Morphometrics and genetic diversity of Tegal, Magelang and their crossbred ducks based on Cytochrome b gene

Title	Morphometrics and genetic diversity of Tegal, Magelang and their crossbred ducks based on Cytochrome b gene
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Abstract	This experiment was conducted to study the morphometric and genetic diversity of Tegal, Magelang, and their crossbred ducks. Each ten female about twenty weeks old ducks from Tegal, Magelang, Gallang, and Maggal ducks, respectively, were used as the group materialss. The body weight, chest circumference, body length, shank length, neck length, and pubis width were recorded and tested by analysis of variance of one way classification as the morphometric characteristics. Polymorphism of cytochrome b (cyt b) gene on mitochondrial DNA (mtDNA) was analyzed by Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP). Genetic distance was analyzed based on value of heterozygosity, whereas the phylogeny tree was reconstructed using MEGA6 software. The results showed there were highly significant difference (P<0.01) on body weight, chest circumference, body length, and neck length between population, while shank and pubis width were not significant different. The genetic distance between Gallang and Maggal ducks (0.206) was higher than Tegal and Magelang ducks (0.169). It is concluded that the reciprocal crosses increased the morphometric and genetic diversity of Indonesian local duck population.
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