Use of Natural Service Sires with Synchronized Estrus

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Typically producers that synchronize estrus do so to facilitate an AI program. However there are some instances where application of an AI program is not feasible but advantages from synchronization of estrus are still desirable.

Advantages

Synchronization of estrus serves to concentrate both the breeding and calving seasons. This may be particularly useful in heifers and in herds with extended calving and breeding periods. Synchronization of estrus will begin to group more cows toward the beginning of the calving period and may be an intermediate step prior to implementation of a full estrus synchronization and AI program. Early calving cows have more time to resume normal estrus cycles prior to the next breeding period and are therefore more likely to continue to conceive early. More early calving cows will result in more older calves at weaning. Some studies have shown as much as a 10 to 17 day calf age advantage and 20 to 44 lbs at weaning as a result of estrous synchronization. Additionally, compared with conventional AI, cows are exposed to bulls sooner in the breeding season which may have a biostimulatory affect on those females that have not yet resumed normal estrous cycles. Facilities and time needed for heat detection and AI are not needed with natural service.

Disadvantages

The impact of a failure to identify a sub-fertile bull or a disease problem prior to turn out is magnified with a synchronized estrus. If bulls are not physically fit, the increased activity may be more likely to result in injury due to the intense activity in a short time frame. The increased number of females in heat at one time can attract attention from neighboring bulls. If the neighbor's bull(s) get into the pasture with the synchronized group of cows, the resident bull(s) may spend more time fighting the foreign bull(s) than breeding cows. This also increases the chance of injury. Finally, the genetic options and potential available with AI sires are most likely to exceed those with natural service sires

Guidelines for using bulls with synchronization

1) Use a synchronization protocol recommended for use with heat detection. If the estrus synchronization protocol is one injection of PG, turn bulls out when the PG injection is given or turn bulls out and give PG five days later. For the Select Synch protocol, turn bulls out three days before PG. The tightness of synchrony achieved with a fixed-time AI protocol is not desirable in this case. 2) Use a small pasture or lot to reduce the physical energy the bull uses to travel. 3) Be sure to have a complete breeding soundness exam performed on bulls prior to use. 4) Use bulls two to four years of age that are agile, active and known breeders. Bulls used in a multi-sire group should have their pecking order established well before turnout. 5) Use a bull to female ratio of 1:15 to 1:25. 6) Single sire pastures eliminate bull fights, however, there is some data to indicate fertility was increased when two bulls were used compared to one. 6) Monitor activity closely during the two to five days of most intense activity. 7) After the intense period of activity, it is best to rest the bull for two to three weeks or more prior to turning the bull back out. For small herds, with only one or two bulls this may not be possible.

Using bulls at a synchronized estrus can be an effective way to tighten the calving period and eventually shorten the breeding season. Pregnancy rates using either bulls or AI after the same synchronization protocol should be similar given good management in both cases.