

Specialty vs. Ag-Grade Fertilizers

THERE IS A DIFFERENCE

Turfgrass managers are inquiring about applying ag-grade fertilizers to turfgrass. The information presented here is intended to provide insight into why products specifically developed to meet the nutritional needs of row crops (i.e. corn, soybeans, wheat) are not the best option to promote healthy, uniform turfgrass growth.

DIFFERING GOALS

The goal when applying ag-grade fertilizer is to maximize yield and the grower's ROI. When fertilizing turfgrass, the goal is to maximize plant health to survive the changing seasons and stressful conditions, like extreme temperatures, drought or high traffic. Row crops demand large amounts of nutrients during relatively short, specific periods of time. Turfgrass demands a fertilization program focused on steady, sustained nutrition and growth.

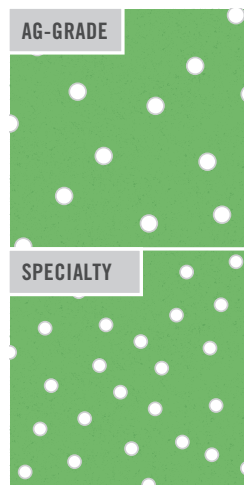
WHY SIZE MATTERS

Ag-grade fertilizer granules are larger (approximately SGN 300 or larger) compared to standard turfgrass granules (SGN 120-270). When larger granules are applied with a spreader, distribution uniformity can suffer because of their size (fewer particles per square foot compared to smaller granules). Additionally, the larger the granules, the more they tend to get caught in the turfgrass leaf canopy. This increases the risk of burn and the chance for mower pick-up, and the fertilizer can fail to reach the soil where it is needed for root uptake.

With smaller sized granules, nutrients are distributed more completely over the soil surface. More granules per square foot means more uniform access to nutrients. The chances for speckling due to inadequate distribution are decreased, especially when lower N rates are applied. The importance of this more consistent nutrient delivery should not be minimized. The nutritional status of the turf has broad-ranging impacts, including tolerance to disease and insect infestation, competition with weeds and tolerance to stress factors such as heat, cold and low moisture.



Larger ag-grade fertilizer can get hung up in the turfgrass.



Smaller specialty granules allow for better distribution.

UNAMENDED VS. AMENDED UREA

The nitrogen source in ag-grade fertilizers is usually unamended, highly soluble, and short in longevity. The release of nutrition is regulated by water. With a lack of water, some of the nitrogen can be lost through volatilization. Too much water can increase the potential for leaching, denitrification and runoff.

Conversely, there are enhanced efficiency fertilizers (EEFs) specifically developed for turfgrass applications. These products feature urea that has been amended with a technology such as a coating, reacted with other components or enhanced by inhibitors. Because these technologies regulate when nitrogen releases, the rate of that release and the longevity, these fertilizers provide the more consistent nutrient delivery that benefits the growth habit of turf.



Consistent nitrogen delivery also helps to optimize nutrient uptake, which minimizes flush growth and the feast/famine cycle that can negatively impact the growth of turfgrass. Improved nitrogen uptake goes hand-in-hand with reduced losses to the environment. This is an important consideration given the scrutiny the turf and ornamental industries are under from regulatory and environmental advocacy groups.

Fertilizers are developed to achieve different goals. In the case of ag-grade products, the objective is usually to deliver a high rate of quick release nutrition for shorter periods of time—to optimize row crop yield that can maximize a grower's ROI. Fertilizer granule size is a far less critical factor in its performance compared to a turf setting.

For turfgrass applications, smaller particles and more consistent distribution are needed to promote consistent growth and appearance and minimize the chances for speckling. In addition, there is a wide variety of EEFs available in the market. These fertilizers have been specifically designed to promote consistent growth instead of flush growth, impacting many aspects of turf health and management. Whether you take advantage of EEFs or not, specialty fertilizers designed specifically for turf and ornamental applications provide more complete nutrient distribution and promote more consistent growth and appearance. Knowing the differences between these fertilizers can make it easier for you to decide which is the better option to incorporate into your turfgrass nutritional programs.