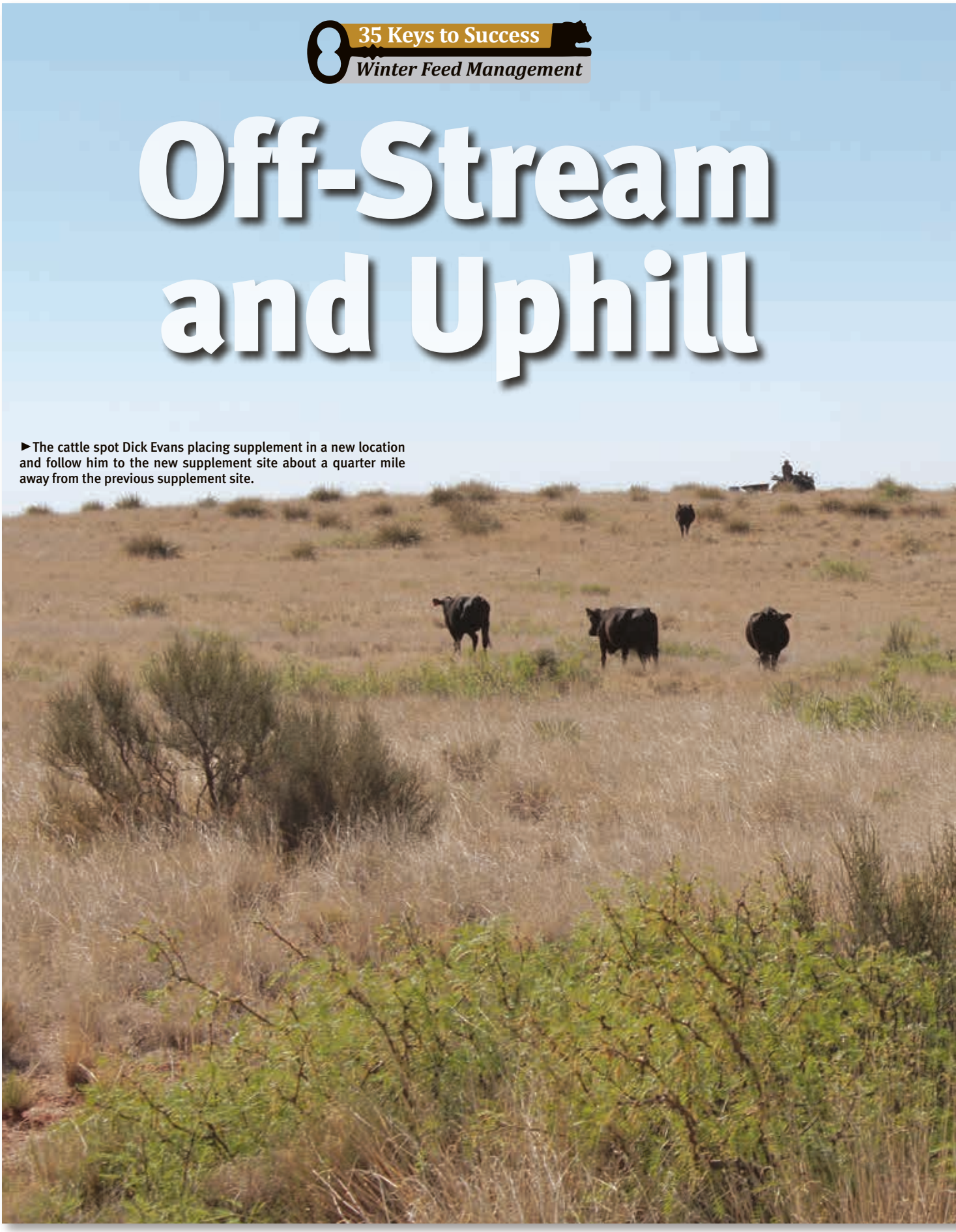
35 Keys to Success

Winter Feed Management

Off-Stream and Uphill



►The cattle spot Dick Evans placing supplement in a new location and follow him to the new supplement site about a quarter mile away from the previous supplement site.

Use these simple ways to get better utilization out of pastures.

*by **Paige Nelson,** field editor*

Basically lazy, the majority of cattle don't venture too far from water, shade and easy grazing. That's because they don't have much reason to, but new supplement strategies may turn that water-trough loafer into a 1,200-pound (lb.), protein-seeking mountain goat.

If left to their own, cattle tend to overgraze riparian, shaded and level areas while hardly taking a step, let alone a bite to eat, in the high elevations and far corners of the pasture. This inactivity results in areas of decreased forage production and increased invasive plant occupancy.

Building fence, herding, erecting shelters and developing water sources can be used to move cattle into the more rugged areas of the range. However, these practices are costly and labor-intensive and may never produce the return on investment that was sought initially.

Targeted grazing strategies may be the key to economically convince cattle to move off-stream and uphill. Research suggests strategic placement of attractive protein supplements will encourage cattle to travel further from water and trek across rugged terrain to satisfy their requirement.

Derek Bailey, professor of animal and range sciences at New Mexico State University (NMSU) and Chihuahuan Desert Research Center director, delved into just how far cattle are willing to travel. In his 2008 research study, "Comparison of low-moisture blocks and salt for manipulating grazing patterns of beef cows," Bailey looked at ways ranchers could manipulate habitual grazing patterns and target underutilized areas of the pasture.

Bailey and his research team conducted their study on the foothills of Montana during the autumn months using 32 Hereford and crossbred-Angus cattle. Supplements were strategically placed in 12-acre areas within 700- to 900-acre pastures that were away from water and on ridges that historically had received little use from cattle.

Results concluded that when a low-moisture protein block (LMB) was provided, cattle traveled further from water and used higher elevations. Activity level in

CONTINUED ON PAGE 270

PHOTOS BY ERIN EVANS

the individual cows increased when LMB was available; they spent less time resting during both the night and day.

Bailey concluded, "LMB is effective in attracting cattle to graze high and rugged rangeland."

J.A. Tanaka et al. examined the economic impact of strategic supplementation in "Grazing distribution: The quest for the silver bullet," published in *Rangelands*.

By using a model of a northeast Oregon ranch grazing 300 cows, the economists were able to quantify costs associated with supplementation and the added benefits of luring cattle into underutilized areas of the range.

The supplementation period was in the autumn months, and the authors assumed LMB to be fed at the manufacturer's recommendations for 91 days. Using a supplementation cost of $608 per ton and time requirements for supplementation of four hours of labor per placement, the authors estimated that strategic supplementation increased grazing costs by 23¢ per head per day and extended the grazing period for one month.

The researchers concluded, "Strategic supplementation was a profitable practice to replace the amount of hay fed in the fall with a lengthened grazing season."

Putting research into practice

Erin and Dick Evans, owners of Heartstone Angus LLC in the Burrow Mountains southwest of Silver City, N.M., heard about the research NMSU was doing and were able to implement strategic supplementation on their own a few years ago.

"When we heard about what they were doing, Erin and I both thought, 'Boy, are we dumb! We should have thought of this a long time ago because it's so practical,'" says Dick. "Our range runs from about 5,300 feet (ft.) to up over 7,000 ft. in elevation. In our area, some of our pastures are 4,000 to 5,000 acres. Cattle have to utilize a lot of area."

The Evanses manage the C Bar Ranch, and Dick says they have been suffering from drought conditions since 1994.

"A lot of this research is being done to help the ranch community improve the utilization of their rangeland in this prolonged drought," he says. "The research projects we have benefited from are really aimed at helping producers try to keep their numbers up as much as possible and still protect the rangeland."

Strategic supplementation is one such strategy.

"You're trying to create a spot where the cattle will come and loaf," says Bailey.

Cattle have a morning grazing bout and an evening grazing bout, he explains. "[Cattle] go to water, leave, go to an evening grazing spot, graze there, sleep nearby, then graze in the morning. What we're trying to do is get the cattle to pick that spot — where they graze and hang out — near supplement."

Using a supplementation strategy to lure cattle into typically underutilized areas works because supplements provide a nutrient that the native forage is lacking, Bailey says. "[Cattle] don't go to these spots because of the feed that's there, they go there because they love this supplement. It provides a nutrient they need."

PHOTO BY ERIN EVANS

►Heartstone Angus cattle had spent about a month in the pasture, but did not move into this area until supplement was placed here.

"We feel our first priority here is ensuring that we manage our pastures in a way that we are continually seeing improvement on our range conditions."

— Dick Evans

Using strategic supplementation

Targeted grazing requires some training and maturity. Bailey has found this strategy plays on the age and experience of the cattle using it and has not had much success with yearling-age cattle. However, it starts with training.

"If you're going to use LMB or any kind of a supplement as an attractant, [the cattle] have to know what it is first," says Bailey. He describes two ways to teach naïve cattle to use supplement. Both techniques feed off the cows' natural curiosity.

1) When feeding cattle hay, throw out some supplement blocks along with the feed. This works well when cattle are in small pastures because as they get bored, they walk over and check out the blocks. Within a day or two they will know what the supplements are and will be looking for them.
2) Another way to introduce supplement blocks or barrels is by placing them near water. As the cattle lay around water during the day, they will naturally get curious and start to sniff and then lick the blocks.

Like most work involving cattle, grazing manipulation strategies require fairly consistent management.

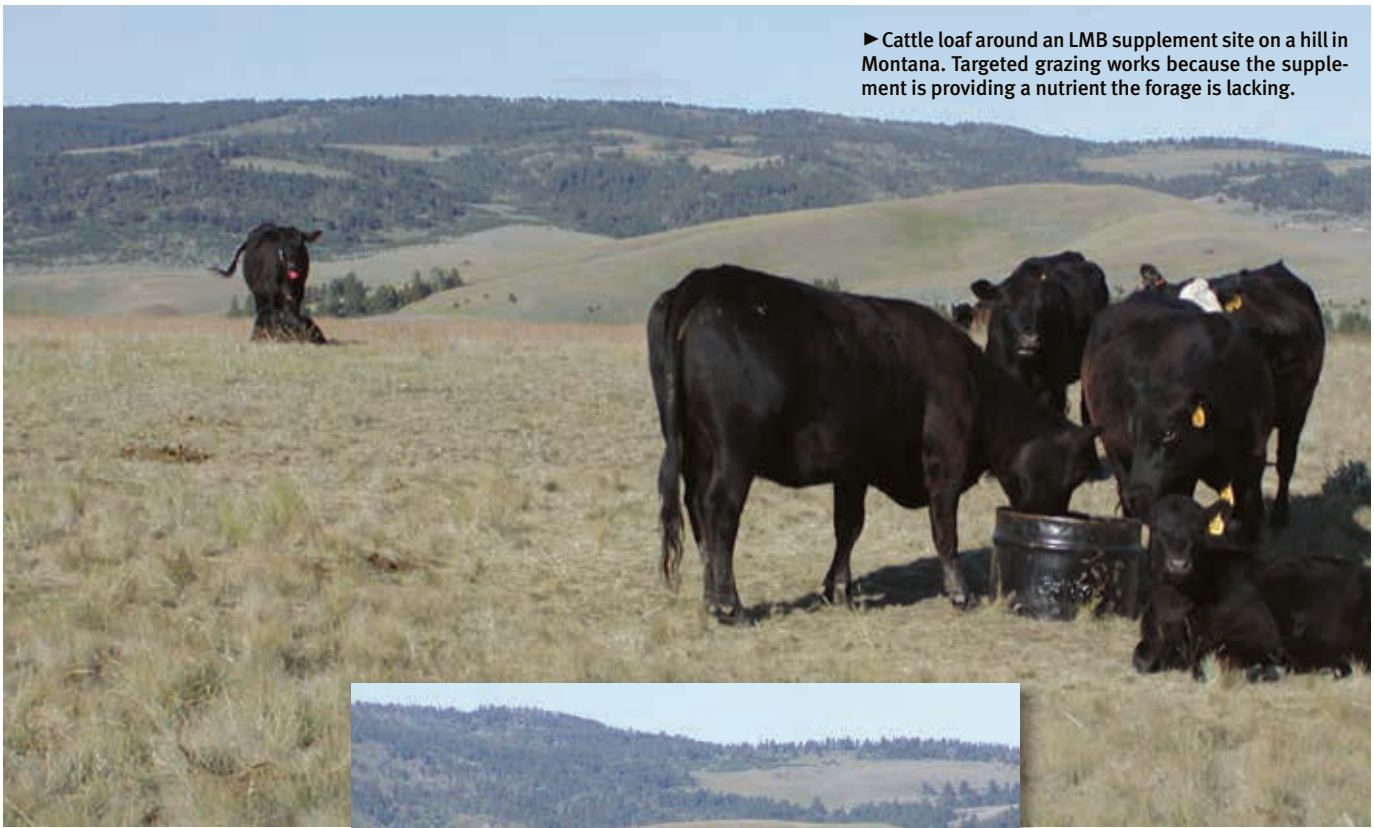
"It is a way to get cattle to realize that there is grass in these spots and to graze it. Supplement is not something that you can just do once, but it can be used to help encourage livestock to try new areas," notes Bailey.

Bailey has noticed some carryover effect in grazing patterns. In the first year of the two-year study, the cattle were herded to the supplement site. The following year the cattle returned on their own to that same site because they remembered it from the year before.

"You have to remember that cattle can go back to their old ways; you still want to give them encouragement," Bailey cautioned.

Bailey recommends taking at least one-fourth to one-third of the herd to the actual supplement spot. Then, depending on total herd size, space the supplement blocks or barrels accordingly. With a smaller herd, he typically places the barrels in pairs and sets them 20-40 yards apart.

"That way one cow cannot keep the other cows from using it, because at 20 yards apart she can't defend it," he



►Cattle loaf around an LMB supplement site on a hill in Montana. Targeted grazing works because the supplement is providing a nutrient the forage is lacking.

PHOTOS COURTESY OF DEREK BAILEY

►Placing LMB in spots that cattle are able to access but typically are not already grazing will help extend the grazing season and allow cattle to better utilize available forage.

explained. For larger herds that require more than two barrels of supplement, Bailey suggests keeping with the pair idea, but spacing the pairs 200-300 yards apart. "With larger herds we still put them in the same spot, we just used more area.

"That will keep them in that spot, then you just move the whole group somewhere else. Imagine you have a big ridge that's just not getting used like you would like. Put [supplement] up on one end of the ridge, then maybe move it to the middle, then move it to the other end. If you make a big move you might want to take them to it again," he said.

The Evanses have used this same technique.

"We took a group on a pasture that is a canyon, and it has high country all around it. We knew exactly where we wanted to take the cattle because they generally did not need to climb up there and obviously the canyon floors were getting over-utilized," says Dick. He loaded a protein tub on his 4-wheeler and drove to the top of a mesa. Erin and their daughter, McKenzie, brought the cattle right behind.

"We didn't have to do it a second time," he says. "Once they knew where the protein tub was, they spent the next two weeks up there. It was so useful. We use that strategy now in every pasture we're on."

Even with this supplementation strategy, Heartstone Angus consistently weans calves at 500 lb.

"[The forage is] low in protein and you're providing a protein supplement, so that makes it very attractive. Those cattle just love it, and they are willing to walk a long way to it."

— Derek Bailey

Timing the strategy

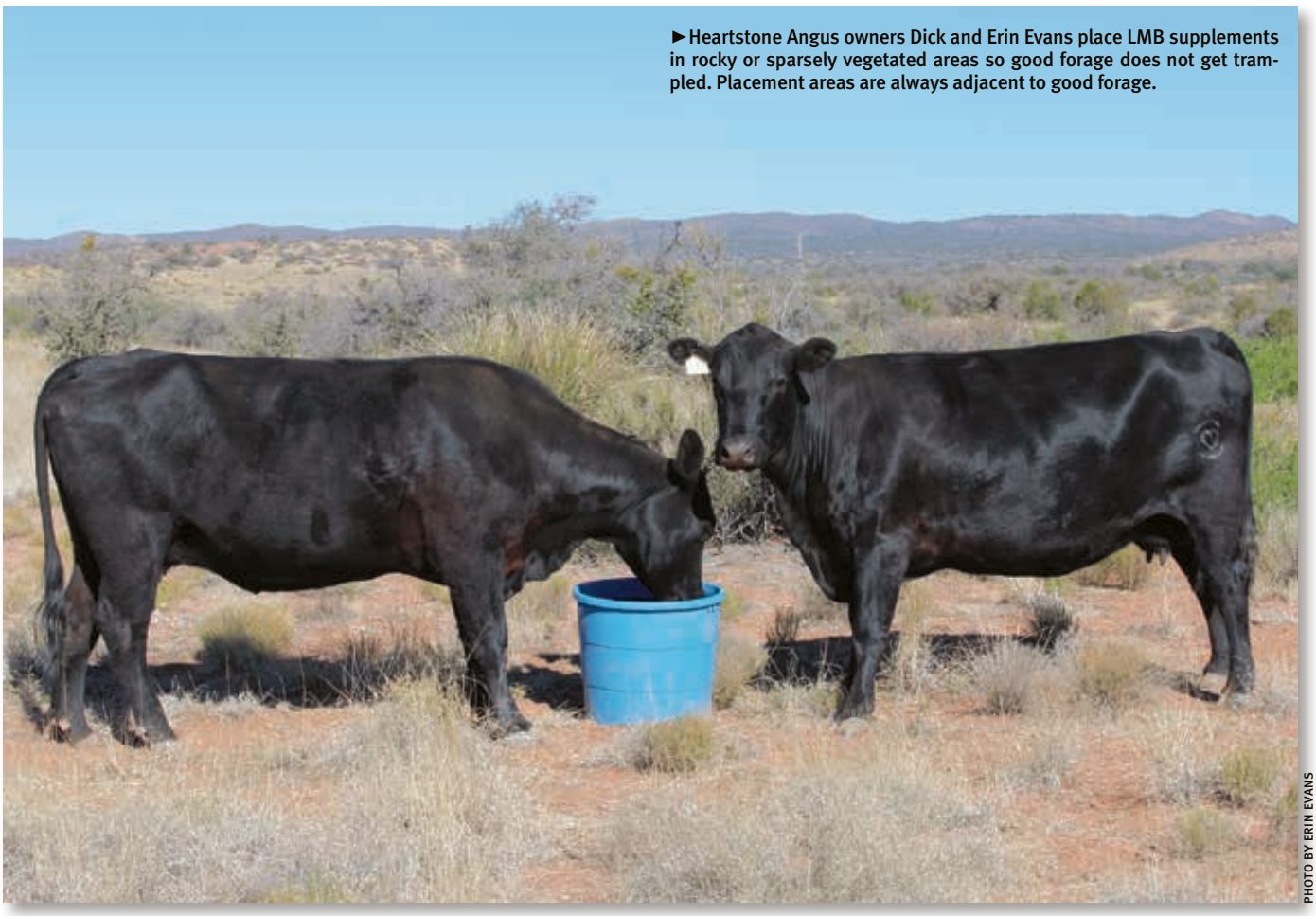
Supplementation using LMB works best during the fall and winter months when the forage is dormant.

"[The forage is] low in protein and you're providing a protein supplement, so that makes it very attractive. Those cattle just love it, and they are willing to walk a long way to it," says Bailey.

When the grass is lush and green and has a relatively high digestibility, LMB supplements don't work as well as attractants, he explains. The cattle are using the forage to meet their protein needs. However, it is at this time that salt supplementation can work very effectively.

"Salt works best when the forage is lush and green because [cattle] are getting so much moisture through the nice forage. The salt is needed to maintain their osmotic

CONTINUED ON PAGE 272



►Heartstone Angus owners Dick and Erin Evans place LMB supplements in rocky or sparsely vegetated areas so good forage does not get trampled. Placement areas are always adjacent to good forage.

PHOTO BY ERIN EVANS

balance. Salt tastes good when you have a high liquid intake," Bailey adds.

The Evanses have had mixed results with salt supplementation. They mix loose salt and loose mineral together.

"When we've tried to use salt to get them to an area, what we've found is that cattle don't need salt every day," Dick says. "There's cows that might come lick every few weeks."

Benefits noticeable

Before the Evanses took over C Bar Ranch, the ranch's previous owner had been managing a 275-head permit on the Forest Service ground. After she passed away, the permit was cut in half because of the range's terrible condition.

Thanks to careful management by Dick and Erin, their range conservation officer is looking into increasing the stocking rate. The district ranger for the area also told Dick that the deeded ground they use has never looked better.

"We feel our first priority here is ensuring that we manage our pastures in a way that we are continually seeing improvement on our range conditions," says Dick.

"LMB is effective in attracting cattle to graze high and rugged rangeland."

— Derek Bailey

Workable location

Bailey says strategic supplementation will primarily be utilized in the West, where pastures are traditionally larger and more rugged, but the principles behind supplementation can be applied anywhere "that cattle could potentially graze that they're not grazing."

When it comes to distance from water, Bailey says, "It depends on the problem. You need to put them in spots that cattle can use but aren't, and don't be afraid of taking them on some steeper slopes or some areas far from water. We've had good luck at up to 2 miles — 2 miles of not-too-rugged and a mile and half of pretty rugged terrain. We've had luck."

"Once they knew where the protein tub was, they spent the next two weeks up there."

— Dick Evans

The Evanses are excited about the results they have seen from strategic supplementation and are now working with NMSU on other research projects that will expand producers' ability to utilize more pasture.

"What I'm enjoying about the research that NMSU is doing on these projects is they're so practical and so usable in the industry for the desert Southwest," Dick concludes.

Editor's Note: *Paige Nelson, a cattlewoman and freelancer from Rigby, Idaho, interned with the* Angus Journal *this summer and has since joined the team as a field editor.*