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Brome Fertility Plot Results

Three brome plots were hosted in Northeast Kansas during 2015. Sites in Atchison County, Brown County (east of Hiawatha), and the Meadowlark Extension District (north of Holton in Jackson County) included multiple treatments designed to measure the differences between nitrogen and phosphorous rates as well as interactions between those nutrients as well. This year's plots also included a sulfur treatment at a 'high management' fertility level.

Results from single sites are available, but combined, they provide us a view of treatments that might be statistically different, something we can't typically catch at the single site level. This year's three site summary provides some interesting contrasts.

From a nitrogen (N) standpoint, response curves show a positive response up to 90 pounds of actual N applied per acre. At the 120 pound N rate, yield (approximately three tons per acre) is flat to slightly declining. Interesting as well is that yield differences at the 60, 90, and 120 pound N rates aren't statistically different.

Phosphorous (P) responses weren't seen at any level (a 30 pound per acre actual P rate was used). This is likely due to high soil test P levels at each sites. The site north of Holton had a 47 ppm soil test P level. Twenty parts per million is typically considered more than adequate, so a response was not expected. Sulfur applications did not show a yield response, but it was only applied at the 90 pound per acre N rate.

If you are still making a fertilizer rate decision for cool season forages, be sure to individually evaluate each site to determine appropriate fertilizer rates. Most soil tests from hayed sites indicate low P levels, requiring P applications to maximize yield.

For full plot results, as well as those from prior years, contact a District Office or e-mail me at dhallaue@ksu.edu. Special thanks to William and Henry Hill for hosting this year's plot.

Start Trees off Right

If you're planting trees this spring without a weed control plan, research from K-State's John C. Pair Horticultural Center on redbud and pecan seedlings might change your mind! The work by three researchers was to investigate the inhibition of growth of transplanted, seedling trees when lawn grasses (three species) were allowed to grow up to the trunk. The results?

Caliper measures 6 inches above the soil surface were twice as large for plots without grass as for those with either fescue or bluegrass. Redbuds showed a 300% weight advantage for plots with grasses controlled than those without. Pecans showed a significant 200% increase. Leaf areas were 200% larger in plots without grass competition and leaf weight showed a 300% increase.

The conclusion: grasses must be controlled under a newly transplanted tree to get the best possible growth. For best results, control grasses to a minimum of three feet.