

SEAG-Symposium, October 14-18, 2002, Vietnam

“The role of dialogue and networking:  
From a transitional to an industrialized country”

## Estimation of Genetic Parameter of Production Trait on Japanese Quail (*Coturnix coturnix japonica*) in Bandung, West Java, Indonesia

SRI BANDIATI KOMAR PRAJOGA\*

\*Lab. Biometric and Animal Breeding, Animal Production, Animal Husbandry Faculty, Padjadjaran University.

### Abstract

The research about estimation of genetic parameter of production trait is important to do, because Japanese Quail (*coturnix coturnix Japonica*) was distributed and developed since 1995 in Indonesia. They were crossed with local quails and the genetic parameter of production trait have not been estimated.

An experiment was conducted to estimate the genetic parameter for production trait of Japanese Quail (*coturnix coturnix Japonica*) for basic of Selection Program at Laboratory of Biometrical and Animal Breeding, Faculty of Animal Husbandry, Padjadjaran University, Bandung, West Java, Indonesia from September 2000 to May 2001.

Research-material was 628 Japanese Quails of 63 Sires and 126 Dams of 9 weeks old in ratio 1:2 and the offspring of them 786 young quail.

The computer program of animal model for repeated measurement were used to analyze data of egg weight, four week old weight, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> month eggs production and total eggs production.

The heritability value for egg weight ( $0.679 \pm 0.3438$ ) was high category,  $h^2$  for 4 week body weight ( $0.681 \pm 0.257$ ) was high category too, the  $h^2$  for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> month egg productions were  $0.3 \pm 0.088$ ;  $0.476 \pm 0.088$ ;  $0.545 \pm 0.091$ ;  $0.561 \pm 0.090$ . The genetic correlation among egg weight and 4 weeks old body weight was  $0.939 \pm 0.2337$ . The genetic correlation among 1<sup>st</sup> and total egg production (0.492) was lower than genetic correlation among 2<sup>nd</sup> egg production and total production (0.926).

The result shows that selection on egg weight will give advantage respond to 4 weeks body weight and according to the research outcome selection of egg production can be employed at 2<sup>nd</sup> month of stage of egg production.

**Keywords:** Animal Model of Repeated Measurement, genetic correlation, heritability value, quail