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USSR Report

AGRICULTURE

(FOUO 2/82)



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REGIONAL DEVELOPMENT

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EFFECTIVENESS OF INDUSTRIAL SEED PRODUCTION IN SIBERIA NOTED

Moscow SELEKTSIYA I SEMENOVODSTVO in Russian No 11, Nov 81 pp 30-31

Article by V. S. Verevkin, head of the division of seed production of the Siberian Scientific Research Institute of Agriculture, and G. I. Novosel'tsev, candidate of economic sciences, senior scientific worker at the institute's division of economics: "Experience in the Specialization and Concentration of Seed Production"¹⁷

Text Basic Directions in the Economic and Social Development of the USSR for 1981-1985 and for the Period Until 1990 note the need for an improvement in the system of production of seeds of agricultural crops, acceleration of its transfer to an industrial basis, the most rapid introduction of highly productive, new varieties and hybrids and improvement in the quality of seeds.

In accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures for the Further Improvement in the Selection and Production of Seeds of Grain and Oil Crops and Grasses" (1976) a system of industrial seed production was developed in Omskaya Oblast. It envisages the production of seeds of the highest reproductions of grain and oil crops and grasses on the experimental production farms of the Siberian Scientific Research Institute of Agriculture (Omskoye, Novoural'skoye, Boyevoye and imeni Frunze), on the educational farm No 2 of the Omsk Agricultural Institute imeni Kirov and at the Siberian Oil Crop Station, which should annually produce more than 14,000 tons of elite and first reproduction seeds of grain crops, 50 tons of perennial and annual grasses and 110 tons of oil crops for strain changing and renovation.

A production association for varietal seed raising--Oblsortsemprom--including 16 specialized seed producing farms located in rayons with conditions most favorable for seed production (steppe and forest steppe) was established under the oblast production administration of agriculture. They reproduce elite seeds of grain crops to the second reproduction and fully provide 68 kolkhozes and sovkhozes in six rayons of taiga and subtaiga zones with them. The specialized seed producing farms of Oblsortsemprom were also entrusted with the production of seeds of crops occupying small sown areas (millet, buckwheat, peas, vetch, oil crops and grasses) and with the procurement of a significant proportion of seeds of grain crops (80,000 tons) and perennial grasses for state resources and the oblast insurance stock.

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A total of 18 intrarayon specialized seed producing farms were established in rayons of the northern forest steppe zone. On the basis of interfarm cooperation they should meet the need of all the other farms in their rayon (65) for seeds of grain crops. On large sovkhoses and kolkhozes of steppe and forest steppe zones (161 farms) seed production for local needs is concentrated in seed producing departments and brigades (intrafarm specialization), which now form the basis for the oblast's seed production.

The introduction of industrial seed production has ensured an improvement in the quality of seeds. Most of the oblast's farms have high-quality seed stocks of the best regionalized varieties. Last year the oblast's sovkhoses and kolkhozes sowed 95 percent of certified seeds of grain crops, including 67.3 percent of first- and second-category seeds, whereas in 1970 these indicators were 85.2 and 57.9 percent respectively. During the 10th Five-Year Plan sown areas were basically varietal, 94 percent of the areas being occupied by regionalized varieties.

Strain changing--replacement of old unproductive strains with highly productive ones--should be the main task of seed production at the present stage.

The variety ratio in production improved considerably and more productive, new varieties appeared: of spring wheat--Omskaya 9, Tselinnaya 20, Sibakovskaya 3, Almaz and others; of barley--Tselinnyy 5; of oats--Risto and Omskiy kormovoy 1; of millet--Omskoye 5; of peas--Omskiy 7; of vetch--Omichka and others. On the average, in 1977-1980 on the Novoural'skiy Experimental Model Farm from an area of 9,920 hectares the Omskaya 9 spring wheat produced a grain harvest of 34.5 quintals per hectare and in 1980 from 3,400 hectares, 42.5 quintals per hectare.

The areas sown with new varieties expand annually. For example, whereas in 1975 they comprised 2.4 percent of all the areas sown with grain crops, in 1980 they made up 39 percent.

Along with an improvement in the seed production system in the oblast much attention is paid to the strengthening of the sector's material and technical base, improvement in the crop structure and introduction of a scientifically substantiated agrocomplex contributing to the production of high-quality seeds. For example, the construction of 355,000 square meters of asphalted grounds, 330 grain cleaning flow lines and 32 seed complexes is envisaged for 1981-1985. In accordance with the technological systems developed in the Siberian Scientific Research Institute of Agriculture clean fallow should comprise 18 to 20 percent and areas sown with grain crops, 55 to 60 percent in the structure of arable land of seed producing farms during the 11th Five-Year Plan.

To raise the farming standard, specialized seed producing farms began to introduce the soil protective system of soil cultivation and the fertilizer system in crop rotations.

In accordance with the recommendations of the Siberian Scientific Research Institute of Agriculture plans are made to apply 57 kg of nutrient elements, including 34 kg of phosphorus fertilizers, 15 kg of nitrogen fertilizers and 8 kg of potassium fertilizers, per hectare of arable land during the 11th Five-Year Plan.

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The transfer of seed production to an industrial basis, its further concentration and intensification of specialization will create optimal conditions for a rise in labor productivity, decrease in production costs and growth of production profitability.

Calculations show that the level of profitability of the production of varietal seeds of grain crops on the experimental production farm of the Siberian Scientific Research Institute of Agriculture will comprise 127 percent and on specialized seed producing sovkhozes, 110 to 124 percent. At the same time, when seeds are grown on specialized seed producing sovkhozes, the production costs of grain on kolkhozes and sovkhozes decrease, the net income per hectare of sown area increases and the profitability of grain farming rises.

The results of the general economic evaluation of seed production on specialized seed producing farms of Oblsortsemprom for kolkhozes and sovkhozes indicate that the specialization and concentration of seed production are effective for seed raising, as well as consuming, farms. The total annual economic effect from seed production on an industrial basis is 2,501,900 rubles, or 33.2 rubles per hectare of sown area.

A rapid introduction of highly productive, new varieties of grain crops and the transfer of seed production to an industrial basis will enable sovkhozes and kolkhozes in Omskaya Oblast to increase the grain harvest by 3 to 5 quintals per hectare and to additionally obtain 60 to 65 million rubles of profit from grain production every year.

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AGRO-ECONOMICS AND ORGANIZATION

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EFFECTIVE CAPITAL INVESTMENT IN DAGESTAN FRUIT PROCESSING

Moscow PLANIROVANIYA I UCHET V SEL'SKOKHOZYAYSTVENNYKH PREDPRIYATIYAKH in Russian No 11, Nov 81 pp 26-32

[Article by G-G. A. Salikhov, chief of financial division of Dagplodoprom: "High Effectiveness of Capital Investments"]

[Text] The Dagestan specialized association for producing, storing, processing and selling fruits and grapes (Dagplodoprom) combines 36 sovkhoses, most of which have been organized since the March (1965) Plenum of the CPSU Central Committee on the basis of economically weak kolkhozes. During 1971-1980 more than 220 million rubles in funds from the state budget were used for the development of kolkhoz production. During that time the value of fixed production capital of the farms increased 2.5-fold as compared to 1970.

Under the Tenth Five-Year Plan the provision of capital for the sovkhoses increased by 26.4 percent as compared to the level of the Ninth Five-Year Plan. An analysis of the assimilation of capital investments on the sovkhoses of Dagplodoprom, where perennial plantings comprise 61 percent of the fixed production capital for agricultural purposes, shows that the capital-labor ratio and the provision of capital for the farms increased under the Tenth Five-Year Plan as compared to the Ninth Five-Year Plan by 16 and 22 percent, respectively, and the output-capital ratio decreased by 50 percent during this same period.

But we do not think that one can draw a conclusion about a reduction in the effectiveness of the utilization of capital investments and fixed production capital just on the basis of these figures since the rapid increase in their volumes could not but affect the level of the output-capital ratio in agricultural production. A certain amount of time is required in order to obtain a greater return from invested funds, and it is very important to take all necessary measures for reducing the time periods for recouping the funds. According to our calculations, the time period for the assimilation of capital investments on farms with orchards and vineyards is from 6 to 15 years.

Research has also demonstrated that, although Dagestan has been engaged in orchard growing since time immemorial, it did not begin to plant intensive orchards on large areas using valuable low-growing strains from domestic and foreign selection until little more than 10 years ago. The republic has every opportunity to extensively develop intensive industrial gardening in zones with mountain valleys and

plains. Still, the orchard growers are searching for optimal variants of the selection of crops which provide for obtaining the largest volume of products with the least expenditures and for high effectiveness of capital investments.

Dagplodoprom is taking measures for reconstructing less productive orchards on the sovkhozes and intends to replace them completely with intensive orchards in the future. In 1980 the sovkhozes of the association planted 815 hectares of orchards using new planting technology and distributing 400 to 1,000 trees on one hectare. In planting the new orchards preference is given to crops whose fruit has pits rather than cores, and the most valuable strains are being used.

The sovkhozes of the association have a large selection of planting material for fulfilling their earmarked plans. Thus in 1980 the farms received 1,323,000 fruit tree seedlings (with a plan for 1.3 million) and, moreover, produced 9.6 million grape seedlings. In 1980 the sovkhozes received more than 2 million rubles in profit from the sale of fruit and grape seedlings. In the next few years the nursery sovkhozes of Dagplodoprom will be able to supply planting material of valuable strains of fruits and grapes not only for kolkhozes and sovkhozes of Dagestan, but also for farms of other krays, oblasts and autonomous republics of the Northern Caucasus.

In recent years large changes have taken place in grape production in Dagestan where until recently mainly manual labor was used. We have assimilated new technology for the cultivation of grapes and the kolkhozes and sovkhozes are planting plants that form the bush on a high stem with broad interrows, which will make it possible in the future to fully mechanize all labor-intensive processes and, because of this, to sharply reduce the production costs of products and to increase productivity.

The areas planted in intensive vineyards are expanding from year to year. In 1980 alone the sovkhozes of Dagplodoprom used progressive methods to plant 911 hectares of vineyards.

On multibranch farms which have achieved sufficiently high effectiveness of capital investments in orchard and grape growing, the indicators of the provision of capital for production and the capital-labor ratio are still low in other branches, especially animal husbandry. For example, on an average for 1976-1979 the sovkhozes of Dagplodoprom produced 375 rubles' worth of products per 1,000 rubles' worth of fixed production capital for agricultural purposes, and for a whole group of sovkhozes this indicator was even lower--only 112-217 rubles.

The low level of provision of capital and the capital-labor ratio is explained by the inadequate amounts of capital investments in these branches. Thus 80 percent of the overall volume of capital investments allotted to Dagplodoprom were used for the development of orchard and grape growing and for technical rearmament of their material base, and only 15-20 percent were used for the construction of buildings and other structures for production and non-production purposes.

The main impediment to increasing capital investments in the construction of buildings and structures, and also in the reconstruction of animal husbandry facilities and production structures for other services, is the failure on the part of the

main contracting organizations to fulfill their plans for construction and assembly work. Each year they upset plans for the startup of fixed capital. Thus in 1981 all seven contracting organizations that serve the association failed to fulfill their plans for contracting work and, as a result of this, the volume of incomplete construction as of 1 January 1981 amounted to more than 4 million rubles.

Despite the great need for the construction of new facilities for production and non-production purposes, while the sovkhoses have temporary facilities and incomplete construction on their books they do not have the right to include new facilities in their plans for capital work, even though the facilities that are under construction are not being introduced on time because of factors that are beyond the control of the farms.

Specialized construction organizations pay little attention to construction in rural areas and, for this reason, they delay the fulfillment of long-range plans for the socio-economic development of the farms.

Further increased effectiveness of fixed production capital through reducing the time periods for its assimilation after startup, improving its structure, and increasing the productivity of each branch in all ways.

In practice the sovkhoses are also experiencing certain difficulties in providing for the volumes of capital investments from the appropriate sources of financing. This pertains primarily to perennial plantings, for which there are large differences between the volumes of investments indicated in the production and financial plans of the sovkhoses and the plans for capital investments (form No. 3) that are submitted to the institutions of the Gosbank and sovkhoses. Each year the farms are forced to petition higher organizations for the allotment of additional volumes of capital investments in excess of the plan at the end of the year.

Under the Tenth Five-Year Plan the sovkhoses of Dagplodoprom assimilated an additional 2,400,000 rubles' worth of capital investments without changing the plan for capital investments, and 93 percent of this amount went for perennial plantings. The sources initially allotted according to the plan for financing capital investments (form No. 5), as a rule, are inadequate for providing for the volumes of work that is done for tending the newly planted areas, and by approximately October the sovkhoses have expended all the funds from the account for financing capital investments for the yearly volume of work. As a result, the sovkhoses generally have no funds left for financing work for planting new orchards and vineyards.

Since they have no funds in their accounts for financing capital investments, the sovkhoses are unable to promptly pay for the seedlings they receive or for the work of plowing the plantations which is done by tractors of Raysel'khoztekhnika. At the same time the farms that supply the seedlings and associations of Goskomselkhoztekhnika require only preliminary, and not subsequent payment for the commodity-material values and services they render.

As a result, in order to fulfill the plans for planting orchards and vineyards, the sovkhoses are forced to temporarily utilize their own circulating capital for these purposes, in the hope that it will be remobilized at the end of the year as a result of additional funds being allotted by the higher organization. Moreover, the

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additional funds that are allotted usually go into the account of the farms in the last days of December, and the managers and workers of the bookkeeping and planning-economic services cannot be sure that the immobilized internal circulating capital will be remobilized in the same calendar year.

In order to rectify this situation, in our opinion, it is necessary for the RSFSR Plodoprom to promptly back up all volumes of capital work with the appropriate sources of financing.

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AGRO-ECONOMICS AND ORGANIZATION

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UTILIZING PRODUCTIVE FIXED CAPITAL IN LENINGRAD AREA

Moscow PLANIROVANIYE I UCHET V SEL'SKOKHOZYAYSTVENNYKH PREDPRIYATIYAKH in Russian No 11, Nov 81 pp 28-32

[Article by Y. M. Larina, head economist for financing and organization of book-keeping of the Pobeda Specialized Production Association in Leningrad Oblast, and M. Ye. Zhil'tsova, economist: "Control Over the Utilization of Fixed Production Capital"]

[Text] The Pobeda Specialized Production Association was organized in 1975. It includes 4 sovkhoses, of which 3 specialize in vegetable and dairy products and 1 in dairy products and potatoes, with the development of hog raising. They have all retained their legal independence and carry out their activity on the basis of the Provisions for the Socialist State Enterprise.

The overall area of land included in the association of sovkhoses amounts to 14,260 hectares, including 11,761 hectares of agricultural land, of which 8,105 hectares is plowed. The structure of the association's fixed capital is shown in the table.

From the figures in the table one can see that under the Tenth Five-Year Plan as compared to 1975 the amount of fixed production capital for agricultural purposes had increased by 16.2 percent and amounted to 64.5 percent. During this same period the capital availability increased by 14.8 percent. For every 100 hectares of agricultural land and 100 hectares of plowed land there are 302,500 and 441,400 rubles' worth of fixed production capital for agricultural purposes, respectively. The capital-labor ratio increased by 17.4 percent, and the energy availability per one average annual worker increased by 6.3 percent and is equal to 26.5 horsepower.

Under the conditions of comprehensive and consistent intensification of agricultural production and the growing capital investments, effective economic control must play an important role in increasing the effectiveness of the utilization of fixed production capital. In the association the latter is exercised by the associations' council, the administrative services and public organizations.

The association council organizes its work according to a plan that is drawn up for the quarter. It envisions concrete measures for control and inspection issues, the time periods for conducting them and the individuals responsible for them. The council holds meetings no less than once a quarter. The decisions it makes are

Table. Structure of Fixed Production Capital of Pobeda Specialized Production Association (thousands of rubles)

Groups and kinds of fixed capital	1975		1976-1980		
	Value of fixed capi- tal at end of year	% of overall capital	Value of fixed capi- tal at end of year	in % of overall value of fixed capital	1976-1980 in % of 1975
Fixed production capital for agri- cultural purposes --total	30,244	66.3	35,157	64.5	116.2
Including:					
buildings	10,315	22.6	12,102	22.2	117.3
structures	10,924	23.9	11,415	21.0	104.5
Of these:					
irrigation and flooding machines, equipment	7,257	15.9	7,383	13.6	101.7
driving apparatus	3,385	7.4	3,988	7.3	117.8
means of trans- portation	725	1.6	816	1.5	112.6
productive live- stock	3,639	7.9	5,424	10.0	149.0
capital expendi- tures on land im- provement	1,056	2.3	1,243	2.3	117.7
others	200	0.6	169	0.2	84.5
Fixed production capi- tal for nonagricul- tural purposes	2,399	5.2	2,872	5.3	119.7
Fixed nonproduction capital	12,998	28.5	16,398	30.2	126.1
Total fixed capital	45,641	100	54,427	100	119.2

implemented through orders from the general director--the chairman of the association council. Control over their execution is the responsibility of the staff legal advisor, who reports each week on the implementation of the earmarked measures at operations meetings in the presence of the general director.

The association council devotes a great deal of attention to control over the utilization of fixed production capital on the sovkhoses of the association. Thus a number of measures have been taken for efficient utilization of the land, production facilities, agricultural equipment, productive livestock and so forth.

In the structure of the fixed production capital for agricultural purposes, land reclamation funds comprise 32.5 percent in the association, and fixed capital for crop growing--50.9 percent. Products obtained from reclaimed land comprise 68.9 percent of the overall volume of the gross production of crop growing products. Therefore special attention it devoted to efficient utilization of reclaimed land.

Specifically, the association council has developed a long-range plan for land reclamation construction during 1976-1980, a plan for centralized care for the land reclamation network, and also a comprehensive set of land reclamation measures, including preparing a long-range plan for irrigation and drainage of land, conducting technical crop work, assimilating poorly utilized small sections of land (along roads, riverbeds, canals and farms), liming fields, planting meadows, restoring the fertility of the land and other measures for efficient utilization of the land. They have also assumed control over the time periods for construction, the volumes and quality of work performed by contractors in keeping with the calendar plan for construction, the availability and utilization of land reclamation equipment, its storage and its removal from the books.

As a result of the aforementioned measures the gross production of products from reclaimed land increased by 19.7 percent under the Tenth Five-Year Plan as compared to 1975 and the output-capital ratio increased by 18.8 percent during this period. For each thousand rubles of average annual value of land reclamation funds we obtained 790 rubles' worth of gross output, or 125 rubles more than in 1975.

As a result of plowing roadside strips and previously unutilized sections of land along canals, riverbeds and the edges of fields, under the Tenth Five-Year Plan the sovkhoses of the association put about 400 hectares of land into circulation and procured 33,000 tons of peat.

The value of productive livestock in the association increased by 49 percent during the past five-year plan as compared to 1975, and constitutes 15.4 percent of the fixed production capital for agricultural purposes. The culling of cows increases from year to year. While in 1975 it amounted to 18.8 percent, in 1980 this figure was 26.9 percent with the plan calling for 25 percent.

The association council exercises strict control over the reproduction of the productive herd, increasing the milk yield of first heifers and recently calving cows, the maintenance and feeding of animals of the productive herd, a monthly analysis of the condition of the reproductive herd and the maintenance of the livestock on the sovkhoses, and also the fulfillment of measures earmarked for improving the work for reproducing the basic herd.

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The director and the head specialist regularly report at council meetings on the question of the reproduction of the productive herd on the sovkhoses. All this contributes to successful implementation of measures for improving the reproduction of the herd and increasing the output of calves and the milk yield per cow on forage.

In 1980, for example, the output of calves per 100 cows in the association amounted to 83 head, while the plan was for 81 head. At the head sovkhos, Pobeda, and the Petrodvortsovyy, with plans for 84 and 82, respectively, they each actually obtained 86 head. The output of calves in the association as a whole has increased by 16.2 percent as compared to 1975. The milk yield per cow on forage amounted to 3,661 kilograms of milk or 8.9 percent above the 1975 level. During the Tenth Five-Year Plan the gross milk production increased by 53.8 percent as compared to 1975.

In order to increase the efficiency of the utilization of the machine and tractor fleet, the association council has developed measures for implementing the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Measures for Further Increasing the Efficiency of Utilization of Agricultural Equipment, Improving its Maintenance, Providing the Kolkhozes and Sovkhoses with Machine Operating Personnel, and Ensuring That They Remain in Agriculture," and is exercising control over their implementation. At its meetings the council considers questions of improving the utilization of the machine-tractor and automotive fleet, improving their structure and also stepping up control over the work of the interfarm complex and the combined detachment for procuring feeds, the distribution of technical equipment for spring planting, the organization of the shipment of organic fertilizers to the fields, and so forth.

Additionally, the association council follows the course planning and construction work, and current and capital repair. At the same time it checks on the way orders and decisions for ensuring the efficiency of the utilization of fixed production capital are carried out.

The bookkeeping, economic and other services are very important for exercising control over the utilization of fixed production capital.

The organization of the accounting for fixed capital and economic analysis of its utilization are directed toward revealing reserves for increasing the effectiveness of the utilization of fixed production capital.

The sovkhoses of the association have introduced a progressive method of accounting for fixed capital using card files. Comprehensive mechanization of accounting has been introduced in three of them, which makes it possible to obtain exhaustive information on the availability of fixed capital in the care of each materially responsible individual, in the structural subdivisions and in the various groups of fixed capital according to the established classification, and also concerning amortization deductions and its distribution among the structural subdivisions and facilities whose expenditures are accounted for.

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Official instructions have been developed for all bookkeeping workers, including a complete list of accounting and control functions for each. For example, the responsibilities of the head bookkeeper of the head sovkhos include organizing accounting and accounting for fixed capital, accounting for wear and tear and amortization of fixed capital, and accounting for the charter fund. Additionally, within the time period established by the plan for document circulation, he receives from materially responsible individuals documents for the receipt and transfer of fixed capital (form No. 52), documents for writing off machines, equipment and means of transportation (form No. 56), and documents for writing off buildings and structures (form No. 55). He also checks to make sure that the receipt and writing off of fixed capital are correct. In addition to this, the deputy head bookkeeper must promptly, completely and precisely reflect the technical descriptions of fixed capital on the inventory cards, check on the correctness of the deductions and distribution of amortization each month, make sure that the accounts with the suppliers of fixed capital are up to date and correct, inform administrative services about the existence of unused machines, equipment and also fixed capital that is unsuitable for further operation, prepare the necessary bookkeeping information for conducting an economic analysis of the utilization of fixed capital, and, in conjunction with specialists of other services, take an inventory of it.

The bookkeeper in charge of auxiliary production is responsible for accounting for the operation of the machine and tractor fleet. His duties include keeping cumulative information about the operational indicators of the motor vehicles (shipped cargo [tons], ton-kilometers, the number of motor vehicle-days of operation, the expenditure of fuel and so forth) for the various individual vehicles and makes of vehicles as well as drivers, the respective work on conventional standard hectares, and the expenditure of fuel for the various makes of tractors and tractor operators;

the determination of the production cost of a ton-kilometer and a conventional standard hectare;

the drawing up of statistical accounts of the work of cargo transportation and the production costs of automotive shipments (form No. 2-tr) and the work of tractors and grain harvesting combines (form No. 1 and 2-mekh);

control over the correctness of journals for checking out motor vehicles and returning them to the garage, registration of travel sheets for the automotive fleet and tractors for transportation work;

the preparation of bookkeeping figures concerning the operation of the machine and tractor fleet that are necessary for conducting economic analysis.

The association's economic service is partially centralized. The association's head economist is also the head economist of the head sovkhos, and the economists are responsible for the same parts of the work for the association as they are for the head sovkhos. The supervisory function of the workers in the economic service are also determined by official instructions.

Control over the utilization of fixed production capital (except for productive livestock) is the responsibility of the economist for cost accounting and analysis.

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Additionally, he analyzes and supervises the utilization of the fixed production capital of each sovkhos and their structural subdivisions;

he promptly submits the results of analysis to the corresponding services (agronomical, zootechnical, engineering, construction and so forth);

he substantiates the economic effectiveness of capital investments and the sequence for their realization;

he develops measures for improving the utilization of fixed capital;

he conducts economic training for workers of the association's sovkhoses.

The duties of the senior economist for animal husbandry and the economist for crop growing include control over efficient utilization of productive livestock and the land, respectively.

Each month the association also does an analysis of the reproduction of the productive herd and the production of milk, the operation of the machine and tractor fleet, the motor vehicle fleet, the repair shop and the construction shop. For example, the main economic indicators of the production of milk reflect the average number of head of cows, the gross milk yield per cow on forage, their offspring, the production of calves per 100 cows and noncalving young cows, the production cost of one quintal of milk in terms of the various elements of expenditures, and labor expenditures per one quintal of milk.

The main indicators of the operation of the machine and tractor fleet give detailed information about its utilization both in the association as a whole and on the sovkhoses that comprise it.

Each year after drawing up the annual report, the workers of the economic service make an in-depth analysis of the structure of fixed production capital as a whole and per one hectare of agricultural land and plowed land, the production of the gross output from crop growing and animal husbandry in terms of all of the kinds, the capital availability, the capital-output ratio, the level of development of agricultural production, the output-capital ratio, the capital-intensiveness, financial results and the profitability of agricultural production.

All specialists are informed of the results of the economic analysis and they are considered by the association council and in economic conferences. The latter are conducted monthly both in the association and on the sovkhoses. The results of the work for the quarter are summed up by balance commissions. From the results of their materials orders are issued which earmark measures for eliminating existing shortcomings as well specific people responsible for executing them. The bureau of economic analysis exercises control over the implementation of the decisions of the balance commission. A large role in this is also assigned to the head specialists in production technology--agronomists, zootechnicians, engineers and specialists of the middle level. Their control functions are determined by official instructions. Thus the head engineer-hydrotechnician is responsible for technical supervision of the construction of drainage and irrigation systems and other hydro-technical structures for all the sovkhoses of the association, and also control

over the condition and correctness of their operation, the organization of the proper storage for land reclamation and watering equipment, prompt and high-quality repair of it and its preparation for operation.

He simultaneously guides the development of measures for utilizing technical equipment efficiently, raising the level of mechanization of work for preventive maintenance and repair of land reclamation structures, and he regularly analyzes the economic effectiveness of comprehensive measures and individual agricultural land reclamation measures that are taken for radical improvement of the land.

The duties of the association's head engineer-mechanic include supervising the delivery of new equipment to the sovkhoses in keeping with orders and funds that have been allotted, the meeting of schedules and making sure that planned preventive repair of technological and mechanical equipment is carried out, and correct storage of agricultural equipment, spare parts and other material values.

Agricultural equipment comprises 10.3 percent of the association's fixed production capital for agricultural purposes. As of 1 January 1981 the value of these machines and equipment was 4,024,000 rubles. Operational expenditures for the machine and tractor fleet last year amounted to 20 percent of all the production expenditures in crop growing. They spent 650,000 rubles on current repair of technical equipment alone. Therefore the engineering service devotes special attention to making sure that agricultural machinery is always in a state of technical readiness, introducing advanced methods of its utilization into production and reducing expenditures on the operation of the machine and tractor fleet.

As a result, in 1980 the daily output per one standard tractor had increased by 30.4 percent as compared to 1975, and the expenditure of fuel per conventional standard tractor had decreased by 1.5 kilograms. The number of machines in the automotive fleet had increased by 12 percent, and the cargo shipment--by 32.1 percent. While in 1975 the association produced 8,072,000 ton-kilometers, in 1980 this figure was 10,651,000. The production cost of one ton-kilometer decreased during this time by 6 kopecks. But the coefficient of the utilization of the motor vehicle fleet is still low. In 1980 it was 62 percent.

Operational information provides a good deal of assistance in the organization of control. The association has 50 intrasovkhoz and 6 intersovkhoz radio stations, a central dispatch point and a teletype. Various kinds of information comes into the central dispatch point, including information that is used for control. All of it is initially processed and analyzed by the senior dispatcher and it is then submitted to the head specialist of the association.

The central dispatch point maintains communications with all of the sovkhoses and their production subdivisions and services, promptly transmitting the appropriate information so that it can effect the results of the economic activity. The senior dispatcher also keeps a special journal which he uses to check on the promptness of the implementation by officials of orders and instructions from the general director and the head specialists.

Public organizations also devote a good deal of attention to control over the utilization of fixed capital in the association: the bureau of economic analysis, the production-technical council and peoples' control groups and posts.

The bureau of economic analysis was created here in 1973. It is headed by the deputy general director for production. The bureau includes the head specialists of the head sovkhoz, the leaders of farms and brigade leaders for field work, and also leading workers, amounting to a total of 21 people. Its main task is to disclose internal production reserves and develop practical recommendations for increasing the production of products, reducing production costs and increasing labor productivity, the profitability of production and the efficiency of the utilization of fixed production capital.

The bureau of economic analysis conducts its work on the basis of developed provisions and a plan that is approved by the general director, in close contact with the economic and bookkeeping services and peoples' control groups and posts. The bureau meets no less than twice a quarter. For example, the work plan for 1981 envisions conducting 8 meetings, 5 of which are to be on questions of efficient utilization of fixed production capital.

Three peoples' control groups and 15 posts have been created at the head sovkhoz of the association. The peoples' control groups are assigned the areas of crop growing, animal husbandry and work with machines, respectively. The farms and the subsidiary shop each have three posts, housing and municipal services have four, and other five are at the garage, the repair and mechanics shop, the construction shop, the section for minor mechanization and the machine and tractor fleet. A total of 96 people have been elected as peoples' controllers, including 47 communists and 8 Komsomol members. The peoples' control groups and posts are elected for a period of two years.

The peoples' control groups of the head sovkhoz direct the work of the shop posts. The latter are under the jurisdiction of the rayon peoples' control committee. The activity of the groups and posts is carried out in keeping with the plans. Long-range and annual (quarter-by-quarter) plans are drawn up for the work of the head peoples' control group. They are approved at a meeting of the sovkhoz party committee.

In keeping with the plan that is developed and on the basis of the Law on Peoples' Control in the USSR in 1979-1980, the peoples' control groups have conducted a number of inspections directed toward eliminating inefficiency and revealing internal reserves for increasing the efficiency of the utilization of fixed production capital. In particular, a good deal of attention has been devoted to the implementation of measures for preparing for and conducting spring field work, providing the farms with seeds, efficiently utilizing agricultural equipment in spring planting, shipping inorganic fertilizers and procuring feeds, cultivating the soil well and conducting planting work, caring for the pastures and preparing them for use, and also efficiently utilizing drained and irrigated land, land reclamation structures and technical equipment, and providing for their maintenance.

The work plan for 1981 envisions exercising control over the expenditure of funds for the maintenance of buildings, structures and technical equipment, the fulfillment of volumes of capital construction and its quality, efficient utilization of fuel-energy and other material resources, and also organization of the forthcoming wintering of livestock.

Additionally, the peoples' control groups conduct various kinds of inspections under the mottos "production reserves in action!", "no idle time for technical equipment!" and so forth. The materials from them are discussed at a meeting of peoples' controllers where they earmark measures for eliminating shortcomings that have been revealed. The association's general director, the party committee and the workers' committee of the trade union are informed of their decisions.

In order to provide for efficient utilization of fixed capital, it has been suggested that the peoples' controllers arrange for continuous operation of the transporters that are used for loading hay for ventilation; increase the efficiency of the repair of technical equipment; hear at an expanded meeting of the party committee those managers of the construction shop, the energy service and the minor mechanization service who are not ensuring that the farms are properly prepared for the wintering of the livestock; and report to the head agronomist on poor control over the utilization of technical equipment and the organization of labor in the operations for placing root crops in clamps. Additionally, it has been suggested that the number of people working to prepare seedlings be increased in order to utilize technical equipment more efficiently during the planting of cabbage.

The peoples' control groups check on the implementation of the decisions that have been made by conducting repeat inspections. They also hear reports from individuals who are directly responsible for their implementation.

All-around control over the association's production and financial activity has contributed to increasing the efficiency of the utilization of fixed production capital. During the Tenth Five-Year Plan there was a marked increase in the volume of production of agricultural products. Labor productivity also increased, and one average annual worker employed in agricultural production produced a total of 7,387 rubles' worth of gross output, which is 12.8 percent more than in 1975.

Direct labor expenditures per one quintal of output decreased as compared to 1975 (in man-hours): milk--by 0.8, gain of live weight of large horned cattle--6, hogs--3.9, potatoes--0.3, vegetables--0.1, and so forth. During the Tenth Five-Year Plan we obtained 525 rubles' worth of gross output per 1,000 rubles' worth of fixed production capital for agricultural purposes, or 17.7 percent more than in Lenin-grad Oblast as a whole.

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AGRO-ECONOMICS AND ORGANIZATION

RECOMMENDATIONS FOR DEVELOPMENT OF PRIVATE SECTOR OUTLINED

Moscow VOPROSY EKONOMIKI in Russian No 11, Nov 81 pp 157-159

[Article by I. Vasil'yev and B. Frumkin: "Development of the Private Sector and the Sale of Its Products"]

[Text] The first all-union scientific-practical conference dedicated to discussing the role of the LPKh [lichnoye podsobnoye khozyaystvo; private sector] in socialist agriculture convened in Moscow in April 1981. It was organized by IEMSS [Institute of Economics of the World Socialist System] of the USSR Academy of Sciences, IE [Institute of Economics] of the USSR Academy of Sciences and by VASKhNIL [All-Union Academy of Agricultural Sciences imeni V.I. Lenin]. More than 300 scientific, economic and party workers from various cities, republics and oblasts throughout the country participated in the work of this conference.

In opening the conference, academician-secretary of the Department of Economics of VASKhNIL, VASKhNIL Academician A. Nikonov, emphasized the great theoretical and practical significance of an overall study of the development of the LPKh in the USSR, in all of its aspects -- economic, social, legal, economic-domestic, aesthetic-educational, ecological and so forth. The party and government are orienting the scientists and practical agricultural workers in this direction: during the past 4 years alone, special decrees aimed at increasing the production of agricultural products on the private plots were adopted on two occasions.

Two principal groups of problems were discussed during the course of the conference: the overall aspects associated with development of the private sector; problems concerned with the development of collective horticulture, gardening and other forms for participation by citizens in the private sector. In the speeches by the deputy minister of agriculture for the USSR A. Iyevlev, the secretary of the L'vovskaya Oblast Committee of the Communist Party of the Ukraine M. Vasylyv and others, emphasis was placed upon the importance of the LPKh for supplying the population with food products and attracting additional labor, land and material resources into agricultural production. Thus, in 1980, the LPKh accounted for 64 percent of the overall volume of potato production in the country, vegetables, fruit and berries -- 33-34 percent, milk, meat and eggs -- 29-32 percent. This was promoted by the implementation of the mentioned decrees. For example, in 1980 the number of swine being maintained in the LPKh increased by 19 percent compared to 1976, poultry -- by 11 percent, the production of vegetables -- by 15 percent, meat -- by 8 percent and

so forth. At the same time, full use is not being made of the potential available for implementing the measures called for in the decrees. In a number of republics, oblasts and rayons the measures required for improving the conditions for further increasing production in the LPKh have not been undertaken and the requirements of the population for young cattle and poultry stock, orchard-gardening implements, light mechanization equipment and agricultural chemicals are not being satisfied. Serious derelictions are taking place in the area of ensuring that the private sector is supplied with feed, haying and pasture lands and so forth. The provision of agrochemical, engineering, veterinary, agronomic and other types of production services for the private plots of the rural population and for the horticultural-gardening associations of city dwellers is at a low level. The level of organization for the procurement, transporting and storage of surplus products from the LPKh is still not very high. As a result, even in the rural areas only 69 percent of the families are maintaining private plots and this is lowering the ability of the rural population to supply its own food products and at the same time it is limiting the variety of products available in the kolkhoz markets in cities.

In those regions where the supplying of feed is under control and zootechnical and other types of services have been organized and extensive use is being made of credit and other measures for stimulating the development of the LPKh, as called for in the decrees, noticeable results have been achieved. Thus, from 1965 to 1980, the gross production of the LPKh in L'vovskaya Oblast increased by almost 24 percent, including by more than 30 percent in animal husbandry. The oblast's rural population is not only not purchasing meat products in the state stores, but rather it is selling them to the state and to the consumer cooperatives. Receipts from the private plot constitute 33 percent of the total income of a kolkhoz family. Considerable capital investments have been saved in connection with the construction of animal husbandry facilities on public farms; additional labor resources -- persons engaged in non-agricultural branches, pensioners and students -- have been attracted to participating in agricultural work through the private sector.

The organization of logistical supply and trade services by kolkhozes, sovkhoses and consumer cooperatives is playing a great role in the development of the LPKh. Further information was furnished on this subject by member of the Board of the USSR Ministry of Procurements S. Mysov and the chief of the Main Administration of Tsentrosoyuz [Central Union of Consumers' Societies] M. Sinyakov. It was emphasized in the speeches that growth in production and profitability for the LPKh is greatly dependent upon the development of production in the public sector (logistical supply, the furnishing of various services, the use of a production infrastructure and so forth). The organic link which exists between the private sector and the public sector is promoting the transformation of the LPKh into a component part of the socialist agroindustrial complex. Special attention was given to this matter during a discussion of the theoretical problems of the functioning of the LPKh under socialism. In the speeches delivered by Doctor of Economic Sciences G. Shmelev, Doctor of Economic Sciences M. Sonin, Doctor of Economic Sciences V. Grigorovskiy, Doctor of Historical Sciences V. Ostrovskiy, Doctor of Economic Sciences I. Suslov, Candidate of Economic Sciences L. Nikiforov, Candidate of Economic sciences E. Khyayal and others, a comprehensive analysis was furnished on the socio-economic nature and functions of the private sector during the stage of developed socialism. It was emphasized (G. Shmelev) that a more precise definition of the social essence and economic role played by the LPKh is required for preparing

a long term concept for its development, for predicting the consequences of carrying out various measures in this sphere and so forth. The socialist nature of the LPKh derives mainly from the fact that it is operated by workers who are permanently engaged in public production, using their own labor; it is closely associated, in a production-economic sense, with the public sector and it participates in the creation of the country's food fund, in reproduction of the work force in the public sector and so forth. Cooperative horticulture and gardening organically combine active relaxation by the municipal population with socially useful agricultural labor, they promote the economic use of poor land and so forth.

In the opinion of a majority of those participating in the conference, the chief function of the LPKh, for an extended period of time into the future, will continue to be that of supplying the rural population and the residents of small cities and settlements of the municipal type with agricultural products. The subsidiary farms of enterprises, which presently occupy more than 4 million hectares of land, have the same function. In the speeches by Doctor of Economic Sciences V. Venzher and Doctor of Economic Sciences A. Il'ichev, emphasis was placed upon the importance of disseminating the measures called for in the decrees on the LPKh to this type of subsidiary farm, encouraging their development in every possible way and especially in regions of new development.

In the future the marketable function of the LPKh will intensify in terms of a number of products based upon integration with the public sector. In this regard, a great amount of attention was focused on the problems concerned with the specific forms for regulating and controlling the LPKh. V. Grigorovskiy and Candidate of Economic Sciences Ye. Glukhov advocated increased planning for and control over the development of the LPKh, including the creation of special organs at the oblast and rayon levels. A. Il'ichev and L. Nikiforov emphasized the importance of economic methods for regulating production operations in the LPKh. A number of problems were addressed: the differences in the types of private plots for the rural and municipal populations, the importance of the LPKh for solving the social-demographic problems of the rural areas, the development of rural settlements and so forth (Doctor of Economic Sciences I. Buzdalov, Candidate of Geographic Sciences G. Ginzburg, Candidate of Economic Sciences K. Kopach and others).

In the opinion of a number of those participating in the conference (Doctor of Economic Sciences B. Rakitskiy and others), the organic link existing between the development of the LPKh and the development of the public sector raises the need for taking it into account when determining the effectiveness of production in the LPKh and when solving the problems of price formation for its products and the financial relationships of the LPKh with the budget.

During the conference, a considerable amount of attention was given to improving the legal documents which regulate the management of the LPKh and to the development of contractual forms for integrating the private sector with the public sector and its contacts with the various procurement systems (Doctor of Laws M. Kozyr', chief of the Legal Administration of the USSR Ministry of Agriculture A. Denisov and Candidate of Laws A. Stankulov).

For solving the socio-economic problems, determining the prospects for developing the LPKh and preparing appropriate recommendations, great importance is attached to

sociological studies. The method employed for such studies and the results obtained were discussed during the conference by Doctor of Economic Sciences Ye. Bryanskikh, Candidate of Economic Sciences T. Antonova, A. Shaposhnikov and A. Shchannikov (RSFSR) and Candidate of Economic Sciences I. Rayg (USSR). Control over the development of the LPKh requires consideration not only of the peculiarities of its various types but also of the regional conditions (availability of land and labor resources, population traditions and others). The results achieved in the use of a differentiated approach for developing the LPKh in various regions of the country were discussed by Candidate of Economic Sciences V. Nikitin, chairman of the Yaroslavskaia Oblast Council of Horticulturist Societies Yu. Kirillov, Doctor of Economic Sciences L. Shepot'ko, Candidate of Economic Sciences I. Prokopa, Candidate of Economic Sciences Kh. Markov, Candidate of Economic Sciences A. Samoylov, Candidate of Economic Sciences E. Khyayal and others.

Recommendations were developed during the conference concerning the more important production-economic and organizational-legal aspects of the functioning of private plots.

In the interest of improving the operation of the LPKh, a proposal was made calling for the organization of large-series specialized production of modern orchard-gardening implements and light mechanization equipment and also for expanding the opportunities for maintaining and utilizing horses on the farms of the population. Recognition was given to the advisability for developing a network of state nurseries and seed production enterprises, taking into account the requirements of the population, ensuring that the kolkhoz and sovkhos plans include a task aimed at improving the availability of livestock feed to the private plots and so forth. The recommendation was also made to have the plans of industrial and land reclamation enterprises include tasks for installing transport-engineering lines of communication and for furnishing other production services for the orchard and gardening associations.

In order to improve the sale of LPKh products, the recommendation was made to orient such sales mainly towards augmenting the local food funds; to intensify the role played by consumer cooperatives in organizing the procurement and marketing of highly perishable and difficult to transport products; to expand the network of the bureau of trade services, for the purpose of ensuring the sale of LPKh products at kolkhoz markets and so forth.

Within the framework for improving the organizational-legal forms for regulating the development of the LPKh, it is considered advisable to combine in a general and systematized legal document the norms and statutes governing the management of the LPKh and the sale of its products; to introduce the latest changes having to do with the management of the LPKh into the Model Regulations for a Kolkhoz and civil legislation; to create, at the local and national economic levels, special administrative structures for the management of and control over the activities of the LPKH.

In the interest of improving the organization of scientific studies and the preparation of recommendations on specific problems concerned with the development of private plots, the need is recognized for creating an all-union scientific-methodological council or section at one of the councils of VASKhNIL, with problem

groups in individual regions of the USSR. This would make it possible to coordinate studies and works concerned with LPKh matters, increase their methodological unity and also the scientific validity of the recommendations.

The realization of these proposals, in the opinion of those who participated in the conference, could promote a more complete and effective implementation of those party and governmental decisions having to do with the development of private plots within the system of socialist agriculture.

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TILLING AND CROPPING TECHNOLOGY

MORE ATTENTION TO IMPROVEMENT IN SEED PRODUCTION URGED

Moscow SELEKTSIYA I SEMENOVODSTVO in Russian No 11, Nov 81 pp 2-6

Article by G. P. Zhinov, deputy chief of the USSR All-Union Production Association for Varietal Seed Raising: "Constant Concern for the Development of Seed Production"

Text During the 10th Five-Year Plan, owing to the selfless labor of millions of Soviet people and the great contribution of scientists and agricultural specialists, the average annual gross output of grain in the country reached 205 million tons for the first time. For the purpose of most fully meeting the demand for grain and for its processing products, the 26th CPSU Congress set the task of increasing during the 11th Five-Year Plan the average annual production of grain to 238 or 243 million tons, including of pulse crops, to 12 or 13 million tons. In order to attain such a level, great efforts on the part of all the workers of the agroindustrial complex, a correct and economical utilization of the material and technical resources allocated to agriculture, introduction of advanced grain production technology and mobilization of all existing internal reserves will be needed.

According to the evaluation of scientists and agricultural specialists, the harvest and gross output of grain can be increased by 20 to 25 percent as a result of a general improvement in seed production and an annual utilization in sowing of high-quality seeds of new regionalized and promising varieties.

Fulfilling the decrees of the CPSU Central Committee and the USSR Council of Ministers "On Measures for the Further Increase in the Efficiency of Agricultural Science and the Strengthening of Its Connection With Production" and "On Measures for the Further Improvement in the Selection and Production of Seeds of Grain and Oil Crops and Grasses" (1976), extensive work on improvement in selection and seed production has been done in the country in the last few years. Selection centers have been strengthened organizationally, a network of specialized seed producing farms has been approved and their material and technical base has been strengthened in a planned way in a number of republics and oblasts.

A total of 183 new varieties of grain, pulse and hulled crops were regionalized during the 10th Five-Year Plan. They include 17 winter wheat varieties with a potential yield of more than 80 quintals per hectare (Krasnodarskaya 46, Akhtyrchanka, Zaporozhskaya Ostistaya, Odesskaya 66, Polukarlikovaya 49 and others). Production received 13 new intensive winter rye varieties with a potential yield of

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50 to 60 quintals per hectare--Chulpan, Voskhod 1, Voskhod 2, Belorusskaya 23, Bezenchukskaya 3 and others. Highly effective varieties of spring wheat and spring barley, millet varieties immune to smut and highly productive rice, oat and buckwheat varieties were developed. There are significant shifts in the selection of pulse crops. Nonshattering varieties of peas--Neosypayushchiysya 1, Tenaks and Voroshilovgradskiy Yubileynyy-- were developed.

A total of 1,195 overall centers and plants of a varying capacity for the treatment and storage of seeds were put into operation on kolkhozes, sovkhoses and educational-experimental and experimental production farms in 1977-1980.

The organization of specialized seed producing farms and the construction of overall centers and plants for the treatment and storage of seeds on them initiated a new procedure for the provision of kolkhozes and sovkhoses with seeds of grain and oil crops and grasses and the transfer of their seed production to an industrial basis. As a result, in many republics, krais and oblasts during the 10th Five-Year Plan, despite the unfavorable weather conditions, work with seeds was improved, the plans for their storage in assortment were fulfilled and the volumes of insurance and carryover stocks were increased. In 1980 specialized seed producing farms produced about 7 million tons of seeds of grain crops, 63,000 tons of sunflower seeds and more than 83,000 tons of perennial grass seeds.

In the Union and autonomous republics, krais and oblasts, where the set of measures for an improvement in seed production and its transfer to an industrial basis is carried out in a planned and purposeful manner, the yield and production of plant products increase. Work on the transfer of the production of seeds of grain crops and grasses to an industrial basis is most successfully organized in the Belorussian SSR.

A total of 27 experimental bases for the production of elite and first reproduction seeds are directly subordinate to the Republic Production Association for Varietal Seed Raising (Belsortsemprom). In the system there are also six oblast production associations for varietal seed raising. A total of 117 head seed producing farms (one in every rayon), at the base of which rayon interfarm seed producing associations are organized, are subordinate to the latter. The construction of overall centers and plants for the treatment and storage of seeds is carried out successfully on specialized seed producing farms. The Belorussian SSR Ministry of Agriculture allocates material and technical facilities (tractors, motor vehicles, mineral fertilizers and so forth) to production associations for varietal seed raising for their delivery to head seed producing farms. Specialized seed producing farms are relieved of the sale of commodity grain to the state. Plans for the production and sale of varietal seeds to kolkhozes and sovkhoses of the serviced zone are annually established for them. For varietal seeds sold in excess of the established sales plan specialized seed producing farms receive mixed feed.

The conclusion of the construction of overall centers and plants for the treatment and storage of seeds and the establishment of rayon interfarm associations for the production of seeds enables specialized seed producing farms to fully provide the republic's kolkhozes and sovkhoses with high-quality varietal seeds of grain crops and grasses by 1983.

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There are examples of a good organization of seed production in a number of oblasts in the RSFSR, the Ukrainian SSR, the Lithuanian SSR, the Latvian SSR, the Kirghiz SSR and other republics. However, there are still serious shortcomings in the work on the transfer of this sector to an industrial basis and on accelerated strain changing. For example, in Vladimirskaya, Ivanovskaya, Kalininskaya, Kostromskaya, Ryazanskaya, Yaroslavskaaya, Tyumenskaya and Kemerovskaya Oblasts, the Bashkir, Kalmytskaya and Dagestanskaya Autonomous Republics, the Georgian SSR, the Uzbek SSR and a number of other republics and oblasts from 13 to 25 percent of the areas allocated for grain crops are annually sown with seeds of nonregionalized varieties. Owing to the inefficient organization of seed production and the lack of the necessary volumes of insurance and carryover seed stocks, a large quantity of seeds, often of nonregionalized varieties and of low sowing quality requirements, is annually brought to these oblasts and republics from the country's other regions. New varieties are introduced slowly in these and a number of other oblasts and republics.

In the Azerbaijan SSR, the Tajik SSR, the Uzbek SSR, the Armenian SSR and the Kazakh SSR insufficient capital investments are allocated for the construction of projects of the material and technical base of seed production.

There are also shortcomings in the fulfillment of the plans for the sale of elite and first reproduction seeds. For example, from the 1980 harvest scientific research institutions in the Russian Federation fulfilled the plan for the sale of seeds of the highest reproductions of winter rye 73 percent, of spring barley, 77 percent, of oats, 71 percent, of buckwheat, 66 percent, of peas, 64 percent and of vetch, only 40 percent.

Measures for the intensification of the specialization of seed producing farms and for the concentration of the production of seeds of grain and oil crops and grasses on them are not carried out in a sufficiently active way in many republics and oblasts. In most cases local directive bodies, instead of increasing assignments for the production of high-quality seeds for specialized seed producing farms, as before, assign stepped-up plans for the sale of food grain and other nonseed output to the state to them, which does not make it possible to increase on specialized seed producing farms the production of seeds for kolkhozes and sovkhoses and their procurement for state resources. Many seed producing farms are not satisfactorily provided with tractors, agricultural machines, mineral fertilizers and chemical plant protection agents.

At present it is necessary to expand the production of seeds of pulse crops--peas, vetch, lupin, soybeans, kidney beans, fodder beans, lentils and others. Their chronic shortage does not make it possible to improve the structure of the grain wedge and to increase the production of high-protein fodder.

In the last few years there has been a decline in the production of grain and seeds of this group of crops mainly as a result of a reduction in the areas sown with vetch, fodder lupin, lentils and chick peas and in many oblasts of the Russian Federation, with peas as well.

In order to ensure the average annual production of pulse crops envisaged during the 11th Five-Year Plan, in the forthcoming 1982-1983 period, along with improving the technology of their cultivation and increase in yield, it is necessary to expand the areas sown for grain to 8 million hectares (as compared to 5 million

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hectares during the 10th Five-Year Plan). The assignments for the production of these crops for 1981-1985, as well as for the expansion of their areas sown for hay and green fodder, were determined in the decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures To Increase the Production and To Improve the Quality of Fodder" (1978).

Proceeding from this, the USSR Ministry of Agriculture together with the USSR Ministry of Procurement and the USSR State Committee for Supply of Production Equipment for Agriculture developed and approved in April 1980 the Program for an Increase in the Production of Seeds of Pulse Crops for 1981-1985. The necessary volumes of production of seeds, of their storage on farms and of procurement for state resources by the years of the five-year plan were determined in it. Measures for a priority allocation of the necessary equipment and other material and technical facilities to farms producing seeds of pulse crops were developed and the need for an accelerated construction of overall centers for the treatment and storage of seeds in the zones of their commodity production was pointed out.

To implement this program, in most Union and autonomous republics, krays and oblasts the appropriate work was done and measures for an increase in the production of seeds of pulse crops were determined. Where such work has not yet been done, in the very near future it is necessary to implement specific measures for an improvement in the production of the seeds of these crops, to expand their areas sown for grain and to increase the production of commodity seeds.

For zonal scientific research institutions this program set the assignments of developing advanced technologies of cultivation and harvesting of seeds of pulse crops and, jointly with agricultural bodies and advanced farms, of ensuring their introduction into production. Provision of specialized seed producing farms with equipment, special herbicides, mineral fertilizers, desiccants and chemical plant protection agents on a priority basis creates the prerequisites for the introduction of these technologies on all areas sown for seeds for every soil and climatic zone and cultivated crop in the next few years. It is most important to introduce and organize this work on the farms of scientific research institutions and on seed producing farms in all the zones of cultivation of pulse crops and to organize seminars and the training of managers, specialists and machine operators.

For the purpose of improving the state of affairs with the production of seeds of pulse crops, it is necessary to utilize all the existing varietal seeds of the best cultivated and new productive varieties for areas sown for seeds.

A shortage of buckwheat seeds has also been felt in the last few years. In order to increase their production, it is also necessary to solve the problems of concentration of areas sown for seeds in regions and on farms most fully corresponding to its biology, to improve the agrotechnology of cultivation and to take measures for the development of beekeeping, because bee pollination is one of the most important factors in an increase in the yield of this crop. It is necessary to introduce regionalized varieties on its entire sown area.

An accelerated introduction of highly productive, new varieties and hybrids is a very urgent problem. The annual increase in their sown areas for grain crops averages about 5 million hectares. As a result of a full utilization of the total

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grown harvest of newly regionalized and promising varieties for seed purposes, it is possible to at least double the rates of their introduction. In every republic, oblast, kray and rayon there are unutilized potentials for this. First of all, this involves an improvement in the work of scientific research institutions and educational-experimental farms, for which agricultural bodies should annually refine the plans for the production and sale of elite and first reproduction seeds, increasing the volumes of the latter for new regionalized and promising varieties.

The problems of a rapid introduction of new varieties into production are most closely connected with the solution of the problem of transfer of seed production to an industrial basis according to the following scheme: scientific institution-specialized seed producing farm (seed producing department)--kolkhozes and sovkhoses. Unfortunately, however, the volumes of sale of varietal seeds from specialized seed producing farms directly to kolkhozes and sovkhoses are growing extremely slowly. Two reasons are observed here. One of them is the still weak material and technical base of seed producing farms and the other, the lack of the necessary conditions for their work according to purpose (in many cases specialized seed producing farms are ranked with farms producing food and fodder grain), in connection with which the managers and specialists of these farms are unable to form standard batches of seeds, including of new varieties, and to sell them to kolkhozes and sovkhoses. The agronomic service of all levels should place under special control the full utilization of the harvest of new varieties for seed purposes alone. For this it is necessary to widely practise interfarm exchange and the sale of seeds of new varieties for state resources, because seeds of newly regionalized (scarce) and promising varieties are accepted for state resources from all farms regardless of the established plan for the procurement of varietal seeds.

Work on the treatment and storage of seeds of spring grain and oil crops and grasses for sowing in 1982 continues on kolkhozes and sovkhoses and at other state agricultural enterprises. It is very important to intensify this work everywhere with a view to completing it before cold winter weather arrives.

Managers and specialists must see to it that their farms are fully provided with seeds in the necessary quantity for every crop and acquire seeds of new regionalized varieties. Interfarm exchange, as well as the acquisition of varietal seeds in the form of exchange for food and fodder grain from state resources, can serve as a source of replenishment of seed stocks. At the same time, it is necessary to clean, bring up to sowing quality requirements and ensure a reliable storage of carryover stocks of winter crops and of insurance stocks of seeds of spring grain crops.

It should be noted that in the practice of many kolkhozes and sovkhoses in the chernozem zone of the RSFSR seeds of winter crops placed in the carryover stock are often subjected to spoilage during the period of storage, or are used for other, nonseed, purposes, as a result of which their volume is reduced by one-half at the time of fall sowing. Therefore, freshly harvested seeds, often imported, of nonregionalized varieties, have to be used for sowing, which leads to a failure to keep to sowing schedules and to a reduction in the harvest.

Agricultural bodies and scientific research institutions should see to it that elite and first reproduction seeds are prepared promptly and distributed correctly throughout specialized seed producing farms and other kolkhozes and sovkhoses with due regard for the planned strain changing and strain renovation.

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A good harvest of clover, lucerne and other perennial grass seeds was formed in many regions in 1981. This makes it possible to significantly improve the provision of kolkhozes and sovkhoses with them and to fulfill the established procurement plans for state resources and the all-Union fund for delivery to regions where, owing to climatic conditions, it is not possible to obtain them. Specialists of agricultural and procurement bodies, grass seed producing stations and specialized seed producing farms should organize work on grass heap cleaning so that the maximum output of high-quality seeds is obtained.

All work on the establishment of seed stocks, their quality preparation, prompt check of sowing qualities and reliable storage should be carried out under the constant and unabated control of specialists of production associations for varietal seed raising and of state seed inspectorates and the country's entire agronomic service.

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