

ABSTRACT

MORPHOLOGY, PHYSIOLOGY AND HEMATOLOGY STUDY OF LOCAL MINAHASA'S HORSE (*Equus caballus*)

By
Utiya Akmalati
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Local Minahasa's horse (*Equus caballus*) is the one of local Indonesian horse. It's population gets lower each year and now they're almost extinct. The objective of this research was to determine the morphology, physiology and hematological characteristics of local Minahasa's horse, so it can be used for conservation and biomedical development of horse in Indonesia. The research was conducted in Tompaso and Tomohon district, North Sulawesi. Five samples (3 horses stallion and 2 horses mare) of local Minahasa's horse were checked for its health, their body morphology and physiology were measured, 5 ml of blood samples were taken from jugular vein and stored in venoject tube that has been Ethylene Diamine Tetra Acetid acid (EDTA). General blood examination were done in Laboratory of Department Internal Medicine, Faculty of Veterinary Medicine, Gadjah Mada University. Research showed that the local Minahasa's horse have a morphology: a body length 123-127 cm; width of chest 24-25 cm; height at withers 125 to 127 cm; circumference of chest 137-140 cm and width of hip 40-42 cm. Physiology: respiration rate 26-33 breaths a minute; heart rate 31-42 beats a minute; temperature 37.9°-38.2°C. Hematology: RBC 6,27-8,97 x10⁶/μl, Hb 9,6-11,2 g/dl, PCV 28-38 %, MCV 32,33-54,29 fl, MCH 11,94-16,59 pg, MCHC 25,26-37,24 %, WBC 5,52-9,45 x10³/μl, neutrophil band 0 %, neutrophil segmented 52-73 %, eosinophil 3-11 %, lymphocyte 21-31 %, monocyte 3-11 %, basophil 0%, plasma protein 6,6-7,5 g/dl and fibrinogen 0,3-0,5 g/dl.

Keywords: *Equus caballus*, local Minahasa's horse, morphology, physiology, hematology