

Predicting Foaling



Down on the Farm

by HEATHER SMITH THOMAS

Gestation in mares is roughly estimated at about 340 days, but this figure is just an average—to be used as a guideline—since mares often foal as much as three weeks earlier or later than this. Mares are notoriously unpredictable, and this is why horse breeders often try to figure out ways to more accurately pinpoint the time of foaling in order to be present at the birth.

Peter Sheerin, DVM (Rood and Riddle, Lexington, Kentucky) says that typically breeders figure an estimated foaling date using the mare's last ovulation or breeding date. This just gives a starting point, since breeders need to be aware that the mare could foal several weeks ahead of the projected due date. When examining the mare for signs of impending foaling, things to look for are udder development, relaxation of the vulva, waxing at the ends of the teats, and other body changes.

These changes may take place within just a few days of foaling, or for several weeks. A mare may bag up three to four weeks before foaling and may even leak milk for a day or more before she actually foals. "This is the frustrating thing about foaling one or two mares at home and trying to

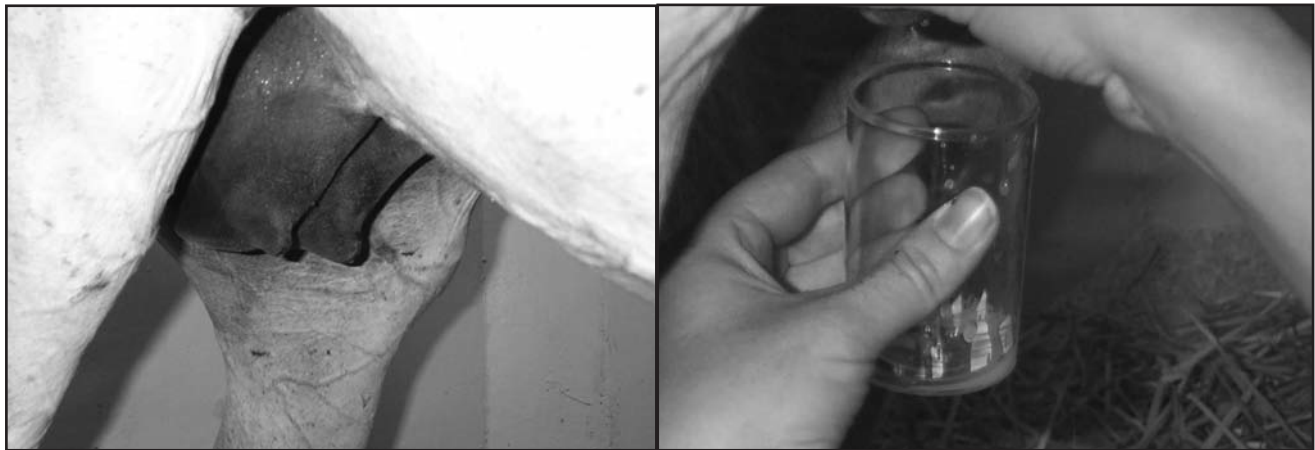
watch them. There is a lot of sleep deprivation! The biggest thing is to know your mare. If it's a mare who you've foaled out before, she will usually have a pattern," he says. Length of gestation in an individual mare is often similar with each subsequent foaling.

"Maiden mares are tougher to predict, not only because of the variability of when they might foal, but they also may not build an udder as quickly as a mare who has had foals before," says Sheerin. A maiden mare may suddenly bag up and foal, without much warning, and some may not even come to their milk until after they foal.

"One thing we often use as an aid in prediction is testing mammary secretions. There are several commercial test kits available, for checking the mare's milk. In reality, they are more accurate in telling you when the mare is not ready to foal, than for pinpointing when she will actually foal," says Sheerin.

"If the test indicates that she's going to foal, the window for when she is going to foal would probably be 48 to 72

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The various steps in checking for calcium levels in a mare's milk.





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hours. It depends on how much of a change you get, on the test strip. But if it says she is not going to foal within 48 hours, there is a greater chance of that being correct," he says. This would give you some assurance that she still has some time left and you won't need to watch her round the clock just yet.

What the test measures is calcium. "You can use a commercially available test kit or you or your vet can take a sample of the udder secretion and bring it to the lab, to measure calcium. The things we look at, for example, if we are evaluating a mare we are going to induce—to see if she is ready to induce labor—is the calcium, sodium and potassium level in the secretion. The test strips in the foaling prediction kits just measure calcium," he explains.

A small amount of milk is taken from a teat, squeezed into a clean container, and that secretion is applied to the test strip. The strip will change colors when calcium reaches a certain level. "When there is over 40 miligrams per deciliter of calcium (which causes the strip to change color), the mare is getting close to foaling. The ideal time to take the sample from the mare is in the evening. This gives you a more accurate result. I can't explain the physiology behind this, but it may have something to do with the fact that most mares foal at night, so we start to see the changes then. From my experience, samples taken in the morning or through the day seem to be less predictive than the ones taken in the early evening," he says.

The main advice Sheerin gives, to owners who want to try to be there for the foaling, is "Good luck!" 🐾

Signs Of Early Labor

In stage one labor, the mare is usually restless and may get warm and sweat a little. Blood vessels may become more pronounced on the body. Those are signs the mare will foal within a few hours to six hours. Some mares will put off foaling for longer than that, however, if they are upset and nervous, but if you see those signs you know she's getting close.

"The horse is unique in having such variable gestation, and the fact a mare can hold off on foaling if she chooses. The foal determines the length of gestation; he comes when he's ready, and his readiness triggers labor. The foal determines the day of foaling, but the mare determines the hour," says Sheerin. You may have to watch her half the night, if she decides to put it off.

"Thus it is important to keep her environment as quiet and natural as possible, to keep her from putting it off. If you are continually going out to the barn and pop on the lights to see if she's had her baby, she'll keep putting it off," he says.

"It can be very frustrating. The mare may show you some signs of being ready to foal and then hang on for a while. The waxing can be within 12 to 24 hours of foaling or may be three or four days. There are all these little signs to give us a clue, but there is no really good way to predict, within a very small window, when she is actually going to foal—until she goes into labor."

Factors That Affect Gestation Length

A number of factors can influence length of gestation, including time of year the mare foals, age of the mare, genetics (draft horses tend to have shorter gestation than light horse breeds, and donkeys have a longer gestation than mares, so a mule foal is often carried longer, even in a mare that normally has a short gestation length), uterine health and nutrition.

Mares foaling in January, February and March tend to go a few days longer than mares foaling in April, May or June. You can alter this somewhat, however, by putting those mares under lights. This can trick the mare's body into thinking it's later in the season; with artificial lighting extending the actual daylight hours, a mare foaling in February would have a short gestation similar to a mare foaling in May.

Regarding age, older mares tend to carry foals a little longer than younger mares, though a first foal tends to have shorter gestation regardless of the age of the mare. For instance, a 12-year-old mare having her first foal may

foal earlier than an eight-year-old mare having her fourth foal, but not always. The biggest factor is the mare's own pattern; most mares tend to follow the same gestation length throughout their broodmare career. "If she foaled early in the past, she will probably do so again, if everything was normal when she foaled early. The same applies to a mare who goes longer than usual," says Sheerin.

Mares who are nutritionally deprived (which rarely happens on a breeding farm) may have a slightly longer gestation. Uterine health can also be a factor.

"In a mare who has changes such as fibrosis, or decreased gland density, gestation goes longer. The foal needs 'x' amount of nutrition to develop and is getting a decreased amount because the placenta does not have adequate attachment to the uterine lining. Thus it takes longer to reach the end point," he explains.

"The season of the year, and other factors, won't change the signs the mare shows you when she's ready to foal, but will alter the length of the pregnancy," says Sheerin.