



Get an Extension

Tips for extending fall and winter grazing.

by Heather Smith Thomas

Extending the grazing season can help reduce production costs, since harvested feed during winter is the most expensive aspect of raising beef cattle. In dry climates ranchers often run short on late-summer and fall pasture, however, when productivity of cool-season perennial grasses is diminished during summer heat. There are various ways to increase forage production/utilization to ensure adequate fall grazing or sometimes enable cattle to graze through winter.

One method commonly used is to stockpile pastures, grazing them later in the season. Jerry Volesky, range and forage specialist at the University of Nebraska—Lincoln's West Central Research and Extension Center, says this practice works well in many situations.

The other option is to utilize perennial forages that were just lightly grazed during the summer, leaving a lot of biomass in the pasture for winter grazing.

Summer annuals

"Annual forages like pearl millet or sorghum-Sudan grass hybrids can be planted in summer and utilized in late fall," says Volesky. Some producers plant sorghum-Sudan grass and cut it once for hay. Rather than cutting the regrowth for a second

cutting, it can be left growing until frost. After frost, it can be grazed as fall/winter pasture.

Producers also have success with mixtures that include both warm- and cool-season species.

"These are often called cocktail mixes and contain cool-season forages like oats, turnips and oil-seed radishes, and a warm-season forage like millet or Sudan grass, planted in August. These mixes grow until frost and accumulate a lot of growth, with 1.5 to 2 tons per acre by the time they are grazed," he says.

"With these mixes it's best to wait until well after a frost to graze them, because with warm-season annuals you can run into prussic-acid problems after frost. Let them freeze down all the way, and then they can be safely grazed. Some cool-season species, like oats or turnips, wouldn't be completely frozen yet. A mix provides very nice grazing with good nutrient quality," he explains.

With a mix of plants, there is always

something that does well, even when growing conditions vary from year to year.

Ten years ago 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 forage 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. Test plots were continued for three years, 2008 through 2010."

The first plots contained five species of warm-season annuals, including Sudex, Teff (an annual grass plant), German foxtail millet, pearl

millet and grazing corn.

"Later we just planted Sudex — the sorghum-Sudan hybrid — around the first of July, to incorporate into our grazing system



PHOTO COURTESY OF JERRY VOLESKY

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to provide forage in November/December for some of our cattle.”

During the most productive year Hall said they were able to graze 100 head for 40 days on 16 acres, which exceeded their expectations. Under irrigation, and with some fertilization, the crop did well, he says.

The researchers applied between 40 and 60 units of nitrogen per acre, Hall explains. “You don’t want much because these plants are nitrate accumulators, and you don’t want a nitrate toxicity problem.”

With the crop, Hall says they can expect 70-80 animal grazing days per acre using strip-grazing.

“We use a rotary mower to make swaths through it where we want to run our fence — and use a single strand of polywire down the alley we’ve made,” Hall says. “We found that when we mow paths through the field, it thatches over the ground, protecting it from freezing so deeply when weather gets cold in the fall.”

That makes it easier to put tread-in posts into the ground for a hot wire.

“Much of our work with the dry pivot corners is to have more forage available in the spring, to get cattle off hayfields. We’ve used cool-season annual crops like rye, barley or triticale, planting in late summer/early fall to capitalize on fall and spring moisture before



►When selecting a crop for fall grazing, John Hall determines whether it will hold up under a snow load. Some warm-season annuals such as sorghum-Sudan hybrids work well because they protrude through the snow, allowing animals to find the plant easily. Making large windrows also helps, he says. Once they locate the windrow, cattle will root through the snow and find it.

the ground dries out too much.”

Hall says they’ve experienced good and bad years, depending on rainfall. A positive, he adds, is that it’s a low-input operation, aside from seed and diesel costs.

For fall grazing, the research center grazes alfalfa aftermath in hayfields, swathing what

would have been a third cutting. This is strip-grazed once it is freeze-dried and has less risk for bloat.

“We still try to keep ionophores or bloat-guard products out there for cattle to use while they graze this. It helps, but the big thing is having the crop wilted enough,” Hall says. “In our part of the country, during a mild fall that third crop can get up fairly tall and has enough coarseness that there’s not as much probability for bloat. On other years the third crop is very fine and lush.”

Swathing alfalfa before it wilts and freezes saves the leaves, he explains, and leaves more nutrient quality in the feed.

“We strip-graze it, preferably after it has frozen hard — so there will be less damage to the ground and plants with heavy hoof traffic on the alfalfa,” he says.

“Grazing probably reduces the life of the stand a little, but orchard grass comes in and makes up for it in terms of hay tonnage. Since we are not trying to sell dairy hay as a cash crop (just using hay as beef cattle forage), this is acceptable. To us, it’s worth it to be able to utilize the final growth as fall grazing for yearling cattle and replacement heifers.”

It is excellent feed for younger animals that need higher nutrient quality.

Wildlife can be a big issue on what you

Rake-bunched hay

David Bohnert, beef extension specialist and ruminant nutritionist at Oregon State University, Eastern Oregon Agricultural Research Center, at Burns, Ore., says one option in certain climates is rake-bunched hay, which is essentially raking windrows into numerous piles, like tiny haystacks.

“Our experiment station here at Burns was one of the first to publish data on this method. Many ranchers in our area use rake-bunched hay for fall and winter feed, and it works very well. Hay in these piles retains its quality, like baled hay,” says Bohnert.

There are a few things to keep in mind when considering this alternative, he says. “First is making big enough piles, so cattle can find them when they get snow-covered. Piles can work well in deep snow because they are taller than a windrow.”

One trick is to make sure the hay isn’t too dry when it’s raked.

“It needs enough moisture to stick together — probably a little more moisture than if you were baling it,” he says.

These piles continue to dry a bit more than baled hay, and you want the hay to bind together in the pile. If it’s too dry and fluffy, wind may disrupt the piles. If you get a big windstorm, those piles may be gone, if they haven’t had time to settle.

Bohnert says it’s best to rake the hay a little green, and it will require a special rake to get the hay into piles.

“Even if the hay is so moist there’s a little fermentation in the piles, cattle really like it; the hay becomes sweeter,” he says. “The piles work nicely in our area because we are haying in mid- to late summer and don’t get much rain at that time. We don’t get much

precipitation until winter, and then it is predominantly snow, so the piles tend to keep very well.”

The technique wouldn’t work in western Oregon, where there’s more rain, he notes. “The hay would rot in the field.”

The piles generally contain 150 to 200 pounds of hay.

“Everyone makes them a little different. The advantages are that you don’t have to bale and haul the hay, or haul it back to the field to feed cattle,” he says. This eliminates the major expense and time spent for hay harvest.

Another advantage, he says, is that cattle graze the forage where it was cut, adding manure/urine to the field to fertilize it for next year. You aren’t taking nutrients from the soil and hauling off the hay to feed somewhere else.

To utilize rake-bunched hay most efficiently and effectively it helps to strip-graze, Bohnert says, but many people don’t want to mess with electric fencing.

“They just turn a lot of cows into that field,” he adds. “The waste is higher, but it all adds up to more nutrients put back into the soil. Rake-bunching is handy in fields and pastures where it’s not feasible to haul hay. This method allows you to harvest hay and utilize it, even if it’s not possible to go in there with a big truck or stack-wagon to haul it.”

Another advantage, he says, rake-bunching allows you to harvest the forage at an appropriate time for adequate quality, and still utilize it as hay rather than stockpiled pasture, which declines in quality as it matures.

might utilize for fall grazing, says Hall, explaining that it's a different situation in his area than it is in the Southeast.

"Those producers don't understand why we are not stockpiling forage," he says. "When we do, we are just feeding the elk. It costs more to put it into a bale, but then we can stick it behind an elk-proof fence."

In the Intermountain West, farmers began growing corn when corn prices increased," Hall says. "We have short-season varieties that work in our region, and opportunities for grazing cornstalks. An advantage to grazing over baling cornstalks is costs (cattle do the harvesting), but the difficult thing on many farms is providing water for cattle."

The times have changed, too.

"In the Midwest in the 1970s nearly every farm had a small feedlot and fed their own crops to a few cattle. When that part of the industry changed, moving to bigger feedyards on the High Plains, farmers still had facilities and waterers even though they were no longer feeding cattle. In the corner of one section there's usually a waterer, and it's easy to graze cornstalks. Water is a bigger challenge in our part of the country," he says.

Hall says cornstalks are a portion of the most underutilized crop aftermath in the United States.

"If we bale them, however, there are baling costs, transport costs, and we have a product with a lot of indigestible fiber.



► Stockpiled forages can work well for fall and winter grazing if the snow doesn't get too deep.

Cattle eat leaves, husks and top third of the plant, leaving the coarse stalks. This works great for corn farmers because they still have some residue on the fields to meet their conservation plan. Cattle can selectively graze parts of the plant that have higher nutrient quality."

When selecting a crop for fall grazing, Hall determines whether it will hold up under a snow load. Some warm-season annuals such as sorghum-Sudan hybrids work well because they protrude through the snow, allowing animals to find the plant easily. Making large

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"When you have a field with lower production — not worth baling — you can cut and rake it into piles the cattle can use," Bohnert says, noting that ranchers often use rake-bunched hay when they bring cows home from summer range, sometimes grazing them through the winter. "The cows eat the piles and aftermath growth, and it's usually good-quality forage. Producers take advantage of compensatory gain when they bring cows home from late-season desert range."

It's like feeding high-quality hay, whereas in pastures simply stockpiled the forage would have lost a lot of quality.

"Our studies and other studies in Nebraska and Montana have shown that stockpiled forage — even though you don't have haying expense — loses a lot of quality by late fall. You have to use supplement, and the cattle won't graze all of it. By contrast, if forage is in piles cattle use it better," he says.

There are significant advantages, but there are negatives as well, he says.

If you get deep snow that crusts, cattle won't want to break through it to get to the hay. Deep snow or strong winds can be issues, as well, and if you have significant snowfall or wind, the rake-bunched option may not work as well.

In the right conditions, it can be a great alternative and save money.

"You just need to be aware of limitations and risks. Swath/windrow/rake-bunch grazing seem to work best in the Intermountain West. When you get into Oklahoma, west Texas or New Mexico, it can be more risky because those areas tend to get monsoonal rains," he



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says. Several inches of rain at once could soak the windrows or piles and spoil them.

Rake-bunched hay won't work for everyone, but can be a good option in some regions and climates.

"In our part of Oregon, for instance, we see a lot more rake-bunched hay than windrow grazing," says Bohnert.

Ranchers just need to tailor their haying/grazing methods to their own situation.

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windrows also helps, he says. Once they locate the windrow, cattle will root through the snow and find it.

Stockpiling perennial pastures

Another option is to use perennial forages that were lightly grazed or not grazed at all until fall or winter. Both cool- and warm-season perennial grasses provide options, says Volesky.

Quality of the stockpiled forage will be set by its growth stage and maturity at the time it freezes down, similar to what it would be if it were cut for hay at that point, Volesky explains. Its quality will eventually decline over winter as the plant slowly deteriorates and leaves fall off or blow away.

Some grasses stockpile better than others.

“A common practice in Missouri, Iowa and other regions where producers grow a lot of tall fescue is to graze it a little in early summer, then let the regrowth accumulate,” says Volesky, noting that tall fescue stockpiles fairly well for later use.

Ryegrasses are often utilized for fall/winter grazing. Depending on the variety and your climate, these may be annuals or perennials. The farther south you are, the longer ryegrasses will grow into winter, providing high-quality green forage.

“In Oklahoma, for instance, they stay green all winter,” he says.

Even some of the grasses that don't retain their quality or nutrients as well during winter can be utilized with a little protein supplement, which can be cheaper than feeding hay. Letting cattle harvest their own feed is generally best.

“This is a common practice in our Nebraska Sandhills, with a lot of dormant-season grazing,” Volesky shares. “Our killing frosts are generally in early October. By November or December producers are starting to graze winter pastures that have been stockpiled. For the first month or two, forage quality is still fairly good and may not require supplements, but by January it's usually a good idea to provide protein for those cows.”

The supplement can be provided three days a week or every other day — which is adequate to supply the cows' needs — or as blocks or tubs that cattle can use free choice. Your choice of supplement may depend on



PHOTO COURTESY OF JERRY VOLESKY

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where cattle are grazing and ease of access to haul it out to them as alfalfa hay, pellets/cake, tubs or blocks.

“There are many options today for stockpiling forages. Each producer's situation is different, so you might experiment with different kinds of forages to see which works best for your location and situation,” Volesky advises. Talk with local extension experts to find out what varieties might work best

in your region, or look at what some of your neighbors are using.

“In some cases you might add one more step — windrowing the forage for later grazing. You can allow whatever crop you planted to grow to optimum stage of maturity in September or October, then put it in windrows for winter grazing. This is just another form of stockpiling,” he explains.

Stockpiled pasture or windrows can be utilized by turning cows out in that field, or strip-grazing with temporary electric fencing.

Southern options

Stephen Blezinger, a cattle nutritionist

at Sulphur Springs, Texas, says there are a variety of plant species that can be utilized for forage late in the season in the Gulf Coast states that have warm climate and abundant rainfall. These forages will be different from species in northern or drier climates.

The wetter area includes much of Texas, Louisiana, Mississippi, Alabama, Georgia and Florida, he says.

“In Texas, if we draw a line north and south through the middle of the panhandle (through Wichita Falls and on south), differences will be applicable to everything east of that line. The west Texas climate is so much drier that plant species change, and we are mainly looking at range pastures, except where wheat or other annual pastures have been planted,” he says.

Most perennial grasses used in the Gulf region for hay and pasture will be a variation of Bermuda grass, he adds. Coastal Bermuda grass is dominant, but another might be common Bermuda.

“In recent years there's been a move toward using more of another variety called Tifton 85, but it's a small percentage of the total,” he says.

“We also see a lot of Bahia grass and other types of perennials like rescue grass and Johnson grass. Areas that were in row-crop production often go to Johnson grass. It's a hardy grass and tillers like quack grass,” says

“A common practice in Missouri, Iowa and other regions where producers grow a lot of tall fescue is to graze it a little in early summer, then let the regrowth accumulate.”

— Jerry Volesky

Blezinger. It is considered a weed, but it does make forage for cattle.

He says some producers prefer to plant various types of Sudan grass or a Sudan-sorghum hybrid — a summer annual.

“Generally you get one really good cutting and maybe a second cutting if you get it planted early enough, if conditions are right. It produces a lot of volume, especially some of the new varieties like the brown midrib. Digestibility is higher. Protein values are not very high, however, testing about 7% or 8%. Many people use it for hay production. If conditions are right, with enough moisture, regrowth after haying will provide fall pasture,” he says.

This particular species, however, has a bad habit of accumulating nitrates.

“I tell people to test it for nitrates, particularly after it has been stressed by drought or late in the season. You can get some extension of pasture into the fall with this, but you just have to be careful with it,” explains Blezinger.

Extending the grazing season boils down to aggressive pasture management.

“The typical farm/ranch in our region needs to cross-fence their larger pastures more, and to start using them in a rotational system. This would result in better grass production, and pastures could handle the

dry periods better. This would apply to summer perennials like Coastal, in which you could put up hay and then use the aftermath for grazing,” he says.

Blezinger points out that many producers simply fertilize in the spring, explore costs for ammonium nitrate, purchase the cheapest option and put on a certain amount per acre.

“Not many do soil tests to see what they really need and what they might do to extend production into the fall,” he says.

He lists several varieties of ryegrass, wheat and oats as the main winter annuals for grazing in his part of the country.

“Some regions cattle can graze year-round, if managed properly. In eastern Texas, normal rainfall may be between 35 and 45 inches of rain annually. Some people do a better job of managing pastures and coming into fall with stockpiled grass 6 or 8 inches tall. The problem we sometimes run into in late fall and early winter, if we get significant rainfall at that time, is deterioration of standing grasses, which lowers the quality,” he says.

On a normal year, ranchers are feeding hay to meet cattle’s dry-matter needs, unless they’ve planted winter annuals, he explains. A producer might plant ryegrass or oats that would keep growing through winter.

“On my little place, I’ve planted ryegrass

and clover, but some people mix three or four varieties of plants to seed for winter grazing. These tend to germinate at a little different time and stretch out the growing and grazing season from late fall until May. By then, summer perennials are growing adequately for grazing,” he says.

By late December and into January, stockpiled pasture (that matured in the fall) has so much rain that it is deteriorating in quality. Grass is still there, and cattle can still utilize it as dry matter, but the nutritional value is poor, he says.

“You need a protein supplement. It’s still a good idea to stockpile pasture, to have the extra dry matter available, because it can save money compared to feeding hay from November all the way through winter. The challenge is that every year is different. Over the past 12 years we haven’t had much consistency in weather. You can’t always plan how to manage cows through winter. It takes flexibility. You might have a plan, but if certain things don’t happen the way you planned, you need Plan B or C.”

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Editor’s Note: Heather Smith Thomas is a freelance writer and cattlemaster from Salmon, Idaho



PHOTO COURTESY OF JOHN HALL

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