Cow Reproduction: Bulls Versus AI

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NEWARK, Del. — No one would argue that, in our region this year, temperatures became hotter sooner and to a higher degree than in previous years.

This situation immediately suggests possible trouble in getting our dairy cows bred, which is a source of continual concern for the dairy farmer.

As soon as temperatures go above 80 degrees Fahrenheit, our cows, especially Holsteins, are out of their physiological comfort zone.

To counteract this, cows try to adjust metabolically, usually by reducing the activities of estrus, eating and milk production. One result is that conception rate is lower than it should be.

Studies in Florida, as well as here in Delaware, have shown that directly hosing down cows' bodies with water and then blowing air generated by fans over their backs to evaporate the water is an effective way to cool them down.

Under these conditions, normal conception rates, body temperatures, eating and milk production are soon restored.

Automatic sprinkler systems, the kind usually used on lawns and fields, turned upside down and fastened to the rafters of the cow barn keep cows wet and cool. This innovation works very well.

Casualties in Delmarva broiler houses are not uncommon on very hot days, but dairy cow managers seem to know how to control the overheating problem for their animals.

Another approach to better conception rates has been to bring in a natural service bull as a supplement to or substitute for A.I.

The thinking on this is that a bull is a much better spotter of estrus in cows than even the best and most conscientious herdsperson.

This practice is not uncommon in the South, where temperatures are often much higher than they are here. What then are the results?

Research work in Georgia reveals some interesting data.

Two groups of dairy herds from the Georgia DHIA were compared. The first group bred 90 percent or more of their cows to a natural service bull. The second group used A.I. on 90 percent or more of their cows.

If the assumption is correct that bulls are better settlers of cows than A.I. because they are better estrus spotters, then one would expect superior reproductive data in herds using natural service bulls.

The 62 Georgia DHIA herds using mostly bulls averaged 154 "days open," 70 "days dry" and 14.3 "months calving interval."

In comparison, the 122 Georgia DHIA herds using mostly A.I. averaged 146 "days open," 70 "days dry" and 14.0 "months calving interval."

Few differences were in evidence, but if any differences did exist, they favored A.I.

The real differences in this study surfaced in milk production. The herds on which A.I. was predominantly used averaged 16,832 pounds milk and 587 pounds fat versus 14,139 pounds milk and 501 pounds fat for the natural service herds.

At $12 per hundredweight of milk, this 2,693 pounds milk advantage translates into a plus of $323.16 per cow per year for the A.I. herds.

Many factors may be at work here.

To explain more fully these variations, however, the bottom line is that dairy farmers who used bulls instead of A.I. to breed their cows did not achieve better reproductive performance in their herds to justify this seemingly physiological advantage for the price of a genetic disadvantage.

They may even have had an inferior reproductive performance, not to mention the headache of keeping a bull around. And they certainly had inferior herd milk production at a money differential that could even have paid for some very expensive A.I. semen.

This brings us back to the strategy of keeping our cows watered down and fan cooled to lower body temperature, which ensures their eating well and producing milk better.

In the end, it is a question of how we manage the energy metabolism of our cows. If cows need energy to keep themselves cool, then they will breed and produce less.

Following this same line of thinking, we are beginning to feed our cows better during the first part of the lactation, a period dairy managers used to take for granted that a cow would be in negative energy balance.

With today's high-producing cows, we cannot afford to let them be in negative energy balance. Using what we know and putting these new ideas into action can make our dairy operations significantly more profitable, even without going back to using bulls.

FFA Show

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gers' herd are often recognized by the National Brown Swiss organization for production records.

Taking reserve grand/senior champion was also a 4-year-old cow, Wind Mill Blen Calypso, bred by William Daubert of Pine Grove, and owned by Thomas Zartman Jr., of Ephrata.

In the Jersey breed, there were 11 entries from six competitors.

The top Jersey was a junior 2-year-old entry from Tiffany Yeager, of Chester County, Agape Royal Tootsie. Yeager bred and owned the entry, a daughter of J.S. Quicksilver Royal.

Taking reserve grand champion Jersey was also bred and owned by Yeager, a 5-year-old, Agape Observer Shmad. Shmad is the daughter of Gramhil Observer Poet.

S.E. REGION FFA Dairy Show Results

HOLSTEIN

JUNIOR CALF 1.Darin Nolt B 2 Scott Nolt B
INTERMEDIATE CALF 1 Lavonne Lehman B 2 Rebecca Pyles B 3 Robert Aukamp R
SENIOR CALF 1 Darin Nolt B 2 John Risser B 3 Matthew Kolb R
SUMMER YEARLING 1 Peter Sonnen B 2 David Lentz B 3 Brent Shuey R
JR YEARLING 1 Kraig Sellers B 2 Jennifer Bashore R 3 Jacy Clugston R
INTERMEDIATE YEARLING 1 David Lentz B 2 Thomas Zartman B 3 Jarrod Johns R
SR YEARLING 1 Melanie Balmer B 2 Jason Hostetter R 3 Sandra Gross R
JR CHAMPION David Lentz
RESERVE JR CHAMPION Peter Sonnen
DRY COWS. 1 Thomas Herr B 2 Andrew Bicksler 3 Thomas Shuey R
JR 2-YR-OLD. 1 Matthew Kolb B
SR 2-YR-OLD 1 Andrew Bicksler B 2.Ammon Peiffer Jr. R
4-YR-OLD: 1.Corwin Bomgardner B 2.Andrew Bicksler B
5-YR-OLD: 1 David Lentz B 2 Matthew Hoover B
SR CHAMPION. Corwin Bomgardner
RESERVE SR CHAMPION Thomas Herr
GRAND CHAMPION: Corwin Bomgardner
RESERVE GRAND. Thomas Herr

BROWN SWISS

SR CALF: 1.Scott Wagner B
SUMMER YEARLING: 1 Tom Zartman Jr B
SR YEARLING: 1.Thomas Zartman B
JR CHAMPION: Scott Wagner
RESERVE JR CHAMPION: Tom Zartman
3-YR-OLD: 1 Scott Wagner B
4-YR-OLD: 1.Karen Heilinger B 2.Thomas Zartman B
SR CHAMPION Karen Heilinger
RESERVE SR CHAMPION: Thomas Zartman
GRAND CHAMPION: Karen Heilinger
RESERVE GRAND Thomas Zartman

GUERNSEY

SUMMER YEARLING 1 Karen Heilinger R
JR YEARLING: 1 Steven Wagner B
JR CHAMPION: Steven Wagner
RESERVE JR CHAMPION Karen Heilinger
JR 2-YR-OLD: 1.Steven Wagner B
SR CHAMPION: Steven Wagner
GRAND CHAMPION Steven Wagner
RESERVE GRAND Karen Heilinger

JERSEY

SR CHALF 1 Thomas Herr B 2 Brian Zug R
SUMMER YEARLING 1 Jennifer Ulrich B
JR YEARLING 1 Tiffany Yearger R 2 Brian Zug R
INTERMEDIATE YEARLING 1 Emily Zug
JR CHAMPION: Jennifer Ulrich
RESERVE JR CHAMPION Thomas Herr
JR 2-YR-OLD 1.Tiffany Yeager B
SR 2-YR-OLD: 1 Scott Wagner R 2 Thomas Herr R
4-YR-OLD: 1 Tiffany Yeager B
5-YR-OLD 1 Tiffany Yeager B
SR CHAMPION: Tiffany Yeager
RESERVE SR CHAMP Tiffany Yeager
GRAND Tiffany Yeager
RESERVE GRAND Tiffany Yeager

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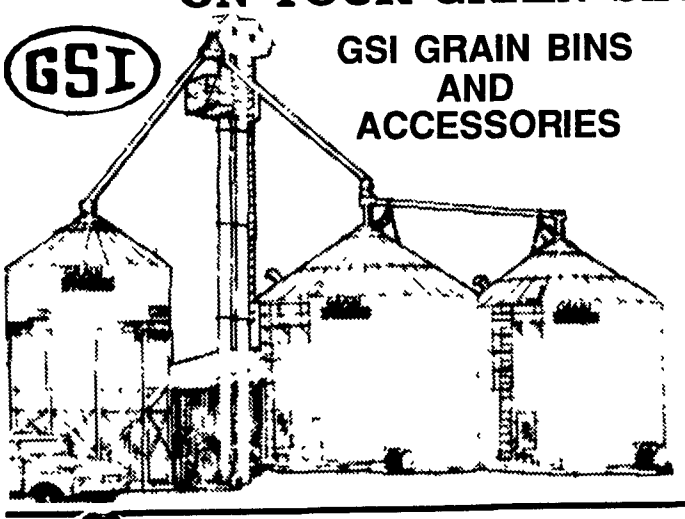

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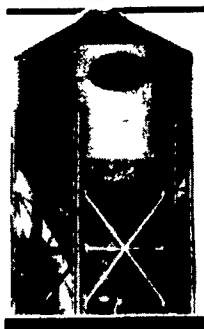

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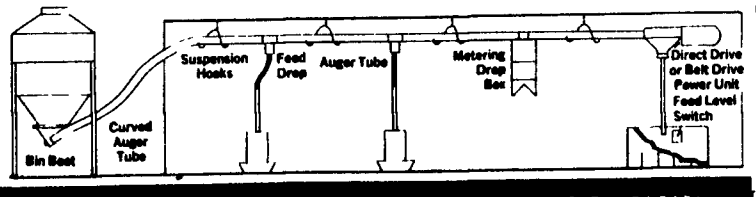

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