

Lawn Fertilization Guide

Fertilizing your lawn is a great way to keep your lawn lush and green as time passes. Sometimes it can be tricky to determine how much to fertilize your lawn. Too much fertilizer causes weak fast growth that is sensitive to disease and will require unnecessarily frequent mowing. Too much can even burn and kill your lawn. Too much can also be hard on the environment and your wallet. Similarly—too little may not reach the correct level of fertility and may not lead to as lush of a lawn as you may like.

Its important to use the lawn fertilizer. In the state of Minnesota is it illegal to apply a lawn fertilizer with Phosphorus (the center number on the label) outside of 12 months of a newly seeded lawn. Phosphorus is typically already sufficient in most Minnesota soils and extra is extremely bad for our waterways.

Using the right fertilizer at the right time is important! Below is a table of fertilizers we carry and when a good time to apply them would be:

Spring (starting at 50 degree soil temps)	Early Summer (late may- Late June	Late Summer (July-August)	Fall (Sept-October)
22-0-6 with preemergent herbicide for crabgrass control	19-0-7 with broadleaf control with Confront	21-0-3 with 1% Fe	32-0-6 MESA
22-0-6 with pre/post crabgrass control	20-0-5 with insecticide Allectus	20-0-10 with 40% Fe MESA	12-25-12 Starter fertilizer
21-22-4 with Mesotrione – Starter fertilizer that targets crabgrass and broadleaf weed seeds without harming turf grass seed.			

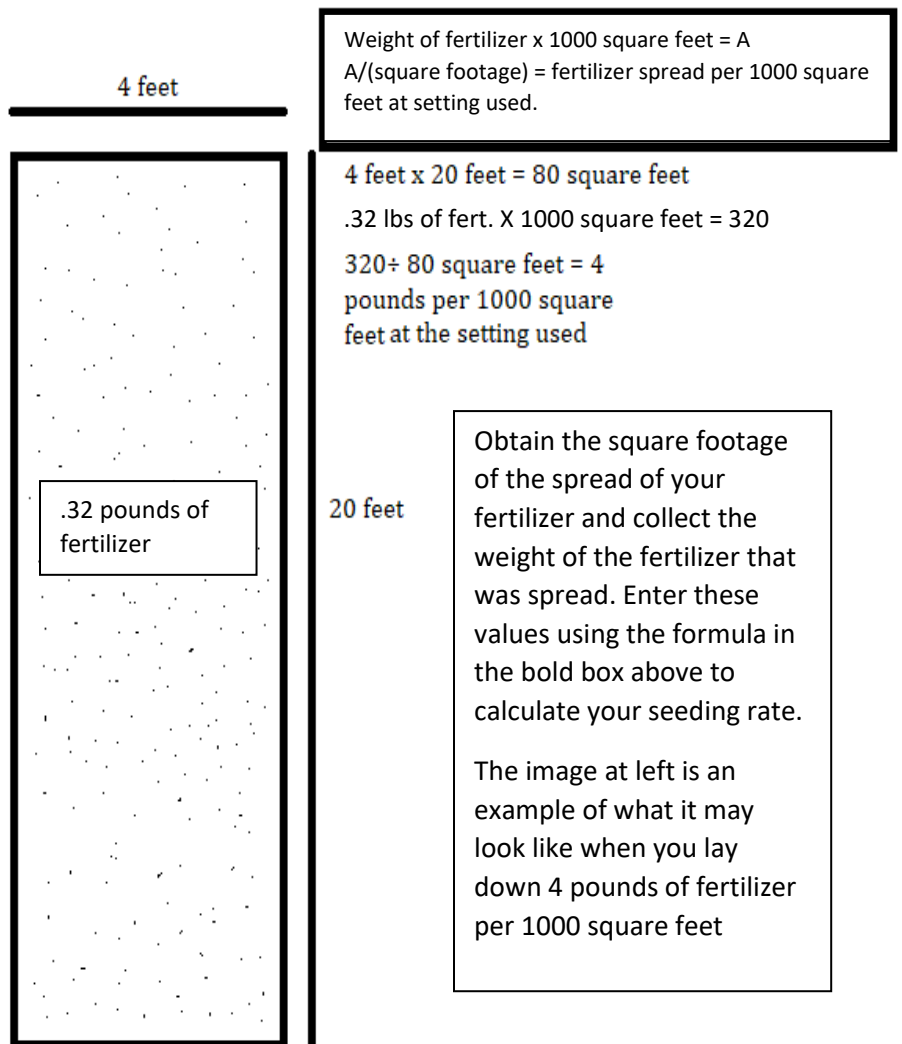
Fertilizer recommendations for home lawns are typically based off pounds of *Nitrogen* per 1000 square feet not pounds of *fertilizer* per 1000 square feet. Each bag has 3 values listed. Take 32-0-6 as an example—the 32 means 32% of the bag by weight is Nitrogen, 0% Phosphate by weight and 6% Potash by weight. In a single application it is not recommended to apply a fertilizer higher than a rate of One pound per 1000 square feet. Here is a walk-through example of finding out how much of a fertilizer you may need to apply for your yard:

The average home lawn is around 10,000 square feet, so we will use it as our example. If we want to apply at the max rate of 1 lb Nitrogen per 1000 square feet we will need a total of 10 lbs of nitrogen (10,000sq ft/1000 sq ft=10 and 10x1 lbs N/1000sqft = 10 lbs of Nitrogen per 1000 square feet). If a bag of 32-0-6 is 32% Nitrogen then a 50 pound bag contains (50x.32=16) 16 pounds of Nitrogen. That means one bag is more than enough for the entire yard for a single application! So we will need (10/16=.625 [or 62.5%]) we need 62.5% of our fertilizer bag for our application—which is only (.625x50 pound bag=31.25) 31.25 pounds of fertilizer for the entire yard!

Some spreaders will have guides for each setting to set it at and some fertilizers may give recommendations. In the end what setting you set your spreader at will vary from spreader to spreader. To figure out the precise rate at each setting, spreaders must be calibrated. To do this, you will need the following: grass seed mix, a spreader, broom, scale, tape measure, calculator, and a flat concrete surface.

First, sweep off your concrete surface to ensure there are no rocks that could skew your results. Second, add fertilizer into your spreader and set it at a setting you believe to be ideal. Next, walk at a normal speed, spreading your fertilizer over a measurable area on the concrete space. Once you've walked your measurable distance and spread the fertilizer, measure out the square footage the fertilizer spread over that space.

Then sweep up and weigh out how much fertilizer fell within that space. Using these values, we can determine how fertilizer per 1000 square feet have fallen at the specified setting you used. The images at right outline how to use the values collected to determine that rate. This can be done at several settings on your spreader to determine the exact quantity of fertilizer you're spreading. This strategy can also be used for spreading products like grass seed.



Nitrogen recommendations
for established lawns

The Following is a table designed to tell you how much fertilizer your lawn will need based off different factors like organic matter in soil, lawn mowing habits and watering habits. If you don't know your organic matter, go with medium. So, if I don't water my lawn and I don't bag my lawn clippings I need to apply 1lbs of N per 1000 sq ft annually. Which can be done in one application or 2 applications at a rate of .5lbs per 1000 square feet.

Maintenance level and practices		Total annual nitrogen to apply			Number and timing of applications
Soil organic matter	Low (less than 3.1%)	Medium (3.1%-4.5%)	High (4.6%-19%)	Organic (+19%)	
	High Maintenance				
Watered, clippings removed	4 lbs N/1000 sq ft/ year	3.5 lbs N/1000 sq ft/ year	3 lbs N/1000 sq ft/ year	2.5 lb N/1000 sq ft/ year	Four annual applications: Aug, Sept, early-Oct, May-June
Watered, clippings returned	3 lbs N/1000 sq ft/ year	2.5 lbs N/1000 sq ft/ year	2 lbs N/1000 sq ft/ year	1.5 lbs N/1000 sq ft/ year	Three annual applications: Aug, Sept, May-June
	Medium Maintenance				
Some watering, clippings removed	3 lbs N/1000 sq ft/ year	2.5 lbs N/1000 sq ft/ year	2 lbs N/1000 sq ft/ year	1.5 lbs N/1000 sq ft/ year	Three annual applications: Aug, Sept, May-June
Some watering, clippings returned	2 lbs N/1000 sq ft/ year	1.5 lbs N/1000 sq ft/ year	1 lb N/1000 sq ft/ year	0.5 lb N/1000 sq ft/ year	Two annual applications: Sept, May-June
	Low Maintenance				
No watering, clippings returned	1 lb N/1000 sq ft/ year	1 lb N/1000 sq ft/ year	0.5 lb N/1000 sq ft/ year	0.5 lb N/1000 sq ft/ year	One annual application: Sept

**Use Medium for Unknown O.M.%	
** recommended rate of 1lb of N/1000 sq ft at a time.	
**.5 lb/ 1000 sq ft for new establishments	

Source: U of MN Extension

Soil organic matter levels: Low = less than 3.1%; Medium = 3.1 – 4.5%; High = 4.6 – 19%; Organic soils = more than 19%. If soil organic matter level is not known, guidelines for medium soil organic matter can be used. Assuming each application does not exceed 1 lb N/1,000 sq ft (for annual applications of 1.0 lb N or greater).