



QUESTIONS FROM THE FLOOR

By Dr. Wayne R. Kussow

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Q: Dr. Kussow: I did some dabbling with a PGR this summer, trying to learn some of the practical aspects of them. The most obvious question I have is this: How does use of PGR affect one's normal fertility program? Does less tissue production translate into lower nutrient requirements? CALUMET COUNTY

A: Let me answer for a putting green since this seems to be where the greatest amount of interest is in the use of PGR's. To answer the question, we need to know how much clipping production has been reduced and the nutrient content of the clippings. Research shows that one can expect a clipping reduction of 0 to as much as 60%. The actual amount varies with the time of year and the amount of N being applied. Let's make as our first assumption that over the whole season, the clippings are reduced 30%. The second assumption is that without PGR the total clipping dry weight for a season is 80 lb/M. Thus, in the 24 pounds of clippings not produced, we would have had 0.96 lb N, 0.12 lb P (0.27 lb P₂O₅), and 0.48 lb K (0.56 lb K₂O). This, then, is theoretically the amount by which you could reduce your annual fertilizer application. At best, it's a ballpark figure.

Q: Prof. Kussow: It seems that in recent years it has nearly become impossible to use granular fertilizer on my greens during the summer months. We have outings on Mondays, player complaints about fertilizer on greens and how it affects ball roll, a mess for rollers on mowers (and player shoes), the need to mow dry without baskets (never popular), particle pickup, and unknown nutrient removal when baskets are used, etc. *ad nauseam*. So we've been spraying fertilizer. The use of urea (and other immediately available products) led to a flush of growth and a lack of color in a week, so we moved to spray grades of slower release materials. Results seem good, although it is tough to time applications to coincide exactly with fungicide applications. Any comments or advice? MANITOWOC COUNTY

A: You've given several reasons why I think us of liquid fertilizer on putting greens is on the rise. Another reason is height of mowing. What granular product won't be extensively picked up at 0.109 inch or less? Second is the new, high-density bentgrass cultivars coming onto the market. Fertilizer really sits up on them. You've taken the right approach to your problem, and I cannot come up with a perfect solution, given that fungicide application intervals vary with the product and disease pressure. I do suggest that you try two different liquid fertilizers, one that is based on methylene urea and the other on triazone. The latter is slower release and probably won't do as well in cool weather. All I can suggest is that you try the two at different rates to see which gives the level and duration of response that best fits with your fungicide application schedule.

Q: We built a new green awhile back, nearly 10 years ago. It was built exactly to USGA Green Section specs, including the coarse sand layer. But something weird has happened over time. Despite passing all the material tests before construction, the perc rate of this green has declined every year, to the point where it is not significantly different from our native soil greens. What's going on here, Doc? LA CROSSE COUNTY

A: Putting green percolation rates naturally decline over time. We've seen our experimental greens go from about 12 inches/hour after construction to around 2 inches/hour in 5 years. This doesn't concern me, at least as far as our climate is concerned. It typically takes about 4 inches of rain before you achieve what we call the percolation rate and I haven't encountered 4 inches of rain per hour in my lifetime. If the perc rate of your USGA green has declined to that of your native soil greens, then I'd venture to say that you have some high-quality native soil greens. Besides the natural decline in perc rates, there are some management related causes that need to be explored. The first has to do with aeration, be it with hol-

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