طريقة جديدة لحساب الأهمية الاقتصادية للصفات (طريقة سلطان) طبقا لاحتياجات المربي واستخدامها في تكوين أدلة انتخابية في دجاج سيناء

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NEW METHOD FOR CALCULATING RELATIVE ECONOMIC VALUE (SOLTAN METHOD) ACCORDING TO BREEDER REQUIREMENTS, AND USE IT FOR CONSTRUCTION OF SOME SELECTION INDICES IN SINAI FOWLS

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ABSTRACT : *Fife method, were used to calculate relative economic value. Kolstad (1975), Sharma (1982), Lamont (1991), regression, and Soltan (2012) methods were compared and used to construct general selection indices. Studied traits were egg number among the first 90 days of laying (EN_{90}), mature egg weight (EW), clutch size (C) and interval between clutches (I). The main objective of the present study were to obtain and discuss different methods of calculating economic values in selection indices. Numerical examples were used to illustrate and calculate Soltan method as a new method for calculating relative economic value for the studied traits and use it in constructed general selection index.*

) ***Key words :*** *Selection index, economic value, soltan method for calculating (V economic vectors.*

مقارنة بين الأدلة العامة والأدلة المحددة باستخدام طرق مختلفة لحساب الأهمية الاقتصادية النسبية لبعض صفات إنتاج البيض في دجاج سيناء

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COMPARISON BETWEEN GENERAL AND COMPLETELY RESTRICTED INDICES BY USING DIFFERENT WAYS OF ESTIMATING RELATIVE ECONOMIC VALUES FOR SOME EGG PRODUCTION TRAITS IN SINAI FOWLS

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ABSTRACT : *The present experiment was carried out in the Poultry Farm, Department of Poultry Production, Faculty of Agriculture, Minufiya University at Shibin El-Kom, Egypt. The local strain used was Sinai Bedouin fowl. The experimental records lasted for eight years. The aim of the experiment was to study the response of selection for egg number at 90 day, egg weight, interval clutches and clutch size by using the selection index method of laying Sinai hens and compare different (Five) methods for calculating the economic values in economic matrices for studied traits.*

The following results were obtained as :

1. Different economic values were estimated.

2. The equations of the general indices which were constructed for different four economic values:

Kolstad $I_G = 0.2032\ EN90d + 0.1094 EW_M - 0.1473\ I + 0.5719 C.$

Reg $I_G = 0.2326\ EN90d + 0.0545\ EW_M - 0.1189\ I + 0.0470\ C.$

Sharma $I_G = 0.2553\ EN90d + 0.0860\ EW_M - 0.2501\ I + 0.8726\ C.$

Lamont $I_G = 0.0079\ EN90d + 0.3209\ EW_M - 1.103\ I + 3.014\ C.$

Soltan $IG = 0.03196\ EN90d - 0.0106\ EW_M - 0.0992\ I + 0.1201\ C.$

3. The equations of the completely I restricted indices ($I_{R,\ I}$) using different economic values which were supposed to stabilize the performance level of pullets concerning I were:

Kolstad $I_{R,\ } EW_M = 0.1529\ EN_{90d} + 0.1938\ EW_M - 0.5818\ I + 1.3352\ C.$

Reg $I_{R,\ } EW_M = 0.1510\ EN_{90d} + 0.1913\ EW_M - 0.5856\ I + 1.2837\ C.$

Sharma $I_{R,\ } EW_M = 0.1733\ EN_{90d} + 0.2236\ EW_M - 0.4586\ I + 2.1164\ C.$

Lamont $I_{R,\ } EW_M = 0.1129\ EN_{90d} + 0.1450\ EW_M - 0.1965\ I + 1.4252\ C.$

Soltan $I_{R,\ } EW_M = 0.0154\ EN_{90d} + 0.0196\ EW_M - 0.0592\ I + 0.1419\ C.$

4. Generally, the results show that the general index (I_G) was most efficient than each of the completely restricted index ($I_{R,EWM}$) for Sinai strain. Moreover, a single restriction ($I_{R,EWM}$) caused less deterioration in the net efficiency of I_G.

5. There are no discrepancies between the values of expected genetic change per generation for Reg and Lamont methods. The spearman rank correlation coefficient estimated between the fowls under study on the bases of the original index by the both methods was 0.999 at 0.001.

6. The breeder can use any of two methods with some restrictions on Sharma method that it may be disturbed by abnormal values which included when calculate standard deviation. Soltan method was more related to regression method this finding may be due to the use of genetic and phenotypic variances in the way of calculations.

Key words: *Sinai chickens, Selection indices, economic values*

تأثير بعض العوامل البيئية على بعض صفات الدم في سلالتين محليتين من الدجاج

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EFFECT OF SOME ENVIRONMENTAL FACTORS ON SOME CHEMICAL BLOOD TRAITS IN TWO LOCAL STRAINS OF CHICKENS

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ABSTRACT: *The present study was carried out at the Poultry Research Farm, Department of Poultry Production, Faculty of Agriculture Minufiya University at Shibin El-Kom, This experiment was designed to study the effect of different light colors (Incandescent, Fluorescent and Infrared light) and vitamin E supplementation on some blood characteristics. The first group was exposed to incandescent light (control), the second was exposed to fluorescent light, and the third one was exposed to infrared light. All birds under light treatments were exposed to lighting period for 14 hours / day. Each group was divided into two subgroups, the first: vitamin E 1ml (20.000IU) added to one liter of their drinking water for 5 day/wk, whereas the second one consumes drink water without vitamin E. The numbers of treatments were 12 (6 treatments for each strain).*

The obtained results were summarized as follows:-

Results indicated that fluorescent light without vitamin E recorded the best blood characters of males meanwhile, in female birds provided under infrared light with vitamin E had the highest of most blood traits in Sinai strain. However, without vitamin E supplementation, males under infrared light were better blood characters in Norfa strain. While, birds recorded fluorescent light with vitamin E the best in female.

There were no significant difference among light colors blood cells, GPT, GOT and platelets. While, the difference between light colors on white blood cells was highly significant ($P<0.01$).The interaction between (color × strain), (treatment × strain), (color × treatment × sex × strain) and (color × treatment × strain) in hemoglobin (Hb), red blood cells (RBCs), hematocrit value (HCT), white blood cells (WBCs) and platelets value (PLT) were not significant. While, All interaction effects such as (treatment × sex × strain),(sex × strain) and (color × sex) in Hb were highly significant ($P< 0.01$).

The correlation coefficient between blood characteristics under the effect of light color , vitamin E, strain and sex were mostly positive and no significant or high significant. But, only few traits had negative correlation coefficient between each other.

Key words: *light colors, vitamin E, blood traits, local stains, chickens*

أدآء دجاج اللحم فى مزارع مختلفة بمعدلات تحويل غذائى مختلفة تحت الظروف المصرية

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PERFORMANCE OF BROILER CHICKENS IN DIFFERENT FARMING WITH DIFFERENT FEED CONVERSIONS UNDER EGYPTIAN CONDITIONS

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ABSTRACT: *Data about the performance of broiler chickens in different houses with different stocking densities, and different feed conversions under Egyptian conditions were collected and analyzed. The studied traits were body weights, livability percentages, growth rates, efficiency of each house, fattening index and European productive index. This study introduces new information about broiler production in Egypt.*

Key words: *Broiler, Density of birds, feed conversion, Egypt.*