Artificial Insemination of Beef Cattle

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Artificial insemination (A.I.) is one of the most valuable management practices available to cattle producers. It requires sound management and planning to be successful, however. The single most important factor affecting the success of the program is the attitude of the manager. He/she must be totally committed to an A.I. program. The weakest link in management sets the level of success for the operation. Should any aspect of management become subpar, A.I. conception rates and the benefits of this valuable program may suffer.

Many managerial decisions relative to feeding, facilities, fences and corrals, equipment, labor, sire selection, and so forth will be necessary. A sound herd health program and good nutrition are requirements of any breeding program, but they become even more important in an A.I. program. As management skills improve, labor requirements will be reduced, but the requirements will also remain above the requirements of natural mating.

Advantages of A.I.

1. Faster genetic process through the use of semen from genetically proven sires.
2. Control of venereal and other diseases.
3. Improved record keeping. Breeding dates will be known, so calving dates can be better estimated. Calving season is actually scheduled.
4. More economical than natural service when genetic merit is considered.
5. Facilitates crossbreeding and/or selecting the appropriate sire for each dam.
6. Earlier identification of fertility problems to improved management.

Disadvantages of A.I.

1. Requires better management.
2. Requires trained individuals.
3. Requires special facilities for corralling and insemination.
4. Requires extra time and commitment for estrous detection.

A manager contemplating using A.I. must be knowledgeable in many different aspects of beef production, such as:

1. Herd identification
2. Nutrition
3. Cow estrous cycle and heat detection.
4. Sire selection.
5. Facilities.
6. A.I. equipment.
7. Semen storage and handling.
8. Insemination procedures.

Herd Identification

Each female in the herd must be individually identified so that accurate estrous detection and record keeping are possible. Several suitable identification methods are available. Characteristics of a good identification system include permanency (not easily lost and will not fade) and visibility (easy to read from a distance). Ear tags and brisket tags with large numbers provide good identification systems. However, a backup system such as tattoos, brucellosis tags, or numbered freeze brands help identify cattle that have lost their tag. An individual identification is necessary to provide a record for when each female comes into heat, date of breeding, sire bred to, pregnancy status, and anticipated calving date.