

## The Effect of Controlled Internal Drug Release (CIDR) on Concentration of Estrogen Hormone in Different Kacang and Bligon Does

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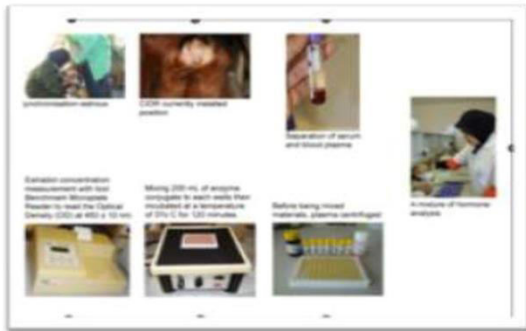
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#### PRELIMINARY

Synchronisation estrous activity and ovulation the world livestock is often used breeding programs for implementation productivity. Estrous synchronization using a synthetic progesterone Controlled Internal Drug Release (CIDR) has felt the benefit both groups and domestic animals such goats and sheep conventional and new types of animals such deer. Many aspects of the appearance of local goat reproduction have been investigated, but the information estrogen and progesterone profile on the estrous cycle has not been many reported. so this study attempts to use a single hormone preparations for estrus synchronization in goats with different and estrogen profiles (Gono, *et al.* 2003). This study aims to determine estrogen hormone profiles in Kacang dan Bligon does through synchronization using a single form the preparations hormone progesterone CIDR for 13 days.

#### RESEARCH METHODOLOGY

The samples used in the study were seventeen does, each seven Kacang and Bligon does and one buck for detect of estrous. CIDR with the content of 0.3 g progesterone performed on each animal for 13 days. Analysis hormone blood collected were does 4 times the day before the installation of CIDR (H0), the day before the release of CIDR (H12), while cattle estrus (H17) and after one estrous cycle (H37). Blood collected from the jugular vein much 3 cc sterile syringe and then placed into EDTA tubes and immediately disentrifuge with speed 3000 rpm for 10 minutes. The plasma then separated and stored in evendof or separate small tubes and stored at refrigerator 20 °C of temperature to estrogen test done. Serum estrogen concentrations in each animal calculated were measured *ELISA* method.



#### RESULTS AND DISCUSSION

concentration of estrogen hormone was does varies. In kacang does, the highest figure shows the H17 or goats estrus when estrogen concentrations of  $183.74 \pm 149.16$  pg/mL and the lowest day before the installation of CIDR  $108.50 \pm 50.0$  pg/mL. This figure is almost equal to the concentration of the hormone estrogen after one estrous cycle ie  $109.17 \pm 60.8$  pg / mL. Concentration of the hormone estrogen in bligon goats was highest H0 or the day before CIDR installation of  $126.27 \pm 60.26$  pg/mL... the concentration of the estrogen of estrous in bligon does  $108.129 \pm 59.02$  pg/mL. Serum concentration of estrogen due to growth of follicles that are not similar between treatment groups and therefore contributes to the growth of the follicle and can also because the influence of body condition and nutrition.

The high estrogen concentration a difference in each cattle probably caused difference capabilities to producing estrogen among individuals.

Concentration of estrogen in each individual is quite different. does which indication of estrus have estrogen concentration ranging from 20.17 pg / ml – 60,163 pg / mL were does of estrous ranged between 124 estrogen hormone concentrations, 94.127 pg/mL - 418.368 pg / mL. The big difference in concentration estrogen in this study, show that the same time there are differences in the amount of estrogen hormone concentrations of each cattle it depends also on the type of goats, race and age of the goats well as time measurement.

#### CONCLUDED

It was concluded this research that the use of CIDR for synchronizing estrous in Kacang and Bligon Does showed that Hormone profile the concentration of estrogen in both types of goats after CIDR implant is different, where the estrogen hormone concentration in kacang does higher than bligon does.

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