NUTRITIVE VALUE AND YIELD OF EMERGENCY FORAGES

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Introduction

Summer annual forages are chosen by many farmers to fill the summer slump experienced by cool-season perennial forages or when needing an emergency forage if facing a challenging year with winterkilled fields. Whichever the case, the need is for the combination of high yield and nutritive value in addition to rapid growth, drought tolerance and quick response to fertilizer because of the short window for summer production. Two of these promising forages for sandy soils have been tested in recent years and they include warm-season annuals teffgrass and crabgrass. The yield and nutritive value of these grasses was compared against orchardgrass and bluegrass (perennial cool-season and native grasses, respectively) which are commonly grown in areas of sandy soils in Wisconsin. During summer teff and crabgrass yields were comparable or exceeded those of orchardgrass or bluegrass.

Teffgrass

This annual bunchgrass originated in the highlands of Ethiopia in northern Africa. It does not tolerate frost and is adapted to temperatures ranging from 50 to 80°F and soil pH from 4.5 to 7.0. Plants have quick germination of three to five days, and fast growth allows to cut it six to nine weeks after planting. Dry matter yield at first harvest ranges from 1500 to 2400 lb/acre with a second cutting after 30-days at 50% of the initial one for a total yield of 2,400 to 3,600 lb/acre. In grazing trials in southern Wisconsin planted in 7.5" rows resulted in 2,900 lb DM/acre. It is a high-quality grass with high digestibility and palatability, high crude protein (22% in current trial) and excellent amino acid composition. It has been used in the last decade as a mite-free alternative to timothy and orchardgrass for the summer slump.

Large Crabgrass

This sod-forming grass is highly palatable and well adapted to sandy loam-clay soils ranging in pH from 5.5 to 7.0. It is a true summer annual with no cold and frost tolerance. It responds well to fertilization and dry matter yield at first harvest ranges from 1,300 to 2,100 lb/acre with a second cutting after 20 to 30-days at 46% of first cutting for total yield of ~3,500 lb/acre. This grass is excellent for grazing and soil conservation, and also makes top quality leafy hay with crude protein around 15% and digestibility near 60%.

References

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