



Fall 2004, No. 5

WINTERIZING PERENNIAL WARM-SEASON GRASSES WITH POTASSIUM

Potassium performs many important functions in forage crops. Potassium...

- **encourages** more efficient nitrogen use by plants,
 - **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,
- and it **increases forage yields, grazing capacity, and potential farm profits.**

If your summer forage grass production seemed to drop off too rapidly as temperatures increased, or if your forage did not respond to nitrogen rates as expected, check your soil test potassium levels now. You may be surprised to learn that your soil test potassium is below optimum levels. Remember, hay and silage harvests remove more potassium from the soil than other field crops.

Research has shown that the potassium removal rate (expressed as K_2O) per ton of harvested forage is about 50 pounds per ton for hybrid bermudagrasses, 35 to 40 pounds per ton for bahiagrass, and about 40 to 50 pounds per ton for dallisgrass. Annual hay harvests of 4 to 8 tons per acre may remove more than 200 to 400 pounds of K_2O per acre. To sustain and improve production, soil potassium must be maintained at optimum levels.

Fertilizing in late summer to early fall with potassium...4 to 6 weeks before frost or before the forage goes dormant...is often referred to as **winterization**. In addition to the benefits named above, applying progressive rates of potassium fertilizer at this time will help **winterize** perennial warm season forage grasses by:

- **increasing the photosynthetic production** of carbohydrates which are necessary for energy production and
- **stimulating storage of starch reserves** in the roots and rhizomes (rhizomes are large underground stems that function as food storage organs and as vegetative buds for the next season's growth).

Plan to improve your perennial warm season forage and livestock production and raise your profit potential for next year by including potassium in your late-summer soil fertility and plant nutrition program.

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