

The use of artificial insemination, or AI, has been widely used by cattle producers for decades. In fact, this management practice has become quite popular amongst a variety of producers, from dairymen, to club calf producers, registered producers, and even commercial producers. If you have not yet implemented the use of artificial insemination in your herd, we encourage you to consider it and the benefits it may provide. This week we will look at the economical differences in using natural service vs. AI service in your operation, and how your decision to choose one over the other may result in a significantly higher profit at the end of each year.

Our first scenario will depict an operation consisting of a herd of 100 cows. Based on the general guideline of using one bull 2 years old (or older) per 25 cows for breeding, we calculate that a total of 4 bulls should be used to breed the herd. Most good quality 2 year old bulls are averaging about \$4,000 to purchase. Because these bulls are purchased and will be managed throughout the year, we must include an additional \$600 for annual care/feed cost per bull. Thus, for the first year after the bulls are purchased and added to the herd, a producer should be prepared to spend about \$4,600 per bull. For four bulls this equates to an approximate total bull cost of \$18,400 for the first year. This means that for the herd of 100 cows, it will cost approximately \$184 to get each cow bred (see Figure 1 below).

Natural Service:
100 Cows
4 Bulls
Bull price:
- Purchase price: \$4,000
- Annual cost: \$600
- Total cost per bull: \$4,600
Total Cost: 4 bulls at \$4,600 each = \$18,400
Total Cost per Cow: \$18,400/100 cows = \$184 per cow

Figure 1.

With the use of a synchronization and AI program it is likely that only two bulls will be needed for the same herd size of 100 cows. For this scenario we assume a cost of about \$40/cow to synchronize the females and purchase supplies needed, such as semen. For 100 cows at \$40/head, this equates to \$4,000 to breed the entire herd. Because not all of the cows will conceive when serviced by AI, we recommend having two “clean up” bulls to use on the cows to breed any females that may come back in heat. As with the first scenario mentioned, we can calculate that the two bulls needed to “clean up” with will cost the producer approximately \$4,600 each, or \$9,200. With a total bull cost of \$9,200, plus the \$4,000 AI cost, it will cost about \$13,200 to get the herd of 100 cows bred. This comes to \$132 per cow (see Figure 2 below). Please note that this price does not take into consideration the labor cost to have the AI procedure done on the females. If you do not know how to AI, a technician will need to be hired to do the work. Or, you may decide that it is most cost effective to take an AI course so that you can learn how to AI.

Natural and AI Service:
100 Cows
AI and 2 Bulls
Cow Cost:
- Synch/Supplies per cow: \$40
- Total cow cost: 100 cows at \$40 each = \$4,000
Bull Price:
- Purchase price: \$4,000
- Annual cost: \$600
- Total cost per bull: \$4,600
- Total bull cost: 2 bulls at \$4,600 = \$9,200
Total Cost: \$4,000 + \$9,200 = \$13,200
Total Cost per Cow: \$13,200/100 cows = \$132 per cow

Figure 2.

If you compare the two scenarios you will see that there is a \$5,200 difference. That is, considering the costs and supplies involved, we found that implementing AI, and using clean up bulls may be a much cheaper alternative to getting your cows bred compared to strictly using natural service. In addition, using a timed AI program will help promote a shorter calving season, which will result in a more uniform calf crop. Not only are the calves more uniform, but they are typically higher quality as well. This is because through AI, a producer has more access to good quality, high performing genetics compared to if he simply used a bull that he purchased through private treaty or an auction. Further, there is typically more information known about AI bulls, such as EPDs, and his pedigree. This helps the producer make decisions on which bulls he should AI his cow to, which contributes to him achieving his operational goals.

Artificial Insemination, though potentially profitable in many situations, is not always the best breeding option for every single producer. How well it will work, and if it will benefit you greatly depends on the size of your operation, your goals, and the resources available to make it work. If you think incorporating AI is something you may want to try, please contact us and we will help develop a plan for your operation. If you have any questions about AI please contact us.

Prices for feeder steers medium and large 1 sold through the Oklahoma National Stockyards on Tuesday, March 10, 2015 are as follows: 480lb- \$284.82, 579lb- \$280.66, 656lb- \$239.87, and 762lb- \$210.24. The price for April 2015 750lb feeder steers on the Chicago Mercantile Exchange was \$209.2 on closing Tuesday, March 10, 2015.

The annual Cattleman's Cow-Calf Clinic will be at the Henderson County Fair Park Complex on April 2. Registration begins at 3pm for the event, and is \$15 per person. If you have any questions, contact the Henderson County Extension office at (903)675-6130.

Thanks,
Dr. Jesse Richardson, DVM

Henderson County Veterinary Hospital
903-675-5613