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USSR Report

AGRICULTURE

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USSR REPORT
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CONTENTS

MAJOR CROP PROGRESS AND WEATHER REPORTING

INTENSIFIED GRAIN PRODUCTION IN KAZAKHSTAN URGED

Alma-Ata SEL'SKOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 1, Jan 84 pp 2-3

/Excerpt/ The fight for big Kazakhstan grain, which should especially gladden the homeland in the year of the 30th anniversary of the virgin-land epic, remains the key problem. In the intensification of grain production, as of other sectors, it is necessary to place emphasis on an efficient introduction of scientific recommendations, advanced experience and zonal farming systems and on a rise in the standard of farming.

We must raise the yield of grain crops higher in developed virgin-land regions, giving priority to strong and durum wheat varieties. It is necessary to overcome the lag in the production of hulled crops in Pavlodar, Aktyubinsk, Uralsk and East Kazakhstan oblasts.

The proportion of corn in the grain balance is increasing. Accelerating the introduction of industrial technologies of cultivation of this crop, it is necessary to bring its output to 65 or 70 quintals per hectare on farms in Taldy-Kurgan, Alma-Ata, Dzhambul and Chimkent oblasts. For example, sovkhozes and kolkhozes in Panfilovskiy Rayon, Taldy-Kurgan Oblast, have exceeded this target. Many farms in Dzhambul Oblast must make up for the lag that has occurred.

Rice growing is becoming an ever stronger sector in the republic. Further increasing the production of silvery grain, managers and specialists of rice sowing farms must see to it that its quality is improved. This especially applies to sovkhozes and kolkhozes in the republic's main rice granary--Kzyl-Orda Oblast.

The reserves of Kazakhstan farming are vast. However, its potentials must be increased in every possible way on the basis of overall mechanization, chemicalization, land reclamation and, most importantly, the rich virgin-land experience, higher skills of machine operators and creative initiative of farm specialists and managers.

In order to increase the harvests and gross output of all agricultural crops now, it is necessary to establish a firm basis for the harvest. The prerequisites created for it are not bad. In the fall more than 20 million hectares of fall areas have been plowed, 5 million hectares of fallow have been cultivated and the plan for the sowing of winter crops has been overfulfilled.

More seeds of the highly productive wheat varieties Tselinnaya 21, Omskaya 9, Nakat, Almaz and Saratovskaya 46, of Donetskiy 8 and Tselinnyy 5 barley, of soybeans and of perennial grass have been stored on the republic's farms.

At all sovkhozes, kolkhozes and agroindustrial associations it is now necessary to accelerate the implementation of agrotechnical winter measures and the preparation of equipment, paying special attention to the quality of work, and to expand agricultural training more broadly.

The role of Kazakhstan as the country's largest granary and animal husbandry base is increasing. Following the decisions of the December (1983) Plenum of the CPSU Central Committee, party organizations and the workers of the agroindustrial complex in the republic will do their utmost in the year of the 30th anniversary of virgin land to gladden the homeland with new achievements in the increase in the production and procurement of grain, meat, milk and other products and with shock labor will reinforce the efforts of the party and the Soviet Government to raise the economic and defense power of our beloved homeland--the stronghold of peace and progress on earth.

11,439
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EFFECTIVENESS OF WHEAT SEED TREATERS ANALYZED

Moscow KHIMIYA V SEL'SKOM KHOZYAYSTVE in Russian No 12, Dec 83 pp 25-27

/Article by M. Koyshibayev, candidate of agricultural sciences (Kazakhstan Scientific Research Institute of Plant Protection): "Wheat Seed Treaters"/

/Excerpts/ Root rot is the most widespread and harmful disease of winter wheat in the south-east of Kazakhstan. Loose and covered smut occurs in wheat crops during individual years.

In connection with this in 1979-1981 we determined the effectiveness of systemic and combined seed treaters against loose and covered smut and root rot in winter wheat (Bezostaya 1 variety). The experiments were conducted on the Kaskelenskiy Grain Sovkhoz in Iliyskiy Rayon, Alma-Ata Oblast. The following preparations were tested: benomyl, vitavax, fundozol, hexathiuram, EF-2 and its mixtures with TMTD. Granosan and TMTD served as standards. Before sowing seeds were infected with smut chlamydospores (in terms of 1.5 grams of spores per kg of grain) and 7 to 10 days before sowing were treated with moistening (10 to 15 liters per ton).

Most treaters did not have a significant effect on the laboratory germination of seeds. A tendency toward its increase was noted in variants with benomyl and fundozol (0.6 to 2.2 percent).

An analysis of the affection of winter wheat with root rot showed that no treater fully protected crops against this disease. Under the effect of fundozol and benomyl the affection of crops with root rot was lowered slightly. A certain increase in the affection of plants with root rot was observed on plots sown with seeds treated with TMTD and a mixture of EF-2 with vitavax.

The weak effectiveness of treaters against the root rot of winter wheat is connected with the fact that in the south-east of Kazakhstan the infection is not transmitted by seeds, but remains in postharvest plant residues and in soil.

The treatment of winter wheat seeds with fundozol, benomyl and hexathiuram increases the density of the plant stand, the grain content in the ear and the grain harvest.

The systemic fungicides benomyl, fundozol and vitavax are highly active against covered and loose wheat smut. The contact treaters hexathiuram and TMTD are effective only in the control of covered wheat smut.

Benomyl and vitavax are slightly active against imperfect fungi causing seed mold. Granosan fully suppresses the development of mold fungi on seeds. However, in the dose of 2 kg per ton it manifests phytotoxicity, causing deformation in sprouts. Therefore, for the treatment of winter wheat seeds it is advisable to apply granosan in doses of 1 to 1.5 kg per ton.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

REVIEW OF PROGRESS IN MOISTURE RETENTION AND SOWING

Moscow SEL'SKAYA ZHIZN' in Russian 16 Mar 84 p 1

[Article by I. Makarov, academician-secretary, corresponding member of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin]; N. Milashchanko, director of SibNIISKh [Siberian Scientific Research Institute of Agriculture] and VASKhNIL academician; D. Vanin, director of VNII [All-Union Scientific Research Institute] of Farming and doctor of economic sciences; V. Penchukov, director of the Stavropol NIISKh [Scientific Research Institute of Agriculture] and corresponding member of VASKhNIL; and A. Zholobov, director of the Main Administration of Grain Crops and on General Agricultural Questions of the USSR MSKh [Ministry of Agriculture]: "Retaining Moisture on Spring Fields"]

[Text] Village workers are coming to a responsible period in spring field work. The most important thing now is to consider the special features of the current spring, the organizational and agrotechnical measures that have been worked out and that are directed at the successful completion of sowing, and the development of a firm foundation for the 1984 harvest.

The basic means of securing stability in the production of grain, feed and other products is the strict observance of technological discipline on fields and the adoption of scientifically-based farming systems. Leading enterprises produce harvests that are 1.5-2 times higher than those of lagging enterprises even during dry years. This is why the work of kolkhozes and sovkhozes in all APK [Agro-industrial complex] collectives must be directed at making this year a year of high quality in the fields, a year for introducing progressive technology and a year for fulfilling the state plans for the production and procurement of agricultural products everywhere.

In all zones of the country it is very important that specialists, together with scientists, intently analyze existing conditions, that they lend precision to the agrotechnology of sowing in every oblast, kray, republic and enterprise and that they introduce those methods which will secure a fuller and more effective utilization of existing resources. The agronomic service must make a precise assessment of all factors and must exhibit initiative, creativity and efficiency in work.

The technology of spring field operations must first of all foresee the maximum preservation and efficient utilization of soil moisture. In connection with this, a standard approach to soil preparation is intolerable. Sometimes enterprises in dry regions still utilize spring plowing, replowing and numerous and excessively deep cultivation techniques. This results in the drying out of the soil and in the lengthening of the sowing schedule. Experience shows that pre-sowing cultivation under such circumstances must be based on principles of minimizing it by utilizing combined machines, broad units and herbicides. But here we cannot tolerate a simplification of agrotechnology. Prior to sowing the field must be carefully levelled and freed of weeds, the seed bed must be well prepared and at the same time soil moisture must be retained. This requires care and accuracy in the preparation of technology and the completion of work in a differentiated manner according to the specific field.

In order to decrease evaporation the levelling of the surface and covering over of moisture are of special importance. It should be remembered that during one spring day lumpy soil looses up to 60-120 tons of moisture per hectare. Despite this, in many enterprises there is a violation of the technology and agrotechnology of the first spring cultivation of the fields. Frequently, work is begun while the soil has not yet matured and is still messy. In such cases a core forms. The levelling that occurs behind schedule creates a lumpy surface and increases evaporation. Only with modern cultivation is valuable moisture in the soil utilized, and good conditions are then created for provoking the growth of weeds.

No less important is the careful organization of levellers and harrows. The truth is well-known, but it must be mentioned because such "trifles" are often not given the necessary attention and because technological discipline is violated. In order to decrease the area of evaporation, harrowing, cultivating and sowing units must operate only with harrows. On fields that have not been plowed since fall and that will be used for early crops, especially if these are cultivated in dry regions or following perished winter crops, it is recommended that instead of deep hoeing and plowing soil be cultivated using sweeps, disc equipment and cultivators.

The decisive factor in the effective use of moisture in the flow method for sowing: pre-sowing soil preparation--sowing--packing the soil. Here every field is cultivated according to the physical maturity of the soil, which secures high quality work--the plowed layer does not have time to dry out because it is immediately packed. This encourages good contact between seed and the soil, and consequently, the formation of full and even shoots. In many enterprises there is a shortage of packers. For this reason the most serious attention must be directed at their preparation for use.

At the same time it should be remembered that packing the sowing layer when the soil is wet results in its overpacking. The carrying out of this important agrotechnical method must be approached with a consideration of each specific field.

During the period of spring field work the most important thing is to secure the highly productive utilization of technology in order to complete this work in the optimal period. Each day that sowing is delayed in the steppe regions results in the underproduction of up to 1 quintal of grain per hectare. In the northern regions the sowing of spring crops at the optimum time enables farmers to avoid crop damage due to early fall frosts.

In the oblasts of North Kazakhstan and Western Siberia the period from the beginning of physical maturity of the soil to the optimal sowing time is 20-30 days. Here after the retention of moisture following the ripening of the soil it is essential to complete the removal of weeds from the fields and water-retention operations in the shortest possible time.

On fields that are not weed-infested it is expedient to complete sowing with SZS-2.1 sowers without the preliminary pre-sowing cultivation of soil. If necessary, this may done immediately prior to sowing. On areas that have not been cultivated since fall and on weed-infested areas if there is a shortage of herbicides there is an intermediate cultivation with mandatory packing.

Fallow and moister soils are sown in the early part of the optimum period; weed-infested fields and fields with smaller moisture reserves--during the second half of the sowing period. In accordance with this in each enterprise there must be a coordination of varieties with different vegetative periods. The sowing norm must be adjusted according to the field within the limits established by zonal recommendations.

Of great importance for the retention of moisture and for obtaining even shoots is the careful adjustment of machines and equipment. In Dnepropetrovsk Oblast after a careful examination of each machine documentation is supplied stating that the machine meets agrotechnical requirements. However, in many enterprises even with the transition to the dotted line fashion of sowing there has been decreased attention being given to adjusting sowers. As if with this method of sowing the precision of sowing, the uniformity of sowing depth and so forth are of less significance. We must emphasize that with an increase in the fertilization rate and with the increased use of herbicides and other chemicals there is an increased and not a decreased responsibility to adhere to technological discipline.

Violations of the requirements of agrotechnology during spring sowing result in the non-productive consumption of moisture and in a significant loss of production. According to data from SibNIISKh [Siberian Scientific Research Institute of Agriculture], with the same degree of fertilization and with the use of the same type of soil-cultivating and sowing equipment but with differences in the adjustment of the equipment, the difference in the productivity of the grain comprises 2-4 quintals per hectare.

In doing field work adherence to the speed regimen and the proper equipping of units are very important. The use of broad units enables farmers to decrease the field area that experiences a heavy load from the propulsive agents of the tractors. At the same time we must not forget that an increased speed results in uneven placement of seed. In order to secure proper seed placement track cultivators are utilized.

The key problem in agriculture was and remains increasing the production of high quality food and forage grain and developing the necessary reserves of both. The grain fields in each enterprise must guarantee the fulfillment of the plan for the production and sale of grain according to crops. Here special attention should be given to increasing the production of strong and durum wheat.

It is essential to complete the entire complex of work related to caring for winter wheat crops which are specially placed on fields with good quality soil. It would be expedient to complete top-dressing on this entire area. There is a sufficient quantity of nitrogen fertilizer for this. We should differentiate the norms and schedules for applying mineral fertilizers with the use of soil and leaf diagnosis and extensively utilize radical top-dressing and the fractional application of nitrogen in conjunction with retardants and fungicides.

We must also fully utilize opportunities for increasing the production of high-quality spring grain, especially durum wheat, in the Transvolga, the Urals, Siberia and Kazakhstan. It should have the best predecessors, the level of agrotechnology should be increased and the application of fertilizer as well as return on the fertilizer should be increased. Here it is important to maximally utilize phosphorus-containing fertilizer in rows during sowing, especially on fields that are highly fertile and on bare fallow. With the balanced nutrition of crops on fallow fields the coefficient of water consumption in the dry steppe decreases by 25-30 percent per quintal of grain.

We must unwaveringly implment measures to integrate plant protection, to prevent the infection of crops with smut or chinch bugs, to decrease the damage caused by weeds, root rot and other diseases of agricultural crops.

The material-technical base that has been developed, the improvement in hybrid composition, the extensive introduction of industrial technology of cultivation and harvesting with threshing of ears and improvements in the storage of moist grain enable us to significantly expand the area in seed corn. It must occupy an important place in the structure of crops on irrigated lands and replenish the country's grain resources.

The area on which agricultural crops are cultivated according to industrial technology has increased significantly today. Material-technical resources exist. Now the main thing is to achieve a high return. Experience shows that two-thirds of the effectiveness of fertilizer and herbicides is determined by the technology for their use, timely application and uniform distribution in the field. With the violation of this technical rule expenditures are not repaid. The precise fulfillment of agrotechnical requirements for each operation is a mandatory condition in the struggle for the harvest. Cadres must be trained well and their responsibility for observing technological discipline and the final results of labor must be increased. The introduction of collective contracts will play a big role in this.

Spring sowing is a difficult test for farmers. Successfully passing it is the duty of all workers in the agro-industrial complex.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

HYDROLOGICAL FORECASTING REPORT ON SPRING FLOODING

Moscow SOVETSKAYA ROSSIYA in Russian 23 Mar 84 p 1

[Article by V. Zhilyayeva: "Vernal waters"]

[Text] Even according to the astonomical calendar spring has a right to be here, but it just has not been in a hurry to take up this right. The rivers under the ice have not yet awakened and the water from melted snow has not yet begun to run alone ravines. Without these signs spring is not spring. This is what is thought in the department of hydrological forecasting of USSR Gidromettsentr [Hydrometeorological Scientific Research Center].

For hydrologists this is the peak period--preparations for spring flooding. With special attention studies are made of the latest snow maps printed on electronic computers on the basis of telegrams from 2,000 stations located in throughout the country. A map like this tells the specialist a great deal: red figures--how much snow there is in the forest; black--how much snow there is in the fields. Attention is fixed on the region of Norilsk with the figure 147--this means that on the average there is a layer of snow 1.5 meters high here, and drifts may reach a depth of 3 meters.

"The storms did their best," says the director of the laboratory on hydrological information, V. N. Pupkov. "It is a common phenomenon there. But here in the central belt we have very little snow now and so there will be no great floods. Take a look at this."

I take the unusual report into my hands. It is about the spring waters in 1984. Right now it is a preliminary report.

"At the Volga cascade, for example," explains Vasiliy Nikitich Pupkov, "this year we do not expect much high water--the maximal level of spring flood waters will be less than the average for many years in almost all of the European part of Russia. Only in the northern oblasts--on the rivers of Karelia, on the northern Dvina, the Pechora, the Onega and others--are flood waters expected to be 0.5-1 meter higher."

A similar situation exists beyond the Urals. Extensive flooding is expected here on the Lower Tunguska. Spring upper levels will be surpassed on the rivers of Kamchatka and Sakhalin and on the lower reaches of the Amur and Lena rivers.

[Question] Which of our rivers are noted for extensive flooding?

"Of the European rivers--the Oka. It has the greatest amplitude of fluctuations in water level. During regular flooding it rises to 13 meters near Kaluga. The Don waters rise about 10 meters. In the floodlands of the Lena the level sometimes increases to 30 meters and the width to 6 kilometers."

A special map appended to the report on spring waters indicates the expected schedule for the break up of ice on the rivers.

"During the winter the thickness of the ice on the rivers was small, but in snowless February the ice rapidly increased to the norm. In reservoirs around Moscow the norm is 50-60 centimeters," explained the director of the laboratory on ice forecasting, B. M. Ginzburg.

Most of the Russian rivers will be freed of ice in April. The Don below the Tsimlyanskoye Reservoir has already revealed its strength. The rivers of Karelia and the Kol'skiy Peninsula will be somewhat behind schedule in responding to the spring sun, and in the lower reaches of the Yenisey, Lena, Olen'ka, Khatanga, Indigirka and Anabara the movement of ice does not begin until the first half of June. Red triangles on the map mark the places for possible ice blocks--on the Oka, Sukhon, northern Dvina, Ob',Lena, and Lower Tungusk. It has happened that the water level rises rapidly, producing extensive flooding; protective measures against this must be taken ahead of time. This is how capricious the long-awaited spring waters are!

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BRIEFS

ANTIEROSION FARMING SYSTEM--The antierosion farming system is widely used in Pavlodar Oblast and in a number of other rayons. The nonmoldboard method of soil cultivation and soil protective crop rotations, which include alternating strip sowings of grain crops (spring wheat, barley, oats and millet) and perennial grass (mainly wheat grass), are the basic elements of this system. About 1 million hectares of arable land dangerous in terms of erosion have been converted into pastures. The presence of big tracts of pasture land and areas sown with perennial grass in soil protective crop rotation has become favorable for the hibernation and development of Italian locust. It has become necessary to clarify the degree of its harmfulness under the new conditions. The damage done by locust larvae during the initial period of vegetation is the most dangerous for spring wheat and by imagoes, during the grain ripening period. In the first case the pest destroys plants completely and in the second, eats around leaves and gnaws through straw, as a result of which ears shed and the harvest is lost. /By L. D. Bunin, deputy chairman of the Pavlodar Scientific Production Association for Agrochemical Services to Agriculture, and V. V. Kurdyukov, senior scientific worker at the All-Union Scientific Research Institute of Plant Protection/ /Excerpt/ /Moscow ZASHCHITA RASTENIY in Russian No 11, Nov 83 p 40/ 11,439

MOISTURE ACCUMULATION--Alma-Ata, 20 Feb (TASS)--Today Kazakhstan's farmers have completed snow ridging on the entire fallow area, which for the first time has been brought up to the scientifically substantiated norm--5.1 million hectares. Thereby, their overall preparation for this year's harvest has been completed. In one season they have been expanded by 1 million hectares. The basis for a complete mastering of efficient grain fallow crop rotations has now been established in the republic. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 21 Feb 84 p 1/ 11,439

DEVELOPMENT OF SOLONETS TRACTS--Alma-Ata, 9 Mar (TASS)--Many sovkhozes and kolkhozes in Kazakhstan have the opportunity of increasing feed production significantly. It has been provided by the detachments of the Scientific Production Association for Agrochemical Services to Agriculture, which have completed snow retention and the delivery of organic fertilizers to improved solonets tracts. The partners of farmers have coped successfully with the set of operations connected with drawing solonets into the economic turnover. About ¼ million hectares of land have become fertile by this spring. It has been decided to expand the volume of work on solonets development during the

remaining years of the five-year plan. This will make no less than another 1.5 million hectares of solonets tracts fertile. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 10 Mar 84 p 1/ 11,439

PREPARATION OF GRAIN SEEDS--Alma-Ata, 29 Feb (TASS)--This year farms in East Kazakhstan and Semipalatinsk oblasts will occupy all grain fields, which amount to 1½ million hectares, only with grain crops of drought resistant varieties. Today they have completed the preparation of grain and pulse crop seeds. The areas sown with the new regionalized Tselinnaya-26 and Orenburgskaya-2 wheat and Donetskiy-8 barley will be expanded manyfold. The quality of seeds has been improved. On most sovkhozes and kolkhozes in the zone they are basically of the first category. A special role is assigned to strain renovation--an important potential for an increase in grain production--in all the republic's farming zones. Farms in such large granaries as West, Central and South Kazakhstan have also fully completed the preparation of grain and pulse crop seeds. One out of every four hectares of arable land is assigned to the highly productive "new settlers" here. The areas under durum wheat, nonlodging barley varieties and nonshattering peas will be expanded considerably. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 1 Mar 84 p 1/ 11,439

REPAIR OF SOWING MACHINES--Alma-Ata, 10 Mar (TASS)--Machine operators in Alma-Ata Oblast are the first in Kazakhstan to be fully prepared for departure to the field. Today they have completed the repair of all sowing and soil cultivating machines in a short period. Councils of rayon agroindustrial associations, which have proposed the introduction of narrow shop specialization, have helped to achieve success. Additional lines for the manufacture and reconstruction of worn out parts and mechanisms operate efficiently. Advanced experience, which makes it possible to increase the labor productivity of repair workers by 15 to 20 percent, has found extensive application in many oblasts in Kazakhstan. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 11 Mar 84 p 1/ 11,439

DROUGHT RESISTANT GRAIN VARIETIES--Kustanay, 20 Mar (TASS)--Farmers in Kustanay Oblast--Kazakhstan's largest granary--have completed the preparation of grain and pulse crop seeds. A total of 95 percent of the seeds correspond to the first and second categories of the sowing standard. Special attention is paid to more productive and drought resistant, new varieties. This year the area under them will be brought up to almost 2 million hectares--about 40 percent of the oblast's grain field. All their sowings are placed after the best predecessors. Mineral fertilizers will also be applied to rows. Owing to the transfer of seed breeding to an industrial basis, Kustanay farmers have attained the highest level of strain renovation in the republic. Their contribution to the realization of the Food Program increases constantly. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 21 Mar 84 p 1/ 11,439

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LIVESTOCK

CONTRIBUTIONS OF KAZAKH LIVESTOCK SECTOR TO FOOD PROGRAM

Overview of Progress, Problems

Alma-Ata SEL'SKOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 1, Jan 84 pp 2-3

/Article: "Increasing the Contribution To the Food Program"/

/Excerpts/ The third year of the 11th Five-Year Plan has transferred the labor competition over to the fourth year. And it is with enthusiasm and a fine desire to achieve new accomplishments that the agricultural workers and all workers attached to the republic's agroindustrial complex have joined in the daily and always important and urgent work being carried out on the fields and farms and in the workshops and departments of enterprises. They have many concerns and yet their chief goal -- commencing with the first days of the new year to increase the contribution towards implementing the Food Program. The responsibility for accomplishing this is general in nature.

As a result of the tremendous assistance furnished by the CPSU Central Committee and the Soviet Government and implementation of the party's agrarian policies, the republic's sovkhozes and kolkhozes and the procurement and processing enterprises are becoming stronger and undergoing further development. At the same time, the required potential is being created for steadily increasing the production and procurements of grain, potatoes, vegetables, meat, milk and other products and for their timely procurement, processing and rapid delivery to the consumers.

As is known, the principal trend for implementing the Food Program is that of achieving high rates for agricultural production based upon its consistent intensification, highly efficient use of land, feed, equipment and fertilizers and the accelerated introduction of scientific achievements and leading experience. The party organizations, the farm leaders and specialists and the councils of agroindustrial associations are devoting priority attention to these matters.

But in recent years the tasks concerned with increasing the production and procurements of farming and animal husbandry products within the republic have had to be solved under complicated natural-climatic conditions. The droughts which have ravaged vast regions have precluded the possibility of achieving the planned yields. However, owing to the extensive introduction of zonal systems of farming and the expertise of the field workers, success was achieved in reducing the adverse effects of the elements.

As a result of the intensification of animal husbandry operations, improvements in breeding and selection work and a strengthening of the feed base, positive changes have taken place in this branch. Compared to last year, substantial increases have taken place in the procurements of livestock, poultry, milk and eggs on farms throughout the republic.

However the achievements of leading elements must not be diminished by the fact that there are still many farms in the republic which are unable to cope with their tasks or that improvements are not taking place with regard to supplying the population with food products, especially animal husbandry products. Thus the operational results at backward sovkhozes, kolkhozes and agroindustrial associations should be examined in a high-principled and self-critical and methods should be outlined for improving the economy and achieving higher goals this year.

A mandatory condition for implementing the Food Program, similar to other socio-economic tasks, is that of unity of words and actions. But unfortunately this is not being achieved on many farms in Chilikskiy Rayon in Alma-Ata Oblast. As a result, the rayon as a whole failed to fulfill its plans and obligations for last year with regard to the sale to the state of the more important farming and animal husbandry products. Great differences are being observed here in the cropping power and the milk yields are falling. This matter was evaluated during a rayon party conference, which required the farm leaders to eliminate the shortcomings and to undertake measures aimed at strengthening the economy and raising the productivity of the fields and farms.

A higher return must be achieved in animal husbandry. This branch requires the daily attention of the party, soviet and administrative organs, the farm leaders and specialists and all farm workers. In the development of animal husbandry, reliance must also be placed upon intensive factors -- the industrial fattening of cattle, the creation of a highly productive milking herd and inter-strain crossings. Obviously, all of this must be supported by a strong feed base.

The principal means for increasing the meat resources -- accelerated growth in the production of beef. Greater numbers of young cattle stock must be obtained, raised, fattened and sold at a live weight of 400-450 kilograms, as is being done by leading farms in Kustanay, Tselinograd and Taldy-Kurgan oblasts.

Sheep raising must become more productive. Last year, 17 million lambs were obtained in the republic and thus real prerequisites were created for increasing the production of mutton and wool. Importance is being attached this year to carrying out the breeding campaign in an organized manner and to increasing the flock noticeably. But some concern is being aroused over the fact that farms in Pavlodar, Turgay, East Kazakhstan and other oblasts are tolerating large losses in and unproductive expenditures of sheep. This is unacceptable.

More complete use must be made in all areas of the opportunities available for engaging in swine raising, droving horse-breeding, camel rearing, poultry production and also pond-fish culture.

As pointed out repeatedly during plenums of the Central Committee of the Communist Party of Kazakhstan, in the interest of supplying the population with

milk, the farms in the suburban zones must raise the milk yields per cow to 3,000-3,500 kilograms per year. Importance is attached to accelerating the conversion over to accepting products directly on the farms, to raising their quality and improving their processing.

An important task of the livestock breeders at the present time is that of carrying out the livestock wintering operations in an organized manner and achieving a high productivity for and proper preservation of the animals.

The workers in Uralsk Oblast displayed valuable initiative when they initiated a republic socialist competition for the organized carrying out of the wintering program and increasing the contribution towards fulfilling the Food Program. Taking their potential into account, they vowed to sell no less than 60,000 tons of meat to the state during the period from October 1983 to July 1984, or 27 percent more than the level for the past wintering campaign and to increase milk deliveries by 2,800 tons. They also vowed to achieve unconditional fulfillment and over-fulfillment of this year's plans for procurements of all types of animal husbandry products.

In the interest of achieving their goal, the workers on farms in the Urals region are improving their cattle fattening operations and raising their delivery conditions and also the productivity of the cows. Serious attention is being given to the efficient preparation and utilization of feed. Progressive forms for the organization of labor are being introduced into operations, particularly the brigade contract. During this important period, the livestock breeders are receiving assistance from the machine operators. Party groups, deputy posts and people's control posts are in operation on the farms. Technological and labor discipline are being strengthened and the conditions required for highly productive labor and relaxation have been created for the livestock breeders.

As emphasized in the decree of the Central Committee of the Communist Party of Kazakhstan concerning the appeal by the workers in Uralsk Oblast, the socialist competition for the successful carrying out of the wintering campaign, for increasing the productivity of the farms and for the ahead-of-schedule implementation of the national economic plans and socialist obligations for the production and procurements of all animal husbandry products during the current year must be expanded in all areas.

A maximum increase must take place in the food resources and this should be achieved mainly by highly mechanized sovkhozes and kolkhozes. But an important role in this regard will also be played by the subsidiary farms of enterprises, organizations and the population. The production of goods on these farms is increasing, but the return is still insufficient. At a number of podkhozes /subsidiary farms/, the land is being utilized poorly and the yields and livestock productivity are low. The situation must be corrected on an urgent basis. The purchasing of surplus animal husbandry and fruit production products from the population is improving only slowly. Kazpotrebsoyuz /Kazakh Union of Consumer's Societies/ and the republic's Ministry of the Meat and Dairy Industry must display greater efficiency and a business-like attitude in the carrying out of this work.

The role being played by Kazakhstan as one of the country's largest grain producers and as a livestock base is increasing. Guided by the decisions

handed down during the December (1983) Plenum of the CPSU Central Committee, the party organizations and workers attached to the republic's agroindustrial complex are doing everything possible to ensure that the year of the 30th anniversary of the virgin lands will be one in which the homeland will be provided with new achievements in increasing the production and procurements of grain, meat, milk and other products, the party's efforts will be reinforced by shock labor and the Soviet Government will realize success in raising the economic and defensive might of our beloved homeland -- a bulwark of peace and progress on earth.

Efficiency of Sector Examined

Alma-Ata SEL'SKOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 2, Feb 84 pp 36-37

/Article by A. Dementova, leading zootechnician of Ministry of Agriculture for the Kazakh SSR: "And High Productivity Also During the Winter"/

/Text/ The chief goal of the Food Program consists of improving the supply of food products for the population as rapidly as possible and particularly meat. During the 11th Five-Year Plan, the average annual production of meat in the republic must be increased considerably and reach 1.3-1.4 million tons in dressed weight.

Beef constitutes approximately 50 percent of the republic's meat balance. Almost all of the sovkhozes and kolkhozes are engaged in the breeding of cattle. Roughly 722 of them are breeding beef cattle, including 70 specialized beef sovkhozes.

Each year the republic's public sector produces 570,000-630,000 tons of beef in live weight and supplies the state with 1.5-1.6 million head of cattle. Rich experience has been accumulated in the grazing and fattening of cattle. The average delivery weight for the animals is in excess of 400 kilograms and 70-80 percent of the animals are being delivered in a high or average state of nourishment.

It bears mentioning that recently the cattle deliveries for the meat industry have been carried out in a more uniform manner throughout the year and this promotes continuous work for the industry's enterprises. But in view of the fact that a majority of the farms, in striving to take advantage of the favorable conditions and cheap pasture feed for grazing, are delaying the sale of the animals during the summer, a large number of them, or more than 1 million head or 70 percent, are being turned over during the period from October through April. However, the experience of past years reveals that during the winter, in the majority of instances, reductions take place in the daily weight increases in the animals and the cattle losses increase. This results in a considerable shortfall in the quantity of products obtained. During the past wintering campaign, for example, for the republic as a whole, the average daily weight increase amounted to only 239 grams compared to 403 during the summer and on farms in Uralsk Oblast the daily weight increase was 163 grams per head, Tselinograd Oblast -- 146 and Karaganda Oblast -- only 88 grams. Thus the organized carrying out of cattle fattening operations during the winter plays a decisive role. The task consists of preventing a reduction

in meat productivity in the winter, maintaining it at the summer level and raising the weight increases and beef production.

All of the means required for accomplishing the above are available this year. First of all, the farms have an adequate contingent of animals to be fattened. At the present time, 793,000 head of cattle are undergoing a fattening regime, with the plans calling for 725,000 more head of young stock to undergo fattening during the winter. Roughly 180,000-200,000 young bulls will be turned over for maturing and after 8 months have elapsed they will be removed from secondary maintenance in beef cattle husbandry. The removal of the young stock must be carried out in an organized manner with their age and nutritional state being taken into account and the required feeding and maintenance conditions being established for them. Secondly, an adequate quantity of coarse and succulent feed was procured in 1983 and rich experience accumulated in the preparation of feed. There are more than 3,300 feed preparation shops in operation on the farms and they are capable of processing and preparing the entire volume of feed. In addition to the livestock maintenance facilities, there are also fattening sites for the simultaneous handling of 1,122,800 head of cattle. There are experienced and skilled cadres of cow tender-operators, all of whom possess a good knowledge of fattening operations, and also an adequate number of zooveterinary service specialists. A requirement exists only for a high level of organizational work, efficient and confident work by the zooveterinary service, the mobilization of all livestock breeders in the interest of achieving a high productivity and the fulfillment of plans and obligations for beef production and procurements.

The leading farms are organizing regular year-round fattening operations, they are rejecting seasonal fluctuations in livestock deliveries to the state and they are maintaining the cattle weight increases during the winter. This includes the sovkhozes Kuduksayskiy in Aktyubinsk Oblast, imeni XXIII Parts"yezda and Organizator in Kustanay Oblast, imeni Ushakov in Turgay Oblast, the Breeding Sovkhoz imeni Leninskiy Komsomol in Kazakhstan, the Chalabay Breeding Plant in Semipalatinsk Oblast and others.

The farms in Panfilovskiy Rayon in Taldy-Kurgan Oblast are undertaking efficient measures aimed at raising the productivity of the livestock and increasing the production of meat. The feed problem is being solved successfully here through the development of corn production and this made it possible, in 1982, to raise the delivery weight for cattle to 500 kilograms. And during this current year, more than a dozen fattening sites are in operation on the farms and enterprises of the meat processing industry are being supplied with heavy weight cattle that are in fine condition.

Additional reserves for increasing beef production have been uncovered at the Breeding Sovkhoz imeni Leninskiy Komsomol of Kazakhstan in Semipalatinsk Oblast. A very simple and inexpensive complex for the raising and fattening of 2,000 head has been in operation here for 5 years. Loose housing and free-grazing maintenance systems are employed, deep bedding is used and there is a pasture-feed yard. Ready access is available to the feed and water. The feed is issued in the form of a complete ration mixture that is prepared in a feed preparation shop. It has been proven in actual practice that young stock raised at such a complex have stronger constitutions and are less susceptible

to diseases. The 2,000 animals are serviced by 5 individuals and the average daily weight increase during the winter is 600-700 grams.

Many years of experience have underscored the high effectiveness of cattle fattening operations carried out at mechanized sites. There are 228 of them alone in Kustanay Oblast, including 159 that are used for winter fattening work. Adaptable facilities are used for this purpose. The cattle are maintained on a loose housing basis on permanent bedding. Grazing yards are available. As a result, the oblast's farms achieved a considerable increase in the deliveries of young stock less than 2 years of age and at raised weights. During 9 months of 1983 in Ordzhonikidzevskiy Rayon, 8,700 young stock the average weight of which was 472 kilograms were removed from fattening and turned over to the state. Ninety seven percent of these animals were in a high state of nourishment. During this same period, the sovkhozes in Fedorovskiy Rayon -- 9,700 head of young stock at an average weight of 485 kilograms, with 92 percent of them being in a high state of nutrition.

The sovkhozes in these rayons commenced the wintering campaign in a highly organized manner, they prepared their facilities in a high quality manner, delivered feed to the wintering areas, organized their accounting and expenditures in the correct manner, ensured reliable conditions for storing and feeding the feed to the animals, composed the rations, carried out a zootechnical analysis of the feed and ensured the operation of feed preparation shops on all of the farms. All of the young stock were formed into herds according to age and sex and they are being raised on a high zootechnical level. Milk-feeding systems which include whole milk, skim milk and their substitutes were developed for calves up to 6 months of age. Additional feedings of coarse, succulent, concentrated and mineral feeds were also organized and the young stock are furnishing a generous return for the feed expended -- weight increases of 700-800 grams.

There are many leading livestock breeders in Kustanay Oblast. Over a period of 9 months in 1983, the team headed by Vasiliy Nikolayevich Rudnev at the Sovkhoz imeni Nekrasov fattened and turned over to the state 658 head of cattle, the average live weight of which was 519 kilograms. In September the daily weight increase amounted to an average of 820 grams. During this same period, the team headed by Nikolay Grigor'yevich Shestopalov at the Klyuchevoy Sovkhoz delivered 420 head at an average weight of 500 kilograms, with the daily increase in weight being 1,000 grams.

Two considerable deviations downwards are usually observed on the annual graphs for cattle productivity on many farms. These take place at the beginning and at the end of the wintering campaigns, at those times when the cattle are either being turned over to or removed from indoor maintenance. Here there may be objective factors that are associated with the physiology of an animal or with a change in conditions. But more often than not a lack of experience plays a strong role here. In such instances, zealous bosses either do not tolerate such factors whatsoever or they reduce them to a minimum.

Similar to many farms in Kustanay Oblast, the Organizator Sovkhoz did not tolerate any decline in operations last autumn. The livestock breeders began their wintering campaign in a confident manner and commencing with the very

first days, they have directed their efforts towards raising productivity and carrying out the tasks concerned with delivering meat to the state. Higher weight increases were obtained during October and at the fattening sites the animals were prepared for providing meat during the winter period. A one and a half year's supply of feed was created at the farm and two feed preparation shops are in operation. The capability of just one of these facilities is 40,000 tons of a mixture of crushed straw, silage and micro-additives. The other facility produces up to 3 tons of liquid feed daily.

To a large degree, success in carrying out this work is ensured by the use of progressive forms for labor organization and payments. One such method -- the operation of teams on the basis of common payments. An efficient and well thought out system for a socialist competition has been developed at the sovkhoz. Obligations were developed and mutual checks carried out monthly among the competing livestock breeders, during the course of which shortcomings are uncovered and good experience adopted. The results of the competition are summarized in a timely manner (by 10-day periods, monthly or quarterly). The entire collective participates in discussions of these results. The best livestock breeders are awarded pennants and bonuses. The flag of labor glory is raised in honor of the winners.

The workers in Turgay Oblast organized full-value feeding for the cattle in a thorough manner and they have eliminated the possibility of sharp drops in the cattle productivity. During the first frosts, many farms, not wishing to rely upon scanty pastures, brought their cattle indoors and organized proper maintenance for them.

The Turgay Oblast workers -- initiators of the republic competition -- remained true to their word: they procured more than 1 million tons of coarse and succulent feed. The livestock breeders are well aware that the available feed can be utilized most effectively only if issued in a thrifty manner, stored properly throughout the winter and fed to the cattle only in a prepared form.

Commencing with the very first days, each kilogram of hay used at the Sovkhoz imeni Ushakov has been accounted for in a very strict manner. Special control is being exercised over the consumption of this hay. The feed preparation shop is operating at full capability, with mineral additives constantly being used for the purpose of raising the nutritional value of the feed. The zootechnical service, headed by A. Kolesnikov, is constantly monitoring the situation to ensure that each quintal is utilized strictly as intended in conformity with the planned weight increases, with the rations being composed depending upon productivity. Such a responsible attitude among the Ushakov workers is by no means a new development. During the last wintering campaign they occupied an honorable position in the all-union competition and their work was noted by the awarding of an honorary diploma of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee. This winter they plan to multiply their successes and to utilize the available reserves. The weight increases during the first month of the wintering campaign amounted to an average of 750 grams. And cowtender D. Beisov exceeded the kilogram level.

The seasonal differences were least noticeable at the sovkhozes imeni Panfilov and Pobeda and at an agricultural experimental station. Here a broad range of

granules, briquettes and liquid and succulent mixtures were introduced into the rations during the winter period.

An analysis of beef production by years reveals that meat productivity varies depending upon the condition of the feed base and particularly upon the availability of feed procured for the indoor winter maintenance period and also upon obtaining and preserving offspring and organizing cattle fattening operations. For example, 17.3 quintals of feed units were procured per standard head for the 1980-1981 wintering period. This was one of the highest indicators. The largest number of offspring was obtained in 1981 -- 1,661,600 head and also the highest delivery weight -- 407 kilograms. All of this made it possible to obtain the highest volume of beef -- 667,200 tons in live weight, or 103 kilograms per head of cattle. Compared to 1980, the increase amounted to 112,000 tons, or 20 percent.

During the 1981-1982 wintering campaign, the public herd was supplied with 15.3 quintals of feed units per animal. And this was reflected in the productivity. Compared to 1981, in 1982 there were 39,400 fewer calves and the delivery weight fell by 30 kilograms and this adversely affected beef production: less than 53,800 tons were turned over.

These facts indicate how important it is to have an adequate supply of feed for the winter indoor maintenance period. But the proper storage and use of this feed must also be organized.

A thriftless attitude towards feed and inefficient consumption of it leads to increased production costs for animal husbandry products. Thus importance is attached to organizing proper accounting for the feed, to distributing it efficiently among the farms and brigades and to ensuring its proper preparation for feeding to the animals. All of the farms must be equipped with operating feed preparation shops and feed kitchens. The scientists have estimated that each ton of thrashing floor feed that is dampened, for example, with a solution of lime is the equivalent of almost 2 tons of unprocessed feed in terms of nutritional value. If we take into account the better edibility of a feed mixture consisting of specially prepared straw, then it turns out that the same ton provides 120-140 additional feed units. This will result in a considerable savings in concentrates and this is especially important at the present time, when emphasis is being placed upon lowering the proportion of grain forage in the rations. When use is made of processed straw, the average daily weight increase in young stock in a fattening regime is raised by 15-25 percent and feed expenditures are lowered by 4-12 percent.

This present wintering campaign serves as a serious test for the farm workers. This is particularly true in view of the fact that a tense situation has developed with regard to the availability of feed in a number of rayons and on a number of farms. Under these conditions, the thrifty consumption of feed only in prepared form is of decisive importance.

The CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee have approved the initiative displayed by those leading collectives of livestock breeders, which recommended the launching of a socialist competition for the successful carrying out of the cattle wintering

operations, for increasing the production and purchases of animal husbandry products during the winter period and for the fulfillment and over-fulfillment of all obligations undertaken. To respond to this initiative with shock labor -- is the obligation of each farm worker.

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AGRO-ECONOMICS AND ORGANIZATION

ECONOMIC PROBLEMS OF RSFSR ENTERPRISES CONSIDERED

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 3, Mar 84 pp 2-4

/Article by G. Kulik, chief of the Main Planning and Economic Administration of the USSR Ministry of Agriculture: "Complete Economic Accounting"/

> /Text/ "To achieve further growth in economic efficiency and to rely mainly upon raising the level of management, accelerating scientific-technical progress and making more complete utilization of the production potential and all material, labor and financial resources. To search for additional reserves in a persistent manner and to achieve above-plan growth in labor productivity, a reduction in production costs and an increase in profits...
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> "To constantly intensify the efforts of workers attached to the agroindustrial complex with regard to carrying out the USSR Food Program and raising the cropping power of the fields and the productivity of animal husbandry. To make more efficient use of the resources allocated for agricultural development."
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> (From a decree of the Plenum of the CPSU Central Committee entitled "Projects of the State Plan for the Economic and Social Development of the USSR and the USSR State Budget for 1984")

The text of a speech delivered by Comrade Yu.V. Andropov during the December (1983) Plenum of the party's central committee contained the statement: "First of all it will be necessary to concentrate attention on the more urgent problems, the so-called bottlenecks, the solutions for which are of great importance if successful work is to be carried out." Today one of these problems consists of improving the economic indicators in all branches of agricultural production, raising labor productivity and lowering production costs for farming and animal husbandry products.

It would not be wrong to state that fine prerequisites were established last year for carrying out work in this regard. The kolkhozes and sovkhozes of Russian not only completed their production activities with a profit (the total profitability of sovkhoz production amounted to 15.3 percent and kolkhoz -- 16.8 percent), but they even made progress in connection with solving the

important problem of lowering output production costs. For example, the production costs for sugar beets at sovkhozes alone during the year decreased from 6.1 rubles to 5.6 rubles per quintal. A gain in weight of 1 quintal in cattle became cheaper by 16 rubles, pork -- by 8 and wool -- by 29.

The entire increase in output production was achieved as a result of improved labor productivity. And this was especially gratifying in view of the fact that the plan for the economic and social development of the country during this year, to a greater degree than earlier was the case, was oriented towards raising production efficiency.

The positive results are certainly gratifying. But they represent only the beginning of the great work which must be carried out in order to increase the production volumes and raise production profitability. In order to achieve success, we must be able to draw the correct lesson from previous mistakes and blunders. A disease cannot be cured unless a diagnosis is first made available: it is impossible to deal with shortcomings if one is unfamiliar with their underlying causes. This is why one of the chief tasks of the economic service today, at all levels -- from a brigade to an oblast or kray -- consists of carrying out a thorough, comprehensive and critical analysis of the results obtained, uncovering the bottlenecks, determining the areas where losses are occurring and finding unused reserves. It is precisely this work which must provide the foundation for the preparation of all measures concerned with improving the production-economic activities of kolkhozes, sovkhozes, rayons and oblasts. In analyzing the operational results, special attention should be given to each unprofitable farm and unfortunately there are many of them in a number of krays and oblasts.

Proper action has been taken by those agricultural organs and economic services which have already outlined a complex of measures to be followed by each backward or low profitability farm. And it is also correct that all of the enterprises and organizations included in the structure of the agroindustrial complex are participating in this important work: strengthening the economically weak farms -- a matter of common concern. Importance is attached to supplying such farms with the required logistical resources on a priority basis, providing them with the necessary personnel, carrying out soil improvement work using the resources of Sel'khozkhimiya, assigning more powerful construction contractual organizations to them and ensuring the construction of housing and projects of a cultural-domestic nature.

A chief condition for achieving high production efficiency has been and continues to be that of raising its intensification, increasing the cropping power of the crops and the productivity of the fields and utilizing the labor and logistical resources in an efficient manner. Thus extreme importance is attached to having the leaders of the economic services, together with other specialists, analyze very thoroughly the great differences in the cropping power levels, the productivity of animal husbandry and the production expenses.

Let us look at some facts. Each year thousands of farms in the Russian Federation obtain potato yields which do not exceed 50 quintals per hectare. In 1982, for example, such results were obtained by 46 percent of the kolkhozes and sovkhozes in Kaluga Oblast, 50 percent in Kostroma Oblast, 43 percent in

Pskov Oblast and 31 percent of the kolkhozes and sovkhozes in the Udmurt ASSR. Thus it should come as no surprise to learn that the production costs for potatoes continue to remain high. In 1983 the profitability level for potato production at sovkhozes throughout the republic was only 10 percent and at kolkhozes -- only 4 percent. It often happens that the earnings obtained by farms for the sale of the tubers are not sufficient for covering the expenses for seed. In 1982, the seed expenditures for seed in Ryazan Oblast were higher by 19.4 million rubles than the earnings realized from the sale of potatoes to the state. One need not be an economist to recognize the fact that such a situation can only be viewed as an extraordinary event.

Allow me to cite an example involving another oblast and another branch of agriculture. In 1982, 55 farms in Orel Oblast obtained less than 60 calves per 100 cows. Obviously, such mismanagement will not be covered by any new prices.

It is also completely obvious that the purchase prices cannot be raised endlessly. Stable financial and economic indicators can be realized only by those farms which annually achieve stable growth in labor productivity and reductions in their production costs. It is the task of the rural economists to acquaint themselves with all of these problems and to analyze them thoroughly.

Opportunities are available in each oblast and on each farm for lowering material expenditures. But these opportunities are not being utilized in all areas. For example, let us take two neighboring oblasts -- Ivanovo and Vladimir -- where the natural conditions are extremely alike. It would seem that Vladimir Oblast would have greater transport and other expenses in that it obtains higher yields for all crops. But it turns out that this is not the case. Last year, in Vladimir Oblast, 10 kilograms of diesel fuel were consumed per hectare of arable land tilled and in Ivanovo Oblast -- 12 kilograms. The farms in Penza Oblast obtain lower grain, potato and vegetable yields than those being obtained in Kuybyshev Oblast and yet they expend 8.3 kilograms of diesel fuel per hectare of arable land worked, while at the same time their neighbors expend only 5.4 kilograms. In Kursk Oblast the productivity of the fields is lower than in Belgorod Oblast and yet the fuel expenditures per hectare of arable land are 1.5 kilograms higher.

Or let us look at some other facts. The length of time required for raising cattle on farms in Vologda Oblast, from the moment of birth until delivery, is 20 months. The average daily weight increases exceed 510 grams. The production cost per quintal of weight increase last year was 237 rubles. In Orel Oblast, the cattle were fattened for a period of 33 months. The average daily weight increase here amounted to 309 grams and the production cost per quintal -- 337 rubles. In Omsk Oblast, the duration of the swine fattening period did not exceed 10 months and the production cost per quintal of meat was 123 rubles. On farms in the Altay Kray the fattening regime lasted for 12 months and the production cost per quintal of pork amounted to 211 rubles.

The high production costs on many farms is explained to a certain extent by the fact that the growth in wages in recent years has surpassed to a considerable degree the growth in labor productivity. The introduction of certain

technologies into operations in farming and animal husbandry is not accompanied in all areas by a reduction in labor and material expenditures. Meanwhile, tremendous reserves are available here.

Let us look in on the managerial results achieved in Belgorod and Voronezh oblasts. The natural conditions, the capital labor ratio and the availability of capital are roughly the same in both oblasts. However, in 1982 the output per worker in agriculture in Belgorod Oblast amounted to 4,800 rubles (compared to the average indicator for the 10th Five-Year Plan, it increased by 20 percent). Meanwhile, on farms in Voronezh Oblast, one worker produced products valued at 4,300 rubles. This is lower than the level for the 10th Five-Year Plan. At the same time, the average annual wage was the same in both oblasts. One can readily understand that this adversely affected the production cost indicators for products produced on the farms in Voronezh Oblast.

In Kaluga Oblast, the average annual wage for kolkhoz and sovkhoz workers amounted to 2,000 rubles and output production -- 3,600 rubles. For the same average annual wage level, one worker in Vladimir Oblast produced 4,500 rubles worth of output, smolensk Oblast -- 4,700 and Tula Oblast -- 5,000 rubles. It is by no means an accident that the farms in Kaluga Oblast have extremely low economic indicators and high production costs for the majority of products being produced.

Two neighboring oblasts -- Kuybyahev and Saratov -- operate under the same conditions. However, many of the economic indicators of the Saratov workers are considerably lower. Here the kolkhozes and sovkhozes expend 157 rubles for the production of 100 rubles worth of gross output. In Kuybyshev Oblast -- 130 rubles. Moreover, each worker in Kuybyshev Oblast produces 5,200 rubles worth of products for an average annual wage of 1,700 rubles and in Saratov Oblast -- 4,900 rubles worth of output for an average annual wage of 2,000 rubles. Hence the poor economic indicators.

Certainly, we do not have in mind here a reduction in wages for agricultural workers. Rather, we have in mind another subject entirely -- the need for ensuring that growth in wages is necessarily accompanied by growth in the production of goods and for labor productivity to increase more rapidly in all areas than the average wage. One obvious truth has obviously been overlooked in Arkhangelsk, Perm and Chita oblasts and in the Chuvash ASSR. How else can one explain the fact that here the output norms are being fulfilled by only 50-60 percent of the tractor operators? On many farms the labor expenditures for manual work remain high.

All of these examples underscore one fact: by means of improved labor organization and strengthened discipline, it is possible to reduce unproductive expenses considerably.

Let us now discuss raising the return from fixed capital. The specialists analyzed their use in animal husbandry and obtained the following interesting data. In Gorkiy Oblast, there are 1,057 rubles of fixed capital per standard head of livestock and in 1982 22 quintals of animal husbandry output were obtained in a conversion for feed units. In Kirov Oblast, the capital-labor ratio per head is 1,208 rubles and the output yield -- only 20 quintals of feed units.

In Perm Oblast, the indicators for the capital-labor ratio in animal husbandry amount to 1,224 rubles per standard head. They are lower in Sverdlovsk Oblast -- only 1,082 rubles. On the other hand, however, the output yield in Sverdlovsk Oblast is higher. Roughly 24.5 quintals were produced here per standard head and in Perm Oblast -- 22.4. It goes without saying that on farms in Perm Oblast the expenses for the amortization and operation of facilities will be higher per unit of product produced.

Real opportunities for lowering expenditures are available in the case of other items which contribute to the production costs. These must be thoroughly analyzed and extensive work carried out in connection with the economic and thrifty use of material, monetary and labor resources -- an important task of the economic service in the rural areas.

During the December Plenum of the CPSU Central Committee, the task was assigned of achieving an above-plan increase in labor productivity and an additional reduction in the production costs.

How will these tasks affect the kolkhozes and sovkhozes of Russia?

An Increase of 1% in Labor Productivity Will Provide:

A reduction in the number of workers engaged in agricultural production -- in thousands of individuals	82
A wage fund savings -- in millions of rubles	151
An increase in the volume of gross agricultural output -- in millions of rubles	451

A Reduction of 1% in Expenditures Will Result in Savings for the Republic's Farms as Follows:

Electric power -- millions of kilowatt hours	338.4
Petroleum products -- thousands of tons	208.9
Coal -- thousands of tons	104.4
Natural gas -- millions of cubic meters	26.5
Savings in material, labor and monetary expenditures -- millions of rubles	592

Certainly, the agricultural economists will play an extremely important role in solving these tasks. They must exercise control over the carrying out of the more important tasks of the party and ensure extensive publicity for the competition among the collectives of enterprises for lowering production costs and raising labor productivity by one percent, over and above the tasks called for in the state plan for economic and social development.

Unless intraorganizational cost accounting procedures are introduced in all areas, it will be impossible to solve these tasks today.

In this regard, special emphasis should be placed upon the fact that intra-organizational cost accounting requires improvements in all economic work. For example, at the Pobeda Kolkhoz in Petrovskiy Rayon in Stavropol Kray,

improvements were carried out in the structure of production administration simultaneously with developing the cost accounting procedures. Production sectors were created in place of all-round brigades. Dairy cattle husbandry now has departments and specialized brigades for irrigation, vegetable production and for feed production have appeared. And cost accounting relationships have been introduced into operations in all areas. Use of the collective contract has been introduced on an extensive scale. This is why the kolkhoz benefited greatly from cost accounting and why production profitability reached 90 percent here in 1983.

The experience of efficient production organization at the Nazarovskiy Sovkhoz in Krasnoyarsk Kray, based upon intra-organizational cost accounting, is well known throughout the republic. In terms of power-worker ratio, capital availability and the use of mineral fertilizers, this farm is no different than many other farms in the kray. Yet the production-economic indictors here exceed the average indicators for the kray to a considerable degree. Last year the production cost for a quintal of milk at the sovkhoz was 19 rubles and 94 kopecks, while at the same time it was higher than 32 rubles for the kray as a whole. The production of 1 quintal of beef at the sovkhoz costs 64-65 rubles -- cheaper by almost half than the average for the rayon and cheaper by a factor of 3.5 than the figure for other sovkhozes in the kray. Last year the total amount of profit earned at the Nazarovskiy Sovkhoz exceeded 8.5 million rubles.

The sovkhoz is able to solve its production-economic tasks as a result of intra-organizational cost accounting, strict control over the use of all material and monetary resources, the efficient and effective use of equipment and fixed capital, the introduction of a simple and reliable technology and constant attention to and control over the quality of the products being produced.

Within a short period of time the brigade contract and cost accounting have been introduced into operations on all farms in Glazunovskiy Rayon in Orel Oblast. They were introduced in a manner such that the new form for labor organization and payments is constantly being employed in the work collectives and has become a most important factor for increasing agricultural production and strengthening the kolkhoz and sovkhoz economies.

The experience of the workers in Glazunovskiy Rayon serves as an example of the great role played by the economic service under modern conditions and how it can and must exert an influence on all economic life in the rayon. The Department of Planning and Inter-Branch Relationships of the rayon agricultural administration has been under the direction of L. Semenova for more than 10 years -- a highly qualified specialist and skilled organizer. She initiated the carrying out of a tremendous amount of preparatory and explanatory work at the kolkhozes and sovkhozes and in the brigades and teams. Under her direction, a single statute was developed for the entire rayon concerning non-schedule collectives and technological charts for the cultivation of all agricultural crops and an efficient system for the maintenance of mutual accounts among the subunits was introduced into operations. But even more important -- daily control was organized to ensure consistent observance of the principles of cost accounting and over the system for computing advances and additional payments

and bonuses for above-plan output, in the interest of preventing any infringement upon the interests of the non-schedule collectives.

Last year the rayon produced 1.3 million more rubles worth of field crop husbandry output than in 1982 and with a considerable reduction in expenditures.

Intra-organizational cost accounting is being employed successfully by many farms in Leningrad, Kaliningrad, Sverdlovsk and Novosibirsk oblasts and in Stavropol Kray and the Tatar ASSR. Unfortunately, this is not the situation in all areas. In Ivanovo Oblast, only 15 percent of the farms are using intra-organizational cost accounting, in the Mordovian ASSR -- 8, in the Dagestan ASSR -- 3, in Amur Oblast -- 4, in the North Ossetian ASSR -- 15 and in the Buryat ASSR -- 13 percent.

This year the economic service must ensure the introduction of intra-organizational cost accounting into operations in all kolkhoz and sovkhoz subunits. Moreover, in addition to assigning cost accounting tasks to all of the subunits in a timely manner, monthly control must also be established to ensure that they are carried out, the summarizing of results should be organized and measures should be outlined for issuing moral and material incentives to workers for having carried out their cost accounting tasks. The role and importance of the balance committees should be raised. Unfortunately, these committees, during the course of examining the operational results of the farms, often hand down formal and all too general decisions ("fulfill the established plans," "achieve a reduction in production costs"). The decisions handed down by the balance committees must provide for an efficient complex of measures, they must indicate the individuals responsible for carrying out the work and also the work volumes and schedules.

The new organs of administration for agriculture -- agroindustrial associations -- have now been in operation for more than a year in the rural areas. The councils of the agroindustrial associations have been granted extensive rights in the areas of production planning and determining the tariffs and rates for work and services provided for the kolkhozes and sovkhozes.

Considerable financial resources in the form of centralized funds for material incentives and socio-cultural development and a centralized fund for production development have been placed directly at the disposal of the RAPO /rayon agroindustrial association/ councils. Importance is attached to the correct creation and formation of these funds and to defining the system for their use. The results of the production-financial activities of organizations and enterprises included in the structure of an association should be analyzed and bottlenecks in the work of allied workers should be uncovered and eliminated in the interest of ensuring successful operations. The economists must devote constant attention to all of these matters.

Today the economic service is responsible for ensuring that the requirements developed by the party and approved during the May (1982) Plenum of the CPSU Central Committee are carried out in an efficient and uninterrupted manner and for ensuring balanced development for all branches of the agroindustrial complex and planned improvements in the efficiency and profitability of agricultural production.

AGRICULTURAL MACHINERY

PROBLEMS WITH FIELD WORK EQUIPMENT CALLED 'ALARMING'

Moscow SOVETSKAYA ROSSIYA in Russian 20 Mar 84 p 2

[Article by V. Pavlov, Volgograd Oblast, followed by commentary by A. D. Mikhaylov, director of the Main Administration of the Transvolga region of RSFSR Minsel'khoz [Ministry of Agriculture]: "They Are Still Conferring"]

[Text] The day began long ago, but the offices of the Bykovskoye RAPO [Rayon Agricultural-Production Association] are empty. Telephones rang almost endlessly. The secretary of the director of Sel'khoztekhnika [Agricultural Equipment Association], I. I. Zakharov, answered in a monotone, "A planning meeting is in progress, please call later..." Yes, the meeting he was conducting was at its height.

Later I. I. Zakharov clarified, "What can we do? We are lagging behind in the repair of equipment for spring; we find it necessary to twist things."

To him "twist things" means hold meetings, pass a resolution, bitterly replete with words such as "oblige," "strengthen" and "commission." During the last month and a half alone the work group on mechanization of the RAPO met six times, but changes are not evident. The repair of technology is lagging and schedules are not being adhered to.

Machine operators and workers of Sel'khoztekhnika in Bykovskiy Rayon took on the obligation of repairing trailers and mounted equipment by the new year. They did not keep their word--even today a number of enterprises have sowers and cultivators which have not been touched by the hand of a repairman. The schedule for the repair of tractors, especially heavy ones, is not being followed.

At each of the aforementioned meetings and conferences the same thing kept being remembered--during the harvesting of grains last year combines remained idle due to breakage for almost 800 days. As a result grains were being harvested and threshed for about 2 months and a significant part of the harvest was lost. It would seem that this bitter experience would have been instructional--technology must be repaired better and this work should be done in the winter and not prior to moving out into the fields. Nevertheless, the condition of machinery is again cause for alarm.

[Commentary] In the kolkhozes and sovkhozes of the Transvolga the initiators of all-union socialist competition for timely and quality preparations for the season of field work, Saratov machine operators, are successfully fulfilling their socialist obligations. All shops here have created quality checkpoints made up of deputies of local soviets and people's controllers; in many enterprises there are commissions which receive technology. They are headed by senior agronomists. In order to secure the uninterrupted work of units in the fields, Saratov farmers formed 1,400 technical servicing links and reequipped 400 vehicles belonging to mobile shops, of which there is a shortage.

The situation is worse in Volgograd Oblast--last year before the beginning of harvesting operations farmers did not have enough time to put over 1,300 combines into operation. Today the pace of repairs of harvesting machines is growing slowly, and this means that in many enterprises everything will be repeated, with a worse variation.

In the Kalmyk ASSR as of now workers have not completed the repair of plows, cultivators and sowers and they are behind schedule in the repair of irrigation equipment. Locally lags are explained primarily by the shortage of spare parts, but checks have shown that the main problem is the poor organization of labor of repairmen. In the shops of the Yuzhnyy and Komsomolets sovkhozes of Gorodovikovskiy Rayon, lists of defective tractor and machine parts were not composed in time. As a result, there is now a shortage of the necessary spare parts. There is no schedule here for putting technology into operation and controls over work quality are poorly organized.

Especially alarming is the status of high-energy tractors in the region. Over 4,000 Kirovets tractors are not ready for work; there is a shortage of many units and parts for them. The enterprises of Goskomsel'khoztekhnika are not taking the necessary measures to accelerate repairwork.

For the sake of fairness we should note that in the region as a whole preparations for sowing are going somewhat better than before, but this is no reason for complacency. There are still many problems in Astrakhan, Ulyanovsk and other oblasts of the economic region. A great deal can still be corrected, all we must do is value every hour.

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AGRICULTURAL MACHINERY

EQUIPMENT AVAILABILITY, PROBLEMS, PROSPECTS DISCUSSED

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 6 Mar 84 p 1

[Article by O. Kaznadzey, director of the production-dispatching administration of USSR Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association], Moscow: "A Green Light for Grain Loads"]

[Text] Spring work is approaching in the village. It always brings about worries not only for village workers. In order to successfully, and as the specialists say, in the best agrotechnical time, complete sowing high-yield modern technology is needed. Each year it must be replenished and consequently there are more worries for machine builders. But the chain is not locked after them--the manufactured machines and spare parts for them must be delivered to kolkhozes and sovkhozes. Moreover, everything must be done efficiently and precisely.

Having considered that this year the volume of sowing operations significantly surpasses last year's, many enterprises of agricultural machine building have accelerated the manufacture of the necessary equipment and have developed reserves. The next step is shipping it efficiently. This is still not being done on the level and in the volume that are dictated by circumstances.

During 3 weeks of February alone in the surveyed plants belonging to Minsel'khozmash [Ministry of Agricultural Machine Building] there was a shortage of 3,200 cars for the shipment of tractors, trailers and other agricultural technology. Because of this, for example, the Tselinogradsel'mash Association [Tselinograd Agricultural Machinery Association] is delaying the delivery of sowers, harrows and plows; the Tashkent Tractor Plant--of tractors and trailers. Accumulating in the storehouses of agricultural machinery associations associations are the following: in Belinsksel'mash--1,800 sowers that are ready for shipment; in Bobruysksel'mash--over 1,200 fertilizer spreaders; and in Rigasel'mash--1,300 units for the application of fertilizer into the soil.

A similar situation exists with the shipment of vehicles. In February only 38 percent of the needed platform cars were supplied for the shipment of KamAZes into agricultural regions. About 1,500 large-capacity trucks remained unshipped. The situation is even worse with trucks of the Gorkiy Auto Plant--the main agricultural vehicles. Over 6,000 of them have accumu-

lated in enterprises. Sometimes it is necessary to drive the Kamsk and Gorkiy vehicles themselves to their destinations, sometimes a distance of over 2,000 kilometers.

Sometimes difficulties arise from the fact that some machine-building enterprises utilize rolling stock unsatisfactorily, retaining cars beyond the norm during loading and unloading. But MPS [USSR Ministry of Railroads] also does not always fulfill its plan obligations.

A day does not pass in which workers of Minavtoprom [Ministry of the Automobile Industry] or Minsel'khozmash do not call MPS--the first deputy director of the main administration for transportation, N. Grigorenko, deputy minister V. Butko, or first deputy minister V. Gin'ko--with a request to improve the delivery of cars for the unloading of agricultural technology. The chairman of USSR Goskomsel'khoztekhnika, L. Khitrun, sent a letter to MPS with the same request. But the situation is changing slowly. This was again noted at a meeting of the operations staff created within USSR Goskomsel'khoztekhnika to coordinate the activities of all participants in the agro-industrial complex.

The director of the loading administration of MPS, G. Davydov, feels that the main reason for problems is the unexpected February storms and snows. It is true that abundant snowfall makes movement difficult on some roads and results in above-normal idleness of rolling stock. But in January there was no such snowfall.

"But in January we overfulfilled our plan," confirms G. Davydov.

Anyone would agree that the situation is not among the simple ones--railroad workers are fulfilling their plan, but shipments are not being made for sowing?

We all recall a time not that long ago when the main form of rolling stock was the small biaxial cars. It is not likely that there were fewer difficulties on railroads then. But these cars, with the signs "Sowing" written in chalk, travelled in a "green wave." It would not be a bad thing to renew this tradition. After all, railroad workers have more possibilities--locomotives are stronger and cars have a larger capacity. There is the reserve of routing. It is also used insufficiently.

It is said that a spring day feeds a year. Today a great deal depends on transportation workers to make sure that not a single day of spring operations will be lost.

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AGRICULTURAL MACHINERY

TECHNOLOGY EFFICIENCY FOR NEW SEASON FIELD WORK EXAMINED

Moscow SOVETSKAYA ROSSIYA in Russian 17 Mar 84 p 1

[Article by S. Karkhanin, I. Filimonov, Orenburg Oblast: "Examination of Efficiency"]

[Text] The village workers of Orenburg Oblast were the initiators of all-Russian competition among farmers for the timely and high-quality preparation of technology for the new season. Soon the time will come to summarize results. With what are farmers greeting the spring?

Farmers of the Zarya Kolkhoz were the first in Sakmarskiy Rayon to begin preparations for the season. Now together with the director of the machine yard of the enterprise, N. Suyusanov, we walk around his "domain." There is model order everywhere. Combines are straight in line on a special platform--they were put here as long ago as late December. All trailer equipment has been ready for a long time. The kolkhoz has completed the planned repair of tractors.

"We have at our disposal a warm, spacious work room--a type of combine 'clinic,'" says N. Suyusanov. "Here workers can work in comfortable and cozy conditions. They began the repair of technology immediately after the harvest and have continued to maintain an intensive work pace in the shop. Management was able to morally and materially stimulate people. Our calculations were justified--never before have we prepared technology at such a rapid pace. For example, the brigade needed an average of three days per combine--much less time than foreseen by norms."

The farmers of the Zarya are justified in counting on spring success. But what is the situation with their neighbors, and in the rayon as a whole? Unfortunately, it is not that favorable. It is true that nothing can be said about the soil-cultivation and sowing technology--all of the trailer inventory in the oblast, as noted in socialist obligations, was readied by January. But things are not completely in order as regards combines. In the very same Sakmarskiy Rayon as of early March 87 percent of grain-harvesting units were repaired. The indicator appears to be a fairly good one, but it was through the efforts of primarily three enterprises which have heated shops, since repair services occupied the entire winter period. Others, such as the 1 May Kolkhoz, still must repair a third of the combine fleet. In the oblast the index of readiness of grain-harvesting technology is 82 percent.

The first reports already indicated a lag in the schedule. The necessary acceleration of the repair conveyor was to be rendered by a shock 2-month period which was proclaimed in the oblast immediately following the new year. But it did not bring the desired results--of the planned 4,000 combines the enterprises readied only three-fourths during this time. In order to fulfill their obligations, Orenburg workers must sharply increase the pace of combine repair in 11 out of 35 rayons in the oblast. The situation is particularly alarming in Aleksandrovskiy, Perevolotskiy and Pervomayskiy rayons, where it is still necessary to repair every third-fifth grain-harvesting unit.

How did Orenburg machine operators find themselves in such a situation? There are many different reasons for each specific situation, problably, but there is also a common reason: not everyone was able to maintain the rapid work pace that was begun. The great reserve of time that developed after an abrupt beginning soothed some collectives of repair workers. This explains the numerous "zero's" in growth fixed in January and February reports.

Now the lagging enterprises are placing their hopes in Sel'khoztekhnika [Agricultural Equipment Association], but naturally it cannot accept such a large number of combines. Meanwhile, other reserves do exist.

"Having completed the repair of our units in December, we were ready to allow others to use our warm facilities," says the secretary of the party committee of the Zarya Kolkhoz, A. Srebritskiy. "However, only the Kolkhoz imeni Frunze repaired three of its combines in our facilities. The remaining neighbors did not utilize the existing opportunity."

It is typical that while preaching inter-enterprise cooperation, the RAPO [Rayon agro-industrial association] and its working organ--the agricultural administration--did not in fact value this innovative and non-traditional form of mutual aid.

Many are tripped up by their own lack of speed. For example, the oblast's industrial enterprises take it upon themselves to manufacture the spare parts that are in especially short supply and they send brigades of qualified repairmen to kolkhozes and sovkhozes. However, even this reserve is not utilized fully. For example, the enterprises of Dombarovskiy and Yasnenskiy rayons have practically the same conditions and they are supplied with spare parts by the same base. The sovkhozes of Dombarovskiy Rayon are already completing the repair of combines because they actively recruited advisors to help them solve problems, whereas their neighbors in Yasnenskiy Rayon still have a lot to do since they did not establish contacts with the industrial enterprises in their city.

Time is running out. Orenburg workers must exhibit a maximum of organization in order to pass the test of efficiency with honor and to keep their word.

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PROBLEMS WITH TECHNOLOGY FOR SPRING FIELD WORK DISCUSSED

Moscow SEL'SKAYA ZHIZN' in Russian 20 Mar 84 p 1

[Editorial article: "Dependable Technology for the Spring Field"]

[Text] A period laden with responsibility has arrived for the country's farmers. In the fields, awakened by the sun, sowing operations are beginning on a broad front; the results of this will greatly affect the final results of the struggle for the harvest during the fourth year of the five-year plan.

Workers of the agro-industrial complex have at their disposal all that is necessary for increasing the production of grain and other products and for the successful fulfillment of the goals of the Food Program. Recently, the material-technical base of agriculture has become stronger. Now the main thing is to fully utilize the available potential, and to do this it is essential to complete, as soon as possible, overall preparations for mass movement into the fields while at the same time securing the clear organization of spring sowing.

This spring has not been one of the easiest. Unfavorable weather conditions had a noticeable effect on the condition of winter crops. In some zones they are in need of an overhaul, top-dressing with fertilizer or even resowing. There has been a significant growth in the scale of spring field work and the load being placed on technology is increasing. The sowing period will require a full effort on the part of people, a high degree of professional mastery and an innovative approach to solving existing problems. It is especially important to exhibit concern for the dependable, uninterrupted operation of the machine-tractor fleet and transportation vehicles. This is one of the most important reserves for the growth of labor productivity of village machine operators, for decreasing production costs and for the intensive development of the branch.

As operational statistical data shows, at the present in the country as a whole there is a significantly larger number of tractors, sowing and soil-cultivating technology and other machines necessary for the spring fields on the line of readiness than last year. It is noteworthy that under the conditions of the agro-industrial complex traditional socialist competition among farmers has become more vital and more fruitful and has acquired new features. It is characterized by a mass creative search for progressive forms of labor organization in kolkhoz and sovkhoz shops, in the specialized

enterprises of Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association], by the extensive introduction of collective contracts, by the skilful practical application of scientific-technical progress and by a careful attitude toward material resources.

In the course of all-union competition for the timely and model preparation of technology for field work, high results were achieved by its initiators--the village workers of the Azerbaijan SSR and Voroshilovgrad, Kustanay, Minsk and Saratov oblasts. Thus, many collectives of Voroshilovgrad maintenance workers work according to a single order but in two shifts. They increased the coefficient of use of technological equipment and labor productivity and were among the first to repair tractors, plows, sowers, cultivators, harrows, potato planters and irrigation machinery. Here, progressive repair technology and modern methods of restoring networks and details are greatly honored.

The machine operators and engineering-technical workers of Ivnyanskiy Rayon, Belgorod Oblast, have organized the preparation of the machine-tractor fleet for spring sowing in a model way. They fulfilled their socialist obligations ahead of schedule. Machines being put back into operation were carefully test-run and enterprises conducted mutual inspections of readiness for spring. Guarantees were issued for renovated technology.

The road to success was laid by maintenance workers with the active participation of the RAPO soviet. On its initiative and with its constant control, for example, improvements are being made in the interrelations between kolkhozes, sovkhozes and raysel'khoztekhnika [Rayon agricultural equipment association]. The efforts of partners are directed in one direction--to utilize the entire arsenal of technology effectively and with a maximal return.

We can present many examples of an economic attitude toward technology. Thus, in Stavropol Kray all work on spring fields is to be completed by large, multi-faceted sowing detachments which are staffed with experienced machine operators. They have been allocated the necessary machines and trailer equipment. In order to secure their high degree of readiness, mutual control inspections have been organized in enterprises. The inadequacies that came to light were eliminated efficiently.

Unfortunately, there are instances of different kinds of facts. There are still cases in which shops, in pursuit of favorable reports, release machines that have been repaired quickly and with poor quality. An examination made by Gossel'tekhnadzor [State agricultural technical investigation association] in some regions of Kursk Oblast showed that a significant portion of tractors which had been in shops had serious defects and required repeated repairs. In a number of enterprises of Lipetsk Oblast a large number of sowing and soil-cultivating units were counted among those repaired, but in reality they were not ready to move into the fields.

The letters of machine operators received by the editors make many complaints about the enterprises and organizations of Goskomsel'khoztekhnika. Some of its associations are slow in restructuring their work and violate contractual agreements.

In particular, in Omsk Oblast the Steppe Repair-Mechanics Plant puts village workers on the spot. Tractor motors, units and networks repaired in its shops frequently break down and do not remain in service for the guaranteed period. In the enterprise the level of technological discipline is low and controls over the quality of production are poor. In Dagestan complaints have been directed at the collectives of the Khasavyurtovskaya and Kizlyarskaya station of technical services for power tractors. It is their fault that many machines are inoperable.

Such cases are intolerable. Idleness in poorly-repaired technology is simply too dear to the state during spring operations. The harvest decreases and valuable products are lost. Decisive measures must be taken to efficiently eliminate shortcomings in the work of repair enterprises, to secure the readiness of the machine-tractor fleet in full and to achieve its highly productive and dependable operation on the spring fields.

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BRIEFS

TECHNOLOGY READIED--Tatar ASSR--In Baltasinskiy Rayon, Tatar SSR, the plows, sowers and cultivators could be taken out into the fields at any time. The repair of other equipment is proceeding well also; this is facilitated considerably by the tractor exchange fund developed here--enterprises receive a new machine almost immediately after turning in an old one. The workers of Baltasinskiy Rayon have surpassed 3-year quotas for the sale to the state of grain and livestock products and are now striving to achieve new goals. In particular, they intend to harvest 19 quintals of grains per hectare, almost 1,000 quintals of root crops and 500 quintals of green mass from grasses on irrigated plots. [M. Kharisov] [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 20 Mar 84 p 2] 8228

SOWING TECHNOLOGY PREPARED--Saratov Oblast--Sowing technology was readied ahead of schedule in the Sovkhoz imeni Radishchev, the largest sovkhoz in the Saratov Transvolga. In the machine yard the flag of labor honor has been raised in honor of machine operators and communists P. Nefodin, I. Kokorin, V. Akinin and V. Chernov. On their initiative tractors and other technology were repaired by means of the brigade-network method, which enabled them not only to significantly curtail the repair schedule, but to improve the quality of repair as well and to decrease the cost of work by 3 percent as a result of a careful attitude. [V. Zlobin] [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 20 Mar 84 p 2] 8228

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INADEQUATE USE OF SECONDARY TIMBER MATERIALS IN LITHUANIA

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 12, Dec 83 pp 36-37

[Article by A. Morkyavichyus: "Losses That Can Be Avoided"]

[Text] It has been proved that without exception all of the by-products from the production and processing of timber can be used as secondary raw materials. These resources are enormous and they are very valuable. At this time, however, only an insignificant part of them is being processed. A number of serious problems must be solved before they can all be used. One of these problems is that of perfecting the inventorying of timber by-products.

Up to now, unfortunately, there has not been complete information on the available resources and the degree of use of secondary timber materials. Estimates of such stocks are very approximate and essentially are based on calculations lacking the necessary degree of statistical support.

The statistical accounting of form 2-TP (special), introduced in 1977, serves as the basis for planning the use of timber by-products. It is not sufficiently reliable. Because of methodological imperfection, the statistical data do not indicate actual but "calculated" resources of timber by-products. The instructions for drawing up form 2-TP (special) foresee only an inventory of certain types of by-products arising at forest depots, sawmills and timber processing enterprises. As a result, if an enterprise producing timber does not use the by-products from the cutting of timber, does that mean that there are no resources? But surely that is a completely incorrect conclusion.

There are other questionable conditions. Thus, if the volume of timber taken out at one depot does not exceed 30,000 cubic meters, if the enterprise produces less than 10,000 cubic meters of sawed material or if it produces carpentry products valued at less than R1 million, then the by-products are considered economically inaccessible. But surely such limitations have nothing to do with the actual situation. Such a means of calculation leads to manifest losses of valuable raw materials. In some regions, particularly in those not having large timber resources, all by-products may become accessible, including those accumulating at small enterprises.

The existing system of inventorying timber has not been standardized at all, and today not a single sphere of economic activity can get along without standardization. It is still not clear what should generally be considered to be timber

by-products. In 1980, to be sure, there appeared the technical administrative provisions "Timber By-Products (TU 13-539-80) approved by the USSR Ministry of the Timber, Pulp and Paper, and Wood Processing Industry. But for unknown reasons, not included in the provisions were such important resource types as stumps and roots--by-products arising in the sanitary clearing of of forests and in producing wood-fiber materials.

The report according to form 2-VR on the use of production by-products, incidental products and secondary raw materials suffers from serious shortcomings. Here it is impossible to understand what is included in the concept "by-products in timber production." It is known that where timber is produced, there are, besides sawdust, scraps and branches, trunk fragments and fallen limbs, and needles and leaves. But they are not even mentioned in form 2-VR.

Using the example of the LiSSR, one can judge the extent to which the statistical accounting distorts the real picture of the use of timber by-products. There is considerable timber produced in the republic every year. In addition, it is brought in from other economic regions. Calculations show that at the current level of consumption, as much as 2 million cubic meters of by-products occur, including 1.2 million cubic meters in the wood processing enterprises and 800,000 cubic meters where the timber is produced. It is known from statistical reports that there are just 650,000 cubic meters of such by-products, including 40,000 cubic meters where the timber is produced. Thus only one-third of the available by-product resources is being counted. Apparently, the situation is about the same in regard to the amount inventoried in the country as a whole.

The situation is not better with respect to the use of timber by-products. To be sure, a significant part is used in one way or another as bedding for cattle in agriculture, in the production of consumer goods and in the form of firewood and other fuels. But as a secondary technological raw material in the LiSSR, only 250,000 cubic meters of timber by-products is used, 12 percent of the available resources. In regions where there is little timber, of course, this index should and may be significantly higher.

Many wood sheets are produced in the republic, and there is a hydrolytic enterprise and a cellulose factory. They could produce up to 1 million cubic meters of secondary raw materials annually. However, only the hydrolytic plant and a small shop making wood-fiber sheets use them. Overall, in the production of wood sheets, by-products comprise 18 percent of all raw materials used, and they are not used at all in the paper-pulp enterprises. Meanwhile, there are sufficient resources of that raw material and they can be brought into use if that business is put on a truly planned basis and converted into an inseparable part of national timber production.

The distribution of timber by type, including by-products, is carried out departmentally by the Gosplan of the USSR. For specific types, as a rule, this work is performed with no analysis of the territorial distribution of the direct consumers and the possibilities for a complex use of resources. The republics of the Union appear only as consumers. The complexity of consumption, the entire productive output by republic and economic region, and the reserves

for increasing this level through interdepartmental cooperation and combining are all factors that are practically not being considered. And such information does not exist, for there is still no working up of territorial balances of the actual use of timber, no complex balances which would include the sources of all types of raw materials and other materials as well as all consumers.

Planning the supply of timber, including the use of wood by-products, is based on the so-called "planned circle," when a limited number of enterprises of a certain branch is taken as the source of raw materials. For example, the "planned circle" in the LiSSR extends only to enterprises in the microbiological industry. As a result, for example, the Kazlu-Rudskiy experimental combine for wood products, manufacturing board from wood shavings and fully able to process its own by-products from its sawing operations, is required to furnish them to the Kedaynyayskiy biochemical plant for the production of fodder yeast. Also brought here are wood by-products from the Klaypedskiy combine for wood products, which itself is able to utilize by-products available not only in Klayped but in the entire vicinity as well. That would benefit everyone--suppliers and consumers. The combine, however, is required to give up its secondary raw materials and bring in technological wood materials from other regions.

The irrational and artificial transfers cost approximately R100,000. Such use of secondary raw materials results not in an advantage but a disadvantage. Obviously, however, there is little thought in Soyuzglavles about the consequences of such planning. Although there are unused resources of secondary timber materials in the LiSSR, Soyuzglavles is planning the shipment of wood by-products of Lithuanian enterprises from Kaliningrad Oblast, Latvia and even Karelia to the Kedaynyayskiy biochemical plant, for example.

We believe that this would not be the case and the situation in regard to the use of wood by-products would improve if the responsibility for the rational use of secondary wood resources were given to the territorial organizations for the supplying of timber, the Gosplans of the republics. In our opinion, it is expedient for the Gosplan of the USSR and Soyuzglavles to deal with the distribution of secondary raw materials among the republics and to control the situation at the sites.

To a significant degree, the mobilization of the resources of wood by-products is made difficult by the fact that enterprises in many ministries and departments are involved in wood processing and sawing operations. The result is that today most consumers receive round timber instead of the necessary sawed materials. The USSR Ministry of the Timber, Pulp and Paper, and Wood Processing Industry should take upon itself the centralizing of sawing operations, organizing that activity on an up-to-date level. That has not yet been done, and a significant part of secondary raw materials is being lost because of the primitive organization of the work.

In the LiSSR alone, there are, along with large-scale enterprises working at half capacity, more than 1,000 temporary sawmills. They can be shut down today and this work can be concentrated in large enterprises. For this purpose,

it is not even necessary to expend additional sums. On the contrary, a significant economy of labor and raw materials will be attained, simultaneously solving the problem of collecting the by-products.

Solving the problem of using the by-products of timber production is more complicated. The fact is that there is a considerably greater expenditure of labor in providing by-products and "low-value" wood than that initially employed in production. For this reason, those producing timber and seeking to fulfill the productivity plans and meet the planning prime cost are forced to leave not only by-products but also much valuable wood in the clearings.

It is perfectly understandable that these resources of timber raw materials can become accessible only as a result of a fundamental change in the system of planning timber production and a change in the prices for timber products. Despite the fact that prices were revised last year, they still do not reflect socially necessary expenditures, they encourage the primary selection of conifers and hinder an improvement in forest composition. It is necessary for the labor of those producing the timber to be paid for in prices that consider the quality of timber materials.

It is very important that the organizations involved in providing timber become interested in the further increase in the production and processing of secondary timber raw materials. The territorial organizations of USSR Gossnab that are based on economic accountability have no income from the sale of timber by-products and they have no material responsibility for their irrational use. Here the principle of economic accountability should come into play fully. It is quite possible that the experience of "Vtorchermet," "Vtortsvetmet" and other organizations involved in the production of secondary raw materials will help to cope with this problem.

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