

Forage Extension Program

Souped-up Annual Forages for Fall Grazing

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Forage supplies in Montana have been critically short for the past two years, and many producers are planting annual forages in 2002. Low soil moisture and limited winter precipitation have caused risky conditions for dryland seedings of perennial grasses or alfalfa. Annual crops can provide an excellent source of low-cost, low-risk forage to relieve losses on native range or dryland pasture due to drought. For spring planting, several of the cereal crops such as hay barley or oat are widely used for hay on both irrigated and dryland conditions. Plantings of warm-season crops (corn, sudangrass, sorghum X sudangrass, millet, etc.) are also expected to increase in 2002.

On irrigated ground, many producers are looking at several new options for "double-cropping" or hay-stockpile systems. Hay prices are expected to remain high through 2002, so optimum use of fertilizer and early irrigation are being considered. For old or winter-thinned alfalfa stands, many producers have increased production by fall or spring disking, then planting hay barley or oats. The resulting hay crop is a mixture of alfalfa and barley, improved at a low cost. On irrigated farm ground, sudangrass or some of the sorghum X sudangrass hybrids can produce a heavy cutting of hay, then the aftermath can be stockpiled until after frost for pasture. These warm-season crops should be planted after soil temperatures are consistently about 60 degrees, and should be monitored for nitrate and prussic acid levels. Many of these crops (including millets and corn) are widely adapted to dryland conditions east of the Continental Divide, and their forage potential is essentially correlated to summer precipitation.

IRRIGATORS - The "Souped-up" Option

One innovation in annual forages is the use of a cereal forage underseeded with annual ryegrass as a "double" or "relay" crop. Under irrigation in Alberta and British Columbia, this combination can reliably produce up to 5 tons of dry matter per acre – about 3 tons of dry hay in July (mostly barley), then 1 to 2 tons of excellent fall growth of annual ryegrass. These crops are seeded together in May at 60 to 70 pounds of barley and 10 to 20 pounds of annual ryegrass. They can be seeded together in a drill, in two drill operations or broadcast spread followed by light harrowing or packing, but the annual ryegrass should not be seeded deeper than ¾-inch. For dry hay, use a variety of "hay" barley such as Haybet or Westford. For silage, any awned-variety of feed barley or triticale can be used. Few varieties of annual ryegrass have been tested, but the variety Gulf has been used in this manner. The current retail price for annual ryegrass seed is in the 50 to 60 cents per pound range, so this can be very cost-effective. Be sure to specify "annual" (not "Italian" ryegrass – which is a distant cousin of Persian darnel).

If irrigation water is not anticipated to be limiting, a reasonable fertilizer rate for a 4 to 5-ton crop would be 90 to over 120 pounds of nitrogen per acre, which should be split. The barley should be cut in the water to milk stage, and removed in a timely manner, followed by the second split of fertilization and irrigation. Annual ryegrass is a true annual with fairly good frost tolerance, so depending on irrigation water availability and fall conditions, the annual ryegrass can produce up to 2 tons per acre of excellent, lush forage for haying, grazing or windrow-grazing. No research trials have been conducted yet by MSU, but

several producers have successfully used this system since 2000. Be sure to monitor nitrate levels in both the barley and annual ryegrass prior to feeding or grazing.