FALL FEEDING

Many turf managers design their fertility plan to bring turf back to life after the winter thaw. Talking about a fertility program with the conversation starting at snowmelt fails to address an important component: the condition of the turf going into winter.

Feeding the turf in early fall (during the last few weeks of September) will start the recovery process from the recently endured heat and traffic stresses of summer. It will also provide the turf with the necessary nutrients to build up reserves through the fall when the second wave of root and lateral shoot growth is initiating. It is important to put nutrients in place early to make the most efficient use of them. As long as the plant is still photosynthesizing, it is synthesizing and storing carbohydrates. Some natural signals such as shorter day-length and cooler temperatures during this period tell the turf that it is time to reduce top growth and start readying itself for winter.

Applying large amounts of readily available nitrogen in late fall (usually anytime after October) increases the risk of fertilizer not being taken up by the plants as photosynthesis and carbohydrate storage will be significantly lower. An additional risk of fertilizing too late in the fall is the potential for an extended and unexpected period of warm weather. This combined with readily available nitrogen during the last few weeks of fall can cause flush growth sending the turf into winter lush and more prone to disease.

Another method that many employ is that of applying fertilizer after the ground has frozen so that it will be available when the snow melts the following spring. This practice has several potential pitfalls as well. If the fertilizer is not soluble and stays on the surface, the material could move with surface water run-off. Mother Nature has a nasty way of showing us that she is in charge, such as a winter of heavy, accumulating snow followed by fast and furious melts that can leave much of our turf under flowing water. Another major drawback to applying nutrients when the turf is no longer able to take them up is the lag time for them to become available the next spring.

Classic charts on root and shoot growth show that cool season grasses are putting a great deal of energy into increasing their carbohydrate reserves (roots and lateral shoots) in the shoulder seasons, more so in the fall. When large amounts of available nitrogen are applied to the turf coming out of winter to produce brilliant color, it does so with several costs. Top growth kicks into high gear resulting in more mowing in mid-to-late spring when the grass plants are already growing well due to warmer soils. This induced growth surge also taps into the carbohydrate reserves in the roots and lateral shoots that the plant worked so hard to stock up over the past several months. Do not assume from this last part that nitrogen fertility in the spring is a bad idea; it just has to be planned well and timed according to how the grass is reacting to the weather.
Fairways

Typical fairway fertility programs in the turf industry tend to see turf managers begin to dial back or reduce the nitrogen applications and begin to shift their focus over to a more potassium based program in order to help the plant better prepare itself for the stresses of winter. In some of the warmer Ontario (Windsor and Niagara) areas we have seen over the years a benefit to the addition of a nitrogen based fall fertilizer program. This type of program is not the same as a dormant nitrogen application, rather these types of applications are used for immediate aesthetic and agronomic benefits, as well as continuing to see the benefits come early to mid spring.

These late season nitrogen based applications can also benefit the turf in the spring by reducing the need for an early spring fertilizer application when turf will tend to grow rapidly and healthy on its own. This period of the year the plants will use the reserves stored from the fall to help begin the spring growth cycle.

Research has also shown that there is no significant reduction in root growth from late season nitrogen applications (a lower amount of carbohydrates could result but not in a significant amount).