MGA® Isn't Just for Heifers Anymore

Researchers say the feed-based compound can help synchronize mature cows, too.

Story and photos by ***Becky Mills***

MGA®(melengestrol acetate) has proven itself time and time again as an effective synchronization tool for yearling heifers. But researchers and producers are finding the feed-based compound also works for 2-year-olds and mature cows.

Frankfort, S.D., commercial producer Brent Mason uses MGA to synchronize both his wet 2-year-olds and his cows. "It was really very simple," he says.

Mason uses the MGA-Select program, formulated by University of Missouri animal scientist David Patterson in cooperation with Select Sires. He feeds MGA for 14 days in a carrier of shelled corn. Twelve days later he gives an injection of gonadotropin-releasing hormone (GnRH), which stimulates ovulation and synchronizes the follicular wave. Seven days later, he gives a prostaglandin (PGF) injection.

He checks heat and breeds for the first 80 hours after he gives the PGF, then time-breeds the rest and gives them another injection of GnRH.

Mason says he was concerned about the required number of trips through the chute, "but we tried to make sure we had enough manpower. And it didn't bother the calves at all."

He says they worked 200 cows in one day, and the cows flowed through the chute.

He was just as satisfied at the pregnancy check. Of his 103 head of Angus-based, wet 2-year-olds, 55% settled to the artificial insemination (AI) breeding, and 39% settled to the natural breeding for a total of 94%. Of the 98 head of 3- to 5-year-old Angus-based cows, 71% settled to the AI breeding, and 28% settled by natural service, for a 99% pregnancy rate.

Comparison

Producer Mark Fulton, Miller, S.D., uses a similar program on his 250 head of straightbred Angus 2-year-olds; however, after the PGF injection he heat detects and breeds for three days and doesn't time-breed.

"The first year the wet 2-year-olds worked like the heifers — 86% to 87% came in standing heat, and 65% settled by AI. We were really happy."

He adds, "These younger cows should have the best genetics. We hit the best cows with the best job of breeding we can do."

Roy Wallace, vice president for Select Sires' beef program, says the MGA-Select program is a refinement of their Select-Synch method. "The Select-Synch program is the F-150 pickup without air and power steering," he comments. With it, producers give an injection of GnRH followed by a PGF injection seven days later.

While Wallace says the Select-Synch program still works for producers who aren't set up to feed MGA to their cows, he says there are a couple of drawbacks. "Five percent to 10% of the cows will cycle the day before you give the prostaglandin. That is not a problem if you are there and can sort the cows out." The MGA prevents these

The CIDR adds another option

When it comes to synchronizing cows, there is even more help on the way. The new and improved version features a controlled internal drug release (CIDR) device that releases progesterone.

Available internationally, but still waiting on Food and Drug Administration (FDA) approval here, the CIDR has the attention of researchers and producers.

"The ease of application and the ease of removing it are probably the biggest advantages," says Joel Yelich, University of Florida animal scientist.

The CIDR is inserted into the cow's vagina with a plastic applicator and removed simply by pulling the nylon tail attached to the end of the implant. The tail hangs out of the cow's reproductive tract, so the producer can get to it easily.

Although they are easy to remove, the implants generally stay put until they are supposed to come out. "The retention rate is very good," Yelich says. "We lose less than 1% of them."

"You don't necessarily have to catch their heads to apply them," he continues. "You can use a breeding box or a squeeze chute. When you remove them, you can load the cows in an alleyway and grab the small tails and pull them right out."

He says, "We've put 300 to 400 in during a morning and taken them out of the same number of cows in two hours. For producers who want to breed a lot of animals, the limit becomes how many cows you can time-breed AI in a day."

Angus and Brangus breeder Chris Hardee works with Yelich in testing the CIDR. Over the last four years, he says they have used the implants in four groups of heifers and cows. However, it was a group of 65 Brangus cows that sold him on the device.

"We got a 65% single-service conception rate on timed AI," says the Chiefland, Fla., producer, adding that the cows were even thinner than he likes for an AI program. He estimates their body condition scores (BCSs) were 4.5 to 5 on a 1-to-9 scale.

"We had some cattle that were only 35 to 40 days postpartum," Hardee adds. "If you can do that time and time again, you can get cows bred like you want to."

Yelich isn't surprised by those results. "The CIDR does increase

No frills synchronization program works for North Carolina producer

In Mooresville, N.C., Angus breeder Dennis Overcash sticks with the F-150 version of synchronization — the Select Synch program. "This is the third year we've done that; it saves on labor," he says.

Overcash, who farms with wife Linda, daughter Kristi and son Jason, tries to breed all 70 head of his registered cows by artificial insemination (AI). During his winter 2001-2002 breeding season, he checked heat for two and a half weeks and bred 36 cows by AI. Then he gave a gonadotropin-releasing hormone (GnRH) injection, followed by a prostaglandin (PGF) injection seven days later, to 19 more cows that had not shown heat. All but one came in heat within 72 hours.

He'll follow the same program on his remaining 15 cows, and will breed by AI any cows in the first group that come back in heat.

Overcash starts supplementing his cows with 3-4 pounds (lb.) of grain 30 days after they calve, both to boost nutrition on fescue pastures and to make it easier to handle the cows.

During the 2000-2001 breeding season, he got all but seven cows bred by AI with this program.

►Dennis and Linda Overcash are committed to AI on their Mooresville, N.C., Angus operation.

Overcash estimates he spends around $8.60 per head for the synchronization products, and he is paid back many times over by being able to breed his cows by AI. "We're breeding for good, functional cattle that will work on this fescue and wean off a big calf," he remarks.

He is succeeding. Overcash Angus sends approximately 10 head of their AI-sired young bulls to test stations in North and South Carolina each year. Since they first started consigning the bulls in 1988, they have had the highest indexing Angus on test 11 times.

early heats by getting the cows into the same stage of the estrous cycle.

While the GnRH means an extra trip through the chute and costs $3.25-$4/dose, Patterson says it helps jump-start the cows that aren't yet cycling. "Adding GnRH to the mix on Day 26 will get the heat response into the 80% to 90% range," he says.

Preparation

Still, the 2-year-olds and cows have to be in good shape for any synchronization program to work.

Fulton feeds his 2-year-olds corn, alfalfa hay and corn silage until they are moved to grass. Then he continues to feed small amounts of corn to keep them in the habit of eating when he feeds the MGA supplement. He says they have a body condition score (BCS) of 6 or 7 at breeding.

Mason supplements his young cows with 5-6 pounds (lb.) per head per day of shelled corn, a molasses lick tank, and minerals. Like Fulton, he continues to feed corn after the cows go on grass so they'll eat the MGA supplement. He estimates the 2-year-olds were about a BCS 6 at breeding.

Both producers breed their yearling replacement heifers to calve in February, a month before their mature cows. Doing so gives the heifers extra time to recover from calving and still stay on schedule with the mature cow herd. Mason says his 2-year-olds were an average of 90 days postpartum when he started the synchronization program.

Uniformity

Mason and Fulton say their synchronization and AI programs are worth the extra effort and cost. Fulton, who sells his calves as 700-800-lb. feeders, says, "Around here, that is what makes

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the probability of anestrous animals showing estrus. It will induce heat in probably 30% to 50% of those animals, depending on how deep the cows are in anestrus." He says the animals that don't respond to the CIDR are generally the ones in very poor body condition.

On the down side, Hardee says the CIDR does require some chute time. "That goes with all synchronization systems, though," he comments.

In the protocol Yelich generally uses, the cows are placed in a chute or breeding box on Day 1 for the CIDR to be inserted. He also recommends giving an injection of gonadotropin-releasing hormone (GnRH) at the same time.

"The GnRH turns over the follicles, and that increases the pregnancy rates." He explains, "The follicles may remain on the ovaries for seven to eight days. They tend to be infertile."

On Day 7, the CIDR is removed and the cows get an injection of prostaglandin (PGF).

"Then you have several choices," Yelich says. "You can breed on detected estrus, which is usually four to five days, or you can do timed AI 48 hours after CIDR removal, while at the same time injecting GnRH."

However, he says there is a risk with all timed-AI programs — there is a variation of 20% to 80% in conception rates among sires, while breeding on detected estrus usually results in conception rates between 50% and 65%.

"With timed AI, the majority of cows will not have shown estrus yet. GnRH stimulates ovulation, but they won't ovulate until 24 to 30 hours later. The sperm has to live that long, and some sperm can't do that."

Whether using timed AI or breeding on heat, Chris Hardee is ready for the FDA to approve the CIDR. "We'll use them for sure," he states. "Even if they are more expensive than a conventional synchronization system, we'll bear the cost. When we look at the cost of semen, of open cows and late calves, every 5% to 10% of conception rate means a lot."

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money — having them uniform and in load lots."

University of Florida animal scientist Joel Yelich says this uniformity is one of the main advantages of an effective synchronization program, particularly one using timed AI.

"We can get 50% to 60% of the cows bred in the first three days of breeding season," he notes. "That increases the number of cows that will get pregnant in the first estrus following the synchronization period. Typically, we see 70% to 80% of the cows calve in the first 30 days of the calving season."

Mason says he also benefits from the improved genetics of his synchronization and AI program. "I do feel we are getting compensated for our calves, even in the auction barn." He adds, "Buyers take note when the calves have carcass data behind them, and their genetics speak in the feedlot."

Editor's Note: *For more information on synchronizing, breeding by AI and costs, check out the following Web sites:* www.ianr.unl.edu/pubs/beef *(University of Nebraska);* www.iowabeefcenter.org *(Iowa State University); and* www.selectsires.com *(Select Sires).*