

# Why natural service is not the solution

by Jeff Stevenson

**A** NUMBER of myths circulate in our industry. One that frequently surfaces is that natural service is the answer to poor conception rates and heat detection challenges on the dairy farm.

In 1938 when A.I. breeding was first introduced, dairy producers quickly adopted it. No other technology has been more readily accepted on the dairy farm except for the milking machine. If you will indulge me for getting on one of my favorite soap boxes, I would like to clear up some of these myths about natural service that can be refuted by scientific facts.

**Myth No. 10: The best herds are doing it.**

Results of a survey of 61 of the top 128 dairy herds based on yearly rolling herd average for milk disagree. These herds represented all nine dairy records processing centers and involved work by Ellen Jordan. Those who responded indicated that they were using A.I. breeding on 95 percent of their cows and 89 percent of their heifers. They were watching cows on average 3.1 times per day (undoubtedly the key to their success with A.I.).

**Myth No. 9: Herd bulls make more pregnancies.**

Almost without exception, we find that A.I. breeding gets more cows pregnant.

Just five years ago, a study was conducted in the U.K. where five herds were converted from all natural service to A.I. breeding (600 cow records). Twenty pairs of cows were selected during each of three years in which 20 cows were A.I. bred and 20 were naturally mated. During the first two years, calving intervals dropped for both A.I. and naturally serviced cows; but, after three years, the A.I.-bred cows had shorter calving intervals by 18 days.

A more recent California dairy where head-to-head comparisons were made between the bull and A.I. found 52 percent of cows were pregnant in bull strings compared to 60 percent pregnant in the A.I. strings.

The author is professor of animal sciences at Kansas State University, Manhattan.

**Myth No. 8: Bulls are better heat detectors.**

In confinement, free stall facilities, bulls have a difficult time “finding” cows in heat. Remember, the bull first must see mounting activity before he can move to that estrual female and validate estrus by sniffing and licking.

In confinement, depending on the facility, finding cows may be a problem. We assume the bull is on the job 24 hours per day. That is not true when he has his head in the feed bunk and cannot see what is happening behind him!

**Myth No. 7: Young bulls produce no calving problems.**

Of all the calves born on the dairy, no single lactation group produces more calves than the 2-year-olds. In Holsteins, they are also the group with the highest calving risks because of their size at first calving. The unknowns of a young herd bull are his mature size and the size of his calves. He has no track record.

The Holstein sire summaries provide a calving ease value that indicates the average percentage of calves born to replacements that you can expect to assist by exerting considerable force and extreme difficulty. For A.I. breeding heifers, you should use A.I. sires with low calving ease percentages of high reliability.

**Myth No. 6: Bulls have minimal health risks.**

No one more closely scrutinizes the health of its bulls than the A.I. industry. Semen from A.I. sires is stringently tested to ensure each straw of semen is disease-free. Natural-service sires can be a source of disease transmission. One infected cow mated by a herd bull becomes the source of disease even when the bull was clean.

Unless the herd bull has been tested and screened for disease and then isolated from breeding females until he is declared clean, you have introduced a ticking time bomb.

**Myth No. 5: Bull PTA's are better than average.**

On average, the herd bull has PTA's for milk traits, conformation, and longevity of about zero compared to his long-term tested A.I. sire counterparts.

He has produced few or any offspring, and his contribution to the breeding soundness is rarely known.

**Myth No. 4: Bulls lower the potential inbreeding.**

One loses about 775 pounds of milk over the lifetime of a cow for every 1 percent the female is inbred. The potential inbreeding offered by the herd bull is rarely known. By using various programs offered by A.I. studs or other software mating systems, you can lower the inbreeding potential of any projected A.I. mating. More pedigree availability and variation of herd sires are at your fingertips through the A.I. studs.

**Myth No. 3: Using bulls reduces breeding costs.**

Putting a pencil to refute this one is not easy. However, based on calculations made by ABS Global (Tech line, May 2000), they show that the A.I. breeding advantage per cow or heifer on a 500-cow dairy is \$76. They assume a \$1,000 bull cost, \$9 per unit of semen, and 40 percent conception achieved by the herd bull or A.I. breeding. They have accounted for all natural-service costs (bull purchase, health and feed costs, and so forth) which equal \$14,775; and all the costs associated with A.I. (technician, heat detection, semen, and so forth) which equal \$21,149. This is where most of the pencil pushing stops and many claim natural mating is cost effective.

But wait, don't forget the additional income that comes from A.I. breeding: improved fertility from selected, high-fertility sires and their resulting live calves; improved profitability from less inbreeding; increased genetic gain; and increased maternal value of females in the herd. Some of these A.I. benefits are accrued in the short and long term.

**Myths No. 2 and 1: Bulls are safe.**

People count most. That is why most of you have chosen to be dairy producers. One life taken by an “accident” with a herd bull is one life too many. No one wants the unenviable task of reporting such a needless accident to his spouse or one of his employees. The only safe bull is the one in your A.I. breeding gun. Happy A.I. breeding! 