Abstract

Characteristics based on the growth of domestic animals have a greate importance, because of the direct relationship with the economical profit.growth curve shows the biological efficiency of an animal in time span. It is a means for the selection and management of the nutrition. Inbreeding programs, the wareness of the form of growth curve, can be a suitable means for meaking decision to choose the next generation. The aim of this study was to determine the best model descriving growth curve using different non-liner models. For this purpose, body weight records 800 japanese quail during 70 day were used for growth curve fitting. Five non-liner models: exp, logestic, gompertz, van bertalanfy, morgan mercer flodin fitted by computer program R and best function was selected via bayesian information criteria (BIC), akaike information criterion (AIC), mean square error (MSE), and R^2 adjust. The results showed that based on the criteria used logestic function (lowest MSE, AIC, BIC and highest R^2adjust) and exp function (highest MSE, AIC, BIC and lowest R^2 adjust) are the best and worst models for describe the growth curve Japanese quail. The highest (0/9996) correlation between predicted and actuail values of body weight were obtained for the logestic function. According to this function, generally, the results indicate that growth curve description of Japanese quail using logestic function was appropriate and should be noted to body weight.

Key words: Growth curve, Japanese quail, Body weight, Logestic

University of Zabol
Graduate school
Faculaty of Agriculture
Department of genetic and Animal Breeding
The Thesis Submitted for the Degree of M. Sc. Degree of
Animal Breeding and Genetics

Estimation of growth curve parameters in Japanese quail

Supervisor:
Dr. M. Rokoui
Dr. A. Maghsoudi

Advisors:
Dr. B. keshtegar
E. M. Ghazag

By:
N. Sheikh

September 2016