

(PGF₂ alpha) is the most important prostaglandin we use for manipulation of the bovine cycle in our herd health programs. Synchronizing estrus of individual cows that have a corpus luteum and have not been detected in heat is an effective way to maximize a dairy herd's reproductive efficiency. Synchronizing estrus in groups of cows and heifers is an effective way to help control herd distribution for profitable production. As with any veterinary intervention with the reproduction management of cattle, there are some considerations to be made before medical administration. Nutrition and body score conditions are important aspects of the dairy management that must be reviewed if synchronization programs are to be effective. Also timing of synchronization must be reviewed with the management before it is implemented. Injecting a group of cattle with PGF₂ alpha 48 hours before the Super Bowl or Christmas will have mixed results.

A considerable volume of data has been collected concerning the effects of PGF₂ alpha on reproductive efficiency, but the theoretical and practical value of using this medication in postpartum cows is still being debated. A good review of the literature on this subject was presented in the June 1991 issue of *Veterinary Medicine*. In our practice, clinical impressions indicate that PGF₂ alpha used during the postpartum period can reduce the interval to first service. Obtaining uterine involution and ovarian activity before breeding commences has an important impact on profitability by decreasing days open in the herd.

Additional research is required to clarify the value of PGF₂ alpha in treating metritis in the noncyclic cow. However, the value of this medication during this stage of lactation may be that it has the least deleterious impact on reproductive efficiency compared with conventional treatment regimen, intrauterine infusions. The economic advantage of prostaglandin therapy over antibiotic therapy is that milk from cows treated with PGF₂ alpha does not have to be withheld from the bulk tank, whereas milk from cows treated with intrauterine antibiotic infusions must be withheld until the antibiotic is cleared. A clinical impression

worth further investigation is the report by dairymen that postpartum metritis cows treated with prostaglandin do not go off feed and lose production compared to cows treated with antibiotics alone.

Prostaglandin is the best agent for treatment of uterine infection in cows with a corpus luteum because it stimulates contraction of the uterine muscles and empties pus and fluids from the uterus. Heat prediction can also be extrapolated from the treatment intervention for future breeding in the reproductive cycle. Using PGF₂ alpha on a whole herd basis for postpartum cows needs to be evaluated after close investigation of the health status and management practices of the dairy under consideration. Such intervention is usually considered successful when there is an indication of an increased incidence of postpartum metritis in the herd and the first-service conception rate and number of days open need improvement.

Another advantage of whole herd postpartum prostaglandin treatment is in the commercial dairy herd that utilizes bulls for breeding. PGF₂ alpha treatment at days 40 to 45 postpartum not only helps control the incidence of endometritis infections but will establish proper lactation intervals. Early conceptions that have occurred in the herds with bulls are aborted and days in milk are not sacrificed due to early breedings. Again this intervention can also be used to manipulate herd distribution and heat detection. Careful planning of this medical intervention can be very useful in determining when heats will occur so that bulls are not over used and heat records can be obtained.

In conclusion, heat detection in the northwest is really nothing new or different from procedures conducted in other areas. Close observation and persistent dedication by management is required in order to get results. Veterinary intervention can be an aid for better efficiency and accuracy in estrus detection if it is combined with other aspects of a good herd health program. In no way allow your recommendations to become a "crutch" for sound management procedures if you expect to anticipate profitable results for the dairyman.

Heifer Co-op: Broader Veterinary Services for Smaller Beef Producers

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In our area of the country (Eastern Iowa) we have many family farms that include beef cows as one of their many farming enterprises. Many of these producers find it difficult to justify saving back replacement heifers due to a variety of reasons, namely:

1. One breeding pasture used.
2. Only one bull used on the entire cow herd.

3. Calving problems with heifers.
4. Replacement heifers are sired by current herd bull.
5. Too few heifers to successfully heat detect and A.I.
6. Unable to identify top replacements due to a lack of records.
7. Poor facilities to make A.I. practical.

So, many of these producers end up buying bred cows to

replace their culls, and often times they are buying someone else's culls.

After some financial analysis, we determined that most of these clients would be financially ahead to save top heifers from their herd for replacements, but we had to overcome the seven problems listed above. That is when the idea of the heifer co-op was initiated. I had read about other groups doing "heifer tests", so we borrowed some of these ideas for the framework of our heifer co-op.

The concept was explained in a newsletter and a questionnaire was sent to interested owners so that we could match A.I. bulls to their programs. Calving ease Angus and Red Angus bulls were used on all heifers.

1990 was our first year for the program and we had 33 heifers from 9 different herds participate. They arrived April 10 and were processed as follows:

1. IN IBR vaccination.
2. Lepto5-Vibrio vaccination.
3. Pelvic measured.
4. Reproductive tract evaluation.
5. Yearling weight taken.
6. Double tag each heifer.
7. Condition score

A pre-arrival requirement was that each heifer had to be "pre-conditioned", brucellosis vaccinated, and dewormed the previous fall/winter. The beef feedlot ration software from Iowa State University was used to develop the ration for the heifers.

We allowed 8 days for the heifers to become accustomed to eating together and started MGA on April 18. We fed it for 14 days and then gave an injection of Lutalyse on May 19, (17 days after MGA removal). Heat detection started immediately with the following artificial insemination results:

May 21 6pm - 11 bred
 May 22 7am - 7 bred
 May 22 7pm - 10 bred
 May 24 6am - 1 bred

So, 29 of 33 were bred in 3 days.

We repeated the lutalyse injection to the 4 not bred on May 30 and bred 2 of the 4.

We heat detected until June 15 and then turned in a clean-up bull until July 6 (21 days).

Results

26/33 heifers bred in 46 days 79%

21/26 settled AI 81%

(of heifers not bred at the end, one cycled every 5-7 days; one was 5 months pregnant and aborted two months before co-op started; and one had multiple implants).

We only had to assist 1 heifer at calving time. She had a 71# bull calf which was easily delivered. The heifer just wasn't trying to help. One owner assisted one also - 82# bull calf that came easily. The average calving ease score was 1.08 and average birth weight was 74.9#.

Overall, owners were very pleased with the results. They got a bred heifer of superior genetics to put into the herd that calved early and basically unassisted. The calves will be weighed this fall to assess growth rate. Comments have been very favorable as to the quality of calves.

Total cost to producer was \$114.38 for the total program.

1991 Heifer Co-op

Changes made from 1990

- only AI one time
- had a client that was more adept at heat detection
- charge more for labor

1991 Co-op results

20 heifers delivered	4/12/91
MGA started	4/14/91
MGA stopped	4/28/91
Lutalyse	5/15/91
AI	5/18/91

2 heifers bred early 5/10 and 5/12 due to "early" standing heat, remainder given Lutalyse on 5/18.

5/17/91 - 9 bred
 5/18/91 - 4 bred
 5/19/91 - 3 bred

So 17/20 bred in 3 days (with 2 bred early) for a total of 19/20 bred (95%).

We feel this is a service that you the veterinarian can coordinate to allow your cattle producers to justify keeping top replacement females for their herds.

Formulating Anionic Dry Cow Rations

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Dry cow nutrition is one of the most neglected areas of dairy cattle management. This is a serious oversight in

that this 60-day period sets the stage for subsequent lactational performance. Thus, inattention to dry cow diets can