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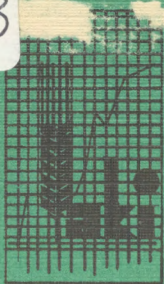
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/Debrecen, 8-11 December 1971./

BUDAPEST 1973

RESEARCH INSTITUTE FOR AGRICULTURAL ECONOMICS

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1973

**RESEARCH INSTITUTE FOR AGRICULTURAL ECONOMICS**

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## INTRODUCTION

That was the 8th December 1971, when in Debrecen, in the agricultural center of the Great Hungarian Plain the IIInd National Conference on Agricultural Economics, had its session, organized by the Hungarian Society on Agricultural Sciences, the Research Institute for Agricultural Economics, and the University of Agricultural Sciences in Debrecen as the host. Thereby activities of the First Conference held in Budapest in 1969 which wished to establish a national forum for the experts of the discipline in effect could be continued.

The IIInd National Conference on Agricultural Economics in the starting year of the IVth Five Year Plan discussed the economic and organizational context of the unified food economy selecting for its main topic the problems related to enterprise management.

Professional and social success of the Conference as well as interest manifested on behalf of experts abroad was incentive for us to publish in the Bulletin of our Institute the thematic outlines on the proceedings and discussions of the Conference in English and Russian languages. As a consequence of size limitations and editorial consideration we had the intention that through the partly original and partly abridged presentation of the contributions of the speakers, assistant reporters and discussants we should give a clear picture on this important event of Hungarian agricultural economics.

Editors



Opportunities for the specialization of production,  
the implementation of industrial type production systems  
and the specific rentability in different production branches

/Zoltán ENYEDI/

Mr. Zoltán ENYEDI commented the problem in his contribution as follows: "In course of their development activities, the farms constantly evolve their production structure. The composition of their fixed assets which also determines the possible future structure of production is established through investments."

Factors affecting the specialization of production structure

Objective factors call for the specialization of production structure.

The full exploitation of the favourable natural conditions may increase the content of incentive profits realizable by the farms in general under usual conditions. For this end an economic selection comes into display among the different branches of production where the number of enterprises will be reduced and specialization increased.

Resulting from the development of technical factors, machine systems of large capacity are established. Their operation and economical use is possible in compliance with the creation of large production volumes. Production costs are increased by the constant and necessary raise of the wages. Also labour force available for agriculture is steadily reduced. Therefore mechanization is a necessary process and its conditions are to be established through specialization.

Agricultural production is gradually influenced by market forces and the development of the market calls for the creation of a rich assortment of commodities. The use of materials of industrial origin has an ever increasing role in the processes of production and specific market relations are generally developed thereby. In a dismembered structure such co-operation cannot be evolved at all or only on an inferior level of efficiency. The dissociation of biological and economic interactions through scientific and technical means subjected the conceptions declared so far on the organic structure of farms in agriculture to new considerations and the conditions for specialization became more favourable.

Specialization and concentration of production are interdependent, conditional and reciprocally interacting. Specialization is a long term process. In order to correctly evaluate this process we are also to be well aware of the factors impeding it. A given structure of production is determined by the existing composition of fixed assets in the farms where rapid changes can be performed only through the early superannuation of fixed assets or at an insufficient level of their utilization. This, however, does not bring any advantage either for the farms or for the national economy.

The establishment of a specialized production structure requires more and more assets and since the coverage of these requirements with resources can only be implemented at longer term, the process of specialization will be restrained thereby. Modifications of the general economic background and mainly opportunities for the exploitation of boom prices are not always corresponding to specialization objectives considered as correct for long terms too. The development of specialized production is delayed by the profit-centric formulated structure. As a consequence of the biased concentration of intellectual capacities and assets, the specialized structure of production becomes inelastic. Considerable risks are also implied in this fact. The heterogeneous soil conditions and multilateral structure of fixed assets represent objective impediments to the establishment of one-profile production.

#### Rate and results of specialization

The effect of these factors can be surveyed also in the long term plans of the state farms. In course of determining animal husbandry profiles i.e. within a 15 years period the number of farms dealing with 4 and 3 breeds will decrease by 80 and 35 per cent, respectively while the number of those keeping only 2 or 1 species will increase by 60 and 50 per cent, respectively. The tendencies of specialization manifested in the long term plans are also characterized by the fact that the joint development of both cattle and pig farming can be observed in the majority of the state farms. Thus the single profile type of animal husbandry structure will not even perspectively be characteristic although the number of enterprises will significantly decrease.

With specialization the first costs of production are reduced and profits increase. It can unanimously be established that the specialization of the production structure is necessary. In the process of increasing rentability, however, any impatience as well as any measure taken

without adequate consideration of the economic efficiency may cause serious economic damages. The growth rate of specialization even in the future cannot be determined independently from the existing structure of assets and the creation of livestock farms with one single enterprise should not be regarded as a task to be performed in the near future. In course of specialization continuous and resolute progress has to be achieved in the allocation and concentration of production within the farm.

#### Specialization and national economic demands for commodities

In recent years a result of specialization process was that the proportion and importance of those enterprises increased within the farms where technical conditions for specialization existed and in addition also the prices were favourable. Other enterprises, however, where production could not suitably be mechanized and labour with meticulous care was required were slowly eliminated from the farms. Areas of sugar-beet, tobacco, fibre hemp and potatoes were characteristically reduced. The production of labour intensive vegetables /tomato, green paprika, etc./ declined in vegetable growing while the area of sugar peas increased since its production could relatively well be mechanized. In recent years even the satisfaction of national economic demands for respective commodities was already endangered by this process. In order to stop it, measures became and are necessary in two respects:

- by means of adequate mechanization, suitable varieties and production systems, the technical conditions of production are to be established,
- it is reasonable to improve the conditions of rentability through modifications of the economic regulators.

Only one of the two complexes of measures alone cannot bring lasting results. The establishment of technical conditions for production must be considered as fundamental.

#### Production systems of industrial type

In course of establishing the technical conditions, production systems of the so-called industrial type are in progress. These systems can be called industrial because of the high specialization characteristic for modern manufacturing industry, of large-scale mechanization and strictly specified production technology as well as of manifold relations of co-operation existing between them and other industrial sectors. The

system character is represented by the fact that they include not only technologies or machine systems but also every other elements of production. Thus high yielding varieties, suitable for mechanized cultivation are applied in crop growing systems where methods of tillage, fertilization and plant protection providing optimum biological conditions for the crop as well as a comprehensive machine system are co-ordinated by strict technological prescriptions.

Within the systems of animal husbandry technologies can be adapted which include a system of buildings corresponding to the requirements of specific breeds and hybrids of high productivity as well as serious veterinary and particular feeding regulations.

Production systems are in general completed with far reaching co-operation, unified and well co-ordinated research work and acceptance of informations.

Experience is yet available only at a relatively narrow scale. We may possess data serving for basis of calculation mainly concerning corn, diverse vegetables produced in industrial systems, as well as in respect with the production of sugar-beet and potato. This experience together with the examination of logical models, however, is already serviceable for certain conclusions.

Compared to traditional production, the cost structure significantly will be modified in up-to-date production models. Live-labour inputs considerably decrease while costs of material and amortization will rise. Direct costs do not surpass significantly in general those in traditional production but the potentially realizable output level and thus also profits increase. In addition to the results of the static survey it can also be demonstrated by dynamic methods that in consequence of the growth rate of wages /or income requirements/ being higher than the same of other costs the rise of reduced first costs - for a five years period - is much smaller in systems of industrial character than in traditional technologies. The augmentation of first costs in systems of industrial type represents only two thirds of the same expectable in traditional system.

All these have exceedingly high investment demands. The acquisition of machine systems for sugar-beet and potato increases the investments required with about 60 per cent and the prices of machine-sets for vegetables may be 3-9 times higher than of machines in traditional production.

The operation of valuable machine systems calls for their intense exploitation. Therefore minimum acreage required is fairly great so that production can be realized only by promoting specialization within the farm.

Survey results concerning industrial pig husbandry show that the costs of live-labour here also decrease /although not as significantly as in cropping/ and the costs of materials, amortization and auxiliary enterprises increase. Production results are more favourable, but a completely closed system cannot be realized since the buildings are not in harmony with the breeds to be kept in them and the price of more pretentious pigs with better market qualities is equal to that of pigs producing inferior quality and output.

#### The development of vertical connections

The establishment of both specialization and production systems of industrial type require the research of better methods for delivering great quantities of commodities to the consumers too. There are two possible ways of development: either food industry processing activities will be added to agricultural production within the farm or new types of close co-operation will be created with the existing high capacity plants of processing industry.

Problems can only sporadically and partly be solved through the extension of food industry processing activities in the farms. These farms namely where specialization started at a quicker pace have already charged their development resources for several years in the extension of agricultural activities and they dispose but small financial means for evolving the vertical system within the farm. Of course, the development of vertical connections by co-operation is yet possible.

On the other hand, however, it would be desirable to establish new types of co-operation with processing plants. That would not mean only the input of industrial capital into agriculture. The farms provide thereby through the production of commodities in a quantity covering the specific demands of processing industry such an advantage for the later which can be a source of additional profit. Thus through the division of profits an opportunity will be offered to tighten the collaboration based on mutual concerns. Several vertical systems can be extended also to other spheres of agricultural production; sugar-beet production e.g. offers ideal types of co-operation between sugar and feedstuff industry.

We must clearly see that production systems represent already the economics of the future indicating thereby the way of progress. Typifying is impossible in their establishment. Ever newer and newer forms may arise in compliance with the specific conditions prevailing in the state and co-operative farms. In course of progress, therefore, here also, the realistic exploitation of opportunities, the adequate evaluation of re-

strictive factors as well as the reasonable determination of the growth rate are necessary.

### Discussion on the rentability of the enterprises

The discussion of the IIInd National Conference for Agricultural Economics lasted for two days. Contributions were presented on both days which completely or in details dealt with the economic situation and conditions of the different enterprises. As a consequence of the limited extent of this Bulletin we cannot record in the following but some of these contributions having a comprehensive character.

Problems of rentability and structure of the enterprises were commented by Mr. Lajos SZEMES, head of scientific section, member of the Research Institute for Agricultural Economics.

The situation of the horticultural enterprise and the problems of its economic regulation were analyzed by Mr. Béla MOLNÁR, Director General of the Research Institute for Horticulture.

Development and economic conditions of cattle husbandry were the subjects intensively treated by Mr. Károly DOBOS, professor at the University of Agricultural Sciences in Gödöllő, as well as by Mr. László ÁRVAI and Mr. Gábor UNGVÁRY, scientific officers of the Research Institute for Agricultural Economics.

Among the problems of pig farming, operation troubles of specialized pig farms were investigated by Mr. Jenő VÁNCSA, director of the State Farm in Agárd.

### Rentability and structure of the enterprises

Speaking on this problem Mr. Lajos SZEMES referred repeatedly to the ideas he already expounded on the first day of the Conference /see page 62./. To complete his respective remarks he added:

The extension or reduction of the production as well as the increase of the investments is fundamentally influenced by the development of the input-output ratio. The raising of milk price e.g. by 50 fillér would mean in the increase of total income for the whole period of refund as if the state would allocate as a free gift to the farm all objects and projects belonging to a dairy for 416 cows. Or in case of a complex pig farm with 550 sows the increase of feeding costs exceeding by 10 per cent the normative prescriptions would mean that the investments could never be reimbursed at farm level. The production of bread grains in a quantity covering the national demand is not problematic since the input-output relations of this enterprise could be improved by mechanization, yield increase and higher prices.