

Rezumat

SZABÓ T. A., 1984, Modelul Pisum (în engleză), Not. bot. hort. agrobot., Cluj., XIV, 53-58. În lucrare este discutat Modelul Pisum propus de S. BLIXT și J.T. WILLIAMS (1982) pentru documentarea resurselor genetice. Modelul se bazează pe utilizarea analogiilor în prelucrarea informațiilor în sistemele biologice și cele electronice de calcul. Concepția nouă elaborată deschide perspective noi în valorificarea integrată a datelor acumulate în diferitele domenii ale cercetărilor biologice. Datorită acestor perspective modelul este și un omagiu adus amintirii lui G. MENDEL în preajma anului aniversal.

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INSTITUTUM AGRONOMICUM "DR. PETRU GROZA" CLUJ-NAPOCA (ROMANIA)
 NOTULAE BOTANICAE HORTI AGROBOTANICI, 1984, XIV.

AUTOMATIC REGRESSION ANALYSIS FOR USE IN A COMPLEX SYSTEM
 OF EVALUATION OF PLANT GENETIC RESOURCES

CS. ARKOSSY, A. T. SZABÓ

Abstract

ARKOSSY CS., SZABÓ T.A., 1985, Automatic regression analysis for use in a complex system of evaluation of plant genetic resources Not. bot. hort. agrobot., Cluj., XV, 59-62.

In accordance with the general requirements regarding computerisation in gene banks and germplasm research a computer program has been compiled for the analysis of univariate response in crop germplasm evaluation. The program is compiled in COBOL and run on a FELIX C-256 computer. The different modules of the program allows for: (1.) data control and error listing; (2.) computation of the regression function; (3.) listing of the differences between the values measured and computed; (4.) sorting of the individual samples; (5.) construction of scattergrams in two dimensions for measured values with the simultaneous representation of the regression line; (6.) listing of examined samples in a sequence required in evaluation.

Key words: automatic regression analysis, crop germplasm, gene bank

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Seed samples stored in gene banks are preserved especially for plant breeders, so the samples need to be well documented. In an attempt to raise standards (HANSON et al. 1984) the duties of genebank curators were identified and gradual application of the more efficient documentation principles were suggested (BLIXT and WILLIAMS 1982). Paralelly, in many countries, a computerised documentation system emerged in agriculture research and gene bank documentation as well (CRISTEA 1981, FRANKO et al. 1982, KNUPFER 1983, KOVACS 1984, VARGA et al. 1979 etc.). In order to

introduce this methods in germplasm evaluation in our laboratory a computer program has been compiled as first step towards general computerised documentation of the collections. On an ultimate analysis, such a documentation is beneficial for the study of information flow in agroecosystems (9).

In this first stage the program, outlined, from the users point of view, by the second author and compiled in detail by the first author, allows the analysis of the univariate response of different samples in a field or laboratory experiment.

The program emerged in order to solve computative tasks connected with the perennial forage plants, especially with the evaluation of different white clover genotypes in pure culture and in grass-legume mixture but the program is suited for any perennial crop such as hops or grapes, and results presented in this direction stimulated us (7,10,12,13).

The program was compiled in COBOL and it is operational on universal computers from the third generation, e.g. FELIX C-256. In the present stage it is able to establish the parameters of the regression equation of the variables X and Y measured and introduced on cards. The program is viewed as a first part of a larger system and is compiled in modules. These modules allow, for the time being, the following operations:

Module I. - reads and verifies the cards with data collected according to a prescribed model;

Module II. - computes the regression and prints out the equation;

Module III. - verifies the equation by comparison of measured and computed values and lists the differences in a systematic form (Table of differences);

Module IV. - solves the sorting of samples in the ascending sequence of X or Y;

Module V. - solves the graphic representation of the regression function. The regression line is represented in the scattergram of measured values, permitting a visual evaluation of the distribution of values, as compared with the line of the function. This is important, because in this stage there were no modules introduced in the programme to verify the opportunity of the straight line function.

Rezumat

ARKOSSY Cs., SZABÓ T.A., 1985, Calcul automat de regresie pentru un sistem complex de evaluare a resurselor genetice vegetale. Not. bot. hort. agrobot., Cluj., XV., 59-62. S-a elaborat un program pentru calculul automat al funcției "regresie liniară" în vederea stabilirii parametrilor ecuației de regresie aferent valorilor X sau Y găsite la măsurători. Programul elaborat în limbaj COBOL, rulabil pe calculatorul

FELIX C-256 este conceput în structură modulară și permite: 1. verificarea datelor și afișarea erorilor; 2. calcularea parametrilor și stabilirea expresiei explicite a ecuației; 3. prezentarea sistematică a diferențelor între valorile măsurate și calculate; 4. sortarea înregistrărilor în ordinea crescândă a factorilor; 5. afișarea grafică a funcției pentru valorile teoretice calculate în câmpul valorilor reale (diagrama de dispersie); 6. afișarea în liste a surselor examinate în secvența crescândă a factorilor urmăriți. Din considerente didactice și de accesibilitate, programul este autodocumentat prin ample comentarii textuale.

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BREF HISTORIQUE DE LA VALORISATION DES PLANTES MEDICINALES
EN ROUMANIE

L. MUNTEAN

Abstract:

MUNTEAN L., 1984, Bref historique de la valorisation des plantes
medicinales en Roumanie (A short history of medicinal plants in
Roumania), Not. bot. hort. agrobot., Cluj, XIV, 63-72. The traditions
of the exploration and use of medicinal plants is reviewed,
starting with the time of Thracians and Geto-Dacians who founded
first a deep knowledge and a high level of folk-medicine in the
area. The first printed manual, the Herbarium of P. Melius
was published in Cluj (1578), and on the territory of our Agro-
botanical Garden, organized between 1880 - 1890, the first Re-
search Institute of Medicinal Plants in Europa was founded (1904).
The author examines the main achievements and trends of develop-
ment in the research of medicinal plants in Romania which contri-
buted to the fact, that this country is the fifth in rank of
world expert.

Index words: medicinal plants, Romania, history of botany

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La connaissance des plantes qui guérissent et leur utilisation
pour apaiser les souffrances humaines, a de vieilles traditions en
Roumanie.

Il y a des documents qui attestent l'emploi des plantes pour
guérir des maladies même par les tribus geto-daciques qui habitaient
sur le territoire de notre pays. Le botaniste et médecin Dioscorides
/I^{er} siècle av.n.è/ dans son ouvrage "De materia medica" indiquait
quelques dizaines de plantes médicinales par leur nom dacique. VACZY
1968, considérait qu'il y avait 44 plantes au nom dacique alors qu'en

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