

Sandhills Update



[PHOTOS BY SHAUNA ROSE HERMEL]

Story by
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When researchers at the University of Nebraska (NU) released their data on the revolutionary Sandhills calving method and how it eliminated scours, the benefits to commercial cow-calf operations were obvious. Cutting calf mortality from one-tenth of their crop to zero seemed like enough incentive for any beef

Scours-plagued herds find long-term solution in Sandhills system.

producer. (See “The Sandhills Shuffle” in the March 2004 *Angus Beef Bulletin*, available online through a back-issue search at www.angusbeefbulletin.com.)

With more data released to substantiate NU’s original findings, David Smith, the research scientist who directed his university’s original studies, has already seen the adoption of the system by large-scale calf producers who experienced heavy losses to scours on a regular basis and had tried almost everything else.

“These producers can be losing 10% or more of their annual calf crop,” he says. “Even at today’s

prices, you can’t keep doing that forever.”

What he finds exciting is that once the system is implemented, scours remain under control as long as the Sandhills principles are followed. Scours-plagued herds that began the regimen in 2000 are still scours-free.

Smith adds that not all producers incur the kinds of losses that justify a change.

“If you don’t have a problem with scours, then whatever calving system you are using is probably fine,” he says. “We are just offering another way for those who do have problems.”

The Sandhills system uses physical separation to prevent the spread of bacteria and viruses that are responsible for calf scours. Cow-calf pairs are grouped by calf age to keep older and younger animals in separate pastures. Cows that have not calved yet are regularly rotated into new pastures so newborns are not exposed to the germs spread by older calves.

“By keeping the younger calves away from older calves, we prevent transmission of germs,” Smith explains. “Also, by moving pregnant cows to new calving areas, calves are not born in polluted areas.”

Buildup of pathogens

He recalls that the system was inspired by observations that the incidence of scours increased as the calving season progressed if calves of all ages were allowed to commingle in a common pasture.

“The later calves were more likely to get scours than the earlier ones,” Smith says, adding that this phenomenon was a strong indication that an actual buildup of pathogens was occurring. “We concluded that segregating calves by age was the only way to break that cycle.”

He notes that for the system to work properly, the age difference

between calves in the same grouping should not exceed a week. This requires eight separate pastures (see Fig. 2). Cows are turned into the first calving pasture when the first calves are born. After a week, cows that haven’t calved are moved into a second pasture, with cow-calf pairs remaining behind. After a week of calving in the second pasture, the cow-calf pairs stay, and pregnant cows are moved to a third pasture.

This system continues each week. The result is that each pasture contains calves that are born within one week of each other. Once the youngest calf is 4 weeks old, cattle from all pastures can be combined.

A three-year study on a 900-cow ranch documented the first large-scale use of this system and the subsequent elimination of scours in years 2 and 3. Before adopting the calving system, the ranch typically lost 7%-14% of its calves to scours.

Too serious to ignore

Since 2000, veterinarian Tim Knott of Arthur, Neb., has been advocating the Sandhills system to his clients with scours problems. He agrees with Smith that those who really need it are the first to switch over.

“When it gets to a point when a producer can no longer tolerate the losses or the aggravation, that is when he will make his move,” Knott says.

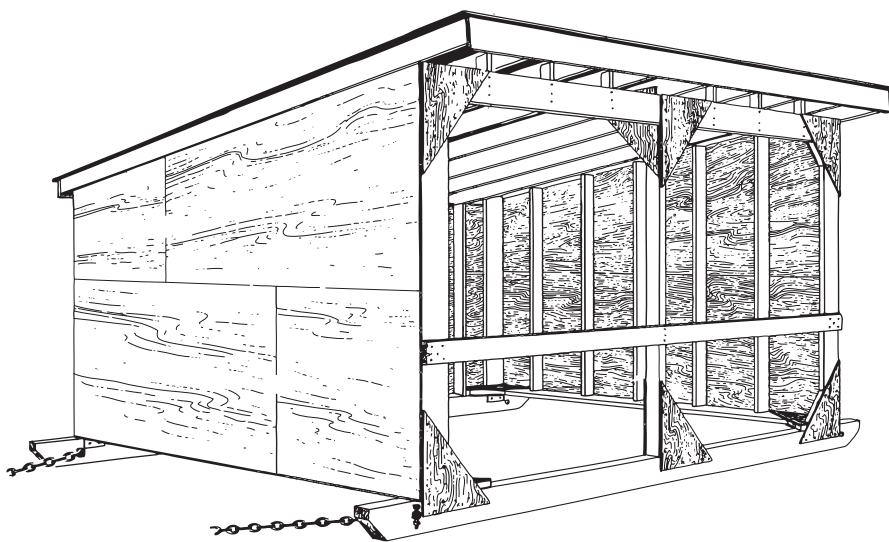
One of Knott’s first clients to say “enough is enough” was Mart McNutt, a calf producer who manages more than 1,000 Angus cows in Tryon, Neb. McNutt says that as the size of his operation grew, so did the cases of scours in his herd.

“When we had 300 or 400 head, we didn’t have much of a scours problem,” he says. “But, by the time we had increased our herd above 600, it got bad.”

McNutt recalls that his calf losses due to scours climbed to 15% the year before he modified his calving

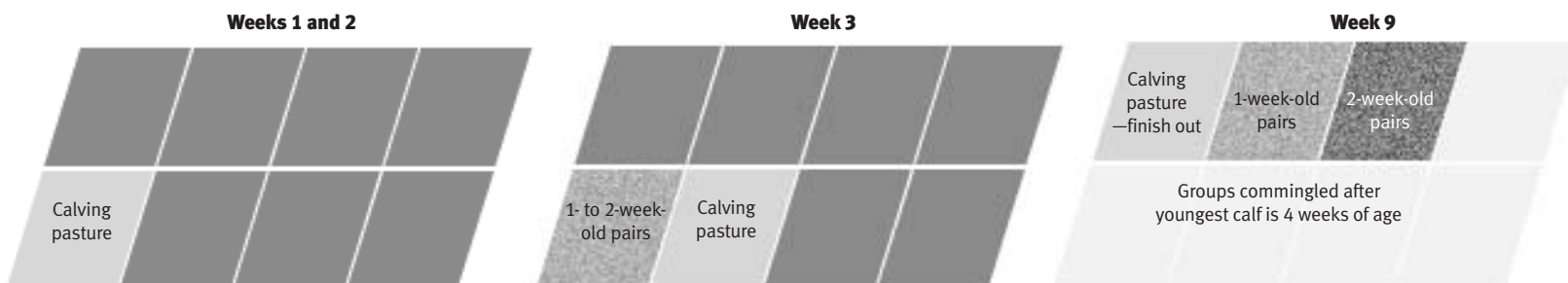
Fig. 1: Calf range shelter
(Plan 1352, Series 1000 Beef Cattle)*

This plan is for a 12-foot (ft.) x 16-ft. shelter, suitable for up to 20 calves. Some ranchers may want to reduce this to a 10-calf shelter (8 ft. x 12 ft.) so it can be skidded on a flat-bed trailer or truck platform for transportation to remote sites. The height of the roof can be reduced if the owner doesn’t mind stooping. The shelter is designed to use inexpensive sheathing plywood or Aspenite for wall and roof covering.



*CPS plans, including the plan for this illustrated shelter, are available for download at www.cps.gov.on.ca/english/bc1000/bc1352.htm.

Fig. 2: Sandhills calving system



routine. The year after, his incidence of scours dropped to zero.

“It was like turning off a switch,” he says.

In retrospect, McNutt admits, despite the losses to scours before turning to the Sandhills method, he had reservations. “In this country, weather was and still is our greatest fear,” McNutt says, adding that his old calving pasture was a single, 20-acre site next to his house where he could monitor his animals, watch for any possible difficulties and get them behind some shelter if a March storm hit.

Fears unfounded

Now, with his new system, cows calve on eight to 10 pastures ranging from 100 to 640 acres. All are at least 10 miles away from his residence. Because of the distance, McNutt limits the contact with his animals to once a day.

“We try and keep a close watch on the weather and get them behind some trees when we get a blizzard,” he says.

To reduce the likelihood of getting caught by a late winter blizzard, McNutt is moving his calving dates from the middle of March to the end of March. He says preliminary observations indicate that the difference in weights at marketing between the earlier and later calves have had little or no effect on his bottom line.

What surprises McNutt most about moving his animals to more remote areas is how self-sufficient his cows can be when they are left to their own resources. He admits it has changed his whole philosophy about ranching.

“I have gone from thinking cows were something you take care of to looking at them as my hired help,” he says. “Leave them alone, let them do their job and, if they don’t, get rid of them.”

Portable shelter an option

Smith notes that some beef producers are in a better position than others to deal with seriously inclement weather or calving emergencies. He adds that while calves possess a remarkable tolerance for the cold, they should be kept dry at birth and shortly after. For those who need a protected location, he recommends constructing a portable calving shed (see Fig. 1, page 110).

“If we have to address this issue that there are weather concerns and they want to have cows calve in some kind of shelter, this is a way to do that,” he says, adding that one producer using the Sandhills method has a hospital shelter on skids that he moves from calving site to calving site.

Because there is no floor in the structure, Smith says, fresh, uncontaminated bedding can be added each time it is towed into another pasture. Lower inside walls can also be disinfected, reducing the likelihood of a buildup of scours-causing germs.

Question of space

Smith recognizes that with some beef producers, there is a question of space. Many of the smaller-scale producers do not have access to the kind of land base

that would allow them to establish eight separate pastures.

“I am hearing from smaller producers — 200 cows or less — who want to use the system, but they don’t have the land base to implement it,” he says. “The way the system works now, it might not be for everyone.”

In response to this specific need, Smith

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is now beginning a new series of studies that involves fewer cattle in more-confined areas. One study will have calving take place in a barn in January and then, soon after, the calves and mother cows will be turned out into a quarter-acre feedlot. Calves born the next week will be moved into a new lot, as will

those born each subsequent week.

As in the original Sandhills system, this allows cow-calf pairs to be grouped by calf age to keep older calves from infecting younger ones.

Although Smith is uncomfortable using a barn for calving, the cooperating producer has concerns about frozen ears, and Smith sees merit in proceeding with the study. "This should give us an idea if

our system will work on a smaller scale," Smith says.

Preference for indoor calving

The reluctance to give up calving indoors is not limited to Nebraska beef operations. "A large proportion of Minnesota's producers calve indoors," says Cliff Lamb, reproductive physiologist at the University of Minnesota (U of M)

Beef Industry Center. "They keep the newborns indoors for about a day, and then kick them out into a large communal pasture."

Prior to Lamb's arrival at the U of M in the mid-1990s, the university herd of 250 registered Angus cows was also calved indoors.

"The year before I arrived, 18% to 20% of the calves died from something related to scours," he says.

Since then, Lamb and his fellow beef researchers have implemented a three-pasture segregation system that has dramatically reduced the incidence of scours and reduced to less than 5% the death loss due to scours. All calving is now done outdoors.

"Calves are born in one of three pastures, depending on how early or how late they are," Lamb says.

He believes two other factors contribute to the reduction of scours in the herd. The first is that a tight artificial insemination (AI) program narrows the calving window, thus reducing the length of time the scours pathogens have to spread. It also reduces the number of pastures needed to properly implement the appropriate segregation program. The second factor is that ultrasounding the pregnant females provides an accurate assessment of their due dates so each one can be relegated to its appropriate pasture.

Lamb adds that in spite of the success the U of M beef herd has had in reducing scours by calving outdoors in segregated pastures, he has seen little change in the calving practices of Minnesota beef producers.

When there is a need

Veterinarian Brett Andrews of Burwell, Neb., is not surprised by that response. As one of the first veterinarians to promote the Sandhills system to his clients, he believes it will take some serious outbreaks to convince the majority of beef producers in his area that they should change how they calve.

"We have had several mild winters in a row. Scours, in general, has been low, so there hasn't been an incentive for people to change," he says. "If we ever get back to a normal winter like we had six years ago, we are going to see a very different picture. That might wake up a few people."

