

Spay Technique	Number	ADG 95 days grass	ADG 174 days grass
Flank Spay & Ovarian Auto-graft & Ralgro implant	27	1.73	1.23
Flank Spay & Autograft	27	1.67	1.17
Flank Spay & Ralgro implant	27	1.75	1.20
Flank Spay	27	1.65	1.15

These data have not been statistically analyzed.

#### References

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Heifers Grazing Native Range, Presented at 89th Annual Convention of the Nebraska VMA. January 16-18, 1986 at Kearney, NE. 2. Clanton, D.C., Hudson, D.B., Johnson, J.L., and Johnson, S.K., Effect of Three Spay Techniques On Heifer Performance, Extension Services, North Platte Station. University of Nebraska, 1986. 3. Lane Mfg. Inc., K.R. Spaying Device, Lane Manufacturing Inc., 5560 E. Pacific Place, Denver, CO. 80222. 4. Rupp, G.P., Johnson, Rich, Simons, John C. What About Spaying Heifers, Society for Theriogenology Newsletter, Vol. 9, Jan.-Feb., 1986. 5. Rupp, G.P., Kimberling, C.V., A New Approach For Spaying Heifers, VM/SAC, 77:4 pp 561-565, 1982. 6. Willis, C.E., A New and Simplified Way to Spay Heifers, Instructions for Customers, Willis Veterinary Supply, P. O. Box 310, Presho, S.D. 57568. 7. Wilson, John DVM, Sheridan, WY. Personal Communication.

## Abstracts

### Efficacy of $1\alpha$ hydroxyvitamin $D_3$ in the prevention of bovine parturient paresis

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One hundred and seventeen Israeli-Friesian cows from herds with a milk fever incidence of more than 15 per cent were injected intramuscularly with either 350  $\mu$ g  $1\alpha$  hydroxyvitamin  $D_3$  ( $1\alpha$ OHD $_3$ ) in propylene glycol or with the vehicle alone, close to calving. If parturition had not occurred within 72 hours a second injection was administered; parturition was induced two days after the second injection if necessary. There were 10 cases of milk fever among 57 control cows as opposed to two cases among the 60 animals treated with  $1\alpha$ OHD $_3$ . In an attempt to prolong the effect of the drug, Israeli-Friesian cows were injected intramuscularly with 350  $\mu$ g  $1\alpha$ OHD $_3$  in either 10 ml propylene glycol or arachis oil.  $1\alpha$ OHD $_3$  in arachis oil did not prolong the effect of the drug.  $1\alpha$ OHD $_3$  in propylene glycol increased plasma calcium concentrations more rapidly than when the drug was administered in oil. Additional cows of the same breed and age were injected intramuscularly with 350  $\mu$ g  $1\alpha$ OHD $_3$  in propylene glycol. Five of the animals received a second dose four days, and five received a second dose five days after the first injection. Five animals served as uninjected controls. The plasma calcium levels of the injected cows were significantly higher ( $P < 0.01$ ) than those of the controls from the second until the 14th day after the first injection. Based on these results 451 Israeli-Friesian cows from herds with a milk fever incidence of more than 15 per cent were injected intramuscularly with  $1\alpha$ OHD $_3$  close to calving. If parturition had not occurred up to 100 hours later, a second injection was administered; parturition was induced two days after the second injection if necessary. There were 27 cases (6 per cent) of milk fever among the 451 injected cows. The incidence in 68 animals injected less than one day before calving was 23.5 per cent (16 cows). However, a significantly lower incidence (2.9

per cent,  $P < 0.01$ ) occurred in the 383 cows which were injected more than one day before calving, with less than four days between the two injections of  $1\alpha$ OHD $_3$ , and when parturition occurred not more than four days after the last injection of the drug either with or without induction of parturition.

### Some effects of water quality on the performance of high yielding cows in an arid climate

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The water from wells in Saudi Arabia is often high in mineral content. The cows in this study had been receiving water containing between 4000 and 5000 ppm total dissolved solids. Four groups of 16 cows were calved down and milked under similar conditions in the hot summer months. Two of the groups were given normal well water and the other two groups received water after desalination in a reverse osmosis plant. One group on each type of water also had their water cooled. The groups of cows receiving treated water drank more water, consumed more concentrate and produced significantly more milk than the groups given normal well water. A similar effect on feed intake and milk production was seen when treated water was given to a 1000-cow unit with a similar number of control cows.