

THE EFFECT OF MONENSIN ON PERI-PUBERAL OVULATION
IN MERINO WEIGHT-SELECTION FLOCK

G.T. STEVENSON, T.N. EDEY, G.N. HINCH* and K.J. ELLIS+

Dietary monensin has been observed to enhance female reproductive performance in ewe lambs (Sumbung and Williamson 1984) and puberal beef heifers.

This experiment tested the long term effect of monensin on peri-puberal ovarian activity in lambs selected for and against weaning weight (weight plus (WP), weight minus (WM) and random (R) genotypes) raised on pasture at Trangie, N.S.W.

Fifty six ewe lambs were randomly assigned to two groups of similar live weight at 22 weeks of age (day 0). One group received monensin at 10 mg/d via two slow release rumen capsules (each 90d duration) with a 23d 'rest' period between (i.e. d 90-113). Fortnightly checks were made for oestrous activity (by raddled teaser) and laparoscopy was used to observe follicles >2mm diam. on days 22 and 57, and ovulation on days 86, 113, 127 and 142. Due to drought conditions, neither group made any significant live weight gains during the experiment period, and mean genotype live weights were 37, 24 and 31 kg (WP, WM and R respectively).

The monensin treatment resulted in no significant difference between groups in oestrous activity or follicle development, and to a significant reduction in ovulation ($P < 0.05$) on days 86, 127 and 142. On day 113 ('rest' period) there was no significant difference in ovulation.

The reduced ovulation due to monensin differs from the results of the work cited. This may be due to the longer duration of treatment and lower dose rate or an interaction between monensin and lack of growth during the experiment.

SUMBUNG, F.P. and WILLIAMSON, P.E. (1984). Aust. Soc. Reprod. Biol. 16: 65.

* Dept of Animal Science; + CSIRO; University of New England, Armidale, N.S.W.

EFFECTS OF TEMPORARY WEANING ON FERTILITY
OF BOS INDICUS STRAIN COWS

N. TABUNAKAWAI and K.W. ENTWISTLE

Lactating Droughtmaster cows (first-calf heifers, $n=40$; mature cows, $n=37$) in poor body condition (mean score 3.2, scale 1-9) were allocated to weaned (calf separation 48 hr.) or non-weaned groups, two weeks after the start of joining when mean calf age was 75 d. A second experiment involved lactating 3/4 Bos indicus cross cows (first-calf heifers, $n=34$; mature cows, $n=29$) in good body condition (mean score 5.1), weaning treatments being undertaken when mean calf age was 89 d. Ovarian activity was assessed from oestrus records, ovarian palpation data, and from plasma progesterone levels in samples taken over three weeks post-weaning; pregnancy status was determined three months after weaning.

In Experiment 1, weaning had no significant effect on incidence of ovarian activity which was higher in heifers than in older cows (57.5 v 43.2 percent). Neither condition, nor live weight at weaning influenced ovarian activity, and none of the lactating cows conceived. Conception failure was not a bull effect, since 7/10 non-lactating cows mated with the experimental group conceived. Both incidence of ovarian activity (77.5 v 71.2 percent) and pregnancy rates (90.3 v 83.5 percent) were higher in the weaned group in Experiment 2 but these trends were not significant, nor were there significant effects of condition or live weight. Temporary weaning appears to be of limited value for improving fertility in lactating Bos indicus cross cattle.

Graduate School of Tropical Veterinary Science, James Cook University, Townsville Qld 4811,