Outlook: Demand For Beef May Begin Growing

BROOKINGS — At this point in 2013, fed cattle prices have generally been disappointing, compared to 2012 forecasts which called for prices in the low $130s for much of the first half of 2013. Instead, slaughter cattle prices averaged $125.12 per hundred weight for the first six months of the year, explained Darrell R. Mark, adjunct professor of Economics at South Dakota State University.

"Prices ranged from $120.04 to $128.44 per hundred weight for the first half of the year across the 5-area market. The Spring high was posted in the first week of May, while the market appeared to find support for a summer low at about $120 per hundred weight for the last several weeks of June," he said.

In addition to weaker consumer demand during the first half of the year, Mark said higher-than-expected beef production contributed to the lower-than-expected fed cattle prices.

"Based on weekly data, federally inspected beef production totaled about 12.57 billion pounds from January through June 2013, which is only about 0.1 percent lower than during the same six months of 2012," Mark said. "Generally, smaller cattle inventories over the last several years were thought to result in lower beef production in the first half of 2013, even though cattle dressed weights generally trend higher each year."

From January through June, Mark explained that federally inspected cattle dressed weights averaged 791 pounds, compared to 784 pounds last year. While that 0.8 percent increase isn't far from the long term trendline, it is well below the 2.3 percent increase seen in 2012 as a result of increased feeding of beta agonists last year.

"Cattle slaughter numbers, of course, are the other driver behind changes in beef production. From January to June 2013, federally inspected cattle slaughter totaled 15.9 million head, about 1 percent less than in 2012," Mark said. "While that decrease in slaughter was enough to offset the modest increase in dressed weights, it is particularly interesting this year to examine the make-up of total cattle slaughter numbers."

He added that steer slaughter, which generally comprises about 46 percent of total cattle slaughter, was 1 percent lower during the first half of 2013. Fed heifer slaughter, though, was 4.1 percent below the same period a year ago.

"The drop in heifer slaughter during this time indicates that producers had made plans in the latter part of 2012 to retain additional beef heifers for breeding," he said.

The fact that beef cow slaughter ran about 11 percent below year-ago levels during January and February Mark said further supported expansion possibilities in the beef cow industry. "However, those plans changed in early Spring as feed prices remained high and dry conditions prevailed across key areas of cow-calf country," he said. "This likely contributed to the increase in feeder cattle placements during March and April as some of the retained heifers were placed on feed."

More dramatically, Mark said beef cow slaughter averaged 15 percent higher than a year ago on a weekly basis from mid-March through mid-May.

For the first half of 2013, fed steer and heifer slaughter was 2 percent lower than in 2012 while combined beef and dairy cow slaughter was 3.4 percent higher.

"This means beef production shifted towards more hamburger and processed beef items, as those generally result from non-fed cow slaughter," he said.

LOWER BEEF PRODUCTION IN THE SECOND HALF?

As we look toward the second half of 2013, Mark said it is likely that much-improved pasture and range conditions and prospects for much lower corn prices will result in increased interest in beef cow herd growth.

Therefore, he said beef cow slaughter is likely to drop in the months ahead and result in 10-12 percent less cow beef production compared to the second half of 2012. While cow slaughter and cow beef production will be the key to how much total beef production drops in the second half of 2013, fed steer and heifer beef production will likely decline around 4 percent compared to the previous year.

"Assuming those declines in both fed and non-fed beef production, the second half of 2013 will likely result in a counter-seasonal decrease in beef production of 2 percent compared to the first six months of the year," he said. "For the year, beef production is expected to be about 25.1 billion pounds in 2013, which would be about 3.2 percent less than in 2012."

Lower beef production in the second half of 2013 will be supportive to fed cattle prices. Likely, slaughter cattle prices will average in the $122 to125 per hundred weight range through the third quarter. Fourth quarter prices could average in the upper $120s, reflecting a normal seasonal increase in prices.

"While those prices are not much different than the first half of the year, they are 2.5 to 3.0 percent higher than in the second half of 2012. And, still higher prices could materialize if consumer demand improves through the end of the year," he said.

Looking ahead to 2014, Mark said cattle slaughter numbers will likely decrease by 6 to 7 percent for the year.

"Assuming dressed carcass weights increase by about 1 percent, beef production for the year will decrease 5.5 to 6.0 percent," Mark said. "This should support fed cattle prices in the upper-$120s to mid-$130s throughout the year, with an annual average price around $130 to 134 per hundred weight."

To learn more, visit iGrow.org.

Through The Pipes

Livestock Watering Design Considerations: The Possibilities With Piping System

EDITOR'S NOTE: Part 1 of this two-part series discussed animal behavior considerations in selecting a tank for a livestock watering system. Part 2 will explore the nuts and bolts of the actual system.

BY RITA BRHEL
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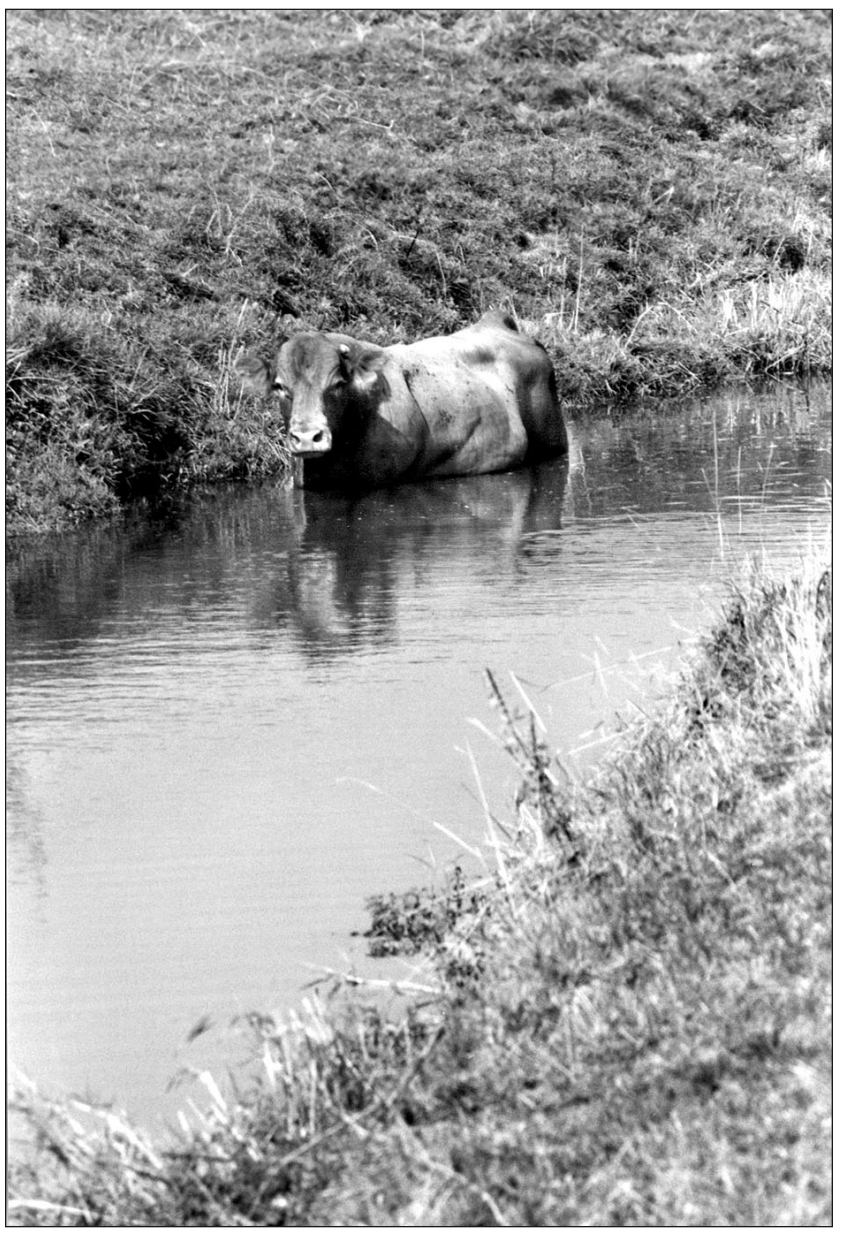

PHOTO: METRO GRAPHICS
A farm pond or watering hole are easy ways to water livestock, but they may not be the most efficient — or dependable — methods for producers.

Besides tank design, and how that affects animal drinking behavior, there is a long list of considerations in putting an adequate livestock watering system together.

"A lot of the system design is like irrigation design. Think about it like you're irrigating your livestock," said Bill Reck, environmental engineer for the U.S. Department of Agriculture's Natural Resources Conservation Service's East National Technology Support Center in Greensboro, N.C., and a national specialist on livestock watering designs.

The first item on the producer's to-do list is deciding where the water will be coming from. These sources may include a spring, stream, pond, well, and municipal pipeline. Water sources for livestock use need to be reliable, accessible, and of high quality. Saline areas and shallow wells, especially around cropland, may test above the standards for good drinking water.

"Municipal is rare, but if you have it, you're lucky," Reck said. "Unfortunately, that municipal source is not available in a lot of areas where livestock is going to be."

Once the water source has been identified and the tank determined, it's time to look at the piping system. There are four energy sources most often used, says Reck: gravity, where the water source is at a higher elevation than the tank and gravity does the work of delivering the water; solar, which uses energy for the sun in remote areas away from electricity; windmill, which uses wind energy; and gasoline or diesel.

Each has their own pros and cons. For example, gravity is a slower delivery of water, solar requires low maintenance but can be costly initially and is not portable, wind and solar both require a backup energy source on calm or cloudy days, and gas/diesel can be expensive. Some producers have experimented with hydraulics, which is relatively cheap to operate but costly upfront. And then there is the nose system — where the animal uses its muzzle to trigger water pumping — which only costs $400 per unit and requires no power, but the animals need to be trained to use it and the units are most efficient relatively close to the water source.

When designing the pumping system, Reck recommends aiming for the highest flow rate and to plan for watering multiple troughs at once even if not right away. This way, the system will be designed for the highest efficiency for any livestock watering situation. In addition, Reck's colleague, grazing lands specialist Kevin Ogles, suggests planning for backup power sources for area prone to thunderstorms or ice storms, where power outages could be a concern.

Slope of the land between the water source and the tank is a major point to note, Reck says. One foot of elevation change converts into 0.433 pounds per square inch change in water pressure. When this adds up, it translates into a lack of pressure for water going uphill or excessive pressure — possibly damaging the line — for water going downhill.

The pipeline is typically made out of PVC (polyvinyl chloride) or HDPE (high-density polyethylene) but steel can also be used. PVC and HDPE, both plastic, will be more cost-effective and easier to handle than steel, but plastic also expands and contracts with temperature changes by as much as two to three feet per 100 feet of pipeline and this slack needs to be added into the plans, Reck says.

It's important to note the frost line in the soil, so the pipes don't freeze in the winter, which not only stops water delivery to the livestock but also damages the system enough to require costly replacement. In the Yankton area, frost penetration is five to nine feet down into the soil profile, Beck says.

Additional slack needs to be planned in to accommodate loss in water pressure for normal pipe design. On average, each fitting requires an additional 10 to 15 percent of pipe length to make up for the pressure loss, Reck explains.

A pipeline is not complete without strategically placed air release and vacuum valves to reduce air in the line.

"Air in pipelines reduces efficiency and can damage pipes," Reck says.

Vacuum valves aren't needed on pipes less than three inches in diameter, but otherwise, both air release and vacuum valves should be placed at high points in the line as well as at one-quarter-mile intervals and the end of the line.

Another piece of equipment to not forget is a pressure tank, which reduces water hammer, a sudden change in flow rate that creates a stuttering of water pressure. In addition, pressure tanks provide some water storage so the pump isn't constantly cycling, which not only costs money but can cause damage. Other must-haves in the piping design is a shut-off valve as well as a float valve, the latter which keeps the automatic watering tank filled with water without overflowing.

While designing livestock watering systems seems complicated, the end result is an efficient way to delivery water to animals that works seamlessly with the livestock operation. A little forethought can go a long way in creating a low-maintenance, low-labor, low-cost system, Ogles says.

"There are some things to avoid besides piranha," he added. "But if the design is right, I've seen a herd drink out of a 25-gallon tank and all be OK."

Mono-Slope Research Project Webinar July 19

BROOKINGS — Cattle feeders interested in learning more about confinement systems can tune into the July 19, 2013 webinar where SDSU Extension faculty as well as other researchers will discuss the Mono-Slope Research Project.

The webinar runs from 1:30 p.m. CDT to 2:30 p.m.

"There is growing interest in feeding cattle in confinement buildings for a multitude of reasons — performance advantages, limited space for open lots, and keeping manure dry as well as preventing feedlot run-off and reducing environmental concerns. Oftentimes these confined cattle are housed in naturally-ventilated mono-slope barns," said Erin Cortus, SDSU Extension Environmental Quality Engineer and Assistant Professor at SDSU. "But questions remain regarding the air quality inside these barns, the emissions to the surrounding environment, especially as it relates to manure management decisions."

The webinar will feature results from a three-year research project conducted by Extension researchers and faculty from South Dakota State University, USDA's Meat Animal Research Center (USMARC), and Iowa State University Extension. The study looks at concentration and emission measurements in comparison with management techniques for mono-slope.

This webinar also provides attendees who apply, with a continuing education credit for Certified Crop Advisors and members of the American Registry of Professional Animal Scientists (ARPAS).

The scheduled speakers include:

• Beth Doranis the beef program specialist for Iowa State University Extension and Outreach, serving 17 counties in northwest Iowa since 1993. She received her Ph.D. from Oklahoma State University in Animal Nutrition. Her Extension efforts include educational programming for beef producers that manage over 1 million head of cattle on feed. Beth will serve as the webinar moderator.

• Erin Cortus received her Ph.D. from the University of Saskatchewan and Prairie Swine Centre Inc., in Saskatoon, Sask. Following graduate school, she spent over two years at Purdue University, working on the National Air Emissions Monitoring Study as the Data Analysis Manager. She joined South Dakota State University as an assistant professor and Extension Specialist in June 2009.

• Mindy Spiehsis a Research Animal Scientist with the USDA Agricultural Research Service at the Meat Animal Research Center in Clay Center, Nebraska. She received her Ph.D. in Animal Science from the University of Minnesota, and served as a Regional Extension Educator — Livestock Manure Systems at the University of Minnesota from 2004-2007. Her current research is focused on air quality around livestock facilities. She has conducted studies to evaluate ammonia, volatile organic compounds, and greenhouses gases from cattle waste when wet distillers grains with solubles are fed to finishing cattle, and is currently evaluating the effect of multiple feed additives on odor and gas concentrations on the feedlot surface.

On the day of the webcast, go to www.extension.org/58813 to download the speaker's power point presentations and connect to the virtual meeting room. First time viewers should also follow the steps at: www.extension.org/8924.

To learn more visit, iGrow.org.