

How many cows are in heat? Are they ready for breeding?

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This week and next are artificial insemination weeks at the Dickinson Research Extension Center. Bull selection occurred last spring in time to get the frozen semen into the tank, but many of the questions involving breeding cattle don't emerge until breeding arrives.

That no improvement can be made to Mother Nature is an important point often lost in discussions. Now don't get off your chair and throw the technology books away. Technology allows cattle producers to modify Mother Nature in ways that fit each producer's management system. This is important to realize because we compare our ability to utilize artificial insemination programs to other programs, not to a naturally cycling group of cows.

In contrast to reproduction, nutrition can be improved over what Mother Nature can provide and obviously the nutritional status of a cow interacts very much with the ability to successfully manage reproduction. Without adequate nutrition, the building blocks are simply not present to provide for conception.

Several important events must take place. Today's focus, however, will be on the most critical question: "Are the cows cycling or in standing heat?" It is fairly easy to determine cycling activity in a cow herd. If the producer spends short periods of time observing the cow herd, roughly four to five percent of the cows should be in standing heat in a 24-hour period if all the cows are cycling. The willingness of a cow to stand still while another cow jumps or mounts her is considered for all practical terms, standing heat. The cow that jumps or mounts is generally not in heat.

The typical cycle length of a cow is 21 days. A cow that ovulates today and is not bred should ovulate again 21 days later. If one assumes there is no reason for the cows to be all ovulating together, 4.76 percent of the cows should be in standing heat on any given day (1 day divided by 21).

In a typical cow herd of 100 cows, four or five cows should be in standing heat every day, but only if all the cows are going to calve in the first 21 days of the calving season. Seldom, if ever, do cattle herds all conceive in the first 21 days of the breeding season. The North Dakota Beef Cattle Improvement Association's CHAPS data reveals only 57 percent of mature cows (no heifers included) actually calve in the first 21 days.

The constant worry of how cows will breed this year is always present. By using average numbers, a producer can get a pretty good feel of how the cows are doing by simply checking for standing heat. In reality, when bulls walk into a herd of 100 cows, the producer should expect only two to three cows in standing heat (4.76 percent times 57 percent equals 2.7 cows). If one was only turning the bull out to 30-some cows, the producer should expect zero to one cow in heat (two to three cows should be bred within three days of turning out the bull).

Lost breeding time or missed breeding are very expensive to a cattle operation. In today's cattle market, a missed cow in standing heat easily calculates into a \$50 bill. Keep an eye on the cows, you better put it in low gear if your cows aren't cycling because at this point, you have a tough hill to climb. Let's hope the bull can do better.

Good luck. May you find all your USAIP ear tags.

Your comments are always welcome at www.BeefTalk.com. For more information, contact the North Dakota Beef Cattle Improvement Association, 1133 State Avenue, Dickinson, ND 58601 or go to www.CHAPS2000.com on the Internet. In correspondence about this column, refer to BT0199.

Estimated Cycling to Maintain a Typical Herd

Ideal percentage cycling per day	4.76%
Typical percentage cycling per day	2.17%
Typical cows in heat per day (100 head)	2 - 3 cows
Typical cows in heat per day (50 head)	1 - 2 cows
Typical cows in heat per day (30 head)	0 - 1 cows

CHAPS – Cow Herd Appraisal Performance Software