

Forage Extension Program

Forage Alternatives for Drought Conditions

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How do we recover from two or three successive years of drought? There are many alternative crops to consider planting in 2001. For the past 10 years, the MAES research centers have been evaluating several annual crops for forage production. There are many promising varieties of fall-seeded cereals, including awnless varieties of winter wheat, triticale and spelt, or spring-seeded hay barley, oats, or emmer. All of these crops would fit well into irrigation operations.

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Hay Production

Spring-seeded cereal crops can be used for pasture, hay, or silage production. For dry hay production, use oats, hooded hay barley (like Haybet, Westford or Horsford), or an awnless variety of triticale. For forage production, these crops are usually seeded 25 to 50% heavier than for grain production. Seed as early as possible to optimize spring moisture. Hay barley and other spring cereals can produce up to 2 tons of hay per acre. Interestingly, these annual crops have out-produced dryland alfalfa and perennial grasses for the past two years in replicated yield trials at the Central Agricultural Research Center (CARC) near Moccasin. Harvested in the milk to early dough stage, hay barley at CARC has yielded 1.3 to 2 tons per acre, with about 10% crude protein and 53% TDN. Just imagine the yields that could be achieved under irrigation.

The second-leading hay barley seeded in both 1999 and 2000 was Haybet. The acreage of cereals seeded for forage hay is expected to increase again in 2001. These crops are low cost and low risk, easy to grow, and more productive compared to first-year stands of new alfalfa or grass. Based on current conditions and costs, we are encouraging producers to take a look at these alternate forages.

Nitrate Risks

One of the key concerns in using these crops for pasture or hay is the potential for the accumulation of toxic levels of nitrate. Nitrate levels generally peak in the boot stage, then decline to safe levels during grain fill. Drought stress increases the nitrate hazard, and county Extension agents provided over 4000 Nitrate "QuikTests" in the past two years. If cereals are planted for pasture, always have a nitrate test done prior to grazing. Also, be conservative with nitrogen (N) fertilizer rates. Use N (soil plus fertilizer N) at 66 to 75% of the rate necessary for high quality grain production. Despite the risk of nitrate problems, re-crop following a non-legume crop usually requires a supplemental nitrogen.