

Oats Offer Options

Planted in the spring or fall, forage oats lend flexibility.

by Troy Smith



**Feeding &
Feedstuffs**

PHOTOS COURTESY OF ARS INFORMATION STAFF

►Grazed or harvested, raising oats can fill gaps in the forage resource supply.

Early this year, Rod Schweitzer was worried about his forage situation. After several extremely dry years, fretting about a shortage of forage for grazing and haying had become routine. But last year was the worst for the Broken Bow, Neb., cattleman. Summer pastures grazed by Schweitzer's commercial Angus herd played out early, forcing him to start feeding hay earlier than usual — well before area corn fields were harvested and ready for cows to glean the residue.

Then, winter's considerable snow and ice curbed stalk field utilization such that cows required a little extra supplemental hay. It took a toll on Schweitzer's store of harvested forage. Often, he carries a little bit of unused hay over to the next year, but the winter of 2006-2007 afforded no carryover cushion.

On the bright side, the winter moisture, plus more snow and rain during March, brought the promise of improved cool-season forage growth in the spring. In an effort to enhance his early-season hay

harvest, Schweitzer turned to an old forage friend — oats. He interseeded oats into a thin stand of alfalfa to boost the first cutting's tonnage. Schweitzer calls oats a fairly dependable emergency forage crop that can work in the wake of failed new alfalfa stands or produce more and better hay in worn-out or winter-killed hay fields.

"The thing about oats is that you can use them in different ways," Schweitzer says. "It gives you some options."

Widely adapted, oats have been used in many different production environments — from the East Coast to the West, from Texas

"The thing about oats is that you can use them in different ways. It gives you some options"

— Ray Schweitzer

to North Dakota and even in Alaska's subarctic climate. In most parts of the U.S., university forage experts can recommend ways that oats might complement a cattle operation. Other small grains can do that, too, but few have more flexibility.

As harvested forage, oats may be cut for silage or as hay. Even when planted as a forage crop, certain situations might prompt producers to consider the option of harvesting the grain instead. And, to extend the grazing season, oats can be grown for spring or fall pasture. It stands alone, or may serve as a companion crop, particularly in combination with legumes.

As harvested forage

Many producers find oats appealing for double-cropping systems. Oats can be planted early, harvested early and followed with another crop during the same year. In some areas, oats have been seeded as early as

CONTINUED ON PAGE 150

Oats Offer Options CONTINUED FROM PAGE 149

mid-February, with harvest occurring in mid-May. That's early enough for the producer to replant the field to soybeans or another forage crop. Later planting, during March or early April, may be more typical. That still allows for a June harvest and reseeding of the field to a forage-producing summer annual such as Sudan grass, sorghum or millet.

In many areas, 2 to 2½ bushels (bu.) per acre is the recommended seeding rate. A soil fertility test will determine fertilizer requirements, but oats planted for forage typically produce more vegetative growth following nitrogen (N) fertilization. Phosphorus (P) and potassium (K) also may be needed. However, oats will utilize carryover fertilizer that may not have been completely used by a previous crop.

Oats also utilize manure applications and help stabilize nutrients to reduce leeching and runoff. Each ton of oat forage harvested removes about 15 pounds (lb.) of phosphorus and 60 lb. of potassium, so growing oats is a good way to lower soil nutrient levels in fields where manure is applied. Along with the desire to use land more efficiently, some producers plant oats as a cover crop to reduce high nutrient levels in large lots where cattle may be concentrated seasonally or in winter-feeding areas.

Growing oats may contain 25%-30% crude protein (CP) until jointing, but protein levels decline steadily as seedheads develop. A widely used rule-of-thumb calls for oat hay to be cut after the plants have headed out and immature seed has entered the early "dough" stage of development. Harvest at this stage may yield 3-4 tons per acre with forage containing 12%-14% CP [on a dry-matter (DM) basis].

Many forage gurus and seed company representatives cite that recommendation, but University of Nebraska Forage Specialist Bruce Anderson has changed his way of thinking. Anderson now encourages producers to consider cutting the hay earlier.

"I don't like dough-stage harvest for oat hay. Too often, the hay is mostly straw and grain. I prefer cutting it during the "milk" stage for better-quality hay (up to 16% CP) with less nondigestible fiber," Anderson advises.

Producers should be aware that, like summer annuals, oat hay presents some danger of toxicity due to the accumulation of nitrates in the plant. The risk increases when the crop has been stressed due to drought, hail damage or other weather conditions that interrupt normal growth patterns. Anderson says producers usually experience fewer

nitrate problems with oat hay than with Sudan grass or other summer annuals, but a forage test is advisable.

"Even when oat hay tests 'hot,' producers seem to have less trouble. Animals manage higher nitrates in oats better. I don't know why, but experience shows it to be so," Anderson adds. "Still, there is some risk."

Interseeding oats into existing but sparse stands of alfalfa can improve yields, often bringing harvest tonnage back up to 3 or 4 tons per acre. Most specialists recommend preparing the field with a harrow or disk (shallow), drilling or broadcasting the oats, and harrowing again. The process of interseeding oats often reduces alfalfa weevil populations as well.

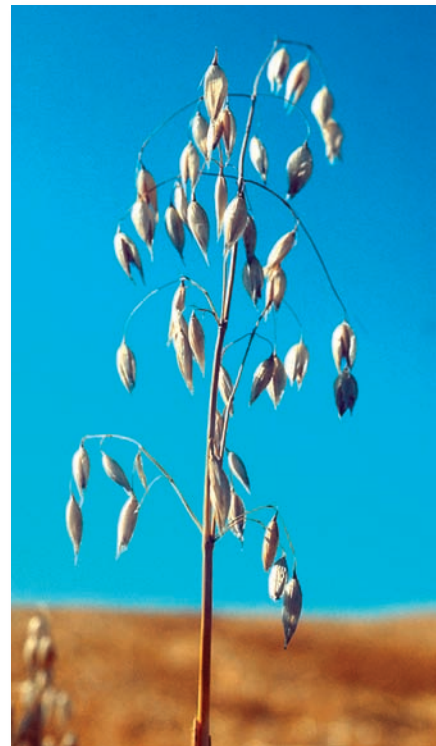
The drawback to interseeding existing alfalfa fields is that increased forage yields will likely be limited to the first cutting. Generally, if oats are headed out when the first cutting of hay is taken, there will be no regrowth. Harvesting earlier for silage would encourage regrowth of oats (if moisture and temperatures are favorable) and a better second cutting.

Early- or late-season grazing

A cool-season specie that grows rapidly, oats can produce good-quality forage for early spring grazing. It is recommended that producers wait until plants are 8 to 10 inches (in.) tall before allowing cattle to graze. Cattle can easily uproot smaller seedlings. Oat pastures work well under rotational grazing systems, with cattle removed when plants are grazed down to 3 or 4 in. in height. Leaving the plant's primary node intact protects the growing point, and plants will produce regrowth as long as the weather is favorable.

Few crops can provide as much forage for grazing during fall and early winter as oats. If moisture is adequate, oats planted during late summer (by mid-August) will be ready to graze in October. Oat pasture planted for fall grazing can work particularly well in regions where winters are mild, providing green, high-quality growth well into December. With good grazing management, oats will keep growing until killed by frost. That usually requires exposure to temperatures below 27° F for several hours. Even after a hard freeze, oat pasture will retain its grazing value for up to a month.

Options include no-till planting of oats into harvested wheat fields. Some producers aerial-seed oats into standing corn during August to enhance grazing of stalk fields after the corn is harvested. Similarly, oats may be seeded into standing soybeans to create a postharvest pasture. However, producers must make sure



the previous crop's herbicide program won't conflict with oats establishment.

In the southern U.S., producers have interseeded oats into permanent warm-season pastures during late summer to create emergency forage. In some cases, the effort yields 60-90 days of fall grazing. Of course, production of grazed forage from oats will vary with weather. Given favorable growing conditions, total production is dependent upon stocking rate plus timing and duration of grazing periods.

Mixing it up

Sometimes used for grazing, but particularly for increasing quality and quantity of silage or hay, oats are planted in combination with other forage species. Legumes, including clovers and field peas, are popular choices to create a mixed forage source offering higher protein levels and greater yield potential than oats alone. For fall grazing, oats may be planted with turnips, which will continue to grow until temperatures drop below 15° F. Using turnips may further extend the grazing season, and they contain higher energy levels.

Naturally, irrigation offers an advantage, but oats often are grown successfully under dryland conditions. With modest precipitation, in the spring or fall, oats can produce a volume of good-quality forage at a moderate cost. Grazed or harvested, raising oats can fill gaps in the forage resource supply. And considering what hay prices are in many parts of the country, oat hay can be a profitable cash crop, too.

