Ways to Extend Fall and Winter Grazing

by ***Heather Smith Thomas***

During dry years, it can be difficult to provide adequate feed for cattle, especially late in the season. Innovative ways to grow more forage or stockpile it can help. Some years it pays to try something different.

Summer annuals

In dry climates, ranchers often run short of late summer and fall pasture, especially when productivity of cool season perennial grasses is limited during the heat of summer. In 2008, researchers at the University of Idaho's Nancy Cummings Research, Extension and Education Center in Salmon, Idaho, began looking at ways to extend grazing with summer annuals.

"We looked at species that grow well in dry corners of pivot-irrigated ground, to try to increase hay yield or pasture," says John Hall, Extension beef specialist. "This evolved into a project to increase forage production for fall grazing."

The first test plots contained five species of warm season annuals including Sudex, Teff (an annual grass), German foxtail millet, pearl millet and grazing corn. Hall says the center's reseachers have since planted Sudex, the sorghum-sudan hybrid, in the beginning of July to provide grazing in November and December. In their most productive year, they were able to graze 100 head on 16 acres for 40 days. With irrigation and between 40 and 60 units of nitrogen per acre, Hall says the crop was successful. However, he warns against using too much nitrogen because the plants are already nitrate accumulators and additional nitrogen could lead to nitrate toxicity problems.

"Generally we can expect about 70 to 80 animal grazing days per acre, and we strip graze it. We use a rotary mower to make swaths through it where we want to run our fences later — a single strand of poly wire down the alley we've made. We estimate the portions to fence, according to the size of our group of cattle. We make several passes through the field, for easy fencing. In some instances we gave them too much and they wasted a little, or we gave them too little and moved fence more often, but it works," Hall says.

Hall says they found that when they mowed paths through the field, the cut plants would thatch over the ground and protect it from freezing as deep when the weather turned cold. This crop doesn't provide all the fall grazing needed for the university herd, but it helps extend the forage resources.

"When choosing a crop for fall grazing, we look at whether it will hold up under a snow load. That's where some of the warm season annuals like Sudex work well because it's always sticking up through the snow. There is no problem for cattle finding the plant — and once they find it they root down and utilize it. Making big windrows also helps, to graze it that way; once they find the windrow they'll root through the snow to eat it," he says.

One drawback with some annual crops is wildlife damage. Hall found that elk don't damage the Sudex as much as some of the other crops during the growing season.

"I don't know whether it's a palatability issue, or the fact that Sudex can get up to 12 feet tall and they can't see through it," Hall says. "By contrast, deer come in and make tunnels. Deer eat it, but don't do near the damage to that crop that they did with the grazing corn. There wasn't an ear that hadn't been chewed during the three years we planted corn."

Rake-bunched hay and windrow grazing

There are many ways to save feeding costs if cows can graze longer into winter. Tim DelCurto, Oregon State University, says the university's two range livestock research stations have done studies on rake-bunched forage. The hay is cut, then raked into small piles.

"The difference between rake-bunching and windrow/swath grazing is that rake-bunched piles work better in areas where there's more snow. It can be difficult for cows to find windrows when snow is deep. We use an old bunch-rake to put hay in piles — a little smaller than those made by the old buck-rakes (which were used for gathering loose hay for stacking)," he says.

In the 1980s, DelCurto says they did many years of research on that method in comparison to traditional haying methods. They found that the cost of feeding rake-bunched hay was $30-$40 less per head. Similar to windrow grazing, it's not necessary to haul forage to your haystack and back out to the cattle. Throughout the years, DelCurto says his researchers found that the best way to utilize bunch-raked forage is by using electric fencing to strip graze the area.

"We did a lot of winter grazing research as well, and looked at stockpiling forage to extend the grazing season further into winter," DelCurto says.

This works well if there is available water (or adequate snow to utilize for water) and access to the cattle for supplementation, if

needed. Grazing dormant forage has minimal effect on plant health, compared to traditional spring and summer grazing. Winter grazing with dry cows (whose nutritional requirements are lower than lactating cows and calves) gives more uniform use of some areas because they can go greater distances to water and accomplish better use of slopes.

Many producers are trying to make their cows work harder to harvest their own forage and to save harvesting/feeding costs. However, DelCurto says that while rake-bunching and windrow grazing work well in some places, they may not be successful in others.

"Our Burns research station is about 4000 ft. elevation. During winter it's a little colder and drier than we have here, and less annual precipitation. Our Union research station has about 15 inches of annual precipitation and is about five to 10 degrees warmer in the winter, but has stronger wind. Here we found that rake-bunching doesn't work because wind blows the piles away," DelCurto says. "With bunch-raked hay or with windrows, because it's warmer and wetter, we've had more problems with the hay molding, and not keeping as well."

It's sometimes harder to get it cured and dry, and even then, it may get wet enough to mold later. So they've looked into other strategies, such as grazing certain pasture in early summer and moving cattle to different pastures so they can let the pasture regrow for late fall grazing instead of cutting it for hay. They have wintered cattle on this variety of "stockpiled" pasture, in addition to providing a supplemental protein. This method helped reduce costs to $30-$40 per cow. It works if forage doesn't snow under too deeply.

"We took advantage of our wind. We get quite a bit of snow, but the wind blows it away. There are many ways to extend grazing, and producers just need to figure out what works best in their own area. There's no one best way," DelCurto says.

Some producers are planting forage barley, forage triticale or something similar to use in late fall or early spring. Some of these can be planted for use as winter grazing to shorten the winter feeding period. Even though producers would have planting costs for these crops, using one is often cheaper than harvesting hay. DelCurto says studies are also being done with forage koshia and similar complementary forages that are high in protein to complement a diet of lower-quality grasses.

"There are many ways to reduce winter feed costs, but they are very ranch specific. Even the things we do at our two range livestock research stations are different because they're in two very different environments," DelCurto says.

It helps to learn about different options or a strategy that might work well in a situation. Price of feed, fuel and machinery often determine the best option for farmers.

"In the 1990's we did one study comparing rake-bunched forage versus traditional haying, versus winter grazing. On the winter grazing we put cows out on desert range and supplemented them with a little alfalfa per day," he says.

After four years of winter grazing research, DelCurto says he's found that when a producer starts cutting costs, he also starts increasing risks. During the first three years of his research (1989-1992), they were able to winter cows at a low price, using just 5 lb. of alfalfa per head per day in a 100-120 day grazing period. This approach led to the cattle being quite successful, but in 1993 a severe winter hindered the program's success. With the biggest risk being Mother Nature, that game may be a dangerous gamble. If there is a heavy snow that stays all winter, producers may have to buy two more months' worth of hay. Given the current economic situation, many producers are looking to reduce hay costs, but should consider the risks.

"In some instances, you must find feed from somewhere else, or reduce herd size," he says.

It's a hard decision, however, to reduce herd size to match available forage in a bad year, especially if it has taken years, or a lifetime, to select the genetics and create the type of animal that works best in that ranch's environment. Many ranchers may not have that kind of time left to try to do it again — if they have to sell those cattle.

"It's a part of yourself that you have to liquidate," he says.

Some ranchers keep extra hay just in case they have a bad winter.

"This is the history of ranching; the people who were prepared for bad times were more able to survive. Every year is a little different; we don't know how much snow there will be," DelCurto says.

Anything that helps extend the grazing period — whether spring or fall — can help reduce costs of production.

"Some ranchers in our area feed hay until early May (sometimes later if it's a late spring). If they go out on pasture or range earlier, they pay the price later because this doesn't allow forage to get a good start. The old saying that 'range readiness is when the grass is taller than your haystack' is all too true. It might be that way again next spring, with the price of hay," DelCurto says.

Ranchers need to find ways to maximize use of grazed forages and to extend the grazing period. **HW**

Tips for windrow grazing

Glenn Shewmaker, Extension forage specialist at the University of Idaho, says that if it's managed properly, windrow grazing gives more efficient harvest than letting cattle graze a field that hasn't been cut. They waste more if it isn't cut. Due to trampling and fouling of the forage, the amount lost rises.

"You can gain another step in harvest efficiency with strip grazing windrows, making cattle clean up a portion before letting them into the next section. A two to three day allocation of forage is a good compromise of labor, to move a fence. We can improve harvesting efficiency 10 to 30% or more by using a strip grazing technique," he says.

The best way to use temporary fence is to set the fence perpendicular to the windrows, especially when there is snow covering the windrows. Shewmaker says this method is more effective if the snow is deep or crusted because then cows know where windrows are and the snow will be broken as they move into the next section.

Cattle will root down through the snow to the windrow because they know where it is. It's more efficient for the cows and easier to manage the strip grazing.

"You can also adjust more precisely the amount of feed that you allocate each time you move the fence," he explains. **HW**