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HUNGARIAN RESEARCH IN AGRICULTURE

SURVEY OF HUNGARIAN SOIL CONDITIONS -- Budapest, Magyar Mezogazdasag, Vol IX, No 1, 1 Jan 54

Experts engaged in practical farming or in agricultural research have, in recent years, devoted increasing attention to the deterioration of Hungarian soil. The farmers realize that the structure, fertility, and water regime of the soil are undergoing a change for the worse, and conclude from the frequent crop failures that the soil food supply is deficient. A survey of Hungarian soil conditions is therefore timely.

The Factors and Principles of Agricultural Techniques (Az agrotechnika tenyezoi es iranyelvei), by the internationally known academician Louis Kreybig, the foremost expert in Hungarian soil research, was recently published by the Hungarian Academy of Sciences. Louis Kreybig has devoted nearly a lifetime to the study of soil, cultivation, and fertilization problems. His recent work presents a summary and evaluation of his experiments extending over several decades.

In the introduction to his work, Kreybig states that Hungarian soil contains, on an average, over 0.1 percent of nitrogen, phosphoric acid, and potassium. This is equivalent to approximately 15 tons of soil food per cadastral yoke in topsoil of 150 centimeters depth, and indicates the presence of an adequate volume of permanent soil food.

On the other hand, Kreybig points out that because of unsatisfactory production methods, the humus content of Hungarian soils has decreased from 6.5 to 5 percent and the quality of the humus has also deteriorated during the last 200 years. In other words, more than one fifth of the total humus content has been lost. -- Janos Leiley

COMPETITION FOR SCHOLARSHIPS AND RESEARCH PREMIUMS -- Budapest, Magyar Mezogazdasag, Vol VIII, No 23, 1 Dec 53

The Hungarian Academy of Sciences has announced a competition for scholarships and research premiums.

Monthly Scholarships

Application for monthly scholarships may be made by experts who are not professionally engaged in scientific research (agronomists, technicians, teachers, lecturers, etc.). The application should include an outline of the thesis; approval by the director of the institute, farm, or plant in which the applicant desires to work; the applicant's choice of professional counselors; and his curriculum vitae. Applications are to be submitted to the Department of Agricultural Science of the academy by 31 December 1953.

The monthly scholarship amounts to 150-400 forints. In case the academy finds that the work of the applicant is unsatisfactory, payment of the scholarship is stopped. Members of university faculties, university students, and members of research institutes are not eligible for scholarships.

Research Premiums

Application for research premiums may be made on the basis of results or partial results obtained from research work. Applications, which should include a detailed description of the results achieved, are to be submitted in triplicate to the Department of Agricultural Science of the Hungarian Academy of Sciences, at any time. The applicant may receive aid for his work (consultation, laboratory, library, etc.).

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The research premium amounts to 5,000 forints and cannot be awarded for an innovation or a technological idea. University students, recipients of monthly scholarships (with the exception of those achieving outstanding results), aspirants, and workers in research institutes are not eligible for research premiums.

The subject matter may be freely chosen by the applicant. However, work in the fields indicated below is advised.

1. Plant Production, Agricultural Engineering, Use of Fertilizers
  - a. Experiments for the improvement of techniques in cultivating various field crops.
  - b. Collection of data on the methods of planting of broomcorn grasses and sorghum, especially in regard to the fodder value of these plants as compared with corn and barley.
  - c. Agricultural engineering aspects of large-scale soil conservation.
  - d. Agricultural engineering in the irrigation of densely planted crops.
  - e. Collection of data on the methods of planting Jerusalem artichoke and its conversion into fodder.
  - f. Study of the growth factors of cereals, with special regard to agricultural methods.
  - g. Cataloguing and description of regional plant varieties in Hungary.
  - h. Study of the habits and life cycles of important plant parasites, and methods of protection.
  - i. Preparation of a plan for the large-scale pickling of seeds.
  - j. Methods of improvement of sandy soils on a large scale (root manuring).
  - k. Effects of the simultaneous use of stable manure and nitrogen fertilizers.
  - l. Biological effects and practical application of crude phosphates.
  - m. Effects of different fertilizers on crops.
  - n. Results of soil improvement.
  - o. Methods of prevention of soil erosion and of the rehabilitation of eroded soils.
  - p. Evaluation of regional climatic data, with special regard to agriculture.
2. Animal Husbandry
  - a. To what extent and with what results may rough fodder be substituted for grain fodder in the various branches of animal husbandry?
  - b. To what extent and with what results may silo fodder be fed to sheep and pigs?

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- c. Hygienic whole-milk production.
- d. Building of hen runs in large-scale poultry farms.
- 3. Mechanization of Agriculture
  - a. Methods of mechanized milking and analysis of the operation of the machine.
  - b. Study of the wearing out of tractor parts and collection of reliable data.
  - c. Study of the fuel consumption and performance of the G-35 and Zetor tractors and collection of reliable data.
  - d. Study of the operation of high-performance straw cutters and corn-stalk shredders, with special regard to the quality of the products.
  - e. Comparative study of alfalfa cutting and storing methods.
  - f. Study of the tractive power requirements of various agricultural machines.
  - g. Large-scale thinning of sugar beets.
  - h. Mechanization of sugar-beet picking.
  - i. Experiments with tractor-drawn trailers.
  - j. Experiments with pneumatic drying equipment, with special regard to grain harvested by combines.
- 4. Agricultural Organization
  - a. Methods of improving hygiene in producers cooperatives.
  - b. Methods of improving the management of state farms.
  - c. Operational problems of dairying.
  - d. Organization of pig breeding on the basis of fodder production on the breeding farms.
  - e. Coordination of machine, draft-animal, and manual labor in state farms and producers cooperatives.
  - f. Methods of producers cooperative management.
  - g. Organization of the mechanization of state farms.
  - h. Organization of large-scale cultivation and harvesting.

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