

## **BREEDING YOUR MARE**

January through March are the months that everyone would like their mares to conceive; however, nature intended for conception to occur in late spring. Only one-third of all mares are cycling normally during the early months of the year. Many mares are still in winter anestrus (not cycling at all) while others are in a transitional period in which they show heat (estrus) but do not develop a “breedable follicle” on their ovaries.

These are frustrating times for mare owners. When mares arrive at the breeding farm in winter anestrus, a longer investment in time, boarding costs and veterinary expenses may be incurred. What can be done to bring these mares into a normal cycle earlier?

1. A Prostin injection can be tried. This is appropriate for a mare that is not showing heat; it only works if there is a corpus luteum on the ovary (a structure that results from a recent ovulation). If the mare has not ovulated this spring, Prostin will not work.
2. Twelve days of Regumate (an oral progesterone) followed by a Prostin injection. This is appropriate for the mare not showing at all or showing heat but not developing follicles. These two hormones simulate the first estrus cycle of the year and may “trick” the mare into normal cycling. The technique works with about 50% of non-cycling mares.
3. Deslorelin is an injection that is commonly used to induce ovulation (This hormone generally induces ovulation within 48-72 hours in mares with a 35mm follicle. It is somewhat more reliable than HCG and is replacing HCG as the ovulatory agent of choice.) Deslorelin can also be used in an attempt to bring mares out of anestrus or transition into normal cycling.

As you can see, the options to force a mare to cycle are limited and have drawbacks. Many times it is simply the lengthening daylight that comes with the onset of spring that brings normal cycles.

The single best way to insure early and normal cycles is to put broodmares under lights from sunset to 10 pm starting on December 1<sup>st</sup>. This should include open mares and mares due to foal prior to March 1<sup>st</sup>. Lights can be started after December 1<sup>st</sup> but the mare requires 60 days of light to return to normal cycling. The mare must be confined to a space in which a newspaper can be read in every corner. This generally requires a 200-watt incandescent (or equivalent fluorescent) bulb for a 12x12 stall.

### ***ARE RECTAL EXAMINATIONS NECESSARY?***

Many studies have shown that breeding programs guided by rectal follicle checks result in high overall conception rates and earlier average foaling dates. They allow the breeding manager to breed only when there is an appropriate follicle. This reduces unnecessary breeding, which poses a risk to both mare and stallion. Again, this can be frustrating to the owner of a mare undergoing a long transitional heat. This mare will eventually develop a follicle and ovulate, but breeding during the early days of this heat would be fruitless and perhaps harmful. Rectal follicle checks are often done on an every other day basis. Rectal follicle checks are done normally with ultrasound assistance. This allows accurate assessment of not only follicle size but also uterine edema.

Ultrasound pregnancy exams are generally done at 15-16 days post ovulation. This allows the breeding manager to prepare for rebreeding if needed and allows the veterinarian to rule out twin conception. A second ultrasound is done on mares pregnant at the first check at around 27 days post ovulation to confirm a fetal heartbeat and to check again for twins.

#### *COMMON HORMONES USED*

1. Prostin, mentioned earlier, will bring a mare into heat 3-4 days after injection if she has a corpus luteum. It will typically be 9-10 days from the Prostin injection to ovulation.
2. HCG (human chorionic gonadotrophin): This injection will cause about 75% of mares to ovulate within 24-48 hours if they have a 35-40mm size follicle and appropriate uterine edema.
3. Deslorelin: This injection will cause ovulation in 24-40 hours in mares with a 35mm follicle and appropriate uterine edema
4. Regumate (oral progesterone): This hormone is used on winter anestrus mares (see Page 1) and is also used as an aid for pregnancy maintenance in problem mares.

These hormones have all been studied thoroughly and do not have negative effects on fertility or pregnancy.

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The staff at Loomis Basin Equine Medical Center is available to answer any additional questions you may have about your broodmare.

