



IRRIGATED PASTURE MANAGEMENT

PHOTOS BY DAWN GERRISH

Grazing irrigated pasture with intentional management offers productive alternative to crops, hay.

by Heather Smith Thomas

Grazing rather than haying irrigated ground can be more productive, especially with rotational grazing and good management. Irrigated pasture has high production potential and regrows rapidly if it receives water right after it is grazed.

In many situations, well-managed pasture under irrigation will meet or exceed hay production potential due to more days of active growth and multiple “harvests.” It only grows once or twice for hay (sometimes more, in a long growing season), but you can have more harvests with rotational grazing.

Traditionally, most people have thought good irrigated land was worth too much as crop ground to use as pasture. However, a person can make more profit per acre using it for beef production, depending on how you manage the pasture.

Jim Gerrish, American Grazinglands Services of May, Idaho, has used innovative grazing systems for many years, first as a grazing specialist with the University of Missouri Forage Systems Research Center and now as a stockman/consultant in east-central Idaho, practicing these principles on his Circle Pi Ranch in the Pahsimeroi Valley.

“We do daily pasture rotation on center pivots and put water back onto a strip the day after it’s grazed. Most of our pastures are grazed four times in a season,” he says. “Compared to what is considered good hay production in

our valley (with a short growing season), on average we get 40% to 50% higher dry-matter production harvesting it with livestock than if it were all taken as hay.”

Pastures are strip-grazed under pivots, with stock water spaced along the inner circle, which makes moving temporary fences very efficient, shortening the distance.

“On our 300-acre pivot, the strips of fence I move each day are about 1,000 feet,” says Gerrish. “It only takes about 25 minutes to take a fence down for the day’s move and reset it for tomorrow’s move.”

Irrigating options

Eagle Valley Ranch near Salmon, Idaho, began using management-intensive grazing (MiG) about 10 years ago, grazing cattle on irrigated forage they originally harvested for hay. Some of the

Above: “Compared to what is considered good hay production in our valley, on average we get 40% to 50% higher dry-matter production harvesting it with livestock than if it were all taken as hay,” says Jim Gerrish, American Grazinglands Services, of grazing under center pivots at his Circle Pi Ranch in the Pahsimeroi Valley, Idaho.

grass pastures are pivot-irrigated, some of the hay fields have wheel lines, and some pastures are flood-irrigated. For grazing, they put in water developments and tanks for the cattle.

Grass grows more quickly in spring and early summer than in July and August. Irrigation helps keep it growing.

Compared to flood irrigation, pivot irrigation is an easier way to keep things wet when it’s hot. Some pastures can be watered more effectively, putting a certain amount of water on them; whereas, it can be hard to get across them with flood irrigation. The water won’t go as far. With a pivot, on a really hot day you can deliver the needed water and keep it wet.

Regarding a forage mix, the ranch just kept what was already

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there. In some fields it was a mix of timothy and brome. If they get behind on grazing during early summer, they can cut hay. They have one pivot pasture of 200 acres they cut for hay if it starts to make more stalks than leaves.

Timing the move

The hardest part of pasture management is knowing when to turn the cattle in. You don't want to start grazing too early in spring, but if you have 1,800 acres you are trying to graze — and keep it all grazed at the proper time so it will keep growing — it can be hard to time it just right.

Grass is short in early spring, so it's important to not stay on it very long. That time of year Eagle Valley Ranch just flash-grazes, giving the cattle a few bites and moving on. After that, the grass may start to get ahead of the cattle. That's when a person could bring in some custom-graze animals for about three weeks. Otherwise, the grass will always get ahead of you on a wet spring.

Eagle Valley has a large number of cows, but with 1,800 acres it's hard to get over it quickly enough to keep the grass evenly grazed. If the grass gets ahead of them and has more stalks than leaves, it's

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not very high-quality calf feed. They can cut it for hay when it gets to that point, and let it regrow for grazing later. Having cattle on it most of the time is healthiest for the pasture, however.

Adding fertility

Intensive grazing adds fertilizer and helps keep pasture productive. Karin Lindquist, a forage and beef specialist from Stettler, Alberta, Canada, says that removing forage as hay exports nutrients from the land — unless you feed that hay to cattle on the same piece of ground.

“Soil nutrients must be returned to maintain productivity. If you continually harvest hay, taking nutrients from the soil, you must add them back with fertilizer, which is an added cost for haying,” she explains.

By contrast, if cattle are grazed

on that piece of land, organic matter and fertilizer are put back into the soil via urine, manure and trampled vegetation.

“Cattle return 80% to 90% of what they consume back onto the land. When cattle are mobbed up with intensive grazing and moved to new pasture frequently, each area gets an equal amount of trampling/manure to stimulate regrowth. This adds fertility and reduces the need for purchased fertilizer,” she says.

Eliminating the expense of fertilizer may tip the scales toward making grazing the more profitable situation.

Bart Lardner of the University of Saskatchewan says you get better production with organic/natural fertilizer as opposed to chemical fertilizer, and longer benefit. It's a slower-release mechanism, with

more benefit over time. When you put up hay you also have to consider harvesting costs, fuel, machinery repair, loss of leaves when putting it into a bale, transport costs, etc.

Under intensive grazing systems on irrigated fields, there is potential to produce a lot of beef.

“We can grow some very high-producing forage mixes, and if a person is willing to rotate cattle through (moving them at least once a day) and strip-graze those pieces, you can get a lot of production,” says Lardner.

With intensive grazing, putting cattle on a strip for a short time and moving on, you give forage ample recovery to be regrazed many times during the growing season. In this situation you can possibly grow more total forage, without any inputs for fertilizer or haying costs, or risk of bad weather during harvest.

Cattle can graze rotationally throughout the growing season and take advantage of high-quality forage at all times. Haying can be risky when trying to produce a high-quality hay crop because you depend on timing and weather conditions. What might have had the potential to be a high-value crop may be damaged by rain, and ends up being lower-value hay.

The potential for significantly reducing cost of machinery, maintenance, fuel, etc., is a factor when weighing options. Some people don't mind the labor involved in MiG, while others may think it is too much work.

“Setting up electric fence, watering points and time spent moving the cattle is cheaper, however, than costs associated with haying,” Lindquist says. “Often it comes down to personal preference, whether you want to play in the tractor or move cows.”

In most cases it doesn't have to

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be a choice of haying or grazing.

“Producers have the option to do both,” says Lindquist. “It might not be both the same year, but it could be — especially in a good year when forage grows early and quickly. You could put up one crop of hay, let it regrow, then graze it; or you might give it a rest from haying for a year and graze it rotationally all summer instead,” she explains.

“If it’s high-quality forage and there’s opportunity to custom-graze stocker cattle after hay harvest, this can be a profitable second crop. You could bring in yearlings to pasture on high-quality forage for good gains on the cattle. Cow-calf pairs also benefit, with their high nutrient requirements for milk and gains on calves,” she says.

Irrigated pasture can also produce adequate quality and quantity for finishing beef on forage.

She recommends evaluating

management goals, the costs involved with various options, and what kind of profit you could potentially make from that piece of ground.

“It doesn’t always have to be one or the other,” she concludes, “because you could do both.”

A grass for calves

Scott Bedke, a fourth-generation rancher in southern Idaho, manages 1,400 cows, weaning calves in October. He backgrounds them on lush regrowth on irrigated hay ground, where they gain weight for 45 days before sending them to a feedlot. At first those hay fields were alfalfa, but there was always risk for bloat. Then he tried triticale, which also made good hay and calf pasture, but it had to be replanted every year.

“We started looking for a perennial grass that we wouldn’t have to tear up and replant every year. We tried different varieties. One was a mix of four grasses —

two cool-season grasses and two warm-season grasses,” he says.

His mix includes 30% early-maturing orchard grass, 30% tall fescue, 25% late-maturing orchard grass and 15% perennial ryegrass.

The grass performed well for both hay and pasture, and the calves liked it, reports Bedke. “The hay tested well; it was always about 100 on the TDN (total digestible nutrients), and 11% protein, which is pretty good for grass hay. So we put the whole pivot into this grass mix.”

After hay harvest, the regrowth is used as pasture for the weaned calves.

“This worked so well that we put the next field (adjacent to it) into grass. When calves go into that grass in early October, the regrowth is up to your knees,” he says.

The hay crop during summer provides 5 tons to the acre, and the regrowth feeds the calves through fall.

“This takes fertilizer — about 125 units of nitrogen — and we also harrow the ground. But when you compare this effort and expense against putting the weaned calves in a custom feedlot for 45 days of backgrounding, this change in our historic practices has made us more money than any other single thing we’ve done,” says Bedke.

“There is still enough grass that we can leave 150 replacement heifers in those fields after we take out the weaned calves to sell — and we can leave the heifers there until April,” he says. “We supplement with a little alfalfa hay during winter, but this grass is their main diet, and it stands up to heavy use. Our hay yields have not dropped, and we are coming into our fifth year with this seeding of grass.” ■

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