

## **Polymorphism of Promoter Prolactine Gene and Its Association with Egg Production of Selected Indonesian Kampung Chicken (KUB)**

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**ABSTRACT :** Prolactin (PRL) is a synthesized peptide hormone which is one of the important reproductive hormones involves in incubation and brooding behavior of birds. KUB chicken genetically has broodiness trait which negative correlation with egg production. The objective of the current research was to investigate the association of polymorphisms in the KUB's PRL promoter region with egg production. As much as 60 KUB chickens were divided into groups of 20 KUB chickens with high egg production (118,15±18,99 eggs/hen), 20 KUB chickens with low egg production (25,74±12,31 eggs/hen), 20 cocks KUB chickens and 20 White Leghorn (WL) chickens as non broody behavior as a control group. Genotyping of 80 individual samples were objected to PCR-PAGE (Polymerase Chain Reaction-Polyacrylamide Gel Electrophoresis) method with prolactin Primers of P4 and P5. The result showed that in P4, three genotypes (AA, AB and BB) were found in KUB chickens, while only one genotypes (AA) was detected in White Leghorn chickens (WL). Similarly with Primers P5, three genotypes (CC, CD and DD) were found in KUB chickens, while only one genotypes (CC) was detected in White Leghorn chickens (WL). The allel frequencies of A and B (Primer P4) in all groups of KUB chicken was the same of proportion allel frequency, but in WL chicken was significantly diferent. Frequency of A and B allel in KUB chicken were 15,83% and 84,17% respectively, while for WL chicken had allel of A was 100%. For Primer P5, detected predominant of allel C in KUB and WL chickens. The frequency of C and D allel in KUB chicken were 69,17 and 30.83% respectively. In WL chicken was found allel of C of 100%. Association between genotypes and egg production in the both of primers was statistically not significantly.

**Keywords:** KUB chicken, Prolactin Gene, genotyping