable settings which amount to a notched bar that sets the opening for the fertilizer in the bottom of the hopper. You simply match the setting (a number) on the hopper to that on the fertilizer package. Some hand-held spreaders can be set in a similar way.

How to operate a drop spreader and a liquid spray applicator are shown in the illustrations.

Spreader maintenance is extremely important. After each use—without fail—the spreader must be washed thoroughly with a garden hose at full blast and then dried. Fertilizer attracts corrosion and if the spreader is not completely cleaned, the parts will rust almost immediately. Even if the hopper of the spreader is plastic, the working parts are metal and need to be cleaned and then dried before the spreader is stored.

AMOUNT OF LIME/ALUMINUM SULFATE OR SULFATE OR SULFUR TO CHANGE THE pH OF SOIL

pH Change	Limestone lbs. needed for 100 sq. ft.	
	3.5 to 4.5	3-1/2
4.5 to 5.5	4	
5.5 to 7.0	5-1/2	
pH Change	Aluminum Sulfate	Sulphur
	lbs. needed for 100 sq. ft.	
8.0 to 7.0	4-1/2	2
7.5 to 6.5	7-1/2	3-1/2
7.0 to 6.0	5-1/2	2
6.0 to 5.5	3-1/2	1-1/2
6.0 to 5.0	7-1/2	3
5.5 to 5.0	4	1-1/2
55.5 to 4.5	8-1/2	2-1/2



Your lawn will look like a series of hairpin turns if you do not keep the rows even, as detailed in the other illustrations. One trick to know is to keep one spreader wheel inside the previous track. The spreader will crush grass slightly so you can see.