

## SECTION A

### PERIPHERAL SERUM LEVELS OF PROGESTERONE IN GOATS TREATED WITH PROSTAGLANDIN ANALOGUE DURING THE OESTROUS CYCLE

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Oestrus synchronization and artificial insemination are modern techniques applied in animal improvement programmes. Recent evidence shows that prostaglandin is a potent luteolytic agent which can be used in synchronization. Therefore the objective of this study was to determine the hormonal changes after treatment with prostaglandin analogue. Four goats received a single intramuscular injection of 250 $\mu$ l Cloprostenol (1 ml Estrumate, I.C.I.) on day 12 of the oestrous cycle. Jugular blood samples were collected from each doe throughout the experimental period and progesterone was measured by radioimmunoassay. Cloprostenol resulted in a fall in progesterone concentration from  $4.43 \pm 4$  ng/ml (Mean  $\pm$  S.D.) to  $0.66 \pm 0.6$  ng/ml within 2 hours of treatment. By 24 hours the concentration was  $0.07 \pm 0.03$  ng/ml and goats came into oestrus at time intervals of 48 - 84 hrs. The progesterone concentration during the subsequent cycle was similar to that in a normal cycle. From this study it is concluded that Cloprostenol is a potent luteolytic agent on the 12th day of oestrous cycle in goats and the rise of progesterone during the subsequent oestrous cycle indicates that ovulation had occurred after induced oestrus.

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#### References

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