

Managing the Brood Mare

Breeding horses can be a frustrating, but also rewarding, experience, especially if an exceptional animal is produced. The national conception rate averages only 60% — much lower than that for other species of farm animals. Much time and money are sometimes wasted on concoctions and secret remedies suggested by old wives' tales for breeding horses. Many problems, however, can be solved by understanding the basic principles of reproduction.

BREEDING HABITS OF THE MARE

The mare is seasonally polyestrous. That is, she cycles throughout the breeding season with seasonal variation in the estrous cycle length, intensity and regularity. Very few mares show outward signs of heat in the winter, and the estrous cycles are irregular during the early spring. However, mares bred in April, May, and June conceive better than any other time of the year. Later in the summer they continue to show signs of estrus, but the cycles become irregular again.

The estrous cycle is the interval from the beginning of one heat period to the beginning of the next. It averages 21 days but may vary from 15 to 27 days. As estrus (heat period) begins, the mare shows these telltale signs:

- Desire for company
- Relaxation of the external genitals
- Slight mucous discharge from the vagina
- Frequent urination
- Winking the vulva

Estrus or the period that the mare will accept the stallion normally lasts 5 to 8 days although some mares may remain in heat much longer early in the breeding season. Ovulation, the release of the egg, takes place 24 hours before to 24 hours after the end of estrus. Thus, it is difficult to predict the time of

ovulation except by palpating the ovary through the rectal wall.

Sperm cells are viable in the mare's reproductive tract for 24 to 36 hours whereas the egg is only fertile for about 6 hours. Thus, the time of breeding is critical to insure that there are live sperm to fertilize the egg upon its release. Whenever the stallion power is available, many horse owners breed the mare on the third day of estrus and then every other day until the end of her heat period.

BREEDING AGE

Fillies usually reach puberty and begin to show heat at 15 to 24 months of age. However, they are not developed sufficiently to carry a foal. Only fillies that are exceptionally well developed should be bred as 2 year-olds. As a general recommendation, it is best to breed a mare first as a 3 year-old so that she will foal when she is 4 years old.

BREEDING PROCEDURES

Hand breeding versus pasture breeding. Hand breeding allows both the stallion and the mare to be handled; it decreases the chance of injury and eliminates the repeated services typical in pasture breeding. As horses become more valuable, hand breeding comes more important with the use of other breeding techniques, such as artificial insemination, etc. Pasture breeding does not require as much labor as hand breeding. Neither does it allow the attention to details that in some instances make the difference in the mare being settled or open.

A sound teasing program coupled with the detailed records may be the most important factor in getting mares settled. As mares demonstrate heat by accept-

ing the stallion during teasing, they can be bred daily or every other day of the estrous period, depending upon the stallion's availability.

Before breeding, the genital organs of the stallion and mare should be washed well with a mild soap and rinsed thoroughly. Soap is an effective spermicide and must be totally removed. The mare's tail should be wrapped to prevent any damage to the stallion. Dispose of all washing cloths and wraps after they are used.

Keep accurate records that include such information as foaling date, heat period, breeding dates, and any health problems that the mare may have had. Also record immunizations and Coggin's test results.

MANAGING POINTERS

Allow the pregnant mare plenty of exercise to maintain her general health. The ideal situation is a lush pasture with adequate shade and water. If she is stalled, give her some forced exercise daily. With careful handling you can ride or drive the brood mare for a short time even up to several days before foaling. But avoid hard work, fast speeds, and sudden stops.

The brood mare requires nutrients for her own body as well as additional ones for fetus development. If the mare is lactating or still growing, her nutrient needs are even greater. The greatest development of the fetus takes place during the last one-third of gestation. Special attention must be given to the feeding program during this time.

Mature, idle brood mares can be maintained satisfactorily on good pasture by adding high quality hay during the winter. Allow these mares to remain in a thrifty condition and not become overly fat to prevent additional complications at foaling. You may have to feed supplemental grains to maintain this thrifty condition and keep the mare gaining in total weight. Carefully regulate the total diet so that she gains weight but does not become fat.

Occasionally in the fescue pasture areas of Piedmont South Carolina, fescue has been blamed for causing abortions or poor milk production in mares. A recent study from the University of Missouri indicates that

such will occur in about 20 percent of the mares. By carefully managing pastures and feeding legume hays, if the mares are to remain on the pastures, this problem can be solved. A selenium-vitamin E interaction may be involved in this situation.

FOALING

As foaling time approaches, move the mare into a roomy box stall so she can adjust to her new surroundings. There is less danger of infection and injury when foaling in a good clean pasture, but it is easier to assist, if needed, in the barn where light, water, etc., are close at hand.

Usually the first sign that the foaling date is near is the mare's udder beginning to fill. The next sign is the shrinking of the muscles over the buttocks and dropping of the abdomen. These generally occur a week or 10 days before foaling. The teats seldom fill out to the end earlier than 4 to 6 days before foaling. Within 12 to 24 hours of parturition, the ends of the teats will be covered with a waxy-like substance. At this point parturition is near, and the mare should be carefully watched.

The gestation period for mares is 340 days, but may vary 30 days in either direction. Adequate records help interpret the mare's appearance and actions as parturition approaches. The mare varies considerably in her actions at the onset of foaling but usually shows one or more of the following:

- Nervousness and restlessness
- Pawing in several places around the stall
- Lying down for short periods of time
- Sweating, urinating small amounts frequently
- Elevation of the tail

Remember that at times all symptoms fail, and the mare will foal when least expected.

Attendants should be present at foaling time to assist if necessary. Mares that have foaled previously and have been fed and exercised properly will seldom need assistance. But, unforeseen problems do arise. Young mares, overly fat or very thin, may have difficulty.

The normal appearance of the foal at birth is the front feet with heels down first, followed by the nose,

shoulders, middle and so forth. If the presentation is not normal, call your veterinarian immediately because the foal may smother if birth is delayed. Abnormal presentations usually result in difficult births.

After it is expelled, the attendant should make sure that the foal's nostrils are clear of mucous and that it is breathing. Normally the navel cord will break 2 to 4 inches from the foal's belly. If it doesn't break, cut it with clean dull scissors or scrape it in two with a knife. Dipping the navel cord into a tincture of iodine reduces the danger of navel ill. Rub the foal dry with towels and place it on clean straw. It will usually be on its feet and nursing within 30 minutes to 2 hours. If not, help should be given. The foal should get colostrum (first milk) because of its increased nutrient antibody content.

BREEDING CONTRACTS

A written breeding contract is always recommended between the mare owner and stallion owner to avoid any misunderstandings concerning the responsibilities of each. Usually the breeding contract contains such items as the amount of the stud fee, arrangements for payment, number of services, return privileges, guarantee of live foal, daily mare care, veterinary charges.

Some contracts also specify the condition that will prevail if either the stallion or mare dies or becomes unfit for service. If you own a mare, be certain you understand all the conditions and terms included before you sign a breeding contract.

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