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# Heat Detection And Timing Of Breeding In The Mare

## Introduction

Good heat detection and timing of service are essential for efficient horse reproduction.

In the northern hemisphere, a mare will begin her active reproductive season in the spring and cycle regularly until fall. The greatest cyclic activity occurs in June, July, and August. A mare usually does not come into heat during winter (November through February) and frequently does not cycle for a time before or after these months.

The estrous cycle is usually 18 to 24 days (the average is 21 days). The heat period (sexual receptivity to a stallion) usually lasts 4 to 9 days (the average is 5.5 days). This means the time between two successive heats is about 15 days. The duration of the estrous cycle and the heat period for a particular mare tends to be repeatable during the breeding season.

## Signs of heat

A mare in heat (in the absence of a stallion) frequently stands with tail raised, "winks," squats, and attempts to urinate (usually passing only small quantities of urine). The vulva may be somewhat swollen and relaxed.

A mare (in the presence of a stallion) in heat will usually:

- seek out the stallion;
- swing rear quarters toward the stallion;
- elevate the tail;
- squat (lower the rear quarters);
- urinate;
- "wink" (rhythmically evert the clitoris even before urination);
- be receptive to the advances of the stallion to nip and nuzzle her; and
- stand to be mounted.

When not in heat, a mare will resist the advances of the stallion. She will not allow the stallion to nip or bite her, nor will she allow mounting. The mare will frequently lay her ears back and attempt to strike or kick at the stallion. She may also swish her tail rapidly.

## Heat detection

Good heat detection requires frequent observation periods, access to a stallion, wise use of records, and knowledge of the signs a mare exhibits when not in heat.



This mare is exhibiting some typical signs of heat, namely raising her tail and "winking" (rhythmic eversion of the clitoris). In addition, mares in heat will usually lower the rear quarters and urinate.

Because of variations in the estrous cycle and the importance of proper timing of breeding, daily observation is recommended. Mares should be teased by a stallion daily or every other day beginning 1 month before anticipated breeding. This should be continued until the mare has been bred 50 days or has been diagnosed pregnant.

Teasing is essential to good heat detection. Numerous methods are successful:

- Pasture teasing (a stallion is led through the pasture on a long lead rope, with the stallion allowed to approach each



The mare in the teasing chute is being teased by a pony stallion. Steel bars placed in front of and behind the mare prevent her from leaving the chute. The top of the tease rail is frequently padded to prevent injury to the stallion.

mare). This method may be dangerous to an inexperienced handler.

- Restrained teasing (a mare is tied in a chute or to a strong board fence, with the stallion approaching the mare from the opposite side of the fence or chute).
- Loose teasing (a stallion is placed in a strong board fence box stall within a paddock, with the mares allowed to mingle freely around the stall).

In all cases, note and record all signs of heat or lack of heat for each mare.

#### Timing

The average length of heat is 5.5 days. Ovulation usually occurs 24 to 48 hours before the end of heat. Peak conception rates are obtained when mares are bred just before ovulation. Because of variations in the length of standing heat and time of ovulation, these recommendations are made:

- If the mare is usually in standing heat for 5 days or less, breed the mare on the 2nd and 4th days of heat.
- If the mare is usually in heat for 6 or more days, commence breeding on the 3rd day and breed her every other day until she goes out of heat.

Remember there are variations in the heat cycles of different mares and within the same mare. Any guidelines will apply to most, but not all, mares.

#### Foal heat breeding

Most mares will begin a heat period about 9 days after foaling. Breeding on foal heat is not recommended as a routine practice. At this time, the mare's reproductive tract may not

be sufficiently involved for good reproductive performance, the genital tract is more susceptible to bacterial infection at the time of natural service, and a higher embryonic mortality rate can be expected.

Foal heat breeding can be successfully carried out in mares that have given birth to a live, healthy foal, that have passed the fetal membranes within 2 hours after foaling, which are free of reproductive tract disease, and which have a normal involuting uterus. A skilled veterinarian can help evaluate each mare for breeding.

#### Improving heat detection

- Keep accurate records of each mare, including foaling and breeding dates, teasing observations, and all examinations and treatments.
- Know the signs of heat (sexual receptivity).
- Know the signs displayed by a mare not in heat.
- Routinely observe and tease mares. Continue to tease mares following breeding to detect return to heat or pregnancy failure.
- Have a competent veterinarian help in your breeding program.

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