tion favoring those which received oxytocin (+.32 services per conception).

d. Slight advantage, not significant, in conception rate of those heifers which were unassisted at parturition, favoring those heifers which received oxytocin.
e. Significant difference among the unassisted heifers in percentage of heifers having no observed estrus with those receiving oxytocin having a considerable advantage.

### Discussion

This clinical trial reaffirms the accepted practice in veterinary obstetrics of using oxytocin as a portion of the after-care in dystocia cases in cattle. It also suggests that there is basis for use of oxytocin in most cases of parturition in the first calf heifer. The increasing frequency of high intensity beef cattle rearing units may require increased assistance from exogenous sources to maintain acceptable reproductive rates in beef cattle.

The effect of oxytocin in stimulating the contraction of the myoepithelial tissue of the udder to affect milk let down is an additional benefit from the use of oxytocin in first calf heifers for the prevention of agalactia. However, additional trials may indicate that the increase in milk let down and subsequent milk flow may be detrimental to improving the number of days between parturition and subsequent estrus. The insignificant difference between trial and control heifers in average number of days to first observed estrus may be a result of this phenomenon.

The economic value of oxytocin in veterinary obstetrics for stimulating uterine involution can be measured by subsequent conception rates, but is dependent on the value of the cattle and their subsequent offspring. This factor should not be a consideration in routine use of oxytocin by the veterinarian in obstetrical cases, but should be a consideration in prescribing its use as a part of a total herd health program for a beef herd.

### Summary

Oxytocin is particularly valuable in improving uterine involution and subsequent conception rates in first calf heifers requiring assistance at parturition. It also is valuable in increasing conception rates in those first calf heifers not requiring assistance at parturition. The use of oxytocin as a portion of the postparturient care should be considered as a prescribed portion of a beef cattle herd health program.

#### REFERENCES

Jones, L. M. Veterinary Pharmacology and Therapeutics, 3rd Edition, Iowa State University Press, Ames, Iowa (1965): 784-785.

# Control of Bovine Mastitis*

There is no immediate prospect of preventing new intramammary infections by immunization or by breeding resistant cows. *Str. agalactiae* can be eradicated from herds without laboratory assistance and a blitz therapy, and although more difficult, it is also possible to eradicate *Staph. aureus*. It is improbable that mastitis caused by *Str. dysgalactiae*, *Str. uberis*, Coliforms and Pseudomonads can be controlled by eradication, and control must therefore be achieved by preventive measures.

The prevention of intramammary infections should be regarded as one of the basic aims of good husbandry, rather than a separate additional task to be undertaken by the cowman.

Infections also occur in hand-milked cows, beef cows used for rearing calves and in unmilked cows. Therefore, currently the most effective way of preventing infections is to employ a hygiene system during lactation to reduce the exposure of the teat to pathogens. The essential factor in the hygiene system is the routine use of an effective post-milking disinfectant teat dip, though further benefit can be obtained by washing teats with a disinfectant using sterile cloths or paper towels, rinsing or pasteurising milking machine clusters before each cow is milked and wearing smooth rubber gloves.

During the dry period, the routine use of a disinfectant teat dip is less effective than a single intramammary infusion after the last milking of lactation with a specially formulated antibiotic preparation.

Antibiotic preparations that are currently available do not persist throughout the dry period and until greater persistence is achieved there may be some benefit from dipping the teats of dry cows daily, particularly one-two weeks before calving. Mastitis in heifers prepartum can also be a problem and teat dipping for two-three weeks before parturition may be useful.

Disinfectant teat dipping is the most important hygiene technique to prevent new intramammary infections, but its effect can be nullified by failure to observe other simple management practices.

**Abstracts from a paper on "The Prevention of Intramammary Infection" by F. K. Neave and E. R. Jackson at a symposium on Mastitis, Reading University, England, January 1971.*