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FEEDER INFORMATION HIGHLIGHTS

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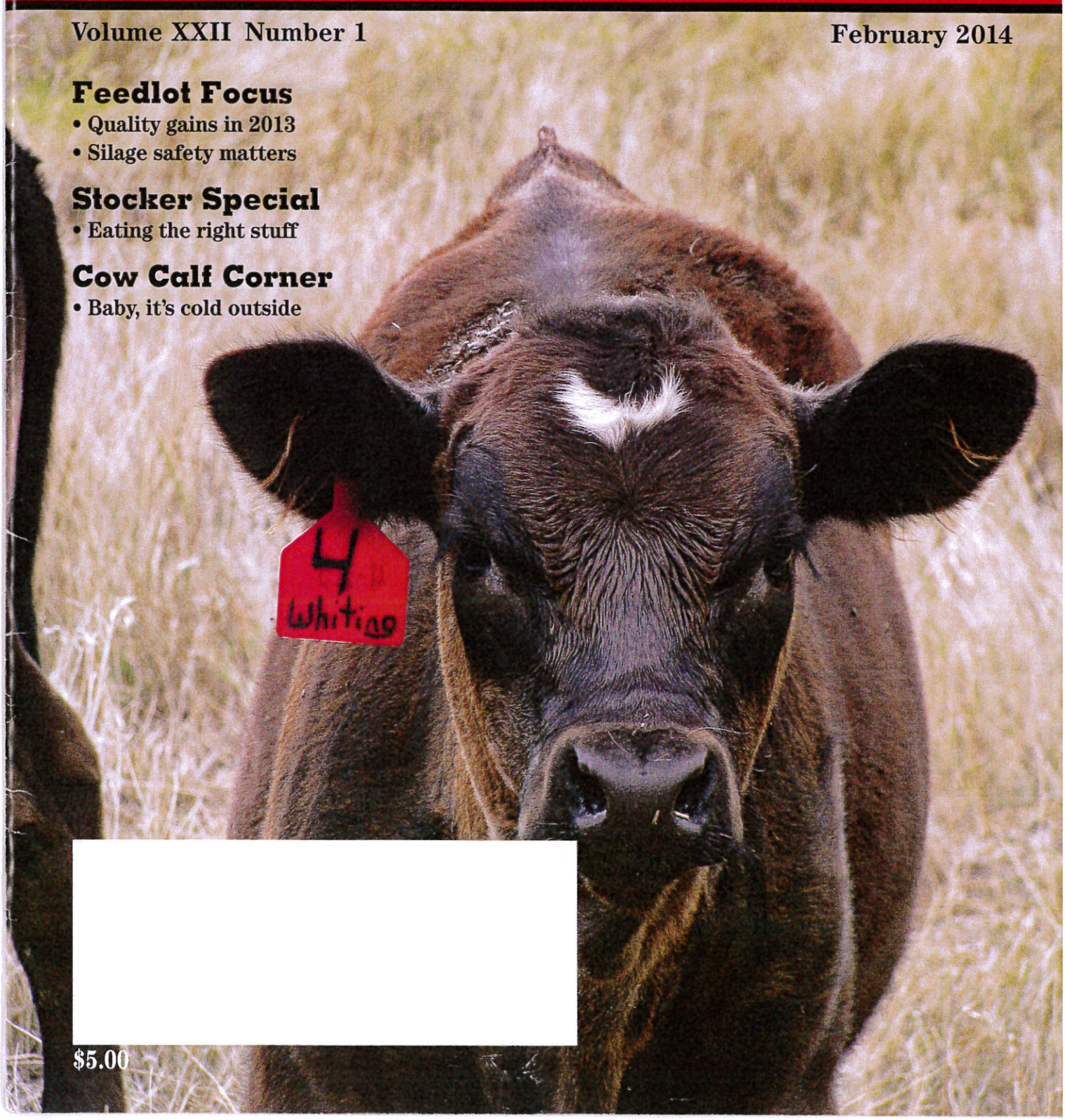

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BY TERRI QUECK-MATZIE

Eating the Right Stuff

It all comes down to protein. A recent study at the Dickinson Research Extension Center (DREC) at North Dakota State verifies the critical value of protein in grass-fed cattle production – with startling results.

Steers that grazed annual crops late in the grazing season showed a 25 percent edge in rib-eye size over those grazing only perennial grasses, and spent 25 fewer days in the feedlot to finish.

"Growth requires the appropriate combination of many nutrients, including protein," says DREC Director Kris Ringwall, Ph.D. "The challenge is finding adequate forage protein late in the season, and in our research, standing crops provided the solution."

The research began with a study of early weaning as a way to manage short forage supplies in drought by turning calves out in standing crops. Calves were confined for a week to ten days, then placed in the cornfield. They grew well, producing results comparable to grazing grass and indulging in mother's milk.

"When they're that young, they're naïve and they don't know what's under the husk, so over-eating is no problem," explains DREC Animal Scientist Doug Landblom, key researcher on the project. By the time they came out of the field, they were backgrounded and ready to move on up the chain.

That made Landblom and his cohorts wonder if a similar approach could be used for older calves, specifically yearling steers. "It seemed a lot of available forage was not being utilized," he says, "at a time when rising feed prices were pushing against profit." Landblom also knew an obstacle to grazing cattle later in the season is a lack of protein (9-10 percent crude protein is considered a minimum acceptable level), an obstacle that could be overcome by a change in diet. "We needed a different model, a different way of capitalizing on forages while maintaining protein quality."

The two-year research project began with 144 large-framed steers divided into three groups. The steers were weaned in early November, maintained on low-quality forage through the winter gaining less than 1.0 pound per day; then split into the three groups. Group one was sent directly to the feedlot. Group two grazed pasture only. Group three began on pasture, then switched to annual crops.

Groups two and three, the pastured animals, were put out on crested wheat grass in early May and fed there until the third week of August (104 days). By then, the forage was losing protein. Registering a crude protein content of 18 percent in early May, CP declined to 8.5 percent in early June. Other native grasses were at 13 percent CP in early June and 7 percent by early August.

At that time, half of the steers were moved to field pea-barley pasture for 27 days. There the protein

measured 15.8 percent. That dropped to 13.5 percent in early September. They were then moved to unharvested corn (CP of 18 percent in mid-August to 7 percent in early October) for 52 days before being shipped to the feedlot. Landblom says to avoid the danger of animals overeating the corn ("This time around they know what's under those husks.") the calves were fed a corn diet for four to five days prior to going into the field to prepare the rumen and to avoid sending them into the field too hungry.

"It's important to match the calves' growth needs to the forage," says Landblom. Monitoring forage protein levels and moving calves accordingly seemed to do just that. The calves in group three went to the feedlot heavier, and thus spent less time there – 61 days, compared to 91 days for the pasture fed calves and 142 days for the feedlot fed control group. "The pasture and annual crops group went into the feedlot at around 1,200 pounds. It's not far to go to get to 1,400."

When compared to the first group of steers that went straight from winter grazing to the feedlot, they gained faster with better feed efficiency, costing less to produce per pound. "After two months in the feedlot, carcasses were heavier and hung a higher quality grade," says Landblom. "It really works, on the farming side and on the net revenue side." Both feed and labor costs were less. In the study, Landblom found the pasture and annual forage group to be profitable without risk management procedures netting an average $9/steer, whereas the all pasture group netted a negative $30/steer and the feedlot netted a negative $298/steer. "Cattle are grazing animals and will do most of the work for you."

And there are other benefits, like waste management and getting the cattle out of confinement. Still, researchers admit the method is not for everyone; but for those with access to forage, water, fencing, and a desire to retain ownership, Landblom says this is a viable and practical option.

"There are those raising eyebrows at this, asking 'why not just harvest the grain?" adds Ringwall, "and in some parts of the country, where the grain business is more prominent, that may be more feasible. But we're such a grain-oriented country, we tend to forget about the forage component." FL