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PRODUCING A COMMERCIAL EGG TYPE BREED OF CHICKENS (APRI GOLDEN)

By

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INTRODUCTION

Egyptian poultry industry, since 1986 and thereafter, almost collapsed due to complete dependence on imported foreign commercial breeds. The seventies had seen tremendous changes in poultry production in Egypt and the intensive production was dominating up to the mid-eighties. Statistics showed that actual self-sufficiency couldn't be achieved, if poultry industry has to depend upon the continuous importation of foreign strains of poultry. On light of the fact that the Egyptian breeds of chickens had regained their dominance over the imported ones after poultry production crisis. Great emphasis had been given to extensive poultry production which depends mainly on local breeds, because of their superiority over foreign breeds with respect to tolerance to the unfavorable environment coupled with extensive production. The majority of these breeds could be found in farm location in small number under relatively poor circumstances like to be fed leftovers and those feeds which may be produced in the farm.

Many strenuous years had been devoted to find the proper gene-pool (reservoir, basket) which will be utilized for developing egg-type and meat-type breeds. Hypothesized genetic improvement program, showed that crossing coupled with selection had to be practiced for about 25 years. To perform the actual initial performance of foundation stocks, which utilized for producing either egg-type or meat-type Egyptian commercial breeds of chickens. Dokki-4 was utilized as a common breed when establishing the previous foundation stocks. In order to save time, money and efforts, establishing new gene-pool for the same purpose has become a must. Genetic and environmental improvement programs either for egg-type or meat-type chickens are the major topics. However, the present article will deal with improving the genetic performance of egg-type breed of chickens only.

The Objectives:

The objectives of this project could be summarized as follows.

1. Producing a commercial egg-type breed of chickens (APRI GOLDEN).
2. Achieving self-sufficiency egg production.
3. Saving hard currency spent for importation of parent stocks and commercial breeds from foreign countries.
4. Soling commercial baby chicks and chicks from parent stock to some Arabic and African countries will be a good source for hard currency.

It is obvious that the production of egg-type commercial breed consists mainly of two parts development and improvement. It should be emphasized that there is no clear cut between development and improvement programs. However, very little attempts have been mad towards the application of the improvement program. Available genetic make-ups were utilized to establish a new gene-pool for local chickens, where initial egg mass could be about 12 Kg / hen / 52 weeks instead of 11 Kg for the old gene-pool. Also the process of producing a commercial egg-type local breed of chickens could be achieved within 10 years instead of 25 years for the old gene-pool. Moreover, the new gene-pool could be utilized for establishing new foundation stocks, where Matrouh will be the common breed in these foundation stocks.

DEVELOPMENT:

Crossing coupled with selection will be applied to establish the new foundation stocks in order to be utilized as sire lines or dam lines as shown.

I- Sire Lines:

SSL 1: Sabhia sire line 1 is a cross between Matrouh males and Golden Montazah females.

SSL 2: Sabhia sire line 2 is a cross between Matrouh males and Inshas females.

SSL 3: Sabhia sire line 3 is a cross between Matrouh males and Mandara females.

SSL 4: Sabhia sire line 4 will results from crossing ISA Brown and Small Bodied Bahij. However, ISA Brown will contribute with 7/8 bloods in this foundation stock.

II- Dam Lines :

SDL 1: Sabhia dam line 1 is a cross between Matrouh males and Silver Montazah females.

SDL 2: Sabhia dam line 2 is a cross between Matrouh males and Small Bodied Bahij females.

SDL 3: Sabhia dam line 3 is a cross between Matrouh males and both Norfa and Small Bodied Bahij females.

SDL 4: Sabhia dam line 4 will results from crossing L.S.L (Lohman Selected Leghorn), Matrouh and Small Bodied Bahij. However, L.S.L will contribute with 7/8 bloods in this foundation stock. All sire lines will be similar to Golden Montazah feather color and feather pattern-wise and all dam lines will be similar to Silver Montazah.

IMPROVEMENT:

The genetic improvement programs will be classified into three main phases.

Phase I: Reaching average of 12 Kg shell eggs / hen / 52 wks production.

Phase II: Reaching average of 13 Kg shell eggs / hen / 52 wks production.

Phase III: Reaching average of 14 Kg shell eggs / hen / 52 wks production.

Further improvements could be achieved (16 Kg shell eggs / hen / 52 wks production) when applying a recurrent selection. Selection will be mainly focused on the following traits.

1- Egg mass of annual egg production.
2- Peak of egg production.
3- Chick and pullets viability.
4- Feed utilization.
5- Egg quality, emphasis will be given to meat and blood spots, albumen height and shell strength.
6- Fertility and hatchability.

Since other production traits will be taken in consideration. The progenies resulting from crossing SSL 4 x SDL 4 will be considered as a control in order to emphasize the relative importance of the contribution of other foundation stocks used for producing the previously mentioned 8-way cross (**Commercial egg-type breed of chickens "APRI GOLDEN"**).