

**KAJIAN BERAT DAN CAIRAN VESIKULA SEMINALIS SERTA
KONSENTRASI PROSTAGLANDIN F2 (PGF₂ α)
PADA BEBERAPA BANGSA SAPI POTONG**

Oleh :

Naela Wanda Yusria Dalimunthe
13/355667/PKH/00498

INTISARI

Glandula vesikula seminalis diketahui mensekresikan hormone prostaglandin F₂ tetapi belum banyak kajian mengenai konsentrasi PGF₂ dari cairan yang dikoleksi langsung dari glandula tersebut. Informasi mengenai hormone PGF₂ dari sapi lokal dan hubungannya dengan berat badan maupun umur juga belum banyak dilaporkan. Tujuan dari penelitian ini adalah untuk mengetahui morfologi glandula vesikula seminalis dari sapi peranakan yang ada di Yogyakarta serta mengetahui hubungan antara bangsa, berat sapi dan umur terhadap berat glandula vesikula seminalis, volume cairan yang dihasilkan dan konsentrasi PGF₂. Sebanyak 60 pasang glandula vesikula seminalis dari beberapa bangsa sapi yang disembelih di Rumah Potong Hewan (RPH) Giwangan, Yogyakarta dikoleksi dan dicatat bangsa, berat badan dan umurnya. Berat, panjang dan lebar glandula vesikula seminalis dicatat dan dilanjutkan dengan pengkoleksian cairan. Pengukuran konsentrasi hormone PGF₂ dilakukan menggunakan *Enzyme-Linked Immunosorbent Assay* ELISA kit (CEA749Ge) sesuai dengan prosedur manual. Analisa pengaruh bangsa, berat dan umur sapi terhadap berat, panjang dan lebar vesikula seminalis maupun konsentrasi hormone PGF₂ dilakukan dengan menggunakan analisa deskriptif, t-test tidak berpasangan, dan one way ANOVA. Peranakan Ongole mendominasi bangsa sapi yang dipergunakan yaitu sebanyak 46.7% (28/60) diikuti Peranakan Simmental-PO sebanyak 18.3% (11/60). Rerata umur sapi adalah 2.3 ± 0.2 tahun dengan berat rata-rata 441.5 ± 30.6 kg. Berat glandula vesikula seminalis rata-rata adalah 85.9 ± 13.4 g dan volume cairan sebanyak 10.4 ± 4.0 ml dengan konsentrasi hormone PGF₂ rata rata adalah 6.4 ± 0.3 pg/ml. Bangsa dan umur sapi tidak berpengaruh terhadap berat, panjang dan lebar vesikula seminalis maupun konsentrasi hormone PGF₂. Berat sapi mempengaruhi berat vesikula seminalis dan volume cairan yang dihasilkan tetapi tidak mempengaruhi konsentrasi hormone PGF₂. Hormon PGF₂ ditemukan di dalam cairan vesikula seminalis dapat diukur dengan konsentrasi yang tidak dipengaruhi oleh bangsa, berat maupun umur sapi.

Kata Kunci : prostaglandin F₂, vesicula seminalis, bangsa, berat, umur, sapi

**STUDY OF WEIGHT AND FLUID OF SEMINAL VESICLE AND THE
CONCENTRATION OF NATURAL PROSTAGLANDIN F2 IN
SEVERAL BREEDS OF BEEF CATTLE**

by :
Naela Wanda Yusria Dalimunthe
13/355667/PKH/00498

ABSTRACT

Seminal vesicle gland are known to secrete the hormone prostaglandin F2 but not many studies on PGF2 concentration of fluid which collected directly from the glands. Information on hormone PGF2 from local bulls and its relationship to weight and age has not been widely reported. The aim of this study was to determine the morphology of the seminal vesicle glands of local cattle in Yogyakarta and to understand the relationship between breed, body weight and age of the cattle to seminal vesicle gland weight, fluid volume and concentration of PGF2 . A total of 60 pairs of seminal vesicles glands from the bulls which slaughtered in the Slaughter House (RPH) Giwangan were collected and recorded their breeds, weight and age. Weight, length and width of the seminal vesicle glands were recorded and directly followed by collecting the liquid. The measurement of PGF2 concentration was performed using *Enzyme-Linked Immunosorbent Assay* (ELISA) kit (CEA749Ge) following the manual procedures. Analysis of the influence of the breeds, the weight and age of the cow to the weight, length and width of the seminal vesicles and the concentrations of PGF2 hormone were made by using descriptive analysis, unpaired t-test, and one way ANOVA. Ongole crossbred bulls that used in this study dominated the breed as much as 46.7% (28/60) followed by Simmental-PO crossbreed as much as 18.3% (11/60). The mean age of the bulls was 2.3 ± 0.2 years with an average weight of 441.5 ± 30.6 kg. The average weight of seminal vesicle glands was 85.9 ± 13.4 g and the volume of fluid as much as 10.4 ± 4.0 ml with an average concentration of hormone PGF2 was 6.4 ± 0.3 pg/ml. The breeds and the age of the bulls did not affect the weight, length and width of the seminal vesicles glands and PGF2 concentrations. The weight of bulls affects weight and fluids volume of seminal vesicle glans but did not affect the concentrations of PGF2 . PGF2 hormone could be found and measured in seminal vesicle fluid with a concentration that was not influenced by breed, weight and age of the bulls.

Key Words : prostaglandin F2 , seminal vesicle glands, breeds, weight, ages, bulls