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**Economic and Organizational Links of Agriculture and Food
Industry in Poland***

Ekonomiczne i instytucjonalne formy powiązań rolnictwa
z przemysłem spożywczym w Polsce

Экономические и правовые формы связей сельского хозяйства с пищевой
промышленностью в Польше

1. SOCIO-ECONOMIC STRUCTURE OF POLISH AGRICULTURE

The structure and the rate of development of Polish agri-business is first of all determined by the productive and socio-economic structure of agriculture. According to the data from December 31st, 1965, the structure of Polish agriculture was the following:¹

1) there were 8,828 big state farms (300 ha each on the average), occupying 13.3% of the total agricultural land, supplying the country with about 16.3% of the agricultural products supplied to the market;

2) the number of co-operative farms was 1,291 (176 ha each on the average), covering 1.1% of agricultural land and supplying 1.3% of production for the market;

3) there were 3,591,900 private farms (average area 4.7 ha), occupying 85% of the agricultural land and producing 82.4% of market production.

* Paper presented during the international scientific conference in Jouy en Josas near Paris in May 19th, 1967, on the connections between agriculture and food industry.

¹ *Statistical Yearbook 1966*, Warsaw 1966; *Agricultural Statistical Yearbook 1945—1965*, Central Statistical Office, Warsaw 1965.

Apart from state farms, which are centrally managed in the socialist economic system, there are almost 3.6 million farms with which the food processing industry maintains direct contacts (through its well developed network of purchasing points). As a result of this far advanced comminution of the supply of agricultural products, the trade apparatus and industry purchasing and processing agricultural products have to deal with trade partners for whom land and farm is something more than a means of earning their living; it is their way of life. Agricultural producers react in different ways to the economic incentives applied by the state (prices above all); as a result of this very complicated system of reactions, the control of production and of market supplies is particularly difficult. Rational and irrational motives, economic, sociological and psychological impulses taken together guide producers in making this or that decision.

Two figures are most characteristic of the present situation in Polish agriculture. The first is the 32% of population deriving their incomes exclusively or mainly from work in agriculture. To the above figure at least 10% of the population should be added: people who no longer regard agriculture as their main occupation, but as an indispensable additional work. So there are 42% of families in Poland for whom agriculture continues to be their job.

Another figure pertains to the structure of the cash expenditures of the population. It results from the inquiries made into family budgets that manual workers' families spend 44% of their annual income on food, and brain workers' families — 38%. This means that approximately 42% of the total purchasing power of the population (excluding the agricultural population) is spent on consumption goods. This determines the place of agriculture and food processing industry in the national economy.

It is taken into account that the population of Poland is growing at a rate of 1.3% at present and that 42% of income is spent on food. Hence, the conclusion must be drawn that agricultural production must increase at a rate of about 2% annually to guarantee the growth of real wages envisaged in the long-term plan. During the last 12 years the average annual rate of growth of agricultural production was 2.9% (as compared to the interwar period the agricultural yields per ha have increased by 65%).

2. SPECIALIZATION IN PRODUCTION OF VARIOUS GROUPS OF FARMS AND REGIONS

The progressing fragmentation of farms makes specialization in production particularly difficult, and yet specialization is particularly

important for the agricultural and food industry. Despite the structural obstacles in Poland, efforts are being made to introduce specialization into agricultural production. Specialization goes in two directions. Firstly, bigger farms (10—15 ha) mostly specialize in grain production and the breeding of cattle for beef; and smaller ones in general stock breeding (pigs, poultry, etc.). Secondly, geographical regions are being selected for specialization in the production of certain articles. Specialization is most advanced in the production of crops cultivated under contracts for future deliveries, of industrial crops and seed crops (oleaginous plants, textile plants, sugar beet, tobacco, herbs, grass, seed plantations, etc.). Specialization is also making headway in animal breeding, e.g. there are certain regions breeding pigs for pork and fat, and for bacon.

Specialization of various groups of farms is the result of their economy (and in this sense it is objectively determined); on the other hand, the specialization of geographical regions is the result of planned State policy. Regional specialization as a rule is based on natural ecological conditions but not exclusively: the formation of specialized regions is also dictated by certain economic and social considerations. More labour-absorbing cultures are usually concentrated in regions where population pressure is greater; this allows of taking better advantage of the existing labour potential.

The existing regional specialization has also been determined by certain historical factors. In the period when agriculture was heavily burdened with quota deliveries (up to about 1956), deliveries on contract terms were a kind of compensation. The relatively high prices of products supplied on contract terms neutralized the adverse effects of excessively low prices at which quota deliveries were supplied. This compensative function of contractation prices played an essential role in the formation of regions specializing in the production of industrial plants and pig breeding.

The investment policy was another important factor shaping the specialized crop regions, particularly the location of enterprises processing agricultural raw materials. With the exception of sugar production, in all the remaining branches of the food industry the regions of cultivation coincide in principle with the centres of industrial production. This does not mean that we have already attained the optimum state of affairs. There are still big transports of agricultural raw materials and, what is even worse, these transports often cross each other. Efforts are now being made to improve the situation in this field with the help of mathematics (transport algorithm).

The food industry and its enterprises—state and co-operative—which are engaged in contract purchases and purchases of agricultural produce in general, play an important role in the shaping of specialized production regions. These enterprises are a factor of vertical integration of agriculture with industry. Industry determines the limits of regions linked with the given processing enterprise and the amount of raw material purchased for processing. These limits are particularly important wherever crops particularly attractive for farmers are envisaged. It is worth adding on this occasion that with regard to most crops, ceilings of contract purchases are established in advance; contracts for deliveries of animal products and the recently introduced contracts for grain deliveries are the only exception to the rule.

3. THE PATTERN OF PLANNING AND MANAGEMENT OF AGRICULTURAL PRODUCTION

The fact that state farms, co-operative farms and private farms are operating in the same country makes the structure of the mechanism of agricultural production management particularly complicated. State farms are managed directly by the central plan, but with regard to co-operative and private farms the influence of the State is indirect. Simplifying the whole problem one can say that the state farms are controlled by issuing directives while co-operative farms and peasant farms are controlled by parameters.

It is worth while dwelling for a moment on the status of state farms because the pattern of their management does not fully correspond to the ideas and pictures people have of these farms on the ground of the methods that were applied years ago. First of all it must be stated that the development trend in the management of state farms is to replace the to-date methods by the parametrical model in which—generally speaking—it is reduced to the influence of the Central Planner (CP) on the economic results of the enterprise. The present stage of development of state farms in Poland is characterized by the duality of the solutions applied. On the one hand there are certain elements of management by directives, and on the other hand, instruments of parametric control are being developed (prices). It is true that the main objective set to those enterprises is to gain the maximum profit within the system of prices of agricultural products and means of production (and this is the index serving to evaluate their activity and grant them bonuses), but at the same time such factors as employment, the wages fund, the size of the enterprise, investments, etc., are centrally planned. The co-existence of instruments of manage-

ment which contradict each other (central directives and parameters) is the source of the weakness of the present pattern. This system of management cannot be maintained for long. Already at present there are tendencies to replace it by purely parametrical control.

The above evolution in the methods of management of state farms is of essential importance as far as forms of their integration with industry are concerned. It is evident that in the near future the links between these farms and industry will consist in the conclusion of voluntary contracts for future deliveries. In the new system the role of prices will acquire primary importance (prices in the broad meaning of the word, that is, the prices of agricultural products, means of agricultural production, rate of interest, land rent, labour costs, etc.).

In principle, the pattern of controlling the production of co-operative farms and private peasant farms is not mixed, but it uses a very wide range of instruments of economic policy. The farms are fully autonomous within the framework of the system of prices. Planning is not tantamount to directing; in fact there is only planned influencing of production by the Central Planner. From the point of view of the CP the basic problem is to induce agricultural enterprises to execute the central plan, that is, to produce the planned amount of various products.

4. THE SYSTEM OF CONTROLLING PRODUCTION IN PEASANT FARMS (PRICES AND CONTRACTS)

There are three basic instruments used by the CP to influence the peasant economy. They are: 1) prices (including rate of interest and land rent), 2) contracts and 3) investments.

The new production tasks set up by the plan, both as regards planned targets and means of their implementation, reach the producer the quickest and most directly by changes of prices (or the relation of prices). This way the enterprise is much better and more precisely informed as to the intentions of CP than by means of descriptions or directives. All parameters are essentially linked with the system of incentives; they only act if there is a correlation between the given parameter and the given incentive. This means that the parameters are instruments of control exerted by means of influencing the economic results of the enterprise. If links between parameters and incentives are broken the former are of no avail in controlling. Control with the aid of parameters is effected through the independent decision of the management of the enterprise, and not by omitting to take such a decision.

In agriculture information supplied by prices alone is not sufficient. Hence the great importance of the system of contracts as the second basic instrument of transferring information about planned targets. Voluntary contracts between industry and agricultural enterprises are the most convenient form of links between agriculture and the central plan, an instrument guaranteeing the desired structure and volume of agriculture production. These contracts concluded on deliveries of a determined quantity of certain products meeting determined standards to trade institutions, are concluded *ex ante* (in advance), thus they effectively influence the production programming.

It is a fact of basic importance that the contract system makes possible linking the public interest with the current interests of agricultural producers. They are induced to implement the production plan not by means of administrative directives but through economic incentives, the individual farms being given full freedom to choose a line of production which is most advantageous from their point of view.

The logical development of the contract system is the following. First of all, contracts are concluded for deliveries of: 1) industrial plants; 2) agricultural products destined for export (and thus meeting the determined qualitative standards and being punctually delivered); 3) crops which the farmers must be encouraged to grow; 4) crops which stimulate the development of the contract system as a form of controlling production.² The system of sales under contract creates conditions for stabilized growth of agricultural production, because: a) institutions concluding contracts with farmers see to it that their contracting parties are supplied with the necessary means of production (power fodder, seeds, fertilizers, pedigree animals, etc.), which is an essential factor for the expansion of agriculture; b) signing of contracts frees farmers

² The contract system has been greatly expanded in Poland after the War II. Contracts are concluded for deliveries of almost 100% of plant products and quite a big part of animal products. Apart from cereals, which have only been delivered on contract terms for two years now, other plants for which contracts have been concluded for many years cover an area of over 17% of arable land. In 1965, contract sales encompassed crops from over 2.7 million ha, out of which 2.2 million ha were food and industrial crops and over 0.5 million ha—seed crops. As much as 75% of pork, about 50% of beef, 55% of potatoes and over 42% of grain destined for the market, is delivered under contract. The entire production of industrial crops (sugar beet, tobacco, hops, chicory, herbs), bacons, broilers, over 50% of production of pork and fat, young beef, oleaginous plants and a little less than 50% of the market production of seeds, brewery barley, leguminous plants, beef, piglets, etc., is under contract terms. In terms of value, 63% of the market supplies of all agricultural products is carried out under contract. The remaining are quota deliveries and free market turnover.

of the risk of market fluctuations not only for a short period, but for a medium term; c) contracts are an instrument for controlling the structure of agricultural production in accordance with the socio-economic structure of agriculture. Plans for concluding contracts are drafted in such a way as to encourage the cultivation of labour-absorbing crops wherever there is redundant manpower, they also take into consideration the pedological (soil) conditions in various regions. This way, the system of contracts plays an essential role in the best possible land utilization and in carrying out a determined social policy; d) contracts make possible the basing of relations between agriculture and industry on long-term agreements, which not only stabilizes the economic conditions of agricultural production but also helps in making the necessary investment in this field.

The system of contract deliveries is not a cure-all (panaceum) automatically solving the problem of equilibrium between supply and demand on the agricultural market. Such equilibrium depends on the general conditions of economic development and calls for the use of a wide range of instruments influencing agriculture. Investments in agriculture and the economic sectors servicing agriculture, intensive popularization of technical progress and of agricultural knowledge as well as substantial expenditures for the development of infrastructure are of basic importance in this respect.

The contract system should thus be regarded as one of the instruments of implementing the plan for the development of agriculture. Price has been and will continue to be the universal instrument. Because it is not the system of contract deliveries as far as its organizational and institutional aspect is concerned, that is the condition of the implementation of the plan, and the proper price policy is the condition of the implementation of the plan for contract deliveries.³ The system of signing contracts can only prove effective if it is combined with a properly functioning system of prices. The skilful linking of the system of prices with the system of contract deliveries can essentially improve the influence of prices on various enterprises, various lines of agricultural production, regions of production, etc. This is one of the main advantages of the system of sales by contract, which can be utilized to the full in the socialist economy.

In the socialist system there is a tendency to make sales by contract general, that is, to encompass the whole of agricultural production and all agricultural enterprises with this system. Only if it is generally

³ A. Brzoza: *Wykorzystanie rachunku ekonomicznego przez organizatorów polityków gospodarczych (Utilization of Economic Calculus by Economic Politicians and Organizers)*, „Zagadnienia Ekonomiki Rolnej” 1966, No. 1, p. 9.

applied can it be taken full advantage of as far as the programming of agricultural production is concerned. The attainment of this goal is only possible as the result of evolution over a long period, because it requires the improvement of methods of planning agricultural output, a more efficient apparatus for purchasing agricultural products, and the reduction of trade costs, etc.

The extension of the system of sales by contract to encompass the whole of agricultural production is now becoming economically justified. The to-date system gave preference to crops that were most important for the national economy in a given period. Of course, price was the instrument of preference. There were great differences in the rate of profit gained in various lines of agricultural production. Such a system of preference cannot be maintained for a long time, particularly if equilibrium is reached in the majority of markets. As a result there is a natural tendency to level up the rate of profitability of various production lines, and as a result the attractiveness of the contract system in its present form will decrease.

The idea of contract sales as a general system has also its opponents in this country. They draw attention to the following adverse features of this system:

1. It is a relatively expensive system of organizing supplies of agricultural products (more expensive than the free market); as a result, its general application would certainly raise considerably the social cost of turnover (signing of contracts, controlling the course of the production process, delivery, settling accounts with the supplier, etc.). But not all the outlays connected with the contract system are costs. Expenditures for agro-technical and zoo-technical consultations, control of the production process, quality control of goods supplied, etc., should not be regarded as production cost if only they contribute to improving the quality of products or the production process. The actual cost includes only expenditures on purely administrative functions, that is, signing of contracts and settling of accounts with producers. These costs can be considerably reduced by means of efficient organization. But the whole problem cannot be reduced to the matter of expenditures involved. One must ask whether it would be possible to attain the required results in production without contracts (particularly as far as the range of goods, their quality and the scope of supplies are concerned). In most cases there is no such possibility and thus the problem of choosing forms of purchases does not exist.

2. The system of contracts makes the process of market exchange more rigid. This applies in particular when many institutions are

engaged in the concluding of contracts⁴ and each of them must set up its own administrative apparatus and pay the cost of its maintenance.

3. In the system of contract sales the losses resulting from the non-implementation of contracts are, as a rule, covered by the State. In a system where private peasant farms prevail, it must always be taken into account that not all the peasants will fulfil the contract terms, and experience has proved that the system of conventional fines is inadequate. But it is possible to safeguard the State from suffering such losses. Formally there is the respective clause in the contract itself, but in practice this clause does not help much in safeguarding the interests of the State. But if there is full market equilibrium the situation will radically change.

All the factors which diminish the attractiveness of the contract system in the new production situation can counteract the extension of this system. One of these factors is that of granting credits and of agro-technical and zoo-technical instruction for peasants by specialized agronomical staff. The farmers who have signed contracts are granted financial aid in the form of credit and supplies of certain means of production difficult to purchase on the market (up till recent years fertilizers, and at present power fodder rich in protein, seeds, etc.). This assistance is particularly valuable for farms suffering from a shortage of financial means. As the shortage of certain means of production (fertilizers, fodder) is gradually made good and the technical equipment of farms increases, the importance of assistance in production will decrease, and, as a result the attractiveness of contract deliveries will also be reduced. This can affect the further extension of the system of contract deliveries (the first symptoms of this phenomenon can already be seen in Poland in the contracts for cereals).

This does not mean, of course, that sales on contract terms are only adequate in the conditions of an underdeveloped system of agriculture, but one must bear in mind that the system of sales on contract terms must also undergo an evolution if it is to play an active role in the changed situation. Nevertheless sales on contract terms cannot be replaced by free market turnover because the latter does not provide the possibility of effectively influencing production and supply in advance, that is, before production has been started. In addition, the free market does not eliminate spontaneity of supply and the risk entailed by the producer. All these are reasons why sales on contract terms (vertical integration) are also developing in capitalist

⁴ In Poland contract sales are conducted by 20 institutions that employ about 7,000 persons permanently and 43,000 are employed seasonally (62% for concluding contracts for plant crops).

countries. The free competitive market cannot solve the problems faced by agriculture at the present moment because the price, which is the main attribute of the free market, is not an omnipotent instrument.

So we have stated that the present system of sales under contract terms with preferences given to chosen production lines and differences in the profitability of various products cannot be maintained in the new conditions. But it is also impossible to shift to the free market (not because of doctrinal but purely economic reasons). In this situation one must look for new solutions aiming at the modernization of the system of sales under contract and above all at making these sales a general system in agriculture, but changing slightly the principles of contract system. If this system is to work in the new conditions it must be generally applied. This is only the general development direction; further discussion will certainly result in elaborating the future pattern in every detail. But it would be a simplification of the problem to maintain that the very institution of contract sales would suffice to solve the problems of adjusting production and supplies to demand. It can bring good results only if the system of prices operates in line with the preferences of the CP. Because sales under contracts have only two essential advantages: for the producer — the guarantee that he will sell his product; for the customer — the guarantee that he will obtain it. Everything else in this system, the whole system of prices above all, acts independently in a certain sense; so without a good system of prices, sales under contract will be nothing more than a frame without contents. The problems do not consist in replacing the policy of prices by sales under contract terms or the reverse, but in linking the two mechanisms in a logical system.

5. CONTRACTS

The number of contracts concluded in Poland at present within one year is from 13 to 14 million. They are signed with private farmers who undertake the obligation of producing and supplying the plant and animal products specified in the contract. If it is borne in mind that about three million farms produce for the market, this means that some 4—5 contracts are signed annually with every farmer. In the section of purchases of animals for slaughter from peasant farms, amounting to about 1.5 million tons of livestock, the annual number of transactions is about 10 million (the number of contracts is much smaller); in the section of cereals (3 million tons) there are 5 million transactions, in potato purchases there are about 6 million transactions

(5 million tons). In milk purchases (3.200 million litres) the figure is about 320 million transactions.⁵ Only one figure, that of 13—14 million contracts signed annually, suffices to depict the scope of the problem and the degree of fragmentation of supplies from private farms.

The contracts for future deliveries regulate the whole of the relations between the agricultural producer and the customer in Poland as they do all over the world. The contracts are voluntary deeds. The producer undertakes the obligation to produce and deliver a fixed amount of goods of a determined quality to a given place and on a date fixed in advance. The purchasing institution undertakes the obligation: 1) to receive the amount of goods fixed in the contract; 2) to pay the due sum at a price fixed in advance; 3) to grant credit to the agricultural producer for the purchase of means of production (to the value of $\frac{1}{3}$ of the agricultural products that are to be delivered); 4) to supply the producer with certain means of production (seeds, pedigree animals, mineral fertilizers, plant protectives, implements, fodder, coal, building materials, etc.); 5) to ensure agro-technical and zoo-technical aid to the producer in the form of free instruction. The contract also includes an obligation on the part of the producer to observe strictly certain requirements concerning the cultivation of plants or the feeding of the animals to be delivered under contract.

The links existing between agricultural producer and the purchaser of his products, that is, the food industry, are rather complicated both in the system of quota deliveries and supplies under contract. In most instances the final customer is unknown to the producer. His interests are most often represented by a universal co-operative which purchases the following articles on contract terms on the order of various enterprises: grain for consumption and sowing, buckwheat, millet, maize, leguminous and papilionaceous plants, fodder and root plants, grass, fruit and vegetables, flax and hemp fibre, animals for slaughter, eggs, poultry, etc. Some branches of the food industry have their own staff for purchasing raw materials and establishing contacts with farmers on their own. Here mention is due to the sugar, beer, herb, fruit and vegetable processing, the potato processing and poultry industries.

So co-operatives have taken over the functions of integrators in all the production branches where supply is excessively fragmented and there is no justification for setting up separate specialized purchasing enterprises.

⁵ *Zasady skupu produktów rolnych (Principles of Purchases of Agricultural Products) Part One—Purchases and Contracts*, PWRiL, Warsaw 1966, pp. 11—12 and 24.

In the branches which have instruction and contracting staff of their own, there is a direct contact between the agricultural producer and the purchasing integrating institution. Instruction is given by experts and the credit assistance is effective. On the other hand, rural co-operatives which purchase many different products on contract terms, have not a sufficient staff of instructors. As a result their intervention in the process of production is much more limited. The contact of the farmer with the integrator-purchaser (co-operative) is usually reduced to a formality: the signing of the contract and the final settling of accounts.

It cannot be said that contracts fully perform their tasks, and in particular they do not secure the actual intervention of the integrator (purchasing party) in the course of the production process. As long as there is no market equilibrium (that is, so long as the purchasing party makes endeavours to win the supplier), the contract actually binds only one contracting party, that is, the purchaser. The producer often regards his obligations as a pure formality, and the inefficiency of conventional fines convinces him that he has taken a rightful stand. The problem is just the reverse when the market is saturated with products. Then it is the purchaser who can choose his supplier: (eliminating the weakest ones, who offer sub-standard goods or are unpunctual).

The contract entitles the integrator (purchaser) to control production process. In many instances, particularly as far as animal breeding is concerned, this is only a formal right. It often happens that the agricultural producer concludes a contract with the co-operative immediately before selling the animal, that is, when the production process has actually been concluded. This deprives the integrator of any influence on the quality of the product (the system of fattening); neither has he any possibility of planning supplies. This situation is gradually changing and the purchasing party is gaining more and more influence on the farmer through the system of contracts.

Supplies of agricultural products from state farms are also based on contract deliveries. Contracts are concluded for supplies of qualified cereal seeds, brewery barley, seeds of plants and seedlings for nurseries, seeds of oleaginous plants, edible potatoes and seed potatoes, sugar beet, chicory, hop, peas, fibre plants, fruit and vegetables. Contracts are most often concluded for several years (long-term contracts).

Apart from contracts, the purchasing institutions also conclude trade agreements with state farms. They are signed shortly before the purchasing campaign and are aimed at guaranteeing purchases of the production surplus of the farm.

6. VERTICAL INTEGRATION OF AGRICULTURE AND THE FOOD INDUSTRY (FACTORS OF PRODUCTION UNDER CONTRACT TERMS)

Contracts perform a very important role in the modernization of the methods of agricultural production and spreading technical progress, above all in traditional peasant farms. As we have already mentioned, the system of production under contract terms is making headway in Poland in spite of the fact that there are numerous factors slowing down the progress in this field (e.g. farm fragmentation, reluctance to introduce new technical methods of farming, the low purchasing power of small farms, etc.).

The branches of the food industry which have their own staff engaged in purchases of raw materials, organize production aid for farmers themselves. The others apply indirect forms of influencing farmers. For instance, the tobacco, fermentation, brewery and herbage industries have their own farms producing seeds and seedlings of tobacco, hops, and herbs which they offer to the farmers signing contracts for future deliveries. Also the fruit and vegetable industry produces the majority of the seedlings of the trees, bushes and strawberries supplied to farmers. The sugar industry supplies farmers with seeds and about 60% of mineral fertilizers. The potato processing industry supplies farmers with the varieties of potatoes adapted to the soil and climatic conditions of the given region. Contracts for supplies of seed-potatoes are concluded with specialized farms producing them and farmers obtain industrial varieties of seed-potatoes on credit terms. The industry purchasing animals for slaughter and poultry supplies farmers with means of production, e.g. the meat industry signing contracts for pork meat, supplies farmers with piglets of a chosen breed, and the poultry industry supplies chicks for the production of broilers. Chicks are either supplied by the industry's own farms or by the farms run or controlled by experts from the Ministry of Agriculture. Farmers who sign contracts for the delivery of pigs and poultry obtain power fodder and coal (on credit terms).

Other industries (e.g. vegetable oil, grain milling industries) supply the farmer with means of production through the intermediary of third trade institutions, they first of all avail themselves of the services of the rural supply and purchase co-operatives. Contracts with supply and purchase co-operatives which are the main contracting party of the food industry as far as supplies to farmers are concerned, provide for the control of industry over the work of the co-operatives in this field.⁶

⁶ *Ibid.*, pp. 27—28

Apart from means of production the food industries supply farmers (on credit terms) with floating funds. For instance, within the framework of the sales under the contract system, the farmer obtains about 27% of the power fodder he needs (in terms of commercial weight), $\frac{2}{3}$ of his total coal supplies and a considerable part of the necessary chemical plant protectives, most often at reduced prices. So far about 60% of mineral fertilizers have been distributed within the framework of contract system. At present the situation is changing because as a result of increased supplies of fertilizers, sales for so-called privileged aims (sales under contract, rehabilitation of drained and irrigated grassland, etc.), are rapidly decreasing. Fertilizers are easy to get and the guarantee of supplies with contract deliveries has lost its importance.

Supplies of means of production to agriculture by the food industries are the basic factor of vertical integration of agriculture and industry. In some production lines (broilers, certain seeds, tobacco, etc.) the farmer obtains almost all the means of production from the purchaser. He only gives his land and work. So far the weight of this integration has not been significant in Poland, but the process is gaining strength.

STRESZCZENIE

Jest to referat wygłoszony w dniu 19 maja 1967 r. na międzynarodowej konferencji poświęconej związkom rolnictwa z przemysłem spożywczym, odbytej w Jouy en Josas pod Paryżem. Konferencja odbyła się w Ecole des Hautes Etudes Commerciales.

Referat przedstawia strukturę społeczno-ekonomiczną polskiego rolnictwa, kierunki specjalizacji poszczególnych grup gospodarstw i rejonów w wyniku ekspansji kontraktacji, a następnie zajmuje się modelem planowania i zarządzania produkcją rolną w Polsce, wskazując na możliwości sterowania (parametrycznego i nieparametrycznego) rozmiarami i strukturą produkcji rolnej. Szczegółowej analizie poddano system cen i kontraktacji produkcji rolnej. Referat, kreśląc ewolucję systemu kontraktacji (od kontraktacji elitarniej do masowej), zajmuje się analizą warunków przejścia do powszechnej kontraktacji produktów rolnych.

Ponadto referat daje opis obecnie obowiązującego systemu zawierania umów kontraktacyjnych i poddaje ocenie jego skuteczność. Końcowy fragment poświęcony jest problemom pionowej integracji rolnictwa polskiego z przemysłem spożywczym, a więc warunkom przechodzenia od kontraktacji handlowej do produkcyjnej.

РЕЗЮМЕ

Эта работа представляет реферат, прочитанный 19 мая 1967 г. на международной конференции, посвященной связям сельского хозяйства с пищевой промышленностью, в Jouy en Josas под Парижем. Конференция проходила в Ecole des Hautes Etudes Commerciales.

В реферате автор представляет социально-экономическую структуру сельского хозяйства Польши в целом, направления специализации отдельных групп хозяйств и районов в результате экспансии контрактации и занимается моделью планирования и управления сельскохозяйственной продукцией в Польше, указывая возможности управления (параметрического и непараметрического) размерами и структурой сельскохозяйственной продукции. Отдельно анализировал систему цен и контрактации сельскохозяйственной продукции. Представляя эволюцию системы контрактации (от контрактации для привилегированных до контрактации для всех), занимается анализом условий перехода к всеобщей контрактации сельскохозяйственных продуктов.

Кроме того дает в реферате описание действующей в настоящее время системы заключения контрактационных договоров и оценку ее эффективности.

В конце говорит о проблемах вертикального интегрирования сельского хозяйства в Польше с перерабатывающей промышленностью, а следовательно о условиях перехода от коммерческой контрактации к производственной.

