



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

DEVELOPMENT OF INTENSIVE AGRICULTURE CHARACTERIZED BY CONTINUOUS GROWTH AND INCREASING SOCIAL SECURITY IN THE GERMAN DEMOCRATIC REPUBLIC

Helmut Schieck and Herbert Fischer¹

One of the main problems of agriculture in most countries is how to ensure further increases in agricultural production to give the population better nutrition and to guarantee increasing social security to farmers and all those employed in agriculture. This occupies the farmers' minds, for it concerns their own vital interests and their position in society; at the same time it is a concern of society as a whole and one of the fundamental problems for agricultural research and particularly agricultural economists.

In the socialist countries, the fundamental and also practical solution of this problem is a concern of society as a whole; all classes and strata of the population are involved. It is thus possible to solve without social conflicts the problem of raising agricultural production further and simultaneously increasing social security in the interests of farmers and all classes and strata. The experience and results gained in the German Democratic Republic (GDR) over more than 30 years indicate that, as in other socialist countries, socialist production relations guarantee farmers both lasting and secure prospects and a high level of social security. We see as a decisive prerequisite for the solution to this problem that the most important means of production be nationally owned and that socialist production relations extend to the relations between town and country.

In the GDR, the fundamental conditions for basic social changes were created as early as 1945 with the defeat of fascism. In the subsequent years, social production relations developed first in industry, trade, and transport. It thus became possible to manage and plan the economy centrally with the enterprises being entrusted with a high degree of self-responsibility, and to guarantee, by integrating agriculture in this system, that the farmers could sell all their products at fixed prices. This advantage of the socialist planned economy was highly appreciated by the farmers.

Supported by the State, and generously encouraged by the provision of credit, machinery, fertilizers, and other inputs, farmers gradually began in the early 1950s to organize their production on a co-operative basis. They perceived that only the establishment and further expansion of cooperative farms would allow the tasks of agriculture to be accomplished in the interests of both farmers and the society as a whole. Important elements were: reorganizing agriculture with a modern material and technological base and advanced farm structure; securing high growth rates of production and efficiency of agriculture; and raising farmers' social position and security as well as their standard of living. The successful development of GDR agriculture is the result of an agricultural policy that has always been developed and implemented in the interests of, and in co-operation with, the farmers.

The Development of an Advanced Farm Structure and Intensive Agriculture Using Industrial Style Methods of Production to an Ever Increasing Extent

Individual working farmers, as well as a considerable proportion of the former large farmers, became increasingly aware of the advantages of joint farming. By 1960, the incorporation of farmers into co-operatives was completed. The socioeconomic structure of the village had undergone fundamental changes. More than 880,000 individual farms with a mean size of about 7 hectares each had been replaced by almost 20,000 co-operative farms each with a mean size of 245 hectares of farmland. They managed about 85 percent of the country's total

farmland area and became the dominate form of production in the countryside. The co-operative farms were established voluntarily by farmers for joint socialist production to better satisfy their material and cultural needs, and to better supply general food needs. Co-operative farmers organize their joint work according to the principles of co-operative democracy and socialist farm management. They fashion their social relations according to the principles of equal rights, friendly co-operation, and mutual assistance. They jointly manage their co-operative property and participate in the economic result of their co-operative farm according to the principle of co-operative distribution.

The rapid development of science and technology and the remarkably speedy improvement of equipment of the agricultural sector with modern means of production led during the 1960s and 1970s to a steadily progressing concentration and specialization as well as further strengthening of co-operation. Co-operative farms developed which concentrated primarily on crop or animal production. Specialized enterprises emerged, mainly as interfarm establishments for special services which supported the co-operative farms in implementing their production targets. These included agrochemical centres, land improvement co-operatives, and interfarm building organizations. At the same time, nationally owned enterprises for agricultural engineering provided technical assistance in farm machinery and equipment.

The major share of crop production is currently the responsibility of 1,100 co-operative farms each with 250 farmers who jointly manage about 4,700 hectares of farmland on an average. About 3,000 co-operative farms produce the major proportion of all products of animal origin. These farms each employ, on average, about 100 farmers. Thus GDR agriculture is distinguished by modern farm structure and large scale and specialization of production that allow long run broad and intensive implementation of science and technology. The co-operative farms are and will be the firm social basis of the farmers and, at the same time, the prevailing basic form of farm organization in agricultural production.

The GDR, with 155 inhabitants per square kilometre, has a high population density. One person is fed per 0.37 hectares of farmland and 0.28 hectares of arable land, respectively. These facts, together with the GDR's economic and social policies aimed at economic growth, full employment, and social welfare, require that agriculture be further intensified and that it ensure a high level and continuous growth of agricultural production. Almost 92 percent of the foodstuffs consumed by the population come from domestic crop and animal production. One of the goals of agricultural policy is to further increase this self-sufficiency rate and consumption level by making full use of scientific and technological progress.

Socialist production relations in the countryside, adapting the farm structure to the growing demands set by science and technology, and continually improving the material and technological base, constitute the fundamental prerequisites for continuing to intensify agriculture which was and is closely linked to the transition to industrial production methods and, hence, to an increase in the use of material resources. Fixed assets doubled in the 1970s. Tractors in terms of horsepower per 100 hectares of farmland increased by about 50 percent in the same period. In 1980, mineral fertilizers equivalent to 276 kilograms of pure nutrients per hectare of farmland were used in agriculture. Expenditure on plant protection and herbicides was 2.9 and 2.6 times higher than 10 years ago.

The use of modern farm inputs made it possible to raise the level of mechanization in crop production and, to an increasing extent, in animal production. Labour input was considerably reduced. The higher level of mechanization inevitably led to an increase in energy input. Due to the objective processes of continuous intensification, but also as a result of the worldwide trend for energy to become scarcer and ever more expensive, the improvement of material and energy economies has become a decisive aspect of efficient

management in GDR agriculture. The advantages of a planned economy are used to initiate steps towards reducing specific material consumption and absolutely cutting energy consumption under conditions of continuously increasing production. Research and development, as well as efficient organization of production, have a substantial share in this process. The high standard of equipment reached so far in agriculture calls for making even better use of all means of production. Consequently, the co-operative farms and those branches of industry producing inputs for the agricultural sector are facing new problems as rationalization is increasingly becoming the main instrument for ensuring further economic growth.

Long Term Growth of Agricultural Production and Its Effectiveness as an Indispensable Principle of Socialist Agricultural Policy

As a result of intensification, gradual transition to industrial production methods, and socialist transformation of agriculture, production has increased considerably over the past 30 years. Production of grain, meat, milk, and eggs went up to 1.6, 4.6, 3.4, and 9.5 times the 1952 levels. The growth in grain production was mainly achieved over the last 10 years. Total production was raised by almost 150 percent and the yields per hectare increased by 35 percent. Higher levels of mechanization and use of chemicals, cultivation of high yielding intensive varieties (particularly from the Soviet Union within the framework of co-operation in science and production among the CMEA countries), and measures for improving soil fertility were of decisive influence. Consequently, labour productivity rose by more than 25 percent during this period, while net product increased by almost 12 percent. Due to more frequent poor weather and the more complicated internal and external production conditions, the growth rates of production and yields, labour productivity, and net product diminished in recent years. In the 1980s, all efforts will be made to further raise crop production in particular. This applies to more or less all agricultural crops, but particularly to cereals. It is planned to raise total output of crop production by 1985 to more than 44 quintals of grain equivalent per hectare of farmland, an increase of about 10 percent.

The role of agriculture as a producer of raw materials is an essential factor of a country's economic growth. For this reason, the GDR pays great attention to agriculture as an important sector within the national economy.

Continuous Improvement of Working and Living Conditions of the Co-operative Farmers and the Further Shaping of Co-operative Democracy

One basic feature of the agricultural policy of the GDR is the bringing of rural living conditions closer to those in urban areas, gradually overcoming the main differences between town and country, and increasing the participation of co-operative farmers in the management and planning of their co-operative farms as well as in the social affairs generally.

The increasing importance of practical experience has confirmed its vital role and has shown how the responsibility and importance of labour increases in production as production continues to develop, and as socialist production relations are further perfected. To meet the growing demand, the vocational qualifications of those permanently employed in socialist agriculture have improved. While only 6 percent of co-operative farmers had completed a vocational training by 1960, the proportion had risen to 89 percent by 1980. At the same time, 8 percent have graduated from higher educational institutions or technical schools. Thus good facilities exist for organizing agricultural production on large farms and for applying scientific findings and modern production technology widely.

The co-operative farmers are participating increasingly actively in the management and planning of production. More than 20 percent of them are members of the executive boards of the co-operative farms and their committees or their divisional and team organizations, and hence are taking part in the direct planning and organization of production. More than 17,000 co-operative farmers and workers are members of the co-operative councils which are the bodies responsible for discussing the further development and implementation of co-operation between groups of co-operative farms so as to enhance intensification of production and to lay down agreed conditions for future work. At the same time, thousands of co-operative farmers serve on people's representative bodies, permanent committees, panels, and working groups. About 12 percent of the deputies to the People's Chambers of both county and district assemblies are co-operative farmers. Their share in town and parish assemblies comes up to 28 percent, and highlights of democratic life in the countryside are farmers' conferences and congresses at district and national levels. This point was demonstrated by the farmers' conferences held in the districts in the spring of 1982 and by the XII Farmers' Congress of the GDR. In detailed and democratic discussions, co-operative farmers and representatives of the state and social organizations exchanged views on further fulfillment of their tasks within the national economy and on the development of co-operative life in the villages. Every co-operative farm can look to a secure future with respect to production and sale of its products as well as to the development of its income. They constitute a safe social basis of existence for the co-operative farmers and their families in the socialist society.

One important result of raising efficiency in agriculture is that the net income earned by the co-operative farmers has almost reached the level of the net income earned by the workers and employees. Improved efficiency is also intended to guarantee average growth of the co-operative farmer's income in the future. Due to the principle of co-operative distribution, the income level will be considerably influenced by the economic results of the joint co-operative work. In years when yields are unfavourable, the reserve funds of the co-operative farms, credit from the agricultural bank, and, to a certain extent, government support are used to avoid a decline in the co-operative farmers' incomes with its attendant negative social consequences.

The social conditions of farmers have also improved fundamentally insofar as the majority of co-operative farms has already introduced fixed working hours, including a paid annual holiday for their members. All co-operative farmers and their families benefit from the social insurance services in the same way as do workers and employees. This also applies to health and labour safety as well as to the protection of mother and child. Equal rights for women have also become reality in agriculture, and the former excessive physical demands commonly made on women on private farms have mostly been abolished.

The Growing Importance of Science and Agricultural Economists

The main source of further growth in agriculture is the broader implementation of scientific and technological progress. This also makes higher demands on science. In the GDR, a high level has been reached in agricultural sciences, and a remarkable research potential is available in almost all of its disciplines. The effectiveness of this potential has been increased insofar as cooperation in science has been continuously improved both nationally and through cooperation at an international level amongst the socialist countries, particularly with the Soviet Union. This potential is now to be concentrated on the decisive topics of scientific and technological progress in agriculture, and the respective findings are to be fully introduced into practice as soon as possible. High crop yields and performance, good production results, labour productivity, and economy are the objectives to be striven for in this way. Therefore, all efforts are being made

to give still more efficient support, particularly to the co-operative farms, in the comprehensive implementation of scientific and technological progress. It is becoming more and more typical for multilateral relations to develop and deepen between research institutes and co-operative farms.

A very impressive example of the practical introduction of scientific findings is the application of electronic data processing. Providing the co-operative farms with optimal recommendations on fertilization enables them to balance feeding and to establish optimal rations in an efficient way. It also makes it possible to maintain a field file to ensure the best cultivation practices and to make effective use of all resources, including labour.

The higher the need for inputs for further intensification of agricultural production becomes, the more attention has to be paid to observing the right proportions between the individual input components. This is a very decisive factor in increasing production and efficiency in the agricultural sector. It thus becomes more important than ever to investigate how to create and maintain optimal proportions in the use of the various intensification factors. It follows that agricultural economists are confronted with many new tasks, such as studies of the dynamics and formation of efficient production structures in agriculture as a whole, and of the ever closer linkages with other sectors of the national economy. They are also concerned with research in the field of farm organization and planning, including further development of the principles of co-operative distribution and economic accounting.

The profound changes induced by science and technology and the complexity of these processes quite obviously require closer interdisciplinary co-operation in the field of scientific, technical, technological, and economic research. For this reason we are striving for ever closer co-operation between agricultural economists and research workers in the scientific and technical sectors. In the same way, co-operation between science and practise is contributing to relate basic and applied research closely to the movement towards innovation in co-operative farms. The essential conditions are being created for making better use of the creative potential of co-operative farmers. All this is characterized by the joint endeavour to link the scientific and technological revolution with the advantages of socialism in the agricultural sector for the benefit of all co-operative farmers and of society as a whole.

Note

¹Institut für Ökonomik der Landwirtschaft und Nahrungsgüterwirtschaft, Berlin, GDR. The paper was presented by Victor Nazarenko.