

Multiple Births Mean More Beef

The average beef cow that conceived after an experimental hormone treatment weaned 1.11 calves — up from 0.85 normally recorded in good beef herds.

The treated cows were part of a practical experiment at Fort Reno Livestock Experiment Station, El Reno, Okla., to try out available techniques for inducing multiple births. Cooperating in the trial were livestock researchers E. J. Tuman of Oklahoma State University and R. E. Renbaiger and D. F. Stephens of ARS.

They injected 81 beef cows with pregnant mare serum (PMS), a substitute for the natural hormone (follicle stimulating FSH) that stimulates the ovary to produce eggs. Cows were injected twice — during the early and the late parts of the estrous cycle. Then at the end of the cycle, they were injected with chorionic gonadotropin to assure ovulation, that is, shedding of each egg.

At the first mating following hormone treatment, 52 cows conceived. Counting only offspring that survived 1 month, they produced 29 single calves, 12 sets of twins, 8 sets of triplets, 2 sets of quadruplets, and 1 set of quintuplets. In future trials the scientists hope to increase the number of twins and triplets without getting quads and quints, which present special management problems.

Multiples were lighter at birth than single calves. Twins and triplets averaged 55 pounds, and quads and quints averaged 34 pounds compared with 83 pounds for single calves.

Light birth weight could be accounted for, in part, by length of gestation. It ranged from 277 days for twins to 258 days for quints compared to 281 days for single calves.

At weaning, twins and triplets averaged 374 pounds, quads and quints 332 pounds. All were generally raised as twins, using providing access to feed. Singles, raised as singles without feed, averaged 462 pounds. This shows researchers emphasize, that offspring of the average cow with multiple calves produced 746 pounds of beef at weaning — more than 1½ times the output of 462 pounds recorded for cows with single offspring.

But results, while encouraging, raise a number of practical problems.

First, 48 percent of cows with multiple calves did not expel their placenta naturally, compared to 2 or 3 percent in the normal herd.

Second, 25 percent of the cows raising twins did not rebreed, perhaps in part because of the heavy stress on cows raising twins. Further, these cows did not really have enough milk for two calves. Both problems may be solved by crossing beef breeds with dairy cattle.

Third, the treatment is costly in materials and labor. Price of hormones, now about \$7 per cow treated, must be reduced by new, cheaper, mass produced hormones or hormone substitutes. Labor costs may come down when research now underway permits workers to combine treatments for multiple births with treatments for estrous synchronization. Synchronized cows can be treated and managed as a herd rather than as individuals.

Scientists at Fort Reno and other stations will chip away at these drawbacks because the potential of multiple calves is undeniable, particularly when viewed from the standpoint of calves weaned per cow.

To get a basic idea of how hormone dosage affects ovulation, physiologists treated 61 beef heifers, 2 and 3 years old, with follicle stimulating hormone (FSH) obtained from pituitary glands of sheep and horses. FSH stimulates the ovary to produce eggs.

The 5 day treatment of two injections daily was started on the eighth day of estrus, which had been synchronized by feeding progesterone. Heifers were bred naturally as they came into heat. Sixty to 72 hours later, results of the entire procedure were checked by surgically examining the ovary and collecting eggs that were shed.

Heifers were bred naturally as they came into heat. Sixty to 72 hours later, results of the entire procedure were checked by surgically examining the ovary and collecting eggs that were shed.

SAVE 15% ON DEKALB XL POWER PLANT Seed Corn? YES!

Plant XL economy grades for the same big bred-in yield potential. Yet they offer a big saving on your seed.

see me now

P. L. ROHRER & BRO., INC.
SMOKETOWN Ph. Lanc. 397-3539

PIONEER OF BETTER IDEAS IN SILO UNLOADING

A 2-foot diameter impeller isn't the only reason you'll feed cattle faster with a Van Dale silo unloader

HERE'S ANOTHER...

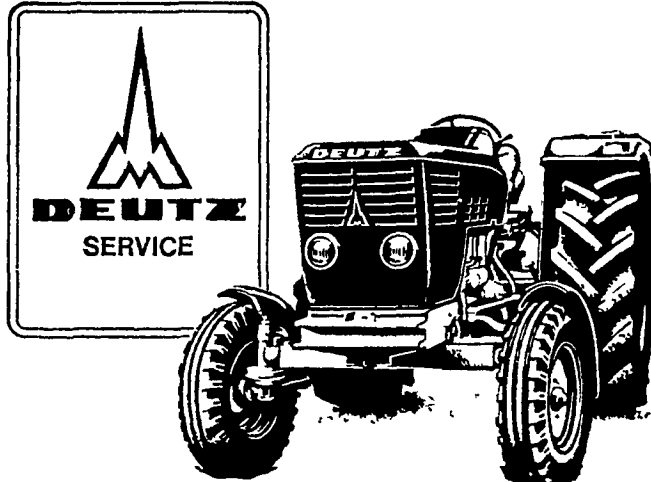
... pioneered by Van Dale back in 1957... the heftier cast iron swinging V-paddles. They give the impeller more unloading capacity. Each 6 lb. V-paddle is weighed, matched, and balanced, then pre-run for more dependable performance. And then there's the solid-weld construction of the heavier gauge impeller housing for longer life in the silo... and the biggest impeller throat... and there are many more reasons that contribute to Van Dale's superior capacity and reliability in addition to the impeller... like the double augers and the... But why not let us tell you about them. We'll be happy to drop by to see you at your convenience.

CALEB M. WENGER
R. D.-1 Drumore Center 548-2116 QUARRYVILLE, PA.

The best dose was 6.25 milligrams of FSH, which resulted in an average of 2.1 eggs ovulated per cow. Half that dose produced too few eggs — only 1.1 per cow. A double dose produced too many — 8.0 per cow.

These tractors are equipped with the famous DEUTZ Air-Cooled diesel engine . . .

Outperforms any water-cooled diesel engine. Options include all the latest features. Four-wheel drive available.



STAUFFER DIESEL REFRIGERATION, INC.
Hatville Rd., Gordonville R.D. 1, Pa. — Phone 768-8531

IF YOU WANT TO TILL, GRADE SLOPES, LEVEL RUTS, DIG HOLES or TRENCHES, RAKE or CULTIVATE...



Model 5030
5 HP
Heavy Duty

get a **YARD-MAN EARTHBIRD**

Tough, rugged, troublefree tillers that really dig in and get the job done. 3, 4 and 5 HP EARTHBIRD TILLERS have the features that match the performance. FINGERTIP DRAG BAR RELEASE controls tilling depth. QUICK-CHANGE BOLO TINES take only seconds to change from standard 22" width to 11" width. Tills up to 32" with optional tines. FULL POWER FORWARD AND SAFETY REVERSE controlled by one lever. SAFETY TINE SHIELD • ADVANCED POWER TRANSMISSION • TOTALLY ENCLOSED POWER GEAR BOX

Ask Your Yard-Man Dealer About Earthbird FREE DELIVERY!

GEHMAN BROS.
1 Mile North of Terre Hill on Route 897
East Earl R. D. 1, Pa. Ph: 445-6272

ELI F. KING
Pond Road, Ronks R. D. 1 Phone 768-3670
(2 Miles Northwest of Intercourse)

Martin's Hardware
182 E. Main St., Leola, Pa. Phone 656-3171