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USSR Report

AGRICULTURE

(FOUO 3/81)

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CONTENTS

LIVESTOCK

INCREASING EFFECTIVENESS OF CATTLE RAISING

Moscow VOPROSY EKONOMIKI in Russian No 12, Dec 80 pp 69-77

[Article by N. Korina]

[Text] It was pointed out in the decisions of the July (1978) Plenum of the CPSU Central Committee that "the whole course of development of the country's economy and a steady growth of the material level of the people's life now bring to the forefront the task for a more rapid rise of animal husbandry." The successful implementation of these tasks depends to a significant degree on raising the economic effectiveness of cattle raising on the basis of its industrialization.

The industrialization of animal husbandry has the same features as industrialization of agriculture as a whole. But there are differences here, stemming from the actual specifics of animal husbandry. This presents greater demands on providing the sector with capital structures, fodder storages, animal-husbandry farms with a specific regime of temperature and humidity within them; feed balance as to nutrient content; medicines; special transport and so on. Thus, industrialization of animal husbandry should be aimed at providing this sector with fixed and working capital in the quantitative and quality composition and correlation which would permit the creation of conditions for the further expanded production of animal-husbandry products in planned volume with simultaneous reduction of socially necessary expenditures of labor per product unit.

Living and past labor participate in the process of production of animal-husbandry products. At the same time, the share of embodied labor in overall outlays per unit of animal-husbandry product is constantly growing. At kolkhozes in 1978, feed outlays in the structure of outlays for production of milk amounted to 40 percent, for the production of cattle--54.2 percent; at sovkhozes--45.5 and 58.4 percent, respectively. On the whole, the relative share of past labor, with account being taken of amortization deductions in overall outlays, reached about 50 percent in the production of milk at kolkhozes and 63 percent in the production of cattle weight increase--63 percent and at sovkhozes--56 and 67 percent, respectively. These figures show the need for rational use of past labor and the influence of the given factor on the effectiveness of cattle raising (on growth of labor productivity, reduction of production expenditures and so on).

Over the course of an extended period of time, agriculture, especially animal husbandry, was, compared to other sectors of the national economy, at a lower level of technical equipment. In recent years, an intensive process has been proceeding

of saturation of animal husbandry with fixed and working capital. Thus, the value of fixed production capital in the period from 1965 to 1978 increased by a factor of 3.4; at the same time, this value of fixed production capital of animal husbandry grew by a factor of 3.7. During 1971-1978 alone, approximately 3 billion rubles were allocated for the construction of animal-husbandry complexes. In this period, the capital-labor ratio of agricultural workers increased significantly. In 1965, it amounted to 2,200 rubles; in 1978, it had grown to 7,900 rubles, that is, by a factor of 3.6. The intensive animal husbandry's capital provision resulted in the growth of the capital-output ratio of animal-husbandry production.

Table 1. Dynamics of Capital-Output Ratio in Cattle Raising

	Capital-output ratio of fixed production capital per ruble of gross production (in rubles)				1976, in % of 1965
	1965	1970	1975	1978	
Kolkhozes					
Milk	1.48	1.66	1.88	2.33	157
Weight gain of cattle	1.38	1.40	1.68	2.15	156
Sovkhozes					
Milk	1.42	1.41	1.90	2.10	148
Weight gain of cattle	1.43	1.15	1.37	1.85	130

As indicated by the data, the capital-output ratio of milk production at kolkhozes increased 57 percent and meat—56 percent, at sovkhozes—48 and 30 percent, respectively. The capital-output ratio of cattle raising is reflected even more in the indicator of fixed production capital as computed per product unit. At kolkhozes in 1965, the production of one quintal of milk employed fixed production capital valued at 26.03 rubles; in 1978, its production had increased to 53.99 rubles, that is, by a factor of 2.

The value of fixed production capital involved in the production of one quintal of weight gain of cattle increased more than 2.6-fold. A similar situation is to be found at sovkhozes. All this means that in the production of one unit of animal-husbandry production more fixed production capital is involved at the present time (expressed in value terms) than has been in preceding years.

Technical progress brings about growth of the technical-output of labor, which serves as a precondition of raising its productivity. At kolkhozes in 1978, outlays of man-hours on the production of one quintal of milk decreased by 50 percent compared to 1965 and on the weight gain of one quintal of cattle by 43 percent and at kolkhozes--42 and 36 percent, respectively. Thus, the growth of the capital-output ratio of production of agricultural products is a lawful process under whose influence there occur in the structure of outlays a reduction in the share of living labor and an increase in the share of embodied labor. Thus, in the total sum of outlays, the relative share of outlays on wages in 1978 compared to 1965 dropped by 52.3 percent at kolkhozes in the production of milk and from 40.6 to 19.0 percent for cattle; at sovkhozes, the figures were, respectively from 34.0 to 24.1 percent and from 21.4 to 15.5 percent.

One of the most important conditions of ensuring a high rate of development for the national economy is to be found in greater effectiveness of use of production capital. At the present time, fixed production capital of agriculture amounts to more than 180 billion rubles, including more than 84 billion rubles for animal husbandry, for which reason its rational utilization is especially important. In increasing the value of fixed production capital without an advancing rise in the value of gross production, the capital-output ratio drops. In recent years, the growth rate of the value of fixed production capital significantly surpassed the growth rate of the value of gross production. Thus, in the period from 1965 to 1978, the value of fixed production capital of animal husbandry at kolkhozes grew 3.1-fold, while the volume of gross production increased only 92 percent and the output-capital ratio decreased 65 percent. At sovkhozes with a 4.3-fold growth of the value of fixed production capital and a 3.1-fold increase in the volume of gross production, reduction of the output-capital ratio amounted to 71 percent.

The rise of the capital-output ratio of product output and a certain reduction in the output-capital ratio occur in part because of intensive capital equipment of regions of the middle zone and the northeastern regions, where agricultural land is less productive and the value of capital construction is higher.

In recent years, most animal-husbandry complexes have been constructed mostly in the regions of the Nonchernozem Zone. Mastery of the use of production capacities, as of new equipment, costs more than the operation of adjusted production equipment. These factors are objective, dictated by the need of strengthening the economy of the Nonchernozem Zone. At the same time, there are a number of factors of a subjective character that can be eliminated. Some of them directly depend on agricultural workers, while others are the consequence of special developmental features of the national economy as a whole. For example, in a comprehensive approach to the industrialization of animal husbandry provision is made for an optimal correlation between the capacities of animal-husbandry enterprises and factories for processing of feed of the necessary quality. But in practice, this condition is not observed. A comprehensive approach to the formation of fixed production capital is one of the conditions of its effective utilization. But even this condition cannot always be fulfilled because of shortages of individual machines and equipment.

The role of different agricultural fixed production capital varies in the creation of new value. Some of it can be conditionally included in the active-part group, consisting of agricultural machines, engines, equipment, electric installations, productive livestock, while another part of it can go into the passive-part group: buildings, irrigation structures, roads, communications and the like. The active part of fixed production capital more quickly transfers its value to newly created products and the passive part--more slowly. Consequently, the structure of fixed production capital influences the rate of transferring its value to newly created value, which to a certain degree determines the effectiveness of its use, that is, the level of the output-capital ratio. Let us examine the structure of fixed agricultural capital of kolkhozes, sovkhozes and other state farms in its dynamics (Table 2).

The most significant relative share in the structure of fixed production capital consists of buildings, structures, transmission equipment, that is, the passive part of the capital. In 1965, this part of the capital comprised less than 50 percent; in 1978, its relative share had grown to 62.1 percent of the total value of

Table 2. Structure of Fixed Production Capital of Agriculture (in %)

	1965	1978
Fixed agricultural production capital, total including:	100	100
buildings, structures, transmission equipment and so forth	48.5	62.1
machines and equipment	22.0	17.2
means of transport	4.3	3.5
productive livestock	15.7	10.3
other fixed agricultural production capital	9.5	6.9

the capital. At the same time, the relative share of all elements of the active part of the fixed production capital had dropped by 1978: machines and equipment--from 22.0 to 17.2 percent, means of transport--from 4.3 to 3.5 percent, while the relative share of the most important part of the production capital of animal husbandry--productive livestock--dropped from 15.7 percent in 1965 to 10.3 percent in 1978.

As analysis of the dynamics of the structure of fixed production capital, shows, the growth of its passive part occurs at an advancing rate, which is likewise confirmed by structural shifts of capital investment in agriculture. Thus, the relative share of capital investment for construction and equipment of animal-husbandry farms and water-management construction in 1978 rose as compared to 1965 from 40.7 to 41.3 percent. The relative share of the active part of the production capital in the total aggregate of capital investment was reduced, for example, in the acquisition of tractors, transport equipment, agricultural machinery and so on from 38.9 percent to 33.7 percent.

The increase in the share of capital investment aimed at the development of the passive part of the fixed production capital greatly contributed to increasing the capital-output ratio of production and reducing the output-capital ratio. Of major significance to agriculture is the level of provision of equipment and various mechanisms (mechanical lines for milking, fodder distribution, manure removal and the like). When they are inadequate, capital structures are not used efficiently and there takes place overexpenditure of labor and material resources. But at the present time, a process is taking place of reducing the relative share of the active part of the capital. Farms are experiencing diffficulties in the acquisition of technical equipment, especially spare parts for machines and equipment.

No less an important factor influencing the effectiveness of cattle raising is optimal correlation of simultaneously used means and objects of labor. In animal husbandry, this is manifested in the need of providing productive livestock on hand with fodder in the required amount and quality and proportion, which determine the success of the operational activity. Growth of both passive and active parts of capital (particularly the basic number of livestock) without expansion of the feed base results not in growth of productivity of the livestock and an increase in

the total volume of production but in a higher cost per production unit and reduced effectiveness in the use of fixed capital.

Over the course of many years, the greatest of attention was devoted to the problem of bread grain and a lot less to the problem of forage grain. This can be seen from the analysis of the dynamics of sown areas in the country occupied by grain crops. In 1940, 40.3 million hectares of land were occupied by spring and winter wheat and in 1978 the figure was 62.9 million hectares, that is, 56.1 percent more. Sown areas under forage grain crops grew insignificantly or were reduced. For example, the area under spring oats for this period decreased from 20.2 million hectares to 12.1 million hectares, that is, by 40.0 percent. In 1978, of the total mass of produced grain crops, bread grains constituted about 70 percent and forage crops only 30 percent.

Despite the fact that there has recently emerged the tendency of a gradual increase in areas occupied by sowings of forage crops and of a certain curtailment of areas occupied by bread grains, forage grain is still being inadequately produced, as a result of which a shortage of feed protein is being felt in animal husbandry; this is partially covered by concentrated feeds produced from wheat. According to our calculations, about 30 million tons of wheat are used for feed in animal husbandry to compensate for deficit feed protein, which is a poorly productive and ineffective use of grain and in the final analysis of labor and material resources. This results first of all in increasing the cost of the feeds themselves and increasing the production cost of a unit of animal-husbandry production. Thus, the cost of one quintal of fodder units from concentrated feeds in 1965 at kolkhozes was 4.67 rubles in 1965; in 1979, the cost had risen to 9.79 rubles, that is, by a factor of 2.1.

The increase in the cost of feeds and animal-husbandry products is aided by the irrational use of milk for feed purpose. Thus, for the feeding of calves in 1979, 7.1 million tons of milk and about 14.1 million tons of skim milk were used on the country's kolkhozes and sovkhozes. Altogether about 10 percent of produced milk and almost half of the milk protein produced in the country as a whole (in highly developed countries 2 to 5 percent of the milk goes for these purposes) were spent on feeding livestock. The use of milk and milk protein for feed purposes leads to higher prices for feed and and correspondingly to a rise of roughly 6-8 percent in the cost of a production unit and to a reduction in the use of whole milk and dairy products by the country's population amounting to 3-4 percent.

At the present time, when specialized animal husbandry is being intensively developed on an industrial basis, the problem of proving feed in the necessary quantity and required quality is becoming especially acute. As we know, progressive technology in specialized animal husbandry is effective only in the case of use of special feeds. For example, starter mixed feeds and regenerated milk without which intensive rearing of young stock is impossible are used. Lack of these feeds, their unsatisfactory quality result in a higher incidence of murrain of cattle at complexes poorly supplied with feeds, which can be as high as 20 percent or more, and both reduced productivity of cattle and their low weight gain.

For the purpose of satisfying the need of enterprises of the industrial type (kolkhoz, interfarm and state) for starter mixed feeds, it is necessary to increase

total production capacities fourfold in terms of their productivity. For the provision of effective industrial cattle raising, regenerated milk should be produced seven times more than has been the case up to now.

Thus, a further increase in the effectiveness of cattle raising is primarily held back by an unsatisfactory feed base, insufficiency and low quality of feeds. The problem lies not only in an inadequate production of concentrated, coarse and succelent fodders in agriculture itself but also in an insufficiency of capacities for industrial processing of feeds. Composition and balance of nutrients determine the possibilities of their assimilation by animals and consequently feed efficiency (grain not processed into specialized, concentrated feeds is not completely assimilated by the animal organism). The relative share of concentrated feeds that have not undergone industrial processing amounted in 1978 to about 24 percent on kolkhozes and in prepared mixed feeds and feed mixtures in granule form--only 3.3 percent.

An inadequate degree of processing of concentrated feeds and mixed feeds results in their over-expenditure for all forms of animal-husbandry products. Thus, in 1978 one hundred fifty-two units were expended for one quintal of milk at kolkhozes and 1,255 feed units for the weight increase of one head of cattle, which is 25-30 percent higher than the rational norm. Growth of feed-production capacities, abetted by the elimination of nonproductive feed expenditure, constitutes one of the significant reserves for increasing meat production and achieving high cattle weight conditions in sale to the state, reduction of all production costs and higher effectiveness of animal husbandry as a whole. The results of selection and breeding work on improving the quality of all cattle also largely depend on the degree of availability of necessary feeds for the animals. Today, gains from work on improving the pedigreed condition of the herd are to a significant degree lower because of the unsatisfactory condition of the feed base.

A deficit in the full value of feed protein and insufficiently high quality of feeds have been responsible for low growth rate of animal productivity. Thus, in 1978 compared to 1965, annual milk yield from one cow increased 20.2 percent, comprising a country average of 2,259 kg per cow; the average weight of one head of cattle sold to the state increased by 41 percent, attaining 361 kg on the average for all categories of farms. The lag in the development of the feed base has been responsible for low growth rates in the number of head (from 1965 to 1978, they increased 29.2 percent), which together with an inadequate rise in cattle productivity determined the low rate of increase of gross production and higher outlays for this production. This can be seen from the data of Table 3.

As shown by the table's data, the cost of one cattle-place [skoto-mesto] at kolkhozes increased to 501.8 rubles (almost 2.4-fold), while the extra products obtained could be valued at only 130.8 rubles (an increase of 51.1 percent). At sovkhozes, additional outlays for the maintenance of cattle amounted to 508.2 rubles, while the added production of one cattle-place was valued at only 167.7 rubles, that is, a 2.1-fold increase had taken place in the rising cost of one cattle-place with a gross production increase of only 53 percent. On the basis of the cited data, it can be said that the additional costs put into cattle raising have so far not produced the necessary economic effect or growth of production volume capable of ensuring reduction of production costs (reduction of socially necessary outlays of labor).

Table 3. Dynamics of Gross Production Output of One Cattle-Place and its Cost

	1965	1970	1975	1978	1978, in % of 1965
Kolkhozes					
Cost of one cattle-place (in rubles)	368.8	525.7	858.2	870.6	236.1
Cost of gross production output of one cattle-place (in rubles)	256.2	339.9	431.0	387.0	151.1
Sovknozes					
Cost of one cattle-place (in rubles)	450.5	541.2	848.8	958.7	212.8
Cost of gross production output of one cattle-place (in rubles)	316.2	418.2	514.7	483.9	153.0

Production cost is one of the basic generalizing indicators determining the effectiveness of production. Volume and quality of production are in direct proportion to the effectiveness of utilization of the elements comprising production cost (fixed production capital, raw and other materials, fuel, wages and so forth). The observed reduction of the output-capital ratio attests to the irrational use of fixed and working capital--to nonproductive use of social labor with its impact on growth of production costs. K. Marx wrote: "Rising labor productivity means namely that the share of living labor is reduced, while the share of past labor is increased, but increased in such a way that the total sum of labor included in commodities is reduced; that, consequently, the amount of living labor is reduced more than the amount of past labor is increased."[1] At the present time, in some sectors of agriculture, particularly in cattle raising, the share of living labor is being reduced as the result of its growing productivity, while the share of past labor continues to grow. But it is increasing in such a way that the total sum of labor included in commodities is not reduced, that is, the amount of living labor is not reduced more than the amount of past labor is increased.

Irrational and nonproductive utilization of past labor included in the means and objects of labor has been one of the reasons for lower growth rates of labor productivity compared to the growth of the cost of expended means of production and on this basis of the rising production cost of animal-husbandry products. For example, in cattle raising on kolkhozes, the production cost of one quintal of milk grew from 16 rubles in 1965 to 24.7 rubles in 1978 (54 percent) and of one quintal of weight gain of cattle from 1017 rubles to 178.5 rubles (76 percent), on sovkhozes, respectively, of one quintal of milk--from 16.3 to 27.2 rubles (67 percent) and of one quintal of weight gain of cattle--from 105.2 to 197.6 rubles (88 percent).

1. K. Marx and F. Engels, "Sochineniya" [Works], Vol 25, Part 1, p 286.

A decree of the July (1978) Plenum of the CPSU Central Committee "On Further Developing USSR Agriculture" points out the need "to launch a determined struggle for economy and thrift, for lower cost of production and an all-out increase in labor productivity at all operational echelons from bottom to top." Effectiveness of cattle raising, higher labor productivity and lower production costs directly depend on rational and economic use of past labor included in the means of production. For this reason, the tasks set for agriculture at the July (1978) Plenum of the CPSU Central Committee have to be solved in the direction of elimination of nonproductive use of past labor and a higher output-capital ratio and return on feed.

The use of the newest achievements of science and technology and progressive processing methods and on their basis the further development of production are not achievable on separate, even large, kolkhozes and sovkhozes. All this demands an increased scale of concentration of production. Interfarm cooperation permits all multisectorial and all-round production of kolkhozes and sovkhozes and all sectors of agriculture to be converted to large-scale, highly mechanized production and the creation of highly concentrated production. In the Summary Report of the CPSU Central Committee and in a number of other pronouncements, L.I. Brezhnev stated that specialization and concentration of production constitute the main line for the development of our agriculture. "Rapid development of agriculture," L.I. Brezhnev emphasized, "leads to increasingly broader spread of interkolkhoz and state-kolkhoz production associations, to the creation of agroindustrial complexes. They make effective use of equipment, capital investment and labor resources and wider use of industrial methods."[1]

The concentration of production at interfarm enterprises and state enterprises of the industrial type (complexes) is significantly higher than at kolkhozes and sovkhozes. Thus, in 1978, concentration of productive head of cattle at kolkhozes was on the average for one farm lower than at interfarm enterprises by a factor of 1.7 and at sovkhozes--by a factor of 1.6. At the same time, the number of farms specializing in fattening was 275 at interfarm enterprises. The level of concentration of young stock being fattened at these specialized enterprises was higher than at kolkhozes or sovkhozes by a factor of 1.5. The high level of concentration and specialized production at interfarm enterprises has made it possible to use progressive technology, creating conditions for the rational utilization not only of living labor but also of past labor. All this has ensured here a lower level of production costs.

Progressive technologies and technical equipment and specialization of production have made it possible to significantly reduce the labor intensiveness of rearing and fattening of livestock, as a result of which labor productivity on the whole has been raised at cattle-raising interfarm enterprises. In 1978, the level of labor outlays for one quintal of weight gain of young cattle at interfarm enterprises was lower by a factor of 3.5 than at kolkhozes and lower by a factor of 2.5 than at sovkhozes. On the basis of progressive technology, there has also been achieved at interfarm enterprises rational utilization of material resources (first of all feeds).

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1. "Materialy XXIV s"yezda KPSS" [Materials of the 24th CPSU Congress]. Politizdat, 1972, pp 50-51.

The high production cost of one quintal of weight gain of cattle-raising production at kolkhozes and sovkhozes at the present time is basically due to a constant shortage of feeds and an unbalanced diet in terms of feed values, particularly with respect to protein, mineral substances and vitamins. Thus, the per-day feed expenditure on one head of young stock and grown cattle being fattened amounted on the average for kolkhozes 4.16 feed units and for sovkhozes--4.65 feed units and average daily weight gains--325 and 378 grams, respectively. At interfarm enterprises, where rearing and fattening are done at specialized complexes on an industrial basis, the average daily feed outlay per head amounts to 5.56 feed units. Average daily weight gains during rearing and fattening at interfarm enterprises amounted to 590, at interfarm complexes--626 and at state complexes--756 grams and as an average for all complexes--652 grams. At some complexes even higher average daily weight gains have been attained, for example 1,046 grams at the Voronovo Complex in Moscow Oblast. The higher average daily feeding norms at complexes (19 percent compared to sovkhozes) and the use of full-value feeds have ensured higher productivity of the animals being reared or fattened amounting to a factor of 1.7.

With increased average daily weight gains of animals and their productivity, the time of growing and fattening of livestock is reduced, which ensures the highest possible effective use of capital structures and all equipment. For the fattening of an animal from 45 to 450 kg, 1,000 days are required at kolkhozes and sovkhozes and at specialized complexes complexes with average weight gains of 1,000 grams, a total of only 405 days, that is, there can be produced at one cattle-place in an equal interval of time roughtly 2.5-3.0-fold more production than at kolkhozes and sovkhozes. Time periods of fattening one head of cattle to a required weight are even more compressed at interfarm enterprises than at kolkhozes and sovkhozes by roughly a factor of 2.5. As the result of this in 1978 one cattle-place at interfarm enterprises was cheaper by 42.7 percent at kolkhozes and by 57.2 percent at sovkhozes. At the same time, 1 ruble of gross production at interfarm enterprises required existing fixed production capital in the amount of 1.55 rubles, at kolkhozes--2.25 rubles and at sovkhozes--1.98 rubles, that is more than at interfarm enterprises (at kolkhozes--by 45 percent and at sovkhozes--by 28 percent). Feed outlays at interfarm enterprises for one quintal of weight gain of cattle are lower than at kolkhozes by 23.6 percent and at sovkhozes--by 28.6 percent, while the productivity of the animals is higher. The average weight of one head of young stock sold in 1978 to the state by interfarm enterprises was 378 kg, by kolkhozes--367 kg and by sovkhozes--360 kg.

As the result of rational utilization of labor and material resources at interfarm specialized enterprisesa lower level of production cost per unit of product has been achieved. The production cost of one quintal of weight gain of cattle on them in 1978 was 128.6 rubles, while on kolkhozes it was at the level of 178.5 rubles and at sovkhozes--197.6 rubles, that is, lower than at kolkhozes by 38.8 percent and lower than at sovkhozes by 53.6 percent. This means that in addition to higher return on feed a significant reserve for boosting the effectiveness of utilization of past labor and on this basis the effectiveness of cattle raising as a whole exists in the further development of concentration of production and intensification of its specialization.

Thus, there is observed at the present time a process of increased capital provision of animal husbandry, thanks to which capital intensiveness and material intensiveness of production output are increasing in it. The industrialization of animal

husbandry and rising capital-labor ratio are contributing to the growth of its productivity. But higher growth rate of fixed capital compared to the growth rate of working capital (first of all feed) bring about a lower output-capital ratio, nonproductive expenditure of a certain portion of past labor included in the means of production. Feed shortage and its low quality result in insufficiently high productivity of animals, an underuse of fixed production capital, an overexpenditure of feed and higher costs of production.

For the purpose of improving the use of fixed and working production capital, it is necessary to further strengthen the feed base, to provide animal husbandry with feeds not only in the required amounts but also in the necessary quality, for which purpose it is necessary to increase the production of forage grain and to expand the capacities of the feed processing industry. Specialization within the sector should be directed at making the processes of rearing and fattening independent production operations, which would create conditions for high concentration of these production operations and for the introduction of progressive technology, ensuring the rational utilization of living and past labor, included both in the means and objects of labor, first of all in feeds. The forming of fixed agricultural production capital should be done comprehensively. Its structure (correlation of passive and active parts) should be such that all constituent capital is used with the highest return. All this will contribute to lowering socially necessary outlays of labor and raising the effectiveness of animal husbandry.

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AGRO-ECONOMICS AND ORGANIZATION

GRAIN SEED PRODUCTION IN TALSINSKIY RAYON, LATVIA DISCUSSED

Moscow AGROTEKHNICHESKIYE SOVETY KOLKHOZAM I SOVKHOZAM in Russian No 3, Feb 81

/Article: "Grain Seed Growing in Agroindustrial Association"/

/Text/ The decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures for Further Improvement in the Selection and Growing of Seeds of Grain and Oil-Bearing Crops and Grasses" (1976) stresses the great importance of industrial seed growing. Its essence lies in specializing kolkhozes, sovkhozes and interfarm enterprises in the production of seeds and in maximally mechanizing all processes.

The need to improve the system of growing seeds of agricultural crops and to accelerate its transfer to an industrial basis is also discussed in "Basic Trends in the Economic and Social Development of the USSR for 1981-1985 and for the Period Until 1990."

Farms in our country's nonchernozem zone are under complex conditions for grain production (a short vegetative period and a high moisture of seeds during the harvest period). Therefore, technical and technological difficulties have arisen in the introduction of industrial seed growing. In order to treat the seed heap arriving from combines in one operation on the production line (by the flow method), while preserving and improving the quality of seeds, it is necessary to have a sufficiently powerful material and technical base. Only industrial seed growing makes it possible to solve these problems successfully.

Organization of Industrial Seed Growing

The first rayon agroindustrial association in the republic (and one of the first in the country) was established in Talsinskiy Rayon in the Latvian SSR. It includes nine kolkhozes, five sovkhozes, an experimental selection stand station and enterprises servicing agriculture--the Latvgoskomsel'khoztekhnika Rayon Association, a mobile mechanized column for reclamation construction and an interkolkhoz construction organization. The transfer of seed growing to an industrial basis takes place against the background of an accelerated economic and social development of the rayon's farms.

Seed production is organized according to the following diagram (fig. 1). When it was drawn up, the following factors important for the concentration of seed growing were taken into account: standard of farming, provision of seed growing farms with personnel, material and technical base, distance of seed transportation and so on.

Figure 1. Diagram of Production of Grain Crop Seeds in Agroindustrial Association

Experimental Selection Stand Station

Kolkhoz imeni V. I. Lenin		Lubezere Sovkhoz			Draudziba Kolkhoz
Kurzeme Kolkhoz	Okte Sovkhoz	Tsinya Kolkhoz	Royupe Kolkhoz	Valdgale Sovkhoz	Dzimtene Kolkhoz
Lachplesis Kolkhoz	Laydzskiy Sovkhoz-Tekhnikum	Dundaga Kolkhoz	Tin'gere Kolkhoz		Virbi Sovkhoz

The program for the specialization and concentration of seed growing was prepared with due regard for capital construction and supply of machinery for the sector's development in the rayon. The economic relations among farms producing and buying seeds were built on a scientific basis.

Whereas previously every farm received elite seeds of grain crops and propagated them to the fifth reproduction, now only seed growing enterprises do this. Having propagated elite seeds to the third reproduction, they sell them to kolkhozes and sovkhozes for the growing of commodity grain. This is how the program for the production of grain crop seeds on specialized farms in the rayon for the 11th Five-Year Plan looks (table 1).

Table 1. Plan for Production of Grain Crop Seeds in Talsinskiy Rayon, tons

Farm	1981	1982	1983	1984	1985
Draudziba Kolkhoz	1.27	1.57	1.88	2.18	2.56
Kolkhoz imeni V. I. Lenin	1.82	2.33	2.43	2.44	2.44
Lubezere Sovkhoz	0.95	1.00	1.10	1.20	1.30
Total	4.04	4.90	5.41	5.82	6.30

In 1977 seed growing farms organized a centralized delivery of treated seeds to the sowing units of purchasing farms. Schedule plans for sowing and transporting seeds worked out and coordinated in advance contribute to the efficiency of operation. There is a constant radio and telephone communication among farms. The motor vehicles that deliver seeds are equipped with radio telephones. Owing to the fact that specialized seed growing enterprises and purchasing farms conclude agreements annually, all operations are performed at the proper time.

Material and Technical Base

The success of industrial seed growing depends on the provision of farms with material and technical equipment for the postharvesting treatment and storage of seeds. Scientists of the Latvian Agricultural Academy in cooperation with the rayon's specialists developed all the technical documents for farms in Talsinskiy Rayon.

The central station for the postharvesting treatment of grain crop seeds was reconstructed on the Kolkhoz imeni V. I. Lenin in 1977. Its drying unit consists of two SZSB-8 dryers and 32 S-50V67 ventilated hoppers. Since dryers and seed cleaning and sorting machines are placed under hoppers, it was not necessary to erect walls and floors between stories. The construction of this enterprise was cheaper and its time was shortened. A similar station was also built on the Lubezere Sovkhoz.

The S-50V67 ventilated hopper is designed for the storage of the seed bulk received from combines for postharvesting treatment. In hoppers the moisture of the seed bulk before treatment in heat dryers is leveled out and it is dried in a regime close to the natural conditions of seed ripening. The seed bulk is ventilated with unheated air. Hopper 5 is installed in an enclosure (fig. 3). This cylindrical capacity with a conical bottom made of sheet steel 2.5 mm thick rests on four closed-section stands 3.

A ventilator 13 with an electric motor is under the hopper. A collector 1 is installed over its input flange. Fabric hoses 2 connect the collector's outlets with discharge chambers. To lift the structure by a crane truck (during installation), three loops 15 are welded on to the hopper's upper edge 5. They also serve to secure the deflector 7, which distributes the loaded seed bulk evenly. In order to prevent the formation of bridges in the hopper's conical part during unloading and avoid the clogging of the discharge opening, there is a manual mixer 12 in the hopper's lower part. A hatch 11 was made to inspect or clean the hopper.

The seed bulk is loaded into the hopper through the deflector's funnel.

In discharge chambers fabric valves are installed so that supply ducts not covered by grain are disconnected (closed by valves).

Horizontal air distributing ducts are welded in staggered rows inside the hopper. They are of two types--supply and exhaust ducts. On the side of the entry of air into the hopper supply ducts 3 are open and on the other, closed. Air is supplied to them through two vertical discharge chambers 8. By using a fabric valve 6 to close the supply ducts, it is possible to regulate its intake. The upper end of the valve is bent through a roller 5 and connected with the other end with a rope 9. The valve can be easily moved by means of an endless cord 7 thrown through a roller with a handle 4. By contrast exhaust ducts 2 are closed on the side of air supply and opened on the opposite side.

The ventilator sucks in outdoor air through a net and supplies it to the fabric hoses 10 and discharge chambers 8 through a collector 11. From them through the open supply ducts 3 the air enters into the seed bulk, passes through it and is carried away into the atmosphere. Thus, the seed bulk is dried slowly.

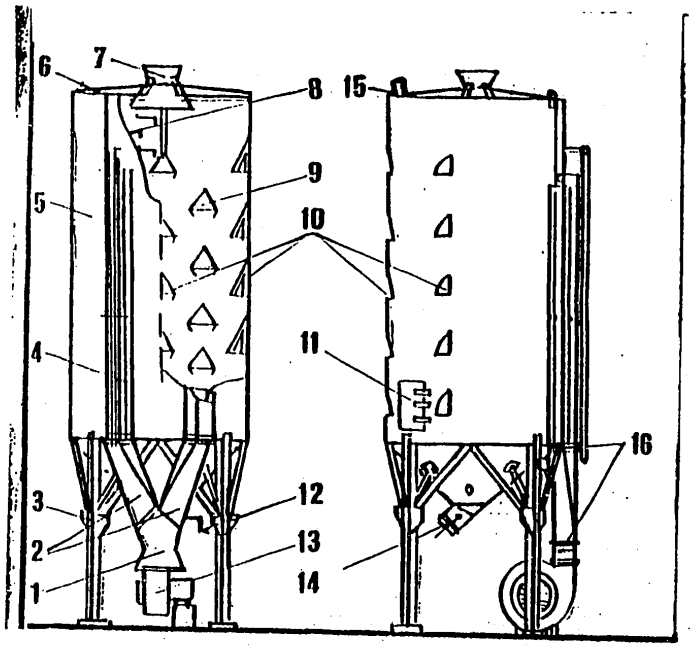

Figure 3. General View of the S-5OV67 Ventilated Hopper:

1--collector, 2--fabric hoses, 3--stanchion, 4--discharge chamber with a regulated valve, 5--hopper, 6--level gauge, 7--deflector, 8--ladder, 9--supply ducts, 10--exhaust ducts, 11--inspection hatch, 12--mixer, 13--ventilator with an electric motor, 14--discharge device, 15--loop, 16--clamp

Overall mechanization on the Kolkhoz imeni V. I. Lenin is also used in seed treatment. In this case the service personnel and the environment are fully protected from the effect of harmful substances. The warehouse for treated seeds is built of S-50A hoppers. The total capacity of this warehouse is 3,000 cubic meters. Hoppers are raised 4.2 meters above the ground level so that a truck--loader of sowing machines--may freely pass under them.

Seeds are treated in the portable chamber over the hopper that is filled at a given moment. The appropriate amount of seeds and seed treating suspension enters the portable chamber for treatment. From the storage facility seeds are supplied by a belt conveyer and a bucket elevator.

The seed treating suspension is prepared in a unit consisting of a capacity, a mixer and a dosing device (the ND-160/25 dosing pump with small changes in design). Its productivity, if two hoppers are filled, is up to 30 tons of seeds per hour. Treatment is given 30 to 40 days before sowing.

Immediately after treatment the germination energy of seeds is 89 to 95 percent and the germination capacity, 93 to 98 percent. After 30 to 40 days of storage in capacities these indicators increase by 1 to 7 and 1 to 4 percent respectively.

In order that the quality of seeds during storage in capacities does not deteriorate, their moisture should be no more than 13 percent. The loading of sowing machines with the use of MMZ-555 trucks takes place in 5 to 10 minutes.

The storage of treated seeds in capacities and the mechanized loading of sowing machines enable the Kolkhoz imeni V. I. Lenin to save up to 7,500 sacks annually. One person handles the treatment of seeds. Owing to mechanization the expenditures on this operation were lowered by 92,000 rubles.

Economic Efficiency

The mutually advantageous relations between specialized enterprises and purchasing farms make industrial seed growing highly efficient. On the one hand, interfarm accounting prices ensure the profitability of seed production (on the Kolkhoz imeni V. I. Lenin it is 50 to 60 percent) and, on the other, do not exceed the expenditures on seed growing on farms. Often these prices are lower than state purchase prices (table 2).

Table 2. Accounting Prices of Seeds

Crop	Interfarm accounting price per quintal of seeds of fourth reproduction, first grade of the seed standard, rubles	State price per quintal of seeds of fourth reproduction, first grade of the seed standard, rubles
Winter rye	19.10	23.80
Winter wheat	17.30	23.80
Barley	19.40	16.50
Oats	17.80	16.50
Peas	29.00	20.40

11,439
CSO: 1824/150

AGRO-ECONOMICS AND ORGANIZATION

INTENSIFIED ROLE OF CONTRACTS IN AGROINDUSTRIAL COMPLEX URGED

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/Article by Ivan Nikolayevich Buzdalov, doctor of economic sciences, senior scientific worker of the Institute of Economics of the World Socialist System of the USSR Academy of Sciences: "The Economic Role of Contracts in the Management of the Agroindustrial Complex"/

/Text/ The strengthening of the contractual principles of interrelationships in the mechanism of planned management of the national economy and its structural units is an indispensable condition for an increase in the efficiency and effectiveness of the entire management system. In "Basic Trends in the Economic and Social Development of the USSR for 1981-1985 and for the Period Until 1990" the development of contractual relations (in particular, an increase in mutual interest and responsibility for the fulfillment of contractual obligations) is defined as one of the important tasks for the further improvement in economic planning work in all national economic units.

The expansion of the functions and strengthening of the economic role of contractual relations are especially urgent for the agroindustrial sphere of the economy with its complex system of intersectorial connections and diverse natural-geographic, technological, organizational and economic conditions and characteristics of reproduction. In accordance with the decisions of the July (1978) Plenum of the CPSU Central Committee specific measures for an improvement in the methods of planning and incentives in agriculture have been developed. They provide for an elimination of excessive patronage of farms, in connection with which the number of planned indicators assigned to them is limited. A further regulation of prices presupposing the inclusion of increments for an above-plan sale of products in the basic purchase price and a greater coordination of material incentives with the end results and quality of work is envisaged. On the whole, conditions are created for the further development of the economic initiative of collectives of agricultural enterprises.

The realization of the envisaged measures, especially in the part of creation of conditions for mutual interest and responsibility for the final quantitative and qualitative indicators of economic activity of kolkhozes, sovkhozes and agroindustrial associations and expansion of the independence of farms in the planned organization of production is connected with an expansion of the functions of economic contracts and increase in their economic role in the regulation of relationships

among all the units of the system of the agroindustrial complex. The utilization of economic contracts not only as the means of fulfillment of planned assignments, but also as an active tool of planning and a direct lever of the system of management of the complex, is an objective need. The economic contract appearing as the legal form of economic contractual relations performs the economic functions of the regulator of exchange of labor activity.[1] The noncorrespondence of the legal regulation of the economy to the tasks of improvement in the economic mechanism and the formality of economic contracts lower the interest of contracting parties in the attainment of the best results of economic activity and in the economy and rational utilization of material and labor resources.

A diverse system of economic contracts, which includes contracts for the sale of agricultural products, material and technical supply and services for enterprises and associations, chemicalization of agriculture, freight transport, construction and installation work and so forth, is now used in the economic mechanism of the agroindustrial complex. Contractual forms of interrelationships are used in the activity of consumer cooperatives and are developed in relations between public and private subsidiary farms of kolkhoz members, workers and employees of state agricultural enterprises.

In fact, the overwhelming part of the exchange of labor activity in the form of purchase and sale, various services, deliveries and so forth is now mediated by contractual obligations and agreements. This form of interrelationships is most widely used in the sphere of state purchases of agricultural products, whose volume in current prices totaled about 80 billion rubles annually in the last few years. The production relations of kolkhozes, sovkhozes and interfarm enterprises and associations with the system of the State Committee for Agricultural Equipment are also built on a contractual basis. The volume of mutual exchange in this sphere, including the trade turnover of supply organizations, exceeds 30 billion rubles annually. Contractual forms of relations are widely used in the relations of farms with trade organizations and public dining enterprises.

Practice shows that, where contractual relations are based on the obligation of observance of mutual interests and on material incentive and responsibility, an active effect of contracts on the intensification and rational organization of the entire reproduction process is observed, the quality of products improves, losses are reduced and the movement of foodstuffs from producers to consumers is accelerated. The active effect of contractual forms of interrelationships on the end results in the sphere of sale of agricultural products by the organizations of consumer cooperatives, public dining and trade is especially noticeable. This is due primarily to the fact that contracting parties are partners with equal rights. This enables them to systematically realize mutual interests and to utilize the system of incentives and sanctions for the fulfillment of contractual obligations in terms of dates of delivery of products, their quality and so forth.

However, the proportion of the turnover in the indicated sphere of mutual exchange of activity on a voluntary contractual basis is not yet significant. For example, in 1979 agricultural enterprises sold products on the basis of direct relations with cooperative and state trade organizations worth 3.1 billion rubles, which comprised 4 percent of the total volume of purchases. However, nor are economic

contracts always used as an effective lever of rational organization of the production and delivery of products to the consumer in this sphere of interrelationships on a contractual basis. In the sphere of direct directive planning contracts have a weak effect on an improvement in the activity of contracting parties.

In our opinion, there are two basic reasons weakening the economic effect of contractual relations on the reproduction process. The first is the lack of unified normative acts for the utilization of contractual relations in the economic mechanism. Individual problems concerning the conclusion and execution of economic contracts are regulated in general form in "Fundamentals of Civil Legislation of the USSR and the Union Republics" adopted in 1961. A more detailed (not uniform) regulation of contractual relations is contained in the special decrees of the USSR Council of Ministers for some types of contracts. This regulation is specified, but often not in a coordinated way, by various ministries and departments. There are statutes on the contracts of farms with procurement organizations. A new standard contract of agricultural enterprises with the organizations of the State Committee for Agricultural Equipment and a statute on this contract were drawn up not long ago. In addition to the fact that every department has "its" contract, diverse "nonstandard" forms of contracts and mutual agreements are used in various units of the agroindustrial complex. For example, in addition to the contracts concluded by kolkhozes, sovkhozes and other agricultural and agroindustrial enterprises and associations, contracts on cooperation, on creative collaboration and so forth are used. As a result, owing to the lack of unified normative principles, departmental disconnection and the diversity of legal acts produced by it, in fact, there is no unified system of efficiently organized contractual relations.[2]

The second reason is the decrease in the functional role of contractual relations as an economic tool of planned management. This is a problem affecting the key aspects of the entire economic mechanism, primarily the combination in it of centralized methods of management with the economic initiative of enterprise and association collectives in the planned organization of production; in this case, the question of combination of the plan and the contract. In practice, in addition to the assignment of the plan for the sale of specific types of products from above to kolkhozes and sovkhozes, at the same time, they also conclude an economic contract. But this is not a combination of the plan and the contract, but a simple duplication by the economic contract of the directive planned assignment. The combination of the plan and the contract is a qualitatively different approach to the understanding and utilization of the principle of democratic centralism in planned management, in which contractual relations have a direct regulating effect on production, organically interacting with planning.

In our opinion, it is inadmissible to consider the problem of realization of the economic functions of economic contracts as a relatively independent lever of planned management exclusively from the positions of economic law and the legal role of contractual relations in production practice.[3] The underestimate of the economic essence of contractual relations has produced indefiniteness in the scientific evaluation of their functional role and place in the economic mechanism and formalism in the practical utilization of the system of economic contracts.

The attitude toward the system of economic contracts as toward a secondary, purely "auxiliary" element of the economic mechanism, which exists in practice, is not only the result of the habit of excessive administrative regulation of interrelationships, not only the result of the practical complexity of reorientation toward the contractual basis of relations, toward economic contractual principles of formation of planned and evaluation indicators. The switchover to the economic contractual basis of management in the agroindustrial complex requires a fundamental refinement of the methods of planning with the use of the intersectorial and overall approach, improvement in price formation, in distributive and the entire system of cost accounting relations and in the principles and forms of incentives and their direct coordination with the fulfillment of contractual obligations.

To determine the place and functions of contractual relations in the system of planned management and to intensify the role of contracts as the economic and legal form of regulation of interrelationships in agroindustrial production, obviously, it is necessary, first of all, to proceed from the objective correlation of the plan and the economic contract predetermining their organic interaction. However, a parallel, essentially separate use of the plan and the contract, a kind of "division" of planned and contractual discipline respectively, is now observed in agriculture and in the agroindustrial complex as a whole. This leads to the isolation of the data of the units of the economic mechanism, in connection with which the functions of both the plan and the contract are weakened and organizational-economic contradictions arise in the matter of an efficient attainment of the same goal--obtaining the highest end results of planned economic management.

The plan and the economic contract are relatively independent, but closely interconnected aspects of the same problem of management of the reproduction process with the use of the commodity-money form of exchange of labor activity. Therefore, the overall approach to planned management with a wide use of economic methods requires a switchover to a single system of planning and contractual relations consolidated by unified juridical and legal norms reflected in the obligations of contracting parties[4] and in incentives and sanctions for the observance of these obligations.

Within such a unity and organic interaction of the plan and the economic contract, under conditions when the latter does not duplicate the planned assignment, but with initiative from below is used as an economic tool of its formation and realization, the efficiency of cost accounting is increased considerably, its organizational basis is strengthened and the stability and reliability of cost accounting relations are ensured. The sale of products and the acquisition of the means of production necessary for rural areas on the basis of the economic contract enable every enterprise to systematically use the principles of cost accounting, primarily the principle of self-support, and also guarantee the derivation of the necessary profit. In turn, the strengthening of cost accounting principles and levers contributes to a better realization of economic functions and, accordingly, of the economic and legal principles of contractual relations. Owing to an intensification of the economic role of contractual relations, a successful combination and an organizational and economic coordination of physical and value criteria and indicators of production planning are attained in the general system of cost accounting as a method of planned management.

The following basic principles, whose utilization will make it possible to efficiently develop the planning and contractual system and on whose observance the effectiveness of this mechanism depends to a decisive degree, should be singled out in the economic mechanism of management of agroindustrial production: Legal equality of parties, economic independence of partners, obligation of the conclusion and fulfillment of a contract, equivalence of exchange according to contractual agreements and material responsibility of parties for the fulfillment of planning and contractual obligations.

The observance of the principles of the legal equality of parties, as well as of the obligation of the conclusion and fulfillment of economic contracts predetermining the activity of the entire system of planned management and the dynamic nature and efficiency of relationships between production and other structural units of the agroindustrial complex, is of special importance. Legal equality as one of the basic principles of contractual relations organically connected with the economic independence of these units--the most important principle of democratic centralism in management and the condition for a normal exchange of labor activity--rules out an administrative imposition of the terms of the contract by one party to the agreement on the other. The obligation of the conclusion and fulfillment of economic contracts increases the mutual interests of contracting parties and the effectiveness of incentives and raises the organization of the entire economic planning work on the regulation of the exchange of labor activity to a qualitatively new level. The principle of obligation of such an exchange on a contractual basis contributes to the realization of the economic role of the contractual system--functions of the contract as a tool of planned regulation of the relations of partners in the reproduction process as a whole.

The need to intensify the economic role of contractual relations and direct cost accounting contacts in agriculture and in the sectors and spheres of the economy related to it was often stressed in party decisions. The contractual relations between primary and other structural units existing in the agroindustrial complex are of a formal nature, which lowers their economic initiative in the selection of more efficient economic decisions on the production of agricultural products and their delivery to the consumer without losses and with a high quality. Farm managers simply sign the completed forms of contracts with procurement officials, without making their remarks and corrections. Such a contract only duplicates the planned assignment and sometimes its content is unknown even to farm specialists. Approaching this contract formally, procurement officials often do not accept the products delivered to them in accordance with the contract on the date scheduled. As a result, their quality is lowered sharply, many products are lost and farms and society at large incur losses.

The contract of farms with organizations of production and technical supply, of the processing industry and of the infrastructure and with other units of the agroindustrial complex does not yet play an active economic role. The interests of farms and enterprises for production and technical services do not coincide, because the former need equipment of a certain assortment and quality and in the necessary combination, while the latter are interested in selling or repairing with an appropriate, often burdensome, markup what was produced and delivered to their bases. Sometimes farms, for the sake of acquiring the necessary spare parts, buy machines

which they do not need at all and pay repair enterprises for services which they did not perform. However, farms have no choice, because the contract is often of a formal nature and the entire system of interrelationships is reduced to claims or orders of farms for the delivery of equipment, which are not binding in any way, and to a one-sided dependence of farms on the organizations of the State Committee for Agricultural Equipment. The same is observed in relations with producers and designers of equipment. The efficiency of economic contracts in the sphere of construction of waterworks, reclamation development and the practical use of improved land is still low. Actually concluded contracts hardly affect an improvement in the activity of contracting parties and reclamation projects often are delivered with big deviations from planned norms. In the final analysis this has a negative effect on the yield and return on the vast investments in reclamation. An intensification of the economic role of contracts could have a significant effect on an increase in the efficiency of investments in reclamation and in the measures for the protection of natural resources used in the agroindustrial complex.

Using the experience in the development of contractual relations between the state and the private subsidiary sector accumulated in a number of the country's regions, as well as in other socialist countries, the potential of the private subsidiary sector in an improvement in food supply could be utilized much more fully. The contractual system of relations can place the sale by kolkhoz members and sovkhoz workers of their products on a planned basis. The volumes of these products within the framework of purchases by consumer cooperatives, organizations and enterprises of the USSR Ministry of Trade and so forth in 1978, for example, for meat comprised only 34 percent and for potatoes, 45 percent of the total volume of sale of these types of products by private subsidiary farms. The transfer of the purchases of products from the population and their surplus from kolkhozes and sovkhozes to a firm contractual basis directly in the localities will contribute to an increase in production and to a reduction in the losses of products and labor during an unorganized sale. The forced trips by rural residents for the sale of small batches of goods to cities now lead to losses of work and free time totaling 200 million man-days annually, as well as to an increase in the prices on the kolkhoz market.

Direct contractual relations play an important role in the prevention of losses of products. Contracts in the Hungarian People's Republic, which are an effective lever of formation and realization of plans for social and economic development, ensure great material interest of parties in the fulfillment of obligations. The right to chose a partner and direct cost accounting responsibility for damage connected with the nonfulfillment of the contract, which is compensated from the income of enterprises and organizations, are the conditions determining this. Planning assignments are presented to departments and are realized through contracts. The same principles also operate in the mutual exchange of activity on the basis of contracts with suppliers of means of production to agriculture, of the service sphere and of the organizations and enterprises of the infrastructure.

Cost accounting contractual relations ensure conditions for an accelerated development and coordinated activity of primary production units within the framework of interfarm cooperatives. Their importance has increased in connection with the wide popularization of industrial production systems in the agriculture of the

Hungarian People's Republic. When the full legal and economic independence of partners is retained, production associations are established under the management of a so-called gesztor firm, which organizes industrial production within the framework of an association on a cost accounting planning and contractual basis. The farms that participate in industrial production systems conclude a detailed contract regulating their relations with the gesztor and each other. A control commission observing the fulfillment of the contract is established.

In the German Democratic Republic the system of cost accounting contractual relations in the agroindustrial sphere was developed and legally formulated in the early 1970's. At the same time, as noted in the economic and legal literature, an assumption was made that, when a contract appears as an active planning lever, the plans of enterprises should not detail their activity. In particular, this applies to material and technical supply and to the sale of products. Specific obligations are fixed only by economic contracts.

The system of economic contracts in the agroindustrial sphere of the German Democratic Republic clearly establishes the quantity and quality of delivered products, dates of deliveries and prices and envisages strict sanctions for the nonobservance of contracts. In particular, the system of sanctions includes one-time fines for the nonobservance of the contract: price sanctions, a full reimbursement of losses to an agricultural enterprise occurring through the fault of a procurement and processing enterprise; sanctions against an agricultural enterprise for the nonobservance of the indicators of the volume and quality of products and the dates of their deliveries, including refusal to accept them, specified by the economic contract.

The contractual system of formation and realization of centralized economic planning decisions actively affects an increase in the return on investments in the agroindustrial complex by means of material incentives and responsibility in two basic directions: a production and technological balance and a more rational and efficient utilization of resources and products and prevention of their losses caused by interdepartmental disconnection and economic isolation. Advanced shifts in production, increase in land productivity, savings of expenditures, improvement in the quality of products, prevention of their losses and so forth are the results of an overall utilization of all the factors in economic development. An intensification of the economic role of contractual relations in the system of planned management in many respects contributes to the attainment of this overall nature and thereby determines the general degree of effect of the economic mechanism on the development and efficiency of production. Contractual relations are noted for the simplicity of practical use and, at the same time, a high efficiency, especially in the part of attainment of a mutual coordination of activity and elimination of the interdepartmental lack of coordination, which is now the main reason for production disproportions and for the organizational and technological disorder in production.

Experience shows that the cost accounting contract performs economic functions of a direct effect on an increase in the end results of development of the agroindustrial complex only if it appears as a relatively independent lever in the realization of economic planning decisions and does not formally duplicate the planned assignment. In order to lend the contract the economic functions inherent in it, it is necessary, first of all, to change the very procedure of presentation of

planned assignments for the sale of products. These assignments should be presented to departments and then to rayon associations and procurement and other organizations and realized on the basis of contracts. At the same time, the system of incentives and sanctions should be made dependent on the fulfillment of contracts. At the level of enterprises and production associations it is necessary to more widely use effective economic contractual relations, which will become an efficient means of realization of state plans.

Direct responsibility for the fulfillment of contractual (in practice, planned) obligations and a full reimbursement of losses from the cost accounting profit of farms, procurement officials, suppliers and so forth are important conditions for an efficient utilization of contractual relations. The realization of these conditions will place the work of all the units of the agroindustrial complex on the basis of self-support. The nature of activity of intermediaries, primarily the procurement system and organizations and enterprises of material and technical supply, will change accordingly.

The switchover to contractual relations, for example, direct relations in the Hungarian People's Republic, eliminated the need to retain departments, such as the Ministry of Procurement and Soyuzsel'khoztekhnika. Farms and associations of sphere II of the agroindustrial complex sell on the basis of contracts products to the appropriate enterprises and organizations of sphere III, which store and sell them at domestic and foreign markets. Material and technical supply and the servicing of agricultural enterprises and their associations are based on direct contractual relations with the appropriate subdivisions and their organizations (wholesale trade bases, repair enterprises and so forth of sphere I of the agroindustrial complex).

State purchase organizations were abolished in the German Democratic Republic at the end of the 1960's. The purchase of agricultural products was replaced by new organizational forms based on an economic contract envisaging the equality of partners. Economic contracts for grain, meat and milk began to be concluded among agricultural production cooperatives, state farms and processing enterprises of neighboring combines. Direct contracts for the delivery of vegetables, fruits and table potatoes are concluded with trade enterprises. The system of stable contracts became the prerequisite for the development of effective forms of agroindustrial integration, in particular, the establishment of cooperative unions. A total of 60 percent of the agricultural commodity output of the German Democratic Republic is now produced and processed without losses within the framework of cooperative unions. Losses connected with the nonfulfillment of contracts are fully covered by the guilty party.

A similar principle was introduced in the People's Republic of Bulgaria in 1979. In accordance with the decisions of the March (1979) Plenum of the Central Committee of the Bulgarian Communist Party the role of cost accounting in agroindustrial production complexes increases sharply. In the last few years the underestimate of cost accounting has had a negative effect on the rates and end results of development of agriculture and the entire national economic agroindustrial complex. Agroindustrial enterprises and purchase organizations become partners with equal rights working on the basis of self-support. The number of planned indicators and specific assignments presented to agroindustrial complexes is reduced sharply. On

the basis of a limited range of assignments agroindustrial complexes conclude economic contracts with appropriate purchase and other organizations. Of great importance is the fact that the agroindustrial complex has the right to freely negotiate the sale of products not included in the planned products list. The fulfillment of terms of the contract for the volume, assortment and quality of products and the derived profit becomes the criterion of evaluation of economic activity and, accordingly, of incentives for the results of this activity. At the same time, these are also incentives for planned indicators, because in accordance with the principles of the new economic mechanism the final indicators of the planned assignment of the agroindustrial complex proceed from the contract and are approved only after its conclusion.

Contractual relations make the services of intermediaries superfluous. However, if the latter exist, they should carry out their activity on the basis of cost accounting and self-support as envisaged, for example, with respect to procurement organizations. Operating on the basis of cost accounting, such organizations would be interested, first of all, in the purchases of the cheapest and highest-quality products and, second, in the purchases of the volume that can be preserved and delivered to the trade network and the consumer. This also meets the interests of the farms themselves, which could sell the entire output in excess of the contractual volume, now used mainly to replace losses, on the basis of direct relations on the kolkhoz market, that is, assign for an increase in the end product of the food complex and satisfaction of the population's needs. When the formality of contracts is retained, these mutual interests, as well as mutual responsibility, including for losses of products, in practice, are absent. The damage for losses incurred by farms when their products are not accepted is compensated at the expense of society, not at the expense of the cost accounting income of procurement officials. The relations between farms and the system of material and technical supply should be built similarly.

Economically substantiated and balanced prices are important prerequisites for the efficiency and effectiveness of contractual relations. For example, purchase prices of some products now create conditions for the derivation of 100 to 150 percent of profitability and more and of others, hardly make it possible to compensate for expenditures. For example, the fattening of livestock for meat on kolkhozes and sovkhozes gives minimal accumulations and meat and dairy industry enterprises obtain profit ensuring them profitability at the level of 30 percent and more. Inequality also exists in the relations of farms with the service sphere, in particular, the State Committee for Agricultural Equipment. The cost accounting contract presupposes an equality of these conditions, because it makes no sense for a highly profitable partner to negotiate, cooperate and join efforts for the attainment of a common goal with an unprofitable partner. Of great importance is the utilization of contractual accounting prices, especially for the regulation of interrelationships in the course of interfarm cooperation. The material interest of cooperating partners working on a contractual basis depends on how correctly contractual prices are fixed.

Contractual accounting prices have become most widespread in the agroindustrial complex of the German Democratic Republic. A common level of profitability for all partners or, in any case, elimination of the possibility for an unsubstantiated increase or decrease in profitability is the basic principle of the fixing of the

contractual price in the entire cooperative chain of production. Contractual prices are formed with due regard for the need to recover production expenditures, as well as to create accumulations equal for contracting p ties. After contractual prices are fixed, they are differentiated depending on the category of quality.

However, the use of accounting prices as an additional tool of regulation of contractual interrelationships does not remove the basic problems from the agenda, that is, regulation of real prices so that in accordance with the decisions of the July (1978) Plenum of the CPSU Central Committee price formation may be turned into an effective lever of development and improvement of the agroindustrial sphere of production.

Therefore, the economic contract can become an economic tool of active planned effect on the activity of all the units of the food complex (including private subsidiary farms) only on condition of an overall reorganization of the economic mechanism of management of the agroindustrial complex; in other words, its rise to a qualitatively new level. The active utilization of economic levers, primarily prices, stressed in the USSR Constitution, which would create equal conditions for management and the use of sanctions and incentives from the cost accounting profit of partners to the agreements, is of special importance.

At present the fulfillment of contractual obligations does not play a noticeable role in the evaluation of the end results of labor in the system of the agroindustrial complex. Regardless of how contracts or claims are fulfilled, what end results are obtained, what the quality of output, volumes of losses and so forth are, work is evaluated according to the plan fulfillment. The evaluation and stimulation of labor with due regard for the fulfillment of contractual obligations compel farms and enterprises to include in the plan only the volumes that under given conditions can be sold to the consumer on time. In the role of an effective planning lever the economic contract can economically prevent great losses of agricultural products and of monetary and material resources.

The entire system of material incentives for workers of the agroindustrial complex according to work and competition results is now based on quantitative indicators of the plan and its overfulfillment regardless of the generalizing end results of economic activity--efficiency, quality and preservation of products. The contractual system of relations used as an active economic tool of planned management makes it possible to combine the volume and quality indicators of management and to coordinate incentives with the end result of activity of every unit of the complex and the system as a whole. At the same time, the connection of the size of material incentives with the magnitude of the effect determined on the basis of end results, that is, according to the actual sale envisaged by contracts, the quality of products and the amount of derived profit, is the necessary condition. This principle should be observed in the relations of farms with procurement officials, suppliers, producers and designers of equipment and so forth and applied under conditions of intracost accounting.

The intensification of the economic role of contracts in the agroindustrial production complex is connected not only with the changes noted in planning and economic incentives, but also in the system of management of the complex. The efficiency of contractual relations and of the entire economic mechanism rises under

conditions of overall management of the agroindustrial complex by a single body ensuring the planned coordination of activity of all structural units and when centralized planning is combined with the contractual form of formation and realization of planned assignments.

FOOTNOTES

1. Therefore, the remark that in an actually developed and efficiently set up economic mechanism of the agroindustrial complex an effective system of contracts objectively becomes the "main tool of regulation of production and economic relations" (PRAVDA, 4 March 1980) is correct. Of course, contractual obligations are based on the plan. In turn, however, the contract appears as a joint planning solution forming the production program of the economic bodies concluding it (see KOMMUNIST, No 16, 1980, p 51). Therefore, the decree of the CPSU Central Committee and the USSR Council of Ministers dated 12 July 1979 "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" points to the need to use the economic contract as a tool of active formation of production programs. In particular, it is envisaged that the list (assortment) of produced products is determined by enterprises (associations) "on consumers' orders in accordance with the concluded contracts."

2. During 1965-1974 alone only the USSR Ministry of Agriculture issued an average of 600 normative acts annually, many of which pertain to the rules and terms of conclusion and execution of economic contracts, mutual agreements, claims and so forth.

3. Economists of socialist countries, especially the German Democratic Republic, the Hungarian People's Republic and the People's Republic of Bulgaria, point to this inadmissibility. See, for example, F. I. Grave, "Sotsialisticheskiy Grazhdansko-Pravovoy Dogovor" /The Socialist Civil Law Contract/, Izdatel'stvo Yuridicheskaya Literatura, 1972; Kh. Nikolov and T. Petkov, "Planirovaniye i Khozyaystvennyye Dogovory" /Planning and Economic Contracts/, Izdatel'stvo Ekonomika, 1978.

4. V. Laptev, corresponding member of the USSR Academy of Sciences, stresses that the "tasks of increasing production efficiency demand that an inseparable unity of the plan and the contract at all the levels of legislative regulation be ensured" (KOMMUNIST, No 16, 1980, p 53).

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