

## **The Improvement of Early Egg Productivity in Korean Native Ogol Chicken Selected by Serum IGF-I Concentration**

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There are considerable reports that the expression of insulin-like growth factor-I (IGF-I) is related to ovarian regulation and oviductal development in poultry. Korean Native Ogol Chicken (KNOC) have been inbred to keep a pure line so that there has been limitation in the improvement of egg productivity by genetic studies. Therefore, this study was conducted to investigate the early egg productivity of KNOC pre-selected by IGF-I expression. The selection was performed based on serum IGF-I concentration, number of egg production, and both. Whole blood was collected every 10 wks and serum IGF-I concentration was measured by radioimmunoassay. Total population showed an increment in the number of egg production and serum IGF-I concentration. As the generation passed on, the egg weight decreased while the pattern of IGF-I expression was reversed. In conclusion, KNOC selected by serum IGF-I concentration showed more egg production than those selected by the number of egg production, implying the usefulness of serum IGF-I as a selective marker for the improvement of egg productivity in chicken.

Key words) *Selection, IGF-I, Egg productivity, KNOC*