Midwest Laboratories®

AGRICULTURE - NUTRIENT MANAGEMENT FAQs

I don't understand what the numbers are the bag of fertilizer represent.

The numbers on a bag of fertilizer is the guaranteed analysis. This is what the manufacturer guarantees by law to have in the bag. There are three numbers on the bag:

The first is nitrogen (N), the second is phosphate (P205), & the third is potash (K20).

These are all considered essential nutrients and are macro-nutrients. Plant requirements of these three elements are much higher than other essential nutrients. Typically lawn fertilizers will have higher levels of nitrogen and much lower concentrations of phosphate and potash. The application rate suggested on the bag will be based on the amount of nitrogen. This generally calculates out to 1.0 pound of actual nitrogen per 1000 square feet. Any time you are applying nitrogen, this the target rate you want. If the first number on the bag is 25%, this suggests that in 10 pounds of product, you will receive 2.5 pounds of actual N. There may be other nutrients included on the bag such as sulfur (S) or iron (Fe).

Are all fertilizers the created the same?

The most significant difference in fertilizer sources would be the type of nitrogen used. We suggest purchasing a fertilizer that contains a portion that is slow release or insoluble. This allows the nitrogen to be spoon fed to the plant. There is enough immediately available as well as nitrogen that will be available at a later time in the season. This reduces the potential for turf diseases from fast, lush growth. These slow release sources also minimize potential nitrogen losses. To determine if the product contains any slow release or insoluble nitrogen, check on the back side of the bag where the panel is located.

GUARANTEED ANALYSIS

Total Nitrogen (N)	4%
2% Water Soluble Nitrogen	
2% Water Insoluble Nitrogen	
Available Phosphate (P_2O_5)	2%
Soluble Potash (K_2O)	2%

EXAMPLE

Fertilizer Timing for Turf

There can be many thoughts on the timing and frequency of fertilization for your yard. There will be differences that need to be taken in to account based on whether the grass is a warm season or cool season species. Typically, with a cool season, high maintenance yard, there would be 4-5 applications per year. Conventional applications would begin in the spring and often have a pre-emergent added to the fertilizer. This is for the summer grass annuals. Be sure to time this application with the soil temperature (55 degrees) for the most effective control. Too early of applications can result in poor late summer control of these summer annuals. Additional times would possibly be May June, August, September, mid October. By using slow release fertilizers in the fall, it helps build root reserves going in to the winter and will also have earlier green up in the spring. This may help reduce the need for that early spring application unless the herbicide is needed. Warm season grasses in the Midwest will have a shorter season and may require the applications to be on a monthly basis to insure the required rates of nitrogen are applied.

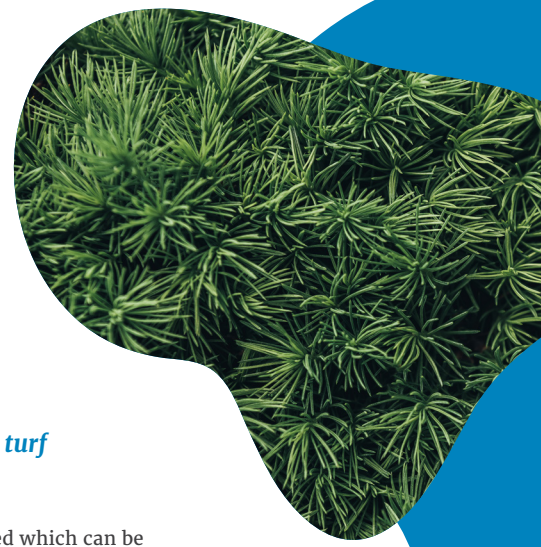
Visit mylab.midwestlabs.com for sampling supplies or questions.

Or contact Client Services at 402.334.7770

Why can't I get my grass to grow in this area with shade?

Even though there are shade blends of grass seed, there still needs to be some sunlight to allow the grass to grow. Making a seeding in these areas in the fall or spring will often result in getting a stand of grass and by mid summer it has died off. The canopy of the trees has filled in and has cut the sunlight to the point the plant can no longer produce food and eventually dies off. Privacy fences, houses, and neighboring trees can exacerbate this issue. Options to correct this problem would be to thin out the tree canopy, trim the lower branches up high or go to some type of ground cover.

Do pine needles acidify my soil?



This is one of the most common myths that I have heard over the years. The fact is that this not necessarily true. Many pines in the wild will often grow in soils that may be acidic, however, they do not alter the pH. The pH of fresh needles are acidic (approx. 3.5) as are many other species, however, this acid will have little impact on the soil acidity. Dried needles carry very little acidity. A soil test from this area would suggest whether fertilizer and lime is needed. Don't just assume that if there was a pine tree the area should be limed. This can actually cause more issues. Test the soil and then amend if needed.

When is the best time to apply lime to the soil?

Lime is required as amendment when the soil test suggest the pH is acidic, less than 7.0.

> *Lime applications should be made when the pH is less than 6.0 on established turf and less than 6.5 on soils that are to be seeded.*

Garden soils should be limed if the pH is less than 6.8. Lime is not soluble so it needs to be incorporated which can be done prior to seeding. If the turf is established, the application of lime should be made after the area has been aerated. This allows the lime to move down in to the soil more easily.

Mulching vs Bagging

I would suggest mulching or leaving the grass clippings on the lawn. The grass clippings are a source of fertilizer and can reduce your annual rate of N by 20–25%. High maintenance lawns may require 3–5 pounds of actual nitrogen per 1000 square feet per year depending on the nitrogen source. The clippings should provide approximately one pound of N per 1000 square feet over the growing period. This also reduces the amount of material being introduced to the landfill.

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Watering the Lawn

The amount of water needed for turf will vary depending on the time of year, the grass species, the soil types, exposure and usage. If you desire green turf all year, there may be times where supplemental irrigation is necessary.

> *During the stressful time of the year where water by the plant is greater than what comes in rainfall, total water application rates of 1.0 – 1.5 inches per week will be needed. This should include any rainfall.*

The amount will vary based on soil type. The objective is to wet the soil to a depth of approximately five inches. Lighter soils will require less each time, however, more frequent to sustain good soil moisture. Watering early in the morning when there is less evaporation is best. With most soils, one deep watering per week may be best. Be sure to calibrate your sprinkler to determine how much and how even the application rates are.

Garden Fertility

Nearly all existing garden soils tend to be over fertilized. This is due to heavy and frequent applications of compost, animal manures, and too much fertilizer. The phosphorus and potassium levels will build to extremely high levels and can over time become an issue with the success of the garden. Some of these products can contain small amounts of sodium which is not normally an issue, however, with the continuation of heavy applications, this can also increase to unwanted levels. Nitrogen from these sources can be slow release in some cases if the N is in the organic form as is the case of compost. Animal manures and bagged synthetic fertilizers will often have both organic nitrogen and immediately available nitrogen. If nitrogen is in a form that is immediately available, there can be root damage to young transplants or seedlings. This can also create situations where diseases can be prevalent due to lush growth as well as reduced fruit set.

Fertilizer Timing for Gardens

As discussed earlier, it is important to not over fertilize gardens with too high of rates of nutrients, especially nitrogen. Slow release products are best source of nitrogen early. Nitrogen that is immediately available should not be applied until fruit set to increase the chances of the best possible production.