DAMORY VETERINARY CLINIC

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Synchronisation techniques used in heifers

Heifers are usually reared as a separate group of animals to the main herd. In an efficient rearing programme they reach the service weight of 400 kg (Holsteins) with a withers height of 1.25m in 15 months.

Ideally, prior to service it is essential to ensure that:

1. Heifers are on an increased plane of nutrition for a minimum of six weeks prior to service (work done by ADAS showed that if less than 6 weeks conception rates declined);

2. They have been moved to or housed in a set area again for a period of at least 6 weeks prior to service, as housing will have an effect on extending the interval between heats and may have a significant effect on the results of synchronisation;

3. Heifers are of an adequate size and weight (see above)

4. All medication, eg. vaccines/wormers should be given in advance of the time of service.

Why synchronise?

When the time comes to serve the heifers more men hours are required to observe bulling (ideally 4-5 times per day for 20 minutes each time). Where this time is not available, synchronisation and fixed time insemination become more of an attractive proposition.

Methods Used

1. *Cidr followed by a prostaglandin (PG) injection*.

After Cidr insertion a PG injection (e.g. Estrumate) is administered one week later. The Cidr is then removed either 24 or 48 hours later and fixed time insemination can be used 48-50 hours after Cidr removal.

Advantages:

a) Good response to synchronisation;
b) No time required for heat detection;
c) Only one insemination required therefore reducing insemination costs and stress of handling

Disadvantage:

Most expensive method with respect to veterinary costs (but to be weighed up against double insemination required in other methods).

2. *Double injection of PG 11 days apart followed by double insemination at 72 and 96 hours after the second injection.*

Advantages:

a) No time required for heat detection;
b) Animals receive a double insemination - there is a possibility that this may help improve conception rates.

Disadvantages:

a) Cost of double insemination, depending on the straws used could make this quite expensive;
b) More handling of heifers at the time of insemination, therefore increased stress may reduce conception rates.

3. *Single injection of PG, serve those seen on heat, then administer a second injection of PG 11 days after the first to those animals not served, double insemination of these animals as under 2.*

Heifers will respond to PG if between days 5-16 of the cycle. If beyond day 16 then they should be approaching oestrus anyway.

Advantages:

a) Reduced drug use;
b) ? reduced straw usage as those animals seen on heat may only receive one service.

Disadvantages:

a) More time spent on heat detection;
b) Better handling facilities required for separating animals for service as increased stress reduces conception rates;
c) Better recording facilities needed to prevent second PG injection to animals already served resulting in a return to oestrus.

Pregnancy Diagnosis

Heifers are reared as replacement animals and as in any profitable management system it is important to know when they are available to be introduced into the main herd as this will help with culling decisions of problem cows. Pregnancy diagnosis is essential to know how successful a heifer rearing replacement system is. All too often heifers are served and assumed to be in calf even after a period of running with the bull, and when it is discovered that a higher proportion than expected are empty then management systems have to change, ie. barren heifers are sold and those animals due to be culled are retained in the herd.

Heifers are usually reared, served and ideally calved in batches as this will allow for easier transition into the main herd. Animals not detected in calf could have their feed pattern adjusted and moved into a special group of heifers to be served or synchronised at a later date.