

RURAL CHANGE

The Challenge for Agricultural Economists

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Accomplishments and Challenges for the Future for Agricultural Economists Working in COMECON

The development of agricultural production, its transition to the machine stage, significant structural and socio-economic changes in agriculture pose new serious problems for agricultural economists in the CMEA countries. It stands to reason that the research areas depend on the specific economic and production problems confronted by each country. However, the common features of the socio-economic structure in agriculture in the CMEA countries, attainment of more or less the same level of agricultural development, simultaneous and identical changes in the farming sector, formation of the national agro-industrial complexes – all this predetermines the similarity of many researches undertaken in the field of agricultural economics. One should accentuate here the importance of the uniform and identical ideological Marxist principles underlying the science of agricultural economics in the CMEA countries.

Time does not permit reviewing all of the research areas in agricultural economics that hold interest and promise, except in brief summary.

One of the major research problems attracting the attention of agricultural economists in practically all CMEA countries is the formation of the national agro-industrial complexes and perfection of economic and organizational relations therein. Nowadays, industrialization of agricultural production, processing of an ever greater portion of farm products, establishment of stronger bonds between farm supplies manufactures, farming, food industry and other sectors of economy stimulate the formation of large national complexes which produce one single end product, i.e. foodstuffs. Changes are taking place in the very mode of food production. Agro-industrial sectors of the economy have been formed in place of relatively isolated industries. All these facts direct the attention of economists to the associated problems, such as analysis of interindustrial relations, their organizational and economic forms, price system within the agro-industrial complex, the level of profitability (efficiency) in separate branches, more rational distribution of capital investment and manpower in the complex, with a view to reducing food production costs, increasing food supply and improving food quality so as to meet the more exacting demands of today. This is closely related to such complicated

problems as the optimal forms of management for the agro-industrial complex at the national level.

As is known, most of the CMEA countries have set up special departments to cater for the agriculture and food industry. The search for optimal forms of management at the state level is still continued in a number of countries as exemplified by the recent changes effected in the agro-industrial complex management in Bulgaria. Such multidisciplinary studies in many states involve not only agricultural economists, but also general economists, experts in industry, prices, management and political economy. This particular problem area, in view of its intricate nature and multidisciplinary aspects, will definitely continue to be among the most important in the years to come.

The interrelations between industries present a great scientific and practical interest not only at the national level but also at the level of regions, associations (firms) and individual enterprises. In recent years, this area of research has acquired specific significance, particularly in the Soviet Union and some East European countries. It incorporates analysis of the performance of the existing agro-industrial associations and enterprises particularly those operating in the field of wine production, horticulture and some sectors of animal husbandry. They have introduced a continuous production line, practise uniform principles of management on the interindustrial basis, and the entire production is geared to a concrete end product. Here the economists deal with such complicated and important problems as distribution of profits, capital investment, labour remuneration, organization and planning of production and forms of labour payment. Legislative aspects are no less significant, since these associations represent new forms of business operations and require formulation and adoption of corresponding acts.

Similar significance is attached to inter-farm co-operation. The fact is that in most socialist countries agricultural production has been concentrated in large state and co-operative farms. This was the situation that prevailed at least some years ago. At present, however, the economically optimal size of agricultural operations is larger than can be supported by one farm, especially in the industrialized branches of agriculture. Therefore, production and economic considerations for concentrated and specialized production created a need for larger producing units to be set up in certain branches of agriculture. In actual practice this is achieved through the organization of higher-level co-operatives, the so-called second stage co-operatives which run within their framework large-scale business operations like feedlots, food processing plants, construction works and so on. These enterprises and co-operatives financially depend on the shares paid by the usual type of co-operative and are managed by a council of directors. In different forms this system has been introduced on a large scale in a number of countries, including the Soviet Union and GDR. Their development, clearly, poses many new problems for the economists to consider, e.g. principles and forms of inter-farm associations, their organizational structure, management, planning, investments

and distribution of income, internal prices, etc. Extensive research work is carried out in this field in socialist countries and undoubtedly this research will be continued in future on a large scale.

One of the key problems encountered by agricultural economists in the Soviet Union and abroad lies in the studies of the most rational ways of agricultural intensification. All East European countries, to one extent or another, have switched to a capital-intensive production which requires sizable investments in this sector of the economy. Suffice it to say that in the Soviet Union investment in agriculture in the last two five-year plan periods exceeded 300 billion roubles. Every economist can appreciate the responsibility of the planning and agricultural authorities for the most efficient distribution and utilization of this investment. Naturally, it calls, above all, for a fundamental concept of agricultural intensification, based on the main principles of the farm policies in each country and planned targets drawn out for major farm products. Agricultural research institutions participate in the decision-making at different levels as far as it is connected with the central questions of planning agricultural development.

The objective of research on agricultural intensification is to assess, in terms of economics, the significance of such factors as mechanization and chemicalization of agriculture, land improvement, construction of livestock premises and other farm buildings. A very complicated problem in this field is to determine the economic efficiency of capital investments and inputs, the sequence of their application and proportions, influence on labour productivity and increase of production volume, and efficiency of agricultural enterprises. These problems are not of merely theoretical, scientific interest; they are very important for practical activities, determination of specific areas of capital investment and its realization in agriculture and related industries. To facilitate the solution of these problems, methods are being developed to evaluate the economic efficiency of investments and fixed production funds in agriculture and to analyse the effect of direct inputs upon the efficiency of the current production.

As mentioned earlier, these are viewed as the key problems of agricultural production planning. Agricultural development plans can be subdivided into long term (covering over five years), medium term (five years), short term (one year) and current (plans for individual farm activities). Traditionally, planning is based on the balance sheet method. At the present time an ever greater use is made of the so-called input-output tables which are more or less identical to those suggested by Leontiev. The important fact to note here is that substantial complication of the agricultural production structure and a steep increase in the capital investment impart an ever greater significance to long term planning covering several five-year periods. Such plans are developed in the form of programmes, and the method used is known as goal-oriented programming, for each programme is designed to attain a certain final goal. It should be mentioned also that a good deal of co-ordination work

is done. The co-ordination is effected in the framework of the five-year plans and is facilitated by a close coincidence of the plan periods in most socialist countries. Nowadays, co-ordination has been raised to a still higher level: development of long term goal-oriented programmes for the CMEA countries envisaging production of different farm products and a corresponding division of labour in agriculture and related industries. The recently held 33rd top-level conference for the CMEA members emphasized particularly the importance of such long term goal-oriented programmes. Their development enlists the active participation of agricultural economists. The role of economists, definitely, cannot be confined to the programme development alone: they should be actively involved further in the building up of the programmes and the development of economic mechanisms to ensure their implementation.

Division of labour in agriculture is one of the most important problems, not only within the CMEA as a whole. Division of labour, i.e. territorial and branch specialization of agriculture and its rational deployment has always been ranked among the top priority problems tackled by agricultural economists in all CMEA countries. The growing specialization and concentration of production, the strengthening of inter-farm and inter-industrial relations render these problems particularly important. Studies carried out in this respective field of research aim at the most effective utilization of natural and labour resources as well as capital investment that would assure attainment of the plan targets. The studies concern labour division at the level of the state, large and small administrative units and within enterprises. Optimal deployment presupposes maximal concentration of each agricultural activity in the areas where specific natural and economic conditions favour the development of a given activity, with due consideration for the natural constraints to agricultural production. This results in the formation of relatively homogeneous specialized zones producing a limited number of the final farm products.

The first and foremost task of economists here is to analyse, in economic terms, the natural and economic condition of production, production costs, productivity, relative profitability and labour efficiency in each zone, as well as to estimate the future economic effect that can be obtained from the redeployment of agricultural production. The intricate and diverse nature of these problems calls for a wide use of economical and mathematical modelling. Of course, optimization of the production deployment and specialization is not something constant. It is and will continue to be subject to changes due to the continually changing economic situation, manpower availability and alternative uses of natural resources. Therefore the work for deployment optimization usually integrates agricultural forecasts and predictions. They are made with full consideration of the expected volume of farm production, farm supplies, working force, technical and technological changes and furnish the basis both for long term planning of agriculture as a whole and for the production plans in respect to each type of product and location of each type of farm production at the level of the country and individual regions. A great

significance is attached to the perspective development of transport facilities, the entire production infrastructure, economic relations and ties within the agro-industrial complex, as well as to the implications that the concentration and specialization of production may have for the ecological system.

The predicted pattern of agricultural production deployment and specialization results from the investigation of the future material and technical basis, changes in the productive forces, rate of urbanization and amount of labour available in the rural areas, the future capacity of the transportation facilities, the type of the food industry to be expected in the long run, the pressure of the environmental problems, etc. One of the principal objectives in this research is to ensure a rational deployment of industries with due regard for the future trends in scientific and technological progress and the full use of such irreplaceable factors of production as climatic conditions.

Such investigations, normally, include the following stages: formulation of the concept; elaboration of the deployment pattern or rather its alternative versions; choice of the version that would most adequately meet the constant requirements; development of the industry deployment prognosis, preparation of the materials and suggestions on the production deployment for the long term plan; clarification of the deployment pattern when the next five-year plan is under consideration. These stages are present, to one extent to another, in the agricultural economic research carried out by most socialist countries in the field of farm production deployment and specialization. As to the macro economic investigations, particularly noteworthy are the studies pertinent to the economic relations between the state and agriculture as a whole and separate agricultural enterprises.

Such relations are effected through production planning, farm supplies and purchase of farm products, as well as through prices, credits, finances, taxes, etc.

It should be also mentioned that the significance of each economic and administrative method and mechanism the state uses to exert its influence on agriculture varies from country to country. And this is only natural because the importance attached to each of these factors, their concrete contents, reflects the specific features characteristic of the economic life in each country. Nevertheless, among the various tools used by the governments in all countries to affect agriculture, there is one common factor and that is the effort of all state authorities to utilize the entire range of economic factors to stimulate the attainment of the state-defined targets in agriculture.

So, the task of agricultural economists here is to analyse the effectiveness of the economic levers, to investigate their economic and production effects, functioning and correspondence to the outlined targets; to study the profitability trends in individual branches and regions, the level of income received by the rural population. In the research dealing with economic mechanisms whereby the state can influence agricultural pro-

duction prices are viewed as a most essential element. The price formation processes are studied in most socialist states, which can be explained by the fact that each farm keeps its own cost accounting of the farm products and the data are then summarized by the relevant statistical bodies.

The principle objective of research in the field of price formation is to study the main trends existing in the production costs and efficiency in respect of different products, often in different regions; to determine the most rational price level which would ensure expanded production in the given branch, duly accounting for the plan targets. The research results are used by the state to make decision as to the level of farm purchase prices.

So far as the micro economic studies are concerned, one should point to those which are devoted to the perfection of economic relations within agro-industrial enterprises, forms and methods of labour remuneration. These studies, as a rule, are aimed at increasing the general efficiency of enterprises, reducing and eliminating subsidies payable to them and their developing into financially self-sustained entities; at introducing such economic relations that would serve to cut down the cost price and save inputs in each field of production activity. In the economic literature these problems are referred to as the problems of internal cost accounting.

Research on labour remuneration normally includes such issues as the level of payment, differentiation of payment according to the workers' skill and qualification, forms of payment, labour norms, etc. This problem area, in addition to its micro economic significance (i.e. practical application of different forms of labour payment used to stimulate production) has a tremendous socio-economic importance, since at the present time all socialist countries are making efforts to bridge the gap between the living standards in town and countryside and to bring the rate of labour payment in rural localities closer to that in the urban centres. The problem of labour remuneration is very closely associated with the problem of labour productivity. The spectrum of scientific studies in this area is usually very wide. It includes first of all analysis of trends and alterations in the level of labour productivity in agriculture as a whole, in its separate branches and in separate regions and factorial analysis of causes inducing these alterations. They provide the basis for prognostic studies concerning the likely trends in labour productivity. The level of labour inputs and other inputs are defined and then used in the process of planning.

In addition to these problems of economics, agricultural economists have also to deal with the problems of rural sociology.

In brief summary, they are as follows. The first is the problem of migration and reproduction of manpower. The rapid rate of urbanization and industrialization, higher educational level of the people, including in rural areas, introduction of compulsory middle education in rural schools in a number of countries, a new generation of workers – all this brings to the foreground new social problems to be tackled by economists. Second,

the very nature of labour in agriculture is undergoing radical changes. Although the natural differences between agriculture and other sectors of economy continue to exist, labour processes in agriculture are becoming more comparable to those in industry, which fact is conditioned by the changing quality of labour and the new relations between the workers and the means of production.

Third, another important fact to note here is the alteration in the very lifestyle of the rural people which is manifested not only in increased incomes but also in the new production and non-production infrastructure, new types of settlement, changes in the quality of life in the countryside.

Fourth, the range of social problems integrates all issues relating to the form of ownership in agriculture. These problems are many and depend largely on the social structure of agriculture in each country. They cover the relationship between private farmers in Poland, introduction of the known forms of co-operatives there, development of higher forms of co-operation in most socialist countries, rapprochement of the state and co-operative forms of property, the process experienced in most socialist countries.

These and many other fundamental problems make up the object of research in the field of agricultural economics in the CMEA countries. Of course they reflect only the main lines of research. The current and long term research programmes underway in each of these countries are more diversified and account for the development targets and conditions prevailing in agriculture in each respective country.

DISCUSSION OPENING – J.S. HILLMAN

Before addressing some points for discussion, I shall take a moment to put the major themes of Dr Nazarenko's paper into context from which I shall raise *questions* that constitute the thrust of my opening statement.

At the outset, I fear that Nazarenko has overdrawn the common features of socio-economic phenomena in CMEA countries, even that of ideological principles. Be that as it may, some major problems attracting the attention of agricultural economists in those countries are outlined rather clearly and we are indebted to him for that. These problems fall generally under the following topical headings:

- 1 Agro-industrial complexes; which include interrelationships between industries, between industries and firms, and between firms.
- 2 Intensification of production.
- 3 Planning of production, which includes the division of labour, cost analyses, and tasks preparatory to the prediction of patterns of production and employment.
- 4 Techniques to achieve state-defined targets in CMEA countries.
- 5 Macro economic studies.
- 6 Labour remunerations.

7 Agricultural and rural sociology problems, such as migration, manpower and rural environment.

Despite his commendable effort, Dr Nazarenko's presentation leaves us with large researchable gaps, and with questions which are relevant not only to agricultural economists working in COMECON but to those working in other countries as well. I now proceed to a partial list of these questions.

The first set of questions relates to trade and trade policies between CMEA countries, and between these countries and the world. What are the bases for trade and the actual movement of commodities between CMEA countries? It would be helpful, for example, to know more about the grain imports and utilization policies of these countries, particularly those of the USSR. Agricultural economists there might undertake studies which would relieve the world of some instability in grain markets if they were to tackle seriously the problems inherent in the transportation, storage and distribution of grain. I might add that the grain reserve problem is a unique one to be probed from that vantage point.

In this general vein, a second major question arises in relation to the consumption of certain products, particularly livestock and dairy products. Is there over-consumption because of the relatively low prices of these products to consumers? In this regard, I might point out that Dr Nazarenko's paper is quite devoid of mention of research on the demand side – all his attention seems to be given to resource, production, or supply problems.

A third set of questions involves the economic relationships between the "players" in the agro-industrial complex. On what basis do industries and farms share in income distribution? This is but another way of asking what are the methods for pricing inputs and outputs in the various systems. In passing, what is meant by the words "profit" and "profitability" used throughout the paper? How are wage differentials determined; or what determines who works where? What is the future of the agro-industrial complex – to assure increased efficiency or stagnation? Farm labour: how do you keep the rural worker happy given the wage differential between farm and factory?

My fourth question relates to the actual investigations already underway and to research capabilities. The paper mentions *many* studies that are being carried out, e.g. those on the division of labour; but little mention is made of any results. Moreover, in light of the voluminous number of research and other problem areas in COMECON raised by Dr Nazarenko, I pose the problem of the availability of personnel and other resources for the task.

Finally, the paper might have been more informative if Dr Nazarenko had told us the *aims* of COMECON, how it works, and at what stage are many of its activities (i.e. for talking or for action). This is of special interest due to the different problems which face the different countries.

Dr Nazarenko has made a beginning. It would be helpful to all if more light could be thrown on the topics he raised and the questions which I have asked here.

GENERAL DISCUSSION – RAPPORTEUR: WILFRED MWANGI

The questions from the floor were in line with those raised by the opener of the discussion. The questions were mainly on the role of agricultural economists in trade and trade policies, the basis for trade, over-consumption of livestock and dairy products, the method of pricing inputs and outputs, the concept of profit, wage differentials in regard to labour, freedom of workers, availability of research resources to agriculture, conservatism of economic policy in allocating resources to agriculture and finally the aims and activities of COMECON.

In his response to the questions raised by the opener as well as from the floor the author first explained that agricultural economists in the USSR are usually specialized according to the Ministries in which they work. In his paper therefore he was only dealing with the work of agricultural economists in the Ministry of Agriculture whose major concern was in agricultural production. He had not, therefore, discussed foreign trade which was the responsibility of Foreign Affairs.

Dr Nazarenko indicated that grain production in the Soviet Union is mainly in marginal areas and this leads to considerable fluctuation in production. It was noted however that in recent years grain production had increased by 75 per cent. Production will be increased further through the improvement of tillage systems as well as through increased fertilizer use. He refuted the contention that there was over-consumption in livestock and dairy products in COMECON. This might appear so because the system of calculation applied is different, say, from that applied by FAO. Meat prices, for example, might appear to be low just because, again, the pricing system is different. Further, the price formation system is difficult to explain because it is not only economic, but also other factors, such as social considerations, that are involved in its determination. However, regional as well as zonal pricing reflect costs of production. The economic policy pursued by COMECON in regard to agriculture was not conservative. Capital investment in agriculture which stood at 27 per cent of total capital investment in the economy reflected the highest priority to agriculture. The aims and activities of COMECON headquarters were not discussed in the paper because the author felt that the subject was different and complicated since COMECON was a supra-national organization.

Participants in the discussion included Edward F. Gillin and Maxwell S. Myers.