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# USSR Report

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USSR REPORT  
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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### LENINGRAD OBLAST HARVEST REPORT

Leningrad LENINGRADSKAYA PRAVDA in Russian 1 Oct 82 p 1

/Article: "Not One Hour of Delay"

/Text/ Herewith is a report on the status of harvest operations as of 30 September 1982 (according to operational data supplied by the oblast's agricultural administration -- in percentages of the plan).

| Rayons              | Potatoes | Vegetables | Food Roots |
|---------------------|----------|------------|------------|
| 1. Boksitogorskiy   | 78       | 39         | 15         |
| 2. Volosovskiy      | 92       | 69         | 16         |
| 3. Volkhovskiy      | 97       | 36         | 23         |
| 4. Vsevolozhskiy    | 97       | 62         | 56         |
| 5. Vyborgskiy       | 94       | 51         | 34         |
| 6. Gatchinskiy      | 88       | 42         | 28         |
| 7. Kingiseppskiy    | 100      | 57         | 28         |
| 8. Kirishskiy       | 86       | -          | 38         |
| 9. Kirovskiy        | 100      | -          | 30         |
| 10. Lodeynopol'skiy | 88       | -          | 34         |
| 11. Lomonosovskiy   | 89       | 52         | 23         |
| 12. Luzhskiy        | 92       | 30         | 32         |
| 13. Podporozhskiy   | 95       | -          | 23         |
| 14. Priozerskiy     | 97       | -          | 21         |
| 15. Slantsevskiy    | 97       | -          | 9          |
| 16. Tikhvinskiy     | 83       | 20         | 22         |
| 17. Tosnenskiy      | 90       | 55         | 25         |

The last 10 days of September have elapsed. Fine weather prevailed during almost this entire period in all areas, weather which enabled the farmers, with almost no interruptions, to harvest their crops, including potatoes. What were the results as they approached 1 October?

In all, at sovkhoses throughout the oblast, potatoes were harvested from 26,000 hectares, or 90 percent of the plan. Ten days ago this indicator was 26 percent less. However, it would be wrong to consider this potato harvesting tempo to be optimum. Indeed, almost 4,000 hectares of potatoes still remain to be harvested. Meanwhile, the best periods for harvesting the "secondary grain" are coming to a close. Thus there can be only one conclusion -- the work rates out on the potato

fields must be raised. Importance is being attached at the present time to ensuring that use is being made of each combine and each potato digging implement and also to organizing the work of the people out on the fields in a manner such that not one kilogram of product is lost. There cannot be one moment's delay in harvesting the crops! It is this thought that is motivating the collectives of sovkhozes in Kingiseppskiy and Kirovskiy Rayons, where the tuber extraction rates during the past 10 day period were higher than the average for the oblast. However, the work is not proceeding in this manner in all areas. For example, it is being carried out slowly by the potato growers in Boksitogorskiy, Kirishskiy, Tikhvinskiy Rayons. And indeed it must be remembered that autumn will not wait. Delays in harvesting the potatoes can be very costly.

Moreover, this fact must be borne in mind by all those participating in the autumn harvest work and those presently engaged in harvesting garden crops and food roots. On the vegetable fields, the products have been harvested from 56 percent of the planned areas. The best results in this work have been achieved by the vegetable growers and their patrons in Vsevolozhskiy Rayon. They are surpassing their principal competitors -- the sovkhozes in Tosnenskiy and Lomonosovskiy Rayons, which specialize in the production of vegetables for Leningrad. At the present time, the principal efforts in the oblast's "garden" sphere are being shifted over to the cabbage plantations -- the most labor-consuming of the vegetable crops and one which requires a great amount of manual labor. And only harmonious actions throughout the entire vegetable production line, from the fields to the procurement bases, will enable the Leningrad workers to lay away this rich vitamin product in winter storage in a timely manner and without losses.

The feed procurement specialists must pass a difficult examination. The root crops, without which it will be impossible to obtain high milk yields from the cows during the winter, must still be harvested from 73 percent of the planned areas. For the oblast as a whole, this amounts to more than 10,000 hectares! Thus a great amount of work still remains to be carried out here.

7026

CSO: 1824/080

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### EMPHASIS PLACED ON OIL-BEARING CROPS

Kiev PRAVDA UKRAINY in Russian 10 Jun 82 p 3

[Article by A. Prus, director of the division of oil-bearing crops of the UkSSR Ministry of Agriculture: "Attention to the Fields of Oil-Bearing Crops"]

[Text] The Food Program contains the following lines: "An important goal for party, soviet and agricultural organs, kolkhozes and sovkhozes and procurement and processing enterprises is facilitating a considerable growth in the production of seed from oil-bearing crops, improving the organization of their reception, storage and processing and decreasing their losses."

For the agricultural workers of the Ukraine this goal is of particular importance. In our republic oil-bearing crops occupy about 1.8 million hectares, including 1.6 million hectares in sunflowers.

Despite the cold and prolonged spring, oil-bearing crops have been sown almost everywhere on a shorter schedule, in well-fertilized soil and using primarily seed of the first class. Industrial technology has been widely utilized. Of every 10 hectares sown, 2 hectares of sunflowers, 6 hectares of the castor-oil plant and 8 hectares of soybeans are cultivated according to progressive methods.

This year the Ukraine must produce 2.7 million tons of sunflower seed and sell the state 2.3 million tons. To do this it is essential to harvest no fewer than 17.4 quintals of seed per hectare. The goal is an intensive one, but one that can be met.

Now sunflower crop care is proceeding everywhere. Skillful organization and a highly productive utilization of cultivator units are being demonstrated by the enterprises of Mar'inskiy Rayon of Donetsk Oblast, Saratskiy Rayon of Odessa Oblast, and Novovorontsovskiy Rayon of Kherson Oblast. These rayons were the victors of republic competition related to the production of this crop in 1981 and they are doing everything possible to secure and surpass that which has been achieved.

In the republic the first cultivation of interrows of sunflower crops is being completed. In a number of rayons enterprises have begun the second cultivation. Under existing weather conditions it is especially important to secure the

correct technological adjustment of cultivation units. Excessive depth of working parts should not be permitted or the most productive use of moisture for the formation of the harvest will not be achieved. All cultivators must operate with weeding harrows or needle-shaped discs.

At the present time when cultivating sunflowers according to industrial technology the use of treflan and other herbicides was not as effective as expected everywhere. For this reason on fields with perennial weeds or a core it is essential to conduct the mechanized cultivation of the interrows.

It is common knowledge how important the proper crop density is for sunflowers. Each hectare in the southern steppe should have 30,000-35,000 plants, in the central steppe--40,000-45,000 plants, in the northern steppe--50,000 and in the forest steppe--55,000 plants. The proper crop density should be reached as soon as possible. Although in the republic as a whole this has been done on over 70 percent of the area, a number of enterprises in Nikolayev, Odessa, Zaporozhye and Crimea oblasts are lagging behind in this work.

Many enterprises have begun top-dressing operations. In Pyatikhat'skiy, Tsarichanskiy and Krivorozh'skiy rayons of Dnepropetrovsk Oblast sunflowers have been top-dressed on every second hectare. We should remember that the application of fertilizers into moist soil increases the productivity of seed by 1.0-1.4 quintals per hectare. It is important to top-dress every hectare, not repeating the shortages of last year, when top-dressing was performed on only 25-30 percent of the total area in Poltava, Kirovograd and Crimea oblasts.

Each year the area in soybeans increases here. This year this valuable high-protein crop will occupy over 100,000 hectares. The soybean harvest depends primarily on the quality of crop care. The amount of cultivation of each field must be determined on the basis of existing conditions. The most important thing is to keep crops free of weeds.

Let's use the Druzhba Narodov Kolkhoz of Crimea Oblast as an example. The soybean field here occupies 1,000 hectares and each hectare is well cared for. Irrigation units are now operating in the soybean fields. Because of the great concern for cultivating soybeans, stable harvests have been achieved. During the last 5 years productivity has comprised 24 quintals per hectare.

No less important is the timely top-dressing of soybeans with mineral fertilizers. A sample dose contains 15-25 kilograms of nitrogen and 30-40 kilograms of phosphorus (active substance) per hectare of crops. It is important to apply the fertilizer on moist soil.

We cannot forget the valuable castor-oil plant, which is being cultivated more and more with industrial technology. In the Bil'shovits'kiy Nastup Sovkhoz of Kherson Oblast this crop occupies 1,500 hectares. In 1976-1980 its average productivity was 8.8 quintals per hectare. During the 11th Five-Year Plan the enterprise's collective is fighting for even better indicators and is striving to fulfill all work related to the care of the crop with high quality and in the best time. Shoot harrowing was performed here when the plants had 2-3 leaves. Five days later interrow cultivation with the

simultaneous application of ammonia water was begun. The castor-oil plant crop is being well cared for in many enterprises of Novovorontsovskiy and Gornostayevskiy rayons of this same oblast.

However, care for the castor-oil plant has not been organized in such a way everywhere. In Sofiyevskiy and Shirokovskiy rayons of Dnepropetrov Oblast, Vol'nyanskiy and Gulyaypol'skiy rayons of Zaporozhye Oblast and Nikolayevskiy and Berezanskiy rayons of Nikolayev Oblast the lowest harvests of the castor-oil plant are achieved due to poor crop care.

Care for the castor-oil plant--development of the proper crop density and top-dressing the plants--must be at the center of attention of specialists and directors of enterprises raising this crop.

8228

CSO: 1824/068

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### LARGE YIELD OF OIL-BEARING SEED PRODUCED

Kishinev SOVETSKAYA MOLDAVIYA in Russian 11 Sep 82 p 2

[Article: "Large Yields of Oil-Bearing Seed"]

[Text] The hybrid sunflower crop has matured uniformly on the fields of the republic. These plants are characterized by their uniform height, by the size of their calathides and the degree of maturation. Today on almost half the field area, over 60,000 hectares, traditional varieties have made way for high-yield hybrids developed natively and abroad. Dessication of almost all fields accelerated the time of the harvest. Machine operators moved combines out into sunflower fields.

The threshing yield achieved in Ungenskiy, Slobodzeyskiy and Kriulyanskiy rayons attests to the fact that this will be a good harvest. The return on a hectare here is 22 quintals. In Glodyanskiy Rayon, where harvesting is close to completion, an average of 25.7 quintals of oil-bearing seed is being collected per hectare. Such large yields of hybrid sunflowers, excellently adapted to industrial technology, are being achieved for the third year in a row.

Drying capacities have been increased by 1,000 tons per day in elevators and grain-receiving enterprises of the republic. New dryers have been put into operation by procurers in the enterprises of Chimishli, Bel'tsakh, Grigoriopole and Orgeyev. The number of powerful unloaders has increased. This enables us to receive the harvest as it comes in without limitations due to moisture. For the first time the "field--threshing floor--elevator" conveyor is working on an hourly schedule.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### AVOIDING HARVEST LOSSES IN KUBAN'

Moscow SEL'SKAYA ZHIZN' in Russian 19 Sep 82 p 1

[Article by Yu. Semenenko, Krasnodar Kray: "Losses Could Have Been Avoided"]

[Excerpts] The varieties and hybrids of sunflowers being cultivated in the Kuban' at the present time are distinguished by their high oil content, but at the same time they deteriorate rapidly and lose those qualities which are necessary for the production of vegetable oil. Taking this into account, farmers clean and dry sunflowers coming in from the field using a flow method in highly productive mechanized shops and send the seed to elevators without lags. With a plan goal of 880 tons, 950 tons have already been sold.

All rayons are now harvesting sunflowers, which occupy almost 310,000 hectares in the kray. The harvest being produced is not a bad one. Each hectare yields over 20 quintals of oil-bearing seed. Eighty-two percent of fields have already been harvested. In places where hybrids and early-maturation varieties such as Pochin, Uspekh, Oktyabr' and others were used the combines have already left the fields and harvesting required only 5-6 days.

The earlier maturation of the harvest enabled farmers to avoid an accumulation of work, which is occurring now in some enterprises. For example, in Yeyskiy, Slavyanskiy, Krasnoarmeyskiy and other rayons sunflowers have been harvested on only two-thirds of the area. The harvesting pace here is low. Hundreds of combines still have not joined in. It would not be easy now since the enterprises of these zones must also harvest corn, sugar beets, vegetables and other crops, procure feed and cultivate the soil for winter crops. There is more to do than during the harvesting period for spike crops, and where will all the manpower and technology come from?

These difficulties could have been avoided if the enterprises here had used early-maturing varieties of sunflowers and dessication methods on significant areas. Alas, this was not done! Now the excessive caution of directors and specialists must be paid for dearly--by means of part of the harvest. Driving along the fields now one hears the rustling of dry leaves and calathides when the wind blows. An alarming sound! If one looks at the ground, one sees large seeds lying there. They are lost even before harvesting operations have begun. The technology operating in the fields increases the number of irretrievably lost seed.

In all enterprises at the present time there are complaints about the acute shortage of trucks, tires and batteries.

Criticism can also be directed at the supplies of liquid fuel provided to enterprises by Goskomnefteprodukt [State committee on oil products]. How can we come to terms with the fact that hundreds of trucks remain idle because fuel is not being delivered? This is hindering the harvesting and procurement of seed to the extreme. At the present time threshing floors have accumulated a large quantity of sunflower seed waiting to be sent to elevators. There is nothing with which to transport the seed. We are moving towards winter. Cold and rains are just around the corner. It is not difficult to imagine what could happen to the oil-bearing seeds under an open sky. They will lose their essential technological properties, which will result in the production of industrial rather than vegetable oil or in a complete destruction of seed.

The reception of the harvest is a touchy question in general for Kuban' workers. During the day there is a "tail" of trucks 150 meters long at the Krasnodar Oil and Fat Combine. What is the problem? The problem is the absence of a daily schedule for transporting and receiving seed as well as the lack of preparation of enterprises for harvesting. Only three tipplers are in operation here, and these become immediately "overwhelmed" when a large shipment arrives. In addition, the tipplers have short platforms and because of this the unloading of KamAZov's [trucks from the Kama Truck Plant] with trailers must proceed one at a time--first the tractor and then the trailer must be unloaded. Then there is the Ural-3.175's driver S. Kil'yan, who delivers sunflowers from the Kolkhoz imeni Chapayev of Dinskiy Rayon and who unloads the body of his truck manually. Why haven't shovels been "retired"? It turns out that the combine has made no arrangements at all for the mechanized unloading of trucks which must be opened not from the side but from the back.

There are continuous obstructions at the Labinskiy Oil Extraction Plant. Here the greatest problem area is the drying of sunflowers. Of three dryers one still has not been repaired. Extremely insufficient are capacities for the storage of raw materials in enterprises of the oil and fat industry and there is a shortage of simple barrels.

From the very first day of receiving sunflower seed difficulties arose as a result of the slipshod work of railroad personnel. They do not adhere to schedules for the delivery of cars to unload grain in various regions of the country. Elevator stores are overfilled, sometimes there is nowhere to store sunflowers, and time does not wait.

Our goal is to eliminate shortcomings as quickly as possible and to save the entire harvest.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SUNFLOWER PRODUCTION IN SOUTHERN UKRAINE

Moscow SEL'SKAYA ZHIZN' in Russian 10 Apr 82 p 2

[Article by V. Kovalenko, first deputy chairman of the oblast executive committee; V. Burlov, director of the division on selection of oil-bearing crops of the All-Union Selection-Genetics Institute, Odesskaya Oblast: "For a Ton of Oil per Hectare"]

[Text] Our oblast is considered one of the main producers of sunflowers in the southern Ukraine. Each year 10 percent of the plowland is allocated to it and enterprises sell the state over 250,000 tons of oil-bearing seed. In their yield per hectare many kolkhozes and sovkhoses are superior to others in the republic. Following the example of Yampol'sk beet farmers the farmers of Saratov Rayon together with the Odessa Oil and Fat Combine are fighting to produce 1 ton of oil per hectare. But do they have many competitors?

In order to answer this question a presentation of the following data suffices. Whereas during the Eighth Five-Year Plan yield of sunflowers was an average of 18.3 quintals per hectare, during the 10th it was 14.8. Productivity dropped by 3.5 quintals and enterprises underproduced over 50,000 tons of oil-bearing seed. Last year their yield comprised 13.3 quintals.

There are several reasons for the sharp drop in productivity. Let's begin with the types of sunflowers available. Previously in our zone we cultivated primarily a type bred by the Armavirskaya Testing Station of the VNII [All-Union Scientific Research Institute] of Oil-Bearing Crops and characterized by a relatively high productivity and a vegetative period of 108-110 days. This enabled farmers to thresh the calathides at the end of August before the fall rains. Now the varieties Odesskiy-63 and Start have been regionalized. They contain more oil in the seed, but their vegetative period exceeds 120 days. In addition, whereas the old varieties were sown after early spring grains, the new varieties need well-warmed soil. This type of sunflower matures by late September when the temperature has dropped and the humidity in the air has increased. Because of grey rot the yield and quality of the oil-bearing seed drops sharply.

Violations of the technology of cultivation also had their effect. Over a 10-year period agronomists got used to the fact that sunflowers was a crop to be sown early. The seed of high-oil varieties develop shoots unevenly when sown in

unwarmed soil, resulting in a thin plantation. Optimal harvesting schedules are not always adhered to. In some cases sunflowers are cut early, with increased moisture. In the absence of drying technology there is self-warming of seed and a loss of quality. When cut late a considerable part of the harvest shatters on the stalk.

The existing situation is alarming. This is why farmers and procurers approvingly accepted the resolution of the CPSU Central Committee and the USSR Council of Ministers, "On Measures to Increase the Production and Procurement of Sunflower, Soy, Rape and Other Oil-Bearing Crop Seed and their Quality." Through joint efforts measures were elaborated to increase the production and sale of oil-bearing seed to the state. In particular, it was planned to increase the area in hybrids characterized by high yield and rapid maturation. They can be cultivated more readily using industrial technology and are less subject to diseases and pests. The plants are of the same height and mature at the same time.

In 1980 the first native hybrids were regionalized--Rassvet and Odesskiy-91, both developed by the All-Union Breeding-Genetics Institute. During the first season they occupied 4,100 hectares. Each produced 20.1 quintals of oil-bearing seed as compared with the oblast average of 15.1. The best results were achieved by individual enterprises. For example, in the Bolshevik Kolkhoz of Belgorod-Dnestrovskiy Rayon, where Rassvet occupied 50 hectares, the yield was 32 quintals.

Last year was an unfavorable one for sunflowers. Nevertheless, in those enterprises where its hybrid form was cultivated an average of 16 quintals of oil-bearing seeds were produced. The hybrids matured 20 days earlier, enabling farmers to complete harvesting at the optimal time.

Already this year hybrids will occupy about 50,000 hectares, or 28 percent of the area earmarked for sunflowers. This growth pace is unsatisfactory to us. The main factor hindering the expansion of this crop is the absence of high-quality hybrid seed. The oblast does not have a region of their guaranteed production, especially of biologically-pure parent forms. In order to obtain such seed it is essential to adhere to spatial isolation from other crops, a distance of 3-5 kilometers. This means that in the zone earmarked for this purpose there can be no cultivation of marketable sunflowers as well as of crops mixed with them for silage and green fodder.

This problem is very complicated. Nevertheless, with the experience of native and foreign science and practice for support, it has already now been decided to organize a zone of guaranteed hybrid seed farming around the elite-seed farming enterprises of the All-Union Breeding-Genetics Institute and the specialized enterprises of Belgorod-Dnestrovskiy Rayon. But in order to maintain an isolation zone it is essential to correct the plans for the sowing and sale of sunflowers. The problem must be dealt with now--the time has come for spring work. At the same time plans must be made for building in the oblast a modern plant for the processing, calibration and storage of sunflower seeds.

The final problem involves cooperation among branches. As a result of the joint efforts of industrial workers and farmers the production of sunflowers increases each year in Saratskiy Rayon. However, little income is obtained from the sold oil-bearing seed. But the Odessa Oil and Fat Comine annually "accumulates" over 20 million rubles of profits from processing sunflowers. Evidently it would be expedient to include the allocation of resources from the enterprise's fund for incentives to brigades and links involved in cultivating this valuable crop and selling it when setting up contractual agreements.

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CSO: 1824/068

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CROP STORAGE, TRANSPORT PROBLEMS IN KAZAKH SSR SCORED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 12 Oct 82 p 1

/Article: "To Protect All of the Crops"/

/Excerpts/ The harvesting of crops continues out on the republic's autumn fields. Grain from the virgin lands and rice from Kzyl-Orda are being delivered to the granaries, sugar beets from plantations in the Semirech'ye region and Dzhambul Oblast have been sent for processing and vegetables and potatoes are being supplied to the trade and for winter storage.

The present period is being devoted to the mass harvesting of garden products, to procuring and placing these products in winter storage. But this work has not been organized in a satisfactory manner in all areas. Articles have appeared in KAZAKHSTANSKAYA PRAVDA regarding slowdowns in the vegetable production line in Karaganda, Pavlodar, Dzhambul and Chimkent Oblasts. Owing to insufficient coordination in the operations of the farms and transport, trade and procurement organizations during the very peak of the vegetable season, the customers had to search for tomatoes and cabbage. At the same time, these products are being brought in from the fields very slowly owing to a shortage of transport and miscalculations in the organization of trade. And indeed at the present time the production and procurements of gardening products and their sale are concentrated mainly in the hands of the Ministry of the Fruit and Vegetable Industry and its associations in the oblasts and rayons.

The vegetable and potato fields of Kazakhstan are extensive. This year, more than 130,000 hectares have been set aside for them. The task has been assigned of supplying the republic's population with internally produced potatoes and achieving a sharp increase in the production of vegetables. Opportunities are available for accomplishing this. At the present time, for example, potatoes are being produced in a volume which almost meets the republic's requirements. But as yet only Karaganda Oblast is not importing potatoes from other areas for trade purposes. When few products are being obtained, more emphasis must be placed on learning how to protect them. Large quantities of potatoes are presently spoiling along the path leading from the fields to the counters. And the chief cause -- unsatisfactory organization of the procurement and storage operations. For example, in Gvardeyskiy Rayon in Taldy-Kurgan Oblast, for the second year in a row, no success has been achieved in organizing the progressive shuttle method for the shipping and sorting of potatoes, by means of which the seed stock and marketable products are selected simultaneously. The fact of the matter is that the interests of the

various farms are clashing. And as a result both the sovkhozes and consumers are losing out. Each year, considerable quantities of unsorted marketable potatoes are shipped by farms in Kokchetav, Severo-Kazakhstan and other oblasts. All of this is resulting in product losses. Many potatoes are being rejected owing to damage sustained during digging up and transporting. At the same time, the transporting and storage of potatoes in containers is being introduced into operations very slowly, despite the fact that the potential for doing this is available.

"In each rayon, in each oblast and in each republic there must be a well thought out and efficient system of measures for combating losses and for ensuring continuous work by the procurement, transport and trade organizations" pointed out L.I. Brezhnev during the May (1982) Plenum of the CPSU Central Committee, "the shorter and more simple the link between the fields and stores, the better will be both the work and the situation as far as the consumer is concerned. In particular, this year must serve as a serious test for the Ministry of the Fruit and Vegetable Industry." The branch's workers are presently passing this test. Much has already been accomplished in Kazakhstan in connection with improving the organization of the production and procurements of fruit and vegetable products. But more still remains to be done. The party and soviet organizations must furnish maximum assistance to the workers in the fruit and vegetable industry in solving the established tasks.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### HIGH FRUIT, VEGETABLE YIELDS IN UZBEK SSR DESCRIBED

Moscow SEL'SKAYA ZHIZN' in Russian 28 Oct 82 p 1

/Article by A. Uzilevskiy, Uzbek SSR: "Generous Fields of Uzbekistan"

/Text/ The gardening plantations created on the plateau of the Gissar Ridge have been generous. The machine operators of the Sovkhoz imeni Karl Marks in Shakhrisabzskiy Rayon are harvesting late potatoes here. The soil, irrigated and fertilized with organic materials, has produce large friable tubers. The farm is obtaining approximately 160-170 quintals of such tubers from each hectare.

Specialized farms created around the large industrial centers and in the foothill regions have augmented the republic's food funds to a noticeable degree. Over the past 3 years the potato plantings in Tashkent Oblast have been increased by more than twofold. This autumn 163,000 tons, or one half of the tubers produced in the republic, were obtained here. The leading brigades on fields in Ordzhonikidzevskiy, Tashkentskiy and Kalininskiy Rayons are obtaining 250-300 quintals of potatoes per hectare.

The republic is solving an important task: the creation during the next few years of its own potato production base. A noticeable step has been taken this year in this direction. For the very first time, the potato procurement plan was fulfilled by 120 percent.

The harvesting of late potatoes and late vegetables, fruit and grapes is continuing in a majority of the rayons of Uzbekistan. Many farms and rayons are furnishing additional food products. The suburban rayons of Tashkent and Samarkand have each shipped 100,000 or more tons of vegetables and fruit to the state receiving points. The farms in Tashkent Oblast have already procured more than 805,000 tons, Samarkand Oblast -- 447,000 tons of gardening and orchard products. For the republic as a whole, the socialist obligations undertaken in commemoration of the 60th anniversary of the USSR have been fulfilled ahead-of-schedule and more than 3.2 million tons of fruit and vegetable products have been delivered to the state. Aircraft and refrigerator trains have delivered thousands of additional tons of tomatoes, cucumbers, potatoes, fruit and grapes to Moscow, Leningrad to the builders of BAM /Baykal-Amur Trunk Line/ and to workers in the Far East and Far North

In a majority of zones in Uzbekistan, this year is characterized by raised yields from the vegetable and orchard fields. More than 320 quintals of vegetables per hectare have been obtained by the kolkhozes and sovkhoses in Samarkandskiy

Rayon. The farms in Ordzhonikidzevskiy, Bulungurskiy and Pastdargomskiy Rayons obtained 150-180 quintals of grapes per hectare. The work performed by melon growers this year in Syrdar'inskiy, Karshinskiy, Ellikkalinskiy and Khatyrchinskiy Rayons has been crowned by record yields being obtained. The vegetable growers at the kolkhozes imeni Engel's and Moskva in Samarkandskiy Rayon, who obtained 500-600 quintals of vegetables per hectare, are included among those who distinguished themselves during the competition. Hundreds of brigades obtained two vegetable crops from the same areas.

In Uzbekistan, intense specialization and concentration continues in fruit and vegetable production operations. New orchard and vineyard sovkhozes have been created on virgin land tracts and in old irrigated zones. They are satisfying completely the requirements of their rayons for fruit and vegetable products and they are generously sharing their surpluses with their neighbors.

This year the specialized sovkhozes of the UzSSR Ministry of the Fruit and Vegetable Industry produced and delivered to the state 58 percent of the potatoes, 24 percent of the vegetables, 44 percent of the fresh fruit and 63 percent of the grapes obtained in the republic.

The fruit and vegetable growers are establishing a strong foundation for the future harvest. The nurseries are preparing for early spring planting twice as much planting stock than is normally required for new orchards and vineyards. The specialized farms in Tashkent, Samarkand, Navoi and Surkhan-Darya Oblasts are completing their work of laying in early vegetables for the winter.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### OVERVIEW OF POTATO HARVEST OPERATIONS IN BRYANSK OBLAST

Moscow IZVESTIYA in Russian 4 Oct 82 p 3

/Article by R. Bikmukhametov and O. Vladimirov: "The Potato Kuban"/

/Text/ The tempo of the potato harvesting work at kolkhozes and sovkhoses in Bryansk Oblast is increasing. Here one finds the largest fields in Russia occupied by the "secondary grain." Thus the oblast is referred to as the "potato Kuban." It can be compared to the largest grain area in the country. During the last five-year plan, the Bryansk kolkhozes and sovkhoses sold 2.7 million tons of tubers to the state; this year they are obligated to furnish no less than 715,000 tons.

The Bryansk potatoes enjoy a good reputation among those who obtain them. And the geography of their distribution is extensive -- Moscow, Murmansk, Norilsk, Astrakhan, Dagestan, Yakutsk and other industrial centers -- approximately one quarter of a million tons will be delivered to these areas from farms in the oblast. At the present time, approximately 180,000 tons have been delivered to the consumers.

By no means can this past summer be considered as a favorable one for the crops. In early June many potato plantations were subjected to frosts, thereafter a thunderstorm struck and finally the agricultural workers experienced cold rainy weather. However the industry, expertise and persistence of the machine operators and specialists and their daily concern for the land finally gained the upper hand. And at the present time, under difficult weather conditions, the oblast's farmers are striving to harvest all of the crops grown without losses.

Fine examples of skilful equipment usage were displayed by the crews of units headed by A. Sychev at the Kolkhoz imeni Kirov in Suzemskiy Rayon, N. Kurzyankov of the Zhitnya Sovkhoz in Pochepskiy Rayon and P. Voronkovskiy of the Rossiya Kolkhoz in Novozybkovskiy Rayon. Each of these crews has already poured more than 1,000 tons of tubers from its bunkers. The best results were achieved by the farms in Klimovskiy, Pogarskiy and Trubchevskiy Rayons. The harvesting-transport complexes in Klimovskiy Rayon performed in an especially well organized manner. Fine work has also been performed by the machine operators in Pogarskiy Rayon. On the whole the oblast is adhering to the planned harvest schedules.

Having joined in the all-union campaign being carried out under the slogan "All that is grown -- protect!", the farmers in Bryansk Oblast are devoting a great amount of attention to the harvest operations. Repeated plowing up of the tubers

is being carried out at a majority of the farms. They are being sorted in a thorough manner at stationary points.

In analyzing the situation, one notes that the fine harvest rates derive from the good preparation of the mechanized teams and the constant attention and concern being displayed by the leaders of farms and the party and soviet organs for the needs and requirements of those participating in the "second harvest campaign" and also from the efficient ideological support being provided for the harvest work.

However the harvest rates in some rayons are lower than the average for the oblast. Certainly, mistakes are being made by the farm leaders and specialists and shortcomings are being noted in the work of those partners of the farmers who are expected to ensure rhythmic operation of the harvest production line. In Unechskiy Rayon, for example, Sel'khoztekhnika did not provide the technical servicing required for the harvesting units, as a result of which their idle time was great owing to trivial breakdowns. It was for this same reason that the harvesting machines in Mglinskiy and Vygonichskiy Rayons lay idle for extended periods of time. The oblast, soviet and economic organs are undertaking measures aimed at assisting those elements which have fallen behind. Unfortunately however, success is not being achieved in all areas. Items have already been written in IZVESTIYA and statements have been made concerning insufficient transport support for the harvesting work. Leading drivers from cities participating in transporting the crop have resolved to perform the amount of work required by the conditions. Unfortunately however, not all of them are imbued with a sense of responsibility for the crop. Some farm leaders are not even aware of just how many machines they should be operating. In Pogarskiy Rayon alone, the workers attached to GAI /state automobile inspection/ uncovered more than 150 crude violations over a period of just 4 days. Nor is the situation any better in the neighboring Pochepskiy Rayon. Analysis reveals that it is precisely on these farms that the deputy posts and people's controllers are inactive.

Those participating in the campaign "All that is grown -- protect!" are noting definite crop losses at the farms themselves and also along the routes leading to the consumers. But the farmers are to be blamed least of all. The Bryansk potato growers are applying a great amount of effort aimed at fulfilling the socialist obligations and delivering the products from their plantations to the consumers in the best possible form. However, by no means is this work dependent solely upon them. The chairman of Rospotrebsoyuz /Union of Consumers' Societies of the RSFSR/ V. Yermakov informed us that a very complicated situation exists with regard to the availability of freight cars for transporting the potatoes. The schedules are not being adhered to and quite often the freight cars are poorly prepared for transporting the product. As a result, a certain portion of the marketable potatoes intended for shipment to industrial centers throughout the country have been reprocessed throughout the oblast for technical purposes. Certainly, the railroad workers are to blame for not displaying the proper degree of efficiency. And it is believed that the USSR Ministry of Railways will undertake the measures required for accelerating the transporting of the Bryansk potatoes. However, a principal solution for solving the problem of protecting the Bryansk potato crop, one which plays a considerable role in implementing the food program, is viewed as being a basically new approach to the problem. It was prompted by the materials of the May (1982) Plenum of the CPSU Central Committee, in which the need for establishing storehouses closer to the production areas for the marketable

products was clearly stated. This is one of the most urgent problems confronting Bryansk Oblast. The MPS /USSR Ministry of Railroads/ is still unable to build a railroad line to Bryansk even though such action would reduce criticism of it.

And yet the construction of a network of modern potato storehouses on the oblast's territory is fully realistic. The potatoes can be kept in such facilities as long as necessary and shipped to the consumers when required. The degree of tension that has been imposed upon the transport facilities is lessening and in the industrial centers to which the potatoes are being shipped fewer forces and resources are required for storing and processing the tubers. This is allowing the Bryansk farms to concentrate the attention of the rural population on processing, sorting and improving the quality of the products being shipped to the consumers.

The problem is not quite as complicated as one might think. But here is what is surprising -- very little initiative is being displayed in this direction. Primitive efforts appear to predominate in this work. Let us assume that it would be proper for Bryansk Oblast to solve the storehouse construction problem itself. But indeed there are traditional consumers for the products obtained from its fields. Obviously, they must also make a proportionate contribution towards solving this problem which is of importance to both the oblast and the republic as a whole.

The task of implementing the decisions of the May (1982) Plenum of the CPSU Central Committee is by no means a routine one. It requires innovative ideas, initiative and enterprise both in the various areas and in the center. This present and difficult harvest period once again confirms the need for carrying out the decision handed down by the party and government, with regard to all of the conditions for the food program, in an efficient and energetic manner.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### RAPID HARVESTING OF BELORUSSIAN POTATOES WITHOUT LOSSES URGED

Moscow SEL'SKAYA ZHIZN' in Russian 10 Oct 82 p 1

/Article by V. Legan'kov, Belorussian SSR/

/Excerpts/ The republic's potato growers are devoting a great amount of effort towards ensuring that the crop is harvested rapidly and without losses.

To carry out the potato harvesting work in a timely manner and without losses and to sell 1.94 million tons of tubers to the state -- such is the goal undertaken by the kolkhozes and sovkhoses of Belorussia. The work is nearing completion. At the present time, not only individual leading farms but even entire rayons are digging up and reploting the last plantations of the "secondary grain."

This year's crop is especially costly. The potato yields in a number of areas are worse than those for last year and there are large quantities of small tubers. So as not to lose them, additional hermetic sealing of the combines has been carried out at the kolkhozes and sovkhoses and their separation organs have been tightened. Three or four individuals have been assigned to each unit for the manual picking up of the tubers. As a rule, the plans call for the reploting of harvested areas using potato diggers to be carried out in a single flow line or for cultivation with harrowing and the picking up of the remaining tubers. The population is furnishing a great amount of assistance in this regard. More than 134,000 residents of cities and rayon centers are working out on the potato fields.

At the same time, the rates for this reploting work are by no means satisfactory in all areas. It is still being carried out slowly in many rayons in Grodno and Brest Oblasts. And indeed the small tubers harvested constitute a substantial reserve for augmenting the forage supplies. Yes and the weather still favors the thrifty harvesting of everything grown out on the fields.

A most important concern is that of fulfilling the state plans for potato procurements, particularly the shipments to the all-union fund. The products must be delivered in full volume and on schedule to the cities of Moscow and Leningrad, to regions of the Far North and to all other consumers. The republic's workers plan to hold firmly to their promise and to maintain their high reputation as reliable suppliers of the "secondary grain." One hundred and thirty four receiving and unloading points have been opened at railroad stations. Platforms and sheds have been equipped for receiving and loading the potatoes. Personnel have been

assigned to work permanently at the loading points and a large number of motor transport vehicles have been allocated for centralized shipments.

But the dispatching of trains is arousing some alarm. Prior to the beginning of October, only 240,000 tons of tubers had been shipped to the all-union fund, or 37.5 percent, despite the fact that more than two thirds of all of the areas had been harvested and more than 2.5 million tons of potatoes accumulated by this date.

An increase in the shipment volumes is being delayed by the fact that the Belorussian Railroad is not making sufficient freight cars available. This problem was never encountered in the past. The technical equipping of the receiving points is making it possible to ship up to 40,000 or more tons of potatoes daily. For the republic as a whole, 11,000-12,000 tons are actually being shipped. Thus during the past few days the amount of food potatoes remaining at the stations has been on the order of 10,000-12,000 tons and seed potatoes -- 7,000 tons. The requests for deliveries of freight cars are being fulfilled by only 60-70 percent. In order to eliminate the lag in the schedule for deliveries to the all-union fund and to the republic, no less than 450-500 freight cars are required for shipping the food potatoes and for the seed potatoes -- 150-170 freight cars. No delays can be tolerated for crops grown under such complicated conditions.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### ESTONIAN POTATO HARVEST STATUS REPORT

Tallinn SOVETSKAYA ESTONIYA in Russian 10 Sep 82 p 1

/Article: "Potato Fields of the Republic"/

/Excerpts/ The mass harvesting of potatoes has commenced out on the republic's fields. The people refer to it as the "secondary grain," thus defining the role played by potatoes in our life. It is difficult to exaggerate its importance as a food product, as a valuable raw material for the processing industry or as feed for livestock.

This year the republic's potato plantations consist of almost 46,000 hectares. The plans and socialist obligations call for an increase in the production of the "secondary grain" and in the amount of potatoes to be sold to the state. In order to achieve these goals, fixed attention must be given to the production of potatoes, commencing with the breeding of new progressive varieties and ending with the harvesting and storage of the tubers.

This year the potato growers had to carry out a considerable amount of work in order to achieve an adequate harvest. Owing to the delayed spring, the planting of the tubers was begun 10 days later than last year. The scientists believe that the most favorable period for planting the seed in our republic is around 25 May. Prior to this date, the potato growers coped with their tasks. The sowings were tended in a timely and high quality manner. However the dry and hot month of July and the first 10 days of August delayed the development of the tubers and the commencement of their mass harvest. Thus by the beginning of this current week the potatoes had been harvested on only 2 percent of the areas. And despite the fact that the tubers are continuing to grow, no delay can be tolerated in harvesting them. On all of the farms, each day and each hour must be utilized fully for carrying out work on the potato plantations, since extremely little time remains for doing so.

This present harvest campaign out on the potato plantations is distinguished by a number of specific features. One of them lies in the fact that the haulm is still green in all areas. Thus the haulm must first of all be cut before the combines are moved out onto the fields. Moreover, it must not be forgotten that the haulm must be cut only on the day that the potatoes are harvested, otherwise nighttime frosts can result in a reduction in yield. When transporting and storing the tubers, it must not be forgotten that their late formation is conditioned by a

thin skin. Thus special care is required during the course of carrying out all harvesting-transport operations.

In past years, serious shortcomings occurred in the work of organizing the acceptance of potatoes. This applies in particular to the Tallinn Fruit and Vegetable Base, where owing to sluggishness on the part of the workers the transport equipment remained idle for long periods of time. Inspections have revealed that again this year the Ministry of the Fruit and Vegetable Industry for the Estonian SSR has failed to ensure, in conformity with the schedule, the preparation of the logistical base for the acceptance and storage of potatoes at the Tallinn Fruit and Vegetable Base or at the Narva and Kokhtla-Yarva Sovkhozes.

Taking into account the late ripening of potatoes, the agrometeorological conditions and the need for harvesting the potatoes as rapidly as possible, the republic's ministries of agriculture and fruit and vegetable industry and the rayon executive committees must ensure the acceptance of the potatoes within a period of 25-28 days and prepare schedules within the next few days for each farm for the delivery and acceptance of the potatoes by the fruit and vegetable bases and the processing industry.

The rural workers, the manual and office workers of industrial enterprises, construction projects and institutes, students and pupils are furnishing a great amount of assistance in harvesting the potatoes. The primary party organizations and farm leaders are obligated to organize the work of the supporting organizations and personnel such that maximum use is made of each pair of working hands and normal living conditions are created for the patrons.

Special attention must be given to ensuring that not one tuber is left out on the fields. The greatest losses are observed in those areas where the harvest work is carried out using rotary machines. But even when the harvesting work is carried out using combines, by no means are all of the tubers gathered up. Thus a requirement exists for organizing the additional picking up of tubers in all areas, an action which, based upon practical experience, will furnish from 8 to 10 additional quintals of potatoes per hectare. For the purpose of awarding bonuses to the workers, the principal indicator should be the quality of the harvesting work and the cleanliness of the potato fields.

A serious concern of the potato growers is that of preparing the potato seed. The plans call for all of the farms to be supplied with seed for planting the following year, using 1st grade high quality potatoes for this purpose, potatoes which were harvested during the optimum periods. Early varieties of seed potatoes and those that are in short supply should first of all be placed in the storehouses of farms and the unhealthy and damaged tubers should be carefully culled out in the interest of avoiding spoilage and contamination of the seed stock during storage.

Workers attached to the system of consumer cooperation must make a worthy contribution towards increasing the potato supplies by improving the organization of potato procurements among the population.

September is the decisive month in the harvesting of the "secondary grain." This fact must be borne in mind by the rural workers.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### POTATO HARVESTING PROBLEMS IN LENINGRAD OBLAST

Leningrad LENINGRADSKAYA PRAVDA in Russian 8 Sep 82 p 1

/Text/ The harvesting of potatoes is being carried out along a broad front. The farmers are being assisted in carrying out this work by a large detachment of workers from supporting enterprises and organizations and by students. In short, considerable effort is being put into this task of harvesting the "secondary grain." Nevertheless, the daily deliveries of tubers to the state throughout the oblast are still lower than the required volumes. The potatoe harvesting work is proceeding slowly in Podporozhskiy, Vyborskiy and a number of other rayons. The work must be organized in a manner such that the planned goals for harvesting and shipping the tubers to the receiving points are achieved as rapidly as possible. In the process, a great amount of attention must be given to the quality of the work, to carrying out double cultivation at the sites and to making efficient use of the potato-harvesting combines.

The transport organizations are not providing adequate support for the farmers. The transporting of the crop presently requires the use of more than 2,000 motor vehicles. But only one slightly more than one half this number is actually in use and this is having a noticeable effect on the tempo of the harvest campaign.

The laying away of seed and autumn plowing -- all of these factors must at the present time receive the attention of the sovkhos leaders and specialists. As yet the preparation of seed and arable land is still proceeding slowly in a number of rayons such as Kirovskiy, Luzhskiy and others.

In addition, high work rates must be maintained in connection with the procurement of feed. Indeed, 20,600 hectares of annual grasses of silage crops and corn have still not been harvested, nor has the aftergrowth of perennial grasses been harvested. The tempo and quality of the work being carried out on the meadows at the present time are of great importance with regard to successful work being performed by the livestock breeders during the winter months.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### CORN OCCUPIES LARGER PART OF PLANTED AREAS

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 2 Nov 81 p 1

[Article by A. Sal'nikov, deputy chief of the oblast agriculture administration (Chimkent Oblast): "The Corn Fields are Being Expanded"]

[Text] Corn growers of Chimkent Oblast are completing the harvesting of the crop. It should be emphasized that in recent years we have devoted special attention to producing corn grain. This valuable food crop is raised on irrigated land and when it is tended well it produces a large yield. Thus last year the farms of the oblast procured 70,000 tons of amber grain, a 3.5-fold increase over the planned assignment. It is intended to harvest and sell the state even more of it this year.

The areas planted in corn in the oblast are increasing from year to year and the agrotechnology for its cultivation is improving. In 1977, for example, it occupied only about 10,000 hectares, and at that time the average productivity was 37 quintals. Last year the area planted in corn was increased to 21,000 hectares and its productivity amounted to 52 quintals. During the past four years the gross production of corn grain in the oblast increased 3-fold and the volume of sales of it to the state increased 4-fold.

Farmers of Kzylkumskiy Rayon have achieved especially noticeable success in the development of corn growing. As a result of the introduction of new land and improvement of old land they have managed to expand the areas planted in corn to 12,000 hectares. Last year corn occupied 9,000 hectares. From this area they gathered and sold to the state 38,000 tons of grain--more than half of the amount that was sold in the entire oblast. This year the Kzylkumskiy workers intend to deposit almost 1.5 times this much corn grain into the state repositories.

The gross production of this in the rayon increases annually not only as a result of the expansion of the planted areas, but also because of the constant increase in the productivity of the fields. Farms are doing a great deal to improve the science of farming and to introduce advanced agrotechnology and progressive methods of labor organization. In particular, chemization and comprehensive mechanization are constantly finding their way to the planted areas. Most of the fields planted in corn are now cultivated only in keeping with industrial technology. The harvesting of the crop has also been transferred to the machines. The farms have introduced the so-called Sharvatnyy method of irrigation whereby organic fertilizers are applied to the fields along with the water. Old strains of commercial corn have been

replaced by more productive ones. Specialized brigades and teams have changed over to the progressive piece-rate-plus-bonus system of wages with periodic guaranteed advances.

Harvesting is now proceeding at shock rates. Many teams are obtaining 80-100 and more quintals of grain per hectare. And the average productivity for the rayon is 55.6 quintals. The farms have already delivered to the procurement points more than 3 times as much corn as was envisioned by the planned assignment.

Dzhetysayskiy Rayon has a good corn yield this year too. Each hectare produces almost 60 quintals of dry grain. And on the farms of Suzakskiy Rayon the productivity is even higher--an average of 68 quintals. Other farms of the rayon are also gathering a fairly good yield.

This year corn occupies almost 60,000 hectares in the oblast. About 30,000 of these hectares are for grain. Responding with deeds to the decisions of the May (1982) Plenum of the CPSU Central Committee, agricultural workers of Southern Kazakhstan are planning to increase the areas planted in this valuable crop to 100,000 hectares by the end of the five-year plan, including 70,000 hectares for grain. The party obkom and oblispolkom have earmarked specific measures for introducing new land and replanning old land that is no longer being used, improving agrotechnology, and extensively introducing advanced methods of cultivating corn. This will make it possible to considerably increase the production of this valuable grain even in the next few years.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SHORTCOMINGS IN MOLDAVIAN GRAIN CROP PRODUCTION SCORED

Kishinev SOVETSKAYA MOLDAVIYA in Russian 2 Sep 82 p 1

/Article: "In the Central Committee of the Communist Party of Moldavia"

/Text/ The Central Committee of the Communist Party of Moldavia, in a decree adopted concerning this problem, has noted that the Bessarabskiy, Dubossarskiy, Rybnitskiy and Chadyr-Lungskiy rayon party committees are not imposing proper exactingness upon the party, soviet and economic personnel with regard to solving the key problem of agriculture -- increasing the production of grain. Serious shortcomings have been tolerated here in the preparation of the soil, organizing the sowing operations and in the carrying out of a complex of agrotechnical measures concerned with tending the grain and pulse crops. Nor has a proper level of organizational and mass-political work during the harvest operations been ensured.

This year the plan for obtaining grain from winter and spring crops (less corn) in Rybnitskiy Rayon was underfulfilled by 12,000 tons, Dubossarskiy Rayon -- 9.1 and Bessarabskiy and Chadyr-Lungskiy Rayons -- 6,100 tons each. The cropping power for the grain and pulse crops amounted to only 27-30 quintals per hectare, which was lower than the average for the republic and also 7-10 quintals less than that for leading rayons. The yields at many kolkhozes and sovkhozes were even lower.

Proper attention is not being given to the cultivation of the principal grain crop -- winter wheat. This year its cropping power in Dubossarskiy Rayon amounted to only 29.7 quintals per hectare and in Bessarabskiy Rayon -- 30.3 quintals. Nor is proper importance being attached to the pulse crops as an important source for providing protein and the best predecessor arrangement for winter crops. Only limited areas are being set aside for these crops. As a result, the plan for the production of pulse crop grain in Rybnitskiy and Bessarabskiy Rayons was fulfilled by less than 50 percent and in Dubossarskiy and Chadyr-Lungskiy Rayons -- by 71 and 78 percent respectively.

Many farms are applying only limited amounts of organic and mineral fertilizers in behalf of the grain and pulse crops, they are not applying foliar top dressings to the plants, nor are they observing the norms and ratios between the individual types of fertilizers and this is leading to a reduction in the effectiveness of their return. In Rybnitskiy Rayon, only 120 kilograms of fertilizer were applied

per hectare in behalf of the 1982 harvest and in Dubossarskiy and Chadyr-Lungskiy Rayons -- 138 kilograms per hectare and these figures are lower than the average for the republic by 46-28 percent.

Neither the irrigated lands nor the great opportunities afforded by light irrigation are being utilized satisfactorily. The plans for the sowing of grain crops are not being carried out and the sown areas are not being protected up until harvest. In Dubossarskiy Rayon, the sowing plan was underfulfilled by 1,000 hectares, Bessarabskiy Rayon -- 800 and in Rybnitskiy Rayon -- 500 hectares.

Work is being carried out slowly in connection with preparations for the sowing of winter crops for next year's harvest. By 23 August, the plans for preparing the soil for the sowing of winter crops in Dubossarskiy and Rybnitskiy Rayons had been fulfilled on 50 and 37 percent of the areas respectively.

The rayon party committees and the rayon executive committees are tolerating serious shortcomings in the organization of grain production operations, they are not imposing proper demands upon the rayon kolkhoz councils, the agricultural departments of rayon executive committees or the agroindustrial associations with regard to the status of affairs in the branch, they are not supplying work critiques to the leaders and specialists of those farms which are obtaining low yields and they are not fulfilling the plans for the production and sale of grain to the state.

The primary party organizations of kolkhozes, sovkhoses, sovkhos-plants and inter-farm associations are employing a formal approach in organizing the socialist competition, they are not ensuring that each communist plays a leading role in production and they are not carrying out sufficient mass-political work aimed at mobilizing the field workers towards increasing grain production and carrying out the tasks established during the 26th party congress and the May (1982) Plenum of the CPSU Central Committee with regard to the successful implementation of the food program.

The Central Committee of the Communist Party of Moldavia considers the work being performed by the party, soviet and economic organs in Bessarabskiy, Dubossarskiy, Rybnitskiy and Chadyr-Lungskiy Rayons (1st secretaries of the rayon party committees V.I. Mastayev, M.M. Dermenzhi, I.D. Kirov and I.I. Arnaut and chairmen of the executive committees of the rayon soviets of people's deputies N.D. Yanush, I.V. Kolibaba, Ye.P. Berdnikov and I.P. Romanov) in connection with increasing the production of grain from grain and pulse crops to be insufficient and has demanded that they raise the responsibility of the personnel for more complete utilization of the available potential for sharply increasing grain production in light of the requirements handed down during the May (1982) Plenum of the CPSU Central Committee.

The proposal has been made to have the Bessarabskiy, Dubossarskiy, Rybnitskiy and Chadyr-Lungskiy rayon party committees and the rayon executive committees eliminate the existing shortcomings in the cultivation of grain crops, develop and implement specific measures for intensifying the production of grain and to achieve a considerable increase in the cropping power and gross yields for grain, as called for in the food program for the rayons for 1981-1985 and for the period up to 1990.

The rayon party committees and the rayon executive committees must analyze in detail the status of affairs at each kolkhoz, sovkhov, sovkhov-plant and inter-farm formation and provide a basic party appraisal to those personnel who are not undertaking exhaustive measures aimed at carrying out the directives of the party and government with regard to increasing the production of grain.

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CSO: 1824/091

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SOIL PREPARATION FOR WINTER CROP SOWINGS IN MOLDAVIAN SSR

Kishinev SOVETSKAYA MOLDAVIYA in Russian 9 Sep 82 p 3

/Article from Selektsiya Scientific Production Association: "Sowing of Winter Crops: Schedules and Agricultural Practices"/

/Text/ The winter crop fields of Moldavia, for next year's harvest, spread out over an area of 430,000 hectares and occupy approximately 50 percent of the grain fields.

At the present time, more than 250,000 hectares of land have been prepared for the winter crops. Time still remains for carrying out the harrowing work, breaking up the clods of earth and the crust and if there are weed seedlings and fallen fruit -- for carrying out light cultivation (to prevent the seed bed from drying out) to a depth of 4-5 centimeters together with the harrowing.

Extreme importance is being attached to accelerating the preparation of the soil following late predecessor crops -- corn for silage, sunflowers and early ripening varieties of sugar beets, using for this purpose sweeps and disk implements and achieving fine and uniform loosening and breaking up of the soil to a depth of not less than 8-12 centimeters.

And certainly each hectare of winter crop must be provided with a fine top dressing of fertilizers at the rate of 90-120 kilograms of nitrogen, 60-90 kilograms of phosphorus and 45-60 kilograms of potassium. In the process, 80-90 percent of the dosages of phosphorus and potassium fertilizers and 30-40 percent of the nitrogen fertilizer must be applied during the principal soil preparation operation and the remaining fertilizers -- during sowing and in the form of top dressings.

At the present time, 60 kilograms of nitrogen, 60 kilograms of phosphorus and 45-60 kilograms of potassium must be applied per hectare during the principal soil cultivation work for the Odesskaya-51 variety, which is to be sown following late predecessor crops on weakly-fertile lands.

More lodging-resistant varieties such as Zaporozhskaya Ostistaya, Eritrospermum-127, Dnestrovskaya-25 and Eritrospermum-103 must be sown following early predecessor crops on upper medium-fertile terraces. Here it will be necessary to apply 60-90 kilograms of nitrogen, 60-90 kilograms of phosphorus and 60 kilograms of potassium per hectare.

Finally, on the highly-fertile and damp fields of low terraces, under irrigation conditions and where the low-stalk Pitikul and Polukarlikovaya-49 varieties must be sown, it will be necessary to apply 90 kilograms of nitrogen, 60-90 kilograms of phosphorus and 60-90 kilograms of potassium per hectare. In the process, it will be necessary to achieve uniform distribution of these fertilizers throughout the entire area of the tract. During the sowing work (in drill rows), 0.5 quintals of ammophos or 1 quintal of granulated superphosphate is applied per hectare.

For the sowing of winter barley, the soil must also be thoroughly prepared and fertilized at the rate of 30 kilograms of nitrogen, 60 kilograms of phosphorus and 60 kilograms of potassium per hectare.

All other conditions being equal, the modern intensive varieties furnish the highest yields when they are sown during the optimum periods and these periods are well known: for winter wheat in the northern zone -- 10-20 September and in the central and southern zones -- 15-25 September. If a threat develops of the moisture in the sowing layer evaporating prior to the onset of the optimum periods on individual fields, then the sowing can be started 5-6 days earlier using the Odesskaya-51 variety. But this must be an exception, since the experience of 1982 once again confirms that early periods, similar to late ones, bring about a considerable reduction in cropping power.

If prior to the onset of the optimum periods on individual fields, adequate moisture is not available for obtaining healthy seedlings, the sowing should be delayed until after a good rainfall. If such rainfall does not arrive, then the sowing can be carried out immediately following the optimum periods, in dry soil using a sowing norm that has been raised by 20 percent.

Winter barley furnishes the highest yields when sown in damp soil during the period beginning 15-20 September and ending 1-5 October. The winter-hardy Yarna variety must predominate in the northern part of the republic and in the south -- the Tsiklon variety and by way of an insurance variety for the entire republic -- the Dvuruchka Odesskiy-86 variety.

The sowing norm for the Odesskaya-51, Zaporozhskaya Ostistaya, Eritrospermum-127, Dnestrovskaya-25 and Eritrospermum-103 varieties, when sown during the best periods, should be set at the rate of 4.5-5 million per hectare and for low-stalk varieties -- 5-5.5 million germinative seed per hectare. If the sowing is carried out towards the end of the optimum periods, the sowing norm is increased to 6-7 million germinative seed. The optimum sowing norm for all varieties of winter barley is 4.5-5 million germinative seed per hectare.

For providing protection against diseases and pests, the seed should be treated prior to sowing using the TMTD /tetramethylthiuram disulfide/ preparation or an ethylmercuric chloride seed fungicide at the rate of 1.5 kilograms per ton. In order to avoid destruction of the plantings by carabids, winter moths or root rots, the sowing of winter crops on the same field three years in a row is categorically forbidden.

On those areas where winter crops are to be planted a second time following stubble crops, a thorough inspection should be carried out and if more than 2-3 carabid

larvae are detected per square meter then a 12 percent hexachlorane dust should be applied during pre-sowing cultivation at the rate of 20 kilograms per hectare or simultaneously with sowing in drill rows -- 50 kilograms per hectare of a 2 percent hexachlorane dust or 40 kilograms per hectare of 5 percent bazudin.

On fields where seedling damage caused by the grain carabid has been observed, dusting should be carried out using a 12 percent hexachlorane dust at the rate of 20 kilograms per hectare or spraying with bazudin (2 kilograms per hectare) or volaton (2 kilograms per hectare).

The pre-sowing cultivation is carried out with no interruption in time and the sowing is conducted to a seed placement depth of 5-6 centimeters.

The use of progressive forms for labor and production organization in carrying out the sowing work will make it possible to complete this important autumn campaign during the optimum periods and to create a strong base for obtaining high grain yields during the third year of the 11th Five-Year Plan.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SOIL PREPARATION WORK FOR 1983 HARVEST IN MOLDAVIAN SSR

Kishinev SOVETSKAYA MOLDAVIYA in Russian 6 Aug 82 p 1

/Article: "For the Future Harvest"/

/Excerpts/ August is always a tense month for the farmers. During this period, concern for harvesting and processing the current year's crops is supplemented by worries regarding next year's harvest. First of all, this involves the timely preparation of soil for the sowing of winter and other crops. The yields obtained from the fields and, it follows, the fulfillment of the state plans and obligations for implementing the food program are greatly dependent upon the periods and quality for the carrying out of this work.

Under conditions wherein the harvesting of the crops is carried out using complex mechanized detachments, the farms have great opportunities at their disposal for removing crop residues from the tracts, applying fertilizers and tilling the soil immediately following the harvesting of the grain and other crops.

This is precisely the way in which the harvesting process was organized in Komratskiy, Vulkaneshtskiy, Tarakliyskiy and Chadyr-Lungskiy Rayons. The party committees, primary party organizations and the executive committees of local soviets held the economic leaders and specialists strictly responsible here for carrying out the entire complex of operations and they actively disseminated the experience of the leading detachments. As a result, the soil cultivation work was carried out at many kolkhozes and sovkhoses in keeping with all of the agrotechnical rules. Just as in past years, the anti-erosion cultivation system involving the use of sweeps and disking implements was disseminated extensively. In addition to protecting the tracts against water and wind erosion, it also ensures good accumulation and retention of moisture and it raises the effectiveness of the mineral and organic fertilizers applied.

Proper action is being taken by those farms which are raising the fertility of their lands by enriching them with organic fertilizers. All of the farms in Faleshtskiy Rayon are necessarily employing this agricultural method when preparing their soil for the sowing of sugar beets.

In carrying out educational and organizational work among the farmers, the party committees and primary party organizations must, as required in the decisions handed down during the 26th CPSU Congress and the May (1982) Plenum of the CPSU

Central Committee, persistently intensify a sense of responsibility for the thrifty use of the land. This means that today each hectare must be supplied with organic and mineral fertilizers before it is tilled. This is a realistic task. Indeed, at the present time approximately 1 million tons of organic material have been procured out on the fields. It merely has to be applied to the soil. In addition, the supplies of organic fertilizer can and must be increased. Especially in view of the fact that a large number of transport vehicles have become available following the completion of the grain harvest. However, this important reserve for improving the fertility of the fields is still being employed to only a minor degree this year in Sholdaneshtskiy, Rybnitskiy and other rayons.

The agricultural departments of rayon party committees and rayon executive committees, the leaders and specialists of rayon kolkhoz councils, the APO /agroindustrial association/ and the rayon associations of the Moldsel'khozkhimiya NPO /scientific production association/ must introduce a strict rule: the scientific recommendations for agrochemical programs must be carried out completely by each farm.

The existing facts regarding the lag that has developed in preparing the soil for the sowing of winter crops can only be explained by low exactingness on the part of the rayon party committees, the executive committees of local soviets and the economic organs. This year the rates for such work are even lower than those for last year. The machine operators in Brichany, Drokiya, Kotovsk and Kriulyany did not even commence this work until the beginning of August.

In organizing the work of the plowing detachments, the specialists were obligated to make extensive use of effective and progressive technologies. Today the agronomists must possess an accurate knowledge of exactly which crop should be grown on a particular field and thereafter use a correct system for tilling the soil and applying fertilizers. When preparing soil for the sowing of winter crops following such predecessor arrangements as grain crops and alfalfa, use should ideally be made of non-plow tilling.

A considerable portion of the winter crops should be planted in the autumn following corn for silage. Hence the harvesting of this crop should be organized in a manner such that the work is completed within 8-10 days. Thereafter, importance is attached to tilling the soil immediately using the non-plow method. Only tracts which are badly contaminated by root-sucking weeds should be plowed and treated in advance with a herbicide.

After tilling the soil in a timely manner, enriching it with fertilizers and procuring adequate amounts of high quality seed, the field workers will be able to carry out their sowing work in an efficient manner and establish a strong foundation for the harvest of the third year of the five-year plan.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### WINTER CROP SOWING PROBLEMS IN MOLDAVIAN SSR DISCUSSED

Kishinev SOVETSKAYA MOLDAVIYA in Russian 23 Sep 82 p 1

/Article by V. Grek, 1st deputy chairman of Kolkhoz Council of Moldavian SSR:  
"...And Once Again Quality!"

/Excerpts/ The republic's grain growers are commencing one of the most important agricultural campaigns -- the sowing of the winter crops. The fate of the future harvest and, it follows, the successful implementation of the food program, are dependent to a decisive degree upon the skilful carrying out of this campaign.

The grain growers are encountering many difficult agricultural tasks during this current autumn period. The fact of the matter is that prior to the onset of the optimum sowing periods for the winter crops a real threat arose with regard to destruction of the seedlings immediately following their appearance owing to extremely low supplies of moisture in the soil in many areas. Thus the agricultural scientists issued persistent warnings to the farmers concerning this dangerous trap.

And it is believed that the agronomists did not fall into it. At the present time, it is impossible to postpone the sowing work any longer and although it has been carried out up until this point on tracts having an ample supply of moisture, the scientists now recommend that it be carried out in all areas. The sowing norm for dry soil has been increased by 20 percent.

Correct action has been taken by those specialists who took advantage of a delay of a week and a half in order to improve the soil for the future winter crop tracts to the status of a bed. Rich soil makes it possible to reduce the effects of a prolonged autumn drought on the crops.

When assembling the sowing units, consideration should also be given to the fact that the SUB-24 sowing units place the seed in dry soil better than do the SUB-48 units. Just as in the past, the sowing was organized in a manner such that a field of 150-200 hectares was sown in one day.

In the interest of carrying out the sowing program in a more accurate manner, the fields were divided up in advance and the units were equipped with markers and adjusted for the assigned norm for sowing seed and mineral fertilizers in the drill rows. Packing of the soil was carried out following the sowing work.

Certainly, it would have been simpler to achieve the required density for the crops using the criss-cross sowing method. But this would have resulted in greater packing of the soil and overexpenditures of fuel and seed. Thus, programmed sowing was considered to be more rational. However, in such instances strict control must be exercised over the operation of the units.

Guaranteed success in grain production work is also impossible if an agronomist fails to display timely concern for protecting the crops against pests and diseases. Here a great amount of assistance can be provided by a system of field conditioning, which was introduced in particular at the Kolkhoz imeni Kirov. As a result, for example, a campaign waged against the grain carabid was carried out in a purposeful rather than a random manner.

As noted in a recently adopted decree of the Central Committee of the Communist Party of Moldavia, deviations from the mandatory agrotechnical requirements have produced serious shortcomings with regard to solving the problem of increasing grain production in Bessarabskiy, Rybnitskiy, Dubossarskiy and Chadyr-Lungskiy Rayons.

For the second year now, the republic's grain growers are persistently striving to fulfill the party's task for stabilizing the winter crop fields.

Towards this end and in addition to improving the production technology and organization, other important measures are also being implemented. Thus, within the kolkhoz council system 70 percent of the winter crops are being grown this year following early predecessor arrangements -- occupied fallow, stubble crops, perennial grass bed. An increase is taking place in the proportion of intensive winter wheat varieties.

With regard to the structure of the winter fields proper, it can be said that there is a trend towards an increase in the proportion of winter barley -- up to 40 percent.

To obtain stable yields of no less than 40 quintals of grain from the winter grain crops -- such is the task which our grain growers are solving today. And the general introduction of leading production experience will make it possible to achieve this goal.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### IMPROVEMENTS IN AUTUMN PLOWING WORK IN MOLDAVIAN SSR URGED

Kishinev SOVETSKAYA MOLDAVIYA in Russian 14 Oct 82 p 3

/Article: "Higher Rates for Autumn Plowing"/

/Text/ The timely and high quality carrying out of autumn plowing work serves as a guarantee that high yields will be obtained for the spring agricultural crops. Approximately 494,000 hectares of spring crop fields have already been plowed, or 155,000 more hectares than were plowed by this same date last year. The farmers in Kutuzovskiy, Ryshkanskiy, Ungenskiy and Nisporenskiy Rayons are carrying out their work in a high quality manner and they are not allowing any pauses to take place between releasing the fields from late predecessor crops and the tilling of the soil.

However, in many rayons the autumn plowing rates and the output per sowing assembly are still not sufficiently high. The situation in Vulkaneshtskiy, Dubossarskiy, Kantemirskiy, Lazovskiy and Leovskiy Rayons is rather alarming, since less than 150 hectares are being plowed daily. This indicator is even lower in Teleneshtskiy Rayon -- only 86 hectares.

The dry autumn conditions created definite difficulties with regard to preparing the soil for the spring crops; an individual and intelligent approach must literally be employed for each tract. The system of agricultural methods must necessarily include thorough disking of the soil and the removal from it of excessive amounts of plant residues. The workers in Chadyr-Lungskiy, Komratskiy, Kotovskiy and Faleshtskiy Rayons are carrying out their autumn plowing work in a fine manner, a statement which cannot be made regarding certain farms in Rybnitskiy and Kriulyanskiy Rayons.

The party organizations and the leaders and specialists of kolkhozes, sovkhozes, sovkhoz-plants and inter-farm associations and enterprises must undertake urgent measures aimed at improving the organization of the plowing operations.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SUGAR BEET CROP, HARVEST PROGRESS IN THE UKRAINE

Kiev SIL'S'KI VISTI in Ukrainian 7 Aug 82 p 2

[Article by V. Zubenko, director, All-Union Scientific Research Institute for Sugar Beets, doctor of agricultural sciences, M. Shapoval, head of Institute Laboratory for Sugar Beet Agro-Technology, Ye. Norytsya, deputy head, Main Administration for Technical Crops, UkSSR Ministry of Agriculture: "Beet Growers' Urgent Tasks"]

[Text] Weather conditions this year were not completely favorable for growing sugar beets. Their negative effect was felt primarily during the period of mass sowing which led to excessive soil hardening, crop thinning and a delay in the initial plant growth. Then, pests appeared in threatening numbers. In many areas beets had to be re-sown. However, thanks to the efforts of beet growers it was possible to establish a satisfactory plant density. At present, the average within the republic amounts to 84,000 plants per hectare.

It was possible to establish the required plant density early by changing to decreased seed sowing norms with high germinating power as well as extensive sprout thinning.

Appropriate care yielded positive effects on plant development: as of 1 August the average mass of root crops amounted to 160 grams or only 6 grams less than last year, the sugar beet top mass amounted to 365 grams or 42 grams more than last year. With sufficient soil moistening and a favorable temperature regime a well-developed leaf surface provides an intensive daily root mass increase and also an increase in sugar accumulation. A favorable correlation between soil water and air is needed. Now it is upset by frequent intensive rains, often downpours. Beet areas are excessively hardened and this creates difficulties in plant nourishment. In addition, weed infestation on some fields has reached a level that will inevitably affect the harvest level.

Considering the actual state of beet plantations, measures must be put into effect which would promote the strengthening of beetroot growth processes and an accumulation of sugar in them. Scientific research and production experience show that only through soil loosening between rows can its physical properties be improved,

decreasing the bulk mass of the upper layer and then improving the water-air regime. According to data from the Salyvonkivskyy elite seed growing sovkhos in Kiev Oblast ("Chernyshi" section) between row loosening done during the second half of the vegetation period in meadow chernozems decreases the bulk mass by 0.3-0.4 grams per cubic centimeter, the number of annual and perennial weeds by 47-68 percent compared to plots where the soil was not worked. Regardless of the fact that seven to eight percent of plant leaves were damaged at the time mostly by tractor wheels, eleven to sixteen percent on research fields of the Yaltushkivska station in Vinnitsa Oblast with grey-podzol soils heavy in mechanical composition, between row soil loosening in the second half of the vegetative period provided for an additional 25-30 quintals of beetroots (4 quintals sugar) from each hectare.

Under present conditions between row soil loosening acquires special importance. Each day's delay in fulfilling this agro-technological measure lowers the hectare's yield and eventually branch effectiveness.

Sugar beet plantation inspection in various oblasts and generalization of information received from farms show that the state of crops is unusually mixed. Crops differ in plant density, state of root and leaf surface development, degree of weed infestation, moisture level, soil hardening, etc. Therefore, a single approach to selecting soil working equipment and working parts is impossible. It is essential for all, however, to loosen soil areas to improve soil air access, destroying the most weeds with minimal leaf surface injury.

With excessive soil moisture preventing soil from breaking up easily, a qualitative soil tilling can be achieved only by the same working part placement as for layer loosening.

On areas with little weed infestation with well developed leaves which closed up between rows, it is best to use two chisels on each plowbeam. In the front holder the chisel is adjusted to a 5-6 cm depth tillage, in the back to 8-10 cm. The distance between them should be maximal to avoid possible jamming with weed and beet top remains.

Over weed infested areas, mostly re-sown with insufficiently developed leaves, which did not close up between rows, the width of the tilled area should be increased. For this purpose three chisels should be attached to each plowbeam to side and back holders. It is better to use cultivators with extended plowbeams which permit chisel placement at larger distances.

The need for timely between row soil loosening is also dictated by the fact that many areas of sugar beetroots were affected by common beet scab, root rot and leaf cercosporosis (leaf spotting).

Leaf surface injury should be avoided during soil loosening between rows. Tractor wheels can be equipped with beet top deflectors. They are not difficult to make in farm work shops.

This work should not be postponed also because the recent hot, sunny weather causes marked soil moisture evaporation. Without loosening, the upper soil becomes excessively hardened and subsequent tilling becomes impossible. This affects the quality of beetroot combine harvesting.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### METHODS TO IMPROVE SUGAR BEET HARVEST DISCUSSED

Kiev SIL'S'KI VISTI in Ukrainian 10 Oct 82 p 1

Excerpt Unfavorable weather conditions developed at the start of sugar beet sowing: it rained and became colder. This led to a decrease in density, uneven plant row placement, different size beetroot formation and a somewhat decreased growth and accumulation of beet sugar. Later, almost during the whole vegetation period there was ample rainfall, the soil became hardened and weeds began to grow. Beet tops grew too rapidly. They now reach more than half a meter in many areas and their weight is greater than of beetroots. If essential measures are not taken under these conditions great harvest losses could occur affecting raw material quality also.

Therefore, harvesting dates should be determined first with appropriate planning done to obtain the highest possible increases in beetroots and sugar accumulation in them.

In present conditions, digging should be started somewhat later than last year. Until mass harvesting (September 20) the beets should be dug only on return strips and in between plot passages so as to assure uninterrupted sugar refinery work. Raw material reserves should not be more than what is needed for three day enterprise needs.

Experience shows that where sufficient attention is paid to beet harvesting organization, technology is prepared correctly and is utilized in harvest-transport detachments, a high machine productivity is achieved, raw material is sent to refineries on time and losses are avoided.

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CSO: 1811/10

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SUGAR BEET HARVESTING STATISTICS GIVEN

Kiev SIL'S'KI VISTI in Ukrainian 14 Oct 82 p 2

/Text/ Weather conditions are favorable for beet harvesting. The gathering of this valuable technical crop is in full swing in all oblasts and the number of farms which already completed the complex task grows daily.

A characteristic attribute of this year's harvest is the wide utilization of the valuable experience of sugar beet growers, sugar refiners and transport workers from the Yampol'skiy Rayon, Vinnitsa Oblast. Almost 5,000 beet sowing farms, transporting enterprises, and all of the republic's sugar refineries this year work according to work cooperation agreements, having a common goal in mind -- a maximal sugar production per beet plantation hectare.

A good example of organized work is provided, as before, by the initiators of the all-union competition for the highest final result, the workers from Yampol'. Beets have been dug here over an area of 7.5 thousand hectares, which amounts to more than 90 percent of the whole crop. The Honorivs'ky sugar refinery is working rhythmically. Beet, transport and sugar refinery workers of this rayon work harmoniously; their ability to solve all complex problems through joint effort is admirable.

Generally in the republic as of October 11 sugar beets were harvested on 1,262 thousand hectares. Data on this work is given below by oblasts.

| OBLAST         | Harvested (percentage of sown) |
|----------------|--------------------------------|
| Vinnitsa       | 80                             |
| Ternopol       | 80                             |
| Volyn          | 79                             |
| Dnepropetrovsk | 78                             |
| Kirovograd     | 77                             |
| Odessa         | 76                             |
| Kharkov        | 76                             |
| Khmel'nitskiy  | 74                             |
| Nikolayev      | 74                             |

| OBLAST          | Harvested (percentage of sown) |
|-----------------|--------------------------------|
| Cherkassy       | 72                             |
| Poltava         | 67                             |
| Sumy            | 67                             |
| Zhitomir        | 66                             |
| Kiev            | 66                             |
| Lvov            | 62                             |
| Rovno           | 60                             |
| Ivano-Frankovsk | 59                             |
| Chernovtsi      | 58                             |
| Chernigov       | 56                             |

Beet harvesting schedules are successfully fulfilled in Vinnitsa, Ternopol, Kharkov, Khmel'nitskiy and a number of other oblasts. On most farms technology is utilized efficiently, socialist competition is in effect and appropriate living conditions have been provided for workers in the field.

At the same time the pace of sugar beet digging in Chernigov, Ivano-Frankovsk, Lvov, Rovno and Chernovtsi Oblasts should be accelerated. Right now it is essential to put to work all available beet technology, providing for their operative and quality technical care and repair and for a centralized harvesting-transport process everywhere.

Special attention should be given to organization improvement in hauling raw material from the field. On most farms in Kiev, Ternopol and Cherkassy Oblasts this work is well done.

There is more success where brigade contract drivers are used for beetroot transport. This method is used widely in the Poltava area. It provides for concentration of transport means and rolling stock in the area needed, their efficient performance, quick and qualitative technical servicing, a substantial decrease in transport idle standing and a one and a half, and in some areas double, increase in seasonal production. Oblast agricultural technology alone provided for 68 contract brigades, each of which services two to four farms. Drivers from one brigade headed by communist H. Yu. Pohribnyak daily transport 80-90 tons of beetroots, overfulfilling their task two times.

At the same time in Volyn, Kirovograd, Sumy and Chernigov Oblasts 13-20 percent of beetroots dug remain in the field which leads to their weight loss and a drop in their technological qualities. An inspection revealed that in kolkhoz "Pershe Travnja" in Pervomayskiy Rayon, Kharkov Oblast, imeni Lenin in Kotovski Rayon, Odessa Oblast, and several other farms because of unsatisfactory sugar raw material transport organization a considerable amount of it remained in the field from five to ten days.

Some beet collecting points have not yet made appropriate arrangements for the receipt of raw material. Thus, at the Shpykivskyy sugar refinery in Vinnitsa Oblast because of a large number of cars unloading delays were up to two hours. At a number of plants in this oblast trucks unload onto pile-making machines even if the beetroots come directly to raft areas or beet collecting lots.

These things should not be allowed. Farm and transport enterprise managers and specialists should take definite steps to liquidate the gap between digging and transporting beetroots which has developed in a number of oblasts. Fall weather is unstable, temperature drops and bad weather are possible. The transport situation, therefore, should be improved especially at night, without undue delays in loading and unloading in receiving centers and with effective dispatcher service.

At the same time sugar raw material quality should be watched since it affects sugar output and kolkhoz income. Unfortunately, there are still instances where kolkhoz and enterprise managers accept production spoilage and losses. Kolkhoz "Zapovit Lenina" in Krasno-oknyanskiy Rayon, Odessa Oblast delivered on September 25 to the Chervonoznamyanskiy sugar refinery eight tons of wilted, black and rotten beets. At the plant itself piles are not well formed, are insufficiently limed and are uncovered.

Interdepartmental commissions should have a more active control over correct determination of sugar raw material quality in plant laboratories, combatting dishonesty and narrow department approach to this matter firmly. At the Hersivaniivskiy beetroot center of the Orelskiy sugar refinery in Kharkov Oblast at the September 24 sugar content determination of beets delivered by kolkhoz imeni Kalinin, Lozivskiy Rayon, this index dropped almost one percent. At the Shevchenkiivskiy sugar refinery in Kiev Oblast a discrepancy of 40-80 kg was revealed in packing weight. These are not isolated incidents and they should be appropriately evaluated.

Time is growing short for sugar beet workers in the field. It should, therefore, be used for painstaking harvest gathering and its delivery to sugar refineries. Each sugar beet plantation should be cleaned up, checked over and approved by a commission.

At the same time a good farmer always takes care of next year's harvest. On most beet sowing farms deep plowing was done in time and an appropriate amount of organic and mineral fertilizer was applied and the surface area was tilled.

The fate of the future harvest depends, to a large extent, on the work done today which should be done well and on time.

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CSO: 1811/10

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### BRIEFS

SUNFLOWERS SOWN--Kiev--Yesterday the machine operators of the Ukraine completed the sowing of sunflowers. Today every fifth hectare of plantations in this crop is cultivated according to industrial technology. During the first year of the five-year plan the republic's farmers have pledged to sell the state over 2.2 million tons of oil-bearing seed. [Text] [Moscow TRUD in Russian 15 May 82 p 1] 8228

ADVANTAGE OF EARLY HYBRIDS--Odessa, 14 Sep 82--The farmers of the Black Sea region are convinced of the advantages of rapidly-maturing sunflower hybrids. They began harvesting this crop much earlier than usual. In the oblast sunflowers occupy 178,000 hectares. For the first time almost one-third of the entire area is occupied by the hybrids Odesskiy-91 and Rassvet, developed in the All-Union Breeding-Genetics Institute. The vegetative period of these is almost 20 days shorter, which enables farmers to complete the harvesting of oil-bearing seed prior to the onset of bad weather in the fall. Mechanized complexes and detachments have entered the sunflower fields. Following the example of Yampol'sk farmers they are working according to a single complex plan with the collective of the Odessa Oil and Fat Combine. Their goal is to produce no less than 1 ton of ready product per hectare of crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 Sep 82 p 1] 8228

OIL-BEARING SEED TO ELEVATORS--Krasnodar, 3 Sep 82--A good harvest of sunflowers has been produced by the kolkhozes and sovkhoses of the Kuban'. Each hectare yields 21.6 quintals of oil-bearing seed, and in Korenovskiy, Kalininskiy, Gul'kevichskiy and other rayons over 24 quintals per hectare are produced. The valuable oil-bearing crop occupies 309,000 hectares in the Kuban'. Mass harvesting has begun. Technology is utilized by the large-group method. After threshing the sunflowers are cleaned, dried and sent to elevators. In many kolkhozes and sovkhoses farmers are striving to complete harvesting in 5-6 calendar days, to eliminate harvest losses, and to provide more oil-bearing seed for the state. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 4 Sep 82 p 1] 8228

LARGE SUNFLOWER HARVEST--Krasnodar--A large sunflower harvest has been produced on the fields of the Kuban'. Mass harvesting of this valuable oil-bearing crop has begun. Leading enterprises of Ust'-Labinskiy, Kanevskiy and Vyselkovskiy rayons thresh an average of 28-30 quintals of oil-bearing seed per hectare. In Krasnodar Kray over 300,000 hectares are occupied by sunflowers. It is

cultivated according to industrial technology. In order to avoid losses, machine operators are utilizing technology in large groups in two shifts. [Text] [Moscow TRUD in Russian 15 Sep 82 p 1] 8228

ACCELERATING SUNFLOWER HARVEST--Having begun socialist competition for the quickest completion of the sunflower harvest, farmers in many rayons of the republic have already completed or are completing this work and are increasing the pace of sales of oil-bearing seed to the state. In general sunflowers have been harvested on 70 percent of the area. In Brichanskiy, Dubossarskiy and Dondyushanskiy rayons great lags in the harvesting of this valuable industrial crop have been tolerated. This type of situation is cause for alarm concerning the fate of the harvest. The processing of oil-bearing seed and sales to the state are proceeding slowly. Over 50 percent of threshed sunflower is found on the threshing floors of enterprises, which can result in a drop in quality. The farmers of Grigoriopolsk are also lagging in the sale of oil-bearing seed. Here 5,700 tons have already been threshed but only 1,550 tons have been sold. Much untransported sunflower seed remains in Kamenskiy, Yedinetskiy, Kutuzovskiy, Lazovskiy, Orgeyevskiy and Kagul'skiy rayons. Local directors of party, soviet and economic organs must take immediate action to complete the harvesting of oil-bearing crops and to fulfill the sales plan to the state. The workers of procurement enterprises must secure an uninterrupted reception of sunflowers. [Text] [Kishinev SOVETSKAYA MOLDAVIYA in Russian 22 Sep 82 p 1] 8228

HOURLY HARVEST SCHEDULE--Kishinev, 26 Sep 82--In Ungenskiy, Slobodzeyskiy and Kriulyanskiy rayons the yield of sunflowers exceeds 22 quintals on each hectare. In Glodyanskiy Rayon, where harvesting has already been completed, the average yield was 25.7 quintals of seed. Drying capacities at elevators and grain-reception enterprises in the republic were increased by 1,000 tons per day. The number of large unloaders has increased. This enables us to receive the harvest without limitations due to moisture. For the first time the "field--threshing floor--elevator" conveyor is working according to an hourly schedule. Here in the Selektiya Scientific-Research Association extensive tests are being conducted on native and foreign hybrids and a division of heterosis breeding of oil-bearing crops has been established. In southern Moldavia a large seed-farming zone isolated from industrial crops has been created. By the end of the five-year plan it is intended to cultivate 10,000 tons of hybrid sunflower seed here, a significant portion of which will be sent to other regions in the country. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Sep 82 p 1] 8228

SUNFLOWER HARVESTING COMPLETED--Kishinev--The machine operators of Moldavia have completed the harvesting of sunflowers. On each of 150,000 hectares about 18 quintals of oil-bearing seed have been obtained. The largest yields were produced in plantations of high-yield hybrids of native and foreign varieties which occupied about half of the area in the crop. The cultivation of hybrids according to industrial technology enabled the farmers of Glodyanskiy Rayon to produce a record harvest of oil-bearing seed--an average of 28 quintals. This year in leading Moldavian enterprises the output of vegetable oil per hectare of crops reached 12 quintals. [Text] [Moscow GUDOK in Russian 3 Oct 82 p 1] 8228

WINTER WHEAT SEED DELIVERY--Kishinev, 15 Sep--The Moldavian procurement specialists have fulfilled the order of the Tajikistan farmers. They have shipped more than 10,000 tons of winter wheat seed for the highly productive Odesskaya-51 variety to the fraternal republic. All of the material shipped meets the requirements for 1st class of the standard. The agricultural workers of Moldavia have been adequately supplied with seed for their grain fields. In carrying out their autumn sowing, the farmers are expanding the areas to be used for the high-yield intensive Zaporozhskaya Ostistaya wheat and the Pitikul dwarf variety, created at the republic's Selektiya Scientific-Production Association. /by I. Subbotovich/  
/Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 Sep 82 p 1/ 7026

GOOD POTATO YIELD--Petrozavodsk--The potato growers in the Karelian ASSR have commenced harvesting tubers on their fifth and last thousand hectares. They are pleased with the crop. For example, the Il'inskiy Sovkhoz has obtained 200 quintals of tubers from each hectare. /Text/ /Ashkhabad TURKMENSKAYA ISKRA in Russian 30 Sep 82 p 1/ 7026

SELECT POTATO VARIETIES--Grodno--The field workers in Grodno Oblast are delivering potatoes to residents of the country's industrial centers at a high tempo. Just as called for in the contractual obligations, select tubers of the best food varieties such as Temp, Ogonek, Komsomolets and Razvaristyy are being shipped. The procurements of seed tubers are also being carried out ahead of schedule. Use of the flow-line and large-group method for harvesting and transporting the product has made it possible to accelerate the work. In order to ensure the best protection for the tubers, extensive use is being made of containers for transporting them. Many station receiving points are equipped with dispatcher communications. Points for procuring potatoes from the population have been opened up on all of the farms. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 1 Oct 82 p 1/ 7026

POTATO PLAN OVERFULFILLED--Kalinin, 6 Oct--The potato growers of the Novosel'ye Sovkhoz have offered up a fine gift in honor of Constitution Day: they have overfulfilled the plan for selling tubers to the state by twofold. The farms in Molokovskiy, Sandovskiy, Rameshkovskiy and other rayons have grown a fine crop of the "secondary grain." At the present time, work is being completed on almost 70,000 hectares of potato fields throughout the oblast. The farmers are striving to harvest completely everything grown and to fulfill their obligations. The potato growers in Rameshkovskiy Rayon have undertaken the goal of selling 4,000 tons of tubers over and above the plan. The kolkhozes and sovkhozes in Maksatikhinskiy Rayon, after fulfilling their potato sales plan, have resolved to sell no less than 1,800 additional tons to the state. More than 150,000 tons of tubers have been delivered to the oblast's procurement points. /by D. Prosekov/  
/Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 7 Oct 82 p 1/ 7026

ON IRRIGATED PLANTATIONS--Tashkent, 18 Sep--In Uzbekistan, the problem of supplying the republic's population with locally grown potatoes is being solved. Specialized sovkhozes created for this purpose are now in their second year of operation. Compared to last year's season, they have increased their tuber planting area by 2,700 irrigated hectares. The tubers have already been harvested from a large portion of the plantations. The work is being completed during the best periods on farms in Navoi, Bukhara and Surkhan-Darya Oblasts. These oblasts and also Tashkent,

Kashka-Darya and Dzhizak Oblasts are now selling potatoes to the state over and above their plans. The Fergana farmers are in the lead in terms of potato cropping power -- they have obtained 170 quintals from each hectare. Almost one half of the republic's potato plantings are located in Tashkent Oblast. Here the crop has been harvested from one half of the plantations. The farmers are striving to obtain 155,000 tons of potatoes, or 26,000 tons more than last year. /by A. Uzilevskiy/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 19 Sep 82 p 1/ 7026

LITHUANIAN POTATOES--Lithuanian SSR--Dishes made from potatoes are popular in the Lithuanian SSR. Each year this valuable and nutritional crop is grown on 50,000 hectares throughout the republic. /Text/ /Moscow EKONOMICHESKAYA GAZETA in Russian No 44, Oct 82 p 2/ 7026

SALES PLAN FULFILLED--By 1 September, the agricultural workers in Leningrad Oblast had sold more than 72,000 tons of vegetables and 34,000 tons of potatoes to the state, thus fulfilling ahead-of-schedule their planned tasks for the sale of early products. /by Yu. Kirillov/ /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 7 Sep 82 p 1/ 7026

POTATO HARVEST COMPLETED--Ryazan--The potato harvest has been completed on the second largest potato field in the nonchernozem zone of the oblast. It was carried out by 550 mechanized complexes. Extensive use was made of the container method for transporting the tubers. The farmers of the Sovkhoz imeni 50-Letiya SSSR overfulfilled their plan for selling the "secondary grain" to the state by almost one and a half times. This year potatoes were planted here for the very first time on irrigated tracts. Each hectare furnished approximately 200 quintals of tubers. /Text/ /Moscow GUDOK in Russian 20 Oct 82 p 1/ 7026

POTATO SHIPMENTS--Cheboksary, 1 Nov--To Tashkent, Navoi, Samarkand and Dushanbe -- to these and many other southern cities, the agricultural workers in the Chuvash ASSR have shipped potatoes from their potato plantations. In all, more than 160,000 tons of potatoes, considerably more than the task, were shipped this autumn. /Text/ /Moscow PRAVDA in Russian 2 Nov 82 p 1/ 7026

RYAZAN OBLAST POTATO HARVEST--Ryazan Oblast--Having completed for the most part their grain harvest, the farmers in Ryazan Oblast have launched their mass harvesting of potatoes. This year the plans call for potatoes to be dug up from an area of 95,000 hectares. A good crop is at hand and the farms expect to sell 670,000 tons of tubers to the state and to fully satisfy their own requirements for seed. Approximately 100,000 tons of seed potatoes will be placed in storage in good quality storehouses having active ventilation. This will make it possible to treat a portion of the seed supplies against diseases. "In accordance with the work plan" stated the chief of the oblast's agricultural administration V.R. Zavrazhin, "we plan to complete the potato harvest in just 14 days. This is a realistic period. The harvesting work is being carried out on the farms by 2,330 combines and more than 470 row-stackers, which make it possible to pick up the tubers simultaneously from six rows. In the case of such multiple-unit digging up, it is certainly possible on lighter texture soils for a combine to achieve a productivity of 3 hectares daily and with direct combining -- 2 hectares. And these estimates are justified, even though the oblast's potato growers are confronted by difficulties -- abundant rainfall has packed the soil to an extreme degree, such that it lends itself very poorly to combine harvesting. At a seminar

held for the potato growers on the eve of the mass operations, valuable recommendations were made by the specialists. /by V. Kolobov/ /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 19 Sep 82 p 1/ 7026

HIGH WORK TEMPO--The harvesting of potatoes is being carried out at a high tempo on fields in Moscow Oblast. Today the kolkhozes and sovkhoses in Moscow Oblast carried out a day of shock work associated with the procurement of potatoes and vegetables. The farms in Podol'skiy, Ramenskiy, Naro-Fominskiy and Domodedovski Rayons have set a fine example in carrying out their work in a highly productive manner. /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 19 Sep 82 p 1/ 7026

POTATO HARVEST COMMENCES--Moscow--The mass harvesting of potatoes has commenced in all rayons in Moscow Oblast. The crop has ripened in a fine manner. On farms in Ramenskiy, Kolomenskiy, Pushkinskiy and other rayons it amounts to 200 quintals of tubers per hectare. Patrons have come to the aid of the agricultural workers -- the collectives of industrial enterprises in Moscow and throughout the oblast. By tradition, assistance will also be furnished by students and pupils from technical schools. /Text/ /Moscow TRUD in Russian 3 Sep 82 p 1/ 7026

DIFFICULT GROWING SEASON--Bryansk, 11 Oct--Today the kolkhozes and sovkhoses in Bryansk Oblast completed their potato harvest operations. So as not to leave as much as one tuber out on the fields, replowing of the tracts was carried out in all areas. As a result, more than 20,000 additional tons of potatoes were obtained. This consisted mainly of small tubers which were not picked up by the combines. This season proved to be a difficult one for the oblast's potato growers. A cold spring, June frosts and frequent rainfall caused a considerable amount of damage to the plantings. In saving the crop, the farmers had to apply a maximum amount of effort aimed at reducing losses. At the present time, the oblast's farms are completing their shipments of "secondary grain" to the country's industrial centers. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 12 Oct 82 p 1/ 7026

SLOW PLOWING RATES--During the period from 11 to 18 October, autumn plowing was carried out on 100,200 hectares throughout the republic. Compared to the previous week, the plowing rates for this period had increased by twofold. However, estimates indicate that even with this daily productivity one more month will be required for preparing the soil for the future harvest and this cannot be tolerated. This work is being carried out at a low tempo on farms in Nisporenskiy, Orgeyevskiy, Tarakliyskiy and Faleshtskiy Rayons. Here the daily volume of autumn plowing work has remained at practically the same level as that for the previous week. In Kutuzovskiy, Strashenskiy, Chimishliyskiy and Sholdaneshtskiy Rayons the plowing rates have dropped by 13-60 percent. Special importance is being attached at the present time to the efficient organization of the work of the machine operators and to creating conditions for productive work in two shifts. In order to raise the output per unit and ensure high quality autumn plowing work, disking of the soil for the purpose of working in the crop residues should necessarily be carried out once or twice. Importance is also being attached to ensuring that the workers attached to the Moldsel'khozkhimiya Association apply mineral fertilizers in a timely and high quality manner. The productivity of the plowing units is greatly dependent upon efficient work being performed by the technical servicing teams. Thus every attempt must be made to ensure that the detachments in all areas are staffed with such repair services. /Text/ /Kishinev SOVETSKAYA MOLDAVIYA in Russian 21 Oct 82 p 3/ 7026

GRAIN, PULSE CROPS--According to data of the Kazakh SSR Central Statistical Administration as of 20 September grain and pulse crops had been harvested and mowed on almost 22 million hectares--88 percent of the area--and more than nine-tenths of this quantity has been threshed. The farmers are hurrying to harvest all agricultural crops. On the second half of the planted areas they are harvesting millet, buckwheat and rice. Potatoes have been dug from 56 percent of the planted area and vegetables have been harvested from one-third of the planted area. Soybeans are being threshed. A large yield of these--22 quintals per hectare--is being obtained by Alma-Ata farms. The ears of corn have been harvested from almost 40,000 hectares in the republic. The rates of harvesting sugar beets and sunflower seeds for grain are increasing. [Excerpt] [Moscow KAZAKHSTANSKAYA PRAVDA in Russian 23 Sept 82 p 2] 11772

IRRIGATED CORN FIELDS--Uzbek SSR--All oblasts of the republic have found it possible to allot such areas of irrigated fields and create specialized corn farms even this year. Bukhara Oblast, like Dzhizak, created two of them, and Kashkadarya Oblast, where there are greater possibilities of developing animal husbandry and more feeds are necessary, created seven. There turned out to be a total of 18 such farms. The area planted in corn for grain in the irrigated zone increased by 60,000 hectares during the year. The directors of the new sovkhozes gathered in Tashkent, and they had something to talk about. Specialized corn farms in a cotton growing zone are still something different. How could the yield from the areas planted in corn approach that of the areas planted in cotton? This was the subject of serious discussion. And an answer was found. The yield could be that great if they obtained 100 quintals of corn grain per hectare. And after harvesting the main crop the plowed lands could be used for repeat crops and winter crops, and on the basis of this intensive animal husbandry could be developed on the farms. This led the discussion to something else. The state commission for strain testing of agricultural crops, in experiments in Chinaz, near Tashkent, established that certain corn hybrids produced from 112.4 to 143 quintals of grain per hectare in the irrigated zone of Central Asia. It was decided that the area of all 18 specialized sovkhozes should be planted with seeds of these hybrids. First the new farms were given herbicides, fertilizers and plastic for silage trenches, and they all received Khersonets-200 combines which have just come out. The republic as a whole has already gathered 1.1 million tons of amber grain as compared to 720,000 tons as of this date last year. But there could have been more. Of the 5,600 combines there are still 2,400 that have not yet been put to work, and more than half of them are standing idle in the Namangan and Fergana areas. This year is still remarkable for the farmers of the republic. Large areas have been planted in commercial corn in the irrigated zone. Almost all of the specialized farms have raised yields that significantly surpass the average indicators for 1981. Dzhizak Oblast, for example, intends to increase the production of corn grain to 70,000 tons. The farmers of the republic think that they will succeed in making up for the shortage of spike crop grain from nonirrigated land where the planted area suffered from the heat, as well as the shortage of rice in the Ural regions where the critical shortage of water had an effect on the crops. The course toward the organization of specialized corn sovkhozes which, incidentally, they began to create immediately as potential centers for new animal husbandry complexes, has fully justified itself. The main thing now is to gather everything that has been raised, to process it and to ship it to the procurement points without losses. The corn farms will

have to alter the latest self-propelled combines, taking into account the different working conditions. The Khersonets-200 is a 6-roll combine which is intended for areas with 70 centimeters between the rows. And on the cotton fields there are mainly 90 centimeters between the rows. In order for 1 cultivator to plant corn as well, it was necessary to alter the new self-propelled combines right on the field so that they would cover 4 rows: wide spaces between the rows are optimal here for raising corn as well. Thus it might be worthwhile to produce the Khersonets-200 in a 4-row variant. And another thing: As one follows the machine over the corn fields it sounds like leaves under one's feet in an autumn forest. These are the corn husks. Alas, they do not go into a silage pit, but are thrown out through the cleaner. And, after all, this part of the corn residuals is rich in vitamins. [Excerpts] [Moscow IZVESTIYA in Russian 24 Aug 82 p 1] 11772

SPECIALIZED CORN SOVKHOZES--Uzbek SSR--There are 18 new specialized sovkhozes for producing corn seeds in the Karakalpak ASSR and in all oblasts of Uzbekistan. Of course, concern for the new sovkhozes should not distract the attention of party, soviet and agricultural agencies from increasing the production of corn grain on other farms of the republic. It is known that last year 128 kolkhozes and sovkhozes of Uzbekistan threshed no more than 45 quintals of corn per hectare, and a number of rayons did not even fulfill the plan for its production. The planted area which has been increased by 47,000 hectares and the increased productivity make it quite realistic to respond to the summons that was made at a recent meeting of corn growers: to increase the production of corn grain to 2 million tons this year. An important stage in carrying out this task is planting. Even in the next 2 weeks it will be necessary to complete the planting of the cornfields everywhere and to prepare for the first cultivation between the rows. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 31 Mar 81 p 1] 11772

CORN HARVEST--Uzbek SSR--In Gagarinskiy and Leninyul'skiy Rayons of Surkhandarya Oblast the farmers threshed 90-100 quintals of grain per hectare and completed the harvesting in 6-7 working days. In these rayons as on a number of farms of Kashkadarya, Fergana, Andizhan and Tashkent oblasts, thousands of hectares of irrigated land that were freed after harvesting were prepared for repeated planting of corn in 1 or 2 days. The shoots have already appeared on several fields. In November the machine operators will harvest the second crop and during the winter the land will be occupied by intermediate feed crops. Every hectare here produces more than 15,000 feed units. According to operational data, corn for grain has been harvested from thousands of hectares in the republic as a whole. Almost 600,000 tons of grain have been threshed. Corn growers of Andizhan Oblast gathered 89 quintals per hectare, and Surkhandarya--83 quintals. The majority of farms in Uzbekistan have begun mass harvesting of corn. It is close to completion in Surkhandarya Oblast as a whole. More than half of the crop has been harvested from the fields of Kashkadarya Oblast. The republic as a whole is threshing an average of 76 quintals per hectare. But the daily increase in the harvested areas and the threshed corn is not great enough. More than 2,000 combines have still not been taken out onto the fields. In Fergana Oblast, according to data from 11 August, only 283 of the 528 combines have been used for harvesting, in Namangan Oblast 100 sets of equipment remained idle, and in Syrdarya--more than 200. Although the rates of the harvest are greater than last year by almost 100,000 tons of grain,

additional measures are needed for all-around acceleration of the harvesting of the corn crop, and the 40-degree heat rapidly dries out the stubble. Delay could cause large losses of the silage mass. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 15 Aug 82 p 1/ 11772

COMPETITION FOR CORN--Farmers of Uzbekistan have entered the final stage of the competition for obtaining 2 million tons of corn grain. The planted areas are larger this year and komsomol youth collectives are striving for 80-100-quintal yields, and 18 corn seed sovkhozes have been created. By 5 August the ears had been harvested from 25,470 hectares. The average grain yield exceeds 80 quintals per hectare. It is necessary to do everything possible to harvest it promptly and preserve all the crop, and to fulfill the plan for the sale of grain to the state. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 7 Sept 82 p 1/ 11772

CORN HARVESTING--The cotton fields are awaiting harvesting equipment, but it has been operating for a long time on the corn plantations. The areas planted in this crop have increased considerably. The productivity has also increased. On an average for the republic, each hectare is producing 1.2 quintals of grain more than last year. The farms of Kurgan-Tyubin Oblast are obtaining an especially large yield of corn grain. They are harvesting an average of 89.3 quintals of grain from each hectare. This oblast also has the highest rates of harvesting work. The kolkhozes and sovkhozes of Pyandzhskiy, Vakhshskiy, Kolkhozabadskiy, Shaartuzskiy and Kuybyshevskiy rayons have already completed the harvesting of the ears. The mowing of the corn intended for silage is coming to an end. More than 228,000 tons of green mass have already been placed in the trenches in the oblast as a whole. This is 67 percent of the annual assignment--the highest indicator in the republic. But far from all corn growers can rejoice in their achievements. In Leninskiy Rayon they are harvesting an average of 70.3 quintals of grain, while in the neighboring Ordzhonikidzeabadskiy Rayon they are harvesting 20 quintals less. On the farms of Leninabadskiy Rayon 1 hectare produces an average of 57.5 quintals, and in Kulyabskiy--67.7 quintals of grain. The farms of Gissarskiy and Tursunzadevskiy Rayons are obtaining much less grain than the average for the republic. The rates of the harvesting work are not high either. The farms of Leninabad Oblast have harvested little more than half of the area planted for silage, and even less of the area planted for grain. Harvesting work is being carried out slowly by the machine operators of Ordzhonikidzeabadskiy, Leninskiy and Fayzabadskiy rayons. This is explained by the poor productivity of many combines. Because of the shortage of corn harvesting combines it is necessary to maneuver them skillfully and arrange to transfer them from various farms and rayons to others. As for silage harvesting equipment, here we need good organization of labor and daily supervision and assistance. It is necessary to take all measures to make sure that the corn harvesting is completed before the beginning of the mass harvesting of cotton. [Text] [Dushanbe KOMMUNIST TADZHIKISTANA in Russian 8 Sept 82 p 1/ 11772

CORN GROWERS' GOALS--Frunze--Harvest time has come to the high mountain corn plantations of Kirghizia. The machine operators of the Yassy sovkhoz in Osh Oblast were first to take the equipment onto the fields. They hold the republic record for productivity, having harvested more than 100 quintals of grain per hectare last year, and they have decided to increase their success. Having surmounted the consequences of the drought, the kolkhozes and sovkhozes raised

a good crop. The introduction of industrial technology and highly productive strains helped to increase the yield from the irrigated hectare. Corn growers of the republic have committed themselves to harvesting 10 quintals of grain per hectare more than last year. [Text] [Moscow GUDOK in Russian 19 Sept 82 p 1] 11772

GOLDEN STREAM--The hum of tractors and combines can be heard on the cornfields of Tashauz Oblast. Specialized brigades are harvesting the golden ears. The first thousands of tons of pearly grain have arrived at the warehouses. The areas planted in this valuable forage crop here are the largest in the republic. The grain fields alone cover 13,000 hectares--much more than in any other oblast. The crop is cultivated with a critical shortage of irrigation water. Now all the zones of Turkmenistan are conducting mass harvesting of corn grain, and many farms have already completed it. Corn has been raised on an unprecedentedly large area--about 33,000 hectares. On more than half of this area the industrial method, which eliminates manual labor, was applied. The cornfields were gratifying on many farms of Chardzhou Oblast. [Excerpts] [Ashkhabad TURKMENSKAYA ISKRA in Russian 14 Sept 81 p 1] 11772

HARVEST TIME--It is a busy time on the fields of the republic. The harvesting of grain crops, potatoes and vegetables is in progress. Agricultural workers are striving to gather what has been raised as quickly as possible and even this year to make an appreciable contribution to the implementation of the country's Food Program. The farms of the southern oblasts have begun to harvest rice and corn for grain. In the republic as a whole these crops have been harvested from 11,300 and 13,300 hectares, respectively. The first threshings show that the yield will be greater than planned on the majority of the sovkhozes and kolkhozes. The corn has been harvested for silage on an area of more than 1.75 million hectares. This work is being completed on the farms of Northern Kazakhstan, Karaganda, Pavlodar, Turgay and Tselinograd oblasts. At the same time the harvesting of silage crops is late in Kokchetav, Semipalatinsk, Aktyubinsk and Ural oblasts. [Excerpts] [Moscow KAZAKHSTANSKAYA PRAVDA in Russian 9 Sept 82 p 1] 11772

CSO: 1824/81

## LIVESTOCK FEED PROCUREMENT

### REVIEW OF UZBEK FEED PROBLEMS, PROCUREMENT OBJECTIVES

Tashkent SEL'SKOYE KHOZYAYSTVO UZKEKISTANA in Russian No 10, Oct 82 pp 18-21

Article: "Feed Production--The Basis for the Development of Animal Husbandry"

Text Under the 11th Five-Year Plan the republic will have to increase the rates of development of animal husbandry--branches that play an appreciable role in implementing the food program that has been earmarked. The average annual production of meat in slaughtered weight should be increased to 400,000-410,000 tons, and milk--to 2.5-2.7 million tons. Even this year animal husbandry workers of the republic plan to reach the production goal of 320,000 tons of meat and 950,000 tons of milk.

The main problem and the basis of animal husbandry is feed, which was discussed with an in-depth analysis at the 26th Party Congress. The problem of the feed base occupies a special place in the system of measures planned by the republic party organization for the 11th Five-Year Plan. An increasing number of managers and specialists of the farms are recognizing their responsibility for creating industrial, highly efficient feed production. They are guided by provisions that have been widely confirmed in practice: In animal husbandry 50 percent of the success depends on an adequate supply of feeds, 30 percent of it is determined by the level of breeding work and only 20 percent is related to other technological and technical measures.

It is precisely this approach that is demonstrated by the preliminary results of the work in the first year of the 11th Five-Year Plan. This year 10,000 more hectares than last year were planted in feed crops. The majority of rayons created specialized feed brigades that were supplied with the necessary technical equipment. There was more extensive organization of harvesting the feed crops by the flow line, Ipatovo method, with large harvest and transport detachments. Hence the weighty final result: The productivity of many feed crops increased and it is believed that this year the gross yield of feeds will exceed last year's indicator by 8-12 percent.

Things are proceeding best in places where party, soviet and agricultural agencies, relying on the opinion of specialists, take on-the-spot measures every day for the intensification of feed production and the introduction of the achievement of science and advanced practice. The areas planted in feed crops have been tended well, for example, on the farms of Kalininskiy, Kuvinskiy, Kirovskiy, Buvaydinskiy, Yangiyul'skiy, Shurchinskiy, Gizhduvanskiy and many other rayons of the republic. But examples of the opposite kind are far from

being eliminated. In some places discussions and promises still substitute for true concern about the development of the feed base. Suffice it to say that many rayons have practically not increased the areas planted in feed crops and have not achieved an increase in their productivity. Just as last year, there are cases of planting substandard haylage and silage, and failure to fulfill assignments for the preparation of vitamin meal and forage grain. Hence the independent attitude. Such farms try to make up for a shortage of feeds which concentrates, and from state resources. Underfeeding of livestock leads here to an overexpenditure of feeds per unit of output which exacerbates the feed problem even more.

Reserves for the development of feed production have not been exhausted in the republic as a whole either. The task consists in concentrating on them the attention of everyone who is involved in this problem, to put them to work and to lay a stable basis for the development of the branch during the entire 11th Five-Year Plan.

The guarantee of success lies primarily in the assimilation of cotton and alfalfa crop rotations. This is clearly demonstrated by the experience of Samarkand, Namangan, Tashkent and Syrkhandarya oblasts, where their introduction amounts to 80-93 percent. At the same time this important work is being inadmissibly delayed in the Karakalpak ASSR, and Dzhizak, Kashkadarya and Khorezm oblasts. And we are speaking about measures that are radical for the intensification of animal husbandry. For example, just on the sovkhozes of Syrdarya Oblast, as a result of bringing the structure of the planted areas up to the scientifically substantiated norm, it is possible to increase the amount of irrigated feed land 1.4-1.6-fold, and the procurement of feeds by a minimum of 50 percent.

There are large areas of feed fields in Uzbekistan--more than 700,000 hectares. But one cannot forget about the fact that the center of gravity under this year's conditions is shifting to intensive factors in the development of production. To gather the maximum from the feed hectare--such is the program of action for the 11th Five-Year Plan. A worthy example here is provided by Tashkent, Andizhan and Syrdarya oblasts, many rayons and dozens of leading farms. They obtain an average of 8,000 feed units per hectare while other oblasts and rayons obtain only 4,000-4,500 or half as much as is possible. But even the former indicator can no longer be considered final today. The practice of the leading farms show that there are possibilities of obtaining 15,000-20,000 feed units from each hectare of irrigated lands planted with cotton and alfalfa crop rotations.

The main path is increased productivity. It is necessary to accelerate extensive introduction of intensive strains of feed crops that are responsive to fertilizer and irrigation. Through the effort of selection workers these have been created and have proved themselves well on the fields of the republic. These include the alfalfa strain Tashkentskaya-1 and Tashkentskaya-3192, the silage corn Uzbekskaya-100 and Uzbekskaya zubovidnaya, the feed sugar beets Uzbekskaya polusakharnaya, the locally improved Chilyaki silage sorghum, the grain strain Karlik Uzbekistana and many other strains and crops.

The recommended strains and crops produce a large return with the optimal agricultural background. The practice of the leading farms has proved that by improving agrotechnology the productivity of feed crops can be increased 1.5-2-fold. Therefore one should take fuller advantage of the corresponding recommendations of scientists, cultivate feed crops only with mineral fertilizers, and decisively eliminate cases of allotting the worst land for them. The complex of these measures will actually bring us closer to an important and the most immediate goal--to obtain from each hectare of irrigated land no less than 200 quintals of alfalfa hay, 100 quintals of corn grain, 450-500 quintals of silage mass, and 500-600 quintals of root crops.

The farmers hold immense wealth in their hands--the irrigated hectare. The time has come to take a course toward working year around. Traditional methods of intensification should be combined with increased attention on year-around utilization of irrigated land. To obtain two or three yields of feed crop a year is no longer a rarity, but the law for the leading farms. For example, on the Kolkhoz imeni Zhdanov in Shurchinskiy Rayon as a result of intermediate crops and combined and repeated plantings they annually obtain up to 20,000 feed units per hectare--a 4-5-fold increase over other farms. The same results are being achieved by other farms of Tashkent, Syrdarya, Andizhan, Kashkadarya and Syrkhandarya oblasts. Future intensification should be based on their experience.

This year repeated and combined plantings occupy about 80,000 hectares in the republic and it is intended to plant intermediate crops before next year's harvest on 200,000 hectares. This is more than last year, but considerably less in percentages of the corresponding amount of arable land than has been achieved by the leading farms where they obtain about 20 percent of all the feeds that are produced as a result of these plantings. The reason for this is the problem of year-around utilization of irrigated land is not at the center of the attention of party, soviet and agricultural agencies everywhere. Not all farm managers and specialists have recognized the need for a radical re-evaluation of the possibilities of the feed hectare. Hence there are results which are simply inadmissible in light of modern requirements. Although certain kolkhozes and sovkhoses have a fair amount of feed land, animal husbandry there is not very intensive and not very productive since the workers are disorganized, inert and inefficient with respect to the public property--the land.

As we know, success in this matter is predetermined by a conscientious attitude and the responsibility of the personnel for the part of the work entrusted to them. And everything indicates that the time has come to plan and strictly supervise the introduction of devices of year-around utilization of the land. One should also think about introducing such a generalizing indicator as the yield of feeds per 100 hectares of arable land. This reflects as in a lens the true level of intensification of feed production and crop growing as a whole--not words, but actions and the searching on the part of farm managers and specialists. This indicator should become one of the most important criteria for evaluating their work. Such an approach corresponds fully to the decisions of the July (1978) Plenum of the CPSU Central Committee which pointed out the need for efficient planning of feed production and

material and technical support for the planned assignments. And the development of feed production has been recognized as a matter of statewide significance.

On the other hand it is necessary to eliminate obstacles on the path to intensive utilization of irrigated land. Up to this point the republic does not have a center for coordinating research on this issue. This problem is being dealt with by practically all scientific institutions, at their own discretion, without taking a comprehensive solution into account. Therefore there is no one to generalize and systematize what has been accumulated or recommend what is best taking into account the requirements of specific zones.

Until quite recently the utilization of the powerful reserve of intensification of feed production was impeded by the lack of the necessary strains and feed crops. Those that existed when planted in the autumn or after harvesting did not amass an adequate yield before the planting of cotton and other basic crops. Therefore intermediate crops are now planted mainly on 1-year (corn) fields where combined plantings are also being introduced. Naturally, under these conditions intermediate and after harvest plantings cannot occupy significant areas.

The necessary strains and crops have now been isolated or created at the Uzbek Institute of Animal Husbandry, the Vakhsh experimental station of the Tajik SSR and other research institutions of the country. They ripen rapidly, are highly productive and have good feed qualities. This pertains primarily to the grain crop triticale, Perko (a hybrid of winter rape and Chinese cabbage), Vakhshskaya-116 rye and several others. These crops are being cultivated successfully on several farms of Tashkentskiy, Ordzhonikidzevskiy, Kalininskiy, Karshinskiy and Shurchinskiy rayons. The project is to organize feed growing of promising intermediate and after harvest feed crops. Each kolkhoz and sovkhoz should have its own seed areas for fully satisfying its own needs. It is necessary to have a network of specialized farms for seed growing of feed grasses.

Unfortunately, these problems which have been important for a long time are being resolved slowly. Time and the tasks facing the republic's animal husbandry workers require action. Then, in the opinion of specialists, it will be possible to use promising intermediate crops on 35-40 percent of the arable land in crop rotations and to achieve a stable increase in the production of feeds as a result of year-around utilization of the irrigated hectare.

Soybeans should occupy an important place in the areas planted in feed crops. This crop is really irreplaceable for solving the protein problem. The rates of its introduction still leave something to be desired. Some of the specialists still think that it does not have good prospects in Uzbekistan. Practice shows the opposite. And it is very noteworthy that this erroneous and harmful opinion has been refuted precisely on the leading farms where highly intensive feed production has already been created. Excellent results are being obtained from the cultivation of soybeans on the Ok altin kolkhoz in Tashlakskiy Rayon, the Kuvinskaya and Buvayskaya fattening bases, and many other farms. Here they produce large yields of grain and each kilogram

produces almost as much nutritive value as 4 kilograms of corn. Soy straw is excellent "raw material" for preparing high-protein hay, and in terms of its nutritive properties it is just as good as alfalfa hay.

To accelerate the granting of a "residence permit" for soybeans on the fields of the republic is one of the primary tasks for farm specialists and managers that arise from the decisions of the 26th CPSU Congress and the 20th Congress of the Communist Party of Uzbekistan. The republic's scientists should determine more rapidly all the zones where it can be cultivated effectively, select strains, and develop optimal agrotechnology for specific soil and climate conditions. The growing of seeds of this crop should be organized efficiently, and the farms should be provided with specialized technical equipment for tending the planted areas and harvesting the yield of grain and green mass of soybeans.

Under the 11th Five-Year Plan it will be necessary to increase the gross yield of grain by 30-35 percent. A considerable proportion of this will be used for forage purposes. In order to provide for the planned rates, it is necessary to search out reserves for expanding the areas planted in winter grain crops, to increase the proportion of grain crops on irrigated land, and to figure out the structure of the planted areas in each rayon. Special concern should be shown for corn, which has no competitors. But this crop does not produce large yields of grain everywhere. With the modern level of development of agriculture this is only the result of a negligent attitude toward the land and toward the recommendations of science. Such a phenomenon should not exist in our reality.

There is also another effective way of obtaining grain products from feed lands--repeated and intermediate plantings. The leading farms have been taking this path for a long time and achieving appreciable results. For example, on the Malik sovkhov, the fields which, according to the requirements of the crop rotation, will be planted in corn the next spring, are planted in winter barley in the autumn, and then the basic crop is planted. So they obtain two yields of grain a year. One hectare produces a total of up to 100 quintals of grain products. This farm also uses other methods of increasing the output of forage grain per unit of area, which are related to intensive, year-around utilization of the irrigated hectare. The task consists in disseminating this practice and achieving a steady increase in the production of forage grain on each farm.

When developing the production of forage grain one cannot forget about its efficient utilization. Valuable experience in this work has been accumulated on that same Malik sovkhov. They introduce byproducts of the cotton cleaning industry into the rations of the steers that are being fattened. The period of fattening is also extended, the average daily weight gain reaches 1,200 grams, and expenditures of grain are reduced. For these purposes we should persistently work on introducing the silage and haylage type of fattening and increasing the production of vitamin meal.

In the future byproducts from cotton growing, including cotton stalks, can significantly augment the republic's feed balance. And correct actions can be seen on those farms which are more and more extensively utilizing them, and, with methodological assistance from scientists, has begun to ferment the wastes. It is necessary to study and more extensively disseminate the experience of the large sovkhoses of Andizhan, Samarkand and other oblasts which are creating feed shops for processing cotton growing wastes. One of them is in operation on the Bayat-1 sovkhos in Syrdarya Oblast. During a year they can process up to 4,000 tons of fibers, which replaces 2,000-3,000 tons of coarse feeds for the farm.

In order to develop intensive sheep raising it is important to consistently increase the productivity and the capacities of the pastures. Here the center of attention should be shifted to the construction and reconstruction of a watering network, the expansion of areas on which wild grasses grow, artesian irrigation, and the expansion of areas planted in feed crops for farms that raise karakul sheep in the irrigated zone. It is especially important to accelerate the construction of feed producing sovkhoses and to make sure that they reach their planned capacity so that they can provide for the needs of sheep raising farms and complexes.

To place this reserve in the service of animal husbandry is a task for the immediate future. But the problem is not simple, and it requires the joint efforts of scientists and practical workers. But it does not follow from this that the matter should be put off until later. Even this year it is necessary to show prompt concern for acquiring and installing the corresponding equipment and studying and introducing the technology that was developed by scientists of the Uzbek Institute of Animal Husbandry and other scientific organizations.

It will be necessary to sharply increase the supply of pasture feeds in the immediate future. Here a good deal will depend on the activity of the republic pasture reclamation association which is still not doing enough work in the nonirrigated zone. For efficient utilization of pastures it is necessary to create more rapidly a special service for operating them and to accelerate the organization of interfarm associations for pasture reclamation. One cannot solve the problem of the feed base without rapidly arranging the growing of seeds of wild grasses. The shortage of these seeds essentially slows up the rates of improvement of the pastures. A reliable path to improvement is to create specialized seed growing farms.

There are dozens of industrial complexes in operation in the republic and a large number of them will be constructed under the 11th Five-Year Plan. These farms are assigned land so that they can organized their own feed production. But nobody is especially dealing with problems of efficient utilization of the land that has been assigned or the creation of a highly efficient feed industry on the complexes. And yet this is one of the primary tasks of agricultural science. This problem and also many others can be solved only if the republic creates a unified scientific center--an institute of feeds.

Another most important problem is the quality of feeds. Work has been stepped up in this area recently, but on the whole it is still on a low level. What is the actual nutritive content of a ton of feeds that has been prepared? To what extent and in what ratio can one kind of feed or another provide for scientifically substantiated feeding of livestock? Unfortunately, the majority of the farms, even the leading ones, cannot yet answer these questions. Yet each oblast in the republic has agrochemical laboratories that are called upon to evaluate the quality of feeds quickly and efficiently. The essence of the problem now consists in changing the attitude of farm specialists and managers toward this important problem. It is necessary to increase their responsibility and hold them strictly liable for the inability to carry out their business on a truly scientific basis.

In order to obtain high-quality feed, it is necessary to strictly observe the time periods and technology for harvesting and to provide for correct storage of the feeds. There are truly immense reserves here. Many farms still consider it insignificant when alfalfa remains too long on the root or the mowed mass remains on the field for a long time and becomes almost completely parched. As a result one loses the most important thing for animal husbandry -- feed protein. And delay in harvesting the crops is no insignificant thing, as is thought on certain farms. According to data of scientific institutions, alfalfa mowed in the budding phase, that is, during the optimal period, contains no less than 20 percent protein. But if the harvesting is delayed by even a week, more than 8-10 percent of the protein is irretrievably lost. Therefore one cannot allow the smallest amount of disorganization in this important matter and it is necessary to hold people strictly responsible for efficient organization of the harvesting of feed crops.

It is the task of specialists to eliminate losses of feeds because of violations of the technology for preparing haylage and silage. Animal husbandry workers are still paying dearly for shortcomings in the trenches and for the occupational illiteracy of individual specialists! Last year, for example, during the course of an inspection it was revealed that there were 200,000 tons of substandard haylage, that is, actually unsuitable for feeding. In the final analysis the price of violations in technology is the loss of the crops on tens of thousands of hectares, the failure to obtain animal husbandry products, and unproductive expenditures of labor and money.

In order to prevent such things, it is necessary to accelerate and extensively develop the construction of standard concrete lined trenches for haylage for silage. Expenditures on this are quickly recouped, mainly through additional animal husbandry products. It is also necessary to increase the motivation and responsibility of feed procurement workers for the quality of the feeds, as is already being done on the leading farms. Another guarantee of eliminating losses is the extensive introduction of chemical means of preserving green alfalfa, corn and other grasses with organic acids, which provides for the preservation of the feeds.

The 26th Party Congress again emphasized the need to make feed production a specialized branch. This concept includes many factors. Not the least important of them is the organization and stimulation of labor in feed

production. The facts show that the necessary thought and scientific substantiation are still lacking here. Many new forms of labor organization and specialization are now being applied in feed production in the republic. As a rule, each of them is a step forward. For example, the organization of the specialized division on the Pskent sovkhoz in Tashkent Oblast had a significant influence on the production of feeds. As a result of the organization of feed production teams, the Malik sovkhoz achieved an increase in the productivity of perennial grasses of 21-31 percent. In the creation of a specialized detachment for centralized harvesting of feeds reduced expenditures on harvesting feed crops by 12-51 percent on the farm.

Hence one can clearly see the value of immediate study of existing forms of organization and stimulation of labor in feed production, the generalization of experience that has been accumulated, and its scientifically substantiated dissemination on all farms, taking specific conditions into account.

The goals that are to be reached in the development of animal husbandry by 1985 are very high and responsible. But they are realistic and scientifically substantiated. The program for the intensification of feed production that was earmarked by the 26th Party Congress and concretized taking the conditions of the republic into account is a reliable and compulsory basis for achieving these goals.

A tested way of implementing the most complex program is extensive mass labor competition. It is the duty of party and management agencies to devote more attention to the problem of the feed base and to organize effective socialist competition of animal husbandry and field workers. It is precisely this that will make it possible to put to work those multifaceted reserves which are still not being utilized for the intensification of feed production. The pivotal point of all work here should be to publicize and introduce advanced experience and the latest achievements of science, that is, to achieve the major goal of socialist competition--to repeat the experience of the leading workers.

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## LIVESTOCK

### DISEASE PREVENTION IN ESTONIAN LIVESTOCK DISCUSSED

Tallinn RAHVA HAAL in Estonian 12 Jun 82 p 2

/Article by Juri Kumar and Arvid Kaarma, laboratory chiefs of Estonian Livestock Institute: "Only a Healthy Cow Gives Good Milk"/

/Text/ It has long been known that only a healthy cow is able to produce at maximum level and quality. A sick cow offers no promise for a healthy and strong offspring. The USSR food program states: "Implement a system of veterinary and preventive means that reduce disease and death of livestock and fowl."

What should be done in our republic to avoid cow and calf diseases? Metabolic diseases, liver damage, and diseases of the digestive system are basically due to the nonconformance of feed to the production and physiological condition of the cows, and to low quality feeds. Metabolic diseases represent almost 13 percent of cattle diseases over the last five years. This represents only the diseases with a clinical diagnosis, subclinical forms are not included. These occur much more frequently and can be diagnosed only through laboratory research. For example, the most frequent diagnoses (about 50 percent of those tested) for cows show a decline of blood glucose below normal limits. This can be explained by a rise in milk production, since blood glucose is used directly in the synthesis of lactose. On the other hand, if the blood glucose content falls significantly below the norm and the organism begins to use other metabolites to satisfy energy requirements, blood glucose content can limit milk production. The situation can be ameliorated by feeding that takes into account all the peculiarities of the digestive physiology of cattle; this creates the optimal conditions for formation of compounds necessary for blood glucose synthesis in the rumen.

Quite often the cows suffer from a lack of carotene. This has varied from 21 to 50 percent of those examined, depending on the year. The amount of carotene in the blood serum depends on its presence in the feed. Deficiency in vitamin A causes breeding problems, weak calves are born, suffering often from diarrhea and pneumonia.

Metabolic disturbances involving declines in the calcium content of blood serum below the normal, and rises of inorganic phosphorus above the norm are also frequent. Declines in the calcium content of blood serum are noted when

absorption of the element is hampered by a lack of vitamin D in the feed, and by disturbances in the optimum calcium-phosphorus balance. Increases in inorganic phosphorus have been frequently observed in enterprises where ketosis occurs and concentrated feed dominates.

Often the energy needs of livestock that have calved cannot be met, and fatty deposits are used. Where this process is intensive and continuous, harmful intermediate products of metabolism--ketone bodies--accumulate in the blood.

Milk research has resulted in a diagnosis of ketosis in an average of 7-10 percent of the cattle. Ketosis occurs most often in highly productive cows after calving; depending on its nature this can result in milk production declines of 10-50 percent and even more. The disease can also cause the birth of feeble cows. Our research indicates that over the last years ketosis occurred in 24 percent of highly productive cows. To reduce ketosis the animal's energy requirements must be more fully met, taking into account also the proportion of easily digested carbohydrates (sugars and starch) and protein in the feed ration. Since cattle often lose their appetite after calving the feed ration must be supplemented with edible roots.

Good results have been obtained by supplementing the feed ration with special additives prepared from glycoplastic components; these help to raise blood glyucose levels, accelerate digestive action, and improve the appetite. Unfortunately, such additives are not produced here. Use of feed additives imported from Finland and the GDR in the course of our experiments prevented formation of excessive ketone bodies in the blood, helped preserve normal blood glyucose levels, and prevented declines in production. After two months of additive administration the milk production of the test group was 16 percent higher than in the control group. A feed additive we composed from propyleneglycol, molasses, feed methionine and trace elements did not do worse than the imports. We have been unable to obtain propyleneglycol for a more extensive experimentation with our feed additive.

Liver function disturbances are quite frequent in cows. Some 2,000 cows have been eliminated in the republic every year for liver injuries. More than 17 percent of the 1500 cows we examined showed liver abnormalities. Since meat packing plants reject about the same quantity of liver the problem is serious.

In our opinion one of the major reasons for liver damage besides direct feed poisoning was the excessive use of concentrated feed. It must be said that during the last winter period the livestock metabolism was better than previously. We observed fewer decreases in blood glyucose and fewer instances of ketosis. But there were more instances of calcium deficiency, due to lack of minerals in the basic feeds, absorption disturbances, and insufficient use of mineral feeds. Manganese and also copper among the trace elements were somewhat below normal.

To avoid damage from metabolic disturbances these must be discovered at the right time through laboratory research. Then we could draw a general prognosis and take measures to improve the feed rations and administer additional feeds.

The basis for milk production intensification is a healthy and strong young herd.

The greatest damage to the embryo is done by a one-sided feeding of the cow in the last stages of pregnancy, especially the use of low-quality feed. Here and in other countries with a developed livestock industry it has been recognized that the feed for cows in the last stages of pregnancy should not include wet silage or beer drafts, and that the proportion of concentrated feed should be reduced. When dry silage is fed, then it must be prepared according to all specifications and of high quality compounds. Raw silage, subject to spontaneous combustion, green grains, and frozen roots are especially dangerous to the cows in the last stages of pregnancy.

These requirements of feed hygiene could not be applied in some farms last year. For this reason there were abortions and stillbirths.

The Livestock Institute's and the collectives' experiences and bacteriological research have shown that abortions and stillbirths are primarily due to deficient feeding, indicated also by liver damage observed in the calves. Investigations showed that their mothers also suffered from profound changes in metabolism, often their liver was damaged as well. In the Laatre farm where cows in the last stages of pregnancy are fed high-quality rations, composed basically of high-quality dry silage there are relatively few abortions and stillbirths, and the calves are healthy. The Laatre herd also shows few metabolic disturbances.

Great care must be taken that the health of the calf be preserved, especially in its first weeks. In a large farm the calves are necessarily exposed to various stress factors for which they lack adaptability. At the same time a large animal concentration causes changes in the organism's normal microflora, whose potentially pathogenic microbes produce more virulent strains that are already capable of causing disease. Due to weak immunological reaction and limited adaptation ability young calves are especially sensitive to these factors, often becoming ill and even perishing.

Such a situation dictates that the hygienic demands in a large farm be much more stringent than in small ones. To date All-Union directives have been compiled for birthing stations of milk farms and for calving wards. According to these the calving ward must consist of several separate sections, the cows calve in a separate box where the mother and calf are kept for 24 hours. The calf isolation ward must consist of sections having separate canalization, ventilation, and entries. The animals are placed according to the principle "All in, all out," and every time the rooms are thoroughly cleaned and disinfected.

Healthy calves can be raised in a satisfactory manner even under present conditions. For example, in Laatre farm the calves and cows are kept in one room that has only conditionally been divided into four sections. The cows and heifers are brought to the department two weeks before calving. At one time a quarter of the calving station is filled; the station has previously been cleaned and disinfected. The calving is carried out according to all

the rules of antiseptics. At the time of calving a disinfected metal plate is placed over the manure drain, and the animal's section is covered with clean straw. The newly-born calves are haltered and placed in a separate row, they are partitioned off from each other. The calves are hauled in a bicycle aftercarriage, heat lamps are used to dry and warm them. The first beesting is given two hours after birth, from then immediately after milking, 6 liters a day for 7 days. In their first day the calves are injected with vitamin A or trivitamines, if there is a danger of diarrhea the injections include anti-colic and anti-salmonella serum.

Pregnant cows and heifers are vaccinated against colic and salmonella two months before calving. In the great Laatre farm 1-2 percent of calves born during the year have perished. The key to the success is the fact that veterinary personnel are precisely following thought-out procedures and are also demanding with regard to herd-tenders. The same conclusion is found in the experiences of Karu farm of the Viljandi exhibit sovkhos.

To make milk production more intensive the health of the cows must be improved and the calves must be raised according to requirements. We can do this by improving the quality of feed rations, increasing the proportion of hay, silage, and roots in the feed ration, improving the management of cows that are kept in the barn throughout the year, and caring for the calves in a professional manner.

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## AGRO-ECONOMICS AND ORGANIZATION.

### ROLE OF GOSBANK INSTITUTIONS IN RSFSR FOOD PROGRAM

Moscow DEN'GI I KREDIT in Russian No 10, Oct 82 pp 6-11

[Article by S. Ye. Yegorov, manager of the Russian Republic Gosbank Office:  
"The Food Program and Tasks of Gosbank Institutions in the RSFSR"]

[Text] The May (1982) Plenum of the CPSU Central Committee approved our country's Food Program for the period up to 1990 and measures for its implementation. Its main goal consists in significantly increasing the production of agricultural products in the shortest possible periods of time.

The distinguishing feature of the Food Program consists in that this is the first time further improvement of the well-being of the people and socio-cultural construction in rural areas have been designated on such an immense scale. It is characterized by an all-encompassing comprehensive approach to the development of all branches of the national economy that comprise the agro-industrial complex. This approach is scientifically substantiated. It takes into account the level of development of productive forces that have been achieved, public division of labor, and new problems that have arisen in the interrelations among branches and enterprises of agriculture and industry.

During the course of the past three five-year plans agriculture has developed in keeping with the party agrarian policy, whose basis was developed by the March (1965) Plenum of the CPSU Central Committee. Life has convincingly confirmed the correctness of this policy. This is quite clear from the example of the Russian Federation. During this time agriculture in the RSFSR has considerably strengthened its material and technical base, more than 200 million rubles worth of capital investments have been used for its development, the fixed capital of the kolkhozes and sovkhozes has increased more than 4-fold, and the energy availability for labor has increased 3.6-fold. A large amount of work has been done for land reclamation and chemization of agriculture: The deliveries of mineral fertilizers have increased greatly, the area of reclaimed land has increased significantly, and almost 9 million hectares of irrigated and drained land have been put into operation. A large amount of work has been done to change animal husbandry over to an industrial basis--large complexes have been created for producing milk and meat, and one branch has been created anew: industrial poultry raising which already produces a considerable quantity of eggs and poultry meat.

The strengthening of the material and technical base for agriculture and the self-sacrificing labor of kolkhoz workers and other workers have made it possible to considerably increase the production of grain, meat, milk, eggs and vegetables. The gross output from agriculture increased under the 10th Five-Year Plan by 38 percent as compared to the 8th, labor productivity doubled, and the average per capita production of food products increased as follows: meat and meat products--1.5-fold, eggs--2-fold, milk--21 percent, and vegetables--34 percent.

Profound changes have taken place in the social image of the rural areas and the living conditions for the rural population. Many vitally important problems have been solved--concerning wages, housing construction, pensions, medical service and so forth. During the years of the 10th Five-Year Plan alone, from all sources of financing, the RSFSR has spent more than 12 billion rubles on housing construction, which made it possible to improve the living conditions of about 6 million rural residents. During the period from 1966 through 1980, 86 million square meters of dwelling space were constructed with money from the population and Gosbank credit. It should be emphasized that the republic is working to change the external image of rural areas, to give them a modern appearance, and to construct all kinds of facilities for socio-cultural and municipal-domestic purposes. More than 14 billion rubles' worth of state capital investments and kolkhoz funds were used for these purposes under the 10th Five-Year Plan. Now rural areas have more than 50,000 general educational schools, 42,000 mass libraries, more than 69,000 club institutions and musical and artistic schools, 6,000 hospitals and 7,000 outpatient polyclinics.

The May (1982) Plenum of the CPSU Central Committee earmarked specific goals for the development of RSFSR agriculture. Under the 11th Five-Year Plan the average annual grain production is to be increased to 134-136 million tons, and under the 12th--to 140-142 million tons. As compared to the average annual production under the 10th Five-Year Plan it is necessary by 1990 to increase the production of sugar beets at least 1.3-fold, sunflower seeds--1.5-fold, potatoes--1.2-fold, and fruits and vegetables--1.4-fold. It is intended to raise the level of dairy and meat cattle raising, to increase the milk yield and to achieve a volume of meat production under the 11th Five-Year Plan of 8.4-8.7 million tons, and under the 12th--9.8-10 million tons, milk production--50-52 million tons and 53-54 million tons, respectively, and feed production will increase 1.3-1.4-fold.

A large amount of work to increase the efficiency of agriculture will have to be done in the nonchernozem zone, in the regions of Siberia and the Far East, and in the Central Chernozem region. Special-purpose programs for the development of agriculture have been established for these regions.

All this requires large material expenditures. Therefore it is intended to make large capital investments in the kolkhozes and sovkhozes of the RSFSR. During the forthcoming five-year plans their production capital and energy capacities will increase significantly. The development of a material base for storing and processing agriculture products and delivering them to consumers both in branches of the processing industry and directly on the kolkhozes and sovkhozes constitute a most important task.

Party and soviet agencies of the RSFSR are doing a large amount of organizational work to implement the Food Program in the republic. In all of the oblasts, krais and autonomous republics there have been plenums of party obkoms and sessions of soviets of people's deputies where they have considered measures for implementing the Food Program. The 5th session of the RSFSR supreme soviet of the 10th convocation was held in July of this year, and it considered one of the most important social problems in rural areas--the construction of residential buildings and facilities for socio-cultural and municipal-domestic purposes in rural areas.

The Food Program is directed toward intensification of agricultural production and a significant increase in the productivity of the fields and animal husbandry. It advances principally new methods of planning, financing and administration of the agro-industrial complex. The course toward efficiency brings intensification of farming to the fore. First of all there is the fundamental task of increasing the productivity of the fields. This means that it is necessary to persistently introduce a scientifically substantiated system of farming and new, highly productive strains. The Russian Federation has thousands of kolkhozes and sovkhoses where, because of the utilization of these factors, crops are increasing as is the production of all kinds of agricultural products. Therefore in their measure for implementing the decisions of the aforementioned Plenum of the CPSU Central Committee, party, soviet and agricultural agencies in the republic are primarily taking into account the reserves and possibilities of the kolkhozes and sovkhoses for increasing productivity on the basis of tasks for more efficient utilization of the land, our major natural wealth, maximum preservation of the crop that has been grown, and delivery of it to the consumers.

Gosbank institutions in the Russian Federation have actively entered into the work that is being done by party, soviet and agricultural agencies. At an expanded meeting of the board of the Russian Republic Gosbank Office in July, with the participation of all office managers, the tasks arising from the decisions of the May (1982) Plenum of the CPSU Central Committee were considered in detail.

It was noted in L. I. Brezhnev's report at the Plenum that the Food Program should produce results as early as this year and, consequently, we must take all necessary measures to preserve the products that have been produced and to utilize them efficiently. The attention of Gosbank institutions is being directed toward actively contributing to the solution to this problem since they provide credit for agriculture, the food industry, light industry, trade and transportation. To this end, bank workers have organized an in-depth study of the economics and finances of enterprises that are engaged in the production, procurement, processing and storage of agricultural products. In keeping with the decisions of the May Plenum of the CPSU Central Committee, work has been done to render financial assistance to the kolkhozes and sovkhoses. Budget and credit resources have been provided for all production expenditures. In order to increase control of the ruble, there are more and better inspections of the preservation of grain, vegetables, fruits and other products. To do this we are using data from analytical accounting, laboratory analyses and materials from branch inspections. We have begun to apply measures of credit influence more strictly to enterprises that allow losses of agricultural products.

In the Food Program a large amount of attention is devoted to increasing the production of products on private subsidiary farms of the population and developing cooperation in raising orchards and gardens and also taking maximum advantage of the possibilities of private farms created by enterprises. In the past two years the RSFSR has considerably increased the volume of operations for extending credit to individuals, especially for the creation of garden plots. Thus last year individuals were granted 206 million rubles' worth of credit, and these operations increased this year. Under these conditions bank institutions must not only satisfy orders for credit, but also strictly check on the expediency and effectiveness of the utilization of the loans.

The May Plenum considered in detail problems of improving production relations and administration of enterprises that are included in the agro-industrial complex, taking into account the fact that one cannot achieve a high final economic effect without solving problems of stimulating production activity and correct functioning of the mechanism for the management of the enterprises that are participating in the agro-industrial association.

In order to improve the administration of agriculture and other branches of the agro-industrial complex (APK), the presidium of the Council of Ministers of the RSFSR formed a commission for questions related to the agro-industrial complex, and agro-industrial associations and councils of these associations have been created in the rayons, krays, oblasts and autonomous republics. The central units are the rayon agro-industrial associations which must deal with questions of the utilization of capital investments, material-technical, labor, financial and other resources, improving the economic mechanism, creating stable economic conditions for the autonomously financed activity of the kolkhozes and sovkhozes as well as the necessary reserve funds, and equalizing economic conditions for management. Gosbank institutions must work in close contact with the newly created administrated agencies at the oblast, kray and rayon level. This pertains primarily to plans for extending credits to enterprises of the APK. Gosbank divisions must coordinate them with the rayon agro-industrial associations which have been granted the right to distribute budget allocations as well as to redistribute 10-15 percent of the material and technical resources.

Under these conditions Gosbank offices and divisions must raise the level of competency and provide for more profound development of the issues. The expansion of the rights of local agencies to distribute bank loans should contribute to a situation wherein the agro-industrial associations resolve more effectively problems of concentration of resources on the main areas, and primarily on measures for increasing the fertility of the land, creating a stable feed base for animal husbandry and capacities for initial processing of products, constructing warehouses and storage facilities, reconstructing and expanding animal husbandry facilities, and also developing rural areas socially. In order to increase the responsibility of the farms for efficient utilization of bank loans, it would be useful to restore the previous policy of mandatory shared participation with their own funds in the construction of facilities that have been accepted by the bank for long-term credit.

An important condition for successful implementation of the Food Program is efficient utilization of the production potential that has been created and further implementation of measures for strengthening the material and technical base for agriculture. The implementation of these measures requires a higher level of organization of the work for financing and extending credit for capital investments, and insuring that agricultural agencies and organizations improve consumers' cooperation in the planning of construction and control over the fulfillment of planned assignments. In past years agricultural agencies have allowed late compilation of planning and financial documentation, the establishment of title lists and planning estimates for many projects and they have not done a good job of drawing up the plans for many construction sites. Under these conditions certain Gosbank offices have not displayed the necessary adherence to principles and have accepted plans with a large dispersion of funds. For example, the Krasnoyarsk Gosbank office accepted plans for 1982 which included 1,088 new projects that were in violation of the norms for the duration of construction. This caused a prolongation of the time periods for construction of an average of 3-3.5 years instead of the 6-10 months allowed by the norms. The Russian Gosbank office drew the attention of the Krasnoyarsk Kray office to this shortcoming and instructed it to demand that the agricultural agencies increase the concentration of funds, which was done.

It is now especially important for Gosbank institutions to concentrate attention on solving problems of the most rapid application in agriculture of the principles of the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, No 695, concerning improvement of planning capital investments, the introduction of accounts for commercial construction products and the correctness of extending credit to contracting organizations. It is necessary to coordinate better the work of Gosbank institutions with the Stroybank in the stage of planning construction, with control over the fulfillment of plans, and in the process of keeping accounts, since a considerable proportion of construction by the contract method is financed centrally in state administrations while the construction sites and the contractors are in rural rayons.

Agricultural agencies frequently refer to the importance of solving social problems in order to explain the large dispersion of funds that is most frequently allowed with the internal method of constructing residential buildings. One can hardly accept this explanation. The dispersion of funds does not accelerate construction, and the volumes of residential space that are introduced should be increased not by violating planning discipline but, on the contrary, on the basis of strengthening planning proportions in capital investments.

A new shortcoming in planning has appeared in several oblasts this year: allotting capital investments for startup construction projects in amounts less than the remaining estimated limit. This leads to diverting resources from startup projects to new ones and means putting construction projects into operation before they are completely finished. The Vologda office, for example, accepted for financing startup projects with planned incomplete work in the amount of 2 million rubles, and the Tyumen--in the amount of 2.5 million rubles.

We devote special attention to control over financing construction in the kolkhoz sector. The overall volume of capital investments in kolkhozes in 1982 will amount to 5.5 billion rubles. About 60 percent of these investments are covered by Gosbank credits. The kolkhozes are now constructing large facilities. In this connection it seems expedient to us to apply the same principles in kolkhoz construction as we do in the state sector when forming plans and planning estimates and also when exercising bank control. This will contribute to increasing the effectiveness of capital investments.

In order to accelerate the growth of agricultural production it is of primary importance to put rural construction projects into operation promptly. Therefore workers of Gosbank institutions at all levels must more efficiently figure out and master methods of control over fulfillment of the startup program. We have a certain amount of experience in this work. The Russian republic office has approved the experience of the Saratov Oblast office and in July of this year held a special seminar on this problem. It is necessary to actively introduce the method of the Saratov workers so that all components of control over the fulfillment of the startup program--analysis, inspection of construction sites, preparation of information, suggestions and economic measures of influence--are effective levers of bank influence over the acceleration of construction.\*

The Food Program envisions further increasing the role of land reclamation in creating conditions for a guaranteed yield, especially as vegetables, potatoes, rice and feeds for animal husbandry. In land reclamation construction the primary area for funds is the reconstruction of irrigation and drainage systems and technical crop work.

It should be noted that we do not always manage to overcome the lack of coordination in conducting land reclamation work. In a number of cases dams and ponds are constructed, and then the irrigation networks are constructed several years later. Frequently land is drained and then not cultivated. It is clear to any economist that without irrigation networks dams and ponds do not produce additional products, and uncultivated drained land produces very low yields. As a result of this the recouping of capital investments in land reclamation still lags behind the planned indicators. Taking all this into account, we are taking measures to concentrate the attention of Gosbank institutions to correct solutions to this problem so that they analyze the economics and finances of construction and operation organizations of the Ministry of Water Management, taking into account the final result from the land reclamation work that is done.

Comprehensive development of rural areas along with increased volumes of housing construction requires increasing the rates of construction of facilities for socio-cultural and municipal-domestic purposes. The republic is doing no small amount of work in this area. Important measures have been envisioned for further increasing housing construction and highways, transforming villages into well-arranged rural towns, and developing cooperative

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\*DEN'GI I KREDIT, 1982, No 4, p 11

and individual construction in rural areas. This requires raising the level of control work not only on the part of economists, but also on the part of engineers of the Gosbank. Engineering and economic control should embrace issues of comprehensive planning estimates which, in addition to production facilities, should envision housing construction, the construction of roads and facilities for cultural and living purposes, the observance of conditions for economizing, and the introduction of facilities without incomplete work. This will be objectively promoted by the transfer of contracting organizations to credit and the introduction of accounts for the commercial construction output. In addition to this we are also setting the task of increasing the number of devices for measuring the amount of work that has been done and improving its quality, especially by fighting against artificially increasing the amount of construction work that is reported.

As inspections conducted by bank institutions show, the changeover to accounts for commercial construction output in a number of cases is accompanied by a weakening of control on the part of the clients over the reliability of the volumes and the quality of construction and installation work that is done. Therefore we are increasing the demands made by Gosbank institutions on their clients, especially on the associations' boards of directors for construction.

The Plenum devoted a great deal of attention to improving the economic activity of the kolkhozes and sovkhozes, increasing their independence, and eliminating excessive administration and trivial interference to the detriment of economic methods of management. The Food Program envisions a complex of measures for improving the economic mechanism, strengthening the economies and finances of the kolkhozes and sovkhozes, and creating stable economic conditions which are necessary for true and not perfunctory autonomous financing. In recent years a considerable number of farms in the Russian Federation has not made up for expenditures with incomes, they have been deprived of their circulating capital and all expenditures are made through credit which is not fully repaid. As a result of this there has been a reduction in the role of prices, profit and credits--the most important economic levers for stimulating production.

This makes it incumbent on Gosbank institutions to improve the quality of economic analysis of the management and financial activity of the kolkhozes and sovkhozes and not to limit themselves to a simple comparison of planned and actual indicators. When retraining economists for agriculture it is important for Gosbank institutions to devote special attention to mastering methods of analysis of the actual results of the operation of the farms and learning to reveal the actual causes of poor production efficiency.

In order to determine correctly the conditions for extending credit, it is very important to analyze indicators of production and financial plans. Therefore it would be useful to introduce into practice provisions whereby the manager of the Gosbank institution would give permission for extending credits to kolkhozes and sovkhozes on the basis of the conclusion of the bank economist which is considered with the participation of the farm manager. We are suggesting that the director of the sovkhoz or the manager of the kolkhoz should personally come to the bank to determine credit and bookkeeping relations and discuss the most important issues of economic and financial activity that are related to obtaining and repaying loans. Gosbank

institutions should solve problems of issuing and repaying loans economically intelligently and strictly, and they should check on the economic expediency and the return from the earmarked capital investments. In this connection we should increase the responsibility of the Gosbank management divisions for the organization of credit for agriculture in order to eliminate the practice of automatically granting loans which exists in certain Gosbank institutions.

In order to improve the economic situation in rural areas and to make it healthier, the Plenum approved a number of measures which are an immense economic and political action in terms of their scope and the depth of their influence on the kolkhozes and sovkhozes. Beginning in 1983 procurement prices will be raised and increments to prices will be introduced for products that are produced under the worst conditions and on farms that operate at a loss or are less profitable. The kolkhozes and sovkhozes of the Russian Federation obtain additional income from increasing prices in an amount of approximately 1 billion rubles a year. A new form of financial relations between the kolkhozes and the state is the introduction of budget subsidy granted to kolkhozes that are less profitable or operate at a loss for housing construction, the maintenance of preschool institutions and facilities for cultural and domestic purposes, and also for payments for state insurance. Economically weak kolkhozes will receive approximately 2.3 billion rubles for these purposes.

In order to improve the financial situation of the kolkhozes and sovkhozes, in addition to these measures which are directed toward strengthening the economy and finances of agriculture, it is permitted to write-off a certain amount for kolkhozes and sovkhozes of the RSFSR that are less profitable or operating at a loss and to grant them deferments for considerable sums of loans which they cannot repay.

As Comrade L. I. Brezhnev said in his report at the May Plenum of the CPSU Central Committee, the task now consists in making sure that the large amounts of funds that have been invested will be returned in the near future with an increase in the production of agricultural products. The republic has adopted measures to make sure that writing off indebtedness and granting deferments is not perfunctory, but is accompanied by work for strengthening autonomous financing, increasing profitability and improving finances and the returns on loans. The decisions of the May Plenum created favorable conditions for profitable operation and strengthening of autonomous financing on the kolkhozes and sovkhozes.

Gosbank institutions have actively engaged in work directed toward increasing labor productivity, reducing production costs, increasing profitability and more efficiently utilizing credit. They are making suggestions to local soviet agencies concerning strengthening the economies and finances of the farms and they are organizing better control over the ruble in the process of extending credit and financing and over the fulfillment of the established measures by the kolkhozes, sovkhozes and agricultural agencies. Here attention is focused on the introduction of autonomous financing so that this tested method of administration will become an effective factor in economic conditions and contribute to increasing production efficiency.

One should search for reserves for increasing profitability in agriculture first of all within the kolkhozes and sovkhozes themselves. The intended increase in prices for agricultural products will make it possible, through the incomes of the kolkhozes and sovkhozes, to fully compensate for production outlays, to operate without losses and to form resources for expanding reproduction. Of course, in order for this to become a reality, the farms and agricultural agencies and also the Gosbank institutions must work hard to introduce the principles of autonomous financing in all intrafarm subdivisions of the kolkhozes and sovkhozes. These economic principles should also be the main criterion for determining the conditions for granting credit to agricultural enterprises.

One can cite quite a few cases where well operating farms are highly profitable precisely because they introduced autonomous financing at all levels while frequently neighboring farms operate at a loss because of the fact that their autonomous financing is poor. The work of the Nazarovskiy sovkhoz in Krasnoyarsk Kray for planned introduction of progressive methods of management is instructive in this respect. The value of this experience consists in that, in terms of natural and climatic conditions, the availability of technical equipment, capital-output ratio, and the provision of mineral fertilizers, the Nazarovskiy sovkhoz is no different from the other farms, and in terms of certain indicators it is even worse than other kolkhozes and sovkhozes. But as a result of the steady application of the principles of autonomous financing, the sovkhoz has raised the level of production, regularly reduced production costs, and all branches are profitable and produce a large profit. One of the key factors in the intrasovkhoz autonomous financing is the check form of account among brigades, farms and other subdivisions, which makes it possible to have operational information about the expenditure of funds.

Of course it is not a simple matter to introduce the principles of autonomous financing everywhere. But we understand that the economies of the kolkhozes and sovkhozes cannot be strengthened just by stepping up the fight against mismanagement and extensively making wages dependent on the products that are produced. The improvement of the forms and methods of control over the economic and financial activity of the kolkhozes and sovkhozes and the evaluation of the results of credit and economic relations with the farms should also be directed toward this.

In this connection it would be expedient to consider the question of the policy of granting credit to the kolkhozes taking into account the circulation of their funds. The conditions for extending credit through a special loan account, in our opinion, do not fully correspond to increasing control over the protection and correct utilization of the circulating capital of the kolkhozes. In this regard we should like to emphasize especially the importance of restoring the role of indivisible funds of the kolkhozes as an economic basis for the public economy of the kolkhozes.

In the system of measures for increasing the efficiency of agriculture an important role is assigned to increasing the material motivation of the workers of the kolkhozes and sovkhozes and improving wages. The collective contract is to be introduced everywhere in order to achieve higher indicators

for labor and economizing on resources, expansion of payment in physical products and encouragement of the workers to increase the profitability of production. Inspections conducted by the bank show that many kolkhozes and sovkhozes of the RSFSR still use wage and bonus funds inefficiently, are slow in introducing forms of payment for the final results of labor, and allow write offs and the maintenance of supernumerary personnel.

The level of overexpenditures of wage funds in agriculture in the RSFSR rose during the past five-year plan. Many interkolkhoz construction organizations whose overexpenditure of funds is increasing are expending wage funds uneconomically. A large part of the overexpenditures are not reimbursed and are written off when the period of limitation expires. The weakness of bank control undoubtedly has an effect on this. At the same time bank institutions have the necessary levers of influence for promptly preventing uneconomical expenditure of funds on wages. It is only necessary to display more adherence to principles and initiative. During the past several years Gosbank offices in a number of oblasts of the RSFSR, in conjunction with the oblast agricultural administrations, have been conducting an experiment on issuing to the sovkhozes money for wages as the production plan is fulfilled. The experiment is producing promising results. Many farms are introducing a progressive form of labor organization--mechanized teams, detachments, brigades and farms that are working under a single order with piece-rate-plus-bonus payment for their labor. Thus the collective contract contributes to increasing labor productivity and economizing on resources. It would be expedient to take these new phenomena into account in bank control over the utilization of wage funds as well.

The implementation of the Food Program and increased material incentives for agricultural workers raise new tasks for monetary circulation. The higher level of well-being of rural residents should be directly reflected in the balance of monetary incomes and expenditures and the search for additional cash resources in the oblasts, krays and autonomous republics as well as in the development of noncash accounts with the rural population.

Gosbank institutions are doing a good deal to improve monetary circulation in rural areas, analyzing existing proportions between monetary incomes and outlays, and giving suggestions to local party and soviet agencies regarding the improvement of trade and consumer and other services in rural rayons. The growth of incomes requires that trade be developed at more rapid rates under the current five-year plan than previously. We are taking these peculiarities into account in our work. Gosbank institutions are contributing to the creation of a material and technical base for trade, taking measures for improvement of control over the fulfillment of plans for the reconstruction of trade enterprises and the introduction of progressive forms of commodity sales, and are working on finding additional food resources. A considerable quantity of products are lost in trade and processing enterprises and therefore we are setting the task of stepping up control over preservation of the agricultural products for which credit has been extended, promptly revealing cases of mismanagement and applying credit and economic sanctions.

Increasing the effectiveness of the bank's work with enterprises of the agro-industrial complex depends directly on correct organization of credit and accounting relations with them. There is no doubt that Gosbank institutions have for a long time been regularly organizing well the work for extending credit to agriculture and enterprises that process agricultural raw material. As an example one can give the Leningrad, Krasnodar, Kaluga, Kuybyshev, Omsk and Kurgan oblast Gosbank offices. For active contribution through credit to the development of agricultural production, government awards were given to the managers of the Krasnodar office--V. A. Lapaksin and the Ivanovo--N. P. Likhachev, the deputy managers of the Leningrad office--T. D. Nikitina and the Kemerovo--A. M. Vinokurov, and the chief of the technical division of the Leningrad Oblast office, G. A. Nemiro-Karachevskaya.

Unfortunately, many Gosbank institutions in Altay and Krasnoyarsk Krays and in Ryazan, Vladimir, Belgorod and a number of other oblasts have still not made the necessary change in the direction of increasing the efficiency of the utilization of credit in order to strengthen the economies of the kolkhozes and sovkhozes.

The fulfillment of the tasks that arise for the bank from the decrees of the May (1982) Plenum of the CPSU Central Committee will depend completely on our personnel. Thus bank institutions which provide credit and financing for enterprises that are part of the agro-industrial complex are staffed mainly with specialists. But many problems need to be solved--filling vacancies, training young workers and so forth. Taking the new requirements into account, it is necessary to retrain not only young specialists, but also workers with a considerable length of service. Therefore we are taking measures to improve the system of retraining personnel so that in a short period of time workers involved in implementing the Food Program will have taken the appropriate courses.

The Russian Republic Gosbank office has developed similar measures for implementing the decisions of the May Plenum of the CPSU Central Committee and has held a conference with office managers regarding this. Similar work has been done in the ASSR's, krays, oblasts and rayons. Agricultural workers, and workers of Gosbank institutions too, are striving to make sure that this year, the year of the glorious 60th anniversary of the founding of the USSR, the soviet people will experience the results of the implementation of the country's Food Program.

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## AGRO-ECONOMICS AND ORGANIZATION

### SUBSIDIARY ENTERPRISE DEVELOPMENT IN RIVER FLEET MINISTRY

Moscow RECHNOY TRANSPORT in Russian No 9, Sep 82 pp 23-28

/Article by V. Dzhurko: "Central Problem of the Five-Year Plan"

/Excerpts/ Setting forth a broad and multifaceted program for social development and improved well-being of the people, the 26th Party Congress attached primary importance to the task of improving the supply of the country's population with food products. On the initiative of General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev, in order to carry out this task, the Food Program of the USSR for the period up to 1990 was developed. This is a most important constituent part of the party's economic strategy for the current decade. This program was approved at the May Plenum of the CPSU Central Committee.

Our special correspondent V. Dzhurko asked workers of the GlavURS MRF /main workers' supply administration of the Ministry of the River Fleet/ and managers of subsidiary farms of the Northern River Shipping Line to discuss how the central problem of the five-year plan is being resolved on subsidiary farms of the Ministry of the River Fleet in order to improve the supply of animal husbandry and field products for the workers of the blue highways. Here is what they said.

N. I. Artem'yev, chief of the GlavURS MRF

Guided by the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Subsidiary Agricultural Enterprises, Organizations and Institutions," the Ministry of the River Fleet has done a certain amount of work for further strengthening of the material and technical base for sovkhozes and subsidiary farms under its jurisdiction and increasing the yield of animal husbandry and crop growing products for supplying river workers and their families.

During the years of the 10th Five-Year Plan capital investments in the development and strengthening of the material base for agriculture in the branch amounted to 9.54 million rubles. During this period we put into operation 7 cow barns to accommodate 1,300 head, 11 hog stys for 3,150 head, 4 calf pens for 960 head, an area for fattening large horned cattle that will accommodate 1,250 head, 2 machine shops, 3 children's preschool institutions and 1 regular school, and 10,300 square meters of dwelling space.

The machine availability for the sovkhozes and subsidiary farms increased significantly. During the five years they received 118 trucks, 175 tractors, 24 combines, 8 buses, 5 automotive cranes, 10 bulldozers, 21 excavators and also a considerable quantity of trailer and mounted equipment. This made it possible in 1980 to sell a total of 10.4 million rubles' worth of agricultural products for the river workers, which was 4.9 million rubles more than in 1975. In 1975, in addition to the 9 sovkhozes, the branch had more than 30 subsidiary farms and hog fattening points, and by 1981 this number had increased to 51. Last year the sovkhozes and subsidiary farms supplied the river workers with 2,500 tons of meat, 12,500 tons of milk, 11,000 tons of potatoes, vegetables and melon crops, and 8.5 million eggs.

At the present time the workers' supply system of the Ministry of the River Fleet has the Rodina and Severodvinets sovkhozes (Northern Shipping Line), the Zarech'ye (Sukhona), Imeni Galaktionov (Kama), Volgar' (Volgotanker), the Rechnik and Ozerskiy (Western Siberian), the Osetrovskiy and Kirenskiy (Lena), and also subsidiary farms in the Volga association, and also in the Bel'skoye, Volgo-Don and Vyatka shipping lines. In order to implement the decisions of the May Plenum of the CPSU Central Committee, the Ministry of the River Fleet has set increased assignments for the subsidiary farms of the shipping lines for 1982-1985 for producing and supplying workers with agricultural products. Another 6 subsidiary farms will be organized under the 11th Five-Year Plan, including in the Western Siberian and Irtysh shipping line with land areas of 13,000 and 4,600 hectares, respectively. The increase in the production of products as compared to the 1980 level will be: meat--47 percent, milk--13 percent, potatoes--52 percent, vegetables and melon crops--41 percent.

A central commission has been created in the Ministry of the River Fleet for carrying out assignments to fulfill the Food Program and render practical assistance to shipping lines in the development of subsidiary farms. The board of the Ministry of the River Fleet and the Presidium of the Trade Union Central Committee have made it incumbent on managers of shipping lines in conjunction with basin committees of trade unions to develop additional measures for implementing the Food Program.

Managers of enterprises and organizations of the Ministry of the River Fleet will have to do a large amount of organizational work. It is necessary to improve the material and technical base of the existing sovkhozes and subsidiary farms, where there is a real possibility of increasing the productivity of agricultural crops as well as of cattle and poultry. It will be necessary to create new subsidiary farms, which will require the creation of an internal feed base, the construction of animal husbandry facilities and the acquisition

of the necessary agricultural equipment. In order to attract agricultural specialists and labor force it will be necessary to solve a number of problems relating to the creation of social and domestic conditions. All this will require significant capital investment and material and technical resources.

But the implementation of the aforementioned measures is complicated to a considerable degree by the fact that capital investments are not allotted to the Ministry of the River Fleet for the development of agriculture. Because of the shortage of mixed feeds, automotive transportation and tractors, the material and technical base for subsidiary farms under its jurisdiction is developing slowly, and agricultural facilities are constructed mainly with Gosbank credit. These facilities are not always provided with construction material and technological equipment, which frequently delays their startup. In a number of cases the managers of shipping lines still do not render effective assistance to sovkhoses under their jurisdiction for the development and strengthening of the material base and the construction and repair of agricultural facilities.

In places where the managers of enterprises display constant concern for the development of these farms, the volume of agricultural products for the river workers is increasing. A positive example of this attitude is provided by the collective of the Northern Shipping Line, where the sale of products from farms under its jurisdiction in percentages of the allotted state supplies are as follows: meat--5.2 percent, eggs--3 percent, milk--45.2 percent, vegetables--11 percent and potatoes--82 percent.

N. P. Yefremov, Chief of the Workers' Supply Administration of the Northern Shipping Line

The workers' supply system of the shipping line has the Rodina and Severodvinets sovkhoses and hog fattening farms under the Kotlas, Veliko-Ustyug and Vychedog workers' supply offices and the combined public catering enterprise in Arkhangel'sk. The sovkhoses and subsidiary farms specialize mainly in the production of milk, meat, potatoes and vegetables.

At the present time the farms are supplied with modern technical equipment: there are 90 tractors of various makes, 15 combines, 41 trucks and 140 various agricultural machines. The work for cultivating grain and silage crops and preparing hay is fully mechanized. All production sections of the sovkhoses and subsidiary farms have electricity. The sovkhoses and subsidiary farms of the shipping line have 3,430 head of large horned cattle, 1,600 hogs, and 5,200 laying hens. The areas of land have increased to 8,293 hectares (3,226 hectares of plowed land, 2,649 hectares of hayfields and 2,418 hectares of pastures). On the whole the fixed capital amounts to 6.5 million rubles. Each worker in the shipping line has an annual average of: 19 kilograms of meat, 268 kilograms of milk, 38 kilograms of potatoes, 17 kilograms of vegetables, and 59 eggs. The average productivity of the cows in 1981 was 3,188 kilograms per 1 forage cow, the egg productivity--180 eggs per 1 laying hen, the daily weight gain of large horned cattle--397 grams, and the weight gain of hogs--370 grams.

The fulfillment of the production plan and increased productivity of the livestock depend directly on the development of the feed base for the sovkhozes and hog fattening points. Now the provision of feeds for internal production on the sovkhozes amounts to 70-75 percent, and on hog farms--65 percent.

The overall annual requirement of all the farms for feeds is 8,400 tons of feed units. With fulfillment of the plans for procuring feeds and gathering food scraps our farms previously produced 4,970 tons of their own feed. Additionally, they annually received 1,800 tons of feed units from state resources. Consequently, we must annually prepare an additional 5,333 tons of hay or 8,880 tons of silage or 1,600 tons of forage grain or 5,000 tons of juicy feeds. In order to make up for the missing quantity of feeds, it is necessary to conduct a complex of measures for increasing the fertility of existing land on the farm and assimilating new areas of land.

The sovkhozes annually lime the land on an area of up to 200 hectares, carry out technical crop work on an area of up to 1,000 hectares and apply up to 2,000 tons of mineral fertilizers, or 0.6 tons per hectare of plowed land, and up to 20,000 tons of organic fertilizers or 6 tons per hectare of plowed land. According to the farms' data, the dose of mineral fertilizers that is being applied is sufficient for our land, but the proportion of organic fertilizers is still extremely small.

The shipping line, the workers' supply administration and the managers of sovkhozes, enterprises and workers' supply departments, in conjunction with party and trade union organizations, have drawn up and are implementing measures for further developing the material and technical base of the farms and increasing the production of animal husbandry and other agricultural products in 1981-1985.

During the last two years of the 10th Five-Year Plan we constructed and put into operation a cattle yard and a calf pen, a hog sty, two more cattle yards, two silage trenches that hold 1,000 tons, and a hothouse with a size of 2,000 square meters. Land reclamation was done on an area of 61 hectares. Three hog stys were constructed for the workers' supply departments. In 1981 we constructed and put into operation two hog stys for the workers' supply department of the Vychegod shipyard and one in Arkhangel'sk, a silage trench holding 500 tons and a shed for storing 200 tons of hay for the Severodvinets sovkhoz. We are now constructing a cow barn (one is being re-equipped), a hothouse with 1,000 square meters and machine shops for 30 conventional repairs a year as well as a building with 12 apartments. In recent years 1,414 square meters of dwelling space and two kindergartens to accommodate 100 have been constructed and put into operation for the workers. Construction projects are carried out with capital investments and long-term Gosbank credit. With a plan for 1,123,000 rubles, we assimilated 1,968,000. Capital construction is carried out mainly by the method using internal funds and by the plants' construction sections under direct agreements. Unfortunately, the funds allotted to us for materials are extremely inadequate. The supply of reinforced concrete items, bricks, lumber, cable products, reinforced steel and paint and varnish material is especially unsatisfactory. The delivery times are not always coordinated with the times for the startup of the facilities.

Each year the fleet of many machines is augmented with new equipment. But it should be noted that the orders from the farms are far from being completely fulfilled. The hog raising farms are inadequately supplied with the necessary equipment for gathering food scraps and removing manure. The farms' orders for the necessary machines and tractors are not filled.

The farms' existing material base for maintaining and repairing agricultural equipment, tractors and machines still does not meet modern requirements, and this increases the time period for repair and reduces its quality. Therefore it's extremely necessary to construct machine shops on the Severodvinets sovkhoz and in the central division of the Rodina sovkhoz. We need help with these problems from higher organizations.

The sovkhozes and subsidiary farms have good personnel with the appropriate training and work experience in agriculture. There are 682 people employed in agricultural production and 75 of them are specialists with higher and secondary education. All the labor collectives have entered actively into socialist competition. The workers' supply administration and the basin fleet committee have developed and approved conditions for the basin competition among collectives of sovkhozes and subsidiary farms. The winners of the competition are awarded Challenge Red Banners and monetary bonuses.

Because of the results of the all-union socialist competition among animal husbandry workers of brigades of sovkhozes in the branch, for the past five years first place, with a certificate of honor and a monetary bonus, has been awarded to the brigade of the Severodvinets sovkhoz (Central farm--Kalashovo) headed by V. I. Lukina, which achieved an average annual milk yield per forage cow of 3,588 kilograms. By a joint decree of the workers' supply administration and the basin fleet committee, bonuses were awarded for achieving high indicators in raising potatoes to the team of the Rodina sovkhoz which consists of 16 people (team leader--V. A. Chukharev) which obtained a yield of 170 quintals per hectare from an area of 47 hectares, and also the team of the Severodvinets sovkhoz which consists of 14 people (team leader S. N. Men'shikov) which obtained a yield of 168 quintals per hectare from an area of 30 hectares. In 1981 35 workers were awarded the title of best in the profession.

Enterprises that handle the main shipping activity make a large contribution to carrying out the tasks set for the collectives of subsidiary farms. Workers of industrial enterprises participate in spring field work, procurement of feeds and harvesting. Assistance is rendered in the construction of facilities and the allotment of transportation and technical equipment. In 1981 patronage river workers worked 2,399 man-days. They were mainly workers of the Limend and Veliko-Ustyug plants, the Kotlas port and the technical section. During the past three years the Limend plant and the Kotlas port constructed a calf pen to accommodate 200 head on the Rodina sovkhoz and rendered significant assistance to the Kotlas workers' supply department in constructing and assembling a hog complex to accommodate 1,000 head. The Limend plant is presently constructing a cow barn for 200 head. The Veliko-Ustyug plant constructed for the Severodvinets sovkhoz a calf pen 2,000 square meters in size, a silage trench for 500 tons, and a shed to store 200 tons of hay. The Arkhangel'sk river port constructed two hog stys for 330 head with a feed kitchen.

The joint efforts of the workers of the sovkhoses and subsidiary farms and the river workers are directed toward increasing the volume of production of agricultural products.

T. A. Akinfiyeva, Chief of the Kotlas Workers' Supply Department

The workers' supply department has its own hog raising subsidiary farm in order to improve the supply of meat products for the river workers. With the startup of a new hog fattening facility for 1,000 head, from June 1981 until the end of the year the number of head of hogs on the subsidiary farm doubled. While in past years the average did not exceed 400 head, as of 1 January 1982 there were 800 hogs on the farm, which made it possible to successfully fulfill the plan of the first quarter of this year for the production of pork by 107 percent and for the sale of piglets to the population--by 170 percent. All of this year's indicators (the number of head of animals, the delivery of young hogs for fattening, the removal from fattening, the production of pork, reproduction and sale of young pigs to the population) more than doubled as compared to 1981.

Just during the past three months of this year the workers' supply department from the subsidiary farm produced 160 quintals of meat in live weight, or 10 percent of the meat from state supplies.

The collective of the workers' supply department attaches a great deal of significance to the development of the feed base. In 1981 food scraps comprised 82 percent of the ration for feeding hogs. Through the efforts of the workers' supply department, on neglected land of the Rodina sovkhos they procured 17 tons of hay, 10 tons of vitamin grass meal and 74 tons of potatoes. With twice as many hogs, the need for feed also increased. Therefore the collectives of the workers' supply department and the enterprises served by the workers' supply department will have to improve the gathering of food scraps from children's and medical institutions, residential buildings, enterprises and bases of the workers' supply department. It is also planned to procure no less than 150 tons of potatoes, 30 tons of hay and 20 tons of vitamin grass meal.

The subsidiary farm of the workers' supply department operates with a closed cycle, that is, they produce the young pigs that are delivered for fattening themselves. In 1982, in order to provide for normal functioning of this cycle, it is intended to conduct capital repair and reconstruction of the existing hog sty for keeping 52 sows and raising piglets. Moreover, it will be necessary to construct a warehouse for storing feeds, living facilities, a garage for motor vehicles and shops, and to build up the territory and the approach roads.

The patronage collective of the Limend shipyard renders a great deal of practical assistance to the workers' supply department in maintaining such a large mechanized farm.

P. V. Smelov, Director of the Limend Shipyard

Understanding the importance of implementing the Food Program for more fully satisfying the needs of the plant workers for agricultural products, our collective is rendering the necessary practical assistance to the Rodina sovkhos and the Kotlas workers' supply division of the Northern Shipping Line. During the period when navigation is impossible workers of the ships in conjunction with workers of the Kotlas port helped the Rodina sovkhos to complete the construction of a calf pen for 200 head at the central farmstead. Each year during the winter months a brigade of 15 plant workers prepares 20-25 tons of conifer meal.

In keeping with their commitments, the collective of the Limend shipyard annually assign two machine operators and technical equipment for harvesting the hay. In 1981 2,031 man-days were worked during the harvesting.

The plant renders assistance to the sovkhos in manufacturing replacement and spare parts for agricultural machines. During the 1981/82 winter period the GT-237 steam engine of the sovkhos was repaired with work valued at 3,400 rubles.

The workers of the repair and construction section of the plant annually provide current repair for 3 animal husbandry farms of the Votlzhemskoye division of the sovkhos.

The plant assigns motor vehicles to the Kotlas workers' supply department for the period of mass procurement of vegetables. During the time of construction of a hog sty for 1,000 head the plant's deputy director for capital construction, N. I. Zaborskiy, supervised the construction, and the collective of the power machine division did startup and adjustment work on the equipment for the hog sty and the feed preparation shop. The plant has already filled a number of orders for the manufacture of nonstandard equipment.

In 1982 the collectives of the workers' supply department, the Rodina sovkhos and the plant are carrying out mutual commitments, according to which the plant renders assistance to the subsidiary farm, and the workers' supply department and the sovkhos send their products for the workers and employees of the plant.

Strictly following the course earmarked by the May Plenum of the CPSU Central Committee agricultural workers of the branch are filled with resolve to proceed further on the path to increasing the production of grain and animal husbandry products, increasing the efficiency of production and raising the cultural level of rural workers.

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EVALUATING YIELD ON CAPITAL IN UZBEK COTTON INDUSTRY

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[Article by M. Imamutdinov, chief of the division for organization and methodology of bookkeeping work of the Uzbek SSR Ministry of the Cotton Cleaning Industry, candidate of economic sciences, and K. Avezov, head engineer of the Khorezmzagotkhloprom Association: "Output-Capital Ratio in Cotton Cleaning Industry"]

[Text] Large amounts of money have been invested in the cotton cleaning industry of Uzbekistan in recent years, and on the basis of this the branch's fixed capital had increased more than 2.7-fold in 1981 as compared to 1965. And the growth of fixed capital at cotton cleaning plants somewhat outstripped the rates of this process in the procurement network.

At the 3d Plenum of the Central Committee of the Communist Party of Uzbekistan which was devoted to further intensification of cotton growing and improving the quality of cotton in light of the decisions of the 26th CPSU Congress, Comrade Sh. R. Rashidov, a candidate member of the Politburo of the CPSU Central Committee and first secretary of the Central Committee of the Communist Party of Uzbekistan noted that, "As a result of the great successes in recent years we have managed to strengthen the material and technical base of the cotton cleaning industry. During the five-year period we have constructed 15 new plants, 50 procurement points, drying and cleaning shops, and warehouses for storing raw and prepared cotton."

Additionally, a considerable quantity of new technological equipment, drying equipment and means of mechanization have been replaced or introduced into operation. All this had led to a situation where considerable structural changes have taken place in the fixed capital of the republic's cotton cleaning industry. Thus while in 1965 the proportion of buildings and structures amounted to 24.5 percent, by 1981 it was almost 29.5 percent. During this same period the active part of the production capital decreased from 75.5 percent to 71.5 percent.

The increase in the passive part of the fixed capital is taking place as a result of the construction of new basic and auxiliary facilities of the plants, the main buildings for the drying-cleaning and cleaning shops, industries for processing wastes, covered warehouses, a heating system for the production premises, the building up of the territories and so forth.

The technological process for initial processing of cotton is constantly improving.

As a result of reconstruction and new construction the level of technical supply for cotton cleaning plants rose considerably and the branch's production and technical base became stronger.

The growth of fixed production capital and its technical improvement were largely determined by the prompt receipt and high-quality storage and processing of machine harvested raw cotton. With the mass introduction of mechanized harvesting of raw cotton the plants took on a considerable proportion of the functions of the kolkhozes and sovkhoses for organizing slow-line transportation and receipt of the raw material directly from the fields according to the system: bunker--cart--procurement point. They also organized centralized drying and cleaning.

All this led to a considerable increase in capital and energy availability as well as labor productivity at the cotton cleaning plants, which can be seen from the table below.

Table 1. In percent of 1965

| Indicators           | 1965 | 1970  | 1975  | 1980  |
|----------------------|------|-------|-------|-------|
| Energy availability  | 100  | 120.4 | 142.2 | 160   |
| Capital availability | 100  | 125.5 | 167   | 220   |
| Labor productivity   | 100  | 103.4 | 155.1 | 162.8 |

Technical progress gives rise to an objective need not only for quantitative growth of the active part of fixed production capital, but also qualitative improvement as a result of the introduction of new, more productive and efficient technical equipment and effective capital availability for labor, that is, expanded reproduction whereby one achieves high labor productivity and a high level of output-capital ratio.

Under the conditions of intensification one of the most important indicators is labor productivity. It is directly related to the degree of utilization of fixed capital through the output-capital ratio and the capital availability for labor. With a progressive structure of fixed production capital and its complete utilization, increased capital availability should be reflected in increased labor productivity. But in the cotton cleaning industry the growth of labor productivity lags behind the growth of capital availability for labor. This takes place mainly because of the lack of correspondence between the rates of growth of fixed production capital and the rates of growth of the gross outputs and the number of industrial production personnel. In particular, it is known that an increased volume of fixed capital in the procurement network of the cotton cleaning branch is not producing any increase in output.

As an analysis shows, the level of utilization of fixed production capital in the cotton cleaning industry of Uzbekistan has a tendency toward dropping, which is shown by the data in the table below.

Table 2. Dynamics of Fixed Production Capital, Gross Output and Output-Capital Ratio in UzSSR Cotton Cleaning Industry, in percent of 1965

| Indicators                                                               | 1965 | 1970  | 1975  | 1980  |
|--------------------------------------------------------------------------|------|-------|-------|-------|
| Industrial production capital                                            | 100  | 135.9 | 197.1 | 265.3 |
| Gross output                                                             | 100  | 106.1 | 181.1 | 191.8 |
| Output-capital ratio per 1,000 rubles of fixed capital in monetary terms | 100  | 79.4  | 96.4  | 75.8  |

Hence follows the conclusion that the fixed capital of the republic's cotton cleaning branch has not increased effectively enough during the past period.

At the 3d Plenum of the Central Committee of the Communist Party of Uzbekistan it was noted in this regard that, "one of the main reasons for the poorer quality of cotton and the low yields of fiber is the critical shortage of capacities in the cotton cleaning industry . . . ."

The deterioration of the quality of the products that are produced is reflected in the output-capital ratio. It's level is significantly affected by the productivity and cost of new equipment. Technical progress predetermines the creation of machines that are more productive than the ones presently in operation. But in practice the cost of new equipment does not always correspond to the advantages in productivity. Thus, for example, the productivity of the PMP-160 linter is 60 percent greater than the KhLF, but the price is five times as great; the productivity of the ZKhDD gin is 33 percent greater than the KhLL-2M, but the price is more than three times as high!

As a result, the estimated cost of construction of one new cotton plant has more than doubled in recent years. Hence the reduction in the output-capital ratio.

It should also be noted that the reduction of the output-capital ratio in the cotton cleaning industry depends to a considerable degree on the high level of wear and tear on fixed production capital.

The yield of the final output also decreases because of the poorer quality of the raw cotton that is processed. This leads to a reduction in its sales value, which is also reflected in the output-capital ratio. Moreover, the processing of poor strains of cotton increases labor and material expenditures. In particular, it is necessary to dry the raw material for storage. During processing the number of machines in the chain of the technological process increases. This, in turn, leads to additional expenditure of electric energy, auxiliary materials and labor, that is, to increased production costs.

In order to improve the utilization of fixed industrial production capital in the cotton cleaning industry, it is necessary to increase the technical unity and coordination of the activity of related branches of the agro-industrial complex, including machine building and instrument building, scientific research, design and other organizations.

Because of the growth of fixed production capital and also the increased demands on the output-capital ratio in the modern stage, it is necessary to improve methods of measuring it from the standpoint of national economic efficiency. One of the most important tasks in investigating the output-capital ratio is the selection of methods for measuring it or measuring output and fixed capital. Let us consider several of these.

At the present time the most widespread is the value method. This makes it possible to measure the output that is produced and the labor that is utilized not only in various industries, but also at various times.

In addition to the value indicator it is also expedient to use the physical method of measuring the output-capital ratio.

Sometimes it is also possible to use the conventional physical method (when measuring products that have a similar purpose).

It is frequently thought that the output-capital ratio can be determined by the gross, commodity, sold and net outputs.

One can also calculate the output-capital ratio by using the indicator of commodity output, since in the majority of cases it differs little from the gross output.

If one is to speak of determining the effectiveness of fixed capital using profit, then the indicator of the output-capital ratio amounts essentially to the level of profitability of the enterprise. From the standpoint of the effectiveness of fixed capital, this indicator does not reflect all aspects of its utilization.

Frequently there are different ways of evaluating similar fixed capital, depending on the time of its creation. Therefore the output-capital ratio for the cotton cleaning industry should be determined by the ratio between the gross output and the initial cost of the fixed industrial production capital plus the cost of capital of the procurement network that is directly related to agricultural production and essentially influences the rates of development of its main branch--cotton growing.

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