

# Late Season Fertilization



## IPM Corner

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*Late season fertilization improves winter and early spring color. Plot in right center did not receive late season fertilization.*

One of the most important tools for maintaining pest free turf is a sound fertilization program. What better time to fertilize a turf area than in the late fall?

In the late season, when temperatures are consistently below 50°, the grass stops growing. You know when this happens because you no longer need to mow. The grass plants are still green though, actively carrying on photosynthesis. Since the leaf tissue is no longer growing, its need for the sugars produced by photosynthesis is diminished. These sugars can then be transported to the crown, roots, rhizomes, and stolons where they are either utilized to produce new growth, or stored.

A properly timed fertilizer application, then, will promote this sugar production to the advantage of the underground plant parts. Benefits of a late season fertilizer application include early spring green up, but without the flush of growth normally associated with an early spring fertilization. There have been some reports of less leaf spot in the spring as well.

### Timing is Important

It is important that the fertilizer be applied at the proper time. Applying fertilizer too early will force succulent growth, making the turf more susceptible to winter diseases and low temperature kill. If the fertilizer is applied too late, the benefits of the late season application will be minimized, if not negated all together. Make your fertilizer application when you are sure that all growth has ceased, but well before the grass goes dormant. In New York State, this period runs from late October to late November, depending on your location.

### Fertilizer Selection

The fertilizer you use in a late season application will impact its success. It is important that the nitrogen you apply to turf in the late fall be quickly available. Fertilizers that require microbial activity to release nutrients are ineffective at this time because of the cool soil temperatures. This eliminates natural organic fertilizers and most urea-formaldehyde products.

Water soluble or quick release fertilizers contain nitrogen in a form the plants can readily take up. Therefore, the nitrogen is available regardless

of soil temperature. Fertilizers that contain urea, ammonium nitrate, potassium nitrate, ammonium sulfate, or ammoniated phosphates are well suited for a late season fertilization. Water soluble forms of nitrogen such as these are excellent choices for late season fertilization. In areas prone to leaching, however, you should consider a slow release nitrogen source.

Of the slow release sources, IBDU is best suited for a late season application. Release of nitrogen from IBDU is dependent on hydrolysis, so temperature dependency is minimal. It is best to use IBDU in a formulation with soluble sources since the initial release of IBDU tends to be slow.

Other fertilizers to consider in order of preference include soluble methylene ureas, such as Coron, short-chained methylene ureas products such as Nutralene and Scotts, and sulfur-coated urea. Polymer coated products have shown temperature dependency, so they would not be a good choice in the late fall.

### Other Nutrients

There is an old spouse's tale that is perpetuated year to year that phosphorus should be included in a late fall or winter fertilizer. Perhaps it comes from the idea that roots are formed in the fall and that phosphorus helps rooting. Regardless of where this thought originated, there is no scientific documentation that phosphorus in a late season fertilizer does any good. It probably does no harm, especially if your phosphorus levels are low. It is best to apply phosphorus on the basis of a soil test.

Potassium has been shown to improve the winter hardiness of some grasses. Like phosphorus, potassium applications should be made based on a soil test. In lieu of a soil test, there should be about half as much  $K_2O$  in a late season fertilizer as nitrogen.

### Late Season Herbicides

Do you have a difficult time getting your preemergence herbicides applied in time in the spring? If so, you may consider a late season application. As reported in last winter's CUTT (Vol. 3 #4), late season applications of Pendimethalin and Ronstar were equally as effective as a spring application in two of three years. Ronstar is in fact labeled for late fall applications for crabgrass control. Fall applications of Team and Dacthal were not as effective as spring applications.

Get your turfgrass areas off to a healthy start next spring by fertilizing this fall.

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