Ask Greenie
The Environmental Genie

Q. What's the best kind of fertilizer to use on my lawn?

A. In general, you should choose a lawn fertilizer that is mostly nitrogen, such as a 24-4-12. This is different from a fertilizer for gardens or flowers, which should contain more equal amounts of nitrogen, phosphate, and potash (such as a 10-10-10). In spring and early summer, use a fertilizer with a high percentage of nitrogen in the slow-release form. Slow-release nitrogen sources provide a more controlled release of nitrogen and are less likely to run-off or seep through the soil into groundwater than water-soluble sources. When fertilizing cool-season grasses in the fall, you can use a less expensive fertilizer that consists primarily of water-soluble nitrogen because intense storms that could cause runoff are less likely in the fall.

Q. How much fertilizer should I use on my lawn?

A. For quality lawns, use the following guidelines:

Turfgrass	(Pounds of actual nitrogen per 1,000 sq. ft.)				
	May	July	Sept.	Nov.	Total
Tall fescue	1	0	1	1	3#
Bluegrass	1	0	1½	1½	4#
Bermudagrass	1	1	0	0	2#
Zoysiagrass	1	1	0	0	2#

If a soil test shows a need for phosphate or potash, these nutrients should be applied in September on tall fescue and bluegrass, and May on bermudagrass and zoysia lawns. The fertilizer bag will give you specific settings to use for the different spreaders. Do not apply more than is recommended.

STOP STOP STOP

Keep Fertilizer Nutrients From Polluting Water

When applying fertilizer:

- Use only low to moderate recommended rates.
- Apply to dry grass
- Do not apply immediately before an intense storm.
- Do not dump or wash off excess fertilizer into storm drains or sewers.
- Try not to get fertilizer on pavement, but if you do, collect spills and apply to lawn area.

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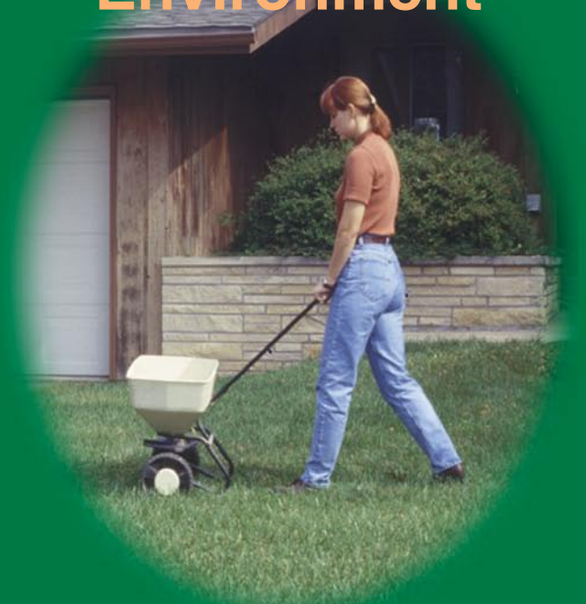
Kansas Green Earth Guide

Lawn Fertilizers and the Environment



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Lawns can greatly improve our environment if cared for properly. A healthy lawn is made up of thousands of grass plants capable of absorbing certain air pollutants, intercepting chemicals and fertilizers, protecting soil from washing away, and releasing oxygen into our air.

Most lawn grasses in Kansas (except buffalograss) require at least some fertilizer annually to keep them healthy. Appropriate use of fertilizers will help maintain healthy turf, but fertilizers can cause environmental problems if not used correctly.

Fertilizers and Safety

Nitrogen and phosphorus are two potential pollutants of water supplies in Kansas. These nutrients are common components of most lawn fertilizers:

- **Nitrogen.** Nitrogen, in the form of nitrate, can be a health hazard to infants and animals when present in high concentrations in water. It also can cause excessive aquatic plant growth, such as algae blooms, that choke out other life-forms.

Because nitrogen moves freely with water, water-soluble sources of nitrogen should be avoided when heavy rains are likely and on sandy soils, especially near bodies of water. Slow-release sources of nitrogen reduce the pollution potential. Fertilizers containing slow-release sources of nitrogen usually have one or more of the following terms in the guaranteed analysis: "water insoluble," "slow release," or "slowly-available water soluble."

- **Phosphorus.** Phosphorus is a major cause of excessive aquatic plant growth. This results in oxygen depletion in ponds and lakes, which can cause fish kills and undesirable odor and taste.

Phosphorus sticks tightly to soil particles after the fertilizer has been washed into the soil, and doesn't readily become an environmental problem. But phosphorus can get into water supplies if fertilizer particles are moved into storm drains and sewers, or if the soil erodes.

Fertilizing Tips

- In spring and early summer, use fertilizers that contain slow-release nitrogen. This is especially important when applying fertilizer near a source of surface water or a storm drain, or where the water table is shallow.
- When using a fertilizer with a high percentage of nitrogen in the water soluble form, do not apply if a heavy rainfall is expected.
- On sandy soils, use a slow-release nitrogen fertilizer or apply only small amounts at a time of a soluble-nitrogen fertilizer.
- Apply about a half-inch of water after a fertilizer application to move the fertilizer into the topsoil, where it is most likely to be utilized by the grass.
- Use a drop spreader rather than a rotary type spreader when applying fertilizer near open water.
- Make sure you shut off the spreader when passing over pavement.
- Clean up any granular spills and spread the material according to label directions.
- Fill spreaders over hard surfaces for easy cleanup.
- Push the fertilizer spreader, do not pull. Start walking before opening the lever and close the lever before stopping. Do not spread while turning. Keep the fertilizer dry so that it flows evenly from the spreader.
- When using the spreader, walk in straight lines using reference points such as the spreader wheel marks or footprints to avoid overlapping streaks.
- Fertilize when grass is dry to allow fertilizer to sift down into the soil.

UNDERSTANDING THE FERTILIZER LABEL

Printed on the bag of fertilizer are three numbers in large type. In this example, the numbers are 16-4-8. This means that this fertilizer contains 16 percent nitrogen (by weight), 4 percent phosphate, and 8 percent potash. Also on the bag, in somewhat small type, you'll find the "Guaranteed Analysis" that gives more detail on the kind of nitrogen in the bag.

Nitrate nitrogen, ammoniacal nitrogen, most urea nitrogen, and some of the water soluble organic nitrogen are fast-release sources of nitrogen. This type of nitrogen will result in a rapid green-up, but is more easily moved by rainfall or irrigation into drinking water supplies.

The guaranteed analysis also will list how much of the nitrogen is slowly available, insoluble, or "slow-release." In the example, 2 percent is slowly available and 4 percent is insoluble. So a little less than half the nitrogen in this product (6 percent out of the 16 percent total) is slow release. Generally speaking, this is good. Other nutrients in this product, such as potash and chlorine, can be helpful to grasses and are not an environmental threat. Some fertilizer products also contain weed or grub killers. Use these products only if weeds are present and the timing is right, or if there has been a history of chronic weed or grub problems.