

THE BREEDING CYCLE OF STALLIONS

Artificial Light, Testosterone, and Stallion cycles

Last week we spent a great deal of time talking about the mare's estrus cycles. We know a great deal starts happening *when the daylight hours start increasing*. If the mare is so seasonal, what about the stallion?

There is some seasonal influence on the stallion. The stallion will breed any time of the year, as proven by stallions being moved from the northern hemisphere to the southern hemisphere to breed mares as the seasons change. For the stallions staying at home, there are some changes in the semen as spring approaches. The total volume will decrease, but even more important is the reduction in the gel portion. Gel is ejaculated to serve as a plug for the cervix. When semen is collected, the gel becomes a problem. It plugs the filters and will even plug the transfer syringes. This situation improves as spring approaches.

There could be some argument for increased aggressiveness and libido in the stallion as spring approaches. However, who among us can deny we all feel better as winter passes and we move into spring. *The spring effect is most evident in the yearling colts.* By spring, most of them are reaching one year of age. Their testicles have grown and are becoming functional. Along with sperm production there is also an *increase in testosterone production*. This hormone appears to have a direct effect on their brain, rendering it nonfunctional. More of this effect is due to the colt's sexual maturity than to the season.

The effects of sexual maturity on the colt and the behavior of the older stallion will both be affected by the company they keep. Factors such as the presence of mares or other boy horses can make a dramatic difference. That is a very interesting topic for a future discussion, and relates to studies of wild horse herds.

If I have convinced you there is some influence of increased light on the fertility of the stallion, you are probably asking yourself; *"Bob, is there any benefit to placing the stallion under lights?"* As you remember, placing the mare under 16 hours of daylight starting December 1 will bring them into a fertile heat one month earlier than natural lighting. In regard to the question about the stallion, the answer is: *"Yes, lights will increase the volume of sperm production some."* But is the increase worth the effort of sending the wife to the barn every night to turn the lights off? Probably not. Most fertile stallions have more than enough semen to breed all the mares presented to them early in the year. By the time the bulk of the mares arrive, it is well into spring and his semen is approaching its peak.

Another benefit of placing any horse under lights on December 1 is to *induce shedding of the winter hair coat*. They will respond to the increased light by losing the long hair of winter just as they will respond sexually. This can be very beneficial to *those showing their horses early in the year*.

Next week we will spend some time with social interactions within horse herds.