Earlier Foaling using Artificial Light

Producing Earlier Foals Begins in December

For those of us who are anxiously awaiting the breeding season, there are a few management chores needing our attention. You may have noticed the last few articles have hardly mentioned the pregnant mare and the breeding season. This was more avoidance than oversight. There are many good geldings, as well as mares and stallions, that are used for riding without any thought of breeding. These all have seasonal preventive medicine needs that deserve our attention. I hope we have addressed most of them. If you feel we have overlooked an important topic, please contact our office.

<u>Some of you want to start breeding the mare for an early foal,</u> and an early foal would be one born in February or March. Early foals are in demand by those who show in both the halter classes and the early two year old performance classes. Unfortunately, no matter how badly we may want an early foal, *Mother Nature and the mare have other ideas.*

<u>Most of the mares</u> (three quarters by the last count) *choose not to even cycle during the winter.* By the time the first day of winter has arrived, which is also the shortest day of the year, the mare's ovaries have become nonfunctional. They have shrunken in size, from the size of our fist to the size of a walnut. The portion of the brain controlling hormone release is also inactive. They will stay this way until the daylight hours begin to increase. The outside temperature has nothing to do with it. Fortunately, after December 21 each day becomes one to two minutes longer. This *increased daylight will eventually stimulate the brain of the mare.* Approximately *thirty days after the brain recognizes* the increased daylight, it will *start releasing hormones directed to the ovary.*

<u>Once the ovary is stimulated,</u> it will take a *minimum of thirty days* to start producing follicles. The early ones, however, are usually very small and may not produce enough estrogen for the mare to show signs of heat. Once the follicles are large enough to start affecting the behavior of the mare, *the first and usually the second follicle are not fertile.* They will be very *thick-walled,* and once they rupture they *will not have a living egg inside.* These are the follicles that cause the mares to show signs of heat for days or even weeks. *If the mare is bred on these heats,* it will not only wear out the stallion but will frustrate the mare and her owner.

<u>Once these initial follicles have ruptured,</u> three weeks later the mare will show signs of estrus (heat) that last for five days. *It is only when the mare has regular cycles* (the cycles have an average length of three weeks) and the length of her heat is consistent from one to the next (five days is average), *should she be bred with any hope of success.*

<u>As you can see, by the time you add all the above days together,</u> you have a breeding date in late March or early April. So you are asking yourself, *"Is there anything we can do to start the mare cycling earlier?"* There is a proven method for making the mare cycle earlier, but it is a little late for this year:

- *Starting on December 1,* the mare can be placed under lights for sixteen hours each day.
- The additional lighting can easily be added onto the end of the day. She can be brought into a stall and put under lights with a timer to complete her sixteen hours of light for each day.
- *There is no advantage* to splitting up the hours under lights between the morning or evening hours.
- The *light intensity should be 200 candle power* at the level of the mare's eyes.

If your candle power tester is not working, 200 candle power would be bright enough for you to read a newspaper at eye level. *(HINT: if you cannot do this at arms' length, then try it with reading glasses!)*

<u>The use of artificial light must continue</u> until the days are sixteen hours long, or until the mare is bred. It will *shorten the mare's quiet period by thirty days,*

which means the mare will have fertile heats one month earlier.