Warm-Season Grass Valuable For Summer Slump

Switchgrass Trials Reported

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Warm-season perennial grasses, such as switchgrass, can provide valuable forage during the "summer slump" period and complement cool-season grass pastures. Switchgrass and other warm-season grasses are also useful for wildlife habitat. Information on the performance and persistence and performance of switchgrass varieties is needed for producer recommendations. In a recent study, our objective was to determine the performance and persistence of switchgrass varieties under grazing and clipping management.

Cave-in-Rock, Trailblazer, and Shawnee switchgrass were established in April 1999 at Rock Springs, and on the Woody Zook farm near Glenmore.

Switchgrass was planted in plots (30 feet by 50 feet) in a prepared seedbed at Rock Springs. Two one-acre pastures of each variety were no-till planted on the Woody Zook farm. Plots and pastures were not cut or grazed during the establishment year.

In 2000 and 2001, two-cut and three-cut system treatments were imposed at Rock Springs. Nitrogen fertilizer was applied at 120 pounds/acre at Rock Springs. Forage yield was determined at each harvest. At the Zook farm, the switchgrass pastures were grazed on four dates in 2000 and three dates in 2001 and 2002 by 25 cow-calf pairs. Grazing time at each date ranged from five to 10 days each year. Forage yield was determined on each pasture before grazing. No nitrogen fertilizer was applied in 2000; however, 60 lb of N/acre were applied in 2001 and 2002, along with two tons of lime.

Averaged over three years, the Trailblazer variety of switchgrass yielded slightly more than other Cave-in-Rock or Shawnee. Yields were significantly higher in 2002 due to a better distribution of rainfall compared to other years. At Rock Springs, there were no significant differences among varieties in yield; however, cutting three times in 2001 reduced switchgrass yields.

Forage And Hay — Potassium Paves The Way

NORCROSS, Ga. — Except for nitrogen, have you ever wondered which plant nutrient is required in the greatest amount by your pasture or which nutrient is removed in the greatest quantities in hay harvests? The answer is potassium.

Potassium

- encourages more efficient nitrogen use by plants,
- increases the photosynthetic production of carbohydrates which are necessary for energy production,
- stimulates storage of starch reserves in the roots of summer perennial grasses to provide greater protection against winterkill,
- enables plants to use soil moisture more efficiently,
- regulates the opening and closing of leaf pores (stomates) to allow proper air exchange for photosynthesis and for plant cooling
- improves root growth and enhances drought tolerance,
- decreases susceptibility to several plant diseases,
- stimulates increased nitrogen fixation by forage legumes and also increases plant protein content
- is involved in many beneficial enzymatic reactions.
- And it increases forage yields, grazing capacity, and potential farm profits.

Potassium is also essential in animal nutrition. It helps regulate the heartbeat, affects neuromuscular activity, maintains proper osmotic balance and acid-base balance in the blood system, and maintains water balance. Muscle contains most of the potassium in the bodies of animals, but it is found in every cell of the body. If cattle and lambs are fed forage and hay with optimum potassium, it can help reduce their stress when they are shipped to feedlots.

Forage will take up potassium in the following amounts (pounds of K_2O per ton of forage): alfalfa=60; fescue, bromegrass, orchardgrass=50; bermudagrass, bahiagrass, dallisgrass=45; clover/grass mixtures=60. Grazing animals will return a large portion of the ingested potassium to the soil in feces and urine.

If your summer forage production seemed to drop off too rapidly as temperatures increased, if cool season forages do not respond to nitrogen rates as expected, check your soil test potassium levels. Remember, hay and silage harvests remove more potassium from the soil than any field crops. To sustain and improve production, the harvested potassium must be replaced.

Growers should consider grazing and hay demands, soil testing to evaluate their soil's potassium-supplying power, and applying potassium fertilizer with other recommended nutrients this fall. Paying attention to potassium can improve forage and livestock production and increase farm profits.