

## **ABSTRACT**

Twenty-three non-pregnant merino ewes were divided randomly into two groups (A and B) during the non-breeding season (December and January). Group A (treated) was subjected to 16 hours of darkness and eight hours of daylight, while group B (control) was subjected to 14.5 hours of daylight per day. Seven ewes out of 12 from the treated group and five out of 11 from the control group showed oestrus within four weeks; the difference was not significant. Ewes from both groups were then superovulated with follicle stimulating hormone-P after 14 days of intravaginal sponge treatment. Following sponge withdrawal, group A manifested oestrus earlier ( $P$  less than 0.05), had more ovulations and subsequently more embryos were recovered ( $P$  less than 0.01) than group B. However, the subsequent oestrous cycle length and the functional lifespan of the resultant corpora lutea, as indicated by the plasma progesterone levels was the same in the two groups.