

News Column

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Breeding costs in cow/calf operations have changed

The current tight cattle supply and liquidation forced by drought have many Kansas producers hoping to either restock or build herds. If heifers serve as those replacements, minimizing calving difficulty is a key concern. Artificial insemination (AI) is a superior tool to minimize risk of calving difficulty through the use of bulls with high accuracy EPD for calving ease. In addition, the value of the AI-sired heifer calves as replacements themselves was cited as contributing to the profitability of AI by 80% of users in a recent survey.

If you haven't been using AI, you might not realize that the value of bulls for natural service has risen faster than semen and associated costs of AI, making AI very comparable in cost. Commercial producers surveyed in 2013 indicated AI-sired calves were worth \$187 per head more than natural service sired calves. A number of variables will influence profitability of various management choices and the best way to evaluate a possible change is to use your own costs to compare. There are a couple of handy tools to do so.

The KSU-Bull vs AI Breeding Cost spreadsheet

(<http://www.agmanager.info/livestock/budgets/production/default.asp>) lets you input your own values for purchase costs, bull to cow ratios, bull maintenance cost, AI costs and any additional value attributed to AI sired calves. Alternatively, if you are a smart phone user, you may want to download the AI Cowculator to compare costs between AI and natural service. This simple tool uses base values from a study involving 8 herds that bred half of the herd with natural service and the other half with one fixed-timed AI followed by natural service clean-up. On a per cow exposed basis, AI groups returned \$49 per head more than natural service alone. One of the herds reported a loss of \$10 head exposed.

The AI Cowculator asks for one number for the bull maintenance costs whereas the KSU spreadsheet has the details to help you calculate that value (feed costs, depreciation, interest, etc.). The KSU spreadsheet allows you to insert your own value for any additional value of the AI sired calf (i.e., age, genetics) compared to the study value used in the AI Cowculator. With your inputs, either can give you an idea of how those systems compare today.

A key factor in comparing the difference in cost between natural service sires and one round of AI followed by natural service sires is the number of natural service sire bulls. At the experiment station in Hays, they figure roughly half of the cows will conceive to AI and they plan to use half of the bull power that they would for the same group with natural service alone. If a pasture holds 20 cows you will still need one bull for natural service, regardless if you use AI or not. [sj1]

Females that fail to conceive to AI are not so tightly synchronized the following cycle that the natural service sired bulls will have trouble covering this group. That said, good judgment is needed as this might not be the best situation to try out a single yearling bull nor to take a week's vacation with no one checking on the herd.^[s]2]

Costs relationships have changed so that natural service alone may not differ in cost from a breeding season that starts with AI, and finishes with clean-up bulls. Many commercial producers AI to high value, high accuracy EPD bulls to improve profitability. Technology to synchronize ovulation which facilitates fixed timed AI works. If you need help getting started there are a number of ways to get help by contacting your local county extension agent, your veterinarian or an AI technician/semen company representative. You can find lots of good information on this technology at www.beefrepro.info

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