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RESEARCH INSTITUTE FOR AGRICULTURAL ECONOMICS

Director general:

Dr. Béla CSENDES

Edited by:

Ádám BISZTRAY

Authors:

Dr. Mrs. Katalin DÉNES
Dr. Kálmán KÓBOR
Dr. János MÁRTON
Dr. Ferenc SZABÓ
Dr. László ZACHER

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Editorial office:

RESEARCH INSTITUTE FOR AGRICULTURAL ECONOMICS
H-1355 Budapest, 55. Zsil u. 3/5. Hungary

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PREFACE

A relatively narrow scope of publicity is a characteristic of conference materials relating to the science of agricultural economics, too. We attach special importance to our publishing the topics and the Hungarian lectures delivered at the two professional-scientific events, the reason being that the Hungarians were the hosts of both conferences. We are convinced that the articles treating the structure and development of agriculture and food industry provide information to our partners maintaining research cooperation contract scientific exchange of information, or exchange of publications with our Institute, viz. institutes, universities, special libraries, or even the researcher colleagues interested.

The fundamental task of our Bulletin series is to disseminate and interpret the achievements of Hungarian researches in agricultural economics with the help of two world languages, English and Russian. Due to technical reasons we have been unable to publish full texts of all lectures. Hence, in addition to the Hungarian articles we have published the topics in detail, facilitating thereby to get information and to embark upon establishing professional contact.

Budapest, November 1985

The Editor

SEMINAR PROGRAM

"STRUCTURE AND REGIONAL LOCATION OF FOOD INDUSTRY IN SOCIALIST COUNTRIES"

The seminar was held at Kecskemét-Szikra State Farm, research station Lakitelek, September 16-20, 1985

September 17: Opening address by dr.Janos MARTON, Director General
Introductory lecture by dr.Ferenc SZABO, Deputy Minister
Professor Dr.Kurt KAHNERT (Zibl, GDR) awarded
Lecture by Prof. Dr.sc. Kurt KAHNERT: Structure and regional location of food industry in GDR
Contributions, discussion.
Chairman: Prof. Dr.sc. Kurt KAHNERT
K.PRUNSKIENE (USSR): Organizational structure and problems of perfection in food industry in SSR Lithuania
Dr. W.KAMINSKI (PPR): Development of location of food industry in Poland

September 18: Continuation of the seminar, contributions, discussion
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R. URBAN (PPR): Size structure of food industry shops and concentration process in Poland
Visit in Kecskemét Canning Factory
Deliberations of the heads of mission on the development of scientific collaboration between the institutes

September 19: Continuation of the seminar, contributions, discussion
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Dr.Kálmán KÓBOR-Dr.László ZACHER (HPR): Questions of structural changes in Hungarian food industry
D.BASSAMAKOV-F.VALCHEV (BPR): Structure and regional location of food industry in Bulgarian People's Republic
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September 20: Continuation of the seminar, contributions, discussion
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Dr.Milan ADITCH (Yugoslavia): Main traits of Yugoslavian food industry
Solemn windup of the seminar

Prof. Dr. János MÁRTON, General Director,
Research Institute for Agricultural Economics, Budapest - Hungary

TRENDS AND TENDENCIES IN FARM MANAGEMENT IN THE LIGHT OF AGRICULTURAL AND STRUCTURAL DEVELOPMENTS TOWARDS THE END OF THE TWENTIETH CENTURY — HUNGARY

Introduction

Development of Hungarian agricultural production took a new direction at the end of the 1970s. Absolute priority of volume increase of production was replaced by an equal importance of efficiency and growth. As a result many changes of production techniques and organization took place on state farms, cooperative farms and small-farms. The role of state guidance was basically transformed also.

Actually agriculture provides food for 15 million people. (The population of the country is 10.7 million.) This is achieved with very diverse economic indicators. The efficiency of fixed assets is outstanding, yields are on a medium, labour productivity on a low level. Storage facilities, processing, packaging and transportation are obsolate.

More than one-third of the output of agriculture and food industry goes to foreign markets. Export surplus of foreign trade is the result of agricultural trade.

Growing competition on the international markets of agricultural products is a widely understood fact with an impact transforming agriculture all over the world. The first to react are the techniques applied, while changes of organization lag much behind. Actually there is no cooperative or state farm in Hungary that would apply unchanged techniques for more than one year.

1. Structure in 1985

Institutional-organizational structure of Hungarian agriculture is characterized by multi-sectoral diversity. State farms and cooperative farms are many fold linked-up with household plots, auxiliary farms, associations etc. A multiplicity of diverse forms, reasonal combination of large- and small-scale farming was an important

factor of results in the past and this will be the case presumably in future also.

There were 128 state farms (including combinates) in 1984, with 12,5 per cent share of total agricultural land, 14 per cent of active agricultural population, 18 per cent of fixed assets in agriculture and 20 per cent of gross agricultural production. In addition to growing and efficient production for the market, it is their task to supply the whole agricultural sector with seed, breeding stock and propagating material and to develop and extensively disseminate production and breeding techniques and management methods for up-to-date large-scale farming.

Very considerable investments were provided from the beginning by the government from the budget for the creation of capital equipment for state farms. For a considerable time, however, these were unable for a reasonably efficient utilization. From the late sixties, qualitative indicators of farming gradually improved and yields of the main products, especially wheat, maize, apples and milk considerably increased. Dynamic augmentation of production, however, went parallel with considerably rising costs. A third of farms have low income and only half are able to support development with own resources.

In the course of the past decade 12 state farms were transformed into agro-industrial combinates. These are large firms with a very substantial vertically integrated agricultural and industrial production, servicing and trade capacity.

1279 cooperative farms operated in 1984 on three quarters of the agricultural land with 62 per cent of active agricultural labour and supplied 51 per cent of total agricultural production.

There are considerable variations in the farming level of different cooperative farms, like the state farms. Not more than one-third of cooperative farms are able to accumulate with their own resources.

Vertical expansion, development of additional industrial and servicing enterprises beyond agriculture proper, became markedly more pronounced in the last decade, both in cooperative and in state farms. Half of net sales income of large-scale farms in 1984 came from industrial, trading and servicing enterprises. This is the result of growing pressures both on local and national level for a higher utilization of existing capacities, better employment of labour; profits

are also higher in industrial enterprises. Development of industrial enterprises proved to be especially advantageous for large-scale farms under unfavourable conditions for agricultural production. These farms often stabilized their farming and developed crop and animal production with income earned from industrial and servicing enterprises.

There are some other cooperatives also: specialized cooperatives and fishery cooperatives. Specialized cooperatives - there were 62 in 1984 - are mainly grape and fruit producers and processors on sand soils of the Danube-Tisza region. Fishery cooperatives (16) are fish breeding and fishing mainly on lakes (Balaton and Velence) and major rivers.

There are approximately 1,5 million small-scale farming families in 1985: 674 thousand household plots of active workers and employees of cooperative farms and 403 thousand pensioners who remained members of cooperative farms getting a household plot from the collective according to the statutes of the cooperatives. Auxiliary farms are also wide spread small farming types, belonging to persons with main occupations outside agriculture (i.e. industry, servicing, public administration etc.). Auxiliary farms are very small, often not more than a few hundred square meters garden land, or plot at the house. 826 thousand families have auxiliary farms. Household plots of cooperative farm members account for 5,9 per cent, auxiliary farms of job holders outside agriculture for 5,7 per cent of total agricultural land.

There are 20 thousand private farms; merely 1,3 per cent of the agricultural land. They are also registered in statistical accounts as auxiliary farms. With an average size of 3,6 hectares these are not real family farms; because small size they cannot provide full employment and subsistence for the family and therefore the majority of family members takes usually other jobs.

1,5 million small-scale agricultural producer families amount to 4,5 million persons, taking account of family members. 17,5 per cent of small-scale agricultural producers are gainfully occupied active agricultural persons, 25,2 per cent industrial etc. employees, 43 per cent dependents and family members, 14,3 per cent pensioners. In the last years gainfully occupied active agricultural persons have declining, pensioners and white collar workers growing share in the household plot and auxiliary farm group.

A brief survey of the main figures clearly demonstrates how mistaken it would be to confuse small-scale farming on household plots with peasant farming, i.e. private farming. It is absolutely clear that household farming is completely different from peasant farming as it is a subsidiary enterprise with the purpose of supplying the family and in many cases to earn additional income.

Production for self supply is always stated as a fundamental characteristic of household and auxiliary farming, in the past years, however, many household and small farms specialized on production for sale. Small producers aiming at self supply from the garden or land around the house, work as a rule independently. Small producers specializing on one product on the other hand, work as rule in close collaboration with the large farms or consumer cooperatives. Actually their number is approximately 700 thousand.

Small-scale agricultural production is integrated by socialist large-scale farms and consumers cooperatives in Hungary. A widely practised form is contracting household production with large-scale farms supplying animals, feed, machine work and other services for the household production and contracted produce is sold through them. Value of services performed is deducted from the sales returns and the rest paid to the small producer. The majority of cooperative farms usually organize household producers as a separate farming enterprise managed by competent experts. There are large-scale farms on the other hand, who prefer establishing specialized groups for each product, open for all small producers interested (not reserved for workers and employees of the large farm). Most popular specialized groups are those for small animals (rabbit, poultry, pigeon, apiculture) and horticulture (vegetables, fruit, grapes, mushroom), mainly providing material and equipment for production and organizing outlets for the sale of the products.

Because of different natural and economic endowments, differences are much larger in small-scale production than in large-scale farming; a great number of small farms produces for the market, many operate for self-supply and thus have a social function and there are also hobby gardens.

Associations are typical forms of inter-firm link-up in agriculture. All state farms and 65 per cent of cooperative farms are members of more than two associations. The majority are simple as-

sociations, i.e. without independent legal status, organization and management tasks done by one of the members ("gestor"). There are approximately 800 simple associations. About 150 associations operate as independent firms with full legal status.

"Closed production systems" are associations established for the task of furthering innovation; thus they have a decisive role in agricultural development. A state or cooperative farm undertakes to develop and manage a system of producing a definite agricultural product (including selection of a high yielding variety, identifying and elaborating techniques, technologies, organization), to introduce it into member farms of the system, to train the workers and to consult. Technologies are prescribed and assistance provided for obtaining seed, breeding-stock, machinery, equipment, material. 92 per cent of maize, 87 per cent wheat, 99 per cent sugar beet, 44 per cent fruit and the whole rice area is attached to production systems. All the large-scale farms in poultry and egg production, two-third of those with pig breeding and three-fourth of those with cows are members of production systems. In 1985 there were 69 production systems operating in agriculture.

Up to now, associations of agricultural and cooperative members were predominant, recently however participation of industrial and trading firms started to increase. A basic condition for expanding cooperation is finding mutual interest (equal advantage and risk) for all parties involved.

In the last years institutional structure of Hungarian agriculture became even more diversified. A growing number of enterprises operate within firms and cooperatives. Earlier only cooperatives had groups of small enterpreneurs, called specialized agricultural groups promoting agricultural production of household and auxiliary farmers, by obtaining equipment and material and providing sales outlets for them. Establishment of these specialized groups was recently extended to state farms. In addition, formation of specialized industrial and servicing groups was also made possible, in compliance with the demand of the population for the provision of local services and the performance of industrial activities. Specialized groups do not have independent legal status but operate with the management ("gestorship") of a firm or cooperative. Everybody wanting to participate is free to join.

Economic labour-teams within enterprises are small-scale units with well-defined tasks and material interests but no independent legal status, established within firm, cooperatives and other economic organizations. Firms can establish these groups from their workers and employees for tasks they cannot perform, or if they can do it, only with adverse results (higher inputs, longer delivery dates, etc.). The main condition for the establishment of these groups is cost saving or performance of tasks not possible in normal working hours. Economic labour teams within enterprises can operate only after normal working time.

There are 671 economic labour teams within enterprises and 908 specialized groups in 1985.

Economic labour-teams within enterprises and specialized groups operate with the management ("gestorship") of an economic organization (e.g. state farm, cooperative). In the past years there was also an expansion of an other kind, economic labour teams founded by workers, employees and pensioners. These are independent organizations the majority operating in the industrial and servicing sphere. They employ 2-30 persons and members are both active wage earners and pensioners. They can operate - with the exception of pensioners - only outside normal working time.

There are even more small-entrepreneur groups: state firms lease out some of their divisions on a contract; and cooperatives run divisions with not more than 15 employees for industrial, consumer and other servicing activities as independent units, the employees paying a lump sum to the cooperative.

Hungarian firms and cooperatives operate within the framwork of socialist planning. Operation relies on the central guidance of the national economy, plans and decisions of the government having a decisive role on plans and decisions of the firms.

Central institutions of economic control and management are the Council of Ministers, National Planning Office, ministries, top level central authorities, banking institutions. Firms and cooperatives have centers and other organizations for safeguarding their interest. In the agricultural sphere for example the National Union of State Farms has partly an organizational, developing and coordinating role and is partly safeguarding the interests of state farms (combinates).

Organizations with interest safeguarding role for cooperative farms are the National Council of Cooperative Farms (TOT) and regional federations of cooperatives.

2. Tendencies of the economic and social environment to 2000

The population of Hungary is going slightly to decline till 2000. The number of agricultural population proper hardly changes, - there will be even small growth of the share in total population - but movements will take place in a non-traditional way. The number of persons having crop production and animal husbandry as their main occupation will decline every year and this group will make in 2000 4-5 per cent of total active population. The combined labour stock of agricultural and related industrial and servicing activities will remain more or less unchanged.

Since 1978 Hungarian economic and rural policy fights successfully against migration, a depopulation of villages. Rural population wants to have a job locally. Therefore rural industry has to be developed, mainly smaller firms and labour teams. This is the expressed wish of jobholders of large-scale agriculture and daily commuters from village to town would also prefer local jobs.

Previously stated wishes and expectations are supported by some modification of the comparative relation of agricultural policy objectives and by the income parity of workers and peasants. Up to 2000 all the three objectives of agricultural policy:

- providing food for the population on a higher level,
- improving living conditions of agricultural labourers,
- raising the contribution of agriculture to the state budget and the foreign trade balance

are going to remain. All the forecasts indicate a smaller emphasis on the third objective at the end of the century, as industry will provide, instead of agriculture, a foreign trade surplus. Foreign market oriented development of agriculture will cease to be such a constraint than actually. There will be, however, growing emphasis on the preservation and maintenance of the natural environment of the country; agriculture is responsible lest ecologic values be destroyed.

All this considerably exceeds the traditional task of food production; the peasant of yore is raised hereby to a new position in

the social division of labour. Control and management of farms, firms, etc. will be also rearranged as a result of the new social-economic environment.

3. Tendencies in production and techniques

Technological changes in the period to 2000 will have the following main characteristics:

- the importance of agro-oecologic endowments will increase,
- consumption of industrial energy will decline,
- deterioration of the environment will not increase.

Many technological changes are actually applied only by the best farms. In the remaining years of the 1980s, however, methods applied by the best will be adapted by the average farms. We expect that up to 2000 general changes - i.e. embracing the majority of the farms - will take place at six sections of the production process:

1. There will be progress of automatisation and instrumental regulation of mechanical procedures in the production process, and a broad penetration of electronics into regulation.

2. In soil management and fertilizer application high precision survey methods and application adapted to the phenophase will increase; liquid fertilizers will have a growing importance. A completely new development will be the application of caelates, bacteria fertilizers and trace elements.

3. Plant protection will improve as a result of forecasts for micro-areas and identification of threshhold values of infection. Application of chemical agents will decline, biologic plant protection will be universal practice of the farms.

4. In the feeding system there will a growth of preservation with chemical agents, improving digestibility of feedstuffs with micro-organisms, industrial production of synthetic amino-acids, universal application of protein-additives.

5. Utilization of biotechnics will be an everyday practice of agricultural production. Application of biotechnics in the biology of reproduction, deep-frozen sperm zygote transplantation will improve the efficiency of breeding efforts.

6. Computerized information and production control systems will improve information flow, functioning and flexible response to changes of the firms.

4. Modernization of control and management

As a consequence of the changing economic and social environment and the technologies applied, only managers, producers and producing structures (firms, cooperatives) will be tolerated, that are able to face the challange for agriculture. Sensitivity to market impacts and cost changes will be obligatory behaviour for all cooperative and state farms and small farmers in association with flexible reaction to:

- informations
- innovations
- natural environment
- social changes
- settlement conditions

Both small- and large-scale farms will in the future only survive, if they are able to keep open to all these external impacts. The changing of the enterprises will have to be reckoned with by the farm management. Even size will tend to be less stable, as some of the large firms are going to disintegrate while others to merge. Neither small, nor cooperative or state farms are, however, expected to go out of production on a considerable scale. Forecasts indicate the number of "agricultural" firms to rise at the end of the century; "agricultural" character will loose some of its importance. The medium size cooperatives and state farms with good soil will maintain crop and animal production as a main enterprise, but all will also have non-agricultural subsidiary enterprises. Large farms employing more than a thousand labourers or operating in highland country derive a minor part of their income from agriculture; management forms and methods of these farms have as a consequence many industrial characteristics.

Plans will be made by the large farms in the future, also, but these will primarily concern alternative decisions, strategic objectives, organizational structures, long term contracts, financial commitments and investment estimates will be also part of the plan.

Routine management tasks at the firm centers will be very limited, as the managers of the smaller units of the firms will take over this. The organization of large cooperative and state farms will gradually decentralize with the emergence of separate small organizations within the firms.

In the coming years to the end of the century, establishment of small organizations within large-scale farms, will serve raising the efficiency of the human factor. Actually and to the end of the century, there is a parallel existence of

- completely independent small organizations,
- units of firms with growing independence,
- units without authority for independent decision-making.

Completely independent small organizations can make independent decisions on the operation of fixed and oprating assets they are furnished with; only payment obligations toward the firm and links with other units of the firm are regulated by the central management. In addition to their labour stock small organizations can utilize material and financial resources of their workers also; they can combine personal property and firm resources if this doesnot interfere with payment obligations toward the firm. The manager of small organizations is elected by the workers and employees, the firm center having right to veto. Small organizations can fix time, place, mode of work and time schedules; they can employ their workers over official working hours, in compliance of course with the rulings of labour legislation. It can be observed, that small-scale organizations are mostly established by such blue- and white collar workers who are able for a high performance. It is a new tendency that savings, especially of older persons, are transferred to the small-scale organizations.

Small-scale organizations within firms are established if:

- technological stages of the production process are separated or arranged in groups;
- enterprises or enterprise-groups are separated;
- regional enterprises or enterprise-groups are separated;
- a new task is fitted into the firm;
- general and specialized tasks for the whole firm (planning, market research, trading operations, etc.).

As a result of the establishment of independent small-scale organizations interest relations of the production chain become more transparent. Personal material incentives can be established, and last but not least there is possibility for establishing a personalized labour quality control.

Whether it is possible to bring about progressive independence of technological phases, enterprises or enterprise-groups by establishing small-scale organizations greatly depends on:

- the homogenity of the enterprise or technical phase;
- the amount of permanent or temporal employment opportunities created;
- the amount of profit derived from the enterprise;
- the amount and kind of resources necessary for the activity.

As a result of the smooth operation of small organizations it is possible for the management of large firms to utilize existing equipment and resources for development.

There will be more opportunity in the next years for large Hungarian firms, to enter into domestic cooperation with Western firms in the food economy. Some state and cooperative farms will undertake with the help of foreign capital production and delivery of goods. Establishment of large and medium sized agricultural firms with mixed (foreign and Hungarian) capital may be considered for work performed on hire or for prefixed targets, primarily in highly sophisticated fields. (Biotechnics, production of propagating material, large-scale experiments, etc.).

The position of small-scale production will be retained to the end of the century, but with a very strong diverzification; some types will disappear, others will newly emerge. The most important base for this is the fact that free labour capacity will remain in the majority of families, both urban and rural. Physical workers living in villages provide actually the main labour base of small-scale production. This labour force is somewhat going to decline, but as a result of mechanization, chemization and specialization, productivity will grow. Only a fraction of small-scale producers will retain agriculture as a main activity. Some will have small-animal husbandry (poultry, rabbit, nutria, pigeon, etc.) others wine, fruit, vegetable production as a small-scale operation based on family labour.

The majority of small-scale farmers have crop or animal production as a side line, fitted into the integrated system of the large-scale farms. Such farming operations need very little management, as this is performed by the integrator.

We do not expect that land owned and farmed by small-producers is going to expand considerably, but land belonging to large-scale farms not suitable for profitable production will be progressively rented to and utilised by small producers.

Present organization of the agricultural sector is very complicated and has few stable but many unstable elements. It can be stated with high probability that organizational complexity and great variability will remain to the end of the century. The majority of Hungarian agricultural economists do not believe that the high degree of uncertainity of the social and economic background of agricultural production will improve till the end of the century but even expect further deterioration. Agricultural producers will face more competition and management will have therefore to undertake harder exercise than ever before.

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