leaching and/or clipping removal. On all other soils, soil testing is the best means of evaluating K needs, but on sandy soils, turf managers often determine K needs based on applied N. Some also use tissue tests to monitor plant K levels.

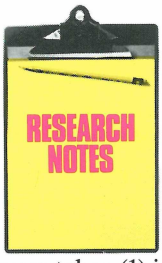
Under Georgia climatic conditions, recommendations on high sand sites for all recreational turfgrasses are:

- When fertilizing at 40 to 120 lb/A annual N, use a 1:1.5 N:K_2O ratio;
- When fertilizing at 121 to 225 lb/A annual N, use a 1:1.0 N:K_2O ratio;
- At above 225 lb/A annual N, use a 1:0.50 to 1:0.75 N:K_2O ratio.

In the summer months, especially on bentgrass, excess fertilizer applications at any one time should be avoided. For salt type K carriers, 10 to 20 lb/A K_2O can be applied every 2 to 6 weeks to maintain adequate K. Slow release K sources are also being developed to allow less frequent applications.

For finer-textured soils, where soil tests are the best measure of K needs, recommendations normally account for the higher K needs of recreational turf versus general use turf. On these sites, the turf manager should not use the previous guidelines based on N:K_2O ratios.

Potassium fertilization is also very important for winter hardiness of warm season turfgrasses. Many turfgrass managers apply a portion of the annual K in early to midfall prior to dormancy. Rates of 20 to 40 lb/A K_2O are recommended for this purpose. ■



Mississippi

Soil Sampling Band-Fertilized Fields

MANY COTTON FIELDS in the Mid-South receive band placement of fertilizers. The soil sampling procedure used to obtain representative samples for testing without a biased influence of the fertilizer band is an important consideration. A potassium (K) research project was initiated on a farmer field near Greenwood, MS, where K had been applied in a deep placed band below the drill for six years. Soil samples were taken (1) in the drill, (2) in 6-inch increments from the drill to the row middle, and (3) by random sampling. Random sampling resulted in soil test K levels similar to the average of values for samples taken from the drill to the row middle. Sampling only in the drill where fertilizer had been banded resulted in higher soil test K levels, shown by data in table. Soil sampling where cores were taken randomly–in the drill row, the row middle, and in between, in no set pattern–was adequate for sampling fields with band applied fertilizers. ■

Soil test K levels from three soil sampling procedures

Soil depth, inches	Sampling procedure: In band	Random	Band to middle average
	Soil test K level, lb/A		
0 to 6	234	140	147
6 to 12	111	78	72

Source: Dr. Jac Varco, Dept. of Plant and Soil Science, Mississippi State University, Mississippi State, MS 39762.