

Timing is Everything

Timed artificial insemination could have major benefits for your herd.

by Whitney Whitaker, American Angus Association

Looking back on life, there are often moments when people consider how different the trajectory could have been if the timing was off. It is no different when thinking about how ironic it can be a dream job will pop up just at the right time. Weather is the same. The timing of a spring rain can do someone good, but rain during harvest is another story.

When breeding cattle timing is everything. However, with discipline and commitment, using timed artificial

insemination (AI) is one area that can positively change the direction and profitability of your herd, said Jordan Thomas, assistant professor and state beef extension specialist with the University of Missouri.

In a recent Angus University webinar, “Tackling Timed AI,” Thomas shared his knowledge and the benefits of timed AI.

Thomas said for families with fairly large cow groups on extensive range conditions, timed AI takes commitment, but value is there in the end.

He shared a story of a ranch family managing cattle in South Dakota. The family raises both

registered Angus and commercial cattle on extensive range conditions. They implement timed AI at their operation because they have seen the return it has for their operation.

Timed AI advantages

Timed AI has several advantages that can significantly affect an operation from a time and energy standpoint, Thomas said.

The return on investment is applicable to seedstock and commercial herds.

When using new tools in an operation, Thomas

reminds cattlemen those that have the most return add value and increase efficiency. From a business standpoint, reproductive tools should increase revenues and overall profitability. Using timed AI, Thomas said, can generate more income per cow and in turn, increase the value of the entire operation.

Thomas encouraged cattlemen to keep an eye on indicators that will measure profitability. For example, the value of calf minus the direct cost of cow exposed measures a single cow’s gross margin. To increase that margin, a cattleman can moderate annual cow carrying costs and

increase the productivity per unit of production while also increasing the value of the product. Reproductive efficiency significantly helps these margins, especially cow depreciation.

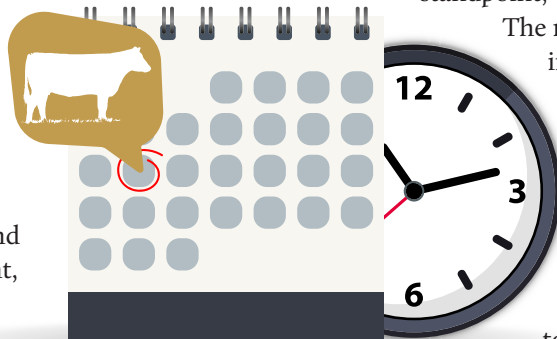
There are also other drivers of profitability that reproduction affects. The first driver being the number of calves weaned over a female’s lifetime. Dependent upon the time of conception, the age and weight of calves weaned can fluctuate the profitability of the operation. The quality of calves weaned, in terms of weight and health, is also a factor of reproductive efficiency.

“It’s not just if, but when she conceives during the breeding season that impacts commercial productivity and ultimately profitability,” Thomas said.

That is why getting cows bred early during the breeding season is vital, so females calve at the earliest time.

Timing creates multiyear challenges, where things can get worse and worse; or it creates multiyear opportunities. The opportunities and challenges are dependent on the timing of breeding and calving. Therefore, using timed AI can assist an operation in creating multiyear opportunities if done right.

Aside from the financial opportunities associated with this reproductive tool, timed AI has a few significant advantages over other systems, Thomas said. All females receiving estrous synchronization



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receive an AI service, which is important when trying to get females to conceive earlier each year. This takes away the potential error associated with heat detection.

Another advantage is the inclusion of progestins in most timed AI protocols, Thomas added. This essentially jump-starts the conception process by inducing estrus in anestrous cows or peripubertal heifers.

Early conception can pay dividends when you look at the number of calves a female can have during her lifetime. Thomas shared a 2013 study where results showed heifers who calve in the first 21 days with their first calf stay in the herd longer.

Additionally, the steps associated with AI can take place at one time in one day. Being able to do everything in one time frame can reduce labor and time commitments.

It also has benefits from a logistical standpoint of pasture use or pen

space when compared to heat detection. Not having those females up and on their feet for a long period of time can be advantageous.

Timed AI considerations

“I’m going to be honest that timed AI isn’t all roses and rainbows,” Thomas said. “There are a few disadvantages that I think are worth talking about.”


This tool is “timed,” therefore timing of insemination is not individualized to specific females.

Instead of using the a.m./p.m. rule, timed AI uses a time point based on a research-based compromise to get the best pregnancy rate for the group of the animals, not the individual cow.

The other disadvantage is females that express estrus before the time of fixed-time AI have reduced pregnancy rates.

Even considering both advantages and disadvantages, utilizing timed

AI as a reproductive management tool can be beneficial, but Thomas recommended cattlemen find a mentor or AI professional to help them through the rest of the process. Thomas recommended connecting with people, as going to AI school is not always necessary.

“The best time to start was twenty years ago,” Thomas said. “The second-best time is now. I would encourage you to look at things that way with reproductive management, and even genetic management tools that are available to you.” 

Editor’s note: The “Tackling Timed AI” webinar and summary can be viewed at www.angus.org/University/.

