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CONTENTS

MAJOR CROP PROGRESS AND WEATHER REPORTING

GRAIN DRYING CONCERNS IN KUYBYSHEV OBLAST REVIEWED

Moscow TRUD in Russian 3 Jul 83 p 1

/Article by N. Senchev, Kuybyshev Oblast: "Absence of Grain in the Granaries"/

/Text/ A rich harvest is ripening on the fields in Kuybyshev Oblast. However the farmers with whom we discussed the approaching harvest work were extremely guarded in their forecasts. There was some basis for this. The prolonged rainfall had aroused considerable concern. The grain crops, which had received an abundant amount of moisture, grew rapidly and had lodged on many tracts. They will be difficult to harvest.

But this was not the chief reason for concern.

"In order to harvest the crop completely under current conditions" stated the 1st secretary of the Bezenchukskiy Rayon Party Committee F. Yemel'yanov, "as never before, a requirement exists for efficient and continuous operation of the grain drying units. This is our rear service. We are devoting a great amount of attention to it throughout the rayon."

How strong is this rear service throughout the oblast as a whole? Such was the question we addressed to the chief of the farming department of the oblast agricultural administration I. Popov.

"Of 400 farms" stated I. Popov, "only 80 have Mark KZS-20 and KZS-40 plant dryers. In addition, there are 70 outdoor units and 42 forced ventilation hoppers. This equipment is capable of processing 12,000 tons daily. And the working plan for the busy harvest period calls for a daily grain yield for the oblast of not less than 130,000 tons."

As you can see, the productivity of the harvesting detachments does not conform to the potential of the drying equipment. What will be the result of this?

"We are hoping for dry weather. Otherwise the tempo of the harvest work will be artificially slowed down" explained I. Popov, "we can see no other alternative."

The far-sighted leaders of kolkhozes and sovkhozes in the Volga region have for a long period of time been discussing the backwardness of the drying and warehouse economy. Nor have they been merely discussing it, but rather they

have been taking certain actions and improving and strengthening the rear service, relying mainly upon their own resources. In Klyavlinskiy Rayon, for example, 18 outdoor dryers were built and prepared for operation. Eighteen and there are only 70 in the oblast! Thus it turns out that there are only a few in the other rayons. Does this not testify to the foresight of some and to the indifference of others?

"But the problem is not simply one of indifference!" such was the statement made in the oblast agricultural administration, "in order to erect even the simplest of outdoor dryers, a search involving an incredible amount of difficulty must be undertaken for materials. One may succeed in accomplishing this and another will not."

It is truly not all that simple to obtain funded materials. However, with valid computations at hand, one can and should submit them to the council of the oblast agroindustrial association and to the organs of logistical supply. But the fact of the matter is that such computations simply do not exist. Moreover, discussions regarding the weakness of the grain drying base do not go beyond the departments of the oblast agricultural administration and arise only on the eve of the busy harvest period, when thunder is already literally bursting forth over the fields.

What is the reason for such an indifferent attitude? Could it be that all hope rests with enterprises of the oblast's grain products administration? They made good preparations for accepting the new harvest, they modernized the weighing equipment and unloading platforms and they increased the drying capabilities. But even assuming extremely efficient work, the grain receiving points are unable to dry more than 45,000 tons of grain daily. Hence, even hope placed in them is weak.

"It is economically unprofitable for the kolkhozes and sovkhozes to deliver sub-standard grain to our enterprises" stated the deputy chief of the grain products administration V. Rogachev, "For each ton of dry and cleaned grain, we extract from them a payment of from 2 to 4 rubles depending upon the annual conditions. However the economic executives are not taking this fact into account. It is all in vain. Each year the kolkhozes and sovkhozes must pay several millions of rubles for our services. And they are not so rich as to be able to afford such costs."

In just a few days, hundreds of harvesting detachments will move out onto the fields in Kuybyshev Oblast. There is still time to correct the problems on the grain threshing floors and thus make the harvest work less complicated and less difficult.

7026
CSO: 1824/547

MAJOR CROP PROGRESS AND WEATHER REPORTING

KUYBYSHEV OBLAST HAY PROCUREMENT PROBLEMS REVIEWED

Moscow SOVETSKAYA ROSSIYA in Russian 28 Jun 83 p 1

/Article by A. Bochkarev, Kuybyshev Oblast: "Hay Perishes in the Windrows"/

/Text/ It has been many years since such a rich stand of grass has developed in Kuybyshev Oblast. A fine opportunity exists this year for creating a one and a half to two year supply of hay, haylage, vitamin meal and granules. At the present time, everything is dependent upon good organizational ability and harmonious operations by the feed procurement specialists. Unfortunately, the oblast's month's campaign, announced on 1 June, for procuring feed is clearly not being carried out at the rate expected.

The consciences of the leaders and specialists at the Kolkhoz imeni Kalinin in Kinel'Cherkasskiy Rayon must be bothered by the dozens of hectares of blackened windrows of hay which perished as a result of rainfall. The Kolkhoz imeni XXII S"yezda KPSS is awaiting the arrival of stable and dry weather. At the Kolkhoz imeni Gor'kiy, the laying in of haylage and forced ventilation for the hay have still not been organized.

Hay procurements are being carried out at very slow rates not only in Kinel'-Cherkasskiy but also in Isaklinskiy, Chelno-Vershinskiy and Sergiyevskiy Rayons. For the oblast as a whole, considerably less feed has been procured than originally planned, owing to the backward farms and rayons.

Commentary by the deputy chief of the Main Agricultural Administration for the Volga region, V.F. Davydov

Last year the farms in our region increased considerably their hay procurements -- by 660,000 tons. Nevertheless, straw, the biological value of which as is well known is incomparably less, constituted 60 percent of all coarse feed last winter. This year we wished to increase the proportion of hay in the rations and it bears mentioning that on the whole the farms have prepared their equipment well for the haying period. And the grasses in all areas, with the exception of Astrakhan Oblast and the Kalmyk ASSR, are in fine condition. However, as yet satisfactory results have been achieved only by the workers in Volgograd Oblast.

All of the other oblasts, especially those to the north, are lagging behind and to a considerable degree. This gap is only partially explained by the

difference in climatic conditions. In Saratov Oblast, for example, the mowing machines were moved out onto the meadows in a timely manner and in terms of the dimensions of the mown areas the workers here are not lagging behind the Volgograd workers. However the amount of hay being obtained here is two times less. Why is this? The man-power from the city was late in arriving and a day's delay during the busy harvest period often results in tremendous losses. In short, the torrential rainfall deluged the hay in the windrows. And not just on individual tracts but rather on many thousands of hectares. Meanwhile the oblast does not have sufficient silage and haylage storehouses and it is lacking 60 percent of the hay storehouses required.

Owing to the rainfall, a driving rainfall in some areas, a difficult situation has developed in almost all areas and in all areas there is a shortage of barns having forced ventilation and also sheds: they are being built unwillingly, with the exception of Astrakhan Oblast, the plan for placing feed storehouses in operation is not being fulfilled. At the present time, attempts are being made on the farms to correct the problems and yet mistakes made during construction are not readily or rapidly corrected. A chief concern at the present time is that of countering the inclement weather with maneuvering of the equipment and a high organizational level. In Bazarno-Karabulakskiy Rayon, for example, they adapted windrow harvesters for the carrying out of mowing and spreading work and thus the grass dries more rapidly. We are striving to disseminate this experience as extensively as possible. Thousands of written off grain harvesting combines have been rebuilt, using the resources of local experts, to serve as feed harvesting machines and many home-made stack-formers have been produced. A number of other measures have also been undertaken.

7026
CSO: 1824/547

MAJOR CROP PROGRESS AND WEATHER REPORTING

DELAYS IN GRAIN HANDLING AT ELEVATORS DISCUSSED

Moscow SOVETSKAYA ROSSIYA in Russian 14 Aug 83 p 1

/Article by A. Bochkarev, Kuybyshev Oblast: "Traffic Jams At An Elevator"/

/Text/ On the eve of the harvest campaign the director of the Kuybyshev Elevator, D.V. Maslov, issued a report concerning its complete readiness for receiving a large amount of grain. He gave his word: that the machines would not have to lie idle for even one extra minute at the gates waiting for the grain to be offloaded. The leaders of the Central Volga Transport Administration issued a report on the high organizational readiness of the motor transport equipment to be used for the centralized transporting of grain in accordance with the schedules agreed upon earlier. But once a large quantity of grain arrived -- all of the assurances and promises remained on paper.

Dozens of heavily laden Maz, KamAZ, Kolkhid and KrAZ trucks towing similarly loaded trailers had to remain in line at the gates to the elevator not for minutes but rather for long hours.

"Yesterday I arrived here at 9:30 am" stated driver S. Chobanyan, evidently exhausted from waiting, "and I was not unloaded until 7:30 pm. I tried to break through the line and for my trouble two warnings were punched on my card. I do not know how it will be today; I have already been waiting in line for 2 hours..."

"In the rayons, lines are also forming at the threshing floors" stated the driver of a neighboring truck, A. Chesayev, as he joined in the conversation, having just delivered grain from Koshkinskiy Rayon, "Yesterday, at 7 am, we delivered reinforced concrete slabs to the Burevestnik Kolkhoz from Zhigulevsk using 20-ton MAZ trucks. And it was not until midnight that we were able to load the grain. We had to find out for ourselves where the grain was to be obtained -- in all of the Burevestnik brigades and at the Kolkhozes Chapayev and Krasnyy Bogatyr'".

An entirely different picture is revealed when one glances through the weight entries at the elevator: they indicate that at no time were the trucks delayed for more than a half hour waiting to be loaded or for 15 minutes waiting to be unloaded -- thus all responsibility for the many hours of idle time had to be borne by the drivers.

"We actually do not consider them guilty in this regard" stated the chief of the center for controlling shipments of the Central Volga Transport Administration, whose truck stands at the gates of the elevator, A. Ponamarenko, "We do not hold them accountable. The losses sustained as a result of the idle time are borne by the transport administration and all are considered to be guilty: the elevator, the rayon harvest staffs and the transport workers. Certainly, we lack proper interaction. The schedules and work plans prepared in advance remained for all practical purposes on paper.

Yes it was precisely because of an absence of interaction that there were days during which the Kuybyshev Elevator was unable to accept as much grain as it was capable of handling. Meanwhile, the long line of motor vehicles at the gates of the elevator continued, vehicles carrying the gaudy inscriptions on their sides: "A green light for the 1983 harvest!"

The priorities for delivering the grain of the various crops to the elevator were not well thought out. Rye alone was shipped in simultaneously from nine rayons which supply Kuybyshev with grain. An unexpected development: at the elevator there was only one lifting mechanism for rye and there was a tremendous amount of work available for it. Meanwhile, all of the other mechanisms were inactive. Unfortunately, somebody blundered and, as a result, a shovel found its way into the mechanism along with the rye -- the lifting mechanism broke down and was idle for several hours; the drivers spent the night at the elevator, with their vehicles blocking the access roads and neighboring streets.

Similar situations developed in the case of barley, peas and wheat. For all practical purposes, the flow of grain was very poorly administered. On paper it appeared that everything was being done as planned: the rayon staffs submitted orders in advance for the following day -- how much and what kind of grain was to be delivered to the elevator and the center for coordinating shipments coordinates these orders with its potential and introduces the appropriate corrections. Actually however, the preliminary computations more often than not are not taken into account. As the saying goes, each performs in accordance with the given situation.

The containers set aside for the rye have already been filled to overflowing and the rye must be shipped on an urgent basis. The Administration for the Kuybyshev Railroad has made available five times fewer freight cars than the figure called for in the schedule. The mixed feed plant had too much material on hand: it had no place to store its grain and in the meantime two heavily-laden barges had approached its moorings. These barges were 2 months late in delivering the grain from some southern point.

Warm and dry weather has finally arrived in the Volga region. The flow of grain is increasing with each hour and a maximum amount of organizational ability is required in order to ensure that no traffic jams develop along its route.

7026
CSO: 1824/547

VOLGOGRAD OBLAST GRAIN HARVEST SHORTCOMINGS SCORED

Moscow IZVESTIYA in Russian 31 Jul 83 pp 1-2

/Article: "Grain From the Shores of the Volga"/

> /Text/ The machine operators in the Volga region are carrying out their harvest work on 14.3 million hectares of fields. Grain is to be found in a majority of the rayons. And it must be harvested down to the last ear. This is not an easy task: much of the grain has lodged or become entangled and rain is falling in some areas. It is not our intention today to discuss in detail the harvest work in the Volga region. These are simply reporters' notes which were available in the Editorial Office at the time this issued was prepared.

Volgograd. Ten days ago a team from IZVESTIYA commented upon the highly organized work being performed by non-schedule teams and the efficient rhythm of their work on the fields in this area. At the present time however, rain has been falling for a number of days, rain which was completely unexpected. And shortcomings concealed during preparations for the harvest, similar to a tenacious thistle, have suddenly surfaced.

We are sitting in the field camp of the Pobeda Sovkhoz where V. Aleynikov serves as the director. We stopped here owing to the fact that, while passing by, we happened to notice a low clamp of winter wheat that had become soaked from the rain. We have since been informed that this was seed wheat. Is it possible that they could not find a tarpaulin for covering up this one clamp?

Subsequently we learned from the chairman of the Bykovskiy Rayon Executive Committee V. Lemyakin that not only does the rayon not have one covered threshing floor but, in addition, not one of its clamps is covered by a tarpaulin.

There is still another detail: combine operators drawn from the city are working on farms in the rayon. They drew our attention to the fact that our "own" machine operators are being provided with equipment that was prepared in a normal manner while the combine operators from the city are being provided with junk. Moreover, this equipment requires large expenditures of labor for repair work and adjustments. Nevertheless, the machines still operate poorly and losses ensue, losses which the workers bitterly resent.

It bears mentioning that this current year has by no means been a bad one for the rayon. The yields for all of the grain crops (according to computations made within the rayon itself) must reach 15.4 quintals per hectare in order to ensure fulfillment of the state plan for grain sales to the state. Prior to the rainfall, an average of 13 quintals was being obtained. This is close to the goal. The plan can be fulfilled. But this requires improvements in two traditionally backward sovkhozes -- Primorskiy and Proleyskiy. All defective items of equipment must be placed in proper working order and certainly the thousands of tons of threshed grain must not be allowed to be exposed to the rain.

There are such rayons in the oblast, for example Mikhaylovskiy Rayon. We agree that the land here is better and hence the yields are higher -- winter wheat furnished an average of 33.8 quintals per hectare and spring rye -- 25.5 quintals. On some farms (Rassvet and Krasnyy Partizan Kolkhozes), yields of 43.7 and 39.5 quintals per hectare were obtained respectively. Could it be that more grain was accumulated? No, the grain simply was not left exposed to the rain: almost every farm has several covered threshing floors. And in those areas where there are not covered threshing floors, the grain is quickly delivered to granaries or rapidly shipped to the grain receiving points.

The harvesting of early grain crops is coming to a close in Volgograd Oblast; only 18 percent of the grain fields remain to be cut down. On 27 July, 1.93 million tons of grain were sold to the state. The possibility exists of confidently fulfilling the plan for selling grain to the state. But the prerequisites are also at hand for the disruption of this plan. Too much grain has accumulated on the threshing floors.

7026
CSO: 1824/547

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

GRAIN SALES CONTINUE--Chimkent Oblast--This year the grain harvesting rates for Sayramskiy Rayon are considerably higher than those for past years. As of this date, the mowing work is ahead of schedule by 5,000 hectares and for grain sales to the state -- by 28,000 tons. The yield is very gratifying: each hectare is producing an average of 22 quintals, or 4.5 quintals more than the plan. There is every reason to believe that the 4 year plan for grain will be fulfilled during just 3 years of the five-year plan. Many kolkhozes and sovkhozes have already overfulfilled their planned tasks for grain deliveries. The entire rayon has fulfilled the plan. The sale of grain to the state is continuing. /by A. Subbotin, 1st secretary of the Sayramskiy Rayon Committee of the Communist Party of Kazakhstan, Chimkent Oblast/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 12 Jul 83 p 1/ 7026

FINAL HARVEST STAGE--Chimkent Oblast--The harvest work being carried out on the fields in Chimkent Oblast has entered its final stage. The grain has been harvested from the plains and now in the evenings, as the intolerable heat abates somewhat, hundreds of motor vehicles together with their repair, dispatcher and domestic services are moving up into the zone's foothills. Six rayons have already fulfilled their grain sales plans ahead of schedule and now, with no slowdown taking place in the tempo, are continuing to ship grain to the procurement points. Here it is important to emphasize that their farms have been supplied fully with seed and forage grain. The farmers cultivated their grain under complicated conditions. They were aided by good agricultural practices, the skilful selection of locally bred varieties and efficient organization of the harvest work. These were precisely the factors which enabled the Saryagach farms to over-fulfill their grain sales plan by 38,000 tons. Success is being achieved in Lengerskiy, Sayramskiy and Tyulkubasskiy Rayons, where each hectare of non-irrigated sowing is producing 23-26 quintals of grain. Kazakhstan grain is being delivered to the state's granaries. /by A. Utyaganov/ /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 19 Jul 83 p 1/ 7026

EARLY GRAIN HARVEST--Algabasskiy Rayon, Chimkent Oblast--The grain fields in Algabasskiy Rayon are for the most part located in piedmont and mountainous zones. Thus the harvesting of grain crops usually commences and ends here later than in other rayons. But this year the Algabasskiy farms were considerably ahead of many of their neighbors in the cutting and threshing of their grain crops. The harvest work has been completed in all areas with the exception of the Aktas Sovkhoz, which is situated high in the mountains. "This year" stated the 1st secretary of the rayon party committee I. Tursunkulov,

"our grain ripened somewhat earlier. The farmers were fully prepared for the busy harvest season and during the grain campaign they displayed enviable diligence and persistence. The accelerated tempo of the harvest work was promoted by a high level of organization, the extensive use of the large-group method of equipment operation and by skilful maneuvering of the equipment." At the present time, the work has shifted to the threshing floors. Hence clean grain is being made available for seed purposes and forage is being shipped to the grain receiving points. The workers in Algabasskiy Rayon have already supplied the state with more than 60,000 tons of grain, against a plan calling for only 54,500 tons. /by Yu. Livinskiy/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Jul 83 p 1/ 7026

INTENSIVE VARIETIES--Chimkent--The oblast's grain growers, who have completed laying in their seed for winter and spring grain crop sowings, showed a preference for varieties which are very generous during this current year, marked as it is by complicated weather conditions. All 108,000 tons of the oblast's seed are for intensive varieties. "For a long period of time we were unable to find a barley variety for use on non-irrigated land which was equal in productivity to Bezostaya-1 wheat" stated the deputy chief of the oblast agricultural administration A. Sal'nikov, "Today this problem has been solved. We are now using the recently regionalized Zavet barley. At a number of piedmont farms in Lengerskiy, Sayramskiy and other rayons, this variety has produced a grain yield this year of 35-50 quintals per hectare. The sovkhozes and kolkhozes have laid away one and a half times more seed for the sowing of this valuable variety -- for the entire area of irrigated land. The scientists at the Krasnovodopadskaya Plant Breeding Station, which is located in the oblast, have presented the grain growers with the required varieties. The yield being obtained from the Yuzhnokazakhstanskiy-43 barley variety bred by them, from hard non-irrigated land, is higher by a factor of 5-6 than that obtained from the prececing variety. Ten times more seed has been procured for the autumn planting of the grain fields than was the case 1 year ago. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 3 Aug 83 p 1/ 7026

MASS GRAIN HARVEST--Dzhambul Oblast--Grain crops have been planted on more than one half million hectares in Dzhambul Oblast. The mass harvesting of grain crops is in progress on all of the farms. The grain has already been harvested from one half of the areas. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 17 Jul 83 p 1/ 7026

FINE GRAIN HARVEST--Dzhambul Oblast--The workers in Dzhambulskiy Rayon, who must harvest grain crops on an area in excess of 30,000 hectares, were the first in the oblast to commence the harvest campaign. Despite the dry spring and the hail which fell at the beginning of summer, a fine crop has developed here -- the rayon plans to obtain an avererage of 14 quintals of grain per hectare. Approximately 38,000 tons of grain will be delivered to the state. This is considerably more than the amount called for in the plan. "Although the weather did not indulge our kray" stated the 1st secretary of the Dzhambulskiy Rayon Party Committee T. Musraliyev, "the grain this year has nevertheless turned out to be quite good. This is the result of concern being displayed for the land: efficient organization of the sowing and field operations and thorough tending of the crops." However, some farms are displaying unjustified sluggishness in organizing the harvest work. Poor

preparations were made for this work at the kolkhozes imeni Amangel'da and Kzyl-Oktyabr' and at the Pioner Sovkhoz. Here the people's controllers uncovered considerable grain losses caused by poor quality adjustment of the units. Several combines at the mentioned farms had not been prepared whatsoever for the harvest campaign. The harvest operations throughout the oblast are increasing in tempo. The Dzhambul workers have responded in a warm manner to the appeal made by the workers in northern Kazakhstan. The party and soviet organs and the leaders of farms are undertaking urgent measures aimed at carrying out this important agricultural campaign as rapidly as possible and without losses and supplying the homeland with more grain. /by A. Korsunov/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 1 Jul 83 p 1/ 7026

GRAIN PLAN OVER-FULFILLED--Dzhambul, 25 Aug--The farmers in Dzhuvalinskiy Rayon have pleased the homeland by supplying it with high quality grain. Under conditions of non-irrigated farming, they have obtained 22.6 quintals of grain from each hectare of piedmont field. The fine harvest made it possible to ship more than 81,000 tons to the state granaries, against a plan calling for only 40,500 tons. The plan for 3 years of the 11th Five-Year Plan has been over-fulfilled. /by A. Iseyev/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 26 Aug 83 p 1/ 7026

GRAIN SALES TO STATE--Dzhambul, 5 Aug--On the whole, the farms in Dzhuvalinskiy obtained an average of 22 quintals of grain per hectare from their mountain fields, which occupy 49,000 hectares. This made it possible, instead of 40,500 tons according to the plan and 42,000 tons according to their obligations, to sell 68,000 tons of wheat and barley to the state. The sale of grain is continuing. /by A. Iseyev/ /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 6 Aug 83 p 1/ 7026

HARVEST RHYTHM INTERRUPTED--Dzhambul Oblast--The harvest campaign is coming to an end on the fields in Dzhambul Oblast. More and more farms are reporting that they have completed their harvest work. This work turned out to be quite difficult in such large grain rayons of the oblast as Lugovskiy, Chuyskiy and Kurdayskiy. Here the grain was undersized and difficult to harvest without sustaining losses. And the fields in Dzhuvalinskiy Rayon are located for the most part in foothills. Thus the harvest work commenced here 2-3 weeks later than in other rayons. But nevertheless the grain turned out to be excellent. However, the work is not proceeding successfully in all areas. The workers attached to the Grain Products Administration made very poor preparations for accepting the grain. They were obviously not expecting a large harvest. Quite often the motor transport vehicles were delayed for many hours at the receiving points. Driver V. Dotsenko, who had brought grain to Dzhambul from the Sovkhoz imeni K. Marx, showed me an entry on his bill of lading which indicated that he had lost more than 9 hours waiting on line at the elevator. The chief of a detachment of Motor Vehicle Column No. 2614 G. Sevast'yanov and his drivers, who had come to provide assistance for the Dzhuvalinskiy grain growers, addressed another complaint against the association. Many of the detachment's vehicles were heavy cargo trucks. However the Burnenskiy Grain Receiving Point was not prepared to service such machines and thus they had to be transferred to Dzhambul. Nor could the grain convoy be accepted here, but rather it had to be redirected to the Maldybayskiy point. It thus had to travel

170 kilometers in all and even at this latter point it was not unloaded rapidly. A lifting mechanism at the point had broken down. The motor vehicles had to be unloaded manually. Similar organizational problems had a grave effect on the rhythm of the harvest work being carried out in the rayon. The workers attached to the oblast's grain products administration must undertake urgent measures aimed at eliminating work stoppages at their enterprises. /by A. Korxunov/ /Excerpts/ / Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 24 Jul 83 p 1/ 7026

RIPENING OF GRAIN--Taldy-Kurgan Oblast--The grain fields in the Semirech'ye region occupy more than one half million hectares. On some tracts the ears have already formed and ripened. The farms located along the lower reaches of rivers were the first to commence their harvest work. The farms in Aksuskiy Rayon, the grain fields of which comprise 45,000 hectares moved their combines out onto the fields immediately following the Dzhansugurov workers. /by G. Belotserkovskiy/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 9 Jul 83 p 1/ 7026

50 QUINTALS PER HECTARE--Taldy-Kurgan, 9 Aug--The harvesting-transport detachments continue to move higher up into the mountains as the grain crops ripen. Seventy percent of the grain crops have already been threshed. Grain from the new crop is being shipped to the elevators. More than 50 quintals per hectare are being obtained from some irrigated tracts and from non-irrigated land -- 20 quintals. The grain growers in Aksuskiy Rayon are in the first ranks of the competition. More than 22,000 tons of grain have been delivered to granaries of the homeland. The farms in Taldy-Kurganskiy, Akakul'skiy and Kirovskiy Rayons are successfully carrying out their grain sales to the state. The slogan of the grain growers in the Semirech'ye region -- to supply the state's granaries with as much grain as possible. /by V. Shingarev/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 10 Aug 83 p 1/ 7026

RAISED GRAIN OBLIGATIONS--Taldy-Kurgan, 22 Jul--The mass harvesting of grain crops commenced in the oblast's northern rayons immediately following the southern rayons. Approximately 2,000 combines are presently carrying out work around-the-clock out on the fields. Dozens of farms in Kirovskiy, Kapalskiy, Kerbulakskiy and other rayons have undertaken raised obligations with regard to the sale of grain to the state. /by M. Davidovich/ /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 23 Jul 83 p 1/ 7026

HOT, DRY WEATHER--Taldy-Kurgan Oblast--Very hot and dry weather prevails throughout the rayon this year. In order to obtain a good yield of grain corn, all of the agrotechnical measures must be carried out as part of an overall complex of measures. /by S. Mirzoyev/ /Excerpt/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 20 Jul 83 p 1/ 7026

MASS GRAIN SALES--Taldy-Kurgan--The farmers in the Semirech'ye region have commenced their mass selling of grain to the state. Yesterday, motor vehicle trains loaded with wheat began traveling between the points and the elevators on the basis of hourly schedules. /Text/ /Moscow TRUD in Russian 17 Jul 83 p 1/ 7026

GRAIN PLAN FULFILLED--Aksuskiy Rayon, Taldy-Kurgan Oblast--The farmers in Aksuskiy Rayon were the first in the Semirech'ye region to fulfill their plan for selling grain to the state. They have shipped 17,000 tons of grain to the elevators and they are fully resolved to more than double their annual task. The rayon's grain crops were harvested very rapidly -- within 10-12 days -- and this made it possible to reduce losses to a maximum. The large-group method of equipment utilization was employed on all of the farms for carrying out the harvest work. Seventeen mechanized detachments were used. The grain shipments were organized using the multiple-trailer method. /by G. Belotserkovskiy/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 27 Jul 83 p 1/ 7026

FEED PROCUREMENTS--The republic's agricultural workers are presently engaged in procuring feed and preparing for and harvesting their crops at a high tempo. At the same time, the farms in the southern oblasts -- Alma-Ata, Dzhambul and Chimkent -- have commenced mowing their grain crops. More than 480,000 tons of grain have already been obtained. Since the beginning of the green harvest season, 4.67 million tons of hay and 1.53 million tons of haylage have been procured and 60,000 tons of grass meal produced. The plan for procuring haylage has been fulfilled by farms in Dzhambul, Chimkent and Karaganda Oblasts. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 18 Jul 83 p 1/ 7026

A FINE GRAIN CROP--The grain fields in Dzhambulskiy Rayon are the largest in Alma-Ata Oblast -- 126,000 hectares. They consist for the most part of non-irrigated land. But this year a fine crop has developed. To obtain an average of 11 quintals of grain per hectare -- such is the goal undertaken by the farmers. The initial tons of grain have already been delivered to the Kopinskiy Elevator. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 16 Jul 83 p 1/ 7026

MASS GRAIN HARVEST--Mass harvest operations are underway on the grain fields in Alma-Ata Oblast. The flow of motor vehicles loaded with grain of the new harvest to the grain receiving enterprises is increasing with each passing day. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Jul 83 p 1/ 7026

GRAIN HARVEST NEARING COMPLETION--Chimkent Oblast--The harvesting of grain crops is nearing completion in southern Kazakhstan. A fine harvest is at hand and the oblast's farmers are devoting all of their efforts towards harvesting it as rapidly as possible and without losses. At the present time the mowing and threshing of the grain crops are being carried out on high mountain tracts and the center of the tense work has shifted to the threshing floors. From here the clean grain is being shipped to the state's granaries. This year the highest yield has been obtained by the grain growers in Tyulkubasskiy Rayon. They have obtained almost 27 quintals of grain from each of 23,000 hectares. This year all of the harvesting-transport complexes in the rayon were operated in an efficient and harmonious manner. Whereas earlier the farms experienced a shortage of combine operators and as a result the harvesting periods were prolonged and losses were sustained, this year the harvesting units were fully staffed using graduates of machine operator courses undertaken at a base of the Vannovskiy Hydrotechnical Amelioration Technical School and the rayon association of Goskomsel'khoztekhnika. The successful carrying out of the harvest work was also promoted by the introduction in all areas of a dispatcher service, the skilful maneuvering of equipment and the broad scope of the

socialist competition for work rates and quality. All of this made it possible for the region's farmers to be among the first to cope with their obligations for selling grain to the state. They have already delivered more than 35,000 tons of grain to the granaries, or one and a half times more than the figure called for in the national economic plan. A generous harvest is being obtained on farms in Sayramskiy and Lengerskiy Rayons, where the average grain yields amounted to 24.3 and 23.2 quintals per hectare. Both rayons have exceeded to a considerable degree their plans for the sale of grain. The farmers in Leninskiy and Algabasskiy Rayons delivered the greatest amounts of grain to the state. They supplied the granaries with almost 66,000 tons of grain -- 11,000 more tons than the plan called for. /by Yu. Livinskiy/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 31 Jul 83 p 1/ 7026

CITY ASSISTANCE--Kuybyshev Oblast--Generally speaking, the farmers cannot proceed with this year's harvest without assistance from the city-dwellers. At the Burevestnik Kolkhoz in Bogatovskiy Rayon, I attended an operational meeting in which, in addition to the chairman V. Bezgin and the chief kolkhoz specialists, the chief of the Kuybyshev SMU /Construction and Installation Administration/ of the Yugavtomatika Trust V. Gorbenko and the secretary of the party committee V. Kuz'min also participated. Here the representatives from the city and their equipment were combined essentially into one contractual collective, which carries out not only the mowing and threshing on the assigned tracts but also the transporting of the grain using their own resources and also technical and cultural-domestic services for the machine operators. Such teams and detachments of municipal industrial enterprises are presently operating in practically all rayons throughout the oblast. Included among them are harvest veterans. At the large Avangard Grain Sovkhoz in Alekseyevskiy Rayon, a worker from the 4th State Bearing Plant, Nagil Neumetov, has commenced his 17th harvest campaign and Viktor Zamytskiy -- his 12th. These bearing workers have been furnishing assistance to the steppe sovkhoz for more than 10 years and they feel at home here. Thirty of them are working on combines, with the majority being assigned to independent harvesting-transport teams. The harvest campaign in the Volga region has commenced in a harmonious manner. More than 10,000 combines are presently harvesting grain crops on the fields of sovkhozes and kolkhozes. The grain is not being obtained easily -- on many tracts it was unable to withstand the attack by rainfall and wind; it lodged under the weight of unprecedented ears. But the Kuybyshev workers possess both the resources and the potential for harvesting it without losses and honorably passing this test by obtaining a high yield. /by A. Bochkarev/ /Excerpt/ /Moscow SOVETSKAYA ROSSIYA in Russian 9 Aug 83 p 1/ 7026

GRAIN ELEVATOR RHYTHM DISRUPTED--Kuybyshev--The newsreel reporters were surprised somewhat upon arriving to take pictures of the harvest operations in Stavropolskiy Rayon. But how could the desired pictures be taken? Where was the familiar and oft-printed scene of a chain of combines? Where were the uniformly parallel windrows, so dear to the hearts of movie-goers? What is going on out there? The combines are moving lengthwise and crosswise and even diagonally, they are slewing about at the midway point in a plot and changing their courses sharply. Is this an indication of disorganization or lack of skill? To the contrary. The point of the matter is that skilled masters are at work today. The obstinate Volga winds and brief but turbulent thunderstorms

have scattered, twisted and pressed the full-grown and rich grain to the ground. So as not to lose their grain, the personnel behind the steering wheels are looking in all directions as they maneuver their machines and invent various technical tricks while moving. They must harvest this difficult wealth from this year's generous land. And one must be a skilled expert to obtain 28 quintals of grain from a hectare of lodged grain crops, as is presently being done on the average in Stavropolskiy Rayon. Over the past several years, the best yields have been obtained by the Kuybyshev grain growers. At the present time, for the oblast as a whole, only slightly more than 21 quintals of grain are being obtained per hectare, but as yet the grain crops have been cut down on only 3 hectares out of every 10 and the grain growers have sold roughly only one eighth of the planned amount of grain to the state. Thus it turns out that the chief work still lies ahead. And during the course of this work the initial mistakes must be taken into account. The schedules for accepting the grain have been disrupted at the elevators in Tomylovo and Chagre and, as a result, the tails of long motor vehicle lines have appeared. The procurement specialists it turns out were correct in their thinking: they stated long ago that they should not be given a large quantity of winter wheat and simultaneously -- rye, peas and barley. It is difficult to accept four crops all at once. But perhaps all of this could be foreseen and measures taken to correct the situation. /Text/ /Moscow IZVESTIYA in Russian 31 Jul 83 p 1/ 7026

VOLGA GRAIN HARVEST--Ulyanovsk--Yesterday the farmers in the central Volga region commenced harvesting their grain crops. More than 7,000 combines and thousands of harvesters and motor vehicles have been moved out onto the fields. Five Hundred and forty harvesting-transport complexes have been created. The grain crops must be cut down and threshed on an area in excess of 1 million hectares. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 27 Jul 83 p 1/ 7026

IPATOVO METHOD EMPLOYED--Ulyanovsk--The workers on farms in the central Volga region have commenced harvesting their groat crops. The mowing and threshing of buckwheat and millet were carried out by 540 harvesting-transport complexes using the progressive Ipatovo method. Under unstable weather conditions, the direct and two-stage harvesting methods will aid in shortening the harvesting periods and delivering all of the crops grown to the elevators. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 25 Aug 83 p 1/ 7026

ULYANOVSK OBLAST GRAIN PLAN--Ulyanovsk--Two harvest campaigns -- feed and grain -- have merged this year on the fields and meadows in Ulyanovsk Oblast. Haying operations are still in progress, silage is being placed in storage, haylage and grass meal are being procured and at the same time the machine operators are displaying haste in their efforts to handle the yellow fields that are ripe with grain. This year there are approximately 300,000 hectares of sown and natural grasses in the oblast which, similar to grain crops, require rapid harvesting and placing in storage. The mowing of these grasses is nearing completion. Various types of forage in excess of 300,000 tons of feed units have been procured. This is more than the figure for last year at this time. But it is not enough for us to become complacent. I would like now to discuss the grain fields. The grain harvest is increasing in tempo with each passing day. More than 1 million hectares of grain crops must be harvested. Winter crops and peas have been cut down on 170,000 of these hectares. As a matter of fact, the harvest work has been in progress for

only several days. The oblast's northern rayons commenced their harvest work only on 28 July. Two thirds of the rayons are selling grain to the state. During the initial days of the harvest, more than 10,000 tons of grain were delivered to the granaries of the homeland. Certainly, this is only the beginning. But the potential is here not only for fulfilling the plans for this year but also for exceeding them. Such are the initial impressions of the grain procurement work being carried out in the Volga region. Here the harvest is generally quite gratifying. But a requirement exists for efficient operations throughout the entire harvesting production line and especially during the final stages, where the fate of the grain crops is decided. /by E. Kondratov, Zh. Mindubayev, O. Pavlov and A. Chemonin/ /Text/ /Moscow IZVESTIYA in Russian 31 Jul 83 p 1/ 7026

GRAIN SALES PLAN OVER-FULFILLED--Ulyanovsk, 24 Aug--The machine operators and drivers of motor vehicle trains in Starokulatkinskiy Rayon have achieved a labor victory in the socialist competition: the annual plan for the sale of grain was over-fulfilled here. The harvesting of grain crops continues. The oblast's farms, having liquidated their indebtedness of past years, intend to sell an additional quantity of grain to the state over and above the figure called for in the task. The field and transport workers of other kolkhozes and sovkhozes in the oblast have supported the initiative displayed by the rayon's leading collectives. /by P. Grigorenko/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 25 Aug 83 p 1/ 7026

GRAIN HARVEST ENDING--Ulyanovsk--The grain harvest is nearing completion on fields throughout the oblast. The farmers in Starokulatkinskiy Rayon were the first to complete this work. They obtained an average of 28 quintals of grain from each hectare. The kolkhozes Kumyak-Kyuch and Berlek obtained even more -- 31-34 quintals. The rayon's farmers have over-fulfilled their plan for selling grain to the state by a factor of 1.5. /by M. Belousov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 2 Sep 83 p 1/ 7026

HIGH HARVEST TEMPO--Volgograd Oblast--The machine operators in Volgograd Oblast are harvesting their crops at a high tempo. The grain crops have been cut down on an area in excess of 1 million hectares -- almost one third of the sowings. The selling of grain to the state has commenced. /by V. Losev/ /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 8 Jul 83 p 1/

DOUBLE SHIFT OPERATIONS--Volgograd, 27 Jul--The young grain growers were authorized to commence mowing their winter wheat on fields in the oblast's southern rayons. The operational rhythm is being set by the members of the komsomol youth team of V. Kusakin of the SOVETSKAYA ROSSIYA Sovkhoz. The grain has developed well here despite the drought conditions and intense heat. In the spring the farmers completed their sowing work earlier than usual. The grain crops thrived under the beneficial effects of the May rainfall. And at the present time, all ten teams of this farm, all of which converted over to the non-schedule method of work, are striving to shorten the harvesting periods. All of the units are being operated in two shifts using the group method. The harvesting of the straw, the preparation of the soil for next year's harvest and the tending of the fallow land are actions that are being carried out as part of a single production line. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 28 Jul 83 p 1/ 7026

GRAIN SALES CONTINUE--Volgograd, 9 Aug--The competition aimed at rapidly implementing the plan for selling 3.5 million tons of grain to the state is expanding among farmers throughout the oblast. The workers in Leninskiy Rayon are remaining true to their word. After shipping more than 45 tons of grain to the elevators, they are continuing their grain sales. The field crop growers in Pallasovskiy Rayon have also distinghished themselves; they procured the planned amount of 145,000 tons of grain. This volume includes more than 30,000 tons of strong wheat. /by V. Losev/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 10 Aug 83 p 1/ 7026

GRAIN PROCUREMENT PLAN FULFILLED--Volgograd Oblast--The work being performed by the farmers in Leninskiy and Pallasovskiy Rayons is distinguished by a business-like attitude. They were the first in the oblast to report fulfillment of their grain procurement plan. Today the machines hurrying to the elevators are transporting above-plan grain. The grain growers in Mikhaylovskiy, Staropoltavskiy and Gorodishchenskiy Rayons are fulfilling the first commandment of a grain growers in a responsible manner. Early concern was displayed here for highly productive use of the harvesting equipment and motor transport vehicles, with the farms being equipped with mechanisms for loading the motor vehicles and the elevators -- with heavy freight lifting mechanisms. Unfortunately, the leaders of many farms in Kletskiy and Kikvidzenskiy Rayons have failed to adopt this valuable practice. A fine yield has been obtained here -- 19-21 quintals per hectare and yet large quantities of grain have accumulated on the threshing floors. The approaching rainfall, which has been forecast by the weather experts, can introduce serious corrections into the work being performed by the grain growers, motor vehicle operators and procurement specialists. The grain harvest work in Volgograd Oblast is nearing completion. Commencing in mid-August, the sowing machines will move out onto the fields in the northern rayons; the sowing of winter crops is commencing. The Volgograd workers have already sold 2 million tons of grain to the state. They have all of the means at their disposal for achieving the planned goal. /by A. Morgun/ /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 10 Aug 83 p 1/ 7026

CSO: 1824/547

LIVESTOCK FEED PROCUREMENT

KIRGHIZ LIVESTOCK FEED OVERVIEW

Frunze SOVETSKAYA KIRGIZIYA in Russian 26 Aug 83 p 1

/Article: "Elimination of Indifference"/

/Text/ At the present time, wherever one happens to be, the sown and natural grasses are reaching up to the sun and ripening fully with the juices of the earth. Real opportunities are available at the present time for increasing the procurements of coarse and succulent feed and for satisfying in a reliable manner the requirements of animal husbandry. The majority of the farms are carrying out their haying work at a rapid tempo. In response to a letter by the Central Committee of the Communist Party of Kirghizia, addressed to "the communists, komsomols, workers attached to the agroindustrial complex and to all of the republic's workers," 58 kolkhozes and sovkhozes are competing for the purpose of creating a one and a half year and 2 year supply of coarse and succulent feed and more than 80 -- for over-fulfilling the plan for procuring such feed by 30-45 percent. In the interest of achieving the planned goals, the feed procurement brigades, detachments and teams are employing the collective contract method, with wages based upon the final results.

According to data supplied by the TsSU /Central Statistical Administration/ for the Kirghiz SSR, by 22 August 1983 the first cutting was obtained from 94 percent of the sown and natural lands and 3,094,800 tons of coarse feed had been placed in storage, 906,800 more tons than had been placed in storage by this same time last year. The farms in Alamedinskiy and Sokulukskiy Rayons are presently engaged in carrying out above-plan procurements of hay, haylage and straw. The republic has surpassed its task for the production of vitamin grass meal by 11 percent.

The table on the following page provides a summary of feed procurement operations in the oblasts and rayons as of 22 August this year.

The statistical data indicates that a number of oblasts and rayons have fallen behind in harvesting their feed lands. The first cutting has still not been obtained from 6 percent of the sown and natural grasses. The farms in Naryn, Talas and Issyk-Kul Oblasts and in Keminskiy Rayon are late in carrying out their haying work.

The kolkhozes and sovkhozes in Chuyskiy, Kalininskiy, Moskovskiy, Panfilovskiy and Kantskiy Rayons are procuring their feed at a rate that is not in keeping

with their potential. Many farms in Chuyskiy and Keminskiy Rayons are dragging out their second and third cuttings of alfalfa, with the third and fourth cuttings being prolonged in Osh Oblast and in a number of rayons in the Chu and Talas River Valleys. As a result, instead of intensifying the feed procurement rates, reductions are taking place compared to the previous weeks. Such is the situation in Osh Oblast.

	Coarse Feeds Procured (in percent of plan)	Weekly Increase (in %)	Silage Produced, thousands of tons	1983 in Percentages of 1982
Naryn Oblast	73	12	-	-
Issyk-Kul Oblast	76	7	80.7	126
Talas Oblast	88	6	3.5	-
Osh Oblast	93	5	228.1	18.7 times
Rayons of republic subordination	97	3	86.6	358
Issyk-Atinskiy Rayon	104	7	8.6	132
Chuyskiy Rayon	94	5	1.9	950
Kantskiy Rayon	93	5	18.6	255
Moskovskiy Rayon	92	4	0.5	28
Panfilovskiy Rayon	88	4	-	-
Sokulukskiy	110	3	36.5	-
Keminskiy	100	2	-	-
Alamedinskiy	109	2	20.5	244
Kalininskiy	85	2	-	-
For the republic	87	6	398.9	397

Special concern is being aroused by the fact that included among the backward farms is a number of enterprises which initiated the creation of a year and a half's supply of feed -- in Chuyskiy, Moskovskiy and Panfilovskiy Rayons.

The serious shortcomings noted in the organization of procurements are the result of complacency with regard to certain successes already achieved. Many rayon party committees and rayon executive committees and also the councils of agroindustrial associations are content with the fact that more coarse and succulent feed, in terms of overall volume, has been laid away than was the case at this same time in 1982, despite the fact that only slightly more than one half of the amount called for in the obligations per standard head has been procured.

It is obvious to all that the leaders of a number of farms still do not realize that it is possible to solve successfully the task of increasing the production of meat, milk and other animal husbandry products by displaying genuine concern for taking advantage of the opportunities that are available for accumulating large quantities of hay, haylage, silage, grass meal and root crops. Is it possible that, just as in the past, they expect to cover their shortages of coarse and succulent feed by means of grain, including that obtained from the state resources? Unfortunately, the oblast and rayon party committees have adopted a tolerant attitude towards such manifestations and are not evaluating them in the proper manner.

Many farms are failing to make sufficient use, for animal husbandry purposes, of secondary sowings, aftercrop, common reeds found on unsuitable lands and the tops of potatoes and other crops. Hay procurements from winter pastures and deliveries of feed to livestock wintering areas have not been organized in the proper manner. Despite the fact that the period is at hand for harvesting the silage crops, one tenth of the silage harvesting combines have yet to be prepared for the operations. The kolkhozes and sovkhozes are not being provided with proper assistance in strengthening the logistical base for feed production or in carrying out the haying operations by the supporting industrial and other enterprises and institutes.

Straw procurements are being carried out in a very slow manner. Despite the fact that all of the farms in the Chu River Valley and a majority of the republic's southern rayons have completed harvesting their cereal grain crops, the straw has still not been stacked or shipped from a considerable area.

A high return can be expected from each kilogram of feed provided it is of a high quality. This factor is the object of constant concern by the leading farms. For example, let us take Moskovskiy Rayon. Here the agricultural chemists have concluded that all of the haylage is of 1st class quality and the hay -- of 1st and 2d class quality. At the same time, one fourth of the hay in the neighboring Kalininskiy and Panfilovskiy Rayons is considered to be of sub-standard quality. A similar comment can be made concerning the efforts of the feed procurement specialists in Issyk-Kul Oblast. Thirty percent of the haylage which they lay away is of sub-standard quality.

The elimination of complacency and indifference and the placing of all reserves in operation will aid in fulfilling the obligations, in creating adequate supplies of feed and in achieving growth in the productivity of the livestock.

7026
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PREPARATION, BALANCING OF FEED RATIONS PROBLEM IN LATVIA

Riga SOVETSKAYA LATVIYA in Russian 14 Jul 83 p 2

[Article by Ya. Latviyetis, professor of the Latvian Agricultural Academy: "Farm Reserves"]

[Text] During past years, feed production on the kolkhozes and sovkhozes of our republic have increased considerably, but we have not managed to fully satisfy the needs of animal husbandry for hay, haylage, silage, root crops and green feeds. Therefore, the proportion of mixed feeds in the rations of the cows and sows exceeds the physiologically permissible norms.

The proper attention is not being devoted everywhere to efficient expenditure of forage, including mixed feeds. Thus on the farms of Yelgavskiy rayon, they expend an average of 135 feed units to produce one quintal of milk. This is more than the average for the republic and exceeds by 19 feed units the quantity envisioned by the normative for obtaining an annual milk yield of 2,900 kilograms of milk per cow. There is also an overexpenditure of feeds when producing pork, beef, eggs and poultry meat.

The main reasons for this overexpenditure are rations that are not balanced in the various components, and also the writing off of forage that is not used, most frequently pasture grass. It is known that forage that does not contain enough protein or has an excess of it is not as well assimilated by the ainmals, with a loss of approximately 20-30 percent. In other words, if during the winter the cows do not receive good hay from legumes or other feeds that are rich in protein, their expenditure for producing a quintal of milk, instead of the 100-120 feed units envisioned by the norm, reaches 130-150 feed units. The same thing takes place at the beginning of summer if, in addition to juicy grass in which the protein content is high, one does not provide feeds with a large quantity of dry substance, hydrocarbons and cellulose--hay or straw, potatoes, sugar beets or molasses and barley flour. In hog raising there is not enough protein either during the winter or

during the summer. Because of this, the hogs whose rations contain a good deal of barley flour add weight slowly (400-450 grams per day) and for each kilogram of weight gain, they consume an average of six and more feed units.

How does one rectify this situation? As a source of protein and lysine in the feed for hogs, depending on the capabilities of one farm or another, one can use fish wastes (paste), nutritive yeast, products from meat salvage, pea meal and nutritive lysine content. This will make it possible to increase the average daily weight gain for hogs on fattening to 600-650 grams and to reduce the expenditure of feeds.

The need for preparing feeds before distribution has been discussed and written about a good deal, but, in our opinion, not enough has been done in this area yet. At the February Plenum of the Central Committee of the Communist Party of Latvia, they again pointed out the need to create on the kolkhozes and sovkhozes shops for thermochemical and microbiological processing of feeds and preparing balanced feed mixtures. The great importance of this is shown by the economic substantiation of the processing of feeds and distribution of balanced mixtures. I shall give some figures. Steers that are kept on fattening receive an unlimited quantity of straw that is not processed, steamed or treated with ammonia. The digestibility of it amounts to 2.3, 4.2 and 3.3 kilograms (translated into dry substance) a day, respectively, the daily weight gain--555, 708 and 768 grams respectively, and the expenditure of feeds--7.31, 6.18 and 5.90 feed units per kilogram of weight gain, respectively.

Another example. One and the same ration, consisting of hay, haylage, straw, silage and mixed feeds, is given to cows of one group in the form of a homogenous mixture, and to another group with each kind of forage given individually. The animals of the first group almost completely digest the feed (98.8) and produce 23 kilograms of milk per day. The cows of the second group leave up to 15 percent of the feed in the feeder and, correspondingly, the milk yield is 1.3 kilograms less, and the fat content in the milk is also less.

The number of times the animals are fed is of no small importance. Thus, when they are given feed more frequently and in smaller proportions, they are more willing to eat it and they assimilate it better. There is a corresponding increase in the productivity of the cattle as well. This is especially important when using mixed feeds. On farms with well developed animal husbandry, it is considered inadmissible to distribute the average daily ration of mixed feeds all at one time. Therefore, in places where the distribution of this kind of forage is being increasingly automated, cows with an overall daily volume of four-five kilograms receive only 400-500 grams of mixed feeds at one time. Thus, they manage not only to reduce the expenditure of nutritive feeds, but also appreciably increase the milk yields.

A good deal also depends on prompt delivery of forage to the farms. It would seem that there would be no need to remind people of this elementary requirement. But this is not the case. As years go by, more and more large farms and animal husbandry complexes are constructed. The staff of machine operators and the dispatcher service is increasing to serve them. There are now more shortcomings in shipping the feeds than there were previously on small farms. Then, the milkmaids and members of their families came to the rescue if necessary. Under the new conditions, this is simply impossible and delays in the delivery and distribution of feeds cause considerable harm. Thus, on the Yudazhi complex where they maintain 650 cows, a delay in the delivery of feeds of one hour entails a shortage of 300-400 kilograms of milk.

Attention should also be devoted to the following fact.

Many products of the farms are in short supply precisely in the summer when there is an abundance of feeds. Why? Because they have not properly arranged shipments everywhere. There are fewer shortcomings in this matter during the winter--the feed is usually not far from the farms and the machine operators are not as busy as they are during the harvest time. There are also frequent interruptions in the shipment of green feed during the summer. One cannot allow this. Green feed should be delivered to the farm twice a day, for otherwise it will spoil, the nitrates will be transformed into nitrites, and the cows can not only lose productivity, but they can also be poisoned. For sows, which also need green feed, the distribution of this forage is fraught with even greater consequences.

During the stabling period, one cannot forget about grazing the animals. This contributes to active metabolism, high productivity and normal reproduction capabilities, and it increases the return from feeds. It seems that it would be expedient under the conditions of the competition of animal husbandry workers to provide material incentive for grazing the animals. And, conversely, if this is not done, a punitive measure should be determined.

Success in animal husbandry cannot be achieved immediately--within ten days, a month or even a season. High results are achieved by daily, painstaking labor from year to year and a false step or carelessness on the part of some person at one time can nullify the efforts of an entire collective. There are no trivia in animal husbandry. Everything is equally important--good care and skillful maintenance, effecient feeding of the animals, and economical expenditure of feeds. How well the wintering goes determines half of the success during the subsequent pasture, and thus skillfully organized maintenance of cattle during the summer is a guarantee of successful wintering. Farm workers and specialists as well as feed procurement workers should remember this truth.

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PROGRESS, PROBLEMS OF AZERBAIJAN LIVESTOCK SECTOR DISCUSSED BY PARTY AKTIV

Moscow SEL'SKAYA ZHIZN' in Russian 17 Sep 83 p 2

/Article by V. Sinitsyn, Azerbaijan SSR: "Dynamic Development for Animal Husbandry"/

/Text/ Meeting of the party-economic aktiv of Azerbaijan

Dynamic rates of development for animal husbandry are dependent upon many factors. If a strong feed base is created, if farms and complexes are modernized or placed in operation in a planned manner and if the technological equipment is operated continuously, then paths are opened up for achieving high final results. Throughout there must be energetic and competent party management of the branch and increased responsibility by the economic personnel and all farm workers for the fate of the plans and obligations. It was from this standpoint that a strict discussion took place on the results and prospects for the development of animal husbandry during a meeting of the republic's party-economic aktiv.

In accepting the diploma of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee, based upon the results of the all-union socialist competition for the successful carrying out of the livestock wintering campaign and for increasing the production and procurements of animal husbandry products during the last wintering period, the participants in the meeting drew a clear conclusion for themselves: a substantial increase took place in the work of the farms owing to the fact that the republic's kolkhoz and sovkhoz workers displayed a high level of organizational ability and discipline and employed a creative approach during the course of the last wintering period. The production and procurement plans for all types of animal husbandry products were over-fulfilled to a considerable degree: the socialist obligations for the procurement of meat were fulfilled by 111 percent, milk -- by 104, eggs -- by 118 percent. The productivity of the livestock and poultry increased and, as well, their numbers increased.

In speaking before the meeting of the aktiv, the 1st secretary of the Central Committee of the Communist Party of Azerbaijan K.M. Bagirov noted that today animal husbandry accounts for 28 percent of the republic's gross agricultural output. This is a high indicator for Azerbaijan -- a grape and cotton region. This vitally important branch of the agroindustrial complex is developing in a

successful manner during this current year. The 9-month plan for procuring milk and eggs was fulfilled ahead of schedule and fulfillment of the obligations associated with meat procurements is nearing completion.

Today, on the threshold of the new wintering campaign, the meeting of the aktiv is evaluating former experience in a critical manner and concentrating its attention on unfinished work, derelictions and shortcomings. In many regions the rates of growth for the production and procurements of animal husbandry products are still inadequate. There are many farms which are not coping with their planned tasks and there are even some which have reduced the productivity and numbers of their livestock and poultry compared to last year. This has occurred owing mainly to the fact that some leaders are continuing to cling to obsolete methods for the extensive management of the branch and are not displaying adequate concern for raising the productivity of the herd. As a result, the livestock on many farms and in many rayons are still being sold at low weights for meat purposes. During the January - August period, the farms in Kyurdamirskiy and Udzharskiy Rayons delivered cattle the average weight of which was lower than 260 kilograms and those in Zhdanovskiy, Saatlinskiy, Sal'yanskiy and a number of other rayons even lowered their delivery conditions compared to last year's level.

The milk yields are increasing at an extremely slow rate. Over a period of 8 months in the republic, they increased by an average of only 23 kilograms and in a number of rayons reductions were tolerated in the milk yields. Why? It occurred owing to the fact that in many areas the feed is procured only for indoor maintenance purposes, with reliance being placed only upon pasture feeding for the summer period and this is clearly inadequate. Moreover, during the peak period of the agricultural operations some agricultural officials tend to overlook the importance of animal husbandry operations. Such an attitude leads to a reduction in the milk yields and weight gains and to a reduction in the gross production of meat and milk.

Those who spoke during the party aktiv meeting, the 1st secretary of the Khanlarskiy Rayon Party Committee M. Ashurov, the chairman of the council of the Shekinskiy RAPO /Rayon Agroindustrial Association/ A. Mamedov, a milkmaid at the Astara Sovkhoz imeni 50-Letiya Sovetskogo Azerbaijana D. Guseynova, a secretary of the party committee at the Sovkhoz imeni Narimanov in Lenkoranskiy Rayon D. Guliyev and others, based their positions on party principles as they uncovered the reasons for the shortcomings and indicated the reserves which were available. The placing of these reserves in operation will aid in raising the milk yields and weight gains and in increasing the production of all types of animal husbandry products during the forthcoming wintering period.

Meanwhile, by no means have all of the farms and rayons completed their repair work on the livestock facilities, feed preparation shops and feed procurement equipment. But a most important consideration is that of making use of all available opportunities for supplementing the forage supplies. This year practically all of the rayons had great opportunities at their disposal for accumulating coarse and succulent feed. For the republic as a whole, the supplies of such feed per standard head of livestock increased by roughly 1 quintal of feed units, but still amounts to only 14.1 quintals. This is obviously completely inadequate. However, as emphasized during the meeting,

the feed harvesting and procurement rates are very low in many regions and, in addition, the technology for the laying in of haylage and silage is not being followed. A serious lag has developed in the production of vitamin meal. Notwithstanding improvements in the harvesting of grain crops, a number of farms have failed to fulfill their tasks for the laying in of grain for forage purposes. Prior to the commencement of the wintering campaign, many opportunities still exist for supplementing the feed resources. The agricultural workers must concentrate all of their efforts on solving this task.

The party committees, ministries and departments, the councils of agro-industrial associations and the economic and party leaders of kolkhozes and sovkhozes must concentrate their attention on raising the activity and creative initiative of the field and farm workers and also their agricultural partners and on searching for and placing in operation the reserves which are available for raising labor productivity.

During the meeting, a decision was made to participate in the all-union socialist competition to be held during the 1983-1984 winter period and to make a worthy contribution towards implementing the country's food program.

7026
CSO: 1824/6

LIVESTOCK COMPLEX TOTALS FOR HOG, BEEF PRODUCTION, FIRST HALF-YEAR 1983

Moscow TRUD in Russian 30 Aug 83 p 1

/Article by A. Deryabin, chief of Main Administration for Animal Husbandry Products of USSR Ministry of Agriculture: "Path To Success"/

/Text/ The livestock complexes for the production of pork and beef achieved fine results during the first 6 months of the year. Roughly 94,900 tons of pork were sold to the state, or 3,200 more tons than the figure called for in the plan. An average daily weight increase during fattening of 611 grams was obtained at the hog raising complexes, an optimum feed consumption level per quintal of weight increase was achieved -- 4.7 quintals of feed units, labor expenditures amounted to 2.6 man-hours and the production cost -- 98.5 rubles.

The Industrial'nyy, Luzinskiy and imeni 60-Letiya Belorusskoy SSR Complexes, by making extensive use of progressive methods for the raising and fattening of livestock, are performing in a stable manner and exceeding the planned capability. They have achieved a raised productivity for their hogs during fattening, minimal feed consumption per quintal of weight increase and high labor productivity. Well trained cadres of operators, fitters and machine operators are working here. The specialists attached to zooveterinary services are carrying out treatment-preventive measures in a timely manner and achieving a high level of preservation among the animals. Inspections are being carried out on a regular basis on the quality of the feed being received from the mixed feed plants and the established production technology is being observed.

An effective socialist competition has been launched among the operators and workers of other services for the fulfillment and over-fulfillment of obligations undertaken in connection with the sale of products to the state and improving work efficiency.

The Krasnogorskiy No. 2 Complex coped successfully with its production program for the first 6 months. Roughly 8,100 tons of weight increase were obtained here, with 7,800 tons of pork in live weight being sold to the state. It bears mentioning that each quarter the complex's workers are increasing their production and sales of products to the state and they are obtaining a high return on the production capabilities placed in operation.

During the first 6 months, improvements were realized in the production indicators for the Chistogorskiy No. 1 Complex, which sold 1,200 more tons of

Operational Results of Livestock Complexes for First 6 Months of 1983

Livestock Complexes	Sales in Live Weight (in tons)	Average Daily Weight Gain (in grams)	Production Cost Per Quintal of Weight Gain (in rubles)	Labor Expenditures Per Quintal of Weight Gain (in man-hours)	Feed Consumption Per Quintal of Weight Gain (quintal of feed units)
FOR PORK PRODUCTION					
Il'inogorskiy No. 1	7936	617	102.4	2.7	4.9
Il'inogorskiy No. 2	6577	641	100.8	2.6	4.4
Kuznetsovskiy	4800	526	107.6	3.3	5.5
Kalityanskiy	6743	606	92.4	2.1	4.6
Gubkinskiy	2110	524	124.9	4.9	5.2
Vostochnyy	6311	580	102.7	2.2	4.8
Luzinskiy	7431	667	83.1	2.3	4.4
Industrial'nyy	7083	663	81.6	2.2	4.2
Krasnogofskiy No. 1	6586	620	95.4	2.3	4.3
Krasnogorskiy No. 2	7804	625	89.2	2.1	4.2
Chistogorskiy	6569	590	105.0	3.1	5.1
Gornoural'skiy	4502	565	97.8	2.7	4.7
Permskiy	7277	651	107.9	2.8	4.8
Imeni 60-Letiya Belorusskoy SSR	7029	676	100.5	2.7	4.3
Alekseyevskiy	6114	597	101.9	2.9	5.0
FOR BEEF PRODUCTION					
Mir	3110	1095	99.9	2.3	5.4
Druzhba	2501	1082	120.3	1.7	6.0
Pashskiy No. 1	2510	994	126.6	2.5	5.9
Pashskiy No. 2	2547	986	124.9	2.5	5.9
Yumatovskiy	3231	1028	94.1	2.3	5.2
Voronovo	3293	1047	106.5	3.0	5.9
Donskoy	2230	905	115.6	3.4	6.8
Valuyskiy	2262	986	116.2	4.0	5.9
Dzhetygenskiy	2167	944	126.0	3.3	5.9
Imeni 50-Letiya VLKSM	2117	521	165.5	6.3	7.0
Imeni XXV S"yezda KPSS	2864	910	122.8	2.8	5.4

meat to the state than were sold during this same period last year. At many enterprises, increases were noted in labor productivity and feed consumption per quintal of weight gain decreased.

The collectives of beef production complexes sold 28,800 tons of meat to the state and the plan was fulfilled by 109.1 percent. The average weight of the young bulls was 430 kilograms. Compared to the level achieved during this same period last year, feed consumption per quintal of weight gain decreased by 15.3 percent and labor productivity increased by 9.4 percent.

Just as in the past, the best indicators for beef production were achieved by the collective of the Mir Complex in Brest Oblast, which fulfilled its plan by 121.1 percent. This collective obtained the highest average daily weight gain in young cattle stock during raising and fattening -- 1,095 grams, with the average weight of the young bulls being 491 kilograms. At the Mir Sovkhoz, a minimum amount of feed -- 5.4 quintals of feed units -- is being consumed for the production of a quintal of weight gain. The production cost for a quintal of meat -- 99.9 rubles.

The farm achieved operational stability as a result of efficient observance of the technology and a strong feed base. The Mir Complex, by making extensive use of organic fertilizers out on the fields and natural haying lands, annually procures one and a half year's supply of hay and haylage. It has used molasses in the livestock feed over a period of many years and this has served to supplement the insufficient amount of sugar in the overall livestock ration and to increase the average daily weight gain in the young stock by 9-11 percent. Experienced operators are working here and leading methods for labor organization and wages are being introduced into operations.

Above-plan sales of meat to the state have also been achieved by the collectives of such complexes as Pashskiy No. 1 and No. 2 in Leningrad Oblast, Donskoy in Stavropol Kray, Valuyskiy in Belgorod Oblast, Dzhetygenskiy in Alma-Ata Oblast, imeni 50-Letiya VLKSM in Tashkent Oblast and imeni XXV S"yezda KPSS in Kiev Oblast.

Raised average daily weight gains in young cattle stock have been obtained at the complexes Druzhba -- 1,082 and Yumatovskiy -- 1,028 grams. The average weight of young bulls at these complexes is 435 and 489 kilograms. The cattle being delivered to meat combines are for the most part are in a high or average state of nourishment. Many beef production complexes have lowered their expenditures of feed and labor and also their production costs.

While searching for reserves for further increasing production, the livestock breeders are fully resolved to fulfill the raised obligations which they have undertaken.

7026
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INCREASING POULTRY PRODUCTION IN BELORUSSIA

Minsk SEL'SKOYE KHOZYZYSTVO BELORUSSII in Russian No 7, Jul 83 p 19

[Article by B. A. Santsevich, deputy chief of Belptitseprom: "The Production of Broilers"]

[Text] Following the path of specialization and concentration, public poultry raising in Belorussia has been transformed into a technically equiped and highly profitable branch which is capable of more fully satisfying the needs of the population for poultry products. The republic has constructed new poultry farms for eggs and meat, and renovated and technically re-equiped all existing farms.

During the years of the Tenth Five-Year Plan, a large amount of work was done for further expansion and strengthening of the material and technical base for industrial poultry raising. The number of head of adult poultry has increased by 58.5 percent as compared to the 1975 level, and the gross yield of eggs has increased by 51.9 percent. The needs of the republic's population for eggs are practically satisfied.

But poultry meat production is still lagging behind. This year, public farms of Belorussia will produce more than 107,000 tons of poultry meat, and by the end of the five-year plan, up to 116,000 tons. And a leading role here will be played by broiler production.

The various technologies for raising broilers that are being used during the present period have their merits and shortcomings. Therefore, the most efficient technological decisions are being sought, which would make it possible to achieve minimal expenditures of labor and money per unit of output.

The principal system for producing broilers in the republic is represented by the Slutskiy breeding farm, the Pravda breeding and reproduction farm of category I, and poultry broiler farms that are in operation (Smolevichi, Gomel, Dzerzhinsk, and Mogilev with 3,000,000 head each) with reproducers of category II incubation shops and slaughtering shops. All the units of the technological process and the capacities of breeding and industrial farms are intercoordinated. Taking into account the fact that the production of broilers begins not with the poultry farms, but with the breeding

farms, special importance is attached to their rhythmic operation with a 4-line cross "Broyler-6" (see figure).

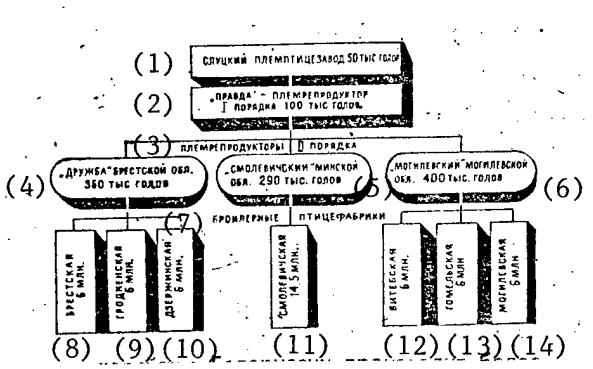

Figure.

Key:

1. Slutskiy poultry breeding farm, 50,000 head
2. Pravda breeding reproducer, category I, 100,000 head
3. Breeding reproducers, category II
4. Druzhba, Brest Oblast, 360,000 head
5. Smolevichskiy, Minsk Oblast, 290,000 head
6. Mogilevskiy, Mogilev Oblast, 400,000 head
7. Broiler poultry farms
8. Brest, 6 million
9. Grodno, 6 million
10. Dzherzhinsk, 6 million
11. Smolevichi, 14.5 million
12. Vitebsk, 6 million
13. Gomel, 6 million
14. Mogilev, 6 million

In addition to the aforementioned poultry farms that are in operation, construction is being completed on the Skidel'skaya broiler farm with a capacity of three million head and the Druzhba poultry farm with a capacity of 10.6 million. Before the end of the Eleventh Five-Year Plan, it is planned to begin construction of the Brest poultry farm with a capacity of 3 million head. All poultry farms are operated and are being constructed according to the principle of a closed production cycle with an outdoor system of maintenance.

In the future, by 1990, it is planned to change over to narrow specialization of broiler farms. To do this, it will be necessary to construct two large, inter-oblast reproducers of the second category to handle 400,000 nests each, which will completely satisfy the republic's need for hybred incubation broiler eggs. Narrow specialization in broiler production will make it possible to double the capacities of 6 farms. They will specialize only in three stages of the technological process--incubation of eggs, raising broilers for meat and processing them. The farms of the kolkhozes and sovkhozes, working according to the principle of production cooperation, will receive day-old broilers from poultry farms and specialize only in raising meat. Moreover, the poultry farms will completely satisfy the needs of the kolkhoz and sovkhoz workers for day-old broilers.

Thus, deeper specialization in broiler production in the republic and efficient organization of the activity of individual enterprises will make it possible to avoid distributing poultry of various ages in one place, to achieve maximum loading of all the equipment of the slaughtering and incubation shops, to utilize more fully the production areas of the poultry farms that are occupied during the present period for maintaining the parent and repair flock, and to avoid the threat of an outbreak of infectious diseases. All of the aforementioned issues are constituent parts of technological process and it is important for them to be resolved by each enterprise on the spot and in an intelligent way, with a profound knowledge of the peculiarities of broiler production, which will provide by 1990 for the production of no less than 130,000 tons of poultry meat, including 70,000 tons of broiler meat, and to satisfy to a considerable degree the needs of the population for meat.

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REPRODUCTION OF HERD IN BELORUSSIA DISCUSSED

Minsk SEL'SKOYE KHOZYAYSTVO BELORUSSII in Russian No 7, Jul 83 p 17

[Article by S. N. Cheredkov, candidate of veterinary sciences: "Increasing the Output of Calves"]

[Text] Reproduction of the herd is a problem which must be solved in order to develop animal husbandry successfully. Suffice it to say that each year one-fifth of the cows in the republic do not produce young. And one usually looks for the reason for this in inadequate feeding. Of course, one cannot denegrate its role, especially during the interlactation period, but this cannot be absolutized. On many farms where the feeding of the animals is quite satisfactory, the output of cows remains low.

If one analyzes in depth the condition of reproduction of cattle, it is not difficult to come to the conclusion that our methods of reproduction themselves are imperfect. They do not correspond to the modern technology of animal husbandry. An increase in the proportion of concentrated and preserved feeds (silage, haylage and so forth) in the ration, a shortage of active movement and sunlight, and the accumulation of large groups of cattle on limited areas lead to deviations in the regulatory systems that control the reproductive functions. Moreover, especially on large complexes with loose maintenance, it has become more difficult to check on the behavior of the animals, for the load of each worker has increased severalfold. One should add that the negative influence of changing conditions is manifested especially during the interlactation period of cows. Therefore, in places where it is possible it is necessary to introduce the flowline shop system.

But the level of reproduction of the herd can be considerably increased if one intelligently controls the process of reproduction. Using special preparations such as prostaglandin,histogen and estrogen, it is easy to control the time periods of insemination and even the calving of the cows. This makes it possible to arrange rhythmic production of animal husbandry products and to obtain an immense economic effect.

At industrial complexes and large farms they have extensively mechanized processes of feeding animals, gathering manure and milking. But artificial insemination which involves a large expenditure of manual labor and time, is still carried out according to the old technology. This is why the propagation of calves in meat cattle raising is being introduced so slowly. Yet with the utilization of the aforementioned preparations, it is possible to conduct artificial insemination on a precisely indicated day.

In recent years, the number of farms of Moscow, Kaluga and other oblasts of the RSFSR have engaged in programmed reproduction of the herd. A certain amount of work is being done in this area by workers of the BelNIIEV and BelNIIZh. Thus we conducted two experiments for synchronization of the rutting of heifers at the complex for raising non-calving young cows on the Kolkhoz imeni Kirov in Vitebskiy Rayon. One group of cows received histogen for fourteen days with their feed, after which the majority of them went into rutting and were artifically inseminated. Even better results were obtained with repeated intrauterine introduction of prostaglandin than F-2 alpha. Within a month 85% of the heifers were inseminated, and they all became pregnant.

For several years now, hormonal methods of preventing infertility have been used on the Novoye Poles'ye Sovkhoz in Soligorskiy Rayon, the Zhodino production farm in Smolevichskiy Rayon, the Druzhba breeding sovkhoz in Kobrinskiy Rayon, the Nesyata breeding sovkhoz in Klichevskiy Rayon and on several other farms.

Until quite recently, it was impossible even to speak about the introduction of programmed reproduction of the herd, since we did not have the necessary preparations and above all prostaglandin. At the present time, the republic is receiving from Czechoslovakia the synthetic analog of prostaglain F-2 alpha--estrophan and from Hungary--a similar preparation, enzaprost. The cost of one dose does not exceed two rubles. These preparations can be used with great effect when inseminating heifers and cows in the second month after calving. To do this estrophan in a dose of two milliliters (one ampule) in introduced intramuscularly in dozens of heifers and cows at the same time. Within ten days, some of the animals go into rutting and they are inseminated. The rest of the animals are given another dose of estrophan on the eleventh day. Within seventy-two hours after the repeated injection of the heifers and cows with the preparation, they are artifically inseminated regardless of whether they have gone into rutting or not (so-called frontal insemination). Similar work is being done with enzaprost.

These preparations can be used only on farms with well arranged insemination and calving. Otherwise, as was the case on the Benyakonskiy Sovkhoz in Voronovskiy Rayon and several other farms, the application of estrophan in order to stimulate the sexual function of the cows can cause mass abortions.

Another mandatory condition for the introduction of programmed (hormonal) reproduction is the availability of skilled specialists who are able to diagnose the pathology of the ovaries. Therefore, it is necessary to conduct oblast seminars for a narrow group of specialists, where workers of Belorussian Scientific Research Institute of Experimental Veterinary Medicine render qualified assistance regarding questions of applying hormonal preparations for reproduction of the herd.

The problem of radically changing the organization of the reproduction of the herd must be solved immediately. This will make it possible in the next few years to increase the output of calves by at least eight-ten percent and to increase the production of milk and meat in the republic.

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EXPERIENCE OF COAL INDUSTRY MINISTRY IN DEVELOPMENT OF SUBSIDIARY ENTERPRISES

Moscow IZVESTIYA in Russian 8 Aug 83 p 2

/Article by Yu. Khrenov: "Farms At Coal Mines"/

> /Text/ The deputies are recommending that the ministries and departments utilize the experience of USSR Minugleprom /Ministry of the Coal Industry/ in the development of branch subsidiary farms.
>
> Industry and agriculture. It was not too long ago that we believed that these two areas had nothing in common and that belonging to one excluded participation in the other. At one time it was felt that the term enterprise applied only to industry and that the cultivation of crops was purely a rural monopoly.

Today such notions are clearly obsolete. In the country's Food Program, approved during the May (1982) Plenum of the party's Central Committee in the overall task for improving the supply of food products for the population, there are specific lines for each ministry as well, including industrial ministries. And not only in the part concerned with improving the logistical equipping of the kolkhozes and sovkhozes. Each branch of industry must participate directly in the production of agricultural products -- such is the manner in which the problem has been stated.

How is this work being carried out in one of our largest industrial ministries -- USSR Minugleprom? In particular, what is being done in this branch to develop the subsidiary farms of enterprises and organizations? This was the subject of a joint meeting held in the Kremlin by the committees for consumer goods and trade of the Soviet of the Union and the Soviet of Nationalities of the USSR Supreme Soviet.

The meeting was directed by the committee chairmen V.P. Orlov and A.M. Masaliyev. Reports were delivered by the leader of the deputy preparatory commmittee A.I. Krylov and the deputy minister of the USSR coal industry F.F. Kuzokov. A report was also delivered by the secretary of the Central Committee of the Professional Trade Union for Mine Industry Workers I.T. Pomogaybo and there were speeches by the deputy minister of agriculture for

the USSR A.I. Iyevlev and the deputy chairman of the administration for USSR Stroybank Yu.A. Khomatskiy and by deputies.

Mention was made of the fact that during the course of studying the problem, the deputies acquainted themselves with the status of affairs in the principal coal basins of the country and they examined materials received from the councils of ministers of a number of union republics, the branch's management and also from USSR Gosplan, USSR Gossnab, the AUCCTU, USSR TsSU /Central Statistical Administration/, USSR Minzag /Ministry of Procurements/ and other ministries and departments.

An analysis of the information obtained enabled those participating in the meeting to conclude that on the whole the work carried out within the branch aimed at satisfying the requirements of the workers for food goods warrants a positive evaluation. At the beginning of this year, almost one half of the enterprises and organizations within the USSR Minugleprom system had their own subsidiary farms. As a result of the production of goods on these farms, the average annual increases in products per coal industry worker are as follows: 10 kilograms of meat, 30 kilograms of milk, 35 eggs, 34 kilograms of vegetables and 22 kilograms of potatoes. Within the branch, measures have been developed and approved for each association, combine and worker's supply department for implementing the decisions handed down during the May (1982) Plenum. The branch has adopted its own food program which calls for meat production per individual to be raised to 18 kilograms in 1990, milk -- to 43 kilograms, eggs -- to 48, vegetables -- to 45 kilograms and potatoes -- to 30 kilograms.

The subsidiary farms of Minugleprom have been assigned 340,000 hectares of agricultural land, including 146,000 hectares of arable land. The following facilities have been created on this land: 59 sovkhozes, 340 subsidiary farms attached to mines, plants, open pit mines and construction organizations and 140 fattening stations attached to departments of worker's supply. On these farms there are 73,000 head of cattle, including 26,000 cows, 162,000 hogs, 10,000 sheep, 26,000 reindeer and more than 900,000 head of poultry. The gross production of agricultural products here amounts to approximately 100 million rubles worth annually.

Large-scale multiple-branch subsidiary farms -- sovkhozes -- are making a worthy contribution towards ensuring that the miners are supplied with food products. For example, within the Vorkutaugol' Association, during 2 years of the current five-year plan, these farms produced 35,300 tons of milk (325 kilograms for each worker in the association), 3,300 tons of meat (16 kilograms per individual), 2,200 tons of vegetables and approximately 6 million eggs. Moreover, these results were achieved under especially difficult climatic conditions on lands which were considered to be of low productivity. Great successes were also achieved by trusts of sovkhozes subordinate to the Kuzbassugol', Rostovugol' and a number of other associations.

Substantial results are being achieved by the collectives of subsidiary farms attached directly to industrial enterprises and organizations. Deputy A.V. Kozhukhar, during the course of preparing for the meeting, became acquainted with the work of such farms of the Krasnoyarskugol' Association, particularly at the Nazarovskiy open pit mine. He stated that 2 years ago

this open pit mine took possession of approximately 6,000 hectares of land. For the most part, this was unsuitable land which earlier had never been of much use. Within a short period of time the miners carried out the necessary soil improvement work here, they built a cow barn for 240 animals, a grain storehouse and a silage trench and they installed a calfhouse and a pigsty-farrowing facility. As a result, last year the "Nazarov" workers obtained 20 additional kilograms of meat for each worker.

The speakers noted that production capabilities for processing agricultural products have been created within the ministry's system. They are producing sausages, meat and fish smoked products, confectionery and other items. In 1982, for example, 20.5 standard tins of vegetable and fruit canned products were produced here per individual mine worker.

Quite understandably, the products being produced are being sent mainly to the public catering enterprises of mines, open pit mines, plants and construction organizations of the branch, where they are being sold through order desks. Some of these products are being sent to children's pre-school institutes, dispensaries and hospitals. The dining halls of the largest open pit coal mine, the Bogatyr', are being supplied throughout the year with fresh vegetables, eggs, milk and meat from its subsidiary farm. This is making it possible to prepare diverse and high quality dishes and this is having a positive effect on the health and mood of the workers. It was noted during the meeting that the creation and expansion of subsidiary farms at enterprises and organizations of Minugleprom, farms which have improved the food supply for the miners and the members of their families, are promoting to a considerable degree the retention of personnel in the branch.

In 1982, Minugleprom, using all sources of financing (28 million rubles of its own funds and the remainder -- bank credit), used 35 million rubles for developing its "agrarian sector," or more by a factor of 1.7 than the amount used in 1981. The plans call for 126.1 million more rubles to be allocated for the 1983-1985 period; this will make it possible to build facilities for 43,000 head of cattle and 379,000 head of poultry and also new storehouses, hothouses, a large dairy plant and to irrigate 11,600 hectares of land.

Having evaluated this experience at its true worth, the deputies recommended it for the attention of other ministries and departments. At the same time, it was noted that there are many unused reserves in the work being performed by USSR Minugleprom in the development of subsidiary farms. The chief such reserves -- raising the efficiency of use of available resources and accelerating the construction and mastering of new production installations. In 1982, USSR Stroybank presented the branch with credit in excess of 2 million rubles for this purpose. These funds are not being utilized in a sufficiently energetic manner. The schedules for turning over eight facilities have already elapsed and only one has been placed in operation.

The branch possesses experience in creating large subsidiary farms on a cooperative basis, including combining resources with other departments. At Kopeysk in Chelyabinsk Oblast, for example, miners associated with the municipal ORS /Department of Worker's Supply/, relying upon the assistance offered by local party and soviet organs, organized on a share basis with the collectives of neighboring enterprises a large complex for the fattening of

hogs using food scraps. Tremendous advantages were realized from this undertaking. However, this experience is still not being disseminated in the proper manner. As a result, many mines and open pit mines have only small fattening points where the labor-intensive processes are weakly mechanized and there are no prospects for a noticeable increase in the production of goods.

In his speech, Deputy M.K. Kamalov directed attention to the weak relationship between the miners' subsidiary farms and science and to the lack of interest on the part of subunits of Sel'khoztekhnika and Sel'khozkhimiya. The deputy emphasized that this is precluding the possibility of making more efficient use of the land being allocated to the branch and of achieving a maximum return from it.

Deputy N.V. Cherskiy noted that there are competent decisions according to which logistical support for the subsidiary farms of enterprises and organizations must be carried out on a par with the kolkhozes and sovkhozes. And one can only wonder why it is that the organs of Goskomsel'khoztekhnika and other departments are stubbornly declining to carry out these decisions. N.V. Cherskiy also touched upon the problems concerned with providing the subsidiary farms of industrial ministries with land. He mentioned that at the present time many unjustified complications are being encountered in this area, complications which must be eliminated. It would be correct if towards this end the enterprises were provided with more of the areas which they themselves recultivated.

The committees prepared a number of specific recommendations.

The following individuals participated in the meeting: the deputy chairman of the Presidium of the USSR Supreme Soviet T.Kh. Koshoyev, chairmen of the Chambers of the USSR Supreme Soviet A.P. Shitikov and V.P. Ruben, the secretary of the Presidium of the USSR Supreme Soviet T.N. Menteshashvili.

7026
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AGRO-ECONOMICS AND ORGANIZATION

DEVELOPMENT OF INDIVIDUAL BRANCHES OF APK REGIONAL SYSTEM EXAMINED

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 83 pp 62-69

/Article by Kalnyn'sh, Arnys Antonovich, corresponding member of the Latvian SSR Academy of Sciences: "Certain Patterns in the Development of Individual Units of the Regional APK"/

/Text/ The May (1982) Plenum of the CPSU Central Committee, which approved the country's Food Program and established a complex of measures for its implementation, demanded radical improvement of the economic mechanism for the development of the agro-industrial complex. Beginning with the first day of the creation of new administrative agencies in our country (RAPOs and oblast APO's) itwas necessary to provide for high efficiency of their functioning.

Of exceptional significance is the definition of the concepts of development of individual blocks, spheres and units of the agro-industrial complex (APK). Research that has been conducted and also an analysis of the operation of the first RAPOs make it possible to make certain generalizations. Thus when developing further concepts for the development of individual production and technical services, it would be expedient to take into account a number of general patterns and methodological points.

1. It is extremely important to consider the concept of the development of agricultural service and various kinds of production-technical service from the standpoint of improving the services for the main production enterprises of the RAPO and ReAPO--the kolkhozes, sovkhozes, enterprises that process agricultural products, and others. Therefore to single out the functions of the production and technical service from the kolkhozes, sovkhozes and other enterprises of main production into specialized agricultural service formations is expedient only when the services are less expensive when they provide them (in terms of total expenditures) than when they are provided through the efforts of the kolkhozes and sovkhozes.

In this connection it is of primary importance to discover the optimal concentration of the performance of individual kinds of service (repair and technical servicing of technical equipment, the agrochemical service and so forth) for production and technical purposes at various levels: agricultural and other enterprises, and intrarayon, interrayon and republic. Here all the levels should be regarded in a total, integrated and vertical unity.

At the same time one should note that to ignore certain principles in practice can lead to certain mistakes. Thus at one time it was suggested that individual economic and scientific workers, when creating interfarm enterprises for mechanization and electrification (MPME) transfer to them all the technical equipment of the kolkhozes and sovkhozes, machine operating personnel and the engineering and technical service for mechanization. But the experience of a number of republics and oblasts demonstrated the inexpediency of this transformation. Moreover, the experience of the Latvian SSR shows that at the present time one should not transfer the repair and technical base or personnel working in these jobs from the kolkhozes and sovkhozes to the MPME.

As of today the following problems are crucial: for example, should the agrochemical service perform all work according to its traditional list and on all farms in a certain proportion, or only on individual farms (especially economically backward ones) and completely, or on all farms, but only particular kinds of work. By solving this problem one solves the problem of the distribution of technical equipment among the farms and Sel'khozkhimiya, and the problem of the development of the material and technical base (construction of shops and garages with repair shops for motor vehicles, the formation of construction subdivisions, and so forth).

Some economists think that, in keeping with the existing list, these jobs should be performed primarily on economically backward farms, since the economically strong farms take advantage of the services of Sel'khozkhimiya only when it is disadvantageous to perform these jobs through their own efforts. But one should take into account that with time the economically backward farms will become average or successful and will be able to perform a number of jobs themselves, for example, shipping in and applying organic fertilizers, and so forth. In this case the need for specialized agricultural service organizations to perform these kinds of services will decrease considerably. In this connection, in order to avoid large errors, it would be expedient to concentrate most of the material and technical base of agricultural service formations for rayon purposes in intrarayon centers.

2. Improvement of the production and technical service should not always take place because of the creation of a new specialized organization for performing one kind of agricultural service or another. In each case and each situation it is necessary to search out possibilities of the performance of new services by already functioning agricultural service organizations and administrative agencies that have already been created. On the whole, for RAPOs and ReAPOs this is less expensive than creating a new formation with a local material and technical base.

The experience in creating a specialized organization for electrical equipment service is typical in this respect. Because of the fact that at one time the Soyuzsel'khoztekhnika (now Goskomsel'khoztekhnika) did not force the development of the necessary work for servicing the electrical equipment on the kolkhozes and sovkhozes, a number of republics of the country created interfarm organizations of Raysel'khozenergo, and then oblast Sel'khozenergos. At the same time the Latvian SSR made a decision not to create a new agricultural service formation, but to place the responsibility for performing this kind of services on the rayon Goskomsel'khoztekhnika associations.

One can also give another example. In order to improve the utilization and reproduction of timber resources of the kolkhozes and sovkhozes through efficient concentration of the performance of forestry work, it is necessary to implement a number of organizational and economic measures. An analysis that was conducted shows the expediency of assigning the functions for the utilization and reproduction of the timber resources of the kolkhozes and sovkhozes and rayon agro-industrial associations under their jurisdiction to an inter-kolkhoz construction organization (MSO). They had in mind that the MSO already has wood processing capacities and that the main consumer of the timber from the farm's forests is the sphere of capital construction and repair of buildings and structures. By expanding the MSO base, one can take into account the needs of the farms for the necessary timber materials and create (as a subsidiary production) a timber procurement section and transfer all the timber supplies to it for centralized procurement of timber.

3. Another very important factor in increasing the efficiency of the work of agricultural service organizations is the creation of an efficient organizational and production structure for the formation itself which provides production and technical support. The fact is that in a number of cases internal narrowly specialized economic subdivisions are created within these formations themselves, which are under the jurisdiction of one higher department or another at the present time. These narrowly specialized economic subdivisions for performing individual kinds of work in the overall unit for the corresponding services are usually concentrated at interrayon, republic or even higher levels, but within the framework of one and the same department.

But this system for creating organizational and production structures is not always justified. For example, an analysis of the work of the Rezekne MSO and certain other MSOs of the Latvian SSR shows that in rural construction at the present time and in the future it is more expedient for internal specialized subdivisions to create construction organizations taking into account the fact that they can perform the entire complex of work as much as possible through their own efforts, without an extremely large number of specialized contracting organizations. The Rezekne MSO has the following sections: the concrete-mortar unit (10 workers; the volume of work in 1980 amounted to 409,000 rubles); the wood processing shop (18 workers, volume of work--239,000 rubles); the metal structure shop (12 workers, volume of work--187,000 rubles); the mine (5 workers, volume of work--227,000 rubles) and a shop for minor mechanization. Additionally, the MSO has a large special section (89 workers, volume of work--1.18 million rubles), which performs sanitary technical, finishing and tin work, and gasification. Thus they basically carry out the entire complex of work through their own forces. With an actual volume of construction and installation work of 5,287,000 rubles under the general contract, subcontracting work amounted to 622,000 rubles or 11.8 percent. At the same time, the volume of work of the special section alone amounted to 1.18 million rubles, or 22.4 percent.

It is necessary to take into account that agricultural construction is dispersed over a very large territory, and therefore it is inexpedient to borrow those forms which have originated and are effective in city construction organizations with a fairly narrow specialization of subdivisions.

Similar concepts of development should be determined with respect to other agricultural service organizations. Thus in the sphere of the Ministry of Land Reclamation and Water Management at the rayon level there are two independent formations: the mobile mechanized column (PNK) for water management, which does capital construction on land reclamation systems, and the administration of land reclamation systems (UMS) which provides technical service, current and capital repair of interfarm land reclamation systems, and, under agreements with agricultural enterprises, also current and capital repair of intrafarm land reclamation systems. But investigations conducted by the Institute of Economics of the Latvian SSR Academy of Sciences and also production experience show that these kinds of activity at the rayon level can be expediently integrated into one economic formation.

4. Analysis shows that it is expedient to take advantage of the possibilities of creating more consolidated (multiprofile) agricultural service formations within the RAPO on the basis of a number of existing narrowly specialized agricultural service organizations. The economic effect from such reorganization consists in that it is possible to form an overall intradepartmental production infrastructure: shops for repairing general purpose technical equipment with a complete or unit set of machine tool equipment, an automotive service facility, garages, fuel and lubricant facilities, material and technical supply services, warehouses, subdivisions for current and capital repair and construction of buildings, and so forth. It is expedient to change over to providing for comprehensiveness of work and services by one agricultural service enterprise in the rayon. This is advantageous for the kolkhozes and sovkhozes, the enterprises become interested in the final results of the RAPO, the responsibility of the service organizations increases, and paperwork decreases. While each organization that serves agricultural enterprises strives to have its own autonomous material and technical base, its creation is frequently delayed, and it works for a long time only for itself. In turn, the agricultural enterprises are forced to construct similar facilities through their own efforts.

Within the framework of a unified consolidated agricultural service formation, it is easier for the RAPO to maneuver technical equipment. For example, in the summer the equipment can be used more extensively for conducting agrochemical work, and in the winter--for forestry work, and preparing the work front for land reclamation, production and road construction. General engineering services will also become unified, economical and skilled services within the framework of this comprehensive agricultural service formation.

In general one should consider the most progressive to be the tendency toward concentration of the maximum volume of work and kinds of activity in the minimum number of agricultural service organizations and formations. Therefore, with the creation of a specialized agricultural service formation for agrochemical service (PNO of Sel'khozkhimiya) there was a breakdown of the production and supply base and a dispersion of production and supply services, the interrelations between the kolkhozes and sovkhozes and these two organizations in the rayon became more complicated, and there were unjustifiable migration flows of engineering and technical personnel and workers from one agricultural service enterprise to another.

In this connection one should take note of the experience in creating intrafarm agricultural service formations at large, multibranch agricultural enterprises, for example, the Sovkhoz imeni XXVI s"yezda KPSS of the Yekabpils RAPO, the Uzvara kolkhoz of the Bauska RAPO, and so forth. These farms have large subdivisions for constructing buildings and land reclamation structures, conducting agrochemical work, repairing technical equipment, providing automotive transportation and so forth. These agricultural service subdivisions are under the leadership of the farm and they have a single goal--to produce the final product of the agricultural enterprise. They seek out the most efficient variants of internal organization of the utilization of technical equipment and labor force, and all-around production and technical service for all technical resources of various intrafarm subdivisions.

In the Estonian SSR, right up until the Estsel'khozkhimiya was created in 1980, the production and technical support was provided on the basis of two formations of the Estonian SSR Goskomsel'khoztekhnika and Estkolkhozstroy. Estonia does not have a ministry of rural construction, and its functions are performed by Estkolkhozstroy which provides almost 70 percent of the overall volume of rural construction. In 1981 on the average of 6.4 million rubles' worth of work was performed per primary contracting organization of Estkolkhozstroy using its own resources.

The Estonian SSR does not have a ministry of land reclamation and water management either, and all functions of land reclamation, drainage of forests and water management construction are the responsiblity of the republic Goskomsel'khoztekhnika. The State Committee of the Estonian SSR for Land Reclamation and Water Management fulfills the functions of the client and the payer, acting on behalf of the kolkhozes and sovkhozes, exercises control over the construction and operation of land reclamation systems, and does planning and research work. The republic has no special administration for the petroleum industry. This sphere of activity is included in a unified formation for agrochemical service.

5. There is reason to assert that agricultural service organizations will operate more efficiently if they are included in RAPOs and are under the jurisdiction of the council and the working staff.

If one analyzes the economic activity of homogeneous agricultural service formations one can note the following pattern: the closer the agricultural service enterprise is located to the kolkhozes and sovkhozes, the better it operates. For example, it is typical that the degree of fulfillment of the plan for construction and installation work in the Latvian SSR, as a rule, in the PMK of the Ministry of Construction is lower than in the MSO, and even lower than with the economic method of construction on the kolkhozes and sovkhozes. While the volume of construction and installation work for agriculture was fulfilled by an average of 95 percent during 1976-1981, for the PMK of the Ministry of Construction it was only 78 percent, for the Latvkolkhozstroy --85 percent and by the economic method--118 percent. In 1982 the plan for construction work on the whole was fulfilled by 105 percent, for the PMK--88 percent, the MSO--91 percent and the economic method--138 percent. Construction brigades of the kolkhozes and sovkhozes are most interested in releasing new facilities, although with the economic method for construction the provision of materials is considerably worse.

Thus it would be expedient for rayon organizations and enterprises that serve kolkhozes and state farms of the association (the rayon Sel'khozkhimiya association, some of the services of the rayon Goskomsel'khoztekhnika association, the MSO and others) to be under the jurisdiction of the RAPO on the basis of the following principles:

the economic activity of the specialized organization (enterprise) should be arranged analogously to the operation of the interfarm enterprise (for example, the specialized organization for artificial insemination of animals) that is directly under the jurisdiction of the RAPO;

the RAPO council should have the right to establish payment rates for services offered to the agricultural enterprises;

the RAPO soviet independently plans the kinds, the structure and the volumes of work performed by specialized enterprises for the kolkhozes and sovkhozes of the association.

At the present time the agricultural service formation could operate most effectively on the basis of an interfarm association (enterprise) which is cooperative. In this case it is easier to interest the service organization in the final result, and the priority in all joint actions remains with the farms that are members of the RAPO; managers and spe alists of the service formation are motivated not to select the volume of work in monetary terms, but to fulfill orders from the farms that are members of the RAPO for repairing machines, conducting the necessary kinds of agrochemical work, and so forth.

It would be expedient to form within the framework of the RAPO the plans for the production, financing, material and technical supply, and capital investments for individual rayon agricultural service formations (organizations of Goskomsel'khoztekhnika, the Ministry of Land Reclamation and Water Management, Sel'khozkhimiya, interkolkhoz construction organizations and so forth). At the republic level it would be more efficient to plan the distribution of technical equipment and other resources among individual RAPO and not among the republic Ministry of Agriculture, Sel'khozkhimiya, Goskomsel'khoztekhnika, Ministry of Land Reclamation and Water Management, the interkolkhoz construction organization and other departments. The needs for resources and the reserves for producing products in enterprises of various systems are more evident at the rayon level than at the republic level.

6. An important aspect of the concept of the development of agricultural service formations is the efficient distribution of these facilities among individual intrarayon regions. In our opinion, it would be economically expedient for several neighboring farms that are members of RAPO (3-5) to cooperate in solving a number of production and social problems on an intrarayon level. It is necessary to take full advantage of the opportunities of interfarm cooperation and specialization in the creation and operation of joint feed shops, warehouses, storage facilities, detachments for utilizing special equipment, and so forth. In these centers of intrarayon regions it is extremely important to create branch agricultural service organizations with a material and technical base (integrated as much as possible for various kinds of service -- agrochemistry,

MSO, Goskhomsel'khoztekhnika, land reclamation PMKs, and so forth), permanent personnel who live in the intrarayon regional center or on the territory of the farms being served, and so forth. Moreover, the neighboring farms and organizations must cooperate for the construction of villages and centers of intrarayon regions with housing and cultural-domestic conditions.

It is expedient to create and strengthen centers of the intrarayon regions through cooperation using the funds of all local enterprises and organizations, regardless of their departmental jurisdiction. As a result it is possible to provide the kolkhozes and sovkhozes with skilled personnel and specialists and to create an optimal system of resettlement within the framework of the RAPO.

In a number of RAPOs (Talsy, Valmiyera and others) these problems are resolved expediently and in stages. In the Rezekne RAPO these intrarayon regional centers for distributing the capacities of the MSO are settlements of an urban type--Vilyandy and Malta. A considerable proportion of the builders of the MSO live on the territory of these intrarayon regions. As a result, the organization of construction and installation work and its quality improve, and the responsibility of the builders increases.

A number of RAPOs on the basis of intrarayon regional centers, do planned work for distribution, in the first place, of technical equipment of the rayon Sel'khozkhimiya production association, in the second place, of centralized, narrowly specialized technical equipment of the kolkhozes and sovkhozes and, in the third place, specialized high-power technical equipment that has just come in to the RAPO. Therefore from the standpoint of any economic considerations it is incorrect to concentrate the entire material and technical base in the rayon center only at the rayon level.

Proceeding from an analysis of the aforementioned patterns in the development of agricultural service formations at the level of the RAPO, one finds that corresponding changes are needed in the system of administration of the APK at the republic level.

One of these areas should be the stage-by-stage creation of an integrated formation and services for agricultural construction. In the beginning this integrated formation serves only agriculture (on the basis of the interkolkhoz construction organization, rural PMKs of the republic's Ministry of Construction, the special rural installation organization of the system of Goskomsel'khoztekhnika, the Main Administration for Capital Construction of the Ministry of Agriculture, and others) and then it will provide for the construction and renovation of facilities for procuring, storing and processing agricultural products.

Such an integrated economic formation for planning, construction, renovation and capital repair of buildings (of the Latsel'stroy production association) can be organized on the basis of the republic association of interkolkhoz construction organizations, rayon subdivisions of Spetssel'montazh of the Goskomsel'khoztekhnika, the corresponding subdivisions for construction on the kolkhozes and sovkhozes, and the Main Administration for Capital Construction of the republic's Ministry of Agriculture. In the first stage it would be expedient for the integrated economic formation for construction to include a

minimum number of organizations with a maximum volume of work. Then it is necessary to review the question of including in the Latsel'stroy rural PMKs and corresponding bases of rural trusts of the republic Ministry of Construction.

In turn, at the rayon level one must create a unified construction organization under the jurisdiction of the RAPO which, in addition to functions of actual construction, should be assigned all work related to the issuing of the order for planning and for the necessary technical equipment and machines, and so forth.

Further, it would be expedient to create an integrated formation for mechanization, power engineering and agrochemical service. At first this integrated formation would service only agriculture and then, combined with the NPO of Sel'khozkhimiya and, finally, with mechanization services, would serve other spheres of the activity of the republic agro-industrial association. This integrated formation in the form of a production and scientific association (PNO) for mechanization and power engineering, in the first stage of the organization and functioning of the ReAPO, could be created on the basis of formations that serve the most important blocks of the APK-agriculture.

Additionally, before the creation of the PNO for mechanization and power engineering of the ReAPO it is necessary to implement a number of stage-by-stage measures for reducing the number of departments involved in performing a number of agricultural service jobs. For example, at the present time agrochemical work is carried out by various organizations: agricultural enterprises, subdivisions of the Latsel'khozkhimiya scientific production association, subdivisions of the Latvian SSR Ministry of Land Reclamation and Water Management (for liming acid soils and extracting litter peat), the Latvian production association for civil aviation (for partial application of mineral fertilizers in fighting against pests and diseases of agricultural crops), enterprises of Goskomsel'khoztekhnika in the Latvian SSR (for transporting various mass cargos for agrochemical purposes), and the administration of the peat industry under the Latvian SSR Council of Ministers (for extracting litter peat). It is necessary to refine the functions of these departments and earmark ways of gradually changing over to a more integrated formation.

One should also determine the position of the block of the APK for land reclamation and water management construction and determine whether to include it in the formation of agricultural formation or the formation for mechanization, power engineering and agrochemical service, or to single it out as an independent economic formation. Based on the production and technical ties, it is more correct to include land reclamation and water management construction in the formation for mechanization, power engineering, agrochemical service and land reclamation construction.

Under the direct jurisdiction of formations for construction, and also for mechanization and power engineering, will be facilities of republic and interrayon significance: the Pivan housing construction combine, specialized PNKs, specialized repair plants, the Stars plant, planning and design bureaus, planning and scientific research institutes, and bases for material and technical supply

and batching. The management of the corresponding formations of rayon significance (Raysel'khozstroy, interfarm enterprises for mechanization and power engineering, PMKs and others) is provided through the RAPO. Directly within the RAPO they form the program for further development of the entire sphere of the production agricultural service of rayon significance, that is, they distribute the total resources allotted by the republic APO to the corresponding rayon agro-industrial association among individual subdivisions of the agricultural service, and they establish the volumes, structure and time periods for work to be done and services to be rendered.

Of course, there can be certain exceptions. If, for example, a specialized repair shop located in one rayon Goskomsel'khoztekhnika division or another or an agricultural service enterprise of rayon jurisdiction has a common material and technical base with services of rayon significance (rayon mechanic shop, technical service stations for various kinds of technical equipment, and so forth), this specialized shop can be under the direct jurisdiction of the rayon agricultural service formation. In this case the republic formation gives the assignment-plan for the repair of technical equipment of other RAPOs to the agricultural service enterprise through the first RAPO.

Consequently, an important area for improving the system of administration is the study of the possibilities of refining the functions related to one kind of service of agricultural enterprises or another among the republic and rayon formations. When creating a number of specialized agricultural service organizations and during the course of their functioning, in individual cases one might find excessive centralization of a number of functions, for example, planning and production functions, although the tasks for production service are carried out precisely in the rayons and in the agricultural enterprises themselves. With centralized management one cannot always establish the actual state of affairs in the local areas, and the effect depends to a considerable degree on the independence of the structural subdivisions. Moreover, managers of departments expend efforts mainly on operational control of production, without devoting the proper attention to long-range cardinal problems of the development and reducing the cost of the services that are offered. A more complete solution to questions of production and technical service at the rayon level creates prerequisites for a possible reduction of the number of personnel on the administrative staff at the republic level.

In addition to the development of concepts of further development of the sphere of agricultural service, it is no less important to justify the directions for the development of the sphere of processing of agricultural products in close coordination with the areas for the production of raw material. In this case too it is necessary to adhere to the stage-by-stage creation of integrated formations and services for providing for a unified cycle of production, procurement, storage and processing of individual kinds of agricultural products.

In our opinion, it would be expedient to place the entire responsibility for obtaining the final product (vegetables, fruits) in fresh and processed form in the republic as a whole on the Latvian SSR Ministry of the Fruit and Vegetable Industry. One could place directly under the jurisdiction of this formation facilities of interrayon significance (storehouses, processing

capacities), narrowly specialized enterprises (for example, the Riga sovkhoz and others), and scientific research and design subdivisions. Functional management (supply in terms of volume and assortment, consultation, provision of planting material and so forth) could be expediently carried out through the corresponding RAPOs since sovkhozes and kolkhozes that are not narrowly specialized are directly under the jurisdiction of the rayon agro-industrial association.

Moreover, within the economic formation for producing, storing, processing and selling fruit and vegetable products itself, one should create territorial production complexes. These complexes should concentrate control of narrowly specialized farms for raising vegetables and fruits, processing enterprises, bases and stores in local areas and in the rayon or territorial zones. Thus at the present time for each canning enterprise one can single out one or two nearby farms which, in terms of production volume and the assortment of vegetables, meet the needs of the processing enterprise and provide for maximum uniformity in deliveries of raw materials throughout the season. Only in this case is it possible to establish effective businesslike ties. This principle of organization of production is typical of regions with developed fruit and vegetable production.

The republic integrated formation for producing, procuring, processing, storing and selling fruit and vegetable products (within the framework of the ReAPO) should perform the following functions, regardless of the departmental jurisdiction of the farms, associations and enterprises: the introduction of the achievements of scientific and technical progress, planning of procurements, distribution and sales of fruits and vegetables; the placement of products in storage facilities; the determination of the assortment for processing enterprises and shops of kolkhozes, sovkhozes and interfarm enterprises; the planning and distribution of fruit and vegetable containers and packaging materials, and so forth.

The raising of flax and its initial processing should also be integrated. As we know, obtaining the final product--flax fiber--involves a number of technological stages: preparing the flax straw (spreading the straw and raising the stock), drying the straw, sorting, desiccation, transportation, storage, preparing the stock by warm retting and producing the fiber.

Out of production and technological necessity it is expedient to combine all units for raising and harvesting flax, obtaining flax fiber and sending it to the linen plants, and transfer this work from the Latvian SSR Ministry of Light Industry to the Latvian SSR Ministry of Agriculture and the republic APO. Correspondingly, in the system of the republic Ministry of Agriculture or the republic APO one should organize a special economic subdivision (formation) for management of the RAPO services that provide control over the organization of the raising of flax on the kolkhozes and sovkhozes and the processing of flax straw and flax stock. At the RAPO level this service can be at the flax plant under the direct leadership of the director of the flax plant. In the RAPO the flax plant can have the legal status of an interfarm plant. Such an interfarm flax plant was created in the Valmiyera RAPO. The plant produces the final product, using flax straw obtained from kolkhozes of the given RAPO.

The republic APO for producing and initial processing of flax should coordinate the plans for the production and processing of flax products among individual RAPOs develop measures for further specialization, distribution and concentration of flax raising and facilities for processing it; contribute to progressive technology for raising and processing flax; order and complete the appropriate systems of machines and equipment for raising and processing flax; have funds for special equipment and materials necessary for producing the final product; organize and carry out the sales of flax fiber and other kinds of final products of flax production (flax seeds, tow, tow cord and so forth) for the needs of national economic complexes.

Certain changes are also necessary in the production of other kinds of final products. Thus it would be expedient to conduct measures for integration of the raising of potatoes for technical purposes and their processing at alcohol and starch plants, and to transfer them from the jurisdiction of the Ministry of the Food Industry to the republic APO. Small starch plants can be placed directly under the jurisdiction of the RAPO. It is expedient to concentrate starch production in the areas where the raw material is obtained. Bringing the capacities for processing products closer to the locations for obtaining raw material contributes to reducing transportation expenditures, reducing losses during storage of the raw material, utilizing byproducts and wastes from processing more efficiently, utilizing the labor force better throughout the year, and so forth.

It is also necessary to clarify the economic status of the subdivision of the mixed feed industry of the Ministry of Procurements, placing responsibility for the production of mixed feeds not only on RAPO plants and mixed feed shops at the agricultural enterprises themselves, but also on the kolkhozes and sovkhozes that engage in the processing of their own forage grain into full-value mixed feeds. Moreover, the functions (and also the services) for procuring products can be expediently transferred to the corresponding republic formations for raising, procuring, storing and processing individual kinds of products: functions for capital construction--to the unified republic formation for construction within the framework of the APK, and functions for quality control of the final product--to the newly created superdepartmetnal agency under the republic Council of Ministers.

The development of concepts of further development of integration processes is carried out somewhat differently for the production of other kinds of final products. Thus plants for processing sugar beets and animal husbandry products under the conditions of the Latvian SSR can be expediently placed under the jurisdiction of republic formations. The republic formations should solve the main problems of correctly determining the zones for raising and producing this raw material thorough the RAPOs that are directly in charge of the raw material enterprises. It is also necessary to study the possibilities of streamlining the internal organizational structure of these formations, raising the level of concentration of individual industries, and so forth. Here one should keep in mind that the Ministry of the Meat and Dairy Industry of the Latvian SSR, as distinct from the ministries of other republics, itself makes deliveries into the unionwide fund and into the retail trade network with centralized delivery.

Moreover, for each of the aforementioned economic formations it is necessary to determine the principles of internal functioning. Frequently the capacities of enterprises for processing cattle and poultry into meat have too much concentration. One must not forget that when the capacities of meat combines are increased there are also increased expenditures on the delivery of raw material and losses of the weight of animals during shipping. It is also necessary to note that with further improvement of the supply of a broad assortment of meat products for the rural population (so far meat products are supplied mainly to the city population through the state trade network) there will be an increase in transportation expenditures and the expenditure of fuel.

The calculations of scientific workers show that in the Latvian SSR it is expedient to construct meat combines with an average capacity, for example, 15,000-20,000 tons a year, that is, for slaughtering and processing the raw material from the kolkhozes and sovkhozes in 2-5 rayons. At the present time the USSR Ministry of the Meat and Dairy Industry is developing a broad program of construction of enterprises (branches of meat combines) for processing cattle, storing meat and producing meat products in rural areas for local needs (see: Antonov, S., "The Meat and Dairy Industry in the Implementation of the Program for Further Development of the Nonchernozem Zone of the RSFSR," EKONOMIKA SEL'SKOGO KHOZYAYSTVA, 1982, No 5).

On the basis of the concepts considered above for the development of individual agricultural service formations and formations for processing agricultural products, one can project the corresponding economic mechanism and system of administration. The initial point is the determination of the concept of development. In the next stage one develops the corresponding economic mechanism for realizing these concepts. In the third stage one determines the system of administration that provides for the most efficient organizational structures for realizing the concepts that have been developed.

The system of administration of the republic agro-industrial complex that is created in stages will make it possible to efficiently combine the territorial and branch principles in the organization of economic activity. The existence of the republic agro-industrial association, its council, the Presidium and the staff will make it possible to provide for implementation of the territorial principle and the development of the republic APK and direct all spheres of the APK toward the production of the final product with the least possible proportional expenditures (resources). In turn, the republic economic formations (for construction, mechanization, procurements, processing and sales of meat, milk and so forth) will provide for the implementation of the branch principle and the utilization of the advantages of the development of narrow specialization of production and service.

It is also necessary to develop concepts for development of other spheres of production that are closely related to the functioning of the APK. Thus in the republic several organizations which are located on the same territory but are included in various departments engage in commercial fishing: the fishing administration under the Latvian SSR Council of Ministers, the council of fishing kolkhozes of the Latvian SSR, kolkhozes and sovkhozes of the Latvian SSR Ministry of Agriculture, and the Baltrybvod administration for protection

and reproduction of fish stocks. At the same time the republic does not have a unified center which can coordinate the work for the development of fishing and integrate the efforts of these organizations. We have not solved problems of developing an intra-economic network of highways for the kolkhozes and sovkhozes.

A major role in solving problems of developing concepts and special-purpose programs for further development of individual spheres of the APK should be played by the council and other agencies for administration of the republic agro-industrial association and also the RAPOs In stages, on the basis of the production and economic concepts which have been worked out for the development of individual spheres of the republic agro-industrial complex, we are creating integrated production and production-scientific associations, and economic formations for production-product purposes, production-technical service and agricultural service.

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FOOD PROGRAM IMPLEMENTATION ASSESSED, POTENTIAL FOR IMPROVEMENT DISCUSSED

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/Article by N. Borchenko, head of department at USSR Gosplan: "Reserves for Production of Food Goods"/

/Text/ The party, soviet, planning and administrative organs and municipal and rural workers have all joined actively in the work aimed at fulfilling the decisions handed down during the May (1982) Plenum of the CPSU Central Committee. Additional reserves for supplying the country with food goods are being uncovered at each enterprise of the agroindustrial complex. The collectives of public farms and enterprises of the agroindustrial complex, based upon their improved logistical base, are striving to utilize their natural-climatic and economic conditions in a skilful manner and to furnish more and better products with reduced expenditures for their production.

The principal conditions of the USSR Food Program have been supplemented, strengthened and further developed in the food programs of republics, oblasts and rayons, in the all-round plans for kolkhoz and sovkhoz development and in the decisions handed down by the boards of ministries and departments.

The development and approval of regional food programs is the first important stage along the path leading to implementation of the decisions handed down during the May (1982) Plenum of the CPSU Central Committee. Agroindustrial associations and agroindustrial committees have been created in the oblasts, krays and autonomous republics. The rayon echelon for exercising control over agriculture and over those enterprises which are closely associated with kolkhozes and sovkhozes has been strengthened. The rayon agroindustrial associations must unite the efforts of the agricultural partners in the interest of achieving high final results.

The administration of the branch is becoming more specific and purposeful in nature. A considerable reduction has taken place in the administrative staff.

Work is continuing with regard to improving planning and logistical supply for agriculture, the economic relationships of kolkhozes and sovkhozes with enterprises of the procurement system, the acceptance and processing of agricultural products and also supply, repair and technical services for the farms. Normative documents have been developed which call for measures aimed at raising the material interest and mutual responsibility of the partners.

The purchasing prices for agricultural products are being improved and bonuses have been introduced for adding on to these prices for the benefit of low-profitability and unprofitable kolkhozes and sovkhozes. Thus, since 1 January 1983 the state has been purchasing at raised prices grain crops, sugar beets, potatoes, cattle, hogs, sheep, milk, vegetables and others. Genuine conditions have been created for the introduction of cost accounting procedures.

In addition to measures of an organizational, administrative and economic nature, those problems concerned with strengthening the logistical base for the rural areas are playing an important role in the Food Program.

The period which has elapsed since the May (1982) Plenum has been characterized by an increase in capital investments in agriculture and by deliveries to the rural areas of plant protective agents, mineral fertilizers, equipment and industrially produced feed.

Thus in 1982 the country's kolkhozes and sovkhozes were supplied with almost 1 million more tons of mineral fertilizer than they received in 1981 and chemical plant protective agents -- 29,000 more tons, including 18,000 tons of herbicides. Greater quantities of grain harvesting combines, trucks, feed harvesting machines and other items of equipment were made available. An increase took place in the production of industrially produced feed.

Fine changes took place in capital construction. A reduction took place in unfinished production and an increase was noted in the placing in operation of apartment living space, children's pre-school institutes, vegetable and potato storehouses, storehouses for feed, warehouses for the storage of mineral fertilizers and other production and non-production installations.

As a result, an increase took place in the power and capital supply of kolkhozes and sovkhozes and in the availability of fertilizers and the means for protecting plants against pests and diseases.

Thus, both last year and this year, in fulfillment of the country's Food Program, a complex of large-scale national measures has been carried out aimed at creating favorable conditions for increasing the production of food goods.

Compared to 1981, gross agricultural output increased by 5.3 billion rubles in 1982, with increases taking place in the procurements of grain, sunflowers, sugar beets, potatoes, vegetables, fruit, grapes, tea leaves, tobacco, milk and eggs. A decrease took place in the number of unprofitable farms. Noticeable improvements were realized in feed production and in its structure and quality.

This served as the base for expanding the production of animal husbandry products in 1983. According to the results for the first 6 months, the plans for procuring animal husbandry products and delivering them to the all-union fund were fulfilled. Substantial growth was achieved in the procurements of livestock and poultry, milk and eggs. Compared to the same period for last year, the procurements of meat and poultry have increased by 600,000 tons, milk -- by 3.6 million tons and eggs -- by 900 million.

By 1 July 1983 the country's kolkhozes and sovkhozes had increased their sales of livestock and poultry by 8 percent compared to the corresponding period for last year, the Lithuanian SSR -- by 33, Estonian SSR -- by 33, Latvian SSR -- by 21, Moldavian SSR -- by 17, Belorussian SSR -- by 8 and the Armenian SSR -- by 10 percent. For the country as a whole, milk purchases increased by 13 percent, including in the Baltic Republics -- by 24-26, the Moldavian SSR -- by 26, in the RSFSR -- by 14 and in the Ukrainian SSR -- by 14 percent; egg purchases increased by 4 percent. Improvements were realized in all areas in the productivity of the livestock and poultry and also in their maintenance and the sales of heavy cattle increased. Compared to last year, an expansion took place in the sale of young swine and poultry stock to the population. The volumes of early and hothouse vegetables purchased increased by 147,000 tons (10 percent). At the same time, a fine foundation was prepared for fulfilling the 1983 plan.

It also bears mentioning that these results could have been better if the material and scientific-technical base created for agriculture through the efforts of the entire country had been utilized in a more efficient manner.

This matter was discussed during a meeting of the 1st secretaries of the central committees of communist parties of union republics and kray and oblast party committees on 18 April 1983, at which time a review was undertaken of the practical problems associated with agricultural development and with implementation of the Food Program*.

In a speech delivered before this meeting, Yu.V. Andropov emphasized that the logistical base that has been created is making it possible to achieve considerably better results in agriculture. He focused special attention on the need first of all for achieving stability in farming based upon the introduction of scientifically sound zonal farming systems, completing the mastering of crop rotation plans during the next few years, converting over to the use of industrial technologies for the cultivation of agricultural crops and achieving further improvements in the structure of the areas under crops. Improvements should also be carried out with regard to introducing scientific-technical achievements and leading experience into operations, utilizing the logistical base created in the rural areas, providing the rural areas with cadres of machine operators, creating a reliable base for the repair, storage and servicing of equipment and making greater use of the potential afforded by the private plots of kolkhoz members and sovkhoz workers and the subsidiary farms of industrial enterprises.

Success in implementing the Food Program is greatly dependent upon the degree to which use will be made of all of these reserves and potential in agriculture and in branches of the agroindustrial complex. And experience has revealed that such reserves are available. The principal such reserve -- the efficient use of accumulated production, economic and scientific potential. This applies first of all to the use of scientifically sound farming systems, which include a broad range of measures aimed at increasing the production of farming products and achieving greater reliability in obtaining the desired yields. Crop rotation plans, modern seed production operations, fertilization

* See PRAVDA, 1983, 19 April.

and soil cultivation systems, the introduction of industrial technologies for the cultivation of crops, improvements in the structure of the areas under crops and progressive forms for organizing labor and production -- these are its principal elements. At the present time, such systems have been developed for all of the country's zones. In those areas where they have become one of the principal elements of the system of management, unfavorable weather conditions are being overcome with minimal losses.

Work carried out in recent years by many kolkhozes and sovkhozes in the Ukrainian and Belorussian SSR's, in the Baltic Republics and in the northwestern region of the RSFSR, in connection with the introduction of zonal farming systems and the efficient use of organic and mineral fertilizers, has made it possible to improve the potential fertility of the soils and to raise the agricultural crop yields.

Thus, industrial technologies for the cultivation of agricultural crops, the areas of which are constantly increasing, as a rule produce increases in yields on the order of 15-20 percent compared to that being obtained from conventional sowings. In 1982 the following crops were grown using industrial technologies: sunflowers on an area of 632,000 hectares, sugar beets -- on more than 1 million hectares, corn -- on 2.5 million hectares. According to data supplied by USSR Minsel'khoz /Ministry of Agriculture/ for 1982, the increases in yields from the use of industrial technologies were as follows: for corn -- approximately 9 quintals per hectare, potatoes -- more than 40, sunflowers -- 5 and soybeans -- 4 quintals per hectare.

The soil-protective system of soil cultivation is an important element of the farming system employed in many regions of the country. It is especially effective in the arid regions of Kazakhstan, Siberia and the Volga area, where it produces an increase in grain yield of 2-3 quintals per hectare. In 1982 this system was employed on 44 million hectares and in the future, in the opinion of the scientists, this area should be increased to 100 million hectares.

However the use on an extensive scale of industrial technologies and soil-protective farming systems is being held up by a shortage of highly productive machines and herbicides produced by USSR Minsel'khozmash /Ministry of Tractor and Agricultural Machine Building/ and USSR Minudobreniy /Ministry of Fertilizers/.

A scientifically sound system of farming is based upon the extensive use of organic and mineral fertilizers. The work of applying organic fertilizers has been organized well in the Belorussian SSR (13-14 tons per hectare of arable land). The planned liming of acid soils is also being carried out here. As a result, an increase has taken place in the effectiveness of use of mineral fertilizers, the areas having a high content of mobile phosphorus have increased in size and a reduction has taken place in the area of acid soils.

However, work concerned with the restoration of land and raising the fertility of soils is not being carried out in all areas. A lowering of the humus content in the soil is being observed in Kursk and Rostov Oblasts, in Krasnodar and the Altay Krays and in some other regions of the country. In order to achieve a self-supporting balance of humus, the use of organic fertilizers throughout the country as a whole should be doubled.

Agriculture is experiencing an acute shortage of phosphorus fertilizers, especially for grain sowings. It is for this reason that the effectiveness of use of the remaining fertilizers is decreasing, the ripening periods for the grain crops are being delayed and the quality of the grain is deteriorating.

At the present time, the kolkhoz and sovkhoz requirements for phosphorus fertilizers are being satisfied by only 60-65 percent. According to computations by USSR Minsel'khoz, increasing the phosphorus content in the soil to the required level can raise the product yield, in a conversion for grain, to 30 million tons.

The country has great opportunities at its disposal for expanding the production of phosphorus fertilizers as a result of newly discovered deposits: Verkhne-Kamskiy, Chimesayskiy, Khunsugulskiy, Oshurkovskiy, Belozimenskiy and others. It is our opinion that a special purpose program should ideally be prepared in the near future, the purpose of which should be to satisfy the agricultural requirements for phosphorus fertilizers.

In addition, the USSR Ministry of Construction Materials Industry must solve in a more rapid manner the problem concerned with supplying farms in the nonchernozem zone of the RSFSR and in the Far East with lime materials, a shortage of which in these zones is causing a shortfall in crops, on acid soils and in a conversion for grain, amounting to approximately 15-18 million tons.

A great amount of work is being carried out throughout the country in connection with implementing improvements in seed production operations. The production of hybrid seed for sunflowers, corn and winter wheat has been organized in a fine manner in Moldavia and the Ukraine. At the same time, new agricultural crop varieties are being introduced into operations very slowly, with considerable areas being sown in low quality seed. In 1982, only 26 percent of the overall grain area throughout the country as a whole was occupied by new grain crop varieties and hybrids which have been regionalized since 1976, at kolkhozes and sovkhozes in Kazakhstan -- only 10 percent and in Uzbekistan, Azerbaijan, Armenia and Turkmenia -- even less.

The operational experience of kolkhozes and sovkhozes in Kirghizia, which during a brief period of time increased sharply their production of seed for alfalfa and sugar beets, has shown that the republics of Central Asia can make a great contribution towards the all-union division of labor in the field of seed production. A reliable base can be created here for producing seed for alfalfa and vegetable crops and hybrid seed for corn and sugar beets, for delivery to other regions of the country where seed production for these crops, owing to the natural conditions, is difficult and unstable in nature.

The USSR Ministry of Agriculture, VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ and the vast network of scientific institutes must introduce scientifically sound farming systems and fertilization systems into production operations in a more active manner and they must develop the seed production work. The newly created rayon agroindustrial associations could promote this development.

The scientifically sound farming systems must be employed in a creative manner. Here an important role is played by the farm leaders and specialists, who must employ them in keeping with the local conditions.

It bears mentioning that the Food Program calls for measures for expanding the rights of leaders and specialists in the making of administrative, agrotechnical and economic decisions and the planning organs must grant the leaders of farms more independence in making such decisions.

A considerable reserve for increasing the production of agricultural products, particularly grain and feed, is that of making more efficient use of reclaimed lands. Their role in increasing production and achieving greater stability in farming is increasing with each passing year. At the present time, approximately 30 percent of the output of farming is produced on such lands. However the reclaimed lands are not being utilized in a sufficiently efficient manner. Thus the yields remain low over large areas, there are great differences in the cropping power and many poor reclaimed lands are being encountered. The proportion of the latter is especially great at kolkhozes and sovkhozes in Turmenistan, Azerbaijan, Kirghizia and Kazakhstan.

In order to improve the use of reclaimed lands, the planning and agricultural organs must call for a number of measures in their plans: higher rates for bringing about quality improvements in and the modernization of existing irrigated lands; raising the completeness of the reclamation operations; expanding the construction of all installations of a production and social nature (roads, repair workshops, animal husbandry facilities, housing, children's institutes, clubs and others) required for land development and not allowing a pause to develop between the development of land and its introduction into operation; improving the technical servicing of the intra-farm irrigation network.

Great tasks have been assigned to animal husbandry by the Food Program. The pedigree structure of the cattle, cows, hogs and poultry can ensure higher rates of growth for the production of animal husbandry products. At the present time, success in this work is being determined not so much by the number of livestock but rather by the quantity and quality of the feed, its structure and good balance in terms of nutrients, especially protein, by the availability of highly skilled cadres of animal husbandry workers and by work discipline and order out on the farms and in the fields.

The production of feed is increasing on the country's kolkhozes and sovkhozes and the quality of the feed rations is improving. However, this is taking place mainly as a result of an increase in the consumption of concentrated feed, with stabilization or a reduction during some years in the production of coarse, succulent and pasture feed.

Thus, during the 10th Five-Year Plan and compared to the 9th, a reduction took place in the average annual consumption of coarse, succulent and summer green feed per standard head of cattle at kolkhozes and sovkhozes in the Georgian SSR, Lithuanian SSR, Moldavian SSR, Latvian SSR and Estonian SSR. The structure for the production of this feed does not conform fully to the existing structure for animal husbandry, which is characterized by the availability of considerable quantities of cattle and sheep.

With each passing year, the problems concerned with producing feed protein and biologically active substances for animal husbandry are becoming more acute. According to data supplied by USSR Minsel'khoz /Ministry of Agriculture/, insufficient support (40-60 percent) for the animal husbandry requirements for biologically active substances, vitamins and anti-biotics and microelements is leading to extremely perceptible overall losses caused by a shortfall in animal husbandry products.

A lack of balance in the mixed feed in terms of protein and biologically active substances is resulting in an overexpenditure of feed, in extended fattening periods for the animals, in incomplete utilization of the production capabilities of the livestock complexes and farms and so forth. With the same overall volume of mixed feed production but with rich and balanced feed ensured for the animals, it is possible to obtain additionally, according to the computations of specialists, no less than 7 billion eggs, 250,000-270,000 tons of poultry meat and 600,000-700,000 tons of pork in live weight.

In order to eliminate the shortage in protein and biologically active substances, it will be necessary for USSR Minpishcheprom /Ministry of the Food Industry/, USSR Minmyasomolprom /Ministry of the Meat and Dairy Industry/, USSR Minrybkhoz /Ministry of the Fish Industry/, Minkhimprom /Ministry of the Chemical Industry, Minmedprom /Ministry of the Medical Industry and Glavmikrobioprom to utilize more completely the opportunities available for increasing the production of oilcake and oil-seed meal, dry livestock feeds, fish meal, nutrients, lysine, methionine, vitamins, microelements and so forth.

At the same time, USSR Minsel'khoz and its organs in the various areas must ensure higher rates of growth for the production of pulse crops, alfalfa, clover and other leguminous grasses and soybeans and also an acceleration in the construction of plants for the production of meat and bone meal.

Hence, a solution for the problem of full-value protein and satisfaction of the requirements for biologically active substances in the feed rations for livestock constitutes a large-scale task confronting the branches of the agro-industrial complex. The carrying out of this task will serve to guarantee the production of additional livestock husbandry products.

An increase in the production and improvements in the structure of feed and a balance in the feed in terms of nutrients represent the principal path to be followed for increasing the production of animal husbandry products and achieving intensification of the branch.

At the same time, the feed must be utilized in an economic and thrifty manner. Great and unjustified overexpenditures of feed are occurring annually owing to the fact that low-productivity cattle are being kept too long and are being delivered to the meat combines mainly at the beginning of each following year. Thus, according to veterinary data supplied by the USSR Minsel'khoz, at the beginning of the indoor maintenance period in 1982 there were 1.7 million head of barren cows on the farms. The specialists estimated that considerable quantities of stall feed intended for productive livestock are being expended annually for these cows that are being held too long and also for low-productivity cattle. Thus, instead of retaining non-productive livestock on

indoor maintenance, they should be delivered for meat purposes. Quite possibly, the periods for accounting for the livestock should be reexamined and they should be changed to the beginning of the wintering period, that is, the 1st of October.

The Food Program requires the planning and administrative organs to utilize all of the products obtained in a thrifty and efficient manner.

One method for increasing the consumption of milk by the population is that of achieving more efficient use of ZTsM /whole milk substitute/ for feeding to calves. This is a very important national economic problem. With the correct organization for the production and use of ZTsM, 1 ton of dry product can be used instead of 8 tons of whole milk.

Each year, 38 percent of the overall amount of milk protein contained in milk and obtained at kolkhozes and sovkhozes is expended for feeding to calves. In 1981, 8 million tons of whole milk and 23.2 million tons of skim milk, buttermilk and whey were used for feed purposes. Approximately 252 kilograms of whole milk, 423 kilograms of skim milk, whey and buttermilk and roughly 50 kilograms of substitute whole milk were expended per calf.

The above data reveals that a considerable amount of the whole milk could have been used for feed purposes through the efficient use of whole milk substitute for feeding to calves and a corresponding reduction in the consumption of whole milk for this purpose.

In 1984, the plans call for the production of 270,000 tons of dry ZTsM and 1 million tons of liquid ZTsM. This amount will make it possible to release more than 3 million tons of milk for feed purposes.

In the plan for 1984, the state plans of union republics and the local agricultural organs must call for the release of an appropriate amount of whole milk for feed purposes.

The private plots of the population and the subsidiary farms of industrial enterprises can provide appreciable assistance in increasing the production of animal husbandry products. The program developed by the party and government for providing maximum assistance and encouragement in developing the private plots of kolkhoz members, sovkhoz workers and all those residing in rural areas is producing the desired results. Compared to 1980, in 1982 the number of cattle being maintained by the population had increased by 1.1 million, cows -- by 200,000, hogs -- by 1.8 million, sheep and goats -- by 1.5 million. However, full use is still not being made of the potential possessed by the population for increasing the production of animal husbandry products.

More than one half of the families of kolkhoz members and sovkhoz workers do not have cows, 64 percent of the families of kolkhoz members and 70 percent of the families of sovkhoz workers are not maintaining either hogs or sheep.

A survey of families of kolkhoz members, conducted by the USSR TsSU /Central Statistical Administration/, has revealed that the principal reason why some of them do not maintain livestock -- difficulties in obtaining feed. Such was

the opinion of 28 percent of those interrogated who wish to maintain cows and 51 percent of those desiring to maintain cows. In the Uzbek, Tajik, Kazakh, Kirghiz, Georgian, Armenian and Azerbaijan Republics, 71-90 percent of those interrogated cited this reason.

Thus mixed feed allocated on a planned basis to Tsentrosoyuz for sale to the population quite often is not used as intended but rather is employed for developing animal husbandry operations in the public economy -- at kolkhozes and sovkhozes. The Food Program calls for an increase in the issuing of grain and feed to kolkhoz members and sovkhoz workers for developing animal husbandry on private plots. However, grain and feed are still being sold and issued to kolkhoz members and sovkhoz workers in insufficient amounts and the population's requirements for young cattle, hog and poultry stock are not being satisfied. The necessary conditions have not been created in all areas for the maintenance of livestock and poultry (geese, ducks, broiler-chicks). Thus, kolkhoz members and sovkhoz workers who reside in multiple-story buildings of the municipal type have fewer animals than families which inhabit buildings of the farmstead type: cows -- by a factor of 5.7 and 7.7, hogs -- 2.1 and 1.3 and poultry -- by factors of 7.5 and 2.4 respectively. Thus, from this standpoint it would be more correct to build mainly farmstead type homes in the rural areas and to create facilities for municipal type homes for the maintenance of livestock and the storage of feed, vegetables and potatoes.

The role played by subsidiary farms of industrial enterprises could increase substantially if more complete use were made of the labor, technical, material and financial resources which these enterprises have at their disposal. In the process, importance is attached to selecting the correct specialization for development of these farms. They can specialize in the fattening of cattle, using the food scraps of public catering enterprises, or they can grow vegetables in greenhouses using the exhaust heat of boiler rooms and gas compressor stations and so forth. However the creation of subsidiary farms based upon obtaining state feed is completely unacceptable, since the basis for creating such farms consists of attracting into agricultural use new and unused lands and feed, labor, material and financial resources. Such a program is economically justified and advisable.

In recent years, collective horticulture and gardening operations have become more active in nature. Compared to 1980, in 1981 it became possible for more than 800,000 families to participate in collective horticulture and gardening and this meant that more than 1.5 million municipal residents were additionally drawn into agricultural production for the growing of vegetables, berries and potatoes. They are obtaining considerable quantities of high quality and labor-intensive products by virtue of useful labor performed during their free time.

The experience of recent years has shown that the subsidiary farms of industrial enterprises, the private plots of the population, collective horticulture and gardening are additional sources for increasing the production of food goods throughout the country.

An important condition for carrying out the Food Program -- raising the technical level of the agricultural machines and equipment and using the

equipment in an efficient manner. However, owing to defects in the grain harvesting, beet harvesting, potato harvesting and other items of equipment, considerable agricultural crop losses are being tolerated.

Towards this end, the Ministry of Tractor and Agricultural Machine Building must expend a maximum amount of effort towards raising the quality of the agricultural equipment and ensuring that it is of high quality and reliable.

In a speech delivered before a meeting of 1st secretaries of the central committees of the republic communist parties in April 1983, Yu.V. Andropov emphasized that "certainly, the quality of the agricultural machines must be raised, but first of all improvements must be realized in their operation."* The output per tractor and combine for the country as a whole is increasing. However, in 1981 the average annual output per standard tractor was 7.6 hectares and in the Azerbaijan SSR -- 6.3 and in the Kazakh SSR -- 6.1 hectares. On some farms the agricultural machines are being written off prematurely. Thus, for a reduction in the number of grain harvesting combines written off in 1981 throughout agriculture on the whole to 10.4 percent (norm of 11.1 percent), 13.6 percent of the combines were written off by Minsel'khoz for the Kazakh SSR and 12.6 percent by Minsel'khoz for the Kirghiz SSR.

Goskomsel'khoztekhnika, USSR Minsel'khoz and the union republic gosplans should organize the work in a manner such that the equipment is written off in keeping with the prescribed norms.

The use of equipment is improving slowly also as a result of unsatisfactory support in the form of cadres of machine operators in some regions of the country. For agriculture as a whole, there are 112 machine operators for every 100 tractors. The kolkhozes and sovkhozes in the Ukrainian SSR, Moldavian SSR and Belorussian SSR are well supplied with cadres of machine operators, where there are 147, 147 and 120 machine operators respectively for every 100 tractors; at sovkhozes in Dzhezkazgan Oblast -- 68, Mangyshlak Oblast -- 71, Guryev Oblast -- 76, Kzyl-Orda Oblast -- 77 (Minsel'khoz for the Kazakh SSR).

The productivity of the units is decreasing as a result of the untimely technical servicing of the machines. In 1982 the idle time of tractors (excluding idle time caused by weather conditions) at kolkhozes, sovkhozes and inter-farm enterprises amounted to 14 percent of the days worked, an amount which is equivalent to 153,000 tractors lying idle for a year's time. In order to eliminate such idle time, harmonious and joint work by all of the agricultural partners in the agroindustrial complex is required. This will promote an improvement in the productivity of the machines and economies in the use of resources.

The Food Program has established the task of achieving a savings of no less than 5 percent in fuel and lubricating materials in the carrying out of mechanized and transport operations. The planning and administrative organs must undertake measures aimed at realizing strong savings in the use of fuel allocated to agriculture, control its consumption, introduce fuel conservation

* PRAVDA, 1983, 19 April

technologies on an extensive scale, reduce unproductive operations by motor vehicles and tractors and ensure the construction and modernization of petroleum warehouses and filling stations in the required volumes. Considerable quantities of metal and labor can be saved by increasing the work volumes associated with the restoration of worn out parts. A definite amount of work has already been carried out here which has produced considerable results. Each year, worn out parts valued at approximately 500 million rubles are being restored throughout the country. Computations carried out by USSR Goskomsel'khoztekhnika indicate that by 1984 it will be possible to increase the restoration of worn out parts by 10-15 percent, provided the workers are materially interested in expanding their collection of them and the necessary equipment is provided.

Returning to the problem of reducing losses in products already created, as an important factor in implementing the Food Program, we wish to emphasize the need for strengthening the material base for the storage of products. The experience of recent years has shown that an expansion of this problem through the construction of storehouses using existing plans requires a prolonged period of time. Thus we are of the opinion that non-traditional solutions are required, solutions which will reduce the storehouse construction periods by roughly twofold. Towards this end, the domestic production of completely prefabricated storehouses made out of light metal structures with protective heated panels and a controlled microclimate should be organized based upon cooperation between industrial enterprises and USSR Goskomsel' khoztekhnika. This will make it possible to accelerate the creation of a storage base and to reduce the losses in food goods. Such storehouses and others similar to them are required first of all for grain, fruit and vegetable products and feed.

The Food Program calls for measures to be carried out on an extensive scale aimed at retaining personnel in the rural areas, especially youth. Moreover, conditions must be created which will start a flow of young workers and specialists from the cities to the rural areas. The creation of industrial departments, mainly for the production of consumer goods, will promote the attraction of additional manpower onto the farms, the formation of stable labor collectives on the farms and strengthen the farm economies. In addition, it will make it possible to gradually eliminate patronage assistance in the carrying out of field work and attract pensioners and the second members of families to performing work for pay.

All of this testifies to the fact that there are still many reserves and opportunities available in agriculture and the agroindustrial complex as a whole and to employ them in behalf of the Food Program constitutes an important task of the planning and administrative organs at all levels of control.

An analysis of the course of fulfillment of the decisions handed down during the May (1982) Plenum of the CPSU Central Committee and the Food Program in the past has shown that more active work is being carried out in connection with supplying the population more completely with food goods; the branches of the national economy are more actively engaged in solving the problems of the central element of the agroindustrial complex; an increase has taken place in

the initiative and responsibility of the local party, soviet planning and administrative organs with regard to improving the supply of food goods for the population; executive and production discipline has been raised -- an important condition for the successful implementation of the Food Program; a positive trend is taking shape in connection with increasing the production of agricultural products and supplying the population with food goods.

At the same time, some intra-branch and inter-branch disproportions and bottlenecks requiring a considerable amount of work have been uncovered: some ministries and departments are unjustifiably dragging out the elimination of these proportions and imbalances and thus they are delaying forward progress.

During the June (1983) Plenum of the CPSU Central Committee, in a speech delivered by Yu.V. Andropov, special attention was focused on raising the role and responsibility of the local party, soviet and administrative organs for solving the Food Problem. "There is a special need" he stated, "for organizing a continuous supply of high quality food products for the population and particularly for the purpose of achieving the maximum possible degree of self-support in this regard."*

The planning organs are presently preparing the draft plan for 1984. In preparing it, consideration must be given to the tasks and requirements established during the May (1982), November (1982) and June (1983) Plenums of the CPSU Central Committee and to the conditions and conclusions expressed in the speech delivered by Yu.V. Andropov during the conference of 1st secretaries of the central committees of union republic communist parties and kray and oblast party committees on 18 April 1983.

Towards this end, the following are required: proportional and balanced development for the entire agroindustrial complex with orientation of it towards obtaining high final results; a fine balance between the production of goods on the one hand and their processing and material resources allocated on the other; improvements in the production structure for individual agricultural crops, particularly grain crops and a reduction in the shortage of protein feeds; intensive development for agriculture; improvements in the quality indicators for production growth: agricultural crop yields and animal husbandry productivity; the extensive introduction of scientific-technical achievements and particularly new industrial technologies for the cultivation of agricultural crops and the maintenance of livestock; a reduction in product losses and observance of the regime for realizing savings in the use of resources; intensify the social nature of the plan.

The mobilization of the accumulated economic potential of the country and the entire agroindustrial complex for solving the problems of agricultural development will serve as a guarantee for the successful carrying out of the tasks of the Food Program.

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* PRAVDA, 1983, 16 June.

AGRO-ECONOMICS AND ORGANIZATION

FINANCE AND CREDIT SYSTEM OF APK ENTERPRISES EXAMINED

Moscow FINANSY SSSR in Russian No 7, Jul 83 pp 8-19

/Article by V.N. Semenov, doctor of economic sciences: "Financial-Credit Mechanism of the Agroindustrial Complex"/

/Text/ During the 26th CPSU Congress, a detailed program was adopted for increasing the production of agricultural products and the products obtained from their processing. This program ensures unified planning and proportional and balanced development for the branches of the agroindustrial complex, considerable strengthening of its logistical base, improvements in the economic relationships between branches, the organization of efficient interaction among them in increasing the production of agricultural goods and improvements in the preservation, transporting, processing and delivery of these products to the consumer.

The agroindustrial complex includes a totality of branches which ensure the production, processing and storage of products and also the logistical equipping of agriculture. It includes three spheres:

...a totality of those branches of industry which supply agriculture, the food and meat and dairy industry and the procurement system with the means of production (machine building, chemical, microbiological and mixed feed);

...the branches of field crop husbandry and animal husbandry and production-technical, agrochemical, irrigation-land reclamation and veterinary-sanitary services for agriculture;

...a totality of those branches which ensure the procurement, transporting, storage and processing of the agricultural products.

At the beginning of 1981, 37 percent of all means of production and 40 percent of the manual and office workers working in branches of the national economy were concentrated in the country's agroindustrial complex; 42 percent of the national income is created here.

The distribution of capital investments and the number of workers in the branches of the agroindustrial complex are presented in the table on the following page.

(in %)

	Capital Investments 1981-1985	Number of Workers 1980
1st sphere	11.3	12.6
2d sphere	76.1	60.7
3d sphere	12.6	26.7
Total	100	100

The planning for development of the agroindustrial complex requires data on growth in the size of the population, on the natural-physical structure of the consumption funds, on the scientifically sound norms for the consumption of food products and the interchangeability of individual agricultural and industrial products taking into account their comparative effectiveness and on the exporting and importing of agricultural and industrial products. In the process, a balanced coordination of the production volumes for the agricultural products with the logistical equipping of agriculture is carried out.

The USSR Food program was developed in conformity with the decisions handed down during the 26th party congress and this program has been included in the plan for the economic and social development of the country during the 1981-1985 period. It represents a plan for the development of agriculture and the processing branches of industry not only up until 1990 but also for a longer period. The development of the Food Program will make it possible to utilize the material, financial and labor resources in a more efficient manner and to implement uniform policies with regard to the production, procurements and processing of agricultural products and logistical support.

The strategy of the Food Program is based upon the need for increasing the production of farming and animal husbandry products, improving the use of raw materials to be delivered to industry, raising quality and reducing losses, ensuring adequate support for the population in terms of bread and baked products, potatoes and sugar and satisfying the population's requirements for rational norms for meat, meat products, vegetables and fruit. At the same time, the plans call for the creation of firm material and organizational principles for intensifying the production of food products in accordance with scientifically sound norms.

The necessary prerequisites for the successful implementation of the Food Program are embodied in the plan for the economic and social development of the economy during the 11th Five-Year Plan. The gross output of agricultural output will increase by 13 percent during the five-year plan and in 1985 it will reach 147.1 billion rubles. A program will be followed aimed at intensifying agricultural production, raising the agricultural crop yields and increasing the productivity of animal husbandry operations. In the interest of achieving these goals, the plans call for growth in the production of feed.

The task of achieving the planned rates of growth in the production of agricultural products calls for a strengthening of the logistical base for agriculture. In the process and in connection with carrying out the tasks for

raising output, a substantial role will be played by strengthening cost accounting procedures and implementing improvements in economic relationships between the branches of the agroindustrial complex and also in price formation and in the financial-credit mechanism.

Expanded reproduction in agriculture is being achieved by means of prices, finances and credit. In the process, the financial-credit mechanism is not supplementing the price mechanism but rather it constitutes a unified mechanism for management.

In 1981, the kolkhozes and sovkhozes sold 73 billion rubles worth of agricultural products to the state. At the same time, they purchased 40 billion rubles worth of industrial goods. The earnings realized from their sale of products served as the principal source for the repayment of production expenses and for the formation of profit (net income), for expanding production and creating economic incentive funds.

The interrelationships between agriculture and industry are carried out in the form of an exchange, based upon commodity-monetary relationships. The rates for expanded reproduction, not only at individual enterprises but also for entire branches of the national economy, are dependent upon an economically sound price level established on a directive basis. Thus planned price formation does not eliminate the complexity and severity of the problem of establishing wholesale prices for the industrial products being supplied to kolkhozes and sovkhozes and procurement prices for agricultural products. This problem becomes more acute with greater economic isolation of the sovkhozes. With regard to kolkhozes, the problem became more acute following reorganization of the machine-tractor stations and the introduction of a guaranteed wage for kolkhoz members in accordance with the sovkhoz rates and estimates.

Hence the problem of achieving expanded reproduction in agriculture and the carrying out of the Food Program touch upon the sphere of those financial-credit relationships which go beyond the direct relationships between kolkhozes and sovkhozes on the one hand and procurement specialists on the other. This is why a review must be undertaken of those problems concerned with establishing the procurement, wholesale and accounting prices and the role played by finances and credit in supporting the cost accounting activities of procurement and supply organizations.

The establishment of purchasing prices for agricultural products in the USSR is based upon the need for stimulating increased production, while motivating the kolkhozes and sovkhozes to lower expenditures. However, when the purchasing prices are established in accordance with average production conditions, advantages are realized by those farms which are well supplied with fixed and working productive capital and which have fine land at their disposal. In this regard, a review of the purchasing prices reveals a trend towards greater differentiation among them. In many oblasts of the RSFSR, several prices were established for the field crop husbandry and animal husbandry products. The larger zones, those which encompass a number of oblasts, are found in the Ukrainian and Kazakh SSR's.

In the case of fractional differentiation of the purchasing prices, the work of the procurement organizations, and particularly the budget, becomes more complicated. In such a case, all of the redistribution functions are shifted over to the budget. Here the profit-forming factors are practically eliminated entirely by the system employed for establishing the purchasing prices. However, optimization is achieved in smoothing out the profitability levels of the kolkhozes and sovkhozes and this is an especially important factor under conditions involving a sharp differentiation in profitability caused by irregular investments in them.

The work of stimulating an increase in the production and procurements of definite types of agricultural products required by society leads to a change in the level of profitability. Such differentiation has been promoted by the 50 percent bonus added on to the purchasing prices for above-plan sales to the state, in the face of insufficient validation of the purchasing plans delivered to the kolkhozes and sovkhozes.

Since 1981, in the interest of stimulating an increase in the production and procurements of agricultural products, a payment of a 50 percent bonus has been in effect for adding on to the purchasing prices, for the sale to the state by kolkhozes and sovkhozes (over and above the sales level achieved during the 10th Five-Year Plan), of grain, sunflowers, sugar beets, raw cotton, soybeans, flax and hemp products, potatoes, tea leaves, tobacco, hops, mustard, ether-oil crops, poppies, livestock and poultry, milk, wool, eggs and karakuls.

In the interest of strengthening cost accounting procedures, achieving high rates for expanded reproduction at kolkhozes, sovkhozes and other agricultural enterprises, intensifying their material interest in increasing production and raising the quality of output, commencing 1 January 1983 the purchasing prices were raised and bonuses were established for them for cattle, hogs, milk, grain, sugar beets, potatoes, vegetables and other products, in the amount of 16 billion rubles annually. At the same time, the purchasing prices were increased by another 5 billion rubles, through the abolishment of subsidies to cover repayment of the difference in prices for automobile gasoline, spare parts, repair and construction materials and other industrially produced goods, which arose in 1978 (for gasoline) and in 1982 (for industrially produced goods and rates), in connection with an increase in the wholesale prices. Thus the purchasing prices for agricultural products, taking into account the bonuses added on to them for products sold to the state by low-profitability and unprofitable kolkhozes and sovkhozes, were raised by 21 billion rubles or by 27 percent.

In accordance with the state sales plan for 1982, the increases in purchasing prices and in the bonuses for adding on to them were as shown in the table on the following page.

Hence, of the total amount of increases in purchasing prices and bonuses for adding on to them amounting to 21 billion rubles, 11.2 billion rubles or 53 percent were used for raising the purchasing prices and 9.8 billion rubles or 47 percent -- for bonuses for adding on to the prices for low-profitability and unprofitable kolkhozes and sovkhozes.

	Increases in Prices and Bonuses		Including:			
			Prices		Bonuses	
	Billions of Rubles	%	Billions of Rubles	%	Billions of Rubles	%
Livestock and poultry	8.9	42.6	3.8	33.6	5.1	56.0
Milk	5.1	24.3	2.8	24.6	2.3	23.8
Wool	0.8	3.8	0.4	3.3	0.4	3.9
Grain	1.9	8.6	1.1	9.8	0.8	8.1
Sugar beets	1.2	5.6	1.0	8.5	0.2	2.4
Potatoes	0.4	1.5	0.2	1.5	0.2	1.5
Vegetables	0.5	2.2	0.3	2.5	0.2	2.0
Cotton	0.7	3.4	0.6	5.6	0.1	0.9
Other products	1.5	8.0	1.0	10.6	0.5	1.4
Total	21.0	100.0	11.2	100.0	9.8	100.0

During the development of the new purchasing prices, a reduction took place in the price zones and differentiation of the purchasing prices within an oblast was eliminated. Differentiation of the payments for products is now being carried out using bonuses added on to the purchasing prices for low-profitability and unprofitable farms. The bonuses for adding on to the purchasing prices for agricultural products sold to the state are established for low-profitability and unprofitable farms which operate under poor natural-economic conditions. The bonuses are established for individual types of agricultural products in percentages of the purchasing prices, with the bonus amount for each type of product not exceeding 75 percent of the procurement price.

Kolkhozes and sovkhozes having a total profitability which as a rule is not higher than 10 percent are included on the list of low-profitability and unprofitable farms to whom the bonus is paid. In some instances this list may include farms which have a total profitability in excess of 10 percent but which are unable to make repayment on USSR Gosbank loans using their own resources or finance capital investments and other planned measures and also which are inadequately supplied with fixed capital. The list of low-profitability and unprofitable farms does not include hothouse combines, poultry factories, wild animal rearing state farms or state livestock complexes that are supplied with concentrated feed from state resources. All of the conditions required for profitable production operations have been created for these farms.

The inclusion of farms on the list of low-profitability and unprofitable establishments that are paid purchasing price bonuses is carried out based upon the computed total profitability. This indicator is computed as a ratio of earnings from the sale of products and services, in accordance with the 1982 plan and the production costs for the products sold, corrected for the actual production costs for 1979-1981. Moreover the earnings also take into account the additional payments resulting from the 1983 increase in purchasing prices. The list of low-profitability and unprofitable farms has been approved for the 1983-1985 period by the oblast executive committees of people's deputies.

The payment of purchasing price bonuses to low-profitability and unprofitable farms is carried out by the procurement organizations simultaneously with the computations for products sold to the state by means of USSR Gosbank credit from a special loan account. The bonuses paid out are reimbursed by means of appropriations called for in the union republic budgets for the individual account. These appropriations can be used only for a special purpose.

The procurement organizations and processing enterprises make payment for the agricultural products purchased from kolkhozes and sovkhozes out of special unlimited loan accounts, that is, by means of USSR Gosbank credit. These payments are also not conditioned by the status of accounts with Gosbank concerned with loans issued earlier. As a result, the procurement organizations and processing enterprises settle their accounts with the suppliers of the agricultural products in a timely manner regardless of their financial status or indebtedness caused by bank loans obtained earlier. However, the cost of the products procured changes owing to plan deviations in the quantities of products received from individual farms in the various price zones. Thus the cost of the products is influenced by the total amount of the purchasing price 50 percent bonus for the sale of products over and above the level achieved during the 10th Five-Year Plan and the distance for which transport expenses had to be paid for delivering them. As a result, the payments for one and the same product deviate sharply from the plan. These deviations in the cost of the products procured inevitably are reflected in the operational results of the procurement organizations and industrial enterprises engaged in procuring and processing the agricultural products. Meanwhile the procurement organizations and enterprises which operate on a cost accounting basis must not depend upon fluctuations in the cost of the raw materials. Their results should be affected only by those expenses which are directly dependent upon their activities -- production and turnover expenses which are associated with the acceptance, storage and processing of agricultural products and raw materials. In this regard, the products being received should be evaluated according to the average prices, with their quality being taken into account.

In the practice of price formation for agricultural products and in the interest of calculating the production costs at procurement organizations and industrial enterprises, use is made of accounting prices which consist of the average purchasing expenses, the bonuses added on to the prices and the expenses for delivering the products to the receiving points. In the case of accounting prices, the agricultural products are accounted for on the balance of the procurement organization. These prices serve as the basis for determining the operational results of the procurement organizations and processing enterprises, since the products received are associated with the production expenses included in these prices. The accounting prices are employed for a number of years on the whole by a branch or republic. In some instances they are established by regions which do not always coincide with the price zones. For example, the accounting prices for some grain crops are established for the country as a whole, for livestock and poultry -- by union republics, with zonal differentiation in some of the republics. Since the accounting prices for some types of agricultural products are permanent, the deviations in the cost of the products purchased, from their cost according to accounting prices, are reflected in special "accounts for controlling the differences in prices for the purchasing of agricultural products." This

difference can be both positive and negative. The positive differences are applied to the budget and the negative ones reimbursed from the budget.

The cost of the products according to the accounting prices and the distribution costs of the procurement organizations and processing enterprises constitute the production costs for the raw materials. The difference between the cost of a product according to its wholesale price and its production cost constitutes its profit and the difference between the cost of this product according to the retail price and wholesale price, with the addition of the trade distribution cost -- the profit of the trade organizations.

Hence the procurement organizations and processing enterprises obtain profit not as a result of a change in the cost of the products purchased, but rather as a result of planned price formation in which the productive labor of their workers is reflected. They obtain additional profit by lowering the distribution costs through improved labor organization and economies in the use of the principal and secondary materials and by reductions in general-production and general-farm expenditures. The cost accounting work of organizations and enterprises engaging in the procurement and processing of agricultural products is manifested in this activity.

Since the procurement organizations and processing enterprises pay for the products purchased from kolkhozes, sovkhozes and the population by means of Gosbank credit, they incur credit indebtedness in the amount by which the cost of the products purchased exceeds the cost according to the accounting prices. In order to compensate for the difference, the plans call for appropriations from the budget as follows:

(billions of rubles)

	1981	1983 (estimate)
Livestock and poultry	15.2	24.9
Milk	8.3	14.1
Potatoes and vegetables	1.1	2.8
Grain and oil-bearing seed	1.4	2.9
Raw cotton and leather raw materials	2.4	2.5
Other	0.4	0.5
Total	28.8	47.7

(%)

Appropriations from budget:		
for expenses of USSR state budget	9.3	13.5
for payments for agricultural products	39.5	55.2

The increase in procurement prices for agricultural products commencing 1 January 1983 increased by this amount the repayment of the difference in prices for the purchasing of agricultural products, which for this same year

will amount to 47.7 billion rubles for the plan for purchases, or 55.2 percent of the payments for agricultural products purchased by the state. In the process, reimbursement will reach 13.5 percent of the budgetary expenses.

Reimbursement for the difference in prices arises: 1) as a result of differentiation of the purchasing prices and the establishment of a 50 percent bonus for adding on to the purchasing prices for exceeding the achieved level; 2) different delivery distances and changing volumes for the purchasing of products; 3) shortcomings in price formation; 4) state expenditures for purchasing and transporting the products exceeding the retail prices.

The first three types of subsidies are not of the direct type. With economically sound accounting prices, the budget serves only to regulate the cost accounting activities of the procurement organizations and industrial enterprises which are engaged in the procurement and processing of agricultural products. In this instance, the differences in prices result in payments being made into the budget and in appropriations being withdrawn from it. Such cost accounting activity on the part of procurement organizations is quite proper in a planned and controlled economy.

Completely different meaning is attached to repayment for the differences in prices resulting from an excess of state expenditures for the purchasing, transporting, storage and processing of agricultural products over the retail prices. This represents a direct subsidy for the purchasing of agricultural products.

The Communist Party is consistently implementing a program aimed at stabilizing retail prices. The Basic Directions for the Economic and Social Development of the USSR During the 1981-1985 Period and for the Period Up To 1990 call for the consistent implementation of a program aimed at achieving stable state retail prices for the principal food and non-food goods. Stable retail prices combined with an increase in the procurement prices requires subsidies for the production of agricultural products. During the 1965-1980 period, the purchasing prices for agricultural products were raised by almost 240 billion rubles. Roughly 250 billion rubles were paid out of the budget in order to compensate for the difference in the purchasing prices for agricultural products during this period, of which amount approximately 25 billion rubles were used for increasing the volume of procurements. In connection with growth in the volume of purchases and the establishment of a 50 percent bonus for exceeding the achieved level, the appropriations from the budget for these purposes in 1985 will exceed 50 billion rubles compared to 25.1 billion rubles in 1980.

Thus the increase in the purchasing prices, with stable retail prices in the same amounts, is accompanied by an increase in appropriations for compensating for the difference in the purchasing prices for the agricultural products. The amount of compensation per unit of output is increasing.

Compensation from the budget for the difference in prices and the excess of state expenditures over retail prices per kilogram of animal husbandry product in 1983 were as follows:

(rubles - kopecks)

	Meat of All Types	Whole Milk	Cream Butter
Average retail prices	1 - 75	0 - 24	3 - 38
Expenditures of state for production and sales	4 - 70	0 - 42	8 - 28
Excess of expenditures over retail prices	2 - 95	0 - 18	4 - 90
...including payments from the budget for the difference in prices	3 - 15	0 - 24	5 - 21

The above data reveals that the products of animal husbandry are sold to the population with a subsidy, with the total amount of compensation for the difference in prices from the budget being greater than the amount by which the state expenditures exceed the retail prices. For example, the compensation for 1 kg of meat in 1983 will be 3 rubles and 15 kopecks, whereas the state expenditure for purchasing it exceeded the retail price by 2 rubles and 95 kopecks and for cream butter -- 5 rubles 21 kopecks and 4 rubles 90 kopecks respectively.

It must be emphasized that quite often the processing and procurement organizations receive unjustifiably high profits as a result of lowered accounting prices. For example, in 1981 the subsidy from the budget for meat and milk amounted to 23.5 billion rubles and the profit of the meat and dairy industry -- 4 billion rubles, of which amount 3.1 billion rubles or 78 percent were applied to the budget.

As a result of a lowering of the accounting prices, the economic relationships and operational results of those organizations and enterprises engaged in procuring and processing agricultural products are distorted. The conditions are being created for examining the problems concerned with a disruption in the economic relationships between the agricultural enterprises and procurement organizations. In this regard, we are of the opinion that the accounting prices should be reviewed in the interest of reducing the appropriations from the budget for compensating for the difference in prices and the profits of those organizations and enterprises engaged in procuring and processing agricultural products. Such organizations and enterprises require profit only for expanding production, creating economic incentive funds and for making payments into the budget for fixed capital of a productive nature.

A question also arises with regard to the nature of subsidies for the purchasing of agricultural products. In accordance with the existing classification for budgetary expenditures, appropriations for compensating for the difference in prices are viewed as being national economic expenditures. A subsidy for agricultural products in socialist countries is also classified as a national economic expenditure. In capitalist countries, subsidies for the maintenance of farmer prices are considered to be budgetary expenditures directly in behalf of agriculture.

A budgetary subsidy for the purchasing of agricultural products is in no way related to national economic expenditures. This is why a subsidy for the purchasing of agricultural products in the USSR and other socialist countries

must be viewed as being an increase in the public consumption funds. Herein lies the great economic value of subsidies for calculating the rates of growth for the standard of living of the population. Certainly, a subsidy for the purchasing of agricultural products is conditioned by rather high expenditures for its production. However, this cannot change the view of such a subsidy as being a direct additional payment to the population for the food products involved.

Reimbursement for the differences in prices for the purchasing of agricultural products differs basically from the establishment of accounting prices in industry, although the problem is identical from a technical standpoint. A review of the wholesale prices in industry does not result in additional state expenditures, since some enterprises will experience an increase in profits while others sustain reductions. Only a redistribution of financial resources within the national economy takes place, with no infringement taking place in the population's income.

In addition to compensating for the difference in prices for the purchasing of agricultural products, use is also made of subsidies in connection with the sale of commodity stocks to kolkhozes and sovkhozes. This type of subsidy is conditioned by the same factors which apply to the purchasing of agricultural products -- stable retail prices for food products, under changing production conditions in industry.

The increasing volume of agricultural production and its specialization and industrialization is resulting in increasing deliveries to the kolkhozes and sovkhozes of machines, mineral fertilizers, plant protective agents, construction materials, spare parts and other industrially produced goods. As a result, an increase has taken place in production marketability and in monetary turnover. Agricultural production, which is now on an industrial path of development, has become more dependent upon industry and the prices for industrially produced goods. A considerable role is played by intermediaries who serve as the link between industry and agriculture.

In order to achieve the planned rates of development for agricultural production and strengthen its logistical base, the Food Program calls for the use of approximately 190 billion rubles during the 11th Five-Year Plan, or 27 percent of all capital investments in the national economy. Agriculture will be supplied with 1,870,000 tractors, 1,461,000 trucks, 600,000 grain harvesting combines and agricultural machines valued at almost 30 billion rubles. In 1985 the deliveries of mineral fertilizers will increase to 115 million tons, or 40 percent more than in 1980.

The supplying of the kolkhozes and sovkhozes with logistical resources is being carried out by Sel'khoztekhnika and Sel'khozkhimiya, which have at their disposal an extensive network of bases and warehouses. Their commodity turnover in 1980 reached 23.8 billion rubles, compared to only 8.1 billion rubles worth in 1965. By 1985 the commodity turnover of these organizations will amount to 30 billion rubles. Industrially produced goods procured by the kolkhozes and sovkhozes are paid for at the wholesale prices with a mark-up to ensure repayment for the distribution costs and for the formation of profit, required for expanding production and for creating material incentive funds.

Commencing 1 January 1982, new mark-ups were established for industrially produced goods sold from the warehouses of Sel'khoztekhnika and Sel'khozkhimiya. In the process, one principle associated with the establishment of mark-ups which has been in existence since 1970 was retained, that is, regardless of the distance from the warehouse or production plant to the farm, the same mark-up is applied. New mark-ups were established in connection with the increase in the wholesale prices and rates for electric and thermal power commencing 1 January 1982. At the same time, they came about as a result of the great changes which took place in the expenditures of supply organizations during the years of the 9th and 10th Five-Year Plans (increased wages for workers, a change in the prices for automobile gasoline).

The mark-ups included in the prices for goods ensure compensation for the distribution costs of the supply organizations and the creation of economic incentive funds. However, they are inadequate for ensuring their expanded reproduction. In this regard, the organizations of Sel'khoztekhnika and Sel'khozkhimiya are practically being subsidized by the state. In order to achieve economically sound interrelationships between these organizations on the one hand and the kolkhozes and sovkhozes on the other, they should be converted over to complete cost accounting procedures: they must make repayment for their expenditures for simple and expanded reproduction by means of price mark-ups for work fulfilled and services rendered.

Similar to purchases of agricultural products, subsidies also exist for machines and mineral fertilizers for the difference in prices, caused by an increase in the wholesale prices in industry and retail price stability. In connection with the 1 July 1967 increase in the wholesale prices for industrially produced goods, the wholesale prices for tractors, agricultural machines, spare parts, mineral fertilizers and other goods increased by 1.2 billion rubles annually. Since 1 January 1982, the increase in the wholesale prices for machines and mineral fertilizers delivered to kolkhozes and sovkhozes has amounted to 1.2 billion rubles. It inevitably should be reflected in growth in the production costs for the agricultural products, in a reduction in savings at kolkhozes and sovkhozes and in an increase in the requirements for sources needed for financing capital investments. In this regard, use is being made of the mechanism for compensating agriculture for the raised costs caused by the increase in the wholesale prices for industrial products delivered to the kolkhozes and sovkhozes.

Despite the increases on 1 July 1967 and 1 January 1982 in the wholesale prices for industrial products and in the rates for thermal and electric power, the price level for tractors, motor vehicles, mineral fertilizers, automobile gasoline and the price mark-ups of Sel'khoztekhnika and Sel'khozkhimiya were retained. The difference between the new wholesale prices introduced on 1 July 1967 and 1 January 1982 and the wholesale factory prices at which the products were sold to the kolkhozes and sovkhozes is reimbursed from the union budget.

Reimbursement for the difference in prices for machines in 1982 (in percent of the wholesale prices of industry) was as follows:

Tractors and tractor trailers	23.9
Motor vehicles and trailers for them	6.4
Agricultural machines	28.5
Total	21.2

The supply organizations maintain accounts for the kolkhozes and sovkhozes for the machines and mineral fertilizers at wholesale prices, even though the goods are aquired at the wholesale prices of industry. At the warehouses and bases of the supply organizations, the machines and mineral fertilizers are accounted for in terms of the wholesale prices. When shipping machines in transit to kolkhozes and sovkhozes, the producing plants propose payment requirements for the consignees in accordance with the factory wholesale prices, with the addition of transit price-mark-ups.

Thus, in the organizations of Sel'khoztekhnika and Sel'khozkhimiya a difference arises in the cost of the machines, equipment and mineral fertilizers between the wholesale prices of industry and the wholesale factory prices for agriculture. Since the payments for the machines, mineral fertilizers and other goods are carried out by the supply organizations using bank credit, this difference tends to form their indebtedness to the bank. This indebtedness is liquidated in a centralized manner by the State Committee for Logistical Support for Agriculture and the USSR Ministry of Agriculture by means of budgetary appropriations, as called for in their income and expenditure balances. The appropriations for the mentioned purposes are determined based upon the planned volume of deliveries of machines and mineral fertilizers and the difference between the wholesale and factory wholesale prices for them.

In order to determine the difference in prices for machines and mineral fertilizers sold at favorable prices, the supply organizations prepare a list of accounts in which the cost of the goods released from warehouses and shipped in transit, in accordance with the wholesale and factory wholesale prices, is reflected. Based upon these lists, the supply organizations of Sel'khoztekhnika and Sel'khozkhimiya present the institutes of Gosbank, in the areas in which they are located, with information on the difference in prices for logistical resources, which is subject to reimbursement from the budget. The institutes of Gosbank issue a report on the total amounts of the differences in prices through the republic office of the USSR Gosbank Administration. On a centralized basis, the Committee for Logistical Support for Agriculture and the USSR Ministry of Agriculture make repayment to Gosbank for the total amount of the difference in prices for the machines and mineral fertilizers, using appropriations called for by them for these purposes in the income and expenditure balances, by means of extracts from the expenditure schedules through the USSR Ministry of Finances. The difference in prices for December is repaid by means of the final turnover for the past year in January of the next year.

The system for retaining the price level for tractors, combines and other agricultural machines and mineral fertilizers enables the kolkhozes and sovkhozes to carry out reproduction in keeping with the rates called for in the five-year plans for economic and social development. At the same time, the necessary prerequisites have been created for industrial operations under the new conditions for planning and economic stimulation. There has only been

a change in the manner in which use is made of profits at the industrial enterprises and of budgetary appropriations, with no losses being sustained either by the budget or by the kolkhozes and sovkhozes.

However, repayment of the difference in prices for machines and mineral fertilizers does not conform to the tasks for strengthening cost accounting procedures and improving relationships between partners in the country's agroindustrial complex. The sale of tractors, combines, agricultural machines and mineral fertilizers to the kolkhozes and sovkhozes at low prices is disturbing the economic relationships between the producers and consumers and resulting in premature writing off of equipment and inefficient use of the mineral fertilizers. Thus the abolishment of subsidies for the machines and fertilizer, with a corresponding increase in the purchasing prices for the agricultural products, would appear to be economically sound. At the same time, a further redistribution of resources in favor of those farms which operate under poor natural-economic conditions can be achieved.

The financial-credit mechanism for agricultural development is supplemented by direct budgetary appropriations. The development of the principle of equivalence and the furnishing of assistance in developing the individual branches of agricultural production are carried out with the direct participation of the budget. Certainly, it would be wrong to think that the budget alone regulates the rates and proportions for agricultural development. All of the cost forms, jointly with the budget and under the conditions of a planned and regulated economy, constitute the mechanism for administering the socialist economy, including agriculture.

The appropriations from the budget are determined based upon the overall expenditures for agricultural development and the internal resources assigned for these purposes in accordance with the plan for the particular year. The agricultural expenditures are determined in conformity with the plan for economic and social development. The plans call for an increase in the proportion of internal working capital for the financing of capital investments, for forming the principal herd of productive and working cattle and other expenditures associated with the expansion of production.

In appropriations for agriculture, the greatest role is played by expenditures for capital investments intended mainly for the construction of livestock facilities at low profitability sovkhozes and housing and cultural-domestic installations at sovkhozes and economically weak kolkhozes. Large budgetary expenditures are incurred along the line of "operational expenses."

Capital investments at low profitability sovkhozes are financed from the budget in the amount not covered by internal sources. New enterprises and complexes for the production of milk on an industrial basis, hothouse-hotbed combines, housing and cultural-domestic installations and land reclamation and irrigation installations at all of the sovkhozes are financed from the budget.

Measures are being carried out on the basis of operational expenses in connection with combating epizooty, agricultural plant pests, hail, land management, applying peat and lime and operating irrigation systems. Included among the institutes and organizations financed from the budget are veterinary stations, sectors, laboratories, hospitals, anti-epizootic detachments and state seed inspectorates.

The agricultural appropriations for 1976-1980 were as follows:

	%
Capital investments	51.0
Increase in the norm for internal working capital	0.9
Formation of the principal herd	1.7
Operational expenses	12.1
Losses of the housing-municipal economy and of the principal activity, payment of percentages for deferred bank loans and so forth	34.3

With regard to improving the economies of low profitability and unprofitable farms, great importance is attached to the decisions handed down during the May (1982) Plenum of the CPSU Central Committee on financing special purpose measures in them by means of the state budget, in the amount of 3.3 billion rubles annually. In 1983 the mentioned appropriations must be used in the following amounts:

	Billions of Rubles	%
Construction of housing, children's pre-school institutes, clubs and other installations of a cultural-domestic nature and the municipal economy	1.0	30
Construction of intra-farm roads	0.5	15
Maintenance of children's pre-school and cultural-educational institutes and young pioneer camps, including expenditures for acquiring implements and equipment	0.5	15
For paying insurance premiums	1.3	40
Total	3.3	100

The financing of special purpose programs is carried out at kolkhozes which are not adequately supplied with fixed capital and which do not have fixed capital and internal resources at their disposal for expanded reproduction. This includes farms which have a total profitability over the past 3 years of not more than 10 percent. The list of kolkhozes and special purpose programs which are financed from the budget is approved by the council of ministers of the union republic. This list is stable and changes with an increase in the profitability level or degree of equipping with fixed capital.

The USSR Ministry of Agriculture, jointly with the Union Council of Kolkhozes, annually distributes among the union republics the state budgetary funds allocated for the financing of special purpose measures at kolkhozes. These sums are provided for by the USSR Ministry of Finances in the budgets of the union republics, with no breakdown by individual measures. The funds are distributed in like manner among the oblasts and rayons. The councils of rayon agroindustrial associations, jointly with rayon kolkhoz councils, distribute the appropriations allocated to them among the kolkhozes and in accordance with the types of measures employed. Budgetary funds for the

construction of cultural-domestic installations and intra-farm roads are provided for within the capital investment limits granted to kolkhozes, in the plan accounts for economic and social development, for the maintenance of children's pre-school and cultural-educational institutes within the network and contingents called for in the plan for economic and social development, for the payment of insurance premiums -- in the amounts computed by the organs of state insurance.

It should be noted that the appropriations for financing special purpose measures can be allocated to the kolkhozes taking into account the available internal resources. In this instance the budget participates in the financing of these measures on a share basis. Based upon the capital investment limits assogned for installations of a non-productive nature and intra-farm roads and also the economic status of the kolkhozes, the appropriations for these purposes can be changed. Here there must be definite mobility in the use of budgetary appropriations for creating stability in the economic status of the farms.

The financing of installations of a non-productive nature and intra-farm roads is carried out by the institutes of USSR Gosbank, from special current accounts and within the limits established for the estimated cost of the installations in keeping with the work and measures to be carried out. First of all, just as in the case of financing state capital investments, use must be made of the internal resources of kolkhozes provided for these purposes. If the construction is carried out only by means of budgetary appropriations, then the payment for work performed is made from special current accounts, regardless of the amount of the internal resources in the capital investment accounts. The payment for insurance premiums is made by transferring the computed amounts to the account of state insurance inspectorates at institutes of USSR Gosbank. If a kolkhoz paid the insturance premiums by means of internal resources, then it must be reimbursed for its expenses from a special current account within the limits of the appropriations allocated for this purpose. The financing of expenditures for the maintenance of pre-school and cultural-educational institutions is carried out in conformity with the appropriations provided and the consolidated estimate presented by the rayon agricultural administration, with a quarterly distribution for all measures and for each kolkhoz, that is, similar to that for state enterprises and organizations.

The appropriations allocated to kolkhozes for financing the infrastructure must be used strictly in accordance with their special purpose. At the end of the year, unused appropriations are not withdrawn from use but rather are transferred over to the following year for financing the same measures. The most efficient use of the appropriations allocated is dependent not only upon strengthening the economies of low profitability kolkhozes but also upon solving social tasks in the rural areas and carrying out the food program.

Appropriations for agriculture, similar to reimbursement for the difference in purchasing prices for agricultural products and subsidies for logistical resources, must be viewed as a single financial-credit mechanism for providing financial support for carrying out the food program. The total expenses for agriculture, taking into account reimbursement for the differences in prices during the 1981-1985 period, will be as follows:

	%
Direct appropriations for agriculture	36.7
Reimbursement for difference in prices for logistical resources	9.9
Strengthening of credit resources for long-term crediting by USSR Gosbank	6.4
Reimbursement for difference in prices for purchases of agricultural products	48.0
Total expenditures	100.0
Ratio of appropriations to payments for products sold to the state, in %	94.4

The allocation of large-scale appropriations for agricultural development requires the adoption of measures required for raising the level of management at the kolkhozes and sovkhozes, rayon and oblast agroindustrial associations and at all levels of administration. Consistent work must be carried out in connection with ensuring the most efficient use of the land, equipment, fertilizers, feed, fuel and other resources of the overall production potential, while achieving stable growth in gross agricultural output by each kolkhoz and sovkhoz. An active campaign must be launched to achieve economies and thrift and to suppress in a decisive manner all instances of mismanagement, waste and parasitism.

In addition to carrying out checks and analyzing financial-economic operations and improving all control-economic work by the financial organs, improvements must also be carried out in the financial-credit mechanism of the agroindustrial complex. The normative documents that have been published on the system for financing special purpose measures at low-profitability kolkhozes, on the establishment of bonuses for adding on to the procurement prices for products sold to the state by kolkhozes and sovkhozes operating under poor natural-economic conditions, on interrelationships between enterprises of the agro-industrial complex and others are creating the necessary economic conditions for the profitable management of a farm and for the timely return of credits extended by USSR Gosbank for production expenditures and capital investments.

The financial-credit mechanism, in addition to ensuring the availability of monetary funds for reproduction in agriculture, must also exert an active influence with regard to raising the efficiency of production operations and reducing unproductive losses and expenditures. In order for the financial-credit mechanism to carry out its functions, a search must be undertaken for new methods and forms for financing, crediting and distributing profit, for property responsibility and material interest of a collective in fulfilling its plan and for the final operational results of enterprises belonging to the agroindustrial complex. Here a complex of measures is required and not just improvements in individual state institutes responsible for regulating the production-financial activities of enterprises and organizations of the agroindustrial complex.

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EFFECTIVE PEST, WEED CONTROL DISCUSSED DURING PLANT PROTECTION SEMINAR

Moscow ZASHCHITA RASTENIY in Russian No 6, Jun 83 pp 2-9

/Report on an all-union seminar: "Raising the Effectiveness of Plant Protection"/

/Text/ An all-union seminar on the subject "Vital Problems of Plant Protection and Measures for Raising Its Effectiveness" was conducted in late March of this year in Dnepropetrovsk. The seminar was attended by the leaders of republic, kray and oblast plant protection services, scientists and Sel'khozkhimiya specialists -- by more than 150 individuals in all.

The following individuals participated in the work of the seminar: an instructor in the Department of Agriculture and the Food Industry of the CPSU Central Committee O.G. Pen'kov, the head of a sector of the Central Committee of the Communist Party of the Ukraine V.L. Dusanovskiy, the head of the Agricultural Department of the Dnepropetrovsk Oblast Committee of the Communist Party of the Ukraine A.I. Sytnik, the 1st deputy chairman of the Dnepropetrovsk Oblast Soviet of People's Deputies L.A. Chernyzvskiy, the deputy chairman of Ukrsel'khozkhimiya P.M. Baranovskiy and the chairman of the Dnepropetrovsk Oblast Sel'khozkhimiya G.P. Beresnev.

The participants were welcomed to the seminar by the secretary of the Dneprpetrovsk Oblast Committee of the Central Committee of the Ukraine Ye.R. Chulakov. The main report was delivered by the deputy chairman of Soyuzsel'khozkhimiya V.I. Martynenko. Speeches were delivered during the seminar by the deputy chairman of Soyuzsel'khozkhimiya V.L. Zakharov, the chiefs of plant protection administrations Ye.V. Malygin (Kazakhstan) and T.I. Golovnya (Belorussia), the deputy chiefs of plant protection administrations E.B. Balayev (RSFSR) and F.N. Kobzov (Moldavia), the chief agronomist at Ukrsel'khozkhimiya O.V. Shilina, chief of a department at UPANKh of the MGA M.Ye. Gol'tsov, acting academician-secretary of the Plant Protection Department of VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ N.M. Golyshin, professors I.Ya. Polyakov and A.Ye. Chumakov at VIZR /All-Union Institute for the Protection of Plants/, director of UkrNIIZR Professor G.V. Grisenko, Professor V.A. Zakharenko of VNIIPTIKhIM, deputy director of TsINAO /Central Institute of Agrochemical Services for Agriculture/ I.K. Ryabchenko, Ye.A. Baturina, T.T. Strashnova (Soyuzsel'khozkhimiya), Sh.M. Grinberg (All-Union Scientific Research Institute for the Biological Method) and others.

Those who participated in the seminar acquainted themselves with the equipment for protecting agricultural crops cultivated using an industrial technology (at an experimental station of the All-Union Scientific Research Institute of Corn).

A discussion was held with the 1st secretary of the Dneprpetrovsk Oblast Committee of the Communist Party of the Ukraine V.G. Boyko on the problems concerned with improving the work of the agrochemical service.

In the successful fulfillment of the country's Food Program, approved during the May (1982) Plenum of the CC CPSU, an important role will be played by plant protection. In their speeches, those who participated in the seminar emphasized that further specialization and intensification in agriculture and an expansion in the agricultural crop areas on which industrial technologies are employed require that increased attention be given to the problems concerned with combating pests, diseases and weeds.

According to detailed data, last year the overall volume of protective work amounted to 181.5 million hectares, including combating pests and diseases on 103.4 million hectares, with the biological method being employed on 20.3 million hectares (in addition, useful natural entomofauna were retained on 9 million hectares). Herbicides were used on 71.7 million hectares and defoliants and dessicants -- on 6.4 million hectares. As a result of the carrying out of a complex of specialized measures, a harvest valued at more than 8 billion rubles was saved.

In 1982, in the RSFSR, 32.9 million hectares were treated against pests and diseases and chemical weed control measures were employed on 35 million hectares. Roughly 355,000 individuals participated in the plant protection work. Eighty million hectares were inspected for weed content. The greatest danger was posed by such pests as the shield bug, beet webworm, grain beetle, Hessian fly, flea beetle and the Colorado potato beetle; and in the case of diseases -- smut, phytophthora infection. All-round systems and progressive technologies were introduced throughout the republic on an extensive scale. Thus low-volume and ultra low-volume spraying, band placement of herbicides and combined treatments were carried out on 20 million hectares. The biological method was employed on 10.6 million hectares outdoors and on 59.6 million square meters of covered ground.

As is known, the Russian Federation has been fairly criticized for its reduced attention to the problem of combating smut diseases. At the present time, measures have been undertaken aimed at sharply reducing crop losses caused by these diseases. An entire complex of measures is being carried out on the farms -- a soil treatment system, optimum schedules and norms for the sowing of seed, thorough preparation of seed for sowing, chemical disinfection and so forth. Increased attention is being given to protecting agricultural crops grown using an industrial technology (whereas in 1980 the area of such crops amounted to approximately 2 million hectares, in 1982 -- 3.2 million hectares).

Last year the campaign against pests, diseases and weeds in the Ukraine was carried out on 53.8 million hectares, including use of the chemical method on

44.3 million hectares and the biological method -- on 9.5 million hectares. The greatest danger to grain crops was posed by the grain beetle, shield bug, smut diseases, root rots, powdery milldew and fusarial wilt. One bottleneck still remains -- that of combating loose smut in wheat and barley.

Protective measures in behalf of sugar beets were carried out throughout the republic on 5.1 million hectares (against beet pests, fleas, aphids and miner flies). The dessication of sunflowers for limiting the spread of white and grey rot and for accelerating ripening has proven its worth. For the purpose of combating the Colorado potato beetle on private plots, 4,500 replenishment points were created. More extensive use is being made of low-volume spraying of gardens (350,000 hectares), including with the consumption of preparations being lowered by 25 percent (153,000 hectares). Use is being made on many farms of feromone traps for determining the periods for combating the apple worm.

At the present time, the biological method is being used on 17 percent of the areas requiring treatment. Trichograms are being employed most extensively (on 8.4 million hectares). Increased attention is being given to providing biological protection for crops cultivated on covered ground. Here extensive use is being made of trichodermin, phytoseyulyus, enkarziya and verticillin and with tomatoes being vaccinated against virus diseases.

Compared to 1982 when agricultural crops were grown on 2.4 million hectares using an industrial technology, in 1983 -- on 3.3 million hectares. Experience has shown that here the corn yields are on the average 10 quintals per hectare higher than when use is made of the conventional technology and in a number of instances -- 15-17 quintals per hectare. This is why special importance is attached to providing effective protection for these crops against weeds, pests and diseases.

A special purpose all-round program entitled "Combating Weeds" has been in use in the Ukraine since 1981. This program calls for improvements in the skills possessed by the specialists, the mass training of personnel, the construction of warehouses for the storage of chemical materials, the re-equipping of sprayers for applying herbicides and units for the preparation of working solutions, the inspection of arable lands for the presence of weed seed and growing weeds, the carrying out of organizational, agrotechnical and chemical measures and so forth. In 1981-1982, 32 million hectares of sowings were inspected for weed content. The accounting data is used for composing cartograms, for determining herbicide requirements and for planning and carrying out special measures.

In 1983, protective measures are being carried out in the Ukraine on 48-50 million hectares, including chemical weed control operations on 11.8 million hectares. Complex systems for the protection of grain crops, sugar beets, rice, potatoes, clover, alfalfa and fruit crops are being introduced into operations on an extensive scale.

Noticeable improvements have taken place in recent years in Belorussia in the quality of the measures employed for protecting plants. As a rule, these measures are carried out only after the sowings have been inspected and then

based upon the criteria for the numbers of harmful and useful types and this has made it possible to reduce the areas for chemical treatments to be carried out against flax fleas, mouse-like rodents and the Colorado potato beetle. Approximately 47 percent of the protective work is being carried out by detachments of Belsel'khozkhimiya, 30 percent by the farms themselves and 23 percent by agricultural aviation. A republic biological laboratory has been placed in operation. It has a biological factory for four mechanized lines for the breeding of trichograms and the production of phytoseyulyus, trichodermine, verticillin and ashersonine has also been organized. Helminthological laboratories have been created within the structure for the oblast plant protective stations and control-toxicological laboratories are being organized.

In Belorussia a great amount of attention is being given to the chemical disinfection of seed for spring grain crops and flax. Measures aimed at raising the culture of farming and destroying weeds based upon the mapping of fields are being implemented successfully at each kolkhoz and sovkhoz. There are also unresolved problems: the method of inspecting the fields for weed content must be simplified, the weeds must be taken into account not on the basis of points but rather according to the number observed per square meter and a more accurate determination must be made as to the withdrawal of nutrients by each type of weed. At the present time, only TsINAO /Central Institute of Agrochemical Services for Agriculture/ is devoting attention to the weed problem. These studies are not adequately developed at VIZR /All-Union Scientific Research Institute for Plant Protection/ or at republic or zonal institutes.

Last year protective measures were carried out in Kazakhstan on 19.5 million hectares: against weeds -- on 13.7 million hectares, against pests and diseases -- on 5.5 million hectares and for defoliation and dessication purposes -- on almost 300,000 hectares. More than 20 million hectares were inspected by stazra /plant protection station/ and kolkhoz and sovkhoz specialists. A great amount of attention is being given to combating locusts. The greatest volumes of specialized measures -- in Pavlodar, Uralsk and Dzhezkazgan Oblasts. The specialists are devoting special attention to the grey grain moth (895,000 hectares treated) and the Colorado potato beetle (40,300 hectares). The use of biological agents is being expanded. This work is organized very well in Chimkent Oblast where there are 20 biological laboratories.

In the Food Program, emphasis is placed upon the fact that the key problem in agriculture is that of accelerating a stable increase in the production of grain. Specialists attached to the state service are devoting a maximum amount of attention to protecting the grain crops. The campaign against the pests and diseases of these crops was carried out on 14.3 million hectares, with the biological method being employed on 1.5 million hectares. The principal grain crop pests -- shield bug, grain beetle, leaf beetle, grey grain moth and greenbugs. The work of combating grain crop pests has been organized in Kazakhstan, the Ukraine, Moldavia, the Baltic republics and in a number of oblasts in the Russian Federation. Unfortunately, insufficient attention is being given to pentatomids in the southern Ukraine, in Rostov, Belgorod and Kursk Oblasts or in Krasnodar Kray. Leaf beetles and their larvae have caused

noticeable damage to sowings of winter and spring grain crops. In 1983, in all regions where damage is caused by the shield bug, special controls must be implemented to ensure destruction of both the bugs and their larvae. In the process, the economic thresholds for carrying out the chemical treatments must serve as a guide.

As yet, proper attention is still not being given in all areas to eliminating grain losses caused by loose and covered smut in winter and spring wheat, barley, millet and other crops. A considerable amount of seed is still being sown without chemical disinfection. In the RSFSR, for example, in 1982, 12 percent of the seed was sown without chemical disinfection, in the Ukrainian SSR -- 500,000 tons and in the Kazakh SSR -- 400,000 tons. On farms in Moldavia and Kirghizia not all of the seed was chemically disinfected and this work was poorly organized in Armenia and Turkmenia.

The causes -- insufficient work by the agronomical service for kolkhozes and sovkhozes and lack of control by the oblast and rayon associations of Sel'khozkhimiya. As a result, grain losses were sustained and the quality of the grain deteriorated. Batches of wheat containing considerable amounts of smut were received from kolkhozes and sovkhozes in Belgorod, Kursk, Lipetsk, Tambov, Saratov, Orel, Ulyanovsk and Volgograd Oblasts. A check uncovered the fact that these oblasts had tolerated a reduction in the expenditure of disinfectants. The plant protection service must raise its exactingness with regard to the quality of seed preparation, improve the quality of the seed, persistently encourage the construction of complexes for the chemical disinfection of seed and concern itself more with the repair of specialized machines and their correct operation.

This year an increase will take place in the volumes of seed disinfection work. This is taking place mainly owing to an increase in the level of organization for the technological process. Moreover, it bears mentioning that improvements have been noted in those oblasts which were criticized by the boards of the RSFSR Ministry of Agriculture and the USSR Ministry of Agriculture, which met in December 1982. A competition has been announced in Lipetsk Oblast for the efficient completion of this work. Three 1st place prizes (300 rubles), three second place prizes (200 rubles) and three third place prices (150 rubles) have been established for the rayons. The results of the competition will be published in this journal.

Work is continuing this year with regard to the carrying out of an extensive production check on film-forming polymers for the chemical disinfection of seed. Approximately 5 million hectares of corn and other crops have been sown using seed treated with the use of film-forming materials.

In 1982, in conformity with a forecast, it was recommended that the campaign against sugar beet pests and diseases be carried out on 9.4 million hectares. It was actually carried out on 9.8 million hectares. In a number of rayons in the RSFSR, the Ukrainian SSR and the Kazakh SSR, owing to untimely treatment of the sowings, plant damage was sustained caused by fleas, leaf miner cutworms, spinach leaf miners, cercosporosis and powdery mildew.

The protection of potatoes against the Colorado potato beetle and phytophthora infection, especially on private plots, continues to be of equal importance.

The campaign against the Colorado potato beetle is being publicized in a very weak manner. This applies in particular to Kursk, Orel, Bryansk, Moscow, Nikolayev, Vinnitsa and Kherson Oblasts. Assistance for the population in the supplying of insecticides is not being organized in all areas and proper requirements are not being imposed upon the trade organizations.

The problem concerning additional measures for intensifying the campaign against the Colorado potato beetle was examined by the Board of the USSR Ministry of Agriculture in September 1982. Measures were approved for protecting potatoes and other potato family crops against this pest. The task of the service -- to undertake measures aimed at eliminating the beetle in new regions of its propagation and to lower the degree of damage caused by it in the principal zones where such damage occurs.

The plant protection administrations of the RSFSR, BSSR and the Baltic Republics must intensify their work of forecasting potato diseases, using an automatic system, and they must provide the farms with more precise recommendations.

Our service has performed a great amount of work in organizing protection for the cotton plant. In view of the strict regulations governing the use of pesticides in the zones of irrigated farming, a considerable amount of attention has been given to developing the biological method in all of the Central Asian republics. The protection of cotton was carried out on 10.4 million hectares, including on 3.4 million hectares using the biological method. More than one half of the areas are now being protected against the cotton-ball worm using the biological method. Thus, in 1982, chemical agents were employed for treating 2.5 million hectares against this pest and biological agents -- 3.2 million hectares.

An integrated system for protecting cotton must be introduced in a more active manner. A good example of this is the Uzbek SSR, where biological agents are being employed on 40 percent of the cotton areas. As yet, the biological method is still being introduced into operations only weakly for this crop in Azerbaijan SSR (10 percent of the areas) and in the Kazakh SSR (20 percent).

The participants in the seminar discussed the shortcomings in the campaign being waged against the pests and diseases of vegetable and fruit crops and vineyards. And indeed, under conditions involving the use of an industrial technology for the cultivation of tomatoes, for example, an increase takes place in the danger of infection of regionalized varieties by septoria spot, phytophthora infection, macrosporiosis and bacterial diseases; onions -- by false mildew.

In connection with an expansion in the areas of winter and spring plastic hothouses, an urgent problem has arisen with regard to combating the greenhouse whitefly, virus diseases and brown patch in tomatoes and in cucumbers -- powdery mildew, anthracnose and root rots.

In regions of intensive horticulture, especially where use is being made of palmette forms, an increase is taking place in the damage being caused by moniliosis, powdery mildew and cystosporosis; a considerable increase has

taken place in vineyards in the spread of grey rot, mildew and bacterial canker, The oblast laboratories for forecasts and diagnostics and the signalization points in a number of areas have decreased their efforts with regard to indicating the best periods for carrying out the various measures. Criticism should be directed at those leaders of oblast plant protection stations who are not exercising sufficient control over the work of the forecasters and who are not furnishing assistance to the various points in the allocation of laboratory equipment and transport resources.

Resistant varieties play an important role in raising the productivity of agricultural production. For the country as a whole, varieties which are resistant to diseases are being cultivated on 15 percent of the sowing areas; for all practical purposes, there are still no varieties which are immune to pests. There are still no sunflower varieties or hybrids in production which are resistant to grey and white rot; wheat and barley -- to rust, powdery mildew and root rots; cotton -- to wilt and bacterial cotton blight; sugar beets -- to peronosporosis, powdery mildew and storage rot.

The protectors of plants have undertaken as a priority task the introduction of industrial technologies for the cultivation of crops. An all-round system for protecting corn, sugar beets, sunflowers and other crops has been introduced for the entire sowing area. Considerable increases in yield have been obtained. Thus, compared to the conventional technology, the average increase per hectare for grain corn was 9 quintals, sunflowers -- 5.2, soybeans -- 3.9, sugar beets -- 26, potatoes -- 40, spinning flax -- 1.6, flax seed -- 1.2, tomatoes -- 147, carrots -- 74 and onions -- 60 quintals per hectare.

At the same time, it bears mentioning that in the case of such crops as corn, soybeans, sunflowers and sugar beets, the achieved levels for increases in yield are clearly inadequate and thus considerable work remains here for the protectors of plants.

All-round systems for protecting the principal agricultural crops -- cereal grains, corn, rice, sugar beets, oil-bearing crops, pulse crops, potatoes, perennial grasses, tobacco, melon crops, fruit crop nurseries and forest plantings -- are being introduced into operations on an area in excess of 50 million hectares. These systems are being employed in a fine manner in the Ukraine, Belorussia, Moldavia and in the republics of Central Asia and the Baltic. They are being developed more slowly in a number of oblasts in the Russian Federation, Azerbaijan and in Kirghizia.

The development of comprehensive measures for protecting vegetable crops, soybeans, essential oil and sub-tropical plants, winter rape, groats, berry and floral crops must be continued. The overall volume of use of all-round systems of measures must be increased to 120 million hectares by the end of the five-year plan.

The participants in the seminar underscored the need for making maximum use of agrotechnical, organizational-economic and other prophylactic measures for preventing the mass development of harmful organisms, combining the biological and chemical resources and for ensuring the skilful operation of the existing pool of ground machines, aircraft and helicopters.

The need for improving the criteria for estimating the numbers of harmful organisms, on the basis of which recommendations are made for carrying out special measures, is becoming more and more urgent. The economic thresholds for the degree of harm inflicted have been developed for 98 species of pests. However, they are being introduced slowly and chemical treatments are being carried out in the absence of preliminary studies of the degree of contamination.

Such progressive methods as local, band and border treatments and also low volume and ultra-low volume spraying with a reduction of 25 percent in the consumption of pesticides are being introduced into production operations on an extensive scale. Use is being made on large areas of combined applications of mineral fertilizers, herbicides and insecticides and also liquid (compound) fertilizers, jointly with herbicides and insecticides.

For the current decade, the Food Program calls for an increase of roughly 12-15 percent in the return from mineral fertilizers and other chemical resources employed in agriculture. This is equivalent to the additional use of 3.6-3.8 million tons of nutrients, the use of which will make it possible to obtain 16-17 million tons of products in a conversion for grain. As is known, the weed content of fields is one factor which limits the possibility of obtaining high yields and realizing maximum results from mineral fertilizers, new varieties and the irrigation of agricultural lands.

There are approximately 1,000 species of weeds in the country, with more than 100 being considered most harmful. Crop losses caused by weeds are still very high and, according to data supplied by scientists, average out as follows: for grain crops -- 10.6 percent, flax -- 10, cotton -- 7.5, sugar beets -- 8.2, potatoes -- 6.5, vegetables -- 10 and orchards, vineyards and berry patches -- 7.2 percent.

In 1981, an inspection was carried out for the very first time in the country on the weed content of fields, perennial plantings and cultivated haying and pasture lands, on an area of 136.3 million hectares (63.5 percent). It was discovered that practically the entire area studies was contaminated (to an average or strong degree on 88.8 million hectares). In 1982, an inspection was carried out on 154.5 million hectares (72 percent). The materials for computing the weediness of fields arrive for the most part in a timely manner, in conformity with the forms developed for the computation. Information is being accumulated on the species structure of weeds and this will make it possible to employ herbicides in an efficient and effective manner. However, some republics and oblasts are furnishing materials containing great deviations from the instructions and some are providing no materials whatsoever. Thus, unsatisfactory materials were presented for 1981-1982 by Kaliningrad, Ryazan, Saratov and Astrakhan Oblasts, Krasnodar Kray, Kabardino-Balkar ASSR and the Azerbaijan SSR. In Uzbekistan, such studies were not carried out at all in 1982 and the materials presented in 1983 were not in keeping with the assigned tasks. For all practical purposes, an inspection has still not been undertaken of the weed content of cultivated haying and pasture lands.

Despite an increase in pesticide deliveries, the requirements for them continue to increase. In a number of republic and also oblast and kray

associations of Sel'khozkhimiya, the requisitions for deficit pesticides are excessive, with no mention being made of surpluses. Meanwhile, such surpluses are considerable. Such a situation cannot be tolerated. In some regions there is a surplus of pesticides and in others -- a shortage. This leads to a situation wherein, at a number of kolkhozes and sovkhozes and even at Sel'khozkhimiya bases, large quantities of the preparations accumulate which, owing to prolonged storage, lose their toxicity and must be destroyed.

The plant protection service must maintain strict accounting on the deliveries and sales of pesticides, so that it will always have information on hand as to where, how much and what types of preparations are available. This will make it possible not only to maneuver the resources in a skilful manner, depending upon the phytosanitary situation, but also to compose sound requisitions.

All of the surplus chemical materials in the various areas must be uncovered and used; they should be distributed among the farms, regions and republics, with laboratory analyses being carried out in advance for the purpose of determining their quality, especially the quality of those materials which have exceeded the established storage periods. Control-toxicological laboratories are presently carrying out checks on the surplus amounts of pesticides, but they are not concerning themselves sufficiently with the quality of the preparations.

The production of 37 new preparations has been developed in recent years, including such fungicides as cuprozan, polycarbatsin, polykhom and sulphur; combined disinfectants; herbicides -- simazine, phenazone, propanide, dalapon, kotoran, lenatsil, triallat, dactal and glifosat. Increases have taken place in the production of technical chlorophos, metaphos, methyl bromide, 2.4-D herbicides, butiphos, magnesium chlorate and some other preparations. Approximately 60 new preparations have been introduced into the assortment of pesticides, including 26 domestic ones.

The requirements concerning the toxicity of the preparations and their safety with regard to the surrounding environment have become more strict. Thus, during the past few years the production and use of 22 highly toxic pesticides have been terminated. However the agricultural requirements for pesticides, as already mentioned, are still not being satisfied fully. In particular, there is a shortage of selective herbicides required for the cultivation of corn, soybeans, sunflowers, sugar beets and vegetables using industrial technologies and also for effective preparations for combating stable forms of pests and diseases of cotton, potatoes and grain, vegetable, fruit and other crops. It bears mentioning that the assortment of plant protective agents being produced by industry contains obsolete preparations: polychlorcamphen, hexachlorane based upon the total amount of isomers, ethylmercuric chloride, heptachlor and others.

The limited assortment of chemical agents being used for protecting plants, in addition to lowering the effectiveness of the measures, also promotes the appearance of resistant forms of harmful organisms.

What direction should be followed in carrying out improvements in the assortment of pesticides? An increase is taking place in the extent of use of safe selective and highly economic herbicides from the phenoxy-derivative groups (2.4-D, 2M-4X); carbamates (atrazine, prometrine, zenkor); derivatives of uracil (lenacil); toluidine (treflan, stomp); urea (arezine, linuron,

dozanex) and other organic compounds. Increases will also take place in the use of selective herbicides during the growing season for cultivated plants. The plans call for a reduction in the use of 2.4-D in pure form on grain crops and for it to be replaced by mixtures containing dicambom, glin, zenkor, stomp and others. The use of mixtures for other crops also appears to be quite promising.

In order to overcome the resistance of pests and eliminate environmental contamination caused by toxicant residues, the alternate use of the following groups of preparations appears to be quite promising: contact and systemic phosphororganic insecticides and acaricides of various types and a spectrum of actions, broken down during the growing season into non-toxic metabolites; chlororganic preparations of average and low stability in objects of the surrounding environment; derivatives of carbamic acid; dinitrophenol derivatives; synthetic pyretroids; selectively acting acaricides and aphicides; mineral-oil preparations; fumigants, sulphur preparations.

The assortment of fungicides includes new systemic and contact preparations (bayleton, ridomil, sumilex, ronilan, euparen and others). Instead of mercury-containing preparations, the plans call for the production of new organic disinfectants with improved preparative forms as a result of the use of film-forming materials.

In addition to increasing the volume and expanding the assortment of chemical agents for protecting plants, greater quantities of biological preparations will be produced. As is known, it was almost 20 years ago that we commenced developing the industrial production of microbiological agents. In 1983 the plans call for agriculture to be supplied with five types of biological preparations (entobacterine, dendrobacillin, bitoksibacillin, lepidocide and gomelin). However the requirements for these materials are being satisfied by only 60 percent. Moreover, the quality of the biological preparations is low, the preparative forms are unsuitable, the titers are low and the storage period is short (not more than a year). The development of new microbiological agents is proceeding slowly.

Despite the fact that a great amount of work has been carried out recently aimed at improving and expanding the assortment of chemical and biological agents, the degree to which agriculture is being supplied with these materials continues to remain unsatisfactory. And this imposes a special responsibility upon the plant protection specialists for ensuring the thrifty, efficient and effective use of the preparations being received.

More extensive use is being made in plant protection practice of traps containing synthetic sexual pheromones for harmful insects. At the present time, they are recommended for monitoring the development of pest populations and for pointing out the most optimum periods for chemical treatments. Extensive production tests will be organized in 1983 for attractant traps containing pheromones of the apple worm and grape leaf roller, in all republics having fruit trees and vineyards, and also traps having pheromones of steppe and Kuban click beetles in the RSFSR and the Ukrainian SSR.

Studies have shown that traps containing pheromones of the grape leaf roller make it possible to record the start of the flight of the butterflies 5-9

days earlier than when use is made of food and light traps. This raises the effectiveness of the campaign by 20-30 percent, it prevents damage to the fruit and it increases the yield of 1st class products. In addition, when there is a small number of pests the feasibility of treating the number of males caught in the traps can be determined.

The use of traps makes it possible to determine the degree of contamination of each quarter of an orchard and, when necessary, to carry out selective treatments on the more contaminated tracts. Moreover, in many instances this makes it possible to eliminate 1-2 chemical treatments. At the Novousmanskiy Sovkhoz in Voronezh Oblast, the economic effect realized from the use of traps amounted to more than 60 rubles per hectare. Moreover, the cost for acquiring a unit and servicing the traps amounted to approximately 1 ruble per hectare. In 1982, traps containing pheromones for the apple work were employed in the Georgian SSR on 855 hectares and the net profit realized amounted to 51,300 rubles. In the Armenian SSR they were used on 1,000 hectares and the net profit was 54,000 rubles.

Those who participated in the seminar emphasized that in keeping with the modern level for the use of chemical processes in agriculture, involving increases in the quantities and assortment of plant protective agents being employed, the protection of the environment against contamination has become an important state problem. A requirement exists for the establishment of strict regulations for the use of pesticides and for an efficiently organized control system. In carrying out the decrees handed down by the party and government on improving the protection of nature and the use of natural resources, a great amount of work is being performed aimed at achieving efficient and intelligent use of chemical agents for protecting plants and observing the regulations and rules for equipment safety when working with these materials. The plant protection service must provide optimum recommendations for the use of pesticides on the farms and it must exercise strict control over their fulfillment. Integrated systems must be introduced into operations in a more active manner and sowings and plantings treated with pesticides only after a preliminary inspection has been carried out and a determination made as to the degree of infection and the threshold numbers of harmful and useful organisms. The chemical agents must be used taking into account the need for protecting the useful types as well as the environment.

In preventing environmental contamination and ensuring the safe and efficient use of pesticides, an important role is played by the correct storage of chemical materials. A considerable requirement is being experienced for standard pesticide storehouses. The availability of such storehouse and container facilities is especially low in the Uzbek SSR, Azerbaijan SSR, Tadjik SSR, Turkmen SSR. The construction of storehouses and bases for the acceptance and storage of pesticides is being carried out very slowly.

The results of inspections testify to the fact that a definite amount of work has been carried out in a number of rayons, oblasts and krays aimed at improving the organization of storage for pesticides, ensuring their preservation and reducing losses. However, there have been instances of the existing rules for the storage and transporting of pesticides being violated. We have encountered incidents of these materials being stored in an irresponsible manner and used

extravagantly. At times the pesticides have been stored in storehouses having poor roofs, doors and gates which do not close, glassless windows, under sheds and even outdoors. On a number of farms the storehouse areas are not fenced. The system for the storage of pesticides is not being followed and the requirements for the separate storage of preparations by groups according to their toxicity and inflammability are not being observed. Many storehouses are not equipped with intake-exhaust ventilation, pallets or shelves and racks for storing pesticides and quite often the ventilation is defective. In some areas the chemical agents for protecting plants are kept in old buildings originally built for various purposes (barns, stables, garages, sheds and so forth), facilities which are unsuitable for this purpose.

There have been incidents of chemical plant protective agents being stored together with mineral fertilizers and other alien materials (sawdust, battery acid and so forth). Pesticides are being transported in open trucks and trailers.

Over the past 2 years, mechanized detachments of Sel'khozkhimiya have increased their plant protection work volumes by a factor of 1.5. They are presently carrying out work on an area of 21 million hectares and mainly on those farms which lack the equipment and conditions required for the efficient use of chemical materials. Especially fine results are being obtained in those instances where the detachments of Sel'khozkhimiya are assigned to stable farms. Positive experience has been accumulated in such work in Belorussia, Kirghizia, Uzbekistan, Kazakhstan and Azerbaijan. In the Russian Federation the output from one sprayer in mechanized detachments is higher by almost threefold than that at kolkhozes and sovkhozes. Nine percent of all of the sprayers are found in Sel'khozkhimiya detachments and they are carrying out more than 20 percent of the protective work.

The participants in the seminar emphasized the need for expanding the servicing work for aviation chemical operations using the resources of Sel'khozkhimiya. In 1982, practically one third of these operations were supported by rayon associations. A requirement exists for the construction of more hard surface take-off and landing strips and refueling points.

During the 11th Five-Year Plan, scientific studies on plant protection are being carried out in all of the principal directions called for in the all-round special purpose programs. Approximately 130 institutes are taking part in this work. Increased attention is being given to those problems, the development of which can produce high and rapid results once they are introduced into operations. More than 20 all-union and 60 zonal systems of measures for protecting the principal agricultural crops have been developed. These systems are constantly being improved taking into account the latest scientific and practical achievements in the sphere of signalization and forecasts, agrotechnical, biological and chemical methods, immunity and so forth.

Our science has accomplished a great deal towards improving the efficiency of plant protection operations. However there are still unsolved problems. As yet, very little attention is being given to organizational and economic studies. It was this aspect of the work that initially attracted the attention

of those participating in the seminar. The norms for consumption of the preparations, as shown on a "list," are often mechanically transferred over to zonal recommendations and this brings about a 20-30 percent over-consumption of pesticides. The recommendations for mixtures of preparations, which as a rule produce higher results, have not been developed sufficiently. Almost no recommendations are available for the chemical protection of individual crops from pests and diseases.

More intense studies must be carried out in connection with the effective use of pesticides in industrial technologies, the appearance of resistant forms of harmful organisms and the effects of the preparations on useful insects. Attention must first of all be given to those problems, the solving of which will ensure a high level of effectiveness for the chemical agents and their safe use with regard to man and the environment. Studies aimed at improving the assortment of pesticides must be continued.

The species structure of entomophages suitable for mass propagation is not being expanded adequately. The status of the work and the preparation of recommendations for new plant protection methods and for plant immunity are still not keeping pace with the modern requirements and efficient solutions are not always being found for the problems concerned with introducing completed works into production operations. With regard to trichograms, a requirement exists for providing an objective analysis of the results of their use in the various zones and for establishing the reasons for their insufficient effectiveness in some regions.

Effective measures have still not been developed for combating such dangerous diseases as white and grey sunflower rot and grain crop root rot. The problems concerned with combating smut, virus, nematode and bacterial diseases and also the Colorado potato beetle have not been completely solved. More attention must be given to the economic thresholds, taking into account the numbers of both harmful and useful types, the level of the agricultural practices being employed, the characteristics of the variety, the condition of the plants, climatic conditions and the planned yields. The scientific collectives must concentrate their attention on these factors.

The participants in the seminar noted that the successful implementation of the special measures is being held up not only by the absence of a number of highly effective preparations, especially herbicides, but also by a shortage of equipment. The requisitions for machines, especially disinfecting machines, are not being satisfied fully. As a result, various devices must be used and this lowers the quality of the work.

Mention was made during the seminar of raising the professional level of the plant protectors. Thus, even in Moldavia, where agronomists in this field are to be found on all of the farms, only 12 percent of the specialists possess higher educations. The absence of plant protection agronomists on farms adversely affects the quantity and quality of the products being obtained, lowers the effectiveness of the campaign against pests, diseases and weeds and precludes the possibility of making efficient and maximum use of the entire arsenal of means and methods available for protecting the crops without causing harm to the environment.

In speaking before the all-union seminar-conference on "The Operational Experience of Kharkov Oblast in Improving the Use of Chemical Resources," which was held from 18 to 20 August 1982 in the city of Kharkov, member of the Politburo of the CPSU Central Committee and secretary of the CPSU Central Committee Comrade M.S. Gorbachev stated: "In order to improve all work associated with the use of chemical processes in agricultural production, skilled personnel must be assigned to the kolkhozes and sovkhozes and also to the Sel'khozkhimiya associations. Unless this is done, it will be difficult to solve the tasks set forth in the Food Program. Unfortunately, it must be stated that today agrochemists and plant protection specialists are lacking in many oblasts, krays and republics. The training and retraining of specialists in this area has been organized only weakly and this explains to a considerable degree the unskilled approach being employed in the use of chemical materials.

"The USSR Ministry of Agriculture" emphasized Comrade M.S. Gorbachev, "must develop on an urgent basis a system of measures which will make it possible to improve the training of these specialists and it must examine the problem of ensuring that such specialists are assigned to all farms having such a need.

The opinion was expressed during the seminar that in the southern regions of the country, for example in Moldavia, an increase in the volumes of plant protection work being carried out by Sel'khozkhimiya is lowering the amount of attention which the farm leaders and agronomists are devoting to the problems concerned with combating harmful objects. As a result, the optimum periods for carrying out the measures are overlooked. Mention was made of the need for introducing an economic plant protection service into operations in the zones of intensive farming. It was stated that solutions have still not been found for the problems associated with providing material incentives for plant protection specialists and workers. They are not covered by the statute which governs the issuing of bonuses to specialists attached to Sel'khozkhimiya associations. Improvements must be carried out in the socialist competition in the branch and solutions found for the problems concerned with harmful working conditions, medical services and so forth.

The participants in the all-union seminar recommended that the Sel'khozkhimiya associations, the plant protection service and the scientific-research institutes undertake the measures required for raising the effectiveness of the special measures; strengthen and improve the service at the rayon and oblast levels in keeping with the agroindustrial complex; introduce progressive forms for organizing labor (brigade contract for the carrying out of field operations, a single order for the disinfection of seed, services for agricultural aviation and so forth).

In order to improve the effectiveness of plant protection operations and the efficient and safe use of pesticides, improvements must be realized in the reliability of forecasts and in the signalling of the appearance of plant pests and diseases; strengthen existing mechanized plant protection detachments in the rayon associations of Sel'khozkhimiya and create other such detachments where needed and also farm and inter-farm points for the use of chemical processes; ensure the construction of fixed refueling stations (points) for the preparation of working solutions, hard surface take-off and landing strips, standard storehouse facilities and sanitary-washing of units

for the decontamination of mechanisms; improving the organization and publicizing of the extensive introduction of new and progressive technologies and also expanding the training and retraining of personnel; intensifying state control over the fulfillment by kolkhozes, sovkhozes and other agricultural enterprises and organizations of the measures and regulations for the use of chemical and biological plant protection agents; ensure the efficient use of pesticides, taking into account the economic thresholds for damage sustained and the presence of useful insects.

The scientific-research institutes must intensify their studies concerned with improving the technology for employing chemical and biological agents, achieve an optimum ratio for them in accordance with the country's natural-economic regions, taking into account the species structure, the population density of the harmful organisms and economic thresholds of damage sustained and a reduction in the danger of environmental contamination; furnish recommendations on the efficient alternating of pesticide treatments, in the interest of preventing the appearance of resistant groups of harmful organisms.

Mathematical methods must be developed for forecasting the harmful organisms (pentatomid, Colorado potato beetle, beet webworm, grain moth, cotton-ball moth and others), for planning the requirements for plant protection agents using an electronic computer and for accelerating the development of a structure and new organizational forms for protecting plans in keeping with the country's agroindustrial complex.

The participants in the seminar called upon the protectors of plants to do everything within their power to reduce sharply the losses caused by the parasites of the fields and in this manner to make a worthy contribution towards fulfillment of the Food Program.

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