

The comparisons of erythrocyte and leukocyte profiles in white Roman, Beidou White Goose LRI-2 and hybrid goslings during growing period ¹

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Abstract

The purpose of present study is to compare the erythrocyte and leukocyte profiles in White Roman Goose, Beidou White Goose LRI-2 and their hybrid goslings during growing period. Fifteen geese of each White Roman, Beidou White Goose LRI-2 and hybrid of White Roman and White Chinese goslings were used as experimental animals, which kept in a high wire floor pen and feed and water were supplied *ad libitum*. Blood samples were taken in the anticoagulate tube from superficial planter metatarsal vein at 4 wks, 8 wks, 12 wks and 16 wks of age. They were used for investigation of red blood cells (RBC) number, hemoglobin (Hb), packed cell volume (PCV), mean corpuscular volume (MCV), mean corpuscular hemoglobin concentrations (MCHC), mean corpuscular hemoglobin (MCH) values, and differential counts of leucocytes. The results showed that hybrid geese did not have heterosis in RBC number. There are linear or quadratic relation for RBC number, Hb and PCV because valuables of those parameters increase with age. The means of Hb in Beidou White Goose LRI-2 is higher than that of White Roman geese during 4 - 16 wks of age; however, means of MCV is inverse ($P < 0.05$). There were no significant difference for means of RBC number, PCV, MCH, and MCHC among the breeds. In the whole experimental period, the differential counts of leucocytes, heterophil percentage is affected by the wks of age ($P < 0.05$) and breed ($P < 0.001$); lymphocyte percentage is affected by the wks of age ($P < 0.001$); basophils percentage is affected by breed ($P < 0.001$); eosinophils percentage is affected by the wks of age and breed ($P < 0.001$), and there is interaction between wks of age and breed for eosinophils percentage ($P < 0.001$). The percentage of heterophils/lymphocyte (H/L) ratio is highest at 8 week-old for the White Roman goose and the hybrid of Beidou White Goose LRI-2 and White Roman goose. Based on the viewpoint that H/L ratio represent as an animal stress indicator, it is suggested that the geese may be suffered physiology stress because of environment and management at 8 wks of age.

Key words: Growing period, Breed, Blood cell

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