

Chapter 7

7.0 SUMMARY AND CONCLUSIONS

All the experiments were completed successfully and the main objective of the studies were achieved. In the hormonal studies to compare between the normal and abnormal goats with reference to hormone secretion during oestrous cycles, it was observed that Jermasia goats had the highest percentage (90%) among the breeds with normal oestrous cycle followed by Katjang goats (60%) and Boer crossbred goats (30%). Similar patterns of oestrous cycle length were observed in all the experimental animals used in the study, regardless of the breed. The animals were said to have normal oestrous cycle when the oestrous cycle length was 21 ± 3 days. All the animals with normal oestrous cycle showed the classical hormone pattern. But there were some animals with normal oestrous cycle showed undetectable hormone levels. Whereas, for goats with abnormal oestrous cycle showed the same hormonal pattern as seen in animals with normal oestrous cycle. It was observed that this group of goats with long oestrous cycle showed longer dioestrus period whereas goats with shortest oestrous cycle had the shortest dioestrus period. In some of the goats which showed abnormal oestrous cycle, alternating peaks of oestradiol and progesterone were also observed. Among the anoestrus female, hormone profiles also showed alternating peaks of oestradiol and progesterone levels but for most of the duration, oestradiol levels were higher. Therefore, it can also be concluded that abnormal oestrous cycle observed in

the female animal may be determined by the length of the dioestrus period or it may be as a result of unsynchronous interactions between the reproductive hormones.

In intensive studies to determine the hormonal pattern of the female goat, 2 days before oestrus until 2 days after oestrus, it has been shown that oestradiol level started to rise two days prior to oestrus. The period between the oestradiol peak and the detection of oestrus was approximately 24 hours. Therefore, the ovulation could be predicted 18 to 24 hours later, that is after the onset of the oestrus. From this point onwards, oestradiol level decreased to undetectable.

In the oestrus synchronization study, it was observed that all the animals used in this study showed the sign of oestrus 24 hours to 72 hours after the removal of the CIDR implant. The good results were obtained may be due to the presence of the corpus luteum (progesterone concentration > 0.5 ng/ml) during the period of oestrus synchronization treatment.

It is hoped that the results obtained from these studies will enlighten the understanding of hormonal control of reproduction in female goats and thus would somewhat overcome many problems related to reproduction. Therefore, this would be tandem with the nation inspiration to increase goat population in Malaysia to meet the self-sufficiency and possible exportation.

REFERENCES

- Abdullah, R. B., N. Massita and W. E. Wan Khadijah. 1998. Progesterone and Oestradiol Profiles During Oestrous Cycle in Goats. Proceeding of 20th MSAP Conference.
- Abdullah, R. and N. Shariffah. 1992. Steroid Hormone Levels During Oestrous Cycle in Kambing Kacang Goats and Their Crossbreds. Proceeding of the National IRPA (Intensification of Research in Priority Areas) Seminar (agriculture sector). Kuala Lumpur, Malaysia. : Volume 11. pp 175-176.
- Arriola, G. C. 1936. A study on the breeding habits of goats. Philippine Agriculture, 25:11-29.
- Asdell, S. A. 1946. Patterns in Mammalian Reproduction. Comstock Publication Association. Ithaca, New York
- Badariah, B. 1993. Aras dan Profil Progesterone dan Estradiol-17 β Semasa Kitar Estrus pada Kambing. Tesis Sarjana Muda Sains, Universiti Malaya, Kuala Lumpur, Malaysia.
- Baruselli, P. S. 2001. Control of Follicular Development Applied to Reproduction Biotechnologies in Buffalo. Proceedings of the I Congresso Nazionale sull'Allevamento del Bufalo, Eboli, Italy. pp 128-146.
- Branton, C., W. S. Griffith, H. W. Norton and J. G. Hall. 1956. The nfluence of heredity and environment on the fertility of dairy cattle. Journal of Dairy Science. 39:933.