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# Heat Detection And Time To Breed



Failure to find the cow in heat is one major cause of poor breeding efficiency. For conception to occur, a cow must be in heat and bred at the right time.

Lack of visible heat may result from either poor heat detection methods or from the cow failing to come into heat. A Minnesota study concluded that nearly 90 percent of heat failures were a result of failure to observe the cow in heat while only 10 percent were due to abnormal conditions in the cow's reproductive tract.

Absence of heat may occur either before or after breeding. Heat failures after breeding cause the largest economic loss because these cows are usually thought to be with calf; many costly pregnancy days are lost before the problem is recognized.



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## Signs Of Heat

**Standing to be mounted** is the best sign that your cow is in heat. There are other warning signals which **may mean** that she is in heat, coming into heat, or going out of heat. Some of these signs are:

1. Attempted mounting of other cows.
2. Moist, swollen, and reddened vulva.
3. Clear mucus discharge from the vagina.
4. Nervousness, restlessness, and bellowing.
5. Poor milk letdown, reduced milk production, and reduced appetite.

Know the habits of your individual cows. Your cows may show all or none of the signs in varying degrees. The intensity and length of the heat period vary between animals.

It is abnormal for a cow to show continuous heat for a number of days or to be in heat every 3rd or 4th day. Such animals probably have cystic ovaries which require treatment by a veterinarian. By using your records, you can determine if the heat cycles are within the normal 18-24 day interval.

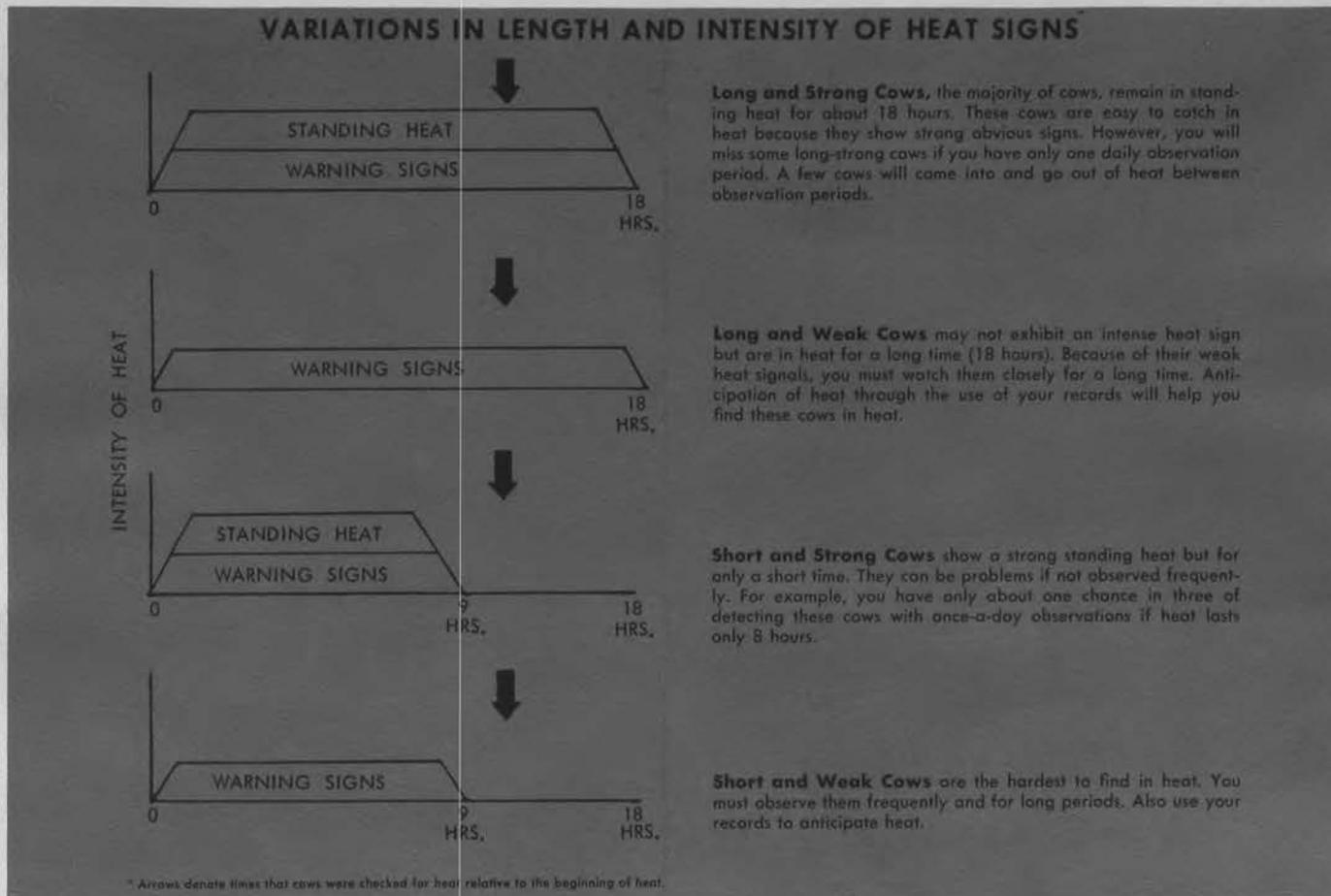
About 1 cow in 20 will show signs of heat at some time while she is carrying a calf. The cow usually will abort if the cervical plug is destroyed upon insemination. Therefore, your inseminator should know which cows are repeats so he can take precautionary measures.

## Heat Detection

A good heat detection program involves having frequent observation periods, spending adequate time watching cows closely, and using your records to anticipate heat. By following this program, you have a good chance of finding each cow in heat and timing the breeding for maximum fertility.

Heat normally lasts about 18 hours but can vary from 4 to 40 hours. Variations in length and intensity of heat are illustrated in the box.

**For example, if cows are observed for heat only once each day (at time indicated by the arrows), cows with short heats will be missed completely. Two or three heat checks daily, anticipation of heat, and close observation offer the best chance of catching cows with short and/or weak heats.**



The best way to detect heat is to turn your cows out once or twice a day. Observe them closely for 15-30 minutes each time. If you divert your attention to do a quick chore, you probably will miss some difficult-to-catch cows.

Heat detection is a full-time job. Check the herd the last thing at night and the first thing in the morning. Get them on their feet and watch them for a few minutes, especially if they are in loose housing. Be constantly alert for heat warning signs while working with the cows or within viewing distance of the herd.

Know the individual habits of your cows. Any out-of-the-ordinary actions of particular individuals may indicate that they are in heat or sick. If you suspect that a cow is in heat, turn her out with one or two other cows to help verify your suspicion.

## Anticipate Heat

You can improve your chance of catching each heat by using your records to anticipate when the cow should come into heat. Record **each heat** date and count ahead 18-24 days. You should record each calving date, breeding date, and notes on all abnormal signs such as retained afterbirth and pussy or bloody discharges.

Blood on the vulva or tail indicates that the cow was in heat a day or two previously, but all cows do not show this bleeding. However, its presence can help you anticipate that the next heat will be about 17 days later. A skilled veterinarian can predict when a cow is expected to be in heat by examining the reproductive tract. Cows not in heat within 45 to 60 days after calving should be examined by a veterinarian.

## Time To Breed

Most cows remain in **standing heat** for about 18 hours. The egg becomes available for fertilization at ovulation—about 12 hours **after** the end of standing heat—and remains fertile for about 6 hours. Sperm must be in the female tract about 6 hours before they acquire the ability to fertilize the egg. They have this fertilizing capability for about 24 hours after insemination.

Inseminations made during the first 9-10 hours of **standing heat** result in substandard fertility because the sperm burn themselves out before the egg is available. Inseminations made **after** ovulation are also usually unsuccessful because the egg is fertile for only about 6 hours.

**For optimum fertility, breed cows during the final 10 hours of standing heat or the first 6 hours after standing heat ends.** If the cow is in standing heat during the morning, breed her in the afternoon of the same day. If she is in standing heat in the afternoon, breed her during the morning of the following day.

## When To Breed Back After Calving

The cow's reproductive organs need time to heal and return to normal after calving. In a Wisconsin study, 120 days were required before all of the cows' reproductive tracts returned to normal. Only 75 percent of the cows were normal at 60 days after calving.

The consequence of breeding too soon after calving is added time lost due to repeat breedings. Even though cows are in excellent reproductive health at the time of breeding, it will take longer for conception to occur if you breed before 50 days than if you wait more than 50 days after calving.

Conception will improve and the number of services per conception will decrease if you wait at least 60 days before breeding normal, healthy cows.

You may be risking veterinary bills or permanent damage by breeding cows in poor reproductive health before 60 days. Cows that had difficult calvings, retained placentas, pussy discharges, or other abnormal conditions should be examined by your veterinarian. Do not breed these cows until he has found them ready.

## Some Cows Fail To Come Into Heat

Only about 10 percent of the heat failures appear to be a result of cows not coming into heat. These failures are due to an abnormal condition in the cow's reproductive organs. Animals should exhibit heat within 45 to 60 days after calving; heifers should exhibit heat by 12 months of age. Have a veterinarian examine animals failing to show heat within these normal periods. Many heat failures can be treated successfully if caught in time.

Pregnancy resulting from an unrecorded breeding is one major cause of heat failure. A skilled veterinarian can diagnose pregnancy 30-60 days after breeding. His examination can also reveal structural abnormalities of the reproductive tract which render the animal incapable of ever producing a calf. By knowing the facts in the case early, you can plan your culling more intelligently. Many good cows have been sold to market for breeding failures when pregnant. A complete, accurate set of records and the services of a skilled veterinarian will reduce these losses.

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**A good heat detection program is the best way to prevent heat failures.**

**—Know the signs of heat and be aware of the variations in heat signs among cows.**

**—Observe your cows for heat frequently and closely for 15-30 minutes each time.**

**—Record all heat dates, calving dates, breeding dates, and other events in your records.**

**—Use your records to anticipate the next heat.**

**—Have a skilled veterinarian diagnose and treat problem cows and determine pregnancy.**

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Authors of this publication are A. G. Hunter, associate professor, and B. J. Conlin, assistant professor and extension dairyman, Department of Animal Science.

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