THESIS

PROGESTERONE PROFILE OF ETAWA CROSSBRED DOES IN PART OF A REPRODUCTIVE CYCLE AT UPT PT-HMT SINGOSARI MALANG

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Thesis
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DECLARATION

I hereby declare that the thesis entitled:

PROGESTERONE PROFILE OF ETAWA CROSSBRED DOES IN PART OF A REPRODUCTIVE CYCLE AT UPT PT-HMT SINGOSARI MALANG

There is no paperwork that has filled to obtain a bachelor's degree at university and also according to my knowledge, there is no paperwork or self-opinions that ever written or published by others, except which is written in this paperwork that had mentioned in the references.

Surabaya, 30th January 2020

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Examination of Seminar Research Result
Date: 20th January 2020

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SUMMARY

The Etawa Crossbred goat is a potential goat as provider of animal protein through both meat and milk. In livestock business, reproductive management is important to improve productivity in addition to maintenance management and good seed selection. The reproductive process is related to the hormonal system mechanism, that is the relationship between hypothalamic-pituitary-gonad hormones, namely Gonadotropin Releasing Hormone (GnRH), Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH), ovarian hormones (estrogen, progesterone, inhibin, aktivin, and relaxin) and uterine hormones (prostaglandin). Progesterone levels can be measured in biological fluids such as blood and milk. Progesterone concentration is low when the animal not pregnant and is high in pregnant animals. The aim of this research was to know progesterone concentration of Etawa Crossbred does on day 0, day 21 after mating, day 42 after mating, day 63 after mating and day 84 after mating.

Progesterone metabolism is fast and occurs mainly in the liver. Endogenous progesterone is metabolized approximately 50% to 5a-dihydroprogesterone in the corpus luteum, 35% to 3-dihydroprogesterone in the liver, and 10% to 20a-dihydroprogesterone. Progesterone metabolites are released from the liver into the blood circulation, and are excreted by the kidneys into the urine. Measuring progesterone levels in the blood has several uses, one of which as an indicator of the presence of a functional corpus luteum. Progesterone was detected as a pregnancy hormone and was evident with the increase in pregnancy stage, progesterone levels in the blood of doe also increased.

Experimental animals used in this study were 5 Etawa Crossbred Does at UPT PT-HMT Singosari Malang with age 4-5.5 years old, had given birth at least 1 time, healthy body condition, and minimum body weight around 20-30 kg. Etawa Crossbred does were injected PGF2α intramuscularly on day 0 and on day 11 for estrus synchronization. This study using blood serum of Etawa Crossbred does as samples. Blood collection was taken from jugular vein of Etawa Crossbred does on day 0, day 21 after mating, day 42 after mating, day 63 after mating and day 84 after mating. Progesterone concentration was measured by ELISA technique.

Mean progesterone concentration (ng/ml) and standard deviation on the day of samples collected were 1.52 ± 0.33; 7.08 ± 1.02; 5.50 ± 2.82; 12.01 ± 5.30; 12.04 ± 0.30, respectively. There are some possibilities the progesterone concentration increase or decrease, such as pseudopregnancy, nutrition during pregnancy, body condition score, and the number of corpus luteum. In conclusion, progesterone concentration from day 0 until day 84 after mating tended to increase.