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Studies examine nontraditional bermudagrass fertilizers

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“Just the facts”

was a popular saying by Detective Joe Friday when doing witness investigations on the television crime series *Dragnet*. He did not want

witness interpretation of the facts; he wanted to interpret them on his own. Increased fertilizer prices have many producers looking for nontraditional fertilizer sources that could produce the same amount of forage with less expense. Numerous nontraditional fertilizers are being marketed with little replicated research demonstrating their effectiveness compared to traditional commercial sources of nitrogen (N), phosphorus (P) and potassium (K). Here are just the facts from the results of two studies, one conducted by the Noble Foundation and the other by the University of Arkansas, evaluating nontraditional fertilizer effectiveness of several products – either alone or in combination with traditional fertilizer sources – on bermudagrass yield.

Noble Foundation Study

Vitazyme (V), a bio-stimulant, was evaluated alone or in combination with varying rates of N (urea) in a replicated, three-year (2010 to 2012) small plot study at three locations

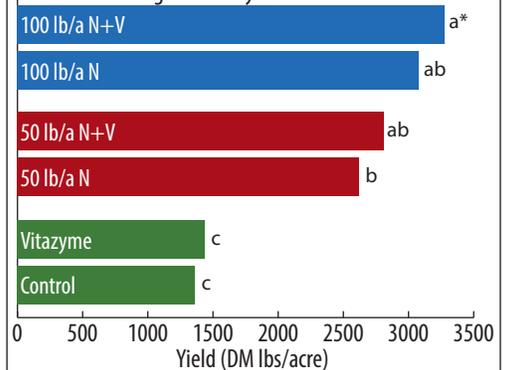
on bermudagrass. At each location, phosphorus and potassium were applied based on soil test reports to 100 percent sufficiency levels. Vitazyme was applied according to the label recommended rate of 13 ounces per acre. Treatments were applied prior to the first harvest and following each harvest during the growing season. Treatments were: 100 pounds per acre N; 50 pounds per acre N alone or in combination with Vitazyme; 13 ounces per acre Vitazyme; and a control receiving no N or Vitazyme. Due to below normal rainfall during the trial period, harvests averaged 1.3 per year. Results are presented in Figure 1.

Summary: Results show that Vitazyme did not statistically improve bermudagrass yield either alone or in combination with urea.

Arkansas Study

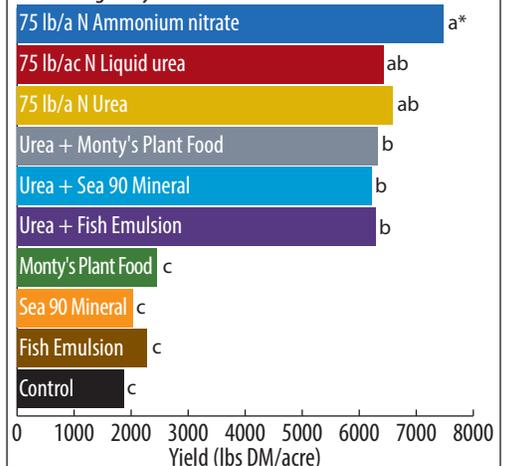
In 2008, fertilizer treatments of ammonium nitrate, urea, liquid urea (23 percent N), Monty’s Plant Food, Sea 90 Mineral and Fish Emulsion were applied to bermudagrass small plots and replicated four times. Ammonium nitrate, urea and liquid urea were applied at 75 pounds per acre N. Monty’s Plant Food, Sea 90 Mineral and Fish Emulsion were applied at label recommended rates and in combination ▶

Fig. 1. Total bermudagrass dry matter yield by fertilizer treatment averaged across years and locations



*Bars with the same letter are not statistically different (P = 0.05).

Fig. 2. Evaluation of nontraditional fertilizers for bermudagrass yield – Total Yield



*Bars with the same letter are not statistically different (P = 0.05).

Source: Jennings, J.A., et al., University of Arkansas Division of Agriculture, Cooperative Extension

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with urea at 75 pounds per acre N. Treatments were applied in June and plots harvested in July. A second treatment application was made in August and plots harvested in October. All plots received commercial P and K fertilizer according to soil test recommendations for bermudagrass hay at a 4-ton-per-acre yield goal. Results are presented in Figure 2.

Summary: Results show that Monty's Plant Food, Sea 90 Mineral and Fish Emulsion did not improve bermudagrass dry matter yield when used in combination with urea. Monty's Plant Food, Sea 90 Mineral and Fish Emulsion did not improve bermudagrass dry matter yield compared to the control.

Just the facts. ■

Reference:

Jennings, J.A., K.J. Simon, J.W. Boyd, L. Espinoza, and M.S. Gadberry. 2009. Comparison of traditional and non-traditional fertilizers for bermudagrass yield. Arkansas Agriculture Newsletters. Animal Science E-News. www.aragriculture.org/News/animal_science_eneews