High Milking Cows, Reproducing Cows Offer Choices

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NEWARK, Del. — As 1991 begins, it's time to make New Year's resolutions. Many of us in the dairy business could also make a wish list for what we want, or don't want, as the case may be, in the next year.

Freudian analysts suggest that sex is a thought foremost on people's minds, but for dairy operators, it's simply business. We are professionally and seriously concerned with that aspect of sex that hits us in our pocketbooks — conception in dairy cows.

Despite all the wonderful biotechnological progress, one in four dairy cows last year was not getting the point of sex, which is to conceive. So on top of my 1991 wish list is better sex performance in all dairy animals. The problem might be that the dairy cow has been increasingly productive physically, producing more and more pounds of milk per day. New studies from Iowa State University indicate that higher milk production is related to longer periods of suppression of estrous behavior in cows.

Traditionally cows have been expected to have a calf every 12 to 13 months. A top dairy cow with 1500 pounds bodyweight might be milking 150 pounds per day. Compare this to a top dairy goat with 150 pounds bodyweight milking, not unusually, 15 pounds per day. However, evolution has made most of these dairy goats seasonally anestrous, because their gestation period is only 5 months as compared to 9½ months for cows. Also, goats, in contrast to cows, can easily have two or three healthy offspring per parturition. So what are the options for dairy-cow people?

Systematically producing twins or triplets is not feasible, not unless E.T. (embryo transfer) plus Cesarian section delivery can offer a breakthrough some day. Nor is a shorter pregnancy possible. And considering less milk per animal per day is not practical since that is where the profit is. Experts agree that the profitability of today's dairy farm is inextricably tied to higher milk production per animal.

So for this seemingly one-track problem only one option is left: to forego the traditional requirement of one calf every 12 to 13 months — and maybe sex-identified E.T. can be a breakthrough here — or to discover why sex with conception and high levels of physical work are not compatible, and then rectify the situation.

One interesting discovery in the new Iowa study is that high milk production was not antagonistic to reactivation of ovarian function, only to expression of estrous behavior. This means a more silent estrus, resulting in less detection of its occurrence by dairy farmers.

Furthermore, fat heifers or those in negative energy balance showed reduced fertility because of less progesterone hormone secretion, which affected the regularity of the estrous cycle and accuracy of timing of A.I. Days to first estrus increased in high-milking cows, and these have negative energy balance, less blood glucose, less liver glycogen and more fat breakdown metabolites. This brings to mind the time-proven procedure of sheep breeders who practice "flushing" when they want to bring their ewes into estrus. They temporarily increase the nutritional levels of the sheep.

With all the genetic selection success in dairy cows, have we hit a nutritional ceiling that says from here on you have either milk or conception but not both? Yet we have added to our bag of nutritional new tricks rumen-protected protein and rumen-protected fat to provide the digestive guts of our cows with the nutritionally higher density ration needed to overcome those negative energy balances. This has given us 24,000-pound herd averages, or 75 to 80 pounds milk per day. Certainly we know how to reach much more milk per cow per day than 75 to 80 pounds, but we do not know too well yet how to sustain such a level to reach 30,000-pound herd averages, especially in the face of reduced estrous activity.

A partial answer comes from a new Cornell University study that examined pregnancy-check strategies. When on-farm milk progesterone was tested on day 19 after breeding followed by treating the detected nonpregnant cows, a substantial net-profit per cow was realized above the alternative strategy of the traditional pregnancy check by rectal palpation between days 35 and 50 after breeding and the use of pressure-sensitive mounting detectors. It certainly seems that this opportunity for earlier catching of cows which have not conceived should reduce numbers of repeat services and long average calving intervals, which will help make 1991 more profitable for such practitioners.

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Rolling Herd Average

Name	Brd.	No. Cows	% Days In Milk	Milk Lbs.	Fat Lbs.	Protein Lbs.
Robert Hewitt	B3	25.3	95.3	21,933	670	680
Arlin Halteman	B3	67.0	90.6	19,973	704	655
Fred Seipt Family	3	117.0	89.0	20,295	693	648
Patty-Run Dairy Farm	B3	64.1	87.2	20,585	752	640
W B Saul High School	3	20.1	89.4	20,134	678	630
Richard A Bechtel	B3	80.4	90.0	19,500	687	626
Robert + Terry Moser	B3	78.4	89.4	18,763	655	624
Correctional Indust	B3	154.9	85.5	19,196	654	616
George Seneko Jr	3	65.0	89.7	19,100	707	611
Edwin A Pollock	B3	40.6	88.3	18,730	563	608
Arthur A Kulp	B3	50.7	88.2	18,748	629	593
Harold K Halteman	3	62.8	88.5	18,802	694	593
Chester Soltys III	B3	55.8	88.3	18,526	648	574
Merrymead Farm	3	104.0	88.5	17,706	650	571
Franklin J Schlegel	B3	36.1	90.1	17,546	636	568
Harold Moser Jr	B3	94.6	83.5	17,535	660	567
Charles Rhoads	3	35.5	89.6	18,029	703	567