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# USSR Report

AGRICULTURE

No. 1392

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### FIELD WORK, CROP PROGRESS REPORTED

#### Spring Sowing Progress

LD042346 Moscow Domestic Service in Russian 1500 GMT 4 May 83

[Text] Every 24 hours 2.5 million hectares are being sown to various spring crops by the land cultivators of the country's kolkhozes and sovkhozes. Sowing is proceeding at a fast pace.

The USSR Central Statistical Administration [CSA] has reported altogether, sowing has been carried out on over 65 million hectares. Past rain has created favorable conditions for the development of shoots in most areas.

Mass sowing is now in progress on the fields in the Nonchernozem Zone, the Volgo-Vyatka region and the Urals.

In the south, the sowing of late crops is drawing to a close. Thus, 94 percent of the area allocated to sugar beets has already been sown. The machine operators of Belorussia, Latvia, Lithuania and Kuybyshev Oblast are continuing work on the sugar beet fields.

This year farms are sowing considerably larger amounts of the valuable fodder crops--rape, lucerne, soja, lupine, and others--than in the years past.

#### Report on Spring Sowing

LD042350 Moscow Domestic Service in Russian 1530 GMT 4 May 83

[Text] The USSR CSA report on spring fieldwork progress was received today. Commenting on this at our request Boris Petrovich Parshin, deputy chief of a Ministry of Agriculture Directorate, noted that various spring crops occupy more than 65 million hectares in the country. In spite of rains that fell last week the pace of the work is as high as before. Precipitation considerably improved conditions for the development of shoots in the Ukraine, central Chernozem oblasts, on the Middle Volga and in a number of other zones. Farmers of Orenburg and Saratov Oblast carried out grain

sowing at a high pace. More than 1 million hectares were planted to cereals in Bashkiria last week. Sowing of spring barley was completed in Uzbekistan, Georgia and Moldavia; farmers of the Ukraine are completing this work. Considerably more leguminous crops have been sown than last year. Farms in many oblasts are now carrying out work on fields allocated for millet and buckwheat. One-third of the work has been completed in rice sowing.

Sowing of corn is being carried out early this year. Mass care [ukhod] for fields of this crop has already begun. Farmers in the Ukraine, Moldavia, North Caucasus and Georgia have completed sunflower sowing. Shoots are good everywhere. Farmers in the southern regions have begun to sow soybeans. The major part of this crop will be cultivated according to industrial technology without a need for manual labor.

The sowing of cotton was practically completed by the beginning of this week; only some farms in Kirghizia are continuing with this.

#### Figures on Sowing

LD050228 Moscow Domestic Television Service in Russian 1700 GMT 4 May 83

[From the Vremya newscast; audio only]

[Text] The USSR CSA reports: By Monday, 2 May, the country's spring crops had been sown on 65 million hectares, including grain and pulse crops--excluding maize--on 35.5 million hectares. Sunflowers occupy almost 4 million hectares and sugarbeets 3.3 million hectares. Potatoes have been planted on an area of more than 1 million hectares and vegetables occupy 729,000 hectares.

#### Additional Figures on Sowing

LD050207 Moscow Domestic Service in Russian 2104 GMT 4 May 83

[Text] The USSR CSA reports that by 2 May, in the country as a whole, collective and state farms had sown summer crops on an area of 65 million hectares. The sowing season has begun on farms of the Baltic republics, the Nonchernozem Zone, the Urals, Siberia and the Far East; they are sowing grass and other early crops. In southern regions sowing of wheat, barley, millet, buckwheat and rice continues. The pace of work is accelerating on vegetable plantations. Vegetable crops have been planted on 729,000 hectares. Over 1 million hectares have been planted with potatoes. Sowing of cotton is coming to an end.

### Agricultural Developments 5-6 May

LD070222 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 5-6 May. Times of broadcasts are given in parentheses at the end of each item.

5 May

Corn sowing has been completed in the Ukraine and the crop covers over 5 million hectares this year.

Moisture retention is being completed in Kokchetav Oblast, Kazakhstan. The sowing of spring cereal crops was completed much earlier than last year in Kirghizia; sugar beet sowing has begun in Altay Kray. Large-scale planting of potatoes began today in the Mari non-Chernozem Zone. The crop will cover 30,000 hectares in the Mari ASSR. The mowing of sown grasses has started in Krasnodar Kray. Haymaking has also started on the meadows. (1530 GMT)

The sowing of rice has started in Maritime Kray. (2300 GMT)

6 May

Penza Oblast machine operators are sowing late spring crops. The harrowing of land ploughed in the autumn for spring sowing is coming to an end in Omsk Oblast. Three-quarters of the land under grain crops will be sown with the following: Omskaya-9, Almas and Irtyshyanka-10 wheat strains. (0400 GMT)

The sowing of spring crops started on the 5th billion hectare in Kazakhstan today. Sowing has started in southern parts of Krasnoyarsk Kray. Sugar beet sowing has started in Ryazan Oblast. (0600 GMT)

Hay mowing has begun in Moldavia. (1100 GMT)

Arkhangelsk Oblast farms have begun potato planting. Kustanay Oblast farmers have sown 30,000 hectares to leguminous grasses. Maritime Kray farms are now sowing a broad selection of annual fodder crops. (1904 GMT)

### Agricultural Developments 7-8 May

LD090020 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 7-8 May. Times of broadcasts are given in parentheses at end of each item.

7 May

Sowing started today on the last, fifth million hectares of land in Saratov Oblast. Sunflower sowing is basically completed. Farms in southern Tuva have started sowing grain crops. In Tataria 1.5 million hectares or two-thirds of the total area have been sown; peas occupy 250,000 hectares here. (0600 GMT)

Kuban farmers' field work is in progress. They have completed the sowing of corn grain crops. Harrowing is now underway. (1500 GMT)

8 May

The agricultural workers of Turkmenia have completed the sowing of corn for grain crops 2 weeks earlier than planned. The machine operators of the Stavropol Kray are beginning to sow soya. This year this crop, which is a new one for the kray, will occupy nearly 20,000 hectares. (0800 GMT)

Machine operators of Ryazan Oblast are sowing spring crops. Wheat, barley, oats, buckwheat, annual grasses, corn and vegetables, have already been sown on 90,000 hectares which is almost 80 percent of the total area. The first cutting of sown grasses has been completed on farms of Surkhan-Darya Oblast of Uzbekistan. Mass potato planting has started at Smolensk Oblast farms; 70,000 hectares will be given over to this crop this year. (1100 GMT)

The first rayon in Bryansk Oblast has completed corn sowing. (1300 GMT)

Potato planting is in full swing in Ryazan Oblast, where the crop will cover 95,000 hectares. The sowing of corn for grain crops has been completed in Kirovograd Oblast; the crop covers 200,000 hectares. (1530 GMT)

#### Agricultural Developments 9-10 May

LD110124 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 9-10 May. Times of broadcasts are given in parentheses at end of each item.

9 May

To date 2 million hectares have been sown with spring crops in Bashkiriya--more than 60 percent of the plan. (0204 GMT)

10 May

Potato farming is underway in Smolensk Oblast; the crop will cover 70,000 hectares this year. (0000 GMT)

In Mordovia sowing of potatoes and other vegetables has started. Over 50 percent of the acreage allotted to the crops has been planted. To date early crops occupy 525,000 hectares--82 percent of the plan. (0204 GMT)

All oblasts in Kazakhstan have started spring sowing, with work proceeding on the 6th million hectare today. Over 250,000 hectares are being sown daily. An area of 28.5 million hectares will be sown in all. Much rain has fallen recently providing much needed moisture to the soil. Virgin land areas of eastern Orenburg Oblast has started sowing; work is proceeding on the 3d million hectares. (0600 GMT)

To date 600,000 hectares have been sown with grain crops in Grokiy Oblast. Ukrainian farmers have finished sowing corn for grain. Almost 2 million hectares were set aside for this which is more than for any other grain forage crop. Most places are introducing industrial technology for this purpose and better use is being made of irrigation. (0700 GMT)

In Altay Kray the sowing of peas, pulses and perennial grasses is coming to an end. The sowing of oats, barley and wheat has started. This year the kray's grain area is 4 million hectares. (1100 GMT)

In Belorussia, the sowing of spring crops has been completed on the 2d million hectares. More than three-quarters of the allocated area has been sown with early grain crops and pulses. Many rayons are planting potatoes on the last hectares. (1530 GMT)

Forty million hectares, 50 percent of the total spring sowing area, has been occupied by sowings of various agricultural crops in the RSFSR as of the beginning of this week. The sowing of early grain crops has been completed on many farms of the European part of the RSFSR. The sowing of groats, millet and buckwheat is in progress. Work is also being carried out on fields reserved for corn. One-third of the area intended for corn silage has been taken up. The sowing of this crop for grain has been completed in the Kuban. The sowing of sugar beets is drawing to a close. (1800 GMT)

#### Spring Field Work in RSFSR

LD112002 Moscow Domestic Television Service in Russian 1300 GMT 11 May 83

[From the Vremya newscast; report by agronomist Yuriy Kovyryalov--audio only]

[Excerpts] Good evening, comrades. The plowed area in the Nonchernozem Zone covers 35 million hectares. Over all this vast area, every day is full of concern for the coming harvest. The Nonchernozem Zone, like several other agricultural zones, is distinguished by its basic development of agricultural production. Around 70 percent of potatoes traded in the RSFSR are concentrated here. This year, to keep the level stable, planting is underway in a very organized way on farms in Moscow, Ryazan, Orel and Kaluga oblasts.

Organized sowing is underway on flax-growing farms of the central areas of the Nonchernozem Zone. Over the entire zone, the sowing of this crop has been carried out on 71 percent of the planned areas. A high agrotechnical level of spring field work on flax fields has been noted on sovkhozes and kolkhozes of Smolensk and Kalinin oblasts.

Sowing of sugar beets is being completed. On the most extensive sugar beet zone of the Nonchernozem Zone in Orel Oblast, two-thirds of sowings are being cultivated by industrial technology.

Unlike certain other zones, the Nonchernozem Zone is characterized especially by the state of its grain crops. The sowings of winter crops have been almost fully preserved; they have been fertilized and plants are now developing normally.

#### Agricultural Developments 12 May

LD130235 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 12 May. Times of broadcasts are given in parentheses at the end of each item.

Various early crops have been sown on some 76 million hectares. Here is how work is going in fields allocated to individual crops: Grain and leguminous crops occupy over 41 million hectares. Most farms in the Volga area and the Nonchernozem Zone have finished sowing early wheat. The plan for sowing leguminous crops has been fulfilled in the Ukraine, Lithuania, Estonia and Kirghizia. Sowing of groats is being done by farms in many central oblasts of the RSFSR and the Kraine. [as printed] The plan for sowing buckwheat has been fulfilled by 17 percent. More than half the rice has been sown, and rice growers in such a major rice area as Krasnodar Kray have finished the sowing. Potatoes occupy more than half the area allotted to them. Mass planting of them continues in the Nonchernozem Zone. (0400 GMT)

Belorussian kolkhozes and sovkhoses have practically completed potato planting. Belorussian potato acreage is the country's largest. This year it occupies 360,000 hectares. (0808 GMT)

Spring grain crops are being sown in Smolensk Oblast. Up to 50,000 hectares are sown daily. The sowing of these crops will end in a few days, and they will occupy an acreage in excess of 500,000 hectares. Some 8 million metric tons of organic fertilizer have been made ready, and this means that for the first time almost 10 metric tons of fertilizers per hectare will be introduced into the soil. Potatoes are to be planted on 60,000 hectares this year; so far they have been planted on 17,000 hectares. (0808 GMT)

Over the past week 174,000 hectares have been sown to spring crops in Orenburg Oblast, 572,000 in Aktyubinsk Oblast, and 391,000 in Bashkiria. (1100 GMT)

Grain crops occupy about 16 million hectares of Tselinograd. (1100 GMT)

Sowing of grain crops has begun in Altay Kray. Sowing of peas, pulses and perennial grasses and the planting of sugar beets are nearly over. More than 4 million hectares are to be sown to grain. The main crops will be spring wheat, predominantly of hard and strong varieties, and high-yield strains of barley and oats. A great deal of groats will be sown. (1100 GMT)

Seven and a half million metric tons of fodder are to be procured here this year to safeguard good cattle wintering. (1100 GMT)

Haymaking is now underway in 10 union republics. Alfalfa has been gathered in from more than 200,000 hectares: 60,000 metric tons of hay and 130,000 metric tons of haylage have been procured. (1100 GMT)

Kuban farmers have finished spring crop sowing. Almost 2 million hectares are occupied by grain crops, pulses, fodder crops, sugar beets, sunflowers, corn and rice. This year farmers have pledged to sell 4.25 million metric tons of grain to the state. (1530 GMT)

Almost 200,000 hectares have been sown to spring crops in Kurgan Oblast. Machine operators are carrying out sowing of wheat, leguminous crops, potatoes, and corn for silage. Kurgan farmers plan to gather 19-20 quintals of grain per hectare this year. The sowing front is moving towards the east. (1530 GMT)

Sowing units have gone out into the fields in Novosibirsk Oblast. The area of wheat fields at local farms exceeds 2.5 million hectares. (1530 GMT)

In Belorussia over 250,000 hectares are occupied by rye grown for feeding cattle. (1530 GMT)

More than 1,000 shops and procurement points will be opened this year for gardening associations of the Russian Federation. They will receive surpluses of gardening and vegetable-growing produce, sell implements for soil tilling, fertilizers, etc., and receive orders for goods which as yet are not on sale. There are more than 26 million families with personal private plots in the country who will benefit from such shops. More than 7 million families take part in horticultural plot associations. More than one-quarter of all agricultural produce of the country is produced in this sector. (1530 GMT)

Spring sowing has been completed in Krasnodar Kray on almost 2 million hectares. (1950 GMT)

#### Agricultural Developments 13 May

LD140330 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 13 May. Times of broadcasts are given in parentheses at the end of each item.

Sowing of early crops is virtually finished everywhere. It is completed in Krasnodar Kray where, despite the difficulties caused by the autumn drought, farmers managed to sow early crops on nearly 2 million hectares in good time. Farmers of Ryazan are today finishing the sowing of early crops on 1 million hectares and are concentrating on great crops, corn, root crops and potatoes. The rate of sowing in the country is much faster than last year. (0000 GMT)

In North Kazakhstan everything is ready for the start of mass grain crop sowing which traditionally starts on 15 May. Sowing of early fodder crops is already in progress. Grain crops will occupy around 16 million hectares. Moisture retention work during the winter has prepared the ground well. (0100 GMT)

Sugar beet sowing in Altay will be completed in a couple of days. Farmers are turning to concentrate on sowing grain crops, which will occupy 4 million hectares. Land irrigation has begun earlier than usual this year because of the dry spring. (0100 GMT)

Sowing of cereals has started in central Kazakhstan, where over 1 million hectares is to be sown. (0104 GMT)

Kuban farmers have finished sowing. Sowing of wheat has started in Omsk Oblast, where the crop this year will be over nearly 1.5 million hectares--two-thirds of the cereals acreage. (0204 GMT)

Vigorous shoots have appeared in corn fields in Chernigov Oblast, the northernmost in the Ukraine. The seeds of early-ripening hybrids successfully withstood frequent drops in temperature. Farmers aim to obtain at least 38 quintals of corn per hectare this year. (1100 GMT)

Tuva farms have begun mass sowing of grain crops. The spring area occupies almost two-thirds of the autonomous republic's arable land. (1300 GMT)

#### Agricultural Developments 14-16 May

LD170124 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 14-16 May. Times of broadcasts are given in parentheses at the end of each item.

14 May

Omsk Oblast crop growers have started mass sowing of grain crops. To date the first 100,000 hectares have been sown to them. The flowline method of carrying out field work is being introduced everywhere. In the view of specialists, this will considerably lower the losses of moisture in the soil and, most importantly, will secure an added yield of 2 to 3 quintals per hectare. (0200 GMT)

Sowing of rice was completed today on plantations in the southern Ukraine. The machine operators of the specialized farms intend to produce over 1.5 million quintals of white grain. (1100 GMT)

Haymaking has started in southern Kazakhstan. Over 30 million hectares have been allocated for haymaking in the republic. It is especially important to save time in cutting alfalfa. In the conditions of southern Kazakhstan it can yield as much as six cuts. (1100 GMT)

15 May

Moldavian cucurbit growers have completed sowing work. Watermelon and musk melon plantations occupy over 6,000 hectares in specialized farms in the southern regions. The republic's farmers plan to obtain no less than 110 quintals of produce from every hectare of cucurbit fields. (0950 GMT)

16 May

Cutting of sown grasses has begun in Kharkov Oblast. Three cuttings are planned for this season over an area of more than 500,000 hectares. The yield aim is 250 quintals of green fodder per hectare. (0100 GMT)

Mass grain sowing has begun in Kurgan Oblast on an area of more than 1.8 million hectares. The main area has been allocated for spring wheat of regionally zoned, high productive varieties. Almost half of the area under wheat will be occupied by local varieties, including the Kurganskaya-1 variety which ripens earlier and gives a high yield. (0204 GMT)

Altay Kray grain growers are sowing barley, oats and wheat; 4 million hectares are to be sown with grain crops in the second half of May. (0700 GMT)

#### Agricultural Developments 17-18 May

LD190326 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 17 and 18 May. Times of broadcasts are given in parentheses at the end of each item.

17 May

Orenburg Oblast farmers completed sowing of spring crops on 3.5 million hectares. (0400 GMT)

Most farms in Belorussia are completing their spring field work ahead of schedule. The last of the spring grain and pulse crops, which occupy more than 1.5 million hectares, are now being sown. Potatoes have been planted on more than 300,000 hectares. Cutting of grasses has begun in Brest and Gomel Oblasts. Rye for fodder has been sown this year on 250,000 hectares. (1330 GMT)

18 May

More than 150,000 hectares of spring crops were sown in Kurgan Oblast yesterday. (0204 GMT)

Spring crops have been sown on almost 500,000 hectares in Omsk Oblast. (0600 GMT)

Mordovian farmers have completed sugar beet sowing and have sown nearly 90 percent of their potatoes. (0800 GMT)

Two-thirds of the farms in Estonia have completed sowing spring grain crops and pulses. More than 60 percent of potatoes have been sown. (1100 GMT)

Mass wheat sowing is in progress in Altay. It occupies 3 million hectares. (1300 GMT)

Harvesting of grain has started in Turkmenia. The winter grain crop occupies 80,000 hectares. (1300 GMT)

Harvesting of winter cereals has begun on the grain fields in southern Uzbekistan. The farmers are to harvest winter cereals from an area of over 800,000 hectares. (1330 GMT)

#### Agricultural Developments 19-23 May

LD240425 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian 19-23 May. Times of broadcasts are given in parentheses at the end of each item.

19 May

All farms of Omsk Oblast are carrying out mass wheat sowing on the allocated area of about 1.5 million hectares. Sowing was completed on 500,000 hectares by today. (0204 GMT)

The border of sowing work has shifted eastwards during the last week. Mass sowing is in progress in Altay. Spring crops have been sown on 1.7 million hectares in Western Siberia and on 1.2 million hectares in eastern Siberia. The sowing is nearing completion in the European part of Russia. Farms in 50 krais, oblasts, and autonomous republics have begun irrigating crops. In view of the warm weather which has settled in this is very important for the harvest. Sprinklers are working well on most farms in the Central Chernozem Zone, the Volga valley and the North Caucasus. However, a lot of irrigation equipment is standing idle in Bryansk, Vladimir, Orenburg, Novosibirsk, Kemerovo, Kurgan, Tyumen and on a number of farms in Chechen-Ingusheti and Chuvashia. (0400 GMT)

Spring crops have been sown on one-third of the total area in Kurgan Oblast. (0430 GMT)

Spring crops have been sown on 10 million hectares in Kazakhstan. This is more than one-third of the entire spring crop acreage in the republic. Despite frequent weather, tractor teams sow 600,000-700,000 hectares daily. More than 200,000 sowing and cultivating machines are now operating in the fields. When good weather has returned, the rate of field work will go up 150-200 percent. (0600 GMT)

Farmers in the northern oblasts of Kazakhstan have completed sowing normal and late varieties of wheat. The new high-yield varieties Omskaya-9, Tselinnaya-21, and Karagadinskaya-2 occupy 3 million hectares, one-quarter more than last year. This year more than one-third of the cornfields are allocated to the more productive varieties. (0800 GMT)

It is again a busy time now on the country's kolkhozes and zovkhozes. In the south, soya is being sown. Work is in progress on the potato and vegetable fields. In the eastern regions, where the focus is now on sowing, spring is extremely unsettled and machine operators are having a difficult time.

Spring wheat alone in Kazakhstan, the trans-Urals, and Siberia occupies around 50 million hectares. Each day more than 300,000 hectares are being sown in Kustanay Oblast and 200,000-230,000 hectares in Tselinograd and Kokchetav Oblasts. Omskaya-9 wheat variety has proven itself well. Farmers are now completing sowing of all spring crops in Volgograd and they will cover an area of 3.75 million hectares. By tomorrow millet and buckwheat sowing will have been completed. (1100 GMT)

The sowing of spring sown crops is nearing completion in Bashkirya. They already occupy 3 million hectares which is more than 90 percent of the area envisaged in the plan. Efforts are now being directed at taking advantage of good weather to sow maize and plant potatoes. (1530 GMT)

20 May

Mass potato planting has begun on Sakhalin to cover more than 7,500 hectares. (2300 GMT)

21 May

To date spring crops have been sown on 2 million hectares in the Altay. This is one-third of the spring fields. Sowing of sugar beets, sunflowers, pulses and grasses has been completed in the best agrotechnical time. At present all kolkhozes and sovkhozes of the kray are conducting the mass sowing of spring wheat. Grain crops have been sown on 500,000 hectares in Irkutsk Oblast. Spring is late here this year. (0700 GMT)

A powerful cyclone passed over northern Kazakhstan today, during the night. Wet snow settled on the extensive grain fields where at the moment mass sowing of grain crops is underway and upon fruit orchards which had started flowering. Such a sharp change in the weather has not been observed here for 20 years. (1400 GMT)

Sowing of grain has been completed in Kirov Oblast. The high pace of work was ensured by the introduction of Ipatovo and team contracting methods of working. Mass laying in of hay has begun in Stavropol Kray. This season it is intended to lay in no less than 1.2 million tons of vitamin-enriched fodder. This is twice as much as in previous years. (1530 GMT)

22 May

Mass sowing of wheat is underway in Novosibirsk Oblast, where it is to cover more than 1.5 million hectares. (0004 GMT)

Grain growers at most Saratov Oblast farms are completing spring sowing. A number of kolkhozes and sovkhoses are using the team contracting method of labor. Kuybyshev Oblast: Fodder procurers in southern rayons have started gathering grasses almost 2 weeks earlier than ever before. (0600 GMT)

Orenburg Oblast is sowing grain on the final hectare, the 4 millionth. (0700 GMT)

Kirghizia cotton growers have started the first interrow work on cotton plantations. Rain fell everywhere in May and now there are healthy growing plants in all places. Republican farmers have pledged to produce no less than 28 quintals per hectare this year. (1100 GMT)

23 May

Spring wheat is being sown in Kurgan Oblast on the second half of the area. Over 1 million hectares is to be sown. Cold and wet weather is hampering work. (0204 GMT)

Ryazan potatoes have been sown over 90,000 hectares so far. New 4 and 6 row machines are being used. About 2 million tons of fodder is planned for this winter in Dagestan. (0400 GMT)

Smolensk Oblast: sowing ended today. Grain, flax and potatoes occupy approximately 800,000 hectares. Mordovia: Sowing equipment overhaul is in progress. Approximately 400,200 grain-harvesting combines ready for harvest. (0600 GMT)

Sowing has begun on second millionth hectare in Omsk Oblast. In Central Kazakhstan, planting of potatoes has been completed and in the Ukraine, fodder procurement has been completed. (2104 GMT)

#### Agricultural Developments 24-26 May

LD270650 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 24-26 May. Times of broadcasts are given in parentheses at the end of each item.

24 May

Kurgan Oblast: the sown area exceeds 1 million hectares already, with over 700,000 hectares sown in wheat. In Orenburg, fodder gathering is under way. (0001 GMT)

Heavy downpours of rain have come down on the Kakhetiya Kray. Hail has fallen. Rivers have overflowed their banks, fields have been inundated, transportation and communications between rayons have been interrupted. Especially great damage has been caused to plantations in Gurdzhaanskiy Rayon, the largest supplier of grapes in the republic. An operational

headquarters has been set up at the raykom to fight the natural disaster and is keeping in round-the-clock contact with the farms. Farmers are taking special care of vineyards and spraying plants with special preparations. The necessary measures are being taken to supply foodstuffs to the population. Fodder is being delivered urgently to farms. (0204 GMT)

Tselinograd Oblast: sowing is under way. Rain and snow are hampering work. Some 1.2 million hectares each. [as printed] (0400 GMT)

Sowing of grain crops is being completed in Kostroma Oblast today. Over one-third of the area has been planted to new varieties. Work has been completed on the flax fields in the oblast. (0500 GMT)

Sowing of grain continues at a high pace in Kazakhstan. Despite the rainy weather and winds farmers are sowing up to 1.3 million hectares each day. As of today, grain crops occupy 15 million hectares of the planned 22.5 million hectares. Sowing of spring crops has ended in Ryazan. These are grain, pulse, sugar beets, corn, root crops and potatoes. Now only vegetable farmers are still engaged in spring sowing. Chuvash grain fields are turning green. Checking on crops begins today. (0600 GMT)

Mass sowing is taking place in the east of the country--on the Kazakh virgin lands, in Siberia, and in the Urals zone. Sowing has not yet ended in the European part of the country on the fields which have been allocated to late crops. At the same time, harvesting has begun in all union republics for the procurement of fodder. Harvesting of grain crops is taking place in the southern fields of the Central Asian republics. The sowing rates in north Kazakhstan have been reduced somewhat because of the cyclone which passed over many areas. In many farms of Kustanay, Kokchetav and other oblasts, wheat has been sown already on more than half of the fields and some farms are completing their sowing of wheat. In the southern part of Uzbekistan harvesting is already underway. Surkhan-Darya Oblast has been harvesting grain for the last week and it was joined today by Kashka-Darya Oblast. Machine operators are attempting to complete the harvest as rapidly as possible in order to complete second sowings in the next days. Corn is the most productive crop in the conditions of Uzbekistan and the cereals here are sown mainly on dry, unirrigated land. Unfortunately, the republic is still lagging behind in the preparation of combines for the forthcoming harvest. The worst culprits in this respect are the machine operators of Samarkand Oblast. But certain rayons of Dzhizak Oblast are also weak. This is because the mechanizers did not overhaul their machinery early in the autumn and were caught out by the early ripening this year. The Stavropol machine operators have now caught up on their figures for the repairs of harvest machinery after lagging behind by 5 percent at the beginning of the month in comparison with the same period last year. Harvesting of fodder crops, especially rape seed, is now underway throughout the kray. This crop enjoys twice the area of last year here. (1100 GMT)

In Archangel Oblast, the sowing of early grain crops is near completion. More than 100,000 hectares will be taken up by cereals. (1200 GMT)

Uralsk Oblast farmers today completed sowing of grain crops which occupy almost 1.5 million hectares. (1300 GMT)

Tashkent Oblast potato farmers began harvesting today. This year early potatoes will be gathered from almost 15,000 hectares, which is 1,000 hectares more than last year. Kuban: Haymaking machines are now out in the fields to cut annual and perennial grasses. (1530 GMT)

25 May

In the last days of spring, workers in villages in Alma-Ata Oblast have undergone a crucial test; cold, pouring rain has caused considerable loss in sowing. The poor weather has been countered with the experience and mastery of farmers. Timely measures have fully eliminated the consequences of the elements. (0800 GMT)

The sowing effort is coming to an end in Kazakhstan. According to operational statistics from the republic's Ministry of Agriculture, 20 million hectares have been sown with grain crops here. Sowing has finished in Uralsk Oblast. Wheat seeds are being sown on the last hectares by Aktyubinsk mechanisers. The rate of work has slowed down somewhat in north Kazakhstan where in recent days there have been heavy rains and snowfalls. (1000 GMT)

Wheat sowing has been completed today in North Kazakhstan. The crop covers over 1 million hectares. Pace of sowing work has considerably risen in the last week and about 21 million hectares were occupied with spring crops, 5 million hectares more than during the previous 7 days in spite of very difficult weather conditions. Heavy rains passed over many regions of Siberia and Kazakhstan where the center of the sowing work moved. Snow fell in some places. This, however, is a rather welcome development, as good precipitation considerably increased water reserves in arid regions. In the European part of the country it was, on the contrary, dry and hot. Only in some places heavy showers passed. A total of 112.5 million hectares was occupied with spring crops in the country as a whole since the beginning of sowing. Farms of Ukraine, Moldavia, Uzbekistan, and some other union republics as well as Krasnodar Kray, Moscow, Leningrad, and many other oblasts of the RSFSR fulfilled the plan. Kolkhozes and sovkhoses of Belorussia, Lithuania, Latvia, and Estonia are close to completing sowing. Considerably more leguminous crops, which play an important role in strengthening the fodder base were sown this year. Special care in this direction has been taken by fodder procurement workers of Ukraine, Lithuania, and Estonia. Mass sowing of groats continues in the country. Plan on sowing corn for grain was considerably overfulfilled. This year, it is being mainly cultivated according to industrial technology, without manual labor. The plan on sunflower sowing has been fulfilled. Sowing on plantations of flax, potatoes and vegetables is coming to an end. Everywhere crop cultivation has begun, watering is being carried out and fodder procured in all the republics. (1100 GMT)

Moldavian farmers completed sowing of soya beans on 18,000 hectares. (1300 GMT)

The agricultural workers of Amur Oblast are carrying out field work in difficult conditions that have been caused by the consequences of two cyclones. The cyclones brought an abundance of precipitation that had not been seen locally since the beginning of the century. They descended upon the area where the sowing campaign was underway on a broad front. The elements naturally brought field work to a temporary halt. But without losing time the oblast's field workers mapped out fresh strategy and tactics for their spring field work. The grain growers in the oblast have now already sown almost 300,000 hectares of the 700,000 hectares planned. (1800 GMT)

26 May

Omsk Oblast machine operators are sowing wheat on the 2d million hectares with 20,000 hectares remaining to be sown to this crop. Farmers of the oblast have planned to gather an average of 17.5 quintals per hectare this year. Mari ASSR: Farms of the Nonchernozem Zone have completed potato planting. They are planted on more than 30,000 hectares. (0204 GMT)

Sowing of wheat has been completed in Kustanay Oblast. It has been carried out on 3 million hectares which is two-thirds of the whole grain area. Harvesting is underway in south Uzbekistan. (1000 GMT)

Kolkhozes and sovkhoses of the Kazakhstan virgin lands have begun mass sowing of corn for silage. This year corn will take up 2,635,000 hectares, some 200,000 hectares more than last year. Haymaking has begun in the Povolzhye area. The time has come in the Zavolzhye steppes to gather in alfalfa for hay. Alfalfa takes up more than 200,000 hectares. The plan provides for about 500,000 metric tons of high-quality hay. This will fully satisfy the demand for it. (1100 GMT)

Kuban farmers have prepared about 18,000 Kolos and Niva combines for the winter cereals harvest. Sowing of the second fodder crop has started in Kharkov Oblast: The crops will cover 86,000 hectares. Early grain crop sowing has been completed in Orenburg Oblast; wheat and barley cover an area of 3.8 million hectares. (1300 GMT)

Sown and meadow grasses have been gathered in from 2.5 million hectares by 23 May. A large part of this area is accounted for by farms of the Ukraine. Laying in of fodder is now being conducted in 14 union republics. In the country as a whole conditions are good for carrying out the first grass cut. Grass is ripening early. Hay mowing will begin in the Nonchernozem Zone of Russia practically in a few days time. Progressive farms are carrying out post-cut watering, applying fertilizer in order to achieve good cuts later. In the country now a total of about 1 million tons of hay, almost 2.5 million tons of haylage has been laid in and 200,000 tons of vitaminwsf [as printed] grass meal has been prepared. (1530 GMT)

## Report on Field Work

LD261522 Moscow Domestic Service in Russian 1530 GMT 25 May 83

[Text] The progress of fieldwork on the country's kolkhozes and sovkhoses is reviewed in a report compiled today by the USSR's Central Statistical Administration. In the European part of the country the weather has been favorable for the completion of the sowing of the late crops and the development of shoots, Boris Petrovich Parshin, deputy chief of the Main Administration for Arable Farming of the USSR Ministry of Agriculture, noted when asked by us to comment on the statistics.

Meanwhile beyond the Urals and in Kazakhstan machine operators have had to work in complex conditions. In many districts chilly rains have fallen, and snow in places and frosts, too, have been noted. And yet the growth in the areas occupied by various crops, primarily cereals, has been considerable in the past week.

Spring crops now occupy 112.5 million hectares overall, and some 21 million hectares were sown in the past week. Spring wheat has been sown on 70 percent of the area allocated to it. Many farms have successfully carried out the sowing of pulses and there has been a substantial expansion of the area of these crops.

In many districts the sowing of millet is continuing; in the RSFSR this drought-resistant groat crop has been sown on more than 1 million hectares. Sowing of this, and also of buckwheat is now being completed in the Ukraine. Buckwheat still has to be sown on a considerable area on fields of the RSFSR, Belorussia and Kazakhstan.

In the Far East sowing on the rice plantations has entered the final stage. In the country as a whole the plan for sowing of maize for grain has been exceeded: three-quarters of the overall crop is to be cultivated by industrial methods. The sowing of sweet corn and sunflowers is practically finished, and these crops are being tended. On many farms of the south the sowing of soybeans has been completed, and in the Far East this work is now in full swing. Sowing on fields allocated to flax is now being done on the last hectares; this work is being done primarily in Siberia.

In the south of the country haymaking is being rapidly stepped up. About 1 million tons of hay have already been supplied. Gathering of the early horticultural crops has started. In Georgia the tea picking is in progress. Fields are being cleared after the harvesting of winter crops in Uzbekistan and Turkmenia. Repeat sowing will be carried out here.

### Agricultural Developments 30 May-1 June

LD020100 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 30 May through 1 June. Times of broadcasts are given in parentheses at the end of each item.

30 May

Kazakhstan kolkhozes and sovkhoses have sown spring crops on over 24 million hectares. Grain crops occupy 20 million hectares. Wheat sowing has been completed in Turgay Oblast. Wheat sowing is nearing completion in Tselinograd and Karaganda Oblasts. In spite of the complex weather conditions many farms have carried out the work rapidly and with excellent quality. (2300 GMT)

31 May

In Kurgan Oblast the sowing drive is nearing completion. Grain crops cover more than 1.5 million hectares--90 percent of the allocated areas. Despite the cold spring, frequent rain and strong winds, spring wheat has been sown in optimum time. Sowing of barley and oats is now under way. In the Tuva ASSR sowing of spring crops has been completed. Farmers have not allowed the cold weather to hamper work, and vigorous shoots have appeared. Planting of potatoes and corn is now ending, as is the sowing of perennial grasses for silage. (0001 GMT)

Pavlodar Oblast has started buckwheat sowing using the wide row method, which will make for efficient use of machines. The area under buckwheat has been increased to almost 100,000 hectares. (0204 GMT)

Gorkiy Oblast has completed potato planting. The crop covers 92,000 hectares. (0400 GMT)

In Saratov Oblast haymowing and fodder procurement are in full swing: high-protein lucerne grasses cover over 200,000 hectares in the oblast. There are about 500,000 hectares of irrigated land in Saratov Oblast, a large part of which is sown with fodder crops, and about 7,000 sprinklers are at work in the fields. (1100 GMT)

1 June

In Omsk Oblast sowing of grain crops is being completed today. More than 2 million hectares have been sown to wheat, barley and oats. The work was carried out successfully despite blizzards during the sowing. The first shoots have appeared on many fields. Inter-row cultivation is under way. In Uzbekistan following the southern areas, grain harvesting has started in Tashkent Oblast. Uzbekistan plans to produce 3 million tons of grain this year, which is considerably in excess of the target. (0204 GMT)

In the Turkmen SSR, the grain harvest is now in progress. It is proceeding faster than last year. This year the republic's farmers are to harvest wheat and barley from an area of 85,000 hectares. (1330 GMT)

## Progress of Field Work

LD012019 Moscow Domestic Service in Russian 1800 GMT 31 May 83

[Text] The Central Statistical Administration of the Russian Federation today published data on the progress of field work. By the start of this week various spring crops had been sown on over 71 million hectares. As we were informed by Stepan Filippovich Bórshch, member of the Collegium of the RSFSR Ministry of Agriculture, the republic's farmers have about one-tenth of the spring sowing area left to sow. The plan for sowing grain crops has been fulfilled now by 91 percent. Despite complex weather conditions, over the past week a considerable area was sown--about 10 million hectares. It is still cold in Siberia, with rain. There has been snowfall from time to time. However, work is being carried out in an organized manner there. In the European part of the republic sowing has been basically completed. It is being carried out only by collective and state farms of the north-western and northern regions. Precipitation is hindering sowing there, too.

## Progress of Spring Sowing

LD012038 Moscow Domestic Television Service in Russian 1700 GMT 1 Jun 83

[From the Vremya newscast; audio only]

[Text] The country's farms complete sowing spring crops according to the USSR Central Statistical Administration, on 30 May a total of 130.3 million hectares of fields were sown with spring crop. Corn for grain was sown on 4.6 million hectares more than last year and 17.9 million hectares have been sown with corn for grain crops. Farms in Uzbekistan and Tajikistan began harvesting winter barley and wheat. Haymowing began in many regions.

## Agricultural Developments 2-4 June

LD050352 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 2-4 June. Times of broadcasts are given in parentheses at the end of each item.

2 June

Sowing of the main crop, spring wheat, was completed today in the Altay. The crop occupies almost 3 million hectares of the most fertile land. Eighty percent of the total area has been sown with promising new varieties which provide big harvests in Western Siberian conditions. (0800 GMT)

Construction of the Lebyazhye irrigation system, the biggest one in Pavlodar Oblast, has begun. Water from the Irtysh will be supplied to the fields of six steppeland sovkhozes. Altogether 15,000 hectares of arid land will be watered. The irrigated areas will provide guaranteed harvests of fodder for animal husbandry. Specialists feel the construction costs will be recouped in 10 years. (0800 GMT)

Uzbekistan has pledged 6 million tons of cotton this year. The mild early spring allowed growth of fine shoots but in the middle of May many fields were flooded by heavy rain, and then dust storms covered the plantations with a thick layer of sand. Losses were particularly great in the Fergana Valley. Then it was all hands on deck. In one day a second sowing was carried out where necessary. When a cyclone from the north then brought cold weather it was necessary to protect the crop with as much humus and organic material as possible. Much is being done in Uzbekistan to minimize loss of water. The main water channels are being concreted and borehills are being sunk. (1300 GMT)

3 June

Grain crop harvesting has started in Tajikistan. The republic's total grain acreage is 225,000 hectares. The pledge: more than 300,000 tons of grain. (0400 GMT)

The irrigation season has started in the Ukraine. At present the area of irrigated tracts exceeds 2 million hectares. Capital investments spent on the construction of irrigation systems are being recouped rapidly. Thus in the zone of the north Crimean canal each hectare of irrigated lands produces as much as four nonirrigated hectares. The zone of irrigated lands in the republic continues to expand. (1530 GMT)

The crop cultivators of Priangarye have started tilling fallows, the areas of which reached almost 250,000 hectares in the oblast this year. In the steppe zone extensive use is being made of tilling with subsurface cultivators. (1530 GMT)

Kyzylkum forestry workers have handed over 90,000 hectares of improved pastures to Uzbekistan's shepherds. The lands which previously were poor in fodder grasses, are located in the center of the Kyzylkum Desert. On the recommendations of the All-Union Scientific Research Institute for Karakulbreeding the foresters planted belts of saksaul on the tracts. Now the young forest has grown taller and stronger blocking the path of hot winds and shifting barchans. Through the green protection the productivity of the pastures has risen by 20 percent. (1530 GMT)

Ashkhabad Oblast: This year spring arrived early. Compared with past years, grain crops are ripening 10-15 days earlier. Quite a good harvest has been grown. We are expecting to receive 25,000 tons more grain than last year. This year repeat sowings of corn for grain are to be expanded considerably. (1530 GMT)

4 June

Sowing has ended in Altay Kray where this year the spring was cold and delayed field work and increased the gap between moisture retention work and sowing. Grain crops are sown on 4 million hectares here. Farmers have pledged to sell 3.7 million tons of grain to the state this year. (0400 GMT)

In Kuban, hay-mowing is in full swing. Many rayons have already completed the first mowing of grasses. In the near-mountain zone the mowing of grasses is nearing completion. This year grass occupies about 11 percent of arable land in the Kuban. (0400 GMT)

Kuybyshev Oblast farms have started the procurement of fodder 2 weeks earlier than usual. Perennial grasses have been cut on 24,000 hectares, one-third of all the area of irrigated land. (0430 GMT)

Today farmers of Kazakhstan started sowing early crops on the 28 millionth hectare. Ninety-five percent of the area has been sown in various crops in Kazakhstan. Over 23 million hectares are under cereal grains and 2.5 million hectares have been allocated for corn. Sowing of rice and millet has been completed in the republic, sowing of buckwheat and soya and vegetables is being finished. Despite the protracted rainy weather during the sowing season the farmers have largely sown the early crops at optimum times and good shoots are now coming up everywhere. (0600 GMT)

Mass harvesting of perennial grasses has begun in the Tatar ASSR. The whole area of more than 300,000 hectares is to be harvested in 2 weeks. (1750 GMT)

Mass laying in of fodder has begun in Orenburg Oblast. Hay is to be harvested on 1.5 million hectares. (1750 GMT)

#### Agricultural Developments 6-7 June

LD090330 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 6-7 June. Times of broadcasts are given in parentheses at the end of each item.

6 June

A new variety of oats called (Gorel) has been bred by Buryat selectionists at the Buryat Scientific Research Institute on agriculture at the Siberian branch of Vaskhnil. The grain it produces is large, has good technological qualities and produces a high yield. It also resists lying down and drought. This is very important for Siberian oats. (0001 GMT)

Grain harvesting began today in Azerbaijan. Despite unfavorable weather the harvest is rich everywhere. (0204 GMT)

Kazakhstan machine operators have completed sowing of spring crops. A total of 28.5 million hectares were planted in grain, goat, industrial and vegetable crops in the republic. The sowing season was difficult this spring. At the height of the sowing season two powerful cyclones brought snow and rains on almost all 19 oblasts of the republic. The bad weather raged particularly fiercely in Tselinograd, Karaganda, and Turgay oblasts. (0800 GMT)

Up to 200 quintals per hectare yield is being obtained from areas planted in alfalfa in Kirghizia. Perennial sown grasses have been cut in 200,000 hectares in the republic. This is half of the task. (1700 GMT)

7 June

The first harvest of grasses has been completed on irrigated land in Saratov Oblast. Between 100 and 120 quintals per hectare of green alfalfa has been obtained. There are still three to four harvest ahead (0600 GMT)

Mass laying in of fodder has begun two weeks earlier than usual in Orel Oblast. Cutting of perennial grasses--clover, alfalfa--and other grasses, is underway. (0600 GMT)

In Kazakhstan all oblasts have begun haymaking; 30 million hectares are to be cut. (0800 GMT)

#### RSFSR Field Work Progress

LD080305 Moscow Domestic Service in Russian 1530 GMT 7 Jun 83

[Text] The Central Statistical Administration of the RSFSR today summed up data about the course of field work in the republic. Gennadiy Ivanovich Beglov, deputy head of the Chief Directorate of Land Cultivation of the RSFSR Ministry of Agriculture noted--commenting upon these data at our request--that the sowing of spring crops, has, on the whole, been completed successfully. Over the past week, the rate of sowing was high. Currently farms only continue the work on the areas set aside for the latest crops, such as soya, buckwheat and vegetables.

The plan for the sowing of millet has been overfulfilled. Work is continuing in a number of places on corn plantations. Farms in Kirov, Novgorod Oblast, Altay are somewhat lagging behind as far as the sowing of corn for silage is concerned.

In eastern regions, in the fields sown to spring wheat, shoots have appeared. Their development was held back somewhat due to cold spells, but, on the whole, conditions are not bad for the development of what has been planted. What they now need is careful tending. Winter and spring conditions favored the development of pest and growth of weeds. Mass inter-row cultivation is underway everywhere. The rate of this work is higher than in past years. Haymaking has begun on a considerable territory of the republic. Harvesting of grasses in grassland and meadowland areas is underway.

## Agricultural Developments 9-11 June

LD120334 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 9-11 June. Times of broadcasts are given in parentheses at the end of each item.

9 June

Farmers of Omsk Oblast began harvesting winter rye. (0200 GMT)

Belorussia: cutting of grasses began today on second million hectares. (0600 GMT)

Gorkiy Oblast farms have cut the first thousands of hectares of meadow and sown grasses. They plan to lay in 750,000 tons of hay and (?one) thousand tons of haylage and vitamin-rich meal for the winter. (0700 GMT)

Kazakhstan corn-growers have completed sowing. The corn area is of unprecedented size, more than 2,500,000 hectares. Three-fifths of this area is in the north of the republic, mainly in the virgin-land oblasts, where corn is grown exclusively for succulent fodder. The largest corn plantations are in Kustanay Oblast, comprising almost 500,000 hectares. This year Kustanay Oblast plans to obtain no less than 25,000,000 tons of silage, mainly from corn. (1330 GMT)

10 June

Harvesting has started in Zarafshan Valley (Uzbekistan). Early potatoes are being dug. Most farms have grown the new early-ripening variety, Zarafshan-1, whose large tubers will mainly be used as seed for second sowing, to obtain a second harvest in October. (0204 GMT)

Harvesting has begun in Kazakhstan, with mechanizers in Chimkent Oblast starting to cut and thresh winter barley today; they will be harvesting cereals from over 500,000 hectares this year. (0600 GMT)

11 June

Harvest preparations in Kazakhstan: Of the 110,000 combines available in the collective and state farms in the republics, 75,000 are ready for the harvest--this is considerably more than at the same time last year. (1950 GMT)

Fodder procurement in Kuban: First cutting of perennial grasses has been completed on 250,000 hectares. (1950 GMT)

## Agricultural Developments 12-17 Jun

LD180656 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 12-17 June. Times of broadcasts are given in parentheses at the end of each item.

12 June

No relevant items.

13 June

Donetsk Oblast procurement workers have completed the preparation of elevators for receiving the new harvest. Technology will allow a daily grain turnover of 15,000 - 20,000 tons more than last year. (0200 GMT)

Grain harvesting is ending in Uzbekistan with Surkhandarya Oblast being the first to finish. (0430 GMT)

The procurement of fodder has begun in the country. Sown and natural grasses have been cut on the first 20,000 hectares in Mordovia, where haymaking is taking place under difficult conditions of unstable, rainy weather. Tambov Oblast farms are to cut grasses on 130,000 hectares this season. Fodder procurement has begun in Kurgan Oblast. The first 1,000 tons of vitaminous grass-meal and granules have been produced. (0600 GMT)

In Tajikistan, machine operators in the mountainous regions have embarked on mass cutting of grass. Nearly 500,000 tons of coarse fodder have already been procured throughout the whole of the republic. This is much more than a year ago. (1100 GMT)

14 June

Grain in Uzbekistan has been harvested on the first 100,000 hectares. The harvest drive in the republic has now shifted to nonirrigated land, which accounts for over three-fourths of the whole grain acreage. (0204 GMT)

In Dagestan dozens of farms are cutting and threshing winter barley on irrigated fields in the Caspian area. Dagestan's target this year is 500,000 tons of grain. Haymaking in Ryazan Oblast is taking place under difficult weather conditions. The oblast intends to lay in almost 5 million tons of coarse and succulent fodders for the winter (0400 GMT)

Threshing of cereal crops has begun in Checheno-Ingush ASSR. This year farmers plan to harvest a record of more than 500,000 tons of grain. (0600 GMT)

Eight union republics are now harvesting. Work is also underway in the southern Ukraine, Severnyy Kavkaz and the Kuban. Grain crops are ripening earlier than usual and many crops are ripening almost simultaneously. There may not be a pause between barley and winter wheat harvesting in the Kuban. Machinery is generally ready for the harvest in the country's southern regions and 1,215 harvest and transport teams have been prepared in Krasnodar Kray. (1500 GMT)

15 June

No relevant items.

16 June

In southern rayons of Rostov Oblast, machine operators have taken the harvesting equipment out into the fields. The harvesting in the oblast will be mounted on an area of more than 3 million hectares, over 2.5 million hectares of which is occupied by cereals. (0400 GMT)

The Kuban is starting grain harvesting. Cereal and pulse crops cover an area of 1.9 million hectares. Barley has ripened 10 days earlier than usual. Many crops are ripening unevenly, having been sown or resown at different times due to bad autumn weather. Exhortations are being made to sell 4,260,000 tons of grain to the state. (0600 GMT)

Nearly 5 million hectares of sown and meadow grass were mown in the RSFSR by the start of this week. This is about one-eighth of the total hay area. Deliveries of fodders were being undertaken early everywhere and overall more hay, haylage and vitamin grass meal had been laid than by mid-June last year. But rates of work could be better in oblasts of the non-black soil zone such as Novgorod, Ivanov and Kirov. Much attention is being given to deliveries of haylage. In Krasnodar Kray the percentage of task fulfillment for this kind of fodder is now twice as high as for hay. Weak use is made of expensive units for preparation of vitamin grass meal in Ivanovo, Yaroslavl and Gorkiy Oblasts. There are already quite a few cases where fodder is delivered of low quality. Checks showed that in Smolensk Oblast and Checheno-Ingush one-third of the fodder delivered is substandard. Control of quality is weakly organized in Penza and Kaluga Oblasts. (0800 GMT)

Harvesting of winter barley is in progress in North Ossetia. A start has been made today on wheat harvesting. In Nikolayev Oblast harvesting of peas is underway. Half of the oblast's rayons are now engaged in cutting and threshing early grain crops. In Altay Kray preparations are in progress for grain procurement. A state commission has passed as "good" the technical base at the Barnaul grain reception combine and that at the Shelabolikha grain reception enterprise. The first stage of a rice complex under construction in Tashkent which will have a storage capacity of over 50,000 tons will be ready in time for this year's harvest. It will be the first in Central Asia to have a system of active ventilation of the silo tower. It will also have an automatic control system which will instantly register the slightest deviation from standard conditions. (1530 GMT)

17 June

Farmers of Ashkhabad Oblast, Turkmenistan, are the first to complete harvesting of grain. An average of 20 quintals per hectare has been obtained. (1400 GMT)

Crimean farms have begun selling grain to the state. All rayons are harvesting early cereals. Selective reaping of winter barley has begun in Stavropol. In Tula Oblast, 100,000 hectares of grasses have been mown. This summer it is planned to procure over 1.4 million tons of coarse feed. (1530 GMT)

#### Agricultural Developments 18-20 June

LD210400 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 18-20 June. Times of broadcasts are given in parentheses at the end of each item.

18 June

Grain harvesting has begun in Kirghizia, where a good yield is expected after spring rains. Grain crops occupy about 5 million hectares in the republic. (0200 GMT)

19 June

Healthy shoots have appeared in the fields of Kazakhstan. Farmers have begun work caring for the corn and other cultivated crops. About 200 air crews are helping to treat grain crops. (0300 GMT)

Laying in of fodder is in progress in Turkmenistan. The first harvest of alfalfa has been completed. Cutting of natural grasses is under way. Because of rain, there should be one and a half times as much as last season. (0100 GMT)

With harvesting coming early, haste has had to be made in Moldavia to get grain reception facilities ready; the work has been completed 10 days ahead of plan with most enterprises' facilities passing as excellent. (0200 GMT)

In Omsk Oblast, hundreds of specialized fodder-collection links are at work, using advanced equipment and operating double shifts with payment by results. (0200 GMT)

In Altay Kray, shoots of grain, groats, and technical crops are coming in well; areas sown with new varieties of wheat are doing particularly well, making dense growth. (0200 GMT)

Kazakhstan: Grasses in the republic have been mown from 3 million hectares, 10 percent of the land allotted for hay-mowing. Three oblasts have already fulfilled the plan for annual laying in of haylage. (0800 GMT)

Cutting of sown grasses has begun on farms in the southern rayons of Sakhalin. (1100 GMT)

Grain of the new harvest is coming in in Moldavia. In the center and south of Moldavia, harvesting of barley has begun and wheat is ripening rapidly. Grain-growing conditions have not been favorable this year, because of drought. The elevators and stores are all ready to receive the grain crops. Everything is being done to organize the reception of grain crops in an efficient manner. The corn crop is also ripening rapidly. Facilities to receive this are also ready. (1800 GMT)

20 June

Grain crop harvesting has started in the Crimea Peninsula. (1530 GMT)

Selective grain crop harvesting has started in Volgograd Oblast. (1530 GMT)

Cutting of sown and natural grasses has started in Omsk Oblast; over 200,000 tons of granulated fodder will be produced this year. (1530 GMT)

Mass grass cutting and procuring is underway in Udmurtiya. Over 4 million tons of various types of fodder are to be produced for public livestock production. (1530 GMT)

Mass harvesting of apricots, cherries, and other fruit has started in Tajikistan. Deliveries to Siberia and the Far East are to be increased this year; the first apricots have been dispatched to the country's major industrial centers. (1530 GMT)

In Altay Kray 2,400 hectares of land have been given regular irrigation facilities. In the arid Rubtsovsk-Aley Steppe, the second stage of the irrigation system is being built. By the end of the year, the trust's land reclaimers are to hand over to farmers over 5,000 hectares of irrigated fields. In our country, there are now 18.5 million hectares of irrigated land; they are called golden because each hectare costs R6,000-7,000. (1750 GMT)

#### Agricultural Developments 21-22 June

LD230440 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 21-22 June. Times of broadcasts are given in parentheses at the end of each item.

21 June

Labor feat of combine operator in Uzbekistan. Cutting of grain crops was carried out by today on 350,000 hectares, which represents 40 percent of the area under grain crops in the republic. (0204 GMT)

22 June

Farms in north Ossetiya have begun the grain harvest. Cutting and threshing of winter wheat is under way. (1000 GMT)

The harvest has begun in north Kirghizia. (1000 GMT)

Nalchik: Haymaking is under way in Kabardo-Balkaria, where all fodder procurement on the republic's irrigated lands is now on the basis of team contracting. Five times as much hay has been gathered as at the same time last year, most of it from alfalfa; twice as much haylage and vitaminized grassmeal has been prepared. Wide use is made of the active ventilation method. (1530 GMT)

Haymaking is proceeding at higher rates in the Ukraine than in previous years: sown and natural grasses have now been cut on almost 3 million hectares. (1530 GMT)

The first harvest of fodder is being gathered from hundreds of hectares of alkaline soil on farms in central Kazakhstan, particularly in Karaganda Oblast. This has been made possible by a method developed by land-improvement specialists using melted snow to reduce the alkalinity of the soil, followed by additional application of fertilizer. This will enable farms in the oblast to produce 1 million tons of greenmass more than last year. (1530 GMT)

All the farms of Moldavia are now engaged in the mass harvesting of cereal crops. Our Moldavian correspondent reports that even within Kriulyaniy rayon alone there are variations in the quality of the crop because of the spring drought. (1800 GMT)

#### Agricultural Developments 23-28 June

LD290559 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 23-28 June. Times of broadcasts are given in parentheses at the end of each item.

23 June

Northern Osetia farms have begun grain harvesting. (0001 GMT)

Northern Kirghizia grain farmers started harvesting. (0001 GMT)

Grass cutting was today completed on the 5th million hectares in Kazakhstan. The first thousands of metric tons of the new harvest have been sent to the state procurement points. (1100 GMT)

Grain and leguminous crops have been cut in the Kuban on 100,000 hectares. (1100 GMT)

Grain crops have been cut on some 30,000 hectares in Rostov Oblast. This area constitutes 1 percent of the acreage and work is just getting underway here, not made any easier by rains. (1100 GMT)

24 June

Kuban: Grain sales to the state have begun. Now 49 enterprises of the Krasnodar Kray Directorate for Bread Products are ready to receive the grain. (0104 GMT)

Fine weather has established itself in the Don area and farmers have begun harvesting. A large area, around 2 million hectares is sown with barley. (1100 GMT)

Harvesting has begun in the southern part of the Donbass region. Today farmers of Donetsk Oblast laid barley in swathes on the first thousands of hectares. (1200 GMT)

25 June

Harvesting work has now started in Vinnitsa and Kiev Oblasts in the Ukraine. (0800 GMT)

The harvesting of grain crops has started in Dzhabul Oblast. This year such crops are to be harvested from an area of over 500,000 hectares. (0800 GMT)

Ukraine: Harvesting of grain crops is now in progress in half the oblasts in the republic, while seven oblasts have begun threshing. This year's harvest demands particular skill and organization on the part of farm workers: the grain crops are ripening unevenly and they are stunted and, in a number of places, flattened by wind and heavy rainfall. (1530 GMT)

26 June

Rostov Oblast: Proletarskiy Rayon is the first to start selling grain to the state. Grain depots in the oblast can take more than 250,000 tons of grain every day. All rayons in the oblast are harvesting. Grain crops and pulses have been cut on 200,000 hectares. Half of this has been gathered in during the past 24 hours. (1300 GMT)

A fodder procurement month has started in Kazakhstan. This area sown with corn for silage, lucerne, rape and other grasses rich in protein has been increased this year. (1300 GMT)

Haymaking is progressing swiftly in the Ukraine. Speaking at the microphone is Vladimir Rodionovich Panchenko, head of the Directorate of Fodder, Meadows and Pastures of the Ministry of Agriculture of the Ukrainian SSR:

Ukrainian farms have completed the first mowing of grasses earlier than is customary. The total area grassland amounts to almost 6.25 million hectares.

At present, haymaking is continuing on mountainslopes and in the immediate vicinity of farms. A total of about 4.5 million tons and more than 7 million tons of silage have been procured. This is approximately twice as much as was procured by the same time last year. This is a result of the early spring, this year, and better organization of work. In Volyn Oblast the annual plan for the procurement of hay has been already exceeded and more than 1 ton of hay per cow has been prepared. Where there are shortages of grassland, haymaking proceeds even on roadsides and in forest clearings, sometimes by hand scything of grasses. Abundance of rain promises good results for the secondary hay-making campaign. Second sowing of grasses has been carried out on over 500,000 hectares of land (1800 GMT)

27 June

Uzbekistan: third lucerne-mowing has begun. (0600 GMT)

Kurgan Oblast has begun mass mowing of natural grasses. (0600 GMT)

Orenburg Oblast: Many city-dwellers are preparing to help with harvest. (0600 GMT)

28 June

Mass grain harvesting has begun in Kirghizia. Our correspondent interviewed Saderbek Abdrakmanovich Adrakmanov, minister of procurement of the republic:

Abdrakmanov says procurement organizations in Kirghizia have largely completed the preparation of the material-technical base for receiving the harvest. A seminar with those concerned has been held, and a plan/schedule worked out. Financial and other incentives have been adopted at enterprises and farms, whereby premiums will be given with consideration for quality indices of the grain. (0001 GMT)

Wheat harvesting has begun in Chechen-Ingush ASSR. As planned the yield is at least 22 quintals/hectare. (0400 GMT)

Fodder harvesting is in progress in Tselinograd Oblast. To date, 250,000 tons of hay have been procured. (0400 GMT)

The Kuban has started harvesting the main grain crop, winter wheat. In Krasnodar Kray more than 1.5 million hectares are sown with wheat. The dry autumn caused quite a few problems. The crop is drying out unevenly, with the result that the harvest is proceeding piecemeal. (1100 GMT)

Grain is being harvested in all rayons of Dnepropetrovsk Oblast. More than 700 units are harvesting peas, barley and wheat. Many farms have set themselves the goal of selling wheat to the state in a day or two. (1100 GMT)

Harvesting of grain crops has been completed in Kurgan Oblast. The rate of grain harvesting is gathering momentum in Uzbekistan. Since the start of the season wheat and barley have been harvested here on 500,000 hectares, which is 100,000 hectares more than at this time last year. Grain crops are still to be gathered in from an area of more than 800,000 hectares. A second sowing is to take place on the majority of the vacated land. (1100 GMT)

Grain crops have been harvested on more than 1 million hectares in the North Caucasus. Machine operators are harvesting winter barley and peas. In the Kuban, mass wheat harvesting has begun; work is proceeding in the most northern areas of Rostov Oblast. Pea harvesting is starting in Belgorod and Voronezh Oblasts. In the next few days, mass harvesting will start throughout the south of the central Chernozem region. Grain harvesting has started earlier than usual along the Volga. Reapers and combines are working in the south of Volgograd Oblast. (1500 GMT)

Cereals have been harvested on an area of more than 1 million hectares in the North Caucasus. The harvest is proceeding in the northernmost parts of Rostov Oblast. The harvest has begun earlier than usual in the Volga area. Mass harvesting is in progress in Chimkent and Dzhabul Oblasts. Harvesting of barley is beginning in Alma Ata Oblast; more than 500,000 hectares of land have been sown here to cereals. Good crops have been produced and more than 3,000 combine harvesters are ready to start work. (1500 GMT)

#### Agricultural Developments 29 June-6 July

LD070306 [Editorial Report] The following is a compilation of reports on agricultural developments in the USSR carried by Moscow Domestic Service in Russian on 29 June-6 July. Times of broadcasts are given in parentheses at the end of each item.

29 June

Sown and natural grasses have been reaped on 100,000 hectares in Omsk Oblast to date. The weather is favorable for machine operators. (0204 GMT)

To date grasses have been cut on 8 million out of the 30 million hectares in Kazakhstan. Sovkhozes and kolkhozes have procured 3 million tons of hay for public animal husbandry. Two oblasts of Kazakhstan, Chimkent and Dzhabul oblasts, have already significantly overfulfilled the annual plan for procurement of haylage. (0600 GMT)

Post-harvest sugar beet sowing has been completed in Cherkassy Oblast. The crop covers 4,000 hectares, twice as much as last year. This year second-sowing of crops will cover about 70,000 hectares in the oblast, and sowing of fodder crops has been completed on almost half this area. (1100 GMT)

Fergana Oblast: The harvest has ended here. Each hectare yielded an average of approximately 30 quintals of wheat and barley. This is one of the best figures in Uzbekistan. Winter cereals have been harvested from 500,000 hectares in the republic--100,000 hectares more than last year. (1330 GMT)

Harvesting of cereals is underway at the moment in ten union republics. Grain has now been cut on 3.7 million hectares and threshing has been carried out on almost 2 million hectares. Harvesting is progressing now in Voronezh, Belgorod and Lipetsk Oblasts. Grain is being harvested in 19 oblasts in the Ukraine and gathering of winter barley and wheat has already ended in Turkmenistan. (1500 GMT)

30 June

Kuban grain growers have cut winter, cereal, and pulse crops on 500,000 hectares, which is a quarter of the sown areas. On more than half of this area the cereals have been threshed. (1100 GMT)

To date the farms of Smolensk Oblast have cut grasses on area of 363,000 hectares and have procured 221,000 tons of hay, 200,000 tons of haylage and 750,000 tons of silage. (1530 GMT)

1 July

All harvesting equipment has been taken out into the grain fields of Kabardino-Balkaria. Reaping of the main grain crop, winter wheat, has started. (0001 GMT)

Selective harvesting of grain began in Taldy-Kurgan Oblast, Kazakhstan, today. Four of the republic's 19 oblasts are harvesting grain. (0730 GMT)

Wheat harvesting opened in Stavropol Kray today. No less than 1 million tons are to be sold to the state. (1100 GMT)

2 July

The harvest has begun in the Central Nonchernozem Zone. Mass reaping of early grain crops began today in Belgorod Oblast. The area to be harvested is over 700,000 hectares. (0204 GMT)

Harvest of grain is going well in Chimkent Oblast. Grain from 350,000 hectares has been cut and threshed. This is two-thirds of the total. (0600 GMT)

Cutting of grain began today in the second million hectare on the Don. Grain from 300,000 hectares has already been threshed. (1200 GMT)

3 July

Ryazan Oblast farmers have started the grain harvest. This year grain and pulse crops are to be harvested from 1,034,000 hectares. (0100 GMT)

To date the farms of southern Kazakhstan have harvested grain crops from 500,000 hectares. In Tajikistan 100,000 tons more coarse fodder has been procured than by this time last year. (0600 GMT)

4 July

Early grain and pulses have been cut on over 100,000 hectares in Belgorod Oblast. First cutting of grass has been completed 2 weeks earlier than usual in Belorussia. (0204 GMT)

Harvest of winter grain has been completed in the Surkhan Valley of Uzbekistan. Grain has been cut on over half a million hectares to date in the republic. (0700 GMT)

Selective harvesting of grain has begun on farms in southern Belorussia where there is a good yield of grain and intertilled crops. (1200 GMT)

Crimean machine operators, having completed the harvest of winter barley, have almost everywhere moved on to the wheat fields. (1230 GMT)

5 July

Farms in Nikolayev Oblast have begun the sale of winter wheat to the state. The drought of many months has reduced the expected yield. The southern rayons of the oblast are completing the cutting and threshing of grain ahead of schedule. The first cutting of grasses has been carried out in the region near Moscow a total of 70 percent of the years requirements in hay, haylage, and vitamin enriched meal have been gathered. (0800 GMT)

6 July

Warm and very dry weather is favorable for progress in harvesting work in the Kuban. The rate of harvesting has never been better. Grain has been reaped on 1.4 million hectares and threshed from 800,000 hectares. To date, Tselinnograd Oblast has prepared 50,000 tons of hay. (0200 GMT)

Harvesting is being completed in Uzbekistan. Cereals remain to be cut on 150,000 hectares. (0204 GMT)

Karaganda Oblast fulfills plan for haylage procurement. More than 100,000 tons of it have been laid in. (0800 GMT)

CSO: 1824/447

## AGRO-ECONOMICS AND ORGANIZATION

### POTENTIAL FOR INCREASING GRAIN PRODUCTION EXAMINED

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 5, Apr 83 pp 3-9

Article by Yu.I. Bystrakov, deputy chairman of Committee on Scientific Principles of Agriculture of the Presidium of the USSR Academy of Sciences and S.K. Orlovskaya, Candidate of Economic Sciences and senior scientific worker at the Institute of Economics of the USSR Academy of Sciences: "Grain Product Subcomplex of the Agroindustrial Complex"/

Text In the food program emphasis is placed upon the fact that a further acceleration and stable intensification in the production of grain constitute the chief problem in agriculture. The plans for the 11th Five-Year Plan call for grain production to be increased to 238-243 million tons and during the 12th Five-Year Plan -- to 250-255 million tons, with the growing areas for the grain crops remaining stable. The solution for this task will be dependent upon achieving balanced and purposeful development for the grain product subcomplex, which includes the totality of branches and subbranches of agriculture, industry, procurement, trade and other organizations engaged in the production, transporting, storage, processing and sale of grain and the products obtained from the processing of grain. The technological, organizational and economic interrelationships of all of its component elements must be subordinated to the same final goal -- satisfying the increasing requirements of the country for high quality bread and forage grain and grain products (flour, groats, macaroni products and so forth), creating the required state grain reserves and having resources available for the exporting of grain.

The principal means for intensifying the production of grain and the products obtained from the processing of grain -- raising the cropping power for the grain crops in all areas and increasing it to 21-22 quintals per hectare by 1990. Great importance is also being attached to changes in the structure of grain production by regions of the country, combating losses at all levels in the grain product subcomplex, raising the quality of the grain and grain products and improving the economic mechanism.

The average annual volume of grain production during the 10th Five-Year Plan was 205 million tons. Over the past three five-year plans, the grain crop growing areas decreased somewhat and yet the gross production of grain increased as a result of improved cropping power (7th Five-Year Plan -- 10.2

quintals per hectare; 8th -- 13.7 quintals per hectare; 9th -- 14.7 quintals per hectare and 10th Five-Year Plan -- 16 quintals per hectare).

The requirements for bread grain and for the products obtained from the processing of grain are for the most part being satisfied completely at the present time. The nutritional structure which existed in the past and which continues at the present time is characterized by a raised content of grain products in the food ration. The grain requirement for livestock and poultry feed is still not being satisfied and is increasing systematically. This is caused to a considerable degree by the use in animal husbandry of feed in an unbalanced form, especially with regard to protein.

An analysis of the cropping power level for individual grain crops in the USSR and in other developed countries of the world testifies to the great reserves which we have at our disposal for increasing the production of grain. The principal path to be followed for raising the cropping power of the grain crops -- the introduction of scientifically sound systems of farming which will make it possible to raise sharply the level of use of the natural and technical-economic potential of the grain economy. In conformity with this idea, the tasks concerned with improving plant breeding and seed production operations warrant priority attention. The conversion of seed production for grain crops over to an industrial basis was planned for the 11th Five-Year Plan. Subsequently, insurance and carry-over seed funds for grain and pulse crops should ideally be created in the required amounts.

An intensification in the grain economy raises the need for the use of chemical processes on an extensive and all-round basis. Improvements in the cropping power of the grain crops are possible only if efficient use is made of fertilizers, chemical regulators of plant vitality and so forth. Compared to 1980, the plans call for mineral fertilizer deliveries in behalf of grain crops to be increased by 1985 by a factor of no less than 1.7 and by 1990 -- by twofold. The increase in fertilizer resources will be employed mainly in those zones which can ensure the greatest increase in the yields of commodity grain. The plans call for improvements in the quality and structure of the mineral fertilizers being made available for the grain crops. In this regard, it will be necessary to accelerate the introduction of the method of treating potassium fertilizers with surface and film-forming substances, for the purpose of raising the quality of their action by slowing down the solubility of the substance in the soil.

In the future, up to the year 1990, the plans call for a considerable expansion in the zone of irrigation grain production and this must also promote improvements in the cropping power of the grain crops.

The carrying out of the tasks assigned to the grain product subcomplex requires that concern be displayed not only for raising the cropping power but also for achieving stability in the production of grain. Although during the years of the past three five-year plans the grain yields increased from an annual average of 13.7 to 16 quintals per hectare, nevertheless the fluctuations in this indicator by years were quite considerable. Thus, for an average cropping power for the grain crops during the 10th Five-Year Plan of 16 quintals per hectare, in 1976 17.5 quintals per hectare were obtained, in 1977 -- 15, in 1978 -- 18.5, in 1979 -- 14.2 and in 1980 -- 14.9 quintals

per hectare, that is, the changes in cropping power during some years amounted to more than 4 quintals per hectare. These changes can be reduced somewhat with the introduction of scientific-technical achievements into the grain economy and yet it is impossible to eliminate them entirely. In conformity with this, special attention is being given to the problem of creating grain reserves, the solving of which will make it possible to overcome the consequences of negative natural phenomena (droughts, floods and so forth).

An analysis of the requirements for various types of grain products underscores the need for substantial changes in the structure of their production. Computations indicate that if the grain being supplied for feed purposes continues to be used as it is at the present time (unbalanced rations, in pure form and so forth), then in order to satisfy the population's requirements for animal husbandry products according to rational norms, it will be necessary to produce from 600 to 700 kilograms of such products per capita. Thus, taking into account the grain requirements for food and production purposes, the need for making seed available and for creating insurance funds and state reserves, the production of grain will have to be increased to 1,100-1,200 kilograms per individual annually. One of the most effective means for solving the grain problem in our country is that of achieving a rational structure for the feed base, one which calls for feed that is balanced in terms of all components. In such a case the national economic per capita requirement for grain, taking into account the rational norms for feeding, including animal husbandry products, decreases to 850-900 kilograms.

In our country, wheat traditionally plays a predominant role in the structure of the grain balance. In the gross yields for grain crops, the proportion of this crop is approximately 50 percent and in the state procurements of grain -- 60-70 percent. Grain forage crops occupy roughly 40-48 percent of the gross yields and 41-45 percent of the sowing areas for all grain crops. Such food crops as buckwheat and millet are still not being produced in adequate quantities.

In developed countries throughout the world, grain forage crops occupy a chief place in the grain balance. In the U.S.A., for example, the production of corn grain is roughly 60 percent of the overall gross yield of grain, whereas wheat constitutes only 21 percent. Pulse crops and soybeans constitute a considerable portion of the grain being produced in the U.S.A.

In 1980, winter grain crops occupied 32.7 million hectares in the USSR, including 22.6 million hectares of wheat, 8.6 million hectares of rye and only 1.5 million hectares of barley. Spring grain crops occupied 93.9 million hectares, including 38.9 million hectares of wheat, 3 million hectares of corn for grain, 30.1 million hectares of barley, 11.8 million hectares of oats and only 4.7 million hectares of pulse crops.

Based upon the data cited, it is apparent that, by expending 60 percent of the grain for the development of animal husbandry, we are allocating 40 percent of the area under crops for the principal grain forage crops and are forced into using bread grain for covering the shortage in feed. In the case of pre-revolutionary Russian grain production, there were 0.5 quintals of feed grain for every quintal of bread grain. By 1950 this ratio had changed and stood at 1:1. During the 10th Five-Year Plan, more than one half of the grain produced was used for feed purposes.

Thus, one trend for solving the grain problem is clearly singled out -- a rational structure for the grain fields. And here there are many unsolved problems. First of all, there is an acute shortage of highly productive varieties even for the principal grain producing regions.

The winter grain crops play an important role in the grain balance. Occupying 17.8 percent of the grain crop areas, they furnish 26.4 percent of the gross yield of grain. The potential for increasing the production of grain by means of these crops has grown in recent years in connection with the introduction of new and highly productive varieties capable of producing up to 100 quintals per hectare on rich soil. However, sufficient use is not being made of them. The cultivation technology is being violated on many farms and there are instances of crops perishing, as a result of which the grain harvest decreases by an average of 20 percent annually.

In order to increase the production of winter grain crops, their sowing areas should be established mainly in those regions where they furnish higher yields than do the spring grain crops (northwestern, central, Volgo-Vyatsk, central chernozem and Volga economic regions of the RSFSR).

Another measure is that of improving the structure of the winter crop fields by increasing the sowings of winter rye, at the expense of winter wheat, in the mentioned regions and also in the northeastern Ukraine and in the Kazakh SSR. Being a more winter-hardy crop, rye surpasses winter wheat in terms of cropping power in the mentioned regions, especially following non-fallow predecessor arrangements and on light-textured soils. Moreover, these advantages are particularly noticeable in connection with the introduction of new and highly productive varieties.

A most important measure for preventing losses and raising the cropping power of the winter crops is that of observing the correct crop rotation plans, thus making it possible to plant the crops following good predecessor arrangements. When planting winter crops in arid regions, an especially great role is played by clean fallow. In conformity with the plans for land management, the crop rotation plans of farms must encompass approximately 11 million hectares. Here a shortage of clean fallow is one of the principal causes of slow growth in the cropping power of the winter crops. The reestablishment of clean fallow to the amounts called for in the crop rotation plans will make it possible, on the areas occupied by fallow alone, to obtain 55-60 million tons of winter crop grain with a cropping power of 50-55 quintals per hectare (this amount is quite realistic when cultivating intensive varieties and applying complete fertilizer norms). A reduction in the sowing areas for winter crops following grain predecessor arrangements (in which case great losses occur and cropping power is lowered severely) will add stability to the production of grain for these crops, especially during unfavorable years.

A deficit in forage grain leads to a situation wherein a portion of the bread grain (approximately 20 million tons) is used for feed purposes. This raises the costs for animal husbandry output and it lowers the profitability for such production. Over the past 10 years, the proportion of grain feed in the rations for large-horned cattle has steadily increased and today it amounts to 40-50 percent on many farms. For example, at kolkhozes in Ul'yansovsk Oblast, the structure of the winter rations for cows over the past 5 years has consisted of

40 percent concentrated feed in terms of nutritional value, 34 percent succulent feed and 1-1.5 percent hay. For an average annual milk yield of 2,072 kilograms of milk from a cow, 1.64 quintals of feed units were expended per quintal of product, including 0.47 quintals of expensive concentrates. The production cost for the milk exceeded 33 rubles per quintal, which is considerably more than the procurement price (see SEL'SKAYA ZHIZN', 1982, 6 October).

An analysis of the use of feed in this area reveals that the higher the proportion of concentrates in the ration for large-horned cattle, the more expensive the output. Thus, at the Put' Il'ich Kolkhoz in Kuzovatovskiy Rayon, for a productivity of 2,209 kilograms of milk from a cow, 1.53 quintals of feed units were expended per quintal of output, including 0.45 quintals of concentrates. The production cost for the milk amounted to 36 rubles and 95 kopecks per quintal and thus its production was unprofitable. However, if the proportion of concentrates in a ration (mandatory in a balanced ration) decreases, then opportunities are presented not only for achieving economies in the use of grain but also for raising the production efficiency for animal husbandry products. For example, at the Kolkhoz imeni Sverdlov in Ulyanovsk Rayon, for an annual milk yield of 2,700 kilograms of milk from a cow, 1.2 quintals of feed units were expended per quintal of milk, including 0.25 quintals of concentrates. The production cost for the milk was only 26 rubles and 10 kopecks and thus it was produced on a profitable basis. At the Kolkhoz imeni XX S'yezda KPSS in Kuzovatovskiy Rayon, for an annual milk yield of 2,463 kilograms, 1.3 quintals of feed units were expended per quintal of milk, including 0.26 quintals of concentrates. Milk production at this farm was also profitable.

The experience of farms in Ulyanovsk Oblast convincingly testifies to the effectiveness of use of the haylage-silage type of feeding during the winter. Thus, for example, 390 grams of concentrates were expended for the production of 1 kilogram of milk in a control group, for silage type of feeding -- 242 grams and for haylage-silage -- only 137 grams. During 1982 the oblast's farms produced more than 400,000 tons of milk involving expenditures of more than 200,000 tons of concentrates. If the haylage-silage type of feeding was introduced in all areas, it would be possible to realize a savings of more than 100,000 tons of concentrates, which are in short supply at the present time. More extensive use should be made of the method developed by Academician of the Academy of Sciences for the Kirghiz SSR N.I. Zakhar'yev for obtaining high milk yields from cows while conserving in the use of concentrates. For an annual milk yield of more than 8,000 kilograms of milk per cow, the expenditures of concentrates per kilogram did not exceed 185 grams.

In the future, improvements in the structure of feed in terms of the proportion of coarse, succulent and pasture feeds will require certain measures to be carried out in connection with the intensification of field and meadow-pasture feed production. The food program calls for hay procurements to be raised to 110-112 million tons by 1990 and food roots -- to 60-63 million tons. This will make it possible to reduce considerably the expenditures of bread grain for feed purposes.

Some changes are required in the production structure for forage grain. First of all, an increase is called for in the production of corn for grain and pulse crops.

An important reserve for improving the consumption of the final products of the grain product subcomplex is that of raising the quality of the grain.

In recent years an alarming trend has become more noticeable -- a deterioration in the quality of wheat grain in terms of its protein and gluten content. For example, in the Volga, north Caucasus, Ukrainian, Urals and Siberian regions, in addition to an insufficient amount of gluten in the wheat grain, its quality has also been very low. The reasons for this -- damage to the plants caused by the stink-bug, low volume weight of the grain and mixture of green bleached and sprouting grains.

The reduction in the protein and gluten content in wheat grain is associated mainly with growth in productivity over the past 15-20 years and the formation of a gap between the plant requirements for nutrients and the level of their application to the soil. For example, for a yield of 25-30 quintals per hectare and a grain protein content of 14 percent, the wheat withdraws 100-110 kilograms of nitrogen per hectare from the soil, 30-40 kilograms of phosphorus and 70-80 kilograms of potassium. At the same time, over the past few years no more than an average of 90 kilograms of active agent have been applied annually to a hectare of arable land, including approximately 40 kilograms of active nitrogen fertilizer agent. As a result, a deficit has formed which reduces the protein content of the grain. For a yield of 45-50 quintals per hectare, achieved on leading farms, the deficit in nitrogen-phosphorus nutrition becomes even more acute. The slow growth in the grain crop yields is explained by the unsatisfactory balance in nutrients. In 1979, 45 percent of the withdrawal of nitrogen and 42 percent of the potassium were not covered by fertilizer applications. At the same time, taking into account the coefficients of use of fertilizers in the year of application and the computations of specialists, the amounts of nitrogen and potassium fertilizer furnished should be increased by a factor of 1.5-2 and that of phosphorus by a factor of 2-3 compared to the amounts withdrawn.

Another important reason for a reduction in the quality of wheat grain is a deterioration in the structure of the predecessor crop arrangements, especially in behalf of winter wheat. Growth in stubble predecessor arrangements and a reduction in the areas of clean fallow also influence the quality of the grain to a considerable degree.

The quality of the grain is also adversely affected to a great degree by the dragging out of the sowing periods in the Trans-Urals and Siberian regions and in the northern part of northern Kazakhstan. As a result, the gluten content in the grain decreases, its quality is often formed at the Group II level, the volume weight decreases and an increase takes place in the mixture of under-ripe grains and also in the danger of damage to the grain caused by frosts.

In all regions of the country, to varying degrees, crops are being cut down excessively early at a moisture content greater than 40 percent; this lowers the quality of the wheat in terms of a number of characteristics (gluten content, volume-weight and so forth). The grain is being held in windrows for too long a period on a massive scale -- up to 2-3 weeks instead of 3-5 days, the optimum period for quality. For example, it has been established that the protein content is lowered by 0.3 percent in grain harvested 10-12 days following the onset of complete ripeness.

An important indicator of grain quality is its protein content. But the new varieties of winter and spring wheat are not always distinguished by a high protein content. Thus the leading varieties of winter wheat Bezostaya 1 and Mironovskaya 808 on the average are inferior to previous varieties in terms of protein content. Recently the Saratovskaya 29 strong wheat variety has been characterized by an insufficient amount of protein in the grain and this has been associated mainly with high cropping power.

A considerable reserve for raising the quality of the output is embodied in making more complete use of the potential of a variety, since it is known that the quality of grain in mass agricultural production is lower by 25-40 percent than the plant breeding qualities of the crop.

For the existing scales of agricultural production in the country, even a negligible increase in the quality of the output can produce a large economic effect. Computations have shown that an increase of 1.5 percent in the protein content in winter and spring wheat grain is equivalent to the production of almost 1 million additional tons of plant protein.

The farms are sustaining considerable losses caused by the continuous mass mixing of grain batches of varying quality on the thrashing floors, grain obtained from different fields. The quality of the wheat is also being adversely affected by the practice of those grain receiving enterprises which do not accept damp grain from the farms, notwithstanding the idle time of the powerful drying and grain cleaning equipment.

At the present time, science has developed measures and recommendations for improving the quality of the wheat. Included here are recommendations for improving the fertilizers, the predecessor crop arrangements and also the mowing and thrashing periods.

For the purpose of obtaining high and good quality winter wheat grain yields in the Ukrainian SSR, the north Caucasus, the nonchernozem zone of the RSFSR and other regions, the optimum dosages for applying nitrogen, phosphorus and potassium are considered to be 90-120, 90 and 30-45 kilograms per hectare respectively. The application of such a quantity of nitrogen should ideally be split up into several parts (principal application, spring top dressing and late top dressing). This will promote to a greater degree an increase in the protein content of the grain.

Great reserves for reducing grain losses and losses in the products obtained from the processing of grain are available during each production stage, commencing with the cultivation of the grain, its harvesting, transporting, storage and industrial processing and ending with the consumption of the final product. A disruption in the cultivation technology for grain crops, the untimely harvesting and transporting of the crops obtained and also insufficiently efficient advancement to subsequent stages lead to a situation wherein the potential opportunities afforded by the grain product subcomplex are not being utilized fully.

Great losses are still being sustained during the harvesting of the crops. This is explained not only by a shortage of agricultural equipment but also by low-technical-economic parameters. The equipment being made available to the

kolkhozes and sovkhozes at the present time does not ensure the optimum agrotechnical periods required for the sowing and tending of the plantings and the harvesting of the grain crops. With the existing pool of grain combines, considerable grain losses are occurring owing to a dragging out of the harvest periods. Further work is required in connection with improving the grain harvesting equipment so as to raise its productivity and reliability, reduce losses during harvesting operations and create harvesting units for the zones of unstable farming which can be employed during all types of weather.

Insufficient support for the farms in the form of grain storehouses and cleaning equipment leads to losses in the grain already harvested during storage, drying and primary processing at kolkhozes and sovkhozes.

As a result of improvements in the technical level of post-harvesting processing, considerable improvements will be achieved in the future in the quality of the grain being obtained, with labor expenditures being reduced by a factor of roughly 1.5-2. For example, the method of radiation disinfection is more economical than the chemical method for grain processing. The productivity of an experimental-industrial unit at the Odessa Elevator is 200 tons per hour.

The elevator-storehouse economy will be developed to an extensive degree. During the 11th Five-Year Plan, the capacity of the grain elevators will be increased by 20 million tons.

The plans call for an expansion in the production capabilities of the milling and groats industry. At the present time, there are many small mills throughout the country which are only weakly equipped with modern equipment. Future plans call for the construction of mills having a capability for processing 250 and 500 tons of grain daily. As a result, during the current five-year plan the production of high quality flour will be increased by 24-27 percent.

Although a considerable increase took place during the 1976-1981 period in the production capabilities of enterprises of the baking industry and many new items of technological equipment were installed, nevertheless the branch has still not been adequately supplied with kneading, dough-making, dumping and rounding units and so forth. The technological level of the equipment often lags behind that of foreign models in terms of the technical-economic indicators. The principal technological processes for the production of baking products have been mechanized and yet insufficient numbers of the required types of equipment are resulting in considerable expenditures of manual labor. Insufficient intensive introduction of non-packaged transporting and storage of flour and additional raw materials is bringing about great expenditures of manual labor in the storehouses.

In connection with increasing the production of grain and the products obtained from the processing of grain, great importance is attached to those economic measures which promote improvements in labor productivity, lower production costs and raise the profitability of the grain economy. Here a substantial role is played by improvements in the formation of prices. Although the production of the principal types of grain crops (excluding some great crops)

has for the most part been profitable in recent years, nevertheless a negative trend towards an increase in production costs has taken place (from 1964 to 1979, the production costs for grain at kolkhozes increased by roughly 82 percent and at sovkhoses -- by 62 percent). Since 1 January 1983, an increase has taken place in the procurement prices for grain and bonuses have been introduced for adding on the prices for products sold to the state by low-profitability and unprofitable kolkhozes and sovkhoses. Under the new conditions, it is now possible for all farms specializing in the production of grain, including those which operate under poor natural-climatic conditions, to operate on a profitable basis. Moreover, in addition to the new procurement prices and the bonuses for adding to them, additional stimulation is being provided for the production of improved quality grain crops. This applies to the more valuable varieties of oats for the production of groats, rice grown without the use of pesticides for the production of dietetic flour at specialized farms and also certain other types of grain products. However, in order to convert an exchange of products during all stages in the production and processing of grain over to an equivalent basis, one which will ensure the extensive use of cost accounting relationships, it will not be enough to merely employ measures within the price formation system. Measures are required for improving interrelationships among all those participating in production operations in the grain product subcomplex. This includes improving the planning and organization of grain product procurements and establishing in a more accurate manner the rates for the services of grain procurement enterprises for the cleaning and drying of grain. A requirement also exists for further expanding and improving the conditions for employing economic contracts between the agricultural enterprises and procurement and service organizations. Success in this work is dependent upon unconditional observance by the parties involved of their mutual obligations. At the present time, insufficient use is being made of sanctions and incentives in the contractual relationships of agricultural enterprises.

At the present time, leading forms for labor organization and for payments for the final results are being employed more extensively in many regions of the country in the production of grain. Mechanized teams which are carrying out an entire cycle of operations concerned with the cultivation and harvesting of grain crops on their assigned tracts of land and which are using the job contract plus bonus method of wages are achieving high indicators in cropping power and production efficiency. The extensive use of the experience of brigades and teams which operate on a contract basis will make it possible to achieve more rapidly the planned indicators for growth in the production of grain.

Foreign economic relationships play a definite role with regard to satisfying the country's requirements for grain. Food wheat is being procured for the most part from four chief exporters of grain in the world market (U.S.A., Canada, Argentina and Australia). During the May (1982) Plenum of the CPSU Central Committee, the task was assigned of making more intensive use of our own resources for increasing grain production and to gradually decrease and thereafter completely eliminate the importing of food wheat. The interests of the country require that we have at our disposal adequate supplies of our own internally produced food and forage resources.

In the future, collaboration in the sphere of the grain economy with developing and especially with socialist countries will be expanded and

strengthened. Greater relationships must be established with socialist countries in connection with the use of highly productive grain crop varieties, progressive production technologies and so forth. Ideally, greater use should be made of the practice of exchanging seed for the best varieties of wheat, corn, barley and other grain crops with the VNR /Hungarian People's Republic/, the GDR and the CSSR /Czechoslovak Socialist Republic/.

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NEW PROCUREMENT PRICING SYSTEM OF LIVESTOCK PRODUCTS EXPLAINED

Moscow ZHIVOTNOVODSTVO in Russian No 4, Apr 83 pp 60-61

Article by A.M. Chursin, Candidate of Economic Sciences: "New Procurement Prices for Livestock Products"/

Text During the years which have elapsed since the March (1965) Plenum of the CPSU Central Committee, a great amount of work has been carried out in connection with improving the territorial differentiation of procurement prices, in the interest of taking into account more completely the zonal peculiarities and creating the conditions required for equalizing the economies of farms located in different zones of the country.

On the whole, the procurement prices for agricultural products for the period mentioned increased by 57 percent. In the process, no changes took place in the retail prices for these products or for goods produced from agricultural raw materials.

Notwithstanding the considerable increases in the procurement prices for agricultural products, difficult economic situations developed at the kolkhozes and sovkhoses in recent years. The growth in expenses coupled with the lag in the procurement price level led to a reduction in the profitability of kolkhoz and sovkhos production. Thus it was considered advisable during the May (1982) Plenum of the CPSU Central Committee to adopt the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Measures for Improving the Economic Mechanism and Strengthening the Kolkhoz and Sovkhos Economies." This decree defined a large complex of measures aimed at strengthening cost accounting at kolkhozes, sovkhoses and other agricultural enterprises, intensifying their material interest in increasing production and improving the quality of output.

Among these measures, an important place is occupied by improvements in the procurement prices for agricultural products, which constitute a powerful lever for exerting economic influence on the development of production based upon cost accounting and for achieving a correct combination of public and private interests at the kolkhozes and sovkhoses.

The procurement prices must reflect the socially required expenditures of labor and resources for the production and sale of products, provide compensation for production expenses and ensure a profit for each farm operating in a normal

manner, stimulate an increase in production and improvements in the quality of the agricultural products and they must create equal economic conditions for raising the income of farms which operate under different natural-economic conditions, in various zones and also within zones, such that the principle of equal pay for equal labor is followed in a consistent manner. At the same time, the procurement prices must motivate the agricultural enterprises into raising labor productivity and lowering output production costs.

Commencing 1 January 1983, new and raised procurement prices were introduced for large-horned cattle, hogs, sheep, milk, grain and other agricultural products and bonuses were also introduced for adding on to the procurement prices for products sold to the state by low-profitability and unprofitable kolkhozes and sovkhozes, which make it possible to ensure profitable production operations for all types of agricultural products.

The principal amounts involved in raising the procurement prices are concerned with animal husbandry output, since the elimination of unprofitable operations in this branch and the creation of normal economic conditions for reproduction are considered to be two of the more important problems concerned with increasing the production of meat, milk, wool and other products.

The procurement prices (taking into account the bonuses added on to the prices) for milk and dairy products were raised in the amount of more than 5.1 billion rubles. The addition to the prices was considerable. Under these conditions, the possibility exists of achieving a production profitability for milk of not less than 20 percent of its production cost. The procurement prices for dairy products sold to the state by kolkhozes, sovkhozes, other agricultural enterprises and organizations and the population were established for 1 ton of 1st grade milk of basic fat content and for 10 percent fat in 1 kg of cream in the following amounts (see Table).

	For 1 Ton of Grade I Milk of Basic Fat Content (in rubles)	For 10% Fat in 1 kg. of Cream (kopecks)
RSFSR	362	75
Ukrainian SSR	320	65
Belorussian SSR	310	65
Uzbek SSR	350	70
Kazakh SSR	350	70
Georgian SSR	400	75
Azerbaijan SSR	400	75
Lithuanian SSR	310	65
Moldavian SSR	320	65
Latvian SSR	310	65
Kirghiz SSR	350	70
Tadzhik SSR	350	70
Armenian SSR	400	75
Turkmen SSR	350	70
Estonian SSR	310	65

The union republic councils of ministries have been authorized to differentiate the mentioned procurement prices according to the natural-economic zones. Grade II milk is paid for at the rate of 7 percent and sub-standard milk -- 20

percent lower than that for Grade I milk. For Grade I milk the temperature of which at the moment of acceptance is not higher than 10° Centigrade, an additional bonus is paid out in the amount of 10 rubles per ton of milk of basic fat content.

The procurement prices for animal oil are retained at the existing level, since they were established at the retail price level minus a special trade discount. A further increase in the procurement prices for animal oil is not considered advisable, since the state is stimulating the sale of whole milk by the kolkhozes and sovkhoses, from which a broad assortment of dairy products is being produced.

The procurement prices for large-horned cattle have been raised an average of 15 percent, for sheep and goats -- 22, hogs -- 14, poultry -- by 7.5 percent and they have been established in the following amounts:

	Large-horned Cattle of Average State of Nourishment	Sheep and Goats of Average State of Nourishment	Hogs of 2d and 3d Categories
	(in rubles per ton of live weight)		
RSFSR	1550	1650	1850
Ukrainian SSR	1450	1600	1700
Belorussian SSR	1600	2200	2100
Uzbek SSR	1600	1500	1800
Kazakh SSR	1450	1500	1800
Georgian SSR	2000	1700	2300
Azerbaijan SSR	2000	1700	2300
Lithuanian SSR	1550	2200	2100
Moldavian SSR	1450	1600	1700
Latvian SSR	1550	2200	2100
Kirghiz SSR	1450	1500	1800
Tadzhik SSR	1600	1500	1800
Armenian SSR	2000	1700	2300
Turkmen SSR	1600	1500	1800
Estonian SSR	1550	2200	2100
Sheep of the Romanov and Karachayev strains and their hybrids (in all areas)		2550	

In the union republics the mentioned prices are differentiated by zones and various categories in the state of nourishment of the animals.

Large-horned cattle, sheep and goats which are in a high state of nourishment are paid for at a rate which is 20 percent higher than the prices for these types of animals when in an average state of nourishment. Large-horned cattle, sheep and goats which are in a lower than average state of nourishment are paid for at a rate which is 25 percent lower and lean (sub-standard) animals -- 40 percent lower than the prices for animals which are in an average state of nourishment.

Calves of the 1st category are paid for at the prices for large-horned cattle of a high state of nourishment and 2d category calves -- at the prices for livestock of an average state of nourishment. A bonus in the amount of 25 percent is paid for sheep of the Romanov strain and their hybrids providing their live weight is 16 kg or higher and they have a wool or semi-wool cover which meets the standard for Romanov sheepskin fur.

Hogs of the 1st category are paid for at a rate which is 10 percent higher than that for category II animals, category IV -- 25 percent lower than category II animals and lean (sub-standard) animals -- 40 percent lower than the category II animals. Suckling pigs (category V) are paid for in all areas at the rate of 3 rubles for 1 kg of live weight. The procurement prices for horses, camels and reindeer have been raised.

For chicks and broilers, the procurement price in all areas has been established at 2,100 rubles per ton of live weight (in the Georgian SSR -- 2,400 rubles), for ducks -- 2,000 rubles, geese -- 2,300 rubles, turkeys and guinea hens -- 2,600 rubles.

In many regions of the country, the effectiveness of the kolkhoz and sovkhos economies is greatly dependent upon the development of wool production. In recent years, the production of such output has either been of low-profitability or unprofitable. In January 1983 the procurement prices for wool were raised an average of 12 percent, goat down -- 30 percent, leather raw materials, fur and sheepskins, fur raw materials and industrial furs -- by 100 percent, the prices for cage-bred mink pelts -- by 10 percent, cage-bred fox pelts -- by 20 percent, the horns of young stags and spotted deer -- by 30 and intestinal and rennet raw materials -- by 50 percent.

Rabbit procurements from kolkhozes, sovkhos and other agricultural enterprises and also from the population are now being carried out by procurement organizations of consumer cooperation and at agreed upon prices.

The bonuses for agricultural products sold to the state by low profitability and unprofitable farms are established by the councils of ministers of union republics which do not have an oblast breakdown, by the councils of ministers of autonomous republics and by kray and oblast executive committees, in percentages of the procurement prices which were in effect on 1 January 1983 and taking into account the bonuses and reductions for the quality of the products, within the limits of the appropriations allocated for this purpose, but no higher than 75 percent of the procurement price.

The bonuses added on to the procurement prices are established for low profitability and unprofitable farms depending upon their profitability level. Once the bonus amounts are established for the farms, consideration is given to their resource requirements for covering the losses which occurred as a result of objective natural-economic conditions and to the need for ensuring a minimum level of profitability for achieving growth in the production and procurements of agricultural products.

The payment of the bonuses, for adding on to the procurement prices for low-profitability and unprofitable farms is carried out by the procurement, processing, trade and other enterprises and organizations engaged in procuring products accepted and credited towards fulfillment of the plan for sales to the state (planned and above-plan), with the exception of sales on the kolkhoz

market to sovkhos manual and office workers and expended for public catering, livestock breeding, egg production used for incubation purposes and also the initial weight of young stock turned over for fattening, grazing and maturing to an inter-farm enterprise, without this weight being credited towards plan fulfillment by the participating farms.

In those instances where farms sell products to the trade network, sanatoriums, and children's and other institutes, at retail prices and with reimbursement in the prescribed manner for the difference between the procurement and retail prices for the supplier farms, the payment of the bonuses is carried out directly by Gosbank from a special account for the payment of procurement price bonuses. Bonuses are paid in the same manner to low-profitability and unprofitable farms for products sold directly beyond the borders of a union republic.

The basis for the payment of the procurement price bonuses by the procurement specialists, in the manner prescribed for products sold to the state by low-profitability and unprofitable farms is a decision handed down by the union republic councils of ministers (those lacking an oblast breakdown), the councils of ministers of autonomous republics and kray and oblast executive committees and a list of farms approved by them and made available to the procurement specialists.

The procurement price bonuses for low-profitability and unprofitable farms are paid out to the procurement specialists simultaneously with the accounts for products sold to the state. The total bonus amounts are indicated on the acceptance receipts, lists and other accounting documents for the products supplied by the low-profitability and unprofitable farms, to whom the procurement price bonuses are to be paid. The following additional information is included in these documents:

...the bonus percentage for the low-profitability (unprofitable) farm;

...the cost of the output according to the procurement prices and taking into account the reductions and bonuses for quality;

...the total amount of a bonus for a low-profitability (unprofitable) farm. The procurement price bonuses for low-profitability and unprofitable farms are not included in the computation for the 50 percent procurement price bonus paid to kolkhozes, sovkhos and other agricultural enterprises and associations for the sale of products to the state over and above the average level achieved during the 10th Five-Year Plan.

The procurement price bonuses for products sold to the state by low-profitability and unprofitable farms are included in the total amount of earnings realized from the sale of agricultural products.

It is recommended that the kolkhozes and sovkhos use the additional income obtained from the increase in procurement prices and the introduction of procurement price bonuses mainly for the carrying out of measures associated with increasing the production of agricultural products.

Thus, at the present time, as a result of assistance furnished to the state in conformity with the decisions handed down during the May (1982) Plenum of the CPSU Central Committee, favorable conditions have been created in agriculture which make it possible to strengthen the economies of kolkhozes, sovkhozes and other agricultural enterprises and to operate on a loss-free basis.

Today the chief task of the agricultural leaders and specialists consists of realizing a maximum return from their use of land, the logistical potential created and the labor, material and financial resources and to launch a persistent campaign aimed at raising labor productivity and achieving economies and thrift.

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## AGRICULTURAL MACHINERY AND EQUIPMENT

### SOVETSKAYA ROSSIYA ON AGRICULTURAL EQUIPMENT

PM131434 Moscow SOVETSKAYA ROSSIYA in Russian 11 May 83 First Edition p 1

[Editorial: "Grain Growers' Arsenal"]

[Text] Never before has our agriculture been so well equipped as now. The Kolkhozes and Sovkhozes have almost 1.5 million tractors, 463,000 grain harvesting combines, hundreds of thousands of reapers, mowers, pickup balers and other machinery and mechanisms. The rural workers' power supply has more than trebled since the CPSU Central Committee March (1965) Plenum. And recently a CPSU Central Committee and USSR Council of Ministers resolution adopted a program for the further provision of modern equipment for the Kolkhozes and Sovkhozes. By the end of the 5-year plan it is proposed to effect a substantial improvement to the quality of machinery and equipment, to raise their reproductivity and reliability, and increase their life.

At the same time it must be borne in mind that even the material and technical base which existence makes it possible to achieve considerably better results in agriculture than we have at present. However, the opportunities are not always used effectively. In noting this, Comrade Yu.V. Andropov, general secretary of the CPSU Central Committee, in his speech at the conference of union republic Communist Party Central Committee and party kraykom and obkom first secretaries, drew attention to the fact that many kolkhozes and sovkhozes have failed to resolve the task of security machinery operator cadres. Some equipment is not the responsibility of a specific person and the base for its repair and storage is being created only slowly. Of course, the quality of agricultural machinery must be improved but above all their operation must be considerably better organized.

On many Kolkhozes and Sovkhozes the productivity of tractors, combines and trucks is still low. On the farms of the northwest region the daily yield per tractor is far less than the average for Russia. There is a similar picture as regards the use of grain harvesting combines. That means that "horsepower" is idle a large part of the time because of malfunctions, lack of organization, the poor qualifications of the machine operators, or simply because of someone's laziness and carelessness. After all, new equipment reaching the Kolkhozes and Sovkhozes is not only more convenient to handle and more powerful, it is also very "demanding" on the level of organization of labor and knowledge of the matter. If the sequence of all technological operations is well con-

sidered and they are linked to agrotechnical deadlines, if cadres are trained and instructed if the quality of work is monitored and discipline and strict order are observed in everything--that means that the necessary preconditions have been created for enhancing the effectiveness of equipment. And the Kolkhozes and Sovkhozes should put concern for this first. Otherwise heavy expenditure on improving machines and creating new ones will be futile. Unfortunately in some rayons expenditure on retooling is far from being in proportion to labor productivity growth, it is considerably higher.

Last year, for instance, 802 combines took no part in the harvest in Kirov oblast, while in Kurgana oblast the figure was 968 and in Volgograd oblast over 1,000.

Equipment has been prepared better for spring and summer this year and the plans for the repair of tractors, trucks, plows and seeders have been fulfilled in the majority of rayons. However, far from everything is in order with regard to combines. On the Kolkhozes and Sovkhozes of Voronezh and Kursk oblasts there are still many of them unrepaired.

The expensive, powerful K-700 and T-150K tractors require special attention from the Kolkhoz and Sovkhoz specialists and leaders. They are being used unproductively. On some farms only at 8-10 percent of their capacity, that is, in practice they are in operation 1-2 hours a day. And not surprisingly: in a number of oblasts, these vehicles, designed for highly skilled cadres, have been handed to undertrained machine operators with only third-class qualifications. Hence frequent breakdowns. The tractors and combines are frequently written off too readily and carelessly, without having served out their allotted lifespan.

On the Kolkhozes and Sovkhozes of Saratov and Orenburg oblasts the unamortized part of prematurely written off fixed capital for 1981 totalled R30 million. The Saratov oblast Khvalynskiy Sovkhoz alone wrote off equipment worth R37,000 and only 20 percent obsolescent. Glaring extravagance--there is no other way of putting it.

Of course, machinery can be put out of commission prematurely no one is insured against natural disasters or accidents. But in this instance it is a case of regular writing off because of the careless storage of equipment, gross violations of the rules for its operation, poor-quality repair or simply thriftlessness. Surely Kolkhoz and Sovkhoz specialists and leaders do not need to have it specially explained to them that without workshops, garages oil storage premises and technical inspection points it is impossible to operate machinery normally? No, of course they do not: leaders are people with sufficient training. However, it is precisely this part of technical backup which is in a neglected state on many farms. For instance, the RSFSR State Committee for the supply of Technical Equipment for Agriculture is not fulfilling the plans for commissioning repair enterprises and technical servicing stations. Because of this the volumes of repair work for farms are in fact not increasing and make up only an insignificant proportion of the overall plan.

Now that the Agroindustrial Association Councils have begun to operate, a lot is changing in partners' relations. They are now tackling with more interest the tasks connected with the spring sowing and producing the planned yields. But a narrowly departmental approach to matters is still making itself felt in some places. Some of the machines which have come from the repair workshops have had to return there and not all tractors could go out onto the fields at the beginning of spring because of a shortage of spare parts.

The readiness of equipment is not a question which should arise given business-like relations. Partners ought to resolve the cardinal questions in a more coordinated way: Questions such as what to do to improve the productivity of the machine and tractor pool and how to seek the introduction of progressive forms of organization for its uses such as the large-group and continuous work method. Last year, 87,000 harvesting and transport complexes worked just on gathering the harvest, around 30,000 on procuring fodder and over 12,000 on harvesting potatoes and sugar beet. This helped to make more productive use of machines. But, at the same time, it must be remembered that there is still a considerable amount of formalism in introducing progressive methods of labor organization. There were actually fewer harvesting, transport and other complexes than indicated in reports. Such instances must not be permitted when creating nonregulated links and teams and when introducing the collective contracts which has found broad support among rural workers.

Party organizations at local level are called upon to increase attention both toward disseminating advanced experience and toward eliminating shortcomings. When carefully analyzing the state of affairs they cannot fail to notice the need for their concrete assistance on a whole range of major unresolved questions. Industrial methods for growing raw crops are still being introduced only poorly, and scientifically substantiated systems of arable farming are being assimilated too slowly. The authoritative opinion of party committees is very necessary in resolving a number of long-term problems. It is necessary to lay down precisely at local level a policy for the organization of the machine pool so that it meets regional conditions to the maximum. It is not so much a question of the amount of equipment as of improving the complement of equipment. For at present certain economic leaders stick to just one principle: take everything that's going, we will sort things out later. Thus they ignore scientific recommendations about the correlation of particular machines specifically intended for certain soil or climatic conditions.

Calculations by scientists of the Siberian Department of the V. I. Leni all-Union Order of Lenin Academy of Agricultural Sciences show that by increasing the quota of wide-span mowing machines to 30 percent it is possible to reduce grain-harvesting time by 5-7 days even with the existing combine park. Moreover fuel expenditure will be reduced by 20 percent and the operational life of combines will increase.

At present the grain producers are waging a persistent struggle for the harvest of the 5-year plan's third year. The machine operator is the central figure in this struggle. It depends on him to a large extent what the earth yields and how the harvest is gathered and preserved. For this reason, concern for the conditions of his work, training, daily life and leisure is the foremost

concern of communists. At the same time, party organizations are called on to organize the work so that in each collective labor discipline strengthens and proprietorial attitude to the land, equipment and all public property grows. It is precisely to the land, equipment and all public property grows. It is precisely this which will assist further technical progress in the countryside.

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## AGRICULTURAL MACHINERY AND EQUIPMENT

### CONDITION OF HARVESTING EQUIPMENT REVIEWED

PM171127 Moscow SELSKAYA ZHIZN in Russian 31 May 83 p 1

[Yu. Grachev "Agriclutural Review": "Preparing Harvesting Equipment for the Off"]

[Excerpts] Rural machine operators are well aware that ensuring that equipment is promptly serviced and his highly reliable in operation means crops harvested in the shortest possible time, zero losses, a high level of labor productivity, and the prompt transportation and delivery of grain and other crops to procurement centers. These are the very qualities in which the many Kolkhozes and Sovkhozes which start repairing combines, reapers, potato harvesters, grain harvesters, corn harvesters and other machinery in the full and actively continue doing so through the winter excel. As a rule, all harvesting equipment is at the ready on these farms by spring.

There are, however, still many farms, even in the country's southern regions, where the servicing of harvesting equipment is making slow progress, slipshod work is tolerated, and badly weatherproofed and unadjusted machinery is being declared ready for use.

As the USSR Central Statistical Administration roundup shows, as of mid-May in the country as a whole 82 percent of grain harvesting combines, an equal percentage of mowers and picup balers, and a slightly lower percentage of shredder-mowers were in working order. Some 75 percent of flax combines, 71 percent of potato harvesters, and 70 percent of corn harvesting combines were ready to commence operations. Some 76 percent of grain cleaning machines were operational. Just over 64 percent of swathers and windrowers are ready for use on farms to date.

What about the equipment which is to transport the crops? In the country as a whole 86 percent of trucks, 85 percent of tractor trailers, and 92 percent of tractors of every designation are ready.

The rate at which many items of machinery are being serviced is, on average on a par with last year. Not bad, you might think. This year's weather conditions require repair services and rural machine operators to expedite their work however. Large variations are apparent in the way this work is conducted. Take grain harvesting combines. Machine operators in Azerbaijan are coping with repair work better than anyone else, with more than 98 percent of these machines ready for use on farms to date.

In Tajikistan, on the other hand, this indicator is a mere 76 percent. These are both southern republics, where grain harvesting begins earlier than in other regions, and yet their approaches to the servicing of essential machine are very different.

The servicing of grain harvesting equipment is making slow progress on many farms in the Kazakh and Uzbek SSR's, where barely 65 percent is ready to date. And yet, to take a few examples, 92 percent of combines in Latvia, 88 percent in Georgia, 86 percent in the Ukraine, and 85 percent in Belorussia have been serviced to date. How is one to account for these disparities? Probably by differences in the way labor is organized and the engineering services' work is approached.

Disparities in the level of development of the servicing base, a shortage of spare parts, and poor liaison in a number of places between farms and enterprises under the umbrella of the State Committee for the Supply of Production Equipment for Agriculture [Goskomselkhoztekhnika] are, of course, also taking their toll.

The shortage and poor quality of spare parts is a constant subject of discussion at sessions of the All-Union Operational Staff but a complete solution of the problem is still a long way off. A whole series of plants under the umbrella of the Ministry of Tractor and Agricultural Machine Building, the Ministry of the Automotive Industry, the Ministry of Machine Building for Animal Husbandry and Fodder Production, the Ministry of Petroleum Refining and the Petrochemical Industry, and other departments are making a poor job of meeting orders from rural areas. Plans for deliveries of spare parts are not being fulfilled or are not being fulfilled on time, and product ranges are not being maintained. Production quality is also poor.

On top of the shortage of spare parts, the supply of servicing equipment to Kolhoz and Sovkhoz workshops is unsatisfactory and there is a lack of technical facilities for servicing operations and a shortage of instruments and tools. Poor supervision on the part of leaders and specialists and the lack on many farms of commissions for inspecting serviced equipment can also be added, of course. For precisely these reasons many Kolkhozes and Sovkhozes are passing as ready for use machinery which is often not properly serviced.

The standard of servicing of harvesting machinery at specialized servicing enterprises under the umbrella of the Goskomselkhoztekhnika is also giving rise to criticism. Lipetsk Oblast's Izmalkovskiy, Chaplyginskiy, Khlevenskiy, Usmanskiy, Volovskiy, and Dolgorukovskiy local Selkhoztekhnika committees on account of their extremely low standard of servicing. The servicing of harvesting machinery was also approached in an unconscientious manner by the local Selkhoztekhnika committee in Alma-Ata Oblast's Dzhambul'skiy Rayon. A check on three grainharvesting combines serviced by this association for the Degeres Sovkhoz revealed more than 30 different faults on each of them. What is more, the same collective reported having serviced eight grain harvesting combines for the Roslavlskiy Sovkhoz when six of them had not been serviced at all.

Many similar cases could be cited. Particularly intolerable are those cases where, after allocating spare parts to Kolkhozes and Sovkhozes, rayon Selkhoztekhnika committees register equipment serviced by farms themselves as having been done by them and receive payment accordingly, as did the Dzhambulskiy rayon Selkhoztekhnika committee, which charged the Roslavlskiy Sovkhoz full price for reconditioning six combines although it had merely issued the spare parts.

When servicing harvesting equipment and transport facilities it is important to pay particular attention to weatherproofing combines, fitting hinged baffles [fartuk], and increasing the height of the flaps on trailer and truck bodies-- in short, to all those "details" which machine operators often ignore but which do not cost much and help to avoid crop losses.

It is imperative to ensure that all harvesting equipment has been serviced by the start of harvesting. Constant and effective monitoring is important here. To ensure such monitoring is the direct duty and responsibility of agroindustrial associations' councils and Soviet and economic organs.

CSO: 1824/449

## AGRICULTURAL MACHINERY AND EQUIPMENT

### AGRICULTURE SUFFERS SHORTAGE OF PARTS

PM270849 Moscow SELSKAYA ZHIZN in Russian 22 Jun 83 p 1

[Yu. Grachev report: "Enhance Delivery Discipline: From a Session of the All-Union Operational Staff"]

[Text] The success of the harvest will depend largely on the reliable and uninterrupted functioning of machinery. This is why rural machinery operators are now making every effort to ensure that all combines, motor vehicles, trailers, harvesters, and grain-drying and cleansing facilities are fully overhauled. They are being greatly helped in this work by workers at many industrial enterprises engaged in the manufacture of machines, components, spare parts, and subassemblies for this equipment. This has been discussed at a routine session of the all-union Operational Staff for Material and Technical Supply for Agriculture.

L. I. Khitrin, chairman of the USSR State Committee for the Supply of Production Equipment for Agriculture, who opened the session, noted that at the same time considerable shortcomings still exist in supplying the countryside with the necessary resources. In a number of places this is delaying the preparation for harvest work of the machine and tractor pool in a number of places.

So, for instance, the Tul'skiy Kombaynovyy Zavod and the Vladimirskiy Traktornyy Zavod Production Associations, the Altay Engine Plant, and the Stavropol Piston Ring Plant, and a number of other enterprises under the USSR Ministry of Tractor and Agricultural Machine Building are lagging in deliveries to Kolkhozes and Sovkhozes of components in short supply.

The preparation of trucks for the harvest is being held up because of a shortage of a number of spare parts supplied by plants of the USSR Ministry of Automotive Industry. The GAZ Production Association (Gorkiy City), for instance, has in 5 months built up a shortfall in supplies for agriculture of 26,730 side rails, 24,970 piston ring sets, 126,390 gasoline supply hoses, and 402,100 stuffing boxes. The Avtodizel (Yaroslavl City) and Motordetal (Michurinsk City) Production Associations and a number of other enterprises in the same department are also lagging in deliveries to Kolkhozes and Sovkhozes of essential articles.

The session also discussed the acute shortage, experienced on many farms, of the hydraulic oils and indispensable for the operation of combines, mower-crushers, and other harvesting equipment. The leadership of the Ministry of Petroleum Refining and Petrochemical Industry and the USSR State Committee for the Supply of Petroleum Products, which are responsible for the production and deliveries of oils, have been ordered to make up the debt in the shortest possible time.

A number of Ministry of Petroleum Refining and Petrochemical Industry enterprises are behind with the production and deliveries to the countryside of industrial rubber goods such as V-belts and fan belts, casing stuffing boxes, and brushing rings. Among the laggards are the Krasnoyarsk, Barnaul, Karaganda, and Volga industrial rubber goods plants.

Participants in the session also examined other questions pertaining to material and technical supply for the harvest. Serious criticism was leveled against the Ministries of Machine Building for Animal Husbandry and Fodder Production, Electrical Equipment and Industry, and Procurement.

The staff session was attended by responsible workers of the CPSU Central Committee, the USSR Council of Ministers, the USSR People's Control Committee, and the USSR Gosplan, and by representatives of a number of ministries and departments.

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## AGRICULTURAL MACHINERY AND EQUIPMENT

### PRAVDA ON PREPARING MACHINERY FOR HARVEST

PM240951 Moscow PRAVDA in Russian 23 Jun 83 First Edition p 1

[O. Andreyev AGRICULTURAL REVIEW: Embarking on the Harvest"]

[Text] Once again the roar of engines does not die down in the grain fields from the morning dew until the evening dew. The harvest has come to the south of our country earlier than usual. Last year at this time people were only just beginning to cut the grain. This year, according to the latest figures, farms in nine of the union republics are harvesting.

Farmers in many regions of Azerbaijan and Turkmenia have brought joy from the very first days, obtaining high threshings of grain. But the grain crops have not been equally successful everywhere: in the northern caucasus, the southern Ukraine, and Moldavia, some of the grain crops have suffered from heat and hot dry winds, and some are undersized and sometimes sparse. In each case the agronomists and machine operators are choosing the most rational methods of harvesting. They seek to gather the crop at the best time, without losses, and to respond in their actions to the decisions of the CPSU Central Committee June (1983) Plenum. On Rostov Oblast farms, for instance, after an attentive study of the grain crops, they have decided to harvest two-thirds of them by the separate [razdelnyy] method. Here the machinery has been combined in large complexes.

The hot summer has speeded up the ripening of grain crops in many regions of the European part of the country. It is clear already that the harvest toil will begin earlier than usual on large areas. And it will not be easy. In a number of places winter and spring regions are ripening at the same time and the work load will increase. In view of this, many oblasts are trying to prepare harvesting machinery more quickly and ensure high reliability.

Nearly the entire combine pool can already be brought out into the fields by the grain growers of Altay and Krasnoyarsk Krays, Bryansk and Belgorod Oblasts, and the Mari ASSR. But that is by no means how things stand everywhere. More than 30,000 combines--one-third of the pool--have not been repaired on Kazakhstan's Sovkhozes and Kolkhozes. An alarming situation has arisen in Uralsk, Semipalatinsk, and Turgay Oblasts: here only just over half the harvesting machines have been prepared for the harvest.

The quality of repairs equally gives rise for concern. Some combines have been sent to the farms with major defects by the Borisovskiy rayon Selkhoztekhnika [supply of production equipment for agriculture] depot in Belgorod Oblast and the Kiliyskiy rayon Selkhoztekhnika on Odessa Oblast. Unfortunately such cases are not uncommon. A check showed that the percentage of combines repaired to a low standard is higher at enterprises of the State Committee for the Supply of Production Equipment for Agriculture than on farms.

"The rayon Selkhoztekhnika took three of our combines," V. Murashkevich, chairman of the Oktyabro Kolkhoz in Sennenskiy Rayon, Vitebsk Oblast, said. "And they took our machine operators--they repaired the machines themselves and the Kolkhoz paid for their labor. Could they not have done it differently and given us the spare parts? and not have taken the combines to the components. The repairs would have been done more quickly, at less expense."

On the eve of the harvest, specialists are also worried about the problem of spare parts for machinery working in the fields. Many people believe that the trouble lies not only in the shortage of components, but in their incorrect distribution for capital repairs and running repairs.

Most of these problems have long been familiar, are left over so to speak, from yesterday, and are the result of departmental disunity. The rayon and oblast agroindustrial associations must therefore study and eliminate the causes of shortcomings in machinery repairs all the more actively and quickly.

Elevators and grain reception centers are in a higher state of readiness than in past years. In regions producing strong and durum wheats the laboratories are being equipped with mechanized installations for washing away the gluten--this will make it possible to define grain quality accurately. But at some reception enterprises in Kirov, Tambov, and Penza Oblasts repair work has been dragged out and sidings are being prepared only slowly.

Practice shows that high results are achieved, as a rule, where the management of the entire harvesting production line--from fields to elevators--is properly organized. The use of hourly schedules for grain shipments and their accurate observance makes it possible, with no additional expenditure, to reduce transport requirements by nearly one-fourth and to increase the throughout capacity of grain reception enterprises by the same proportion. This year it is planned to implement centralized grain shipments according to schedules at more than half the centers and elevators. And at the others? Waiting lines and wasted time again? The progressive method must be introduced more actively and we must ensure that the grain production line operates uninterruptedly everywhere.

This depends to a considerable degree on the railmen too. Unfortunately they sometimes let their partners down. Here is a telegram received by the editorial office from Tambov Oblast: "The Volga railroad administration is disrupting work to prepare technical bases for the reception of grain from the new harvest. Our capacity is 50 percent full of grain. Dispatching is taking place extremely slowly, because of the failure to supply empty cars. From Zhalnina, director of the Muchkapskiy grain products combine."

While resolving questions of preparations for the harvest, party, Soviet, and economic organs must not lose sight of that important summer campaign--fodder procurement. According to the USSR Central Statistical Administration, by 20 June 14.5 million tons of hay and 23.1 million tons of haylage had been laid in. Work is proceeding successfully on the farms of the Ukraine, Lithuania, Belorussia, and Kaluga and Bryansk Oblasts. But in Novosibirsk, Ivanovo, and Kostroma Oblasts and the Dagestan ASSR they were late starting the haymaking and little fodder has so far been procured.

It is necessary to complete the first cut and gather in the grasses on all Kolkhozes and Sovkhozes before the start of the mass grain harvest.

Much work lies ahead. Only shock labor can achieve high end results. More efficient coordination between all components of the agroindustrial complex is needed both in fodder procurement and in the harvest. Ensuring well organized, uninterrupted work by the economic machinery means achieving success in the harvest and increasing the production and procurement of agricultural produce.

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## TILLING AND CROPPING TECHNOLOGY

### SOVIET AGRICULTURALIST ON ZONAL FARMING SYSTEM

PM291509 Moscow PRAVDA in Russian 21 Jun 83 First Edition pp 1-2

[Article by Hero of Socialist Labor A. Barayev, director of the All Union Scientific Research Institute of Grain Economy and Academician of the V. I. Lenin All-Union Academy of Agricultural Sciences, under the rubric "Be Master of the Land": "It Will Repay You Well"]

[Text] Shortandy, Tselinograd Oblast--The CPSU Central Committee June (1983) Plenum and the decisions it adopted give each of us a great deal to think about. The decisions clearly set forth a program, ways of further improving our socialist society and its spiritual and economic life. Much attention is devoted to the tasks and concerns of rural workers and the whole agricultural complex. As a scientist and a grain grower, it is the land which concerns me most of all. You could say I have devoted the whole of my conscious life to increasing its fertility.

Our country's arable farming has achieved great successes in the years of Soviet power. And particularly in the last three 5-year periods. The yield of grain crops, for instance, has increased by nearly 6 quintals, an average annual grain production by 74.7 million tons.

It is hard for today's schoolboy to imagine that at one time endless waiting lines formed at bakeries. We have all long since become accustomed to being able simply to walk into a store and choose bread to suit any taste, without a crush. But behind the simplicity with which we pick up a loaf from the counter is the farmer's intensive labor, his sleepless nights, worries, and joys. Do we always remember this? Do we always realize that the value of bread has not diminished with the years?

Even today there is no more important task for the tiller of the soil than to considerably increase harvests and enhance the sector's stability. The plenum discussed means and problems of strengthening the rural economy and implementing the Food Program. Many concerns still lie ahead. Requirements for food grain are being satisfied. But its quality must be improved and the range [assortment] extended. The developing livestock sector requires fodder. In general, we must grow more grain. How? By extending the areas? They have limits. By increasing, say, the application of fertilizers? That would do no harm in some places. But many cases could be cited where a particular oblast

has been allocated plenty of fertilizer and provided with new machinery, but the yield from each hectare of grain has remained the same.

What is the problem? The fact that the resources allocated are not used skillfully. The land use is poor. And what is particularly alarming is the fact that people work without taking natural and economic conditions into account. The importance of this can be seen, for instance, from the Kazakhstan virgin lands. A bitter lesson was once learned here and served as the impetus for the development of zonal techniques. But even now that the arable farming system has become established and basically every grain grower knows how to protect the soil against the pernicious effects of drought and winds, the virgin land workers always try to be creative in applying the familiar agricultural methods.

Last spring was no exception. At the height of the sowing, cold weather and snowstorms began. Once again it was necessary to adapt to unusual conditions and choose the best schedules. But is it only the virgin land people who are plagued by climatic adversities? Whatever zone of our country you take, first there is not enough moisture, then there is too much. And in many places the fertile layer is being destroyed. In some places by wind, in others by water. So the arable farming system must be an antierosion system everywhere. The experience already accumulated indicates this convincingly.

Wherever people protect the land and take local peculiarities into account in cultivating it, they obtain stable harvests. As is known, in the last 5-year plan, as a result of this, Kazakhstan increased its grain production by 27 percent compared with the previous 5-year period. The Poltava farmers have plenty of grain every year. The summer before last, I happened to visit them. At that time a drought was raging everywhere. But the wheat was a joy to behold. Some farms averaged more than 40 quintals of grain. The Poltava farmers have a true weapon in the struggle against the vagaries of the weather--an antierosion arable farming system.

Today, as is known, such systems have been worked out in all oblasts and republics. Scientists from many union and zonal institutes made a considerable contribution to creating them. It is now a matter of assimilating them. That is where not everything is going well. Zonal systems are being introduced only slowly. In many places scientists' and specialists' recommendations on this question have been on the table for years. But farming carries on in the old way. Harvests in a number of oblasts and republics are very modest and unstable. As a scientist and a grain grower, I look with distrust on all kinds of excuses and complaints about bad weather. People say it was "too hot" or "too wet." Nobody can change the climate or the soil for us. Nor ought we to run down our own weather, so to speak. Of course, in most regions our potential for arable farming is worse than in many other countries. There should be only one conclusion drawn from this: adapt to local conditions and learn to understand and allow for them. This is the aim of zonal systems, which have proved their viability and effectiveness.

But it appears that in some places, after issuing a pamphlet on the "zonal recommendations," they have become complacent. Let the farms take advantage, people say. But that is just the first, initial step toward assimilating the

arable farming system. The main work lies ahead. It is necessary to acquaint every Kolkhoz and Svokhoz with the recommendations. A clear program for increasing [fertility and yield] must be drawn up on the basis of the proposed techniques. The scientists' advice will remain no more than good wishes if what is planned is not persistently put into practice.

At the same time in certain oblasts zonal systems have not even been published yet. Some agronomists have no idea of their content. So how can there be any serious talk of introducing antierosion agricultural techniques!

What stands in the way of these techniques? Of course, the shortage of antierosion implements, for instance, has an effect. This will be discussed later. But I have also seen the following picture. The subsurface cultivators [ploskorezy] stand idle. And splendid chernozems are shredded by the plow, the remnants of moisture being lost on the wind.

It is not easy to get rid of old habits. Even in textbooks for VUZES, the nature of antierosion arable farming has not yet been properly expounded. Future agronomists are still oriented toward the plow. Invented in countries with high levels of precipitation, at first it played a positive role, bringing up nutrients from the deeper strata. Today this reserve has largely been exhausted. It is now necessary to gamble on the plant cover. This must help "build up" the humus. And the antierosion system is a true helper here.

Old views and fixed truths must be broken down. As was noted at the plenum, more attention must be devoted to training cadres. It is necessary to cultivate their feeling for the new and to teach them advanced methods of working on the land. Today not only practitioners, but even some scientists and leaders of agricultural organs still rely on the plow. But there are zones where, as life has shown, the land cannot be dealt with in the old way. Take the Ukraine, particularly its southern oblasts, the Northern Caucasus, or the Central Chernozem region. Here leading farms have long since shown that surface tilling is preferable. But many people still hold on stubbornly to the old ways even here. The dry winds blow, the sun scorches, and people start complaining about the elements. They call on the state for help: we need concentrates, seed. Mutual assistance, support in the spirit of our socialist relations. But the sufferers more often include those who follow the stereotypes in their treatment of the fields. It is necessary to consider whether such leaders and specialists should be entrusted with land and farms.

The basic methods of antierosion farming, taking local conditions into account, are used over more than 40 million hectares. In the opinion of economists the country annually receives a profit of hundreds of millions of rubles as a result.

I am far from thinking of recommending everywhere the methods we use in the virgin lands. Moreover I want to warn against imitating us blindly. Those people of Poltava did not simply bring in subsurface cultivators from the virgin lands. They created their own system on the basis of their soil and climatic peculiarities. In the rural economy it is difficult to have instructions suitable for all cases. And it is quite intolerable to issue commands

from an office as to when and at what depth to sow, what crops to grow where. Certain rayon leaders try to do this. And, contrary to the recommendations of science and the zonal system, a farm is obliged, fulfilling instructions from above, to disrupt crop rotations, follow wheat with wheat.... It is a good thing that many agroindustrial associations have sought from the very first days of their work to renounce faulty methods of administration.

It is also very important for the grain grower not to rest on his laurels. However good the successes, there are always reserves for further growth. Our institute, for instance, was propagandizing five-crop rotations for a long time. The experimental farm, assimilating this system, achieved quite good results. But further research showed that on chernozems a si-crop rotation is more promising. Oats were added to wheat and barley. As a result yields rose. In some places our innovation has met with a hostile reception. People say that since the wheat area is decreased slightly, there is a danger of reducing production. First, we object, in the new crop rotations each hectare is more productive. Second, there is also a considerable need for feed grain. Why feed the livestock golden wheat? Is it not better to replace it with barley and oats, whose fodder value is higher? Obvious, you would think. But this matter is making only slow progress.

The assimilation of zonal systems is not only the concern of the practitioners. Scientists must also struggle to implement their recommendations and defend them. Tens of thousands of industrious people devoted to the party and people work in our science. This is a great force. But as the CPSU Central Committee June Plenum noted, certain scientific institutions are notable for their tendency to become locked in their own "dissertation" and group interests and petty subject matter.

I think the contribution of institutes and their employees should be assessed not in terms of the quantity of publications or the number of dissertations defended. The most important thing is how the results of research are applied in production. We scientists are entrusted with the great right to be pioneers. We must not only follow a new path ourselves, but lead others behind us. A most noble mission. And how I am sometimes saddened by the [desire of some] of our colleagues, particularly the young ones, to "make the grade"--that is, obtain a scientific degree--as soon as possible, at all costs. And then to settle in the city. It may be further from the fields, but life is more peaceful, and sometimes amenities are better, on asphalt. The truth is that many of my contemporaries, in their concern for the land, either forgot all about scientific degrees, or only remembered them years later, when they had considerable experience behind them and really had something to share with others, something to contribute to science. Communists, as well as local party organs, must devote more attention to the planning and organization of research and the style and work methods of scientific collectives.

In my view selection workers deserve a reproach. There are still few varieties adapted to unfavorable weather conditions. The wind hardly blows, and the grain is lodged. A slightly dry summer, and the crop is halved. Selection workers must carefully take account of zonal peculiarities. The conditions for selection work have improved greatly today. But creating a good variety in a

short space of time is a task for a creative collective, not an individual. This means efforts must be pooled. Unfortunately there is still much tinkering about in this matter. And some new varieties are no better than their predecessors. Why release them on the fields and waste time and resources?

Now for the machines. I am sure antierosion agricultural techniques would be used more widely if the farms had more antierosion implements. [Let us recall] how at one time, thanks to collaboration between scientists, designers, and production workers, it was possible to bring the machines which were extremely necessary to the virgin lands on stream in 3-4 years. An antierosion machinery association soon emerged. Today it cannot satisfy the increased demand. The enterprise receives letters and orders from all over the country asking it to send even a single subsurface cultivator or stubble drill. Alas, most often they have to refuse.

I do not think a similar waiting line exists for coulter drills at the Kirovograd Krasnaya Zvezda plant. Why should not that enterprise assimilate production of stubble drills? After all, applicants from there, in the southern Ukraine, have to trek all the way to Tselinograd for those very implements.

Here is another mystery. The Odessapochvomash Association is in almost the same zone. It turns out plows--of indifferent quality, incidentally. Yet farms in adjacent oblasts urgently need subsurface cultivators. These are quite simple implements. A production line for them could be set up at the Odessa enterprise with no particular difficulty. This would not require a single additional kilogram of metal. Of course, production would have to be reorganized. The machine builders will not hear of it. On the contrary, they are increasing deliveries of plows.

So not only the farmers, but also leaders of the Ministry of Tractor and Cultural Machine Building must define their own place in introducing zonal systems. As yet they react only poorly to criticism and think more about their departmental interests than the grain grower's interests.

The countryside is now undergoing great changes. These are not only connected with the work of new management organs. Changes have also emerged in people's consciousness and their economic thinking. Look how quickly and energetically the collective contract emerged. As was noted at the CPSU Central Committee June Plenum, this is a clear manifestation of the spirit of comradely mutual assistance and the educational influence of highly organized socialist labor. Farmers have acquired a taste for the contract system. Although there are, of course, still many unresolved problems. A taste for zonal systems must also be developed in the grain growers. The practical assimilation of these systems is the concern of the ordinary Kolkhoz member and the minister, the farm specialist and the scientist today. The concern of all who are involved with grain. Treat the land well, and it will repay you well for your labor and concern.

CSO: 1824/448

## FORESTRY AND TIMBER

### MAINTAINING RESOURCE BALANCE IN TIMBER MANAGEMENT

Moscow SEL'SKAYA ZHIZN' in Russian 3 Jun 83 p 2

/Article by R. Bobrov, Candidate of Agricultural Sciences, Moscow Oblast: "In Order Not To Disrupt the Balance"

/Text/ If you please, one of the strongest reproaches that can be made against forestry workers is that one out of every three hectares of territory placed at their disposal is not covered by forest. This would include deserts, swamps, bald mountain peaks, vacant land and other useless tracts. Moreover, of the 800 million hectares of forest land by no means do all of them justify their title. It is stretching a point to refer to many of the tracts as forests. Here we have in mind undergrowth, alter trees and low-growing deciduous trees.

In short, the forestry workers have more than enough concerns. And they have accomplished a great deal. Over the past 10 years alone, on the territory of the Russian Federation, forests have been planted on 7 million hectares, approximately two and a half million hectares of water-logged hand have been drained and order has been restored to 25 million hectares of improvement cuttings. Nevertheless, no success has been achieved in carrying out radical improvements in the forest lands.

A great amount of work must be carried out in order to raise the productive strength of the forest tracts, since the demand for timber in many regions is beginning to exceed the potential. For example, the annual volume of tree fellings in Perm Oblast exceeds the annual growth in the forest by 135 percent, in Kirov Oblast by 106 percent, in Vologda Oblast by 110 percent, in Arkhangelsk Oblast by 131 and in the Karelian ASSR by 168 percent. These are alarming and yet not entirely hopeless facts -- the potential is available for achieving a balance between the growth and fellings. A great deal depends upon the forestry-farmers. Within the Russian Federation there are fine examples of a hectare of forest land furnishing 10 or more cubic meters of wood annually. The average increase equals 1-1.5 cubic meters per hectare.

When the "forestry" branch was created, it was assigned responsibility for all forest land and particularly for protecting and multiplying the green resources. However, with the passage of time a large portion of this concern shifted from the land to industrial production. Ten years ago, of the overall balance of work carried out by forestry personnel one half was of a forest husbandry nature and in the taiga regions -- nine tenths. It cannot be stated

that everything was proceeding normally in the forests at that time. Young trees were planted using a very simple technology and the tending of these trees was conducted on a tardy basis owing to a shortage of working hands. The majority of the tracts were closed owing to a lack of good roads and large portions of the forest land suffered from an excess of moisture. The forestry workers necessarily had to concern themselves with these vital matters.

But life dictated otherwise -- the taiga forestry farms, under the pressure of production plans, commenced the procurement and processing of wood. Moreover, the rates for their development in this direction increased rapidly. In the Karelian ASSR, for example, the plans of forestry farms for the sale of industrial products increased from 750,000 to 14.3 million rubles worth since 1970, in Vologda Oblast -- from one to 16.8 million and in Arkhangelsk Oblast -- from 65,000 to 15.1 million rubles worth. For the northwestern RSFSR on the whole, where the forests are definitely in need of improvements, the plan for industrial production has increased by a factor of 42! Moreover, all timber industry operations developed in the vicinity of Minlesbumprom /Ministry of the Lumber and Paper Industries/ enterprises and quite often at its raw material bases.

The need for creating permanent cadres of workers which could take turns in carrying out industrial and forest husbandry operations was advanced as an official plan for this unexpected development in the economic activities of taiga forestry farms. Actually however, the situation turned out to be somewhat different. Simply stated, the plan for industrial production established for a forestry farm turned out to be inflated. In order to carry it out, it was necessary to create new forestry points and build roads and wood-working shops. They were unable to cope with this task and, as a result, the lion's share of industrial production had to be shifted to the taiga forestry farms. They were obviously not prepared for such a turn of events, but they could cope with the task by employing the equipment made available for forest husbandry management.

There is no need for discussing the fact that subsequently all of the thoughts of the forestry workers were concentrated on supplying the consumers with round timber, boards and goods of every day use in a timely manner. And the fact that the chief foresters were criticized more frequently for a lack of order in the forests was viewed as being a natural phenomenon. Many of them did not concern themselves with this problem and there were forest fires and large amounts of lumber were lost.

Many difficulties persist in labor organization for the forestry workers. There is a shortage of procurement machines and mechanisms used in forestry operations and quite often they must be borrowed from neighbors -- timber industry farms. Thus the forest managers often find themselves having to request assistance from those under their control. How is it possible to discuss placing demands upon them? Because a controlled examination of felling areas with the aid of aerial photographs actually reveals forestry violations which are greater by a factor of ten than those observed by forestry workers on the ground.

All of these shortcomings are disturbing to the forestry workers and especially so since the May (1982) Plenum of the CPSU Central Committee. Indeed the forestry workers are farmers who work on forest lands. And they are responsible

to the state for these lands. Many specific recommendations have already been submitted. For example, the forestry workers in the Karelian ASSR believe that it will be possible during the next few years to raise the cropping power of ripe stands of timber by applying top dressings to them. A fine addition to the forest wealth in the Karelian ASSR can be achieved by making use of drained areas and also wood procured for intermediate use. Great plans are available for introducing into the forests protective plantings of fruit and berry plants. It has been established that the richer the forest lands the greater the amounts of berries, mushrooms and fauna that can be obtained from them.

The forestry workers in the RSFSR are devoting a great amount of attention to expanding their plant breeding and seed production operations. Forests cultivated from elite seed grow almost one third better than those from conventional seed. A 20 year program for creating a forestry seed base should be carried out a minimum of 5 years earlier.

Obviously, additional potential is required in order to carry out these plans. Such potential is available in the all-round mechanization of timber industry organizations and efficient specialized operations. Only in this manner will it be possible to make complete use of the modern equipment available for forest cultivation. By way of an example, allow me to cite the experience of specialized detachments at the Podtelkovskiy Forestry Farm in Vologda Oblast. Over a period of 8 working days, a detachment consisting of 11 tractor operators planted more than 1,000 hectares of forest here. This figure is greater by a factor of 3-4 than that achieved when use is made of the usual unit method of planting.

A high level of labor productivity in forestry farm subunits in connection with the growing of planting stock, the planting and tending of the stock, forestry procurements and wood-working makes it possible to achieve an economy in the use of manpower and to separate forest preservation work from industrial operations. In those areas where success is being achieved in doing this, the required culture of forest utilization and fire prevention safety is ensured.

Nevertheless, improvements in the forestry lands would come more easily if the forestry farms were not affected as much by shortages in equipment and material resources. Such difficulties are engendered in particular by the practice of land evaluation. This task is being solved in a more simple manner for agriculture, since it is always possible to determine the true value of the land based upon the yields obtained. The situation is somewhat more difficult in the case of forests, since the usefulness of a forest cannot always be calculated in terms of money. For example, such factors as water conservation, hunting and others must be taken into consideration. Yes and the price for the wood being produced is far from realistic. The tax value of a cubic meter of the best wood, grown in a taiga forest, is evaluated in kopecks and its average annual increase per hectare is slightly more than 1 cubic meter.

A lack of objectivity in evaluating forest wealth certainly does not promote a thrifty attitude towards it and it conceals the national economic importance of the forestry work being carried out. Thus the economic computations must be based more upon moral arguments rather than economic ones. However, these

arguments are not always acted upon. In all probability it would be correct to introduce into operational practice more valid indicators for an economic evaluation of the quality of land areas and those natural factors determined by them.

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