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29 April 1983

# USSR Report

AGRICULTURE

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USSR REPORT  
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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### FARMING SERVICES IN KAZAKHSTAN DISCUSSED

#### Field Work Progress and Weather Conditions

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 3 Nov 82 p 3

[KazTAG report: "Improve Agrochemical Services"]

[Text] In the 3 years since the formation of the republic-wide agrochemical service in Kazakhstan much work has been done to improve soil fertility. The subdivisions of the "Sel'khozkhimiya" Agrochemical Service transport and apply to fields increasing quantities of mineral and organic fertilizers, protect crops against pests, diseases and weeds and conduct other operations. This year they will perform more than 100 million rubles of services in the republic. Next year fertilizer supplies will increase. Fertilizers will be applied to about 17 million hectares of cropland, or 7.5 million more than in the first year of the Five-Year Plan.

The operations follow the recommendations of scientists and experts. The comprehensive method, consisting in the performance by the subdivisions of the "Sel'khozkhimiya" of the complex whole of operations beginning with the transport and application of fertilizers to fields and ending with the treatment of planted fields with herbicides, growth stimulants and other chemicals, is being broadly employed. But the performance of "Sel'khozkhimiya" subdivisions is also beset by shortcomings. This has been mentioned at the republic conference-seminar held in Alma-Ata. The conference participants discussed the report of N. A. Ponomarev, Kazakh SSR Minister of Agriculture and chairman of the Kazsel'khozkhimiya Republic Association on the performance and future tasks of the agrochemical service in the light of the decisions of the May (1982) Plenum of the CC CPSU. Concrete measures to increase field fertility and the yields of all crops were outlined.

The participants in the conference-seminar familiarized themselves with the situation as regards agrochemical services at the Aksay Sovkhoz, Alma-Ata Oblast.

Yu. N. Trofimov, secretary of the Kazakh CP Central Committee, spoke at the conference-seminar.

Those taking part in the deliberations of the conference-seminar included E. S. Karbovskiy, Deputy Chairman of the Kazakh SSR Council of Ministers; V. L. Zakharov, Deputy Chairman of the "Soyuzsel'khózhimiya" All-Union Production-Scientific Association; and secretaries of party oblast committees, deputy chairmen of oblispolkoms, scientists and experts from a number of ministries and departments.

#### Effect of Weather on Farming Discussed

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 5 Feb 83 p 1

[KazTAG report: "Preparing for the 1983 Harvest: Concern for Fertility"]

[Text] The pace of snow retention in Kustanay Oblast has markedly increased. White furrows are being cut on the 4th million of hectares. Each day these furrows are cut on an additional 200,000 hectares--many more than originally intended.

N. V. Steshin, deputy chief of the oblast sovkhóz production administration, declared: "Following a prolonged absence of winter precipitation, there was snowfall toward the end of January. Without delay, mechanizers took nearly all the equipment to the fields. Throughout the area snow retention is being accomplished by the large-group method, on a round-the-clock basis."

Many sovkhózes in the Leninskiy, Kustanayskiy, Borovsky and Uritskiy rayons have commenced the second tilling of fields by means of snow ridgers.

During the fall-winter period about 70 percent of the planned amount of organic matter has been applied to the fields in the oblast. On most farms the quality of the compost was improved in the storage areas, where it had ripened in piles. It is being transported primarily to the fallows and plowlands set aside for grain and fodder crops, vegetables and potatoes.

The republic's farmers have carried out snow-retention measures on 19 million hectares--67 percent of the plan. In the East and North Kazakhstan oblasts snow furrows are being cut in excess of the plan.

More than an half of the planned amount of fertilizer--nearly 18.5 million tons--has been delivered to the fields. For the farms in Karaganda and Dzhezkazgan oblasts the corresponding figure is more than 70 percent and for the farms in Kustanay and Semipalatinsk oblasts, about 70 percent.

About 11,000 teams for growing grain and commercial crops as well as vegetables and potatoes have been formed in the sovkhózes and kolkhózes--this is more than two-thirds of the planned number.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### VINNITSA OBLAST PREPARATIONS FOR SPRING SOWING OPERATIONS

Moscow PRAVDA in Russian 4 Feb 83 p 1

/Article by A. Voytovich, Vinnitsa Oblast: "A Future Test"/

/Text/ This year the grain growers in Vinnitsa Oblast plan to obtain an average of 32 quintals of grain per hectare and to sell 1,280 million tons to the state. At the present time, they are actively preparing for the sowing campaign.

For several years now, contract work teams at the Kolkhoz imeni XXI S"yezda KPSS in Tul'chinskiy Rayon have been obtaining high grain crop yields. Last year their grain fields of 1,800 hectares furnished more than 50 quintals per hectare and corn -- 74.6 quintals per hectare. This year they plan to obtain at least these same amounts.

"If we are to achieve high yields" commented the secretary of the oblast party committee I. Bondarchuk, "we must accomplish a great deal. We are striving to develop a creative attitude towards the land in our specialists and grain growers."

A task has been assigned: to raise the level of agricultural practices and labor organization in all areas. This will be of assistance in eliminating the great differences in cropping power. There are already a number of farms in the oblast which are obtaining an average of 40-50 quintals of grain per hectare. Unfortunately however, there are still more farms which in recent years have suffered reductions in their yields per hectare. This also holds true regarding entire rayons -- Nemirovskiy, Tyvrovskiy.

One reserve for raising the yields is that of the seed. Adequate quantities of seed have been laid away in the oblast, with more than 97 percent being of 1st class quality and barley and peas -- mainly promising varieties.

The sowing areas being used for buckwheat and millet are still increasing in size. The plans call for the sowings of grain corn in the oblast to be expanded by almost twofold.

This year the workers in Vinnitsa Oblast resolved to form more than 800 contract work teams and detachments, with an industrial technology to be used on two thirds of the areas. The work of selecting experienced machine

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operators to serve as team leaders is nearing completion on the farms and temporary party and party-komsomol groups are being created.

In short, a considerably greater volume of work must be carried out during this present spring period than is usually the case. In this regard, double-shift operations for all units is being planned at kolkhozes in Bershadskiy Rayon. Two machine operators have already been trained for each tractor. Sufficient personnel are available for double-shift operation of the equipment in Vinnitskiy, Gaysinskiy and other rayons.

At the same time, there are some kolkhozes in Tyvrovskiy and Barskiy Rayons which do not even have one machine operator for every unit. In order to correct this situation, the oblast's enterprises have promised to send 1,500 machine operators into the rural areas. Certainly, it would be better if they could satisfy their own personnel requirements, as is being done in Yampol'skiy, Tul'chinskiy and Kalinovskiy Rayons.

The sowing preparations are being carried out in an active manner. But there are still some defective tractors in Il'inetskiy, Nemirovskiy and Mogilev-Podol'skiy Rayons. And in many areas the equipment was only partially repaired. Many claims have been addressed against Sel'khoztekhnika regarding the quality of the work.

The chief test for the grain growers lies ahead. And serious preparations must be made for it. The agroindustrial associations must furnish effective and systematic assistance in this regard.

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CSO: 1824/262

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### UNUSUAL JANUARY FIELD WORK IN ODESSA OBLAST DESCRIBED

Moscow SEL'SKAYA ZHIZN' in Russian 22 Jan 83 p 3

/Article by A. Soldatskiy, Odessa Oblast: "January Movement Out Onto the Fields"/

/Text/ The month of January turned out to be unusually warm this year in the Black Sea region. A bright sun flooded the boundless expanses. The ground quickly began to warm up and the meadows to turn green in color. The winter crops continued their growth. The farmers in the southern Ukraine are accustomed to moving their tractors with cultivators, harrows and sowing units out onto the fields during the so-called February "windows." But to commence field work in January is a unique event.

"And we chose not to wait" stated the director of the Druzhba Narodov Sovkhoz V. Gorobets, "Just as soon as the conditions permitted, we commenced operating our soil cultivation units. We began levelling off the soil and applying farmyard manure to the fields on a continuous basis. Whereas during the winter we usually only accumulated it, this year we are working it into the soil immediately."

Two K-700 tractors operated by A. Golubev and A. Uman'skiy advance along the side of a road at the Krasnyy Mayak Sovkhoz. They have been carrying out deep plowing for several days now. The deep furrows extend from the road to the distant Dnestr River. A peach orchard will be planted on this field.

"I have operated a tractor over the fields here for more than a dozen years and yet this is the first time that I have plowed in January. And as you can see, the plowing is good" stated tractor operator Uman'skiy contentedly.

Yes, the layers of the freshly plowed earth are laid out in uniform furrows. The fresh arable land issues its own unique aroma. But today a deep snow cover is needed and thereafter good spring rainfall. This will aid in obtaining high yields. The machine operators are aware that this year's spring will be a tense period. Many urgent tasks will have to be carried out simultaneously. This is why they are taking advantage of the conditions which prevail this January for accomplishing as much work as possible, thereby reducing the tension which usually occurs during the spring.

At the Krasnopovstancheskiy Sovkhoz, in a detachment headed by A. Tsysnetskiy, there are nine powerful tractors in operation. Each day they move 600-800 tons of humus out onto the fields. The organic material is immediately spread over the autumn plowed land and immediately thereafter deep reploting is carried out.

Fodder beets will be grown on the field and they require deep and loose arable land. In view of the fact that the moisture supply is not very great, the decision was made at the sovkhaz to apply 100-120 tons of farmyard manure per hectare. This will make it possible to utilize the moisture in a more thrifty manner and to obtain high yields.

Today nobody can say how many days January will provide for work out on the fields, but an attempt is being made at the sovkhaz to take full advantage of each hour. In the hauling of farmyard manure, the members of the detachment are fulfilling their task by 130-150 percent. Fine soil tilling and plowing work was carried out by V. Kravchenko, A. Kryuchkov, I. Rachan and others.

This year the farmers in Belyayevskiy Rayon have vowed to obtain 33 quintals of grain from each hectare. A search is underway for reserves which will aid in raising the cropping power. Since autumn, a top dressing has been applied to all of the winter sowings. A second application of mineral fertilizer is being applied here at the present time.

"Today we are keeping a careful check on each sowing machine. Everything that can be restored is being restored" emphasized the 1st deputy chairman of the Odessa Oblast Executive Committee V. Kovalenko, "In view of the fact that during the spring the workload of each sowing unit almost doubles, all of the old sowing machines are being repaired in all areas and tense plans have been prepared for the spring operations. Measures have been undertaken to procure blades for the cultivators. Disks for the sowing machines are being both restored and manufactured. Thousands of tractor operators have been obtained from enterprises in Odessa for the purpose of participating in the spring field operations."

Sowing work is already being carried out on some farms at the present time. At the Mayak Kolkhoz in Belgorod-Dnestrovskiy Rayon, for example, 80 hectares have been sown in cereal-legume mixtures for feed purposes. The sowing of winter barley is being carried out on other farms. Hero of Socialist Labor and chairman of the Kolkhoz imeni Tatarbunarskoye Vosstaniye V. Tur stated that he could recall when barley sown during the winter "windows" furnished 47 quintals of grain per hectare.

During these January days, I saw most of all tractors with cultivators and attachments for levelling off the autumn plowed land. Special attention has been given to levelling off the soil in Ovidiopol'skiy, Kominternovskiy, Belyayevskiy and other rayons. The fact of the matter is that the sowing of peas is being expanded throughout the oblast. This crop is important by virtue of the fact that it simultaneously solves three problems: it promotes an increase in the production of protein and straw and it is a fine predecessor crop for winter crops. If the spring and summer periods are rainy, secondary sowings of forage crops can be carried out following the peas.

But, as is well known, peas are difficult to harvest. In particular, considerable losses occur on those fields where the soil has not been sufficiently levelled off. This is why special attention has been given in all areas to levelling off the soil for this crop. This work was carried out in the autumn and the tracts are now being prepared.

Work commenced in January not only out on the fields. Work is in progress at the present time in the orchards and vineyards. Special brigades have been created at the Vygodyanskiy and Belyayevskiy Sovkhozes for pruning the trees. In short, the campaign to bring in the harvest for the third year of the five-year plan has been launched along a broad front. And the Odessa farmers began this campaign in a harmonious manner. This has been promoted by the fact that the majority of the oblast's tractors and soil cultivation units were repaired prior to January. This January has served as a fine test of the degree to which the oblast's machine operators are prepared for various unexpected developments. The majority have passed this test quite well.

In view of the complicated weather conditions, measures are being undertaken throughout the oblast aimed at ensuring that all of the sprinkling equipment is prepared for operations prior to 18 February. The repair of the irrigation network is being accelerated. Irrigation work is to commence at the end of February if the weather is favorable. Use is being made of still another reserve for raising the cropping power -- the utilization of poultry manure as a starter fertilizer. In all areas, it is being dried out and organo-mineral granules prepared. And in those areas where it is not possible to prepare the granules, the seed will be processed using dry manure.

A competition to achieve high yields on the oblast's fields is in full swing.

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CSO: 1824/262

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SPRING CONCERNS OF UKRAINIAN GRAIN GROWERS REVIEWED

Moscow IZVESTIYA in Russian 8 Jan 83 p 1

/Article by S. Troyan and F. Chernetskiy; Zaporozhye, Nikolayev, Odessa and Kherson Oblasts/

/Excerpts/ The more serious the test confronting a grain grower, the more thoroughly he must prepare for it -- such is the thought which has been expressed on more than one occasion by the leaders of kolkhozes and sovkhozes, by party and soviet workers and by those who are directly concerned with preparing the soil and carrying out the sowing and harvesting work in 1983.

"We consider the chief task to be that of cultivating and harvesting a high yield of grain crops" stated the chief of the Agricultural Administration of the Zaporozhye Oblast Executive Committee G. Golovenko, "Compared to 1981 and 1982, appropriate changes have been made in the structure of the area under crops. Allow me to cite several figures. The plantations of grain corn will be increased from 164,000 to 264,00 hectares and possible even more. The barley sowings are being expanded by more than twofold. Oats, peas and millet will be planted on considerably greater areas. Almost the same situation prevails in Kherson Oblast."

The people are aware that the spring period will indulge nobody. This is why the processing of seed is proceeding at maximum capability at the storehouses. Today, in Zaporozhye Oblast, three out of every four kilograms of seed have already been improved to 1st class quality. This is considerably more than the figure for this same date last year and also more than the present average for farms throughout the republic. The indicator is slightly lower for Kherson Oblast.

"At the present time" stated the secretary of the Kherson Oblast Party Committee, "The task has been assigned of raising the amount of 1st class seed to 90 percent. The summaries being received from the farms testify to the fact that the farmers are proceeding towards their goal in a confident manner."

At the present time, those who will be entrusted with carrying out the spring sowing work are improving their professional skills. More than 10,000 machine operators in Zaporozhye Oblast alone are undertaking courses of study. Their chief goal -- to master the industrial methods employed in the cultivation of

agricultural crops. The chief agronomists are renewing their knowledge at the Scientific Research Institute for Irrigation Farming.

As spring draws near, the principal program outlined recently in agricultural production can be seen especially clearly -- improving economic relations and production interrelationships; striving to raise the responsibility for assigned tasks and closely coordinating the interests of an individual worker and a collective and raising efficiency and the quality of labor.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### PREPARATIONS FOR SPRING FIELD WORK IN UKRAINIAN SSR

Moscow IZVESTIYA in Russian 14 Feb 83 p 1

Article by A. Dolenko, Ukrainian SSR: "Prior To Moving Out Onto the Fields"

Text At the present time, work is being completed in the Ukraine on the formation of 13,000 sowing complexes and 7,300 mechanized teams and detachments for the cultivation of corn.

A snowless winter prevails this year in the Ukraine. Taking the present situation into account, and it is especially tense this year owing to the weakened condition of the winter grain crops, the republic's kolkhozes and sovkhozes are conducting a thorough study and analysis of the positive experience of those farms which under any and all conditions are able to obtain high and stable grain crop yields. Control has been intensified over the rates and quality of the equipment preparation work. Where necessary, the sowing units are being staffed with additional skilled machine operators for double shift operations. Shift and seasonal tasks are being issued to those responsible for directly carrying out the work. All of this is being done in the interest of ensuring that the spring sowing work is carried out in a high quality manner and in keeping with the schedules called for in the working plans.

The equipment should be discussed in greater detail. On 1 February, the coefficient of tractor readiness for the republic was 89 percent, just slightly higher than that for this same date last year. Practically all of the plows, sowing machines and cultivators have been prepared. At the same time, the coefficient of tractor readiness in Chernovtsy, Kirovograd, Zaporozhye, Ivano-Frankovsk, Kiev, Nikolayev, Odessa, Sumy and Ternopol Oblasts is lower than the average indicator for the republic. In Chernigov, Rovno, Kiev, Transcarpathian and Zhitomir Oblasts this applies mainly to the K-700 type machines. And importance is being attached to correcting this lag in an efficient manner.

At the present time, the specialists are defining more precisely the structure of the grain crops in all areas and in the process they are devoting attention to areas which were insufficiently sown and also to secondary sowings of the winter crops. All recommendations are being examined taking into account the soil-climatic conditions, the crop rotation plans to be used and maximum

compensation for a possible shortfall in winter crop grain. The process of improving the seed to a high sowing condition is continuing. By 1 February the republic's kolkhozes, sovkhoses and inter-farm enterprises had been supplied with 102 percent of their requirements for grain and pulse (less corn) crop seed. However, the seed available for buckwheat, pulse, corn, soybeans, potatoes and perennial grasses is still less than that required in accordance with the plan. Insufficient quantities of pulse crop seed were laid away in Donetsk, Volyn, Zhitomir, Ivano-Frankovsk, Kirovograd, Crimean, Lvov and Rostov Oblasts; buckwheat -- in Volyn, Zhitomir, Zaporozhye and Rovno Oblasts; millet -- Volyn, Zhitomir, Rovno and also in Lvov Oblast.

All of the required measures are being taken in advance on farms in the Ukraine so as to ensure the timely application of a fertilizer top dressing to the weakened winter crops. This application will be carried out in the spring using mainly the root method and it is expected to provide an increase in yield of 1.5-2 quintals per hectare.

Increased attention will be given to grain corn this year. The republic's Ministry of Agriculture has stated that 1.6 million hectares of corn will be cultivated using an industrial technology, with the remaining 800,000 hectares being grown using the conventional agrotechnical methods. For a guaranteed gross yield of grain, the plans call for silage corn to be sown on 200,000-250,000 hectares using the grain technology, 40,000-45,000 hectares of millet and buckwheat as secondary sowings and also for the corn fields on irrigated lands to be expanded to 305,000 hectares.

In recent years, the agricultural workers have been supplied with good varieties of barley. An increase in the production of barley is conditioned by the need for strengthening the feed base. It is irreplaceable as an insurance crop for undersowings and resowings of winter crops.

"Importance is being attached to sowing the spring barley as early and as rapidly as possible" stated the well known plant breeder and creator of many spring barley varieties, VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ Academician, Hero of Socialist Labor and laureate of the State Prize of the USSR P. Garkavyy, "Last year it was sown in early March at the Kolkhoz imeni Karl Libknekt in Odessa and 43.9 quintals of grain per hectare were obtained. Barley can be sown not only with the onset of the initial spring days, but also during the so-called "February windows."

On the farms where I happened to be at this time, maximum use was being made of the available opportunities for hauling in organic fertilizer. In Khmil'nitskiy Oblast, for example, almost 2,000 tons of organic fertilizer have already been delivered to the fields; this is considerably more than the figure for last year. Success is being ensured as a result of the intelligent use of the transport equipment. The detachments responsible for delivering the fertilizer are performing in a very efficient manner at many kolkhozes and sovkhoses.

The agricultural workers of the Ukraine, in carrying out the country's food program, are efficiently eliminating all shortcomings uncovered during the course of inspections and checks carried out by people's controllers and

deputies. The competition for more complete utilization of reserves out on the spring fields is being expanded at the kolkhozes and sovkhozes. To achieve the planned grain yield during the third year of the five-year plan, to make better use of the potential afforded by the spring crops, particularly corn, to increase the cropping power of the grain crops to 30-31 quintals and to procure more varieties of strong and valuable wheat -- such are the tasks confronting the Ukrainian farmers.

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CSO: 1824/262

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SPRING PLANTING IN TAJIKISTAN CONSIDERED

Dushanbe KOMMUNIST TADZHIKISTANA in Russian 11 Jan 83 p 1

[Unsigned article: "Expedite Preparations for Spring Planting under the rubric "At the Tajikistan CP Central Committee"]

[Text] The Central Committee of the Tajikistan CP points out that the kolkhozes, sovkhoses and other agricultural enterprises of the republic have accomplished a definite amount of work to prepare for the conduct of spring field operations.

At the same time, on many farms the status of these preparations is highly alarming. Plowing is being done in an extremely unsatisfactory manner in the Kulyab and Kurgan-Tyube oblasts. Slow progress is being made in leaching soils, cleaning the drainage and collection and irrigation network, and repairing pump stations and hydraulic engineering structures.

Seed material has not been upgraded to standard condition everywhere. The cleaning of cotton seeds has been unjustifiably protracted and little attention is being paid to their sizing, hulling and defibration.

Through the fault of the Tajik SSR Commission for Agricultural Equipment, the Tajik SSR Ministry of Agriculture, the Tajik SSR Ministry of the Fruit and Vegetable Industry and their local offices, repairs of agricultural equipment are being delayed. As of 1 January of this year only 82 percent of the tractors on the farms of Leninabad Oblast were ready for operation; 85 percent, in Kulyab Oblast and Ordzhonikidzeabadskiy Rayon; and 86 percent, in Tursunzadevskiy Rayon.

A particularly alarming situation has arisen as regards the repair of tractor-drawn drills. Two-shift operation of machine-tractor assemblies has not been organized and mechanizers have not been everywhere provided with adequate cultural and living conditions.

The shipments and application of organic fertilizers proceed more slowly than they did last year, particularly in the Kurgan-Tyube and Leninabad oblasts and the Leninskiy and Gissarskiy rayons. On many farms teams for the preparation and application of fertilizers and composts have not been set up.

Winter-spring work on orchards and vineyards and their pesticidal treatment is unsatisfactory. Owing to lack of supervision by the Tajik SSR Ministry of the Fruit and Vegetable Industry, the plans for the first two years of the Five-year Plan period have not been fulfilled as regards the planting of orchards and vineyards. Specialized teams of the Tajik SSR Commission for Agricultural Equipment are not fulfilling the plans for major overhauls and trenching operations.

The fulfillment of the plans for the winter and winter-spring planting of potatoes and vegetables is being endangered: the volume of that planting is markedly below last year's level. Repair of hothouse facilities and the preparations for growing seed-plot vegetable crops are being conducted at a slow pace.

Sufficient attention is not being paid to analyzing the state of the planting of winter crops and vegetables as well as of alfalfa crops in the past years. The favorable conditions of the winter period are being poorly utilized to conduct the agrozootechnical basic and advanced training of agricultural workers and machinery operators.

The oblast, city and rayon party committees as well as primary party, trade-union and Komsomol organizations are insufficiently demanding toward agricultural personnel as regards responsibility for the tasks entrusted and a strict adherence to work and production discipline. Progressive forms of the organization of labor and particularly the brigade method and the flexible system of the organization and remuneration of labor, are being inadequately introduced.

All this neglect is due to the fact that individual party committees, Soviet and agricultural agencies and ministries and departments belonging in the agroindustrial complex as well as farm managers and experts are slow to restructure their activities in the light of the decisions of the May and November (1982) plenums of the CPSU Central Committee and have relaxed the attention paid to the progress of the preparations for and conduct of field work.

The Tajik CP Central Committee demands of the Tajik SSR Ministry of Agriculture (comrade A. I. Babayev), the Tajik SSR Ministry of the Fruit and Vegetable Industry (comrade K. S. Sufiyev), the Tajik SSR Ministry of Land Reclamation and Water Management (comrade Kh. N. Nasreldinov), the Tajik SSR Ministry of Procurements (comrade S. K. Prokopenko), the Tajik SSR Ministry of the Cotton-Ginning Industry (comrade U. K. Kabilov), and the Tajik SSR Commission for Agricultural Equipment (comrade A. M. Babayev) that they take urgent steps to eliminate the backlog, on warning them that they will be held personally responsible for this.

The oblast, city and rayon committees of the Tajik CP, the executive committees of the oblast, city and rayon soviets of people's deputies, and the ministries and departments belonging in the agroindustrial complex as well as agricultural agencies and kolkhoz and sovkhos managers and experts were charged with the task of assuring the conduct of spring field operations at optimal times and with a high quality.

To this end, it was thought necessary to complete not later than by 20 February the preparation of tractors, soil-working machinery, tractor-drawn seeders and means of transportation as well as to staff the farms fully with the equipment operators needed for the two-shift operation of machine-and-tractor sets and organize their work on the basis of progressive techniques.

By 20 February the preparation of seeds and planting material should be completed; the needs of farms for high-grade seeds of the regionized varieties of cotton, grain crops, fodder crops, vegetable crops and potatoes should be fully met; and adequate supervision should be established over the storage and a correct and economical utilization of seeds and planting material. By that date, too, the kolkhozes, sovkhoses and other agricultural enterprises should launch a widespread campaign for the repair and cleaning of intra-farm and inter-farm irrigation and drainage systems, hydrotechnical structures, irrigation machinery and facilities and pump-power facilities as well as draft and confirm differentiated water-supply schedules and conduct soil-leaching and irrigation operations.

By February 20, too, the formation of specialized brigades for growing cotton, grain corn and other crops by industrialized techniques should be completed, and they should be provided with the needed agricultural equipment and adequate mineral fertilizers and herbicides. The brigade combined-skills system and flexible system of the organization and remuneration of labor should be broadly introduced in these brigades. A highly demanding atmosphere in which no manifestation of violation of work and production discipline is tolerated should be created in all the subdivisions of the agroindustrial complex. Concern should be shown for providing the necessary conditions for a highly productive work of personnel and for their recreation. Mass agrozootechnical training for agricultural workers should be organized, along with their training in economics and in the operation of agricultural equipment and machinery.

The Tajik SSR ministries of Agriculture and the Fruit and Vegetable Processing Industry and the Tajik SSR Commission for Agricultural Equipment were asked to: pay special attention to the preparation and growing of seed-bed vegetables so as to fully meet the demand of kolkhozes and sovkhoses for tomato and cabbage seedlings; assure the fulfillment of the plan for planting orchards and vineyards; complete winter-spring agrotechnical operations in orchards and vineyards; and analyze the planting of winter grain and alfalfa crops in the years past as well as replanting operations and the effect of longer inter-repair periods.

The need to organize special brigades for the repair and maintenance of agricultural equipment, with the object of assuring its high degree of readiness and highly productive utilization, was pointed out. Urgent measures should be taken to expedite the deliveries of fuels and lubricants to the kolkhozes, sovkhoses and other agricultural enterprises.

Party committees and primary party organizations were charged with the task of intensifying ideological and political-upbringing work among the personnel of the agroindustrial complex and mobilizing their efforts for the successful fulfillment of the plans and socialist pledges for the third 'core' year of the Five-Year Plan period and for that period as a whole.

## MAJOR CROP PROGRESS AND WEATHER REPORTING

### BRIEFS

ORGANIC FERTILIZER APPLICATIONS--Kiev--The Ukrainian farmers have exceeded last year's rates for the hauling of organic fertilizer. Each year they supply the fields with 1.5-2 million tons of compost. By utilizing their equipment in a skilful manner, the machine operators in Vinnitsa, Volyn and Poltava Oblasts are overfulfilling their shift tasks on a daily basis. The republic's farmers plan to supply the fields with 284 million tons of organic fertilizer. /Text/ /Moscow IZVESTIYA in Russian 20 Feb 83 p 1/ 7026

HOT AGGLOMERATE--Zhdanov--The navigation flag has been raised along the line connecting the piers of the Kamysheburunskiy Railroad Combine with the port of the Azovstal' Plant. Yesterday the Arshintsevo Motor Vessel delivered the initial thousands of tons of hot agglomerate -- metallurgical raw materials for blast furnace production -- from the Crimean shore. Having concluded an agreement for competing against the metallurgists, the sailors vowed to supply the plant's port with more than 3 million tons of hot agglomerate during the navigation season. /Text/ /Moscow TRUD in Russian 1 Mar 83 p 1/ 7026

WINTER CROP TOP DRESSING--Donetsk--Yesterday the pilots of agricultural aviation commenced applying a top dressing to the winter crops on the grain fields in the Donetsk Basin. The high level of readiness of the field airdromes and landing and take-off strips, created in all of the rayons, will enable the farms to carry out many laborious operations during the best agrotechnical periods. Prior to spring, the aviators of the steppe kray will furnish assistance to the farmers in treating the plantings on an area in excess of 200,000 hectares, considerably more than last year. /Text/ /Moscow TRUD in Russian 4 Feb 83 p 1/ 7026

HIGH POTATO YIELD--Chernigovskaya Oblast--The lands of Chernigovskiy Rayon stretch out across the interfluvial area of the Desna and Dnepr Rivers. Its farms are praised for their high potato yields. Moreover, the soil in the forest district is not rich in nutrients. The farmers are aided by a fine top dressing of organic fertilizer being applied to the fields. Thus this year they have undertaken the obligation of applying 1.24 million tons of organic material -- 11.5 tons per hectare of arable land. In the Chernigov forest district the workers know how to convert barren sand, wasteland and swamps into rich soil. At the present time, with only a short period of time remaining prior to spring, the specialists of agroindustrial associations, Sel'khozkhimiya and kolkhozes and sovkhozes must display concern for ensuring

that each hectare is supplied with a fine top dressing of fertility vitamins.  
/by M. Odinets/ /Excerpts/ /Moscow PRAVDA in Russian 20 Feb 83 p 1/ 7026

CORN VALUE STRESSED--Crimean Oblast--Warm rains fell on the fields in the Crimean Oblast in late January. And immediately thereafter the steppe changed in appearance. The winter crops came alive and the ground became covered with rich verdure. However, regardless of the status of the winter crop fields, the spring crops in the Crimea also occupy a high proportion of the gross yield of grain. In particular, corn has become a very reliable source for augmenting this yield. Last year, for example, an average of 38.9 quintals per hectare was obtained. A fine yield was obtained under irrigation conditions -- 54.3 quintals. Today the Crimean farmers are aware of the value of corn and thus this spring they are allocating more than 50,000 hectares for its use. If it becomes necessary to resow a portion of the winter crops, then corn will be the first choice for serving to guarantee the planned gross yield of grain. /by A. Soldatskiy/ /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 11 Feb 83 p 1/ 7026

AMMONIA LIQUOR APPLICATION--Odessa, 2 Mar--All measures are being undertaken throughout the oblast aimed at creating favorable conditions for the winter sowings. A top dressing is being applied by 20 aircraft of agricultural aviation and hundreds of ground units of equipment. But adequate quantities of dry mineral fertilizers are not available in all areas. To compensate for this, a majority of the farms have ammonia liquor. But how can it be applied to the soil under the plants? The engineers in Reniyskiy Rayon have solved this problem. On shallow plows they installed disks from the plowshares of sowing machines. Containers for the ammonia water are mounted on the frames. Pipelines and pump which operates off the power take-off shaft are connected up to each plowshare; the ammonia liquor is applied to the soil under pressure. Last year's experience has shown that this method for applying a top dressing is highly effective. /by A. Soldatskiy/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 3 Mar 83 p 1/ 7026

FERTILITY DETACHMENTS AT WORK--Odessa, 23 Feb--A month's campaign to procure local fertilizer has been declared throughout the oblast. Fertility detachments are at work in all areas. Taking advantage of the warm weather, 80 tons of humus per hectare have already been supplied for the fields at the Razdel'naya Kolkhoz imeni Frunze, where the plans call for corn to be grown. /by A. Soldatskiy/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 24 Feb 83 p 1/ 7026

RAGING ELEMENTS--Lvov--It was calm and quiet in the apartment when suddenly there was a flash of light and loud thunder resounded beyond the wall. I opened the door to see what the problem was and suddenly I saw over by head -- the exposed nighttime sky. The roof was missing from the beams as though it had never been there. Something incomprehensible was happening out on the street: a wave of snow was being pursued by a wave of rain. The sky was sending down to the earth dazzling yellow arcs of lightning and a strong wind was blowing. The elements' raged all night without abatement. In the morning I called the director of the Lvov Hydrometeorological Observatory V. Skrobach. He explained that two cyclones had collided with each other. During a period of just several evening hours, the storm squall wind, the velocity of which

reached 35 meters per second, damaged 32 transmission lines and put six important electric power lines out of commission. The water lines ceased operating and telephone communications were disrupted in many areas. Two hundred and four populated points remained without light. The roofs of dwellings and livestock facilities were ripped off and a large number of trees were blown down in parks and squares. The city of Lvov and also Gorodokskiy, Zolochevskiy, Zhidachevskiy, Peremyshlyanskiy and other rayons sustained considerable damage from the attack by the elements. The people immediately began combating the elements. Various services were mobilized: power engineering, communications, municipal, water and sewerage and transport equipment was furnished by enterprises and kolkhozes. The restoration work is proceeding in a successful manner. /by G. Klyucherov/ /Text/ /Moscow TRUD in Russian 20 Jan 83 p 4/ 7026

HYDRAULIC ENGINEERING INSTALLATIONS--Zhitomir--Taking advantage of the snowless winter, the land reclamation specialists in the Ukrainian forest district have been carrying out field work for 3 months. During this period they built more than 50 hydraulic engineering installations and they utilized 4 million rubles worth of capital investments. /Text/ /Moscow TRUD in Russian 1 Feb 83 p 1/ 7026

WARM SUNNY WEATHER--Ivano-Frankovsk, 28 Feb--Warm sunny weather prevails in the Carpathian region, with many farms having already commenced their field work. /by O. Matviiv/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 1 Mar 83 p 1/ 7026

EARLY FIELD WORK--Odessa Oblast--For the agricultural workers in Odessa Oblast, a campaign for hauling organic fertilizer was carried out during the month of February. Workers attached to the rayon associations of Sel'khozkhimiya actively assisted the farms in this regard. For example, the Tatarbunary Association exceeded its schedules with each passing day. This was the result of skilful maneuvering of the equipment, utilization of the entire light portion of the day and interest on the part of the machine operators. And the result: this year two and a half million more tons of organic fertilizer have been applied to the oblast's fields than was the case by this same time last year. There is good reason for an irrigated hectare being referred to as a golden hectare in the southern Ukraine. For a good master, it is worth two or even three non-irrigated hectares. Thus one can readily understand why this year, with the moisture supplies in the soil being limited, as already mentioned, special attention is being given to the irrigated fields. The workers in Kiliyskiy Rayon have advanced the initiative entitled "A high return from an irrigated hectare." They examined their obligations undertaken earlier and established new goals for themselves. In particular, they have undertaken the task of raising the cropping power of the grain crops to 44.6 quintals. Considerable areas of irrigated land in the rayon -- 4,500 hectares -- have been set aside for corn. Whereas last year only two teams in the rayon achieved a 100 quintal yield for this crop, this year 11 collectives plan to achieve this goal. At the present time, the rayon's machine operators are levelling off the soil out on the farm fields and carrying out sampling cultivation. Local efficiency experts have prepared devices for applying ammonia liquor. Beyond any doubt, a great amount of laborious work lies ahead. But, as is well known, grain is never achieved easily. /by F. Chernetskiy/ /Excerpts/ /Moscow IZVESTIYA in Russian 10 Mar 83 p 1/ 7026

OPENING OF NAVIGATION--Kiev--Navigation was opened yesterday on the Dnepr River. Dozens of ships carrying metallurgical raw materials, construction materials and equipment departed on distant voyages. This year the republic's river workers plan to transport more than 54 million tons of cargo and approximately 25 million passengers. [Text] [Moscow GUDOK in Russian 15 Mar 83 p 1] 7026

ICE DAMS--The largest and most lush meadowlands in the Pavlodar farming region lie in the valley of the Irtysh. Following the spring floods, long files of hay ricks are erected each year toward the end of the summer along both banks of the river. These files extend for many dozens of versts. But the Irtysh far from always abundantly floods the meadowlands each spring. This year at many river-bank farms it was decided to take advance measures with the object of assuring sufficient moisture for the meadowlands. Following the first few snowfalls, snow plows were brought in, on both meadowlands and plowlands. In Irtyshskiy Rayon, for example, snow retention was thus accomplished nearly throughout the entire 30,000 hectare area. Irrigation facilities that normally lie idle in the winter have been utilized for this purpose. Upon moving the pumps onto ice and extending from them dismountable pipelines, irrigation personnel blanketed the snow cover with a thick ice crust. Considerable stockpiles of water have thus been created for the croplands of the Chernoyarsk Vegetable Growing Association and at the Zarya Sovkhoz. To retain the spring high waters longer on meadowlands, some farms are erecting large dams of frozen ice and snow across the river valley. [By A. Kostyukov] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Feb 83 p 1] 1386

WINTER CROPS-- One-fourth of a million of hectares has been planted with winter crops in Kazakhstan. Their mass planting has been commenced on farms in the western, eastern and southern oblasts. [printed in boldface] [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 37, Sep 82 p 4] 1386

EXPEDITE PLANTING--The foundations for the future harvest should be laid rapidly. Many leading farms are upgrading their seeds prior to the onset of the frosts. Idle post-harvest tractors are being utilized for pre-winter plowing, which has been carried out on nearly 9 million hectares or 48 percent of the plan. The daily plowing rate is more than half a million hectares. But it should be still further expedited. Soil should be tilled with flat coulters not only in the northern but also in the western, eastern and southern oblasts.

Winter crops, now planted on 1.4 million hectares, should be planted on nearly one-third as many more hectares in order to fulfill the plan. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 7 Oct 82 p 4] 1386

FERTILIZERS APPLIED--Kuybyahevsk (Tajik SSR).4. Pre-sowing irrigation was begun early by the farmers of the Vakhshskaya Valley on the fields allotted for cotton. Wherever soils are less fertile, extra doses of organic matter are applied--25-35 tons per hectare. In Kuybyshevskiy Rayon, for example, cotton growers emulate the experience of the Kolkhoz imeni Lenin which, owing to the high level of its agricultural machinery, grows 36 and more quintals of thin-fibered cotton per hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 5 Mar 83 p 1] 1386

PLANTING IN KAZAKHSTAN--The sovkhoses and kolkhozes are planting seeds. In the next few days this work should be completed everywhere. The soil has been upturned on 3 million hectares--16 percent of the planned area. One-half of the target has already been fulfilled by the Semipalatinsk mechanizers. Farmers have planted winter crops on 721,000 hectares or one-third of the planned acreage. The pace of harvesting of rice, sugar beets, corn, vegetables and potatoes is increasing. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 7 Oct 82 p 4] 1386

PRE-WINTER PLOWING--The mechanizers of Kirovskiy Rayon were the first in [Chimkent] oblast to complete pre-winter plowing for winter crops. Organic and phosphoric fertilizers adapted to the physical and chemical composition of the soil have been applied throughout the area. More than four-fifths of the spicose cropland has been set aside for winter plantings, which have higher yields. It is highly important to plant winter crops at the right time. This has already been done on 559,000 hectares in the republic, which is 26 percent of the area planned. Autumn planting should be completed on schedule in optimal time and very competently. Such matters as the seeding and plowing of land should be constantly monitored. Care should be taken to provide all sovkhoses and kolkhozes with quality seeds of all crops for next year's harvest. So far plowing is progressing at a slow pace. This applies primarily to farms in the Aktyubinsk, Dzhezkazgan, Karaganda, Kustanay, Ural and other oblasts with large areas of land awaiting autumn plowing. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 7 Sep 82 p 1] 1386

TENTH MILLION--The farmers of Kazakhstan are laying a solid foundation for the future harvest.. They completed plowing the 10th million of hectares. The autumn tilling of fields on all major grain growing areas is conducted only with flat coulters. The farm collectives have ascertained that the mouldboardless plowing of cropland is highly effective. Wherever operations have been fully converted to the use of complexes of soil-protecting equipment, the yields of spicose crops have increased by an average of 3-4 quintals per hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 9 Oct 82 p 1] 1386

PLANTING RATE--Mechanizers at the Kapal; sloy Sovkhoz [Taldy-Kurgan Oblast] have planted winter crops at optimal times. Only grade-1 seeds were planted. At the same time all plowland at the sovkhos has been upturned. Winter crops in the oblast were planted on 190,000 hectares--96 percent of the area concerned. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 26 Oct 82 p 1] 1386

SNOW OVER ALMA-ATR--/Seemingly there were no omens of bad weather. The weekend was warm and sunny and the temperature was more than 20 degrees Centigrade. But Monday the temperatures fell sharply and it began to rain, with snow and finally a snowstorm arriving in the evening. Under the weight of the snow, that was unusually wet for that time of the year, trees began to bend and break. In many

places power lines broke and here and there fires arose./ [printed in boldface] Yesterday morning trolleys and buses were unable to leave their depots. The municipal authorities took extraordinary measures and additional hundreds of buses appeared on the restored traffic-laden major thoroughfares. Employees of the housing services combines as well as the emergency services of the municipal power system, the fire brigades, and blue- and white-collar workers of the enterprises and institutions of Alma-Ata were mobilized to help eliminate the consequences of this natural disaster. G. Bondar', the chief of the Alma-Ata Weather Bureau, told the TRUD correspondent: "A massive cloud that brought copious precipitation had formed at the boundary between two air masses. Overnight the snow cover grew to a depth of 26 cm. This is usual for mid-winter. The trees did not yet have the time to adapt themselves to winter conditions and, under the weight of the snow cover, they began to break. Maples, elms and poplars, which had not yet shed their foliage, were the most hard-hit. Such a phenomenon happens about once every 40 years. It is expected that already within the next few days the weather in Alma-Ata will get warmer." The disaster has not seriously impaired municipal services. According to available information, there were no casualties.[By V. Gafiatulin] [Text] [Moscow TRUD in Russian 27 Oct 82 p4] 1836

UNUSUAL SNOWFALL--The inhabitants of the capital of Kazakhstan became witnesses to an unusual event. Fluffy snow, blanketing the still green treetops, covered blooming flowerbeds and lawns. The rains that commenced yesterday became replaced by snow and overnight a veritable snowstorm came. R. Krasnova, department chief at the Kazakh SSR Administration of Hydrometeorology and Environmental Monitoring, declared: "We had predicted the weather accurately but even so we had not expected this. Overnight the snow cover reached a depth of 26 cm. This usually happens in the foothills of the Tien-Shan in January. So far synopticians have only once--in 1944--recorded a snowfall resulting in a 19 cm deep snow cover, and that was in October. The cause of this rare phenomenon here was the formation of a contrast zone in the foothills."

Under the weight of the snow, branches of elms and poplars are breaking, as are power lines. The city party committee has set up a headquarters for eliminating the consequences of the disaster. Special equipment has been dispatched to clear the streets and trolley tracks. At many enterprises and organizations Komsomol brigades have been set up to help the municipal sanitation combine.

But the snowfall was a windfall to farmers: in one day the precipitation reached 38 mm. This has not been observed in the foothills of the Tien-Shan for 20 years. The autumn moisture is, following the dry summer, particularly valuable to the plowlands. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Oct 82 p 4] 1386

WINTER PLANTING--According to the State Seeds Inspectorate of the Kazakh SSR, more than 3.1 million tons of seeds have been planted as of the beginning of January, of which about nine-tenths had previously been inspected. Altogether, 86.4 percent proved to be of standard quality. with 72.1 percent belonging in grades 1 and 2. These figures are lower than last year. In East Kazakhstan Oblast nearly one-half of the seeds belongs in grade 1. More than four-fifths of the seeds used in Kustanay and Turgay oblasts are of good quality. But at the sovkhozes and kolkhozes of the Dzhambul, Kzyl-Orda and Chimkent oblasts this indicator is low. A maximum of effort must be applied to upgrade the seeds by

means of additional treatment. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Jan 83 p 1] 1386

ACCUMULATING MOISTURE--Mechanizers at the Oktyabr'skiy Sovkhoz in Krasnoarmeyskiy Rayon [Kokchetav Oblast] have completed the first snow-cover plowing operations on all fields. The depth of the snowcover reaches 30-40 cm. Altogether, snow-retention operations in the oblast will be carried out on an area of 4 million hectares. [By A. Lysenko] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 19 Jan 83 p 1] 1386

BLIZZARD PROTECTION--Abundant snowfall and gusty cold winds are gripping the Caspian coastal region. A veritable blizzard is raging on the steppe of Kyzylkoginskiy Rayon, the northernmost rayon of Guryev Oblast. The normal activities of shepherds have been disrupted. In the morning trenches have to be dug in the snow in order to reach the sheepyards. But humans are opposing the disaster with courage and ingenuity. Tens of thousands of sheep in the rayon have been brought to covered premises and the animals are being provided with good fodder prepared in abundance. Regular supplies of water have been secured. Considerable attention is being devoted to care for the ewe population, considering that lambing will begin in 2 months more. [By N. Pototskin] [Text] [Moscow TRUD 19 Jan 83 p 1] 1386

SEED PLANTING--High-grade grain seeds have been prepared on farms of the Borovskiy, Fedorovskiy, Taranovskiy and Naurzumskiy rayons [in Kustanay Oblast]. [By Ye. Dutov] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 26 Jan 83 p 1] 1386

AHEAD OF SCHEDULE--Snowfalls have become more frequent in the [Petrovskiy] oblast--and the pace of accumulation of winter moisture has immediately increased. About 2,000 snow plows are driven daily to the fields. Many farms operate this equipment in two shifts. The leading farms are those in the Bishkul'skiy and Sokolovskiy rayons, which during the past drought year had harvested most grain and fulfilled their obligations for its sale to the state. On those farms about two-thirds of all planned fields have already been treated with the aid of snow plows. The denser cutting of snow furrows--not more than 3-4 m apart--contributes to the accumulation of moisture for the winter. The depth of the snow cover on the fields worked with the aid of "ugol'niki" [?] has reached 3-35 cm. Road machinery--"dagi"--has been readied for re-erecting snow mounds on every farm. The experience of the local farmers in accumulating winter moisture is being emulated by all farms in the oblast. They are now accomplishing snow retention on the third million of hectares, thus fulfilling more than one-half of the target so far. [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Jan 83 p 1] 1386

FOURTH MILLION--Following the snowfalls the pace of winter plowing has accelerated markedly. In the Kokchetav oblast winter plowing has now been started on the 4th million of hectares. This is much more than in a like period last year. More than 1,000 sets of equipment, mostly based on high-horsepower Kirov

[tractors] are being operated by the team and group method. "Dagi" road machinery has been used to perform snow plowing on one-fourth of a million hectares--twice as many as last year. Following that machinery, mechanizers build efficient snow-retention traps. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 3 Feb 83 p 1] 1386

ACCUMULATING MOISTURE--Virgin Land grain growers are preparing for spring planting. All farms have at hand the needed quantities of high-grade seeds of cereal crops. The farmers rejoice in the abundant snowfalls. Mechanizers attempt to retain on the fields the largest possible quantities of winter precipitation. Snow retention throughout the Tselinograd oblast has been accomplished and the snow plows are now carrying out final operations. At the Suvorovskiy Sovkhoz proper conduct of operations has resulted in blanketing the fields with a snow cover that is more than 40 cm deep. Mechanizers at the Priozerney, Kolos, Poltavskiy, Armavirskiy and Uryupinskiy sovkhozes are using equipment in a highly productive manner. [By G. Nagayev] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 Feb 83 p 1] 1386

MOISTURE IS HERE--For a long time this winter grain growers in Kustanay Oblast lacked precipitation, but now that snowfalls have come, snow plows have immediately afterward emerged on the fields. Work on building snow embankments is being completed at the Veselopodol'skiy, Barvinovskiy and Lesnoy sovkhozes. The leaders in the socialist competition for snow retention are the mechanizers of the Uritskiy Rayon, who employ advanced working techniques, perform snow retention by the group method, maintain equipment properly and are provided with the conditions for highly productive work. The pace of snow-plowing is being accelerated in the Kustanayskiy, Leninskiy and Karasuskiy rayons. Mechanizers face the task of completing as soon as possible the construction of snow embankments on 5 million hectares. They are tenaciously pursuing this goal. [By I. Puzyrev] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 4 Feb 83 p 1] 1386

ON LARGE TRACTS--The farmers of Kazakhstan have completed building snow embankments throughout the planned area of plowland--about 30 million hectares. High labor productivity was attained by the mechanizers of the North Kazakhstan Oblast. They have combined their equipment into large clusters and organized the on-watch method of operation and they were the first in the republic to carry out snow retention in two successive operations throughout the grain fields. On farms of the Sokolovskiy, Vozvyshenskiy, Bulayevskiy and Mamlyutskiy rayons the depth of the snow cover has reached half a meter. [Text] [SEL'SKAYA ZHIZN' in Russian 24 Feb 83 p 1] 1386

MOISTURE ACCUMULATED--An important resource--estuary water--is being utilized for irrigation by the farms of the Ural region of Kazakhstan. Today the irrigators of Uralsk Oblast commenced much earlier than usual to flood extensive tracts with water. The abundant accumulation of water has been helped by favorable weather conditions--the snowfalls have been superseded by frequent thaws. During the 11th Five-Year Plan period the subdivisions of the Ural'skvodstroy Hydraulic Engineering Construction Trust have provided kolkhozes and sovkhozes with about

30,000 hectares of irrigated land. [Text] [SEL'SKAYA ZHIZN' in Russian 23 Feb 83 p 1] 1386

AHEAD OF SCHEDULE--The farmers of Kazakhstan are nourishing winter crops a month ahead of schedule. The appearance of machinery on the fields at such an early period has been prompted by the early thawing of snow--the period when the application of nitrogenous fertilizers is most effective. According to multi-year data, every quintal of mineral fertilizers results in an additional yield of 7 quintals of grain per hectare, in Kazakhstan. This is due to the introduction of effective techniques for the application of fertilizers--top-dressing in early spring and row embedding together with seeds. [Text] [Moscow TRUD in Russian 10 Mar 83 p 1] 1386

1983 HARVEST--Of the 950,000 hectares of land to be worked this year to be worked this year by the Tajik Civil Aviation Administration, more than half is being handled by the Kurgan-Tyube Aviation Enterprise. The work of the assistants to farmers in the Vakhshskaya Valley is practically unabated. Today, too, An-2 biplanes are circling over the fields of farms of the Yavanskiy, Kuybyshevskiy and other rayons, and mineral fertilizers and herbicides are being applied to the winter grain plantings. Sovkhoz heads in the Yavanskiy Rayon and elsewhere in the Kurgan-Tyube oblast appreciate highly the labor of the winged agrochemists. [By A. Pavlov][Excerpt] [Dushanbe KOMMUNIST TADZHIKISTANA in Russian 8 Feb 83 p 1] 1386

FLOOD DAMAGE--The past summer has caused many problems to the staff of the subdivisions of the Tajik republic's ministry of land reclamation and water management. The copious rainfall in the mountains has caused cresting of the Varzob and Kafirnigan rivers. [Excerpt] [Dushanbe KOMMUNIST TADZHIKISTANA in Russian 15 Feb 83 p 1] 1386

VICTIMS RESCUED--/An unusually strong blizzard gripped a number of rayons in northern Tajikistan. Literally within a few minutes lowland segments of the heavily traveled highway running from the Leninabad oblast seat to the settlement of Bustoi were blanketed with snow. Traffic on the highway came to a stop; GAI [State Automobile Inspection] patrols began to turn around. How to help those who were trapped on the highway?/ [printed in boldface] Then alarm was sounded. Heavy-duty vehicles, tractors and bulldozers emerged from the city's depots and converged on the highway. The column slowly but surely progressed toward the people trapped on the highway. Emergency steps were taken to provide them with hot meals, a warm place and medical aid. Despite the intense blizzard the rescue operations were not discontinued for a moment. The team of rescuers operated skillfully under the direction of N. Verkhoglazenko, deputy chairman of the Leninabad Oblispolkom. About 50 people caught on the highway by the blizzard received prompt assistance. Thirty snowed-in vehicles were towed out to a safe

place according to the newspaper LENINABADSKAYA PRAVDA. [Text] [Moscow TRUD in Russian 9 Feb 83 p 4] 1386

SEEDERS IN MOUNTAINS -- --The mass planting of spring crops has begun on the mountain slopes of the Karateginskiy and Gissarsky ranges in Tajikistan. The grain growers of the Leninskiy, Tursunzadevskiy and other rayons are using seeds of high-yielding early-maturing varieties of wheat, barley and oats of Tajik selection. Preference is being given to short-stalked wheat, which is disease- and lodging-resistant and yields more than quintals per hectare of dry sandy soil. Emulating the experience of the country's leading graingrowers, the Tajik farmers work in large comprehensively mechanized teams. This will serve to shorten the time of planting the entire area. The early advent of warm weather in the republic's valley and mountain regions has made it possible to expedite the sowing of annual grasses, root crops and pulse crops. [Text] [Moscow PRAVDA in Russian 12 Feb 83 p 1] 1386

WHEAT GROWING EXPERIENCE--Two intensive varieties of wheat, the Mexican Sete Cerros 66 and the American Verl Sidz [transliterated] 1877, are being grown on irrigated land in Tajikistan. But after a number of years these varieties, when grown in Tajikistan, have become much less short-stemmed (their height now approaches the one-meter mark) and begun to display proneness to lodging, which is enhanced when nitrogen is applied in dosages of more than 100 kg/hectare. In this connection, it was of great interest to test the effectiveness of "tur" [?] [Excerpt] [Moscow KHIIMIYA V SEL'SKOM KHOZYAYSTVE in Russian Oct 82 p 28] [COPY-RIGHT: Izdatel'stvo "Khimiya", "Khimiya v sel'skom khozyaystve", 1982] 1386

TOP-DRESSING OF WINTER CROPS--/The roar of engines is resounding over the grain fields of the republic. The kolkhozes and sovkhoses of the Kurgan-Tyube, Lenabad and Kulyab oblasts have commenced the top-dressing of winter grain crops. [printed in boldface] It is being carried out with the aid of agricultural aviation and land-based means. Nitrogenous fertilizers contributing to a good growth of grain and high harvesting yields are being applied to the soil. According to the Administration of Grain and Fodder Crops at the Tajik SSR Ministry of Agriculture, these operations proceed at a fast pace on farms of the Sovetskiy, Dangarinskiy, Ura-Tyubinskiy, Ganchinskiy, Kumsangirskiy, Kolkhozabadskiy and certain other rayons. This is greatly assisted by the weather, as well as by the good degree of preparation of mechanizers and pilots for this responsible campaign. This year spicose winter crops will be top-dressed on 50,000 hectares more than last year. [By P. Akhmedov] [Text] [Dushanbe KOMMUNIST TADZHIKISTANA in Russian 18 Feb 83 p 1] 1386

POOR FERTILIZER SUPPLIES--An unremitting concern for increasing soil fertility is the principal duty and obligation of farmers. Unfortunately, there are quite a few farms in this republic where all hope is being placed in mineral fertilizers and organic ones are poorly used. Last year on the farms of the Kolkhozabadskiy Rayon the plan for preparation of organic fertilizer was fulfilled only 30 percent, and in the Dzhilikul'skiy Rayon less than half. Naturally, the depleted soil produced much less than it could. Such a practice is also characteristic of

a number of farms in the Leninabad and Kurgan-Tyube oblasts and the Gissarskiy, Komsomolabadskiy, Garmskiy and other rayons where much smaller quantities of organic fertilizer had been applied for this year's harvest compared with a year ago. In the republic as a whole the shortfall exceeds 132,000 tons of organic fertilizer. To fill this gap, the procurements and transport of fertilizer should be universally expedited so as to offset its deficiency in the soil during the period of spring and summer top-dressing. Not much time remains for this purpose, and hence the performance of fertilizer teams should be especially monitored. Organic fertilizers should be transported from winter pastures and other places, even those in which they exist in small quantities. Poultry excreta accumulating in poultry factories and on poultry farms as well as liquid sewage and "duval'nyye" [?] lands should also be utilized. Proper storage of organic fertilizers also is important. Far from all the farms have the facilities for such storage. The manure is often transported to the fields, deposited in piles and left uncovered. This results in loss of valuable nutrients and waste of manure. While it is not possible to build rapidly standard facilities for the storage of organic fertilizer, it can be readily deposited in special mounds anywhere, which a good farmer is bound to cover with a dense layer of earth. The personnel of the "Tajiksel'khozkhimiya" republic association for agricultural chemicals and its local agencies should, jointly with the farmers, do everything necessary to assure the fertility of all fields during the current season. [Excerpt] [Dushanbe KOMMUNIST TADZHIKISTANA in Russian 21 Jan 83 p 1] 1386

CROP PLANTING--Each day the pace of planting in Tajikistan is growing. The Kanibadamskiy Special Farm, which engages in the production of fodder, has begun to plant a 500-hectare tract reclaimed from the marshes by the Leninabad Hydro-technical Construction Trust. Corn will be grown there. In the mountain regions this crop will also be grown on lands previously used to grow low-yielding spicose crops which had at most yielded 10-12 quintals of grain per hectare, compared with the much higher yields of corn in these areas. The Sovkhoz "Forty Years of Tajikistan," for example, harvested 70 quintals of grain corn per hectare. Normally, in Tajikistan, spring begins in the valleys and gradually spreads to the foothills of mountains. But at present snow is falling in the warm zones, followed by sudden frosts which halt field operations. Even so, however, the sun steadily warms the air and soil and summons people to the fields. In the Dashtak Valley of the stern Pamir Mountains early-maturing barley and alfalfa began to be planted. The farmers still face the principal problem--that of growing cotton. How have the mechanizers prepared themselves for planting it? In Sovetskiy Rayon, for example, quite a few agricultural machines still are under repair. In the Moskovskiy and Voseyskiy rayons the cleaning of intra-farm irrigation and drainage and collection systems proceeds slowly. In Kulyab Oblast moisture-retention irrigation has to be carried out on 1,000 hectares, but so far only 130 hectares have been provided with water. Of the 205 hydrotechnical structures only 64 have been repaired. Spring is coming soon. Experts from agroindustrial associations should help grain growers to conduct planting at optimal times and competently and thus lay a solid foundation for the harvest of the third year of the Five-Year Plan period. [By O. Latifi] [Excerpts] [Moscow PRAVDA in Russian 9 Mar 83 p 1] 1386

1386

CSO: 1824/252

## LIVESTOCK FEED PROCUREMENT

### LOW QUALITY, HIGH PRODUCTION COST OF GRASS MEAL IN THREE REPUBLICS

Moscow SEL'SKAYA ZHIZN' in Russian 25 Mar 83 p 2

/Article by V. Finogenov, inspector for the Agricultural Department of the USSR People's Control Committee: "The Meal Is Expensive"

/Text/ There is no need for proving the value of grass meal in terms of its feed qualities. The artificial drying of grasses makes it possible to reduce nutrient losses to a minimum, to obtain feed which is the equal of many grain concentrates and to use it as a protein-vitamin additive in the production of mixed feeds. An inspection carried out by the Agricultural Department of the USSR People's Control Committee, jointly with the republic and local organs of people's control, has shown that in recent years a considerable increase has taken place in the production of artificially dehydrated feeds and that the logistical base for this branch has become stronger. The check revealed that kolkhozes, sovkhoses and other agricultural enterprises in a number of oblasts and autonomous republics in the RSFSR and the Kirghiz and Estonian SSR's have at their disposal 1,513 drying units, 1,238 granulators and 6,013 highly productive feed harvesting machines.

By making efficient use of the available machines and equipment, many farms are fulfilling and over-fulfilling their plans for the production and sale of grass meal and are skilfully employing it as an additive to the principal feeds being used in animal husbandry.

However, it was discovered during the course of the inspection that the quality of the grass meal at a majority of the kolkhozes and sovkhoses is extremely low, its nutritional properties worse than those of hay and its production cost 4-5 times higher. Meanwhile, scientific studies and operational practice have established the fact that, owing to great labor and power expenditures, only the production of 1st or 2d grade meal containing 0.8-0.9 feed units in a kilogram of feed is economically efficient. Actually, the principal bulk of the artificially dehydrated grasses is processed in order to satisfy internal requirements or for sale to the state as lower than 3d grade or even non-graded material. In Kirghizia, for example, more than 80 percent of the overall volume of grass meal was sold to the state as 3d or 4th grade material, in Estonia -- 78 percent, at farms checked in the RSFSR -- 77 percent and another 14 percent as non-graded material. This data is for 1981, with the situation for last year being no better.

An unsatisfactory situation has developed in Vyruskiy, Pylvaskiy and Khar'yuskiy Rayons in the Estonian SSR. Here one half of the grass meal obtained turned out to be non-graded. Moreover, there is still another alarming comparison. At five farms which were checked in Khar'yuskiy Rayon, the grasses harvested for meal furnished 24.8 feed units per hectare and for hay -- 25.7 quintals. Moreover the production cost per ton of meal amounted to 130 rubles and for hay -- only 36. Thus, golden meal was obtained!

And on farms in Kirghizia, Kabardino-Balkar ASSR and the Chuvash ASSR, a large portion of the grass meal obtained, in terms of its crude protein, fat and cellulose content, for all practical purposes did not surpass hay. For the country as a whole, during 1981 only 30 percent of the grass meal produced turned out to be of 1st or 2d grade quality. From year to year the plans for procuring high quality grass meal are not being fulfilled. For the most part this was 3d and 4th grade material and at times even non-graded. Hence the quality of the mixed feed is low and this results in an over-expenditure of grain. At enterprises of the Ministry of Procurements for the Kirghiz SSR, for example, such over-expenditures amount to 7 million or more rubles annually.

What are the chief reasons for such low quality grass meal? An inspection has revealed that it derives from a poor raw material base and from the absence at a majority of the kolkhozes and sovkhoses of a green conveyer line, which would ensure continuous operation of the processing units. In many instances, instead of cereal, leguminous and meadow grasses, the preparation of grass meal involves the use of sowings which have become overgrown with weeds, haulm, damaged grain, straw, common reeds, grape vines and the branches of trees. At the Rassvet Kolkhoz in the Kabardino-Balkar ASSR, corn stalks and peas were processed into meal on AVM units. At the Primalkinskiy Sovkhoz in this same republic, notwithstanding the availability of 200 hectares of alfalfa, feed was prepared using barley and wheat grain.

At almost all of the farms inspected, the technology for the preparation of artificially dehydrated feed was not being observed and the operating regime for the drying units was not being followed. The fodder was being processed by eye and the drying temperature was not in keeping with the norms. The Viniculture Sovkhoz imeni Lenin in the Kirghiz SSR provides a clear example of the end result of such discrepancies. Earlier, before a kilogram of cut alfalfa was placed in a drying unit it contained 160 mm of carotene and following drying, or more precisely overheating, only 42 mm remained.

It is believed that all of this is the result of weak control being exercised by the agronomic, veterinary and engineering services on the farms and the absence of scrupulous analysis of the prepared feed.

Great losses in carotene and other important elements occur in the grass meal during the storage process. The meal is held as a rule in adapted storehouses, barns, pens, on farms, under simple sheds and at times even outdoors in bales. Crude violations of the rules for storage also lead to a deterioration in the quality of the feed and in its spoilage and loss. At the Kuusalu Kolkhoz in Khar'yuskiy Rayon in Estonia, as a result of a careless attitude towards storage and self-warming, 75 tons of granules were lost. Similar situations were observed occurring on farms in the Kabardino-Balkar ASSR.

The people's controllers have uncovered serious violations in the storage of dehydrated feed at enterprises of the Ministry of Procurements. According to specialist computations, the farms should have storage facilities for the one-time storage of 6 million tons of grass meal and yet a storage capacity is available for only 1.6 million tons. And the majority of these facilities do not meet the requirements set forth in the GOST /state standard/. The farms were assigned at task for the 1979-1982 period to place a definite number of storehouses in operation. However, a check carried out at 112 kolkhozes and sovkhozes revealed that not one such facility was built during this period. The plans for the 10th Five-Year Plan called for 131 elevators with metal silos for the storage of granulated grass meal to be built at enterprises of the USSR Ministry of Procurements. Only four such facilities were placed in operation.

All of this led to a reduction in the quality of the grass meal and to an increase in the cost of its production. For each ton of dehydrated feed, 220 kilograms of diesel fuel and 362 kilowatt hours of electric power were expended on the average throughout the country as a whole, against a norm of 200 kilograms and 130 kilowatt hours respectively. If we look at individual farms, then the discrepancies are even greater. For example, the production of 1 ton of grass meal at the Krasnaya Kabarda and imeni Lenin Kolkhozes in the Kabardino-Balkar ASSR required an expenditure of 1,200-1,600 kilograms of fuel.

The specialists attached to the USSR Ministry of Agriculture are not drawing the proper conclusions from the incidents of mismanagement and waste associated with the production and storage of grass meal, but rather they appear satisfied with merely the quantitative aspect of the work. They are not undertaking effective measures aimed at raising the quality of the output or lowering expenditures. Nor is the USSR Ministry of Procurements manifesting proper persistence with regard to increasing the procurements of high quality grass meal.

7026

CSO: 1824/287

## AGRO-ECONOMICS AND ORGANIZATION

### GOSPLAN OFFICIAL EXPLAINS FUNCTIONS OF RAPO COUNCILS

Moscow TRUD in Russian 25 Feb 83 p 2

/Interview with Georgiy Petrovich Rudenko, chief of the USSR Gosplan Department of the Agro-Industrial Complex, by Yu. Popov; date and place not specified/

/Text/ Since the beginning of this year the agro-industrial associations which were created in accordance with the decisions of the 26th Party Congress and the May (1982) Plenum of the CPSU CC have started to function. In places councils of these associations have been formed. Most of them have effectively proceeded to develop and implement measures aimed at substantially increasing the production of agricultural products as early as the third year of the five-year plan.

The editors have requested G. P. RUDENKO, chief of the USSR Gosplan Department of the Agro-Industrial Complex to talk about the first steps in the emergence of the new organs for administering the most important sphere of the national economy.

/Question/ Georgiy Petrovich, the end of last year witnessed the publication of the Model Regulations on agro-industrial associations of two degrees: in rayons and oblasts, in krays and autonomous republics. What general principles were laid down as the foundation for such associations?

/Answer/ Agro-industrial associations in the localities are formed for the purpose of improving the administration of agriculture and the other sectors indirectly linked with it. Precisely which ones? Along with agricultural organizations, the rayon agro-industrial associations (RAPO's) include, on the one hand, enterprises and organizations which service kolkhozes and sovkhoses: Sel'khoztekhnika, Sel'khozkhimiya, reclamation and rural construction sub-divisions. On the other hand, RAPO's include groups engaged in procuring and processing agricultural produce. Associations at the oblast, kray, and republic level have approximately the same structural make-up.

The most important principles which such associations are supposed to ensure are comprehensiveness and proportionality in developing all the units included within it, based on combining territorial and sectorial administration. So that all the associated groups may cooperate together precisely, achieving the fulfillment of plans for producing and delivering foodstuffs to the rayons, and not care only about their own, narrowly departmental interests.

Up to that time, let's say, the main thing for Sel'khoztekhnika was concern for increasing the volume of repair operations. By any means. It is paradoxical but a fact that the more expensive it was for the farms to service their equipment, the higher became the profits of Sel'khoztekhnika's enterprises. And we were moved at times by seeing how television showed the little towns [compounds] of Sel'khoztekhnika, splendidly equipped on these profits with palaces of culture and swimming pools, forgetting that all this was paid for by kolkhozes and sovkhoses, moreover, with money which had been earmarked, to a great extent, in accordance with the state plans, for the acquisitions of new equipment, increasing the fertility of the land, providing civic improvement for their own populated points and strengthening their personnel, and, in the final analysis, for increasing the production of foodstuffs. Now different economic conditions and a different administrative structure have been created, beginning with planning: the tasks assigned to enterprises and organizations of Goskomsel'khoztekhnika included in a RAPO are examined and approved by the association council, on which the majority of votes must belong to representatives of the farms. Such a collegial organ will not allow draw-out indicators to be dictated to them.

Within the association's framework there will also be more coordinated solutions to problems of procuring and transporting output, taking into account the interests of all groups included within it. This same problem of developing a procurement network and building storage facilities will be solved by the council by developing bases in the rayon center or directly on the farm. And not as before, when many procurement offices used to pull, each in its own direction, without taking into consideration the interests either of the farms or of the state. And, on the whole, construction within a rayon ought to be developed in accordance with better grounded plans, examined and approved by the association council, and not merely according to the understanding of the very organizations of the Ministry of Rural Construction and the Inter-Kolkhoz Construction Administration.

And if we turn from the relations with the associated units to the activities of the kolkhozes and sovkhoses themselves which are included within a RAPO, then it is important to emphasize the following point: the association creates more favorable conditions for the economically well-grounded specialization and concentration of production, as well as the development of inter-kolkhoz cooperation. In the council it will be decided with better argumentation as to who should more feasibly engage in seed production, who--in feed production, and who--in industrial crops. Furthermore, thanks to the right, as established by the Model Regulations, to set up appraisals of the resources being supplied to each other within the association's framework, we can now more justifiably stimulate intra-rayon specialization and cooperation.

[Question] Many readers are interested in the question of what has happened to the former specialized organizations, to all those frequently criticized trusts and "proms" [industrial producer cooperatives?].

[Answer] The sub-divisions which did not justify themselves have now been abolished. Throughout the country as a whole, 3,200 trusts, associations, and other administrative organs which often duplicated each other have been re-organized. Setting the administrative apparatus in order affected the system of the USSR Ministry of Agriculture, Goskomsel'khoztekhnika, the Ministry of Procurement, the Ministry of Land Reclamation and Water Resources, and the Ministry of the Fruit and Vegetable Industry, all at the USSR level. More than 5,000 sovkhozes which were previously under their jurisdiction have now been transferred directly under the jurisdiction of the rayon agro-industrial associations. At the same time there occurred a reduction in the administrative apparatus, which allowed a significant portion of the specialists to be sent directly to the kolkhozes and sovkhozes as well as to other enterprises of the agro-industrial complex.

In Orlovskaya Oblast, for example, seven such presently superfluous administrative organs have been eliminated, including four specialized associations, monitoring-auditing and juridical inter-farm groups. Thanks to this, 727 specialists were freed up for other work.

[Question] In the Model Regulations for agro-industrial associations they are assigned a wide range of problems, and, at the same time, they are accorded the necessary rights for solving these problems. Thus, it has been established that, within the bounds of their jurisdiction, the councils of the agro-industrial associations constitute the organs of state administration. What does this mean in practice?

[Answer] There are various types of councils and commissions which can give only recommendations. In the APO councils the situation is different. Their make-up [staff] is approved by a session of the appropriate Council of People's Deputies, and it is in the latter's name that they operate. Herein also lies the state basis for the status of the agro-industrial associations. The decisions taken by their collegial organs are not simply accepted for their information but must be carried out by all the association's members, regardless of their departmental jurisdiction. In case conflicts arise, their resolution may be carried to a higher-ranking organ, even as far as the Presidium of the USSR Council of Ministers Commission on Problems of the Agro-Industrial Complex.

It will not be so simple for the ministries and department directors in the localities to refuse to abide by the decisions of the APO councils; they will need weighty arguments in order to defend their own points of view. Well, and if some one of the partners still does conduct matters in his own way, and this brings about negative consequences, they may be held responsible to the state.

*[Question]* In addition to state rights, the associations have also acquired a number of economic levers in their own hands. But, as the practical experience of initiators--the RAPO's of Estonia and Latvia--has shown, these levers do not always operate successfully within the system of the previously established financial mechanism. Let's say, not all groups can contribute their share to the centralized RAPO funds without violating the existing procedure. What has been provided to resolve such situations?

*[Answer]* A number of normative documents are now being prepared which will lead to a concordance between the existing economic regulations and the new structure for administering the agro-industrial complex. The first of these is the procedure for forming the agro-industrial association funds. It is understandable that it will alter or completely do away with previously operative normative acts.

The second document deals with the economic relations of kolkhozes and sovkhoses with their partners in the agro-industrial complex. Cost-accounting, contractual relations will become the norm. If the services of this or that organization prove to be disadvantageous to a farm, it will not sign a contract. If one of the partners fails to meet his contractual obligations, economic sanctions must inevitably follow, reflecting the measure of responsibility for the loss of agricultural output or other damage.

In this connection, I would like to draw attention to the following point. It is understandable that we must speed up the working out of such documents. But this does not mean at all that, while waiting for them, the APO councils can sit with hands folded. Let's bear in mind that the initiators were operating with an existing normative base, and they achieved results which were not too bad. It is already necessary today to fully utilize the rights granted by the Model Regulations for solving the problems confronting the agro-industrial associations. Above all--this means to unite the efforts of all groups for successfully completing the winter period on the farms and carrying out the spring sowing in a precise manner.

*[Question]* The associations will have to do a great deal of work with backward, weak farms. What means are being provided for this?

*[Answer]* First of all, we must make skillful use of state aid. Freeing the weakest farms from indebtedness, postponing loan payments, raising the purchase prices on a number of agricultural products, surcharges on the prices for farms which are under more complicated natural-economic conditions--the money allocated for this requires intelligent treatment. It is necessary for each of the backward kolkhozes and sovkhoses to work out an effective program for making up the gap, for rising to a profitable level of operation.

An invaluable role in this matter may likewise be played by the agro-industrial associations and their councils. This ranges from concentrating the efforts of land-reclamation specialists and agro-chemists on farm lands which have previously lain fallow to help in supplying economic service. All the more so in that it is within the power of an association to re-distribute 10--15 percent of the resources allocated to a rayon.

[Question] What role in the re-structuring which has begun can be played by the trade-union organizations, raykoms, obkoms of sectorial trade unions, oblast, kray, and republican trade-union councils?

[Answer] An extremely wide field of activity is now opening up for trade unions which are included within the agro-industrial complex. Organizing competition within the framework of the associations is the most essential task of the day. An example of this is the experience of the Yampol'sk people. When the sugar-beet growers and the sugar-mill workers concluded an agreement, the intent of which was to struggle for an end result--the highest possible yield of sugar from each hectare, they strengthened not only their own economy and friendship. It may be said that, by their experience, they have put forth one of the most substantial arguments in favor of creating agro-industrial associations.

Such a competition as this can be developed along many lines within the bounds of a RAPO, oblast, kray, or republican association, or even going beyond the bounds of the sectors comprising them. Let's say that it is absolutely necessary that the sub-divisions of an agro-industrial complex in the localities receive the interested support of machine builders. So what about the reinforcement of sponsorship ties supplied on a planned basis? And in this matter the trade-union committees and councils could also play an important organizing role.

The main thing is that all working people be permeated with the following unified awareness: it is only by common efforts that we will make our dinner-table more abundant and more varied. The Food Program is a nation-wide cause.

2384

CSO: 1824/247

## AGRO-ECONOMICS AND ORGANIZATION

### USE OF FIXED CAPITAL, CAPITAL INVESTMENT IN RSFSR AGRICULTURE

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 2, Feb 83 pp 15-23

/Article by G.V. Kulik, chief of the Main Planning and Economic Administration of the RSFSR Ministry of Agriculture: "Effectiveness of Use of Fixed Capital and Capital Investments"/

/Text/ The decisions handed down during the May and November (1982) Plenums of the CPSU Central Committee, the conditions and conclusions set forth in the report delivered by the general secretary of the CPSU Central Committee Comrade Yu.V. Andropov during a joint session of the CPSU Central Committee, the USSR Supreme Soviet and the RSFSR Supreme Soviet, dedicated to the 60th anniversary of the forming of the Union of Soviet Socialist Republics aroused a tremendous amount of enthusiasm among all of the Soviet people. The agricultural workers and their related branches of the agroindustrial complex are uncovering new reserves and opportunities for rapidly increasing output production and raising its efficiency on each farm and in their subunits. The labor collectives are undertaking raised socialist obligations.

The USSR food program has combined and absorbed the experience accumulated in agricultural development since the March (1965) Plenum of the CPSU Central Committee. During this period in the Russian Federation, just as throughout the entire country, a great amount of work has been carried out in connection with strengthening the logistical base of the kolkhozes and sovkhoses, increasing the deliveries of equipment, mineral fertilizers and toxic chemicals to agriculture and expanding land reclamation operations. From 1965 to 1980, more than 200 billion rubles of state and kolkhoz capital investments have been used for agricultural development in the RSFSR. This is more than the entire amount for all of the preceding years of Soviet rule.

As a result, the productive capital of an agricultural nature on the republic's farms increased by a factor of 4.2, the machine-tractor pool was completely renovated, mineral fertilizer deliveries increased by a factor of 3.6, the areas of irrigated and drained land were expanded by threefold and large-scale modern and highly mechanized specialized enterprises were created for the production of grain, vegetables, potatoes, fruit, meat, milk, eggs and other farming and animal husbandry products. Capabilities were expanded and improvements were carried out in the technology for processing agricultural raw materials at enterprises of the food, meat and dairy and processing industries. Their fixed capital increased by a factor of 2.7.

The strengthening of the logistical base and improvements in the social living conditions of the rural workers led to growth in the production operations. During the 10th Five-Year Plan the average annual gross production of grain at all categories of farms in the RSFSR was 113.9 million tons, compared to 76.6 million tons during the 7th Five-Year Plan, or an increase by a factor of 1.5. During this same period the production of sugar beets increased by 37 percent, vegetables -- by 24 percent, fruit and berries -- by a factor of 2.4, meat in dressed weight -- by a factor of 1.5, milk -- by a factor of 1.3 and eggs -- by a factor of 2.2. In the process, the growth in gross agricultural output exceeded the increase in population growth. As a result, the per capita production of gross agricultural output increased by 25 percent over the past 15 years. And this occurred under conditions involving a considerable reduction in the number of workers. Compared to 1965 and for the republic as a whole, the size of the rural population in 1980 decreased by 11.5 million individuals, including the average annual number of kolkhoz members and sovkhos workers -- by 2 million individuals.

Data on farms in the Russian Federation makes it possible to see the relationship between an increase in the availability of capital and labor expenditures per unit of output (see Table 1).

Hence, labor productivity in poultry raising grew at more rapid rates, since here the process of all-round mechanization and the power-worker ratio are very high. Thus labor expenditures for the production of 1,000 eggs decreased from 21 man-hours in 1965 to 3.7 man-hours in 1980 and the labor expenditures for the production of a quintal of poultry meat decreased by a factor of almost 5.

During the mentioned period, considerable increases took place in the capital-labor and power-worker ratios for workers engaged in farming branches. Compared to 1965 when the average availability of capital on RSFSR farms for a machine operator was 7,000 rubles and the power-worker ratio -- 33 horsepower, by the end of the 10th Five-Year Plan these figures had increased to 26,000 rubles and 104 horsepower. Moreover, changes took place in the fixed capital of production not only from a quantitative standpoint. Quality changes took place in the machines and agricultural implements and the tractors became more powerful and more highly productive. The load carrying capacities of the motor vehicles were raised and increases took place in the productivity of many tractor-drawn implements and combines.

As a result, the production of goods by one average annual worker engaged in field crop husbandry increased accordingly by a factor of 1.8, in grain production -- by 2.8, in vegetable production -- 1.9 and in potato production -- by a factor of 1.2. If we consider all branches as a whole, then 4,400 rubles worth of output was produced per worker in 1980 compared to only 2,500 rubles worth in 1965.

The computations indicate that if the republic's labor productivity in agriculture remained at the 1965 level, then in order to ensure the gross output production obtained in 1980, 7 million more workers would have been required. An increase in productivity is one of the most important economic indicators of realization of the decisions handed down during the March (1965) Plenum of the CPSU Central Committee.

TABLE 1

Relationship Between Growth in Availability of Capital and Labor  
Expenditures Per Unit of Output

|                        | Fixed Productive Capital<br>Per Worker, in thousands<br>of rubles |      | Labor Expenditures Per Quintal,<br>in man-hours |      |      |
|------------------------|-------------------------------------------------------------------|------|-------------------------------------------------|------|------|
|                        | 1965                                                              | 1980 |                                                 | 1965 | 1980 |
| Dairy cattle husbandry | 1.9                                                               | 15.9 | Milk                                            | 13.6 | 8.8  |
| Hog farming            | 3.1                                                               | 25.3 | Pork                                            | 54   | 30   |
| Sheep raising          | 1.9                                                               | 12.8 | Mutton                                          | 59   | 48   |
| Poultry raising        | 3.2                                                               | 63.4 | Poultry meat                                    | 60   | 13   |

Another and less important aspect of the problem is that of raising the stability of agricultural production, which under the conditions found in the republic, with a considerable portion of the territory located in zones of risky farming, is very important. For example, during the 1961-1965 period the average annual gross output at public farms was valued at 27.5 billion rubles, including during the worst years -- 24.5 billion rubles and for the 1976-1980 period -- 43.3 and 41.9 billion rubles respectively. Whereas prior to the March (1965) Plenum of the CPSU Central Committee the deviations in gross agricultural output during the worst years from the average 5-year data amounted to 11 percent and compared to the best year -- 8 percent, during the 10th Five-Year Plan -- 3 and 6 percent respectively.

The USSR food program calls for improvements in the efficiency of agriculture and the entire agroindustrial complex and the achievement of maximum final results while simultaneously reducing the specific overall expenditures of public labor.

In the future, agriculture will be allocated large financial and material resources for ensuring the planned completion of the conversion of this branch over to an industrial basis. But today the center of gravity, which is a distinctive peculiarity of the agrarian policies in conformity with the modern conditions, is shifting over to the return from capital investments, to growth in agricultural productivity and to strengthening and improving its relationships with all branches of the agroindustrial complex. Under these conditions, importance is attached to improving the use of the powerful logistical farm potential already created for raising the return from each ruble invested in agriculture.

The leaders and specialists of many kolkhozes and sovkhoses, relying upon a great amount of assistance being provided by the state, are utilizing the production capabilities already created in an intelligent and thrifty manner. For example, the farms in Moscow, Leningrad, Belgorod, Sverdlovsk and Omsk Oblasts and in Khabarovsk and Stavropol Krays are realizing a high return from the use of production capabilities and from funds allocated by the state for construction. In many instances, the capital-labor and power-worker ratios are increasing and yet output production remains at the former level.

Orel Oblast, for example, has fine natural conditions at its disposal. In addition, during the 10th Five-Year Plan alone approximately 2 billion rubles worth of capital investments were expended in the oblast for agricultural development. Compared to 1965, the availability of capital in the oblast has increased by a factor of 4.3. However the farms are utilizing their great production capabilities in the absence of proper return. The increase in gross output production on the public farms during the 10th Five-Year Plan, compared to the 1961-1965 level, was only 19 percent. Moreover, the gross production of farming products decreased from 228 million rubles, obtained on the average during the 7th Five-Year Plan, to 206 million rubles during the 10th Five-Year Plan. The production of animal husbandry products is increasing slowly. A similar situation prevails in Yaroslavl Oblast. Here the availability of capital on the farms increased by a factor of 4.6 over the past 15 years. Compared to the Ninth Five-Year Plan, the production of goods during the 10th Five-Year Plan decreased.

The farms in the Altay Kray possess a powerful production potential. During the 10th Five-Year Plan alone, approximately 6 billion rubles were allocated for strengthening their logistical base. During this period the capital-labor ratio increased by a factor of 2.3 and the power engineering capabilities increased by a factor of 1.8. The labor productivity of workers and kolkhoz members increased by 4 percent. Compared to the 9th Five-Year Plan, the average annual gross output during the 10th Five-Year Plan decreased from 1.6 billion rubles to 1.5 billion rubles. This was the only region in western Siberia where the farms did not show an increase in gross output.

It is noted that for the republic on the whole, an increase of 70 kopecks in gross output was obtained during the 8th Five-Year Plan for each ruble of growth in fixed productive capital. During the 9th Five-Year Plan, this indicator fell to 9 kopecks and during the 10th Five-Year Plan it increased to only 15 kopecks. There are many factors which can explain this reduction: unfavorable weather conditions, disruptions in the technology and systems for carrying out farming and animal husbandry operations, insufficient material interest on the part of the workers and farms in increasing the production of goods and so forth.

A lack of completeness was tolerated in converting agricultural production over to a modern industrial basis. During the 1970's, a large portion of the capital investments allocated for production construction was used for the construction of animal husbandry facilities. At the time, many farms lacked modern and highly mechanized animal husbandry farms and this restrained the development of animal husbandry production operations. However, during the course of erecting facilities, some leaders did not undertake the measures required for intensifying the development of feed production. During the 1971-1980 period, 44.5 billion rubles were expended for animal husbandry development in the republic. At the same time, growth in the production of meat, milk and other animal husbandry products lagged behind the computations set forth in the plans. The livestock productivity and other indicators remained low. Compared to 1970 when 66 kg of live hog weight were produced per hog billet at kolkhozes and sovkhozes in the RSFSR, in 1980 -- only 65 kg. For the fattening of cattle, this data amounted to 142 and 154 kg. In 1970,

2,170 kg of milk were obtained from each billet for the maintenance of dairy cattle and in 1980 -- only 1,820 kg. The fixed capital structure on the farms (see Table 2) has developed in an unsatisfactory manner.

TABLE 2

Fixed Capital Structure on Farms in the RSFSR

| Capital                                       | 1965                     |      | 1980                     |      | 1980<br>Compared<br>To 1965,<br>factor of |
|-----------------------------------------------|--------------------------|------|--------------------------|------|-------------------------------------------|
|                                               | Billions<br>of<br>Rubles | %    | Billions<br>of<br>Rubles | %    |                                           |
| Fixed -- total                                | 31.7                     | 100  | 137.7                    | 100  | 4.3                                       |
| Of which amount, of a productive<br>nature    | 25.7                     | 81.1 | 107.1                    | 77.8 | 4.2                                       |
| Including: buildings and<br>structures        | 12.4                     | 39.2 | 65.8                     | 47.8 | 5.3                                       |
| Machines and equipment                        | 7.2                      | 22.6 | 25.2                     | 18.3 | 3.5                                       |
| Working and productive livestock              | 4.9                      | 15.6 | 12.7                     | 9.2  | 2.6                                       |
| Productive -- of a non-agricultural<br>nature | 1                        | 3.3  | 6                        | 4.3  | 6                                         |
| Non-productive fixed                          | 4.9                      | 15.6 | 24.6                     | 17.9 | 5                                         |

Thus, one should take note of the higher rates of growth for productive capital of a non-agricultural nature and also non-productive capital, the proportion of which has increased over the past 15 years. It should be borne in mind that these are average indicators for the republic. In many regions the erection of animal husbandry facilities consumed 70 percent of the resources allocated for capital construction. Thus importance is attached here to raising the efficiency of use of production capabilities already created. On the whole, the indicators for animal husbandry complexes are somewhat higher than those for other farms. For example, in 1981 the milk yield per cow at complexes was 2,298 kg and at kolkhozes and sovkhoses in the RSFSR which do not have complexes -- 2,060 kg and accordingly the average daily increase in live hog weight was 451 and 336 grams and that for large-horned cattle -- 652 and 454 grams respectively. In 1981, more than one half of the hog raising complexes obtained an average daily increase in live hog weight during fattening of less than 400 grams, or 1.5-1.6 times lower than the figure called for in the plan.

Many shortcomings are to be found in the use of the production capabilities at dairy complexes. In 1981 there were 974 dairy complexes operating in the republic, one third of which had cow productivities of less than 2,000 kg and the operational indicators for dairy complexes in Tambov, Irkutsk, Chita and Kursk Oblasts and in the Udmurt ASSR were on the whole lower than those for conventional dairy farms. Production concentration and the construction and operation of complexes and large mechanized farms are raising the need for employing an all-round approach for developing the farms and strengthening their logistical base. More than 1.72 billion rubles have been expended throughout the republic for the construction of dairy complexes and the expected return has not been realized owing to disruptions in the overall

development of production. While the complexes were erected, the workers were still not provided with housing. In connection with the construction of the complexes, the plans called for 1.02 million hectares of irrigated land to be placed in operation during the 10th Five-Year Plan and yet only 66 percent of the planned area was introduced into operations.

The task of all-round development was complicated by the fact that the planning and financing for the construction of animal husbandry farms and feed production bases were carried out by various ministries and departments. An animal husbandry complex is planned and built by agricultural organs, while the carrying out of drainage and irrigation work is entrusted to aquicultural organizations. The decisions handed down during the May (1982) Plenum of the CPSU Central Committee concerning improvements in the administration of agricultural production and the creation of agroindustrial associations in the rayons, oblasts, krays and autonomous republics will make it possible to eliminate these shortcomings and to raise the efficiency of use of productive capital.

One feature of modern production lies in the fact that, in the absence of the use of machines, it is impossible to imagine its normal development either in farming or in animal husbandry. The structure of the engineering capabilities at kolkhozes and sovkhoses in the RSFSR has changed considerably. Compared to 1965 when the overall power rating for mechanical and electrical units and electric motors came to 99.6 million horsepower, by 1980 this figure had climbed to 274.7 million horsepower, including respectively: tractors -- 38.2 and 96.9; combines -- 20.8 and 43.9; motor vehicles -- 30.2 and 64.1; electric motors and electrical units -- 10.4 and 69.8 million horsepower.

Thus, against an overall increase in power capabilities of a factor of 2.8, electric motors and power units increased by a factor of almost 7 and as a result their proportion of the overall power capability structure amounted to more than 25 percent. This describes a new stage, from the standpoint of quality, in the mechanization of agricultural production and the extensive introduction of electric power for production purposes. Compared to 1965, the consumption of electric power on farms during 1981 increased by a factor of 6.4.

A change took place in the structure of the machine-tractor pool, with the proportion of high-powered tractors increasing. In 1965 the proportion of 5 ton tractors was 3 percent of their overall capability and in 1980 the proportion of these machines in the tractor pool had increased to 18 percent. The power capabilities and number of wheeled tractors increased considerably. Today they account for 52 percent of the overall capability of the tractor pool, compared to 31 percent in 1965.

Under these conditions, special importance is attached to achieving improvements in the use of the equipment. Today the farm expenses for the maintenance, repair and operation of the machine-tractor pool amount to 6.83 billion rubles annually. Thus improvements in the use of the equipment and reductions in the expenditures for maintaining it are considered to be important conditions for raising the efficiency of use of the fixed capital. It bears mentioning that at many kolkhozes and sovkhoses the productivity of

the machine-tractor pool and agricultural machines and also implements is still not very high. Thus in 1975 the average daily output of one standard tractor was 7.1 hectares and by 1980 it had been raised to only 7.4 hectares. In 1981 the idle time of tractors, caused by technical and organizational factors, amounted to 42,900 tractor shifts at the kolkhozes and sovkhoses, including 17,300 tractor shifts caused by organizational factors.

The task of raising the efficiency of use of equipment is greatly dependent upon improving the planning for equipment deliveries and also upon an expansion in the assortment of machines being produced by industry. Today the highly productive use of tractors is being restrained by the absence of the required grouping of agricultural machines. For example, 45 types of machines are required for ganging tractors in accordance with the production technology and industry is producing only 32. Moreover, the requirements of the kolkhozes and sovkhoses are being satisfied only in the case of six machines. Series production has still not been organized in adequate amounts for wide-swath cultivators, disk harrows or large fertilizer spreaders. The kolkhozes and sovkhoses are not being provided with the equipment needed for the anti-erosion working of soil. Insufficient machines are being produced for the cultivation of potatoes, vegetables, spinning flax, sugar beets and soybeans. The feed procurement processes have been mechanized to only a weak degree. The machines supplied have low technical characteristics. For example, the principal machine for the mowing of grasses is a low productivity tractor mowing machine with a cutting width of 2.1 meters. The replacement of these machines by self-propelled mowing machines would make it possible to lower the requirements for machine operators engaged in feed procurement work by roughly 160,000 individuals.

The greatest bottleneck is transport. Owing to a shortage of transport equipment having the required productivity, many kolkhozes and sovkhoses are having to use grain, potato and beet combines and feed harvesting equipment. According to computations by specialists, the farms in the Volga region, for example, should have no less than 6.9 freight transporting trucks for every 1,000 hectares of arable land and yet they have only 3.6. Similar shortages persist in other regions of the republic as well. The May (1982) Plenum of the CPSU Central Committee resolved to increase the deliveries of highly productive equipment and trucks to agriculture and to raise their reliability and durability. This will promote to a considerable degree the production of goods and at the same time it will raise the efficiency of agricultural production.

The operational experience of many oblasts, rayons and farms testifies to the fact that fixed capital is used most effectively in those areas where the capital-labor ratio and the availability of capital for the farms are close to the established optimum norms. This is apparent in Moscow and Leningrad Oblasts and also in the Karelian ASSR and at many of the republic's best enterprises. For example, on farms in Leningrad Oblast the availability of capital is higher by a factor of more than 2, the capital-labor ratio -- by 1.7 and the availability of power -- by a factor of almost 2, than the average for farms in the western Siberian economic region. Thus the oblast's gross output per 100 hectares of agricultural land is greater by almost threefold. Here the level of production profitability is constantly 19-22 percent and the

labor productivity of sovkhos workers is higher by a factor of 1.7 than the average zonal indicators. The dependence of the operational results on the level of availability of fixed capital is shown in the data furnished in Table 3.

TABLE 3

Dependence of Operational Results of Farms Upon Availability of Capital

|                                                                                              | RSFSR | Non-Chernozem Zone | Leningrad Oblast | Karelian ASSR | Central Region | Moscow Oblast |
|----------------------------------------------------------------------------------------------|-------|--------------------|------------------|---------------|----------------|---------------|
| Farm fixed capital per 100 hectares of agric. land, in thousands of rubles                   | 51    | 80                 | 293              | 205           | 83             | 225           |
| Gross output per 100 hectares of agric. land (average for 1976-1980), in thousands of rubles | 20.2  | 29.3               | 103              | 85            | 31             | 95            |
| Profitability level (loss level) for 1980 production, in %                                   | -10   | -13                | 19.5             | 11.7          | -18.5          | 12.7          |

The availability of capital on many farms is considerably lower than that set forth in the norms. For example, at kolkhozes and sovkhos in the Central-Chernozem Zone there should be 137,000 rubles worth of fixed capital per 100 hectares of agricultural land in conformity with the norms and yet the figure stands at only 63,000 rubles worth. For the western Siberian economic region, the figures are 71,000 and 30,000 rubles worth of fixed capital respectively.

The May (1982) Plenum of the CPSU Central Committee resolved to continue to strengthen the logistical base of agriculture based upon further development of mechanization and the use of chemical processes in production and the extensive reclamation of land. Ninety one billion rubles worth of capital investments have already been allocated during the current five-year plan for the development of Russian agriculture, compared to 81.5 billion rubles worth expended during the 1976-1980 period. Of the overall amount, 74.4 billion rubles worth will be employed for strengthening the logistical base of the kolkhozes and sovkhos; this exceeds by 21 percent the planned level for the 10th Five-Year Plan.

In improving the utilization of productive capital and raising the efficiency of its use, a great deal will depend upon planning and upon ensuring that the priorities for utilizing the resources are determined in a timely and correct manner. Importance is attached to distributing the capital investments in a manner such that new construction and the modernization of existing enterprises will make it possible to eliminate more rapidly and more effectively the existing disproportions in the logistical base and agricultural development

and also those bottlenecks which are restraining as expansion of production operations on the farms and in the rayons and oblasts. For example, the capabilities already created at the animal husbandry facilities and the livestock presently available will make it possible during the next few years to increase the production of animal husbandry products by a factor of no less than 1.5. However, it should be borne in mind that the logistical foundation for feed production has fallen behind on many farms and that a poor balance exists between the growth in equipment deliveries and the base available for the repair and technical servicing of the equipment. In addition, the growth in mineral fertilizer deliveries and the need for expanding the storehouse facilities for them must be taken into account. The elimination of these and a number of other shortcomings has required changes in the trends in capital investments (see Table 4).

TABLE 4

Distribution of Capital Investments Allocated for RSFSR Kolkhozes and Sovkhozes During 1981-1985 (in billions of rubles)

| Objects                                                      | 1976-1980 | 1981-1985 | 1981-1985<br>in % of<br>1976-1980 |
|--------------------------------------------------------------|-----------|-----------|-----------------------------------|
| Productive, of which:                                        | 33.6      | 34.0      | 101                               |
| field crop husbandry                                         | 8.9       | 11.8      | 132                               |
| Including: construction of mineral<br>fertilizer storehouses | 0.7       | 1.2       | 176                               |
| feed production                                              | 2.4       | 4.1       | 169                               |
| animal husbandry                                             | 17.0      | 11.4      | 67                                |

Thus, having defined the bottlenecks in agricultural development, a preference was shown for the branches of farming. This was accomplished by reducing the construction of animal husbandry projects. Actually, by the end of 1981 the requirements of the republic's kolkhozes and sovkhozes for silage and haylage installations had been satisfied by 41 percent. Each year the farms procure approximately 80 million tons of feed units from succulent and coarse feeds, not counting straw. In the process, the feed losses caused by storage in trenches and using the ground method amount to more than 10.6 million tons of feed units.

By protecting the feed procured and reducing losses, the republic's farms can obtain more than 710,000 additional tons of live weight in livestock and 2.7 million additional tons of milk. The annual non-productive farm losses caused by feed spoilage amount to more than 10.6 million tons of feed units. Computations indicate that the expenses for building feed storehouses are repaid within 2-3 years and, most important, the quality of the feed is raised considerably. In the final analysis, this will result in the production of hundreds of thousands of additional tons of meat, milk and other animal husbandry products.

The republic's farms are sustaining considerable mineral fertilizer losses. In early 1982 the kolkhoz requirements for warehouse facilities for the

storage of fertilizer were being satisfied by only 70 percent, sovkhozes -- by 71 and enterprises of Sel'khozkhimiya -- by 42 percent. Owing to the absence of storehouse facilities, 5.5-6 million tons of mineral fertilizer are being lost or utilized with a low return each year and this is equivalent to the production of roughly 6-6.5 million additional tons of grain. This is why the decision was made to employ 1.2 billion rubles for creating a base for the storage of mineral fertilizers during the 11th Five-Year Plan; this amount is greater by a factor of 1.8 than the funds expended for this purpose during the 10th Five-Year Plan.

In the Russian Federation there are 7,632 kolkhozes and sovkhozes which do not have standard repair workshops and 17,094 farms which lack technical servicing stations. This does not promote highly productive equipment utilization and in fact it lowers its readiness. Thus the plans for the 11th Five-Year Plan call for the construction of 4,500 repair workshops and 8,504 technical servicing stations. In the process, more complete utilization will be made of the capabilities of Goskomsel'khoztekhnika enterprises.

During the May (1982) Plenum of the CPSU Central Committee, emphasis was placed upon the fact that "...a chief concern today, and particularly tomorrow, is that of raising cropping power. This pushes into the foreground both plant breeding and seed production." Thus, under modern conditions special attention is being given to strengthening the logistical base of seed production. Each year many farms fail to produce considerable quantities of products as a result of low quality seed being used for sowing. This leads to a reduction in cropping power and, in the final analysis, to reduced effectiveness for all subsequent expenditures associated with the cultivation of the particular agricultural crops. On the average for the 1976-1980 period, 75 percent of the grain and pulse crop seed sown by the republic's farms was of 1st or 2d grade quality and sunflower seed -- 72 percent. One of the reasons for this situation -- the absence of modern and highly productive equipment for cleaning and drying and also storehouses for the storage of seed.

In order to eliminate these shortcomings, a system has now been prepared for the development and distribution of enterprises for the cleaning and drying of seed. Its foundation -- the reconstruction, modernization and expansion of existing capabilities and also the construction of new highly mechanized grain cleaning and drying installations. In all, the plans for the five-year period call for the construction of 1,205 all-round stations for the cleaning and drying of grain crop seed and 48 -- for the cleaning of sunflowers, primarily at specialized seed production farms. The network is being expanded and the base for seed production stations for the production of grass seed is being strengthened. Today there are only 150 of them in the republic. During this current five-year period, 1.95 billion rubles worth of state and kolkhoz resources will be expended for strengthening the logistical base for seed production.

Marxism-Leninism teaches that regardless of how good the equipment is or the quantity available, the chief productive force continues to be the people. This is particularly true today when a shortage of personnel is being experienced in many regions; this is resulting in inefficient use of the means of production. There are many reasons for this and yet the chief one is the unstable nature of rural life.

During this period of developed socialism and the successful creation of the logistical base for communism, a great deal is being accomplished in the reorganization of rural life. During the 1976-1980 period, 36.3 million square meters of housing space were built on farms throughout the republic, kindergartens for 321,000, schools for 719,000 and clubs for 541,000 occupants were placed in operation. Nevertheless, the amenities available in the rural areas are still lagging considerably behind the municipal level. In the rural areas, water supply lines are available for only 38 percent of the housing, sewerage -- 22 percent and central heating -- 26 percent. In a report delivered before the May (1982) Plenum of the CPSU Central Committee, L.I. Brezhnev pointed out: "Measures concerned with the social reorganization of the rural areas are an organic part of the food program." During the current five-year plan, housing and cultural-domestic construction in the rural areas is being expanded and a change is taking place in the structure of capital investments (see Table 5).

TABLE 5

Structure of Capital Investments at Kolkhozes and Sovkhozes of the RSFSR  
Ministry of Agriculture for 1981-1985, in %

| Capital Construction | 1971-1975 | 1976-1980 | 1981-1985 |
|----------------------|-----------|-----------|-----------|
| Total                | 100       | 100       | 100       |
| Including:           |           |           |           |
| non-production       | 23        | 27        | 35        |
| production           | 77        | 73        | 65        |

During the 11th Five-Year Plan, the plans call for 18.6 billion rubles worth of capital investments to be employed for housing and cultural-domestic construction in the rural areas. Compared to the 1976-1980 period, these investments are being increased by 6.2 billion rubles. Practically the entire increase in capital investments called for in the plan is being used for non-production purposes. Compared to the level for the 9th Five-Year Plan, their volume has increased by 49 percent. A considerable expansion has taken place in road construction. For the RSFSR on the whole, the indicators for non-production construction planned for the 11th Five-Year Plan are described by the data furnished in Table 6.

TABLE 6

Plan for Placing Social-Domestic Installations in Operation on  
Farms in the RSFSR

|                                                           | 1981-1985<br>Plan | Information:        |                                   |
|-----------------------------------------------------------|-------------------|---------------------|-----------------------------------|
|                                                           |                   | 1976-1980<br>Report | 1981-1985<br>in % of<br>1976-1980 |
| Housing, millions of square meters                        | 59.6              | 36.3                | 164                               |
| Children's pre-school institutes,<br>thousands of billets | 466               | 321                 | 145                               |
| Clubs and palaces of culture,<br>thousands of billets     | 747               | 541                 | 138                               |
| Intra-farm hard surface roads,<br>thousands of kilometers | 36.6              | 22.1                | 166                               |

During the mentioned period, the plans called for the construction of 76-80 apartments; this indicator was 46 during the 10th Five-Year Plan. For a kolkhoz, the figures were 30 and 17 respectively.

The placing in operation of children's pre-school institutes is being increased by 45 percent, palaces of culture and clubs -- by 38 percent and road construction is being increased by almost 70 percent. Changes are taking place in the quality of the buildings. More cottages of the farmstead type are being built and the level of public services and amenities for housing is being raised. During this period, 7,058 kilometers of sewerage and heating lines and 8,600 kilometers of gas network lines are being installed.

In addition to expanding state construction, the plans call for measures aimed at furnishing assistance to kolkhoz members and sovkhoz workers in the construction of private homes. The production and issuing of construction materials for this purpose are being increased and standard building plans have been developed to conform with the various natural-economic zones. In all, no less than 15 million square meters of housing space will be built during the current five-year plan using the resources of the rural population and with the aid of credit.

Success in rural construction will depend to a great extent upon scientifically sound planning. Unfortunately, USSR Gosplan does not take into account the peculiarities of this important work, it determines the cost per square meter of housing space in an incorrect manner and this creates tremendous difficulties in the work. For example, for 1981 the cost throughout the republic for 1 square meter of housing space was defined as being 213 rubles, that is, without taking into account an expansion in the construction of houses of the farmstead type and raising the level of public services and amenities. Computations and experience have shown that the cost of housing construction must be increased by a minimum of up to 300 rubles per square meter. During the May (1982) Plenum of the CPSU Central Committee, initial recognition was given to the need for constructing housing and cultural-domestic installations at economically weak kolkhozes at the expense of the state. Up to 15 percent of the capabilities of the housing construction combines will be reoriented towards the construction of completely prefabricated homes for the rural areas.

A typical feature of Russian economic development is a high rate of increase in industrial production in the regions of Siberia, the Far North and the Far East. From an agricultural standpoint, many of these regions have been developed in a very weak manner and suffer from a great shortage of manpower. However the creation of large industrial complexes required the accelerated development of agricultural production and hence the allocation of large capital investments for these regions. In many instances the return realized from capital investments per ruble of fixed capital is lower here than in other zones throughout the republic, but in these regions the effectiveness of such investments should be determined based upon the overall state interests. Production must be organized on the spot for perishable and difficult to transport products and particularly vegetables, potatoes, milk and eggs. Thus, 3.5 billion rubles worth of capital investments are being made available during this current five-year period for agricultural development in the

autonomous republics, krays and oblasts adjoining the zone of construction for BAM /Baykal-Amur Trunk Line/. This amount is considerably greater than that for the 10th Five-Year Plan.

In order to develop agriculture at an accelerated tempo in the zone of development of the oil and gas industry, 1.47 billion rubles worth of capital investments have been allocated for farms in Tyumen and Tomsk Oblasts; this is almost 200 million more rubles than were made available during the 10th Five-Year Plan. A large new industrial region is being created in Krasnoyarsk Kray. Approximately 1.34 billion rubles have been allocated for agricultural development in this region.

Failure to coordinate the activities of the construction organizations with the clients tends to reduce the effectiveness of use of the capital investments. Thus, under the existing system for coordinating planning documentation, the kolkhozes and sovkhozes are placed in a disadvantageous and quite often difficult situation. After obtaining the planning-estimates documentation from the client, the contracting organization may refuse to coordinate the computations with the client if the structures called for in the plan do not satisfy its requirements. For example, the plans call for the use of local construction materials which lower the cost of the construction project and often raise its quality. The contracting organization requires these materials to be replaced by reinforced concrete, that is, by structures which it produces. The kolkhozes and even sovkhozes are forced to meet the requirements of the contractor. Thus, despite appeals to lower the cost of rural construction, quite the opposite process is observed.

The interests of the work demand that USSR Gosplan and USSR Gosstroy, jointly with the scientific-research institutes, develop maximum specific costs for the construction of various production, housing and cultural-domestic installations which are differentiated by zones. In the process, a system should be established wherein the planning and financing organizations are not allowed to turn over plans and estimates or accept them for financing, if the specific costs have been inflated sharply without basis; here the contracting construction organization can replace something only with the consent of the client. In the event of an increase in the cost of construction, not caused by the client, the losses must be borne by the construction organization.

The ever-increasing gigantic investments in agroindustrial production objectively impose requirements upon all of the farms, enterprises, specialists and each worker -- to wage a persistent campaign to increase the effectiveness of use of fixed capital and growth in the output-capital ratio, so as to accelerate improvements in the efficiency of agricultural production and in strengthening the kolkhoz and sovkhoz economies. "Today economies and a zealous attitude towards national property" pointed out Comrade Yu.V. Andropov during the November (1982) Plenum of the CPSU Central Committee, "constitute the reality of our plans."

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BIOLOGICAL, ECONOMIC FACTORS AFFECTING UTILIZATION OF AGRICULTURAL RESOURCES

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[Article by A. M. Chursin, Candidate of economic sciences: "Natural-Biological and Economic Factors Affecting the Utilization of Resources in Agriculture"]

[Text] In connection with the intensification and ongoing industrialization of production every potential for economic growth should be exploited and fundamentally new systems for evaluating the quality of managerial decisions should be developed with the object of assuring a highly effective utilization of production resources. At the November (1982) Plenum of the CPSU Central Committee it was emphasized that a rational utilization of material and manpower resources and every production potential is vitally important to the growth of the nation's economy.

To agriculture these problems are of special importance, because in this branch economic and natural processes of reproduction are most closely intertwined and economic laws manifest themselves in connection with the operation of the biological laws of the development of living organisms. K. Marx pointed out: "Regardless of its particular social nature, the economic process of reproduction in this field (in farming) is always intertwined with the natural process of reproduction" (K. Marx and F. Engels, "Collected Works," Vol 24, pp 404, 405).

The biological processes underlying agricultural production are governed by zonal climate and geography, weather conditions, patterns of insolation, conditions of soil-formation, the duration of daylight and the vegetation season, and the reproductive function of livestock. In no other sphere of economic activity are natural factors as overwhelmingly significant in influencing production technology as in agriculture.

Of major importance to this branch is the interrelationship of the biological processes occurring between plants and animals in their habitat. The growth and development of plants occur owing to their interaction with light, heat, nutrients, water and air. Light, heat and air come from the Universe not directly but via the soil, which makes it possible to organize optimal water and nutrition conditions in the soil for a vigorous growth and development of plants.

Land fertility depends on the natural qualities of the soil (natural fertility) and human action (economic fertility). Constant preservation and enhancement of soil fertility requires restoring to the soil the nutrients withdrawn from it by harvests or forfeited owing to improper cultivation. To this end, bioagrochemical techniques improving the turnover of nutrients in the soil are used, the variety of crops grown is optimized, a rational crop rotation system is devised and soil is radically improved by means of land reclamation and protective afforestation, and selection and seed breeding are practiced.

The biological properties of animals are utilized by means of a system for goal-oriented feeding and upkeep, and genetic improvement (selection and pedigree breeding). Feed is the decisive factor in animal husbandry, according to M. F. Ivanov, Academician of the VASKhNIL All-Union Academy of Agricultural Sciences imeni V.I. Lenin : "We consider the principal cause of inadequate accomplishments in improving our animal husbandry to lie in the qualitative and quantitative shortage of feeds.... Feeds and nutrition affect the animal's organism much more than do nature and origin" /2/.

Modern research in and practice of farming and animal husbandry have established the extent of the influence of such factors as natural-biological conditions and the resources used on the productivity of crops and livestock: in crop growing, that extent is 16-20 percent for weather, 41-49 percent for fertilizer, 8-12 percent for hybrid seeds and 5-8 percent for irrigation /1/; in animal husbandry that extent is 50-70 percent for scientifically substantiated nutrition, 10-20 percent for selection, mating with new breeds and bioengineering and 10-20 percent for the development of veterinary medicine /5/.

These fundamental premises are of primary importance to both the organization of crop growing and animal husbandry and the development of an effective system for evaluating production efficiency. They show that the industrial and agricultural products used in natural-materialized form during the process of agricultural production are not part of the finished product and do not represent its materials-intensiveness, whereas in industry raw and other materials are the foundation of manufactured products.

The special features of agricultural production are well-known. Nevertheless, the "outlays-output" system, developed for industrial subsectors, has been adopted to assess the economic performance of agricultural enterprises. As a result, the indicators of performance of agriculture are quantitatively and qualitatively extremely contradictory and do not fully allow for economic and natural-biological factors affecting the utilization of production resources, and neither do they reflect the total extent of the end-result of the performance of kolkhozes, sovkhozes and other agricultural enterprises. The methods used to calculate production performance in agriculture have resulted in that the growth of labor productivity entails a rise in production cost, the increase in gross output per hectare of arable land results in a decrease in the yield of fixed assets, and the increase in sales prices results in a decrease in the profitability of production.

Under modern conditions a comprehensive and well-meshed development of agricultural economy on the basis of its greater scale, increase in production and the

special features of agricultural labor requires new approaches to the problems and proportions of expanded reproduction, the effectiveness of utilization of manpower and material resources and, primarily, the entire real biological potential of the branch. New approaches also are needed as regards orienting the performance of agricultural collectives to the end-results of the entire agro-industrial complex.

Methodological approaches should primarily allow for the dependence of agricultural production on its natural-biological and economic factors such as biology of the soil and the living organism, techniques for increasing soil fertility and livestock productivity, the nature and orientation of live and materialized labor, forms of the organization of production and distribution of the results of labor, the economic processes occurring in agriculture, methods of the economic utilization of the resources of every kolkhoz, sovkhoz, agricultural enterprise and association. The indicators of effectiveness of the utilized resources should reflect positive and negative aspects of economics and contribute to raising the scientific-technical and organizational level of production.

The ruling assumption is that "...the effectiveness of social production is measured by comparing the results of production (the effect) with the expenditures or resources spent...." /4/. This general assumption has to be made much more specific when applied in practice. First of all, it should be pointed out that the effectiveness of production represents the ratio of the useful effect to the aggregate expenditures of live and materialized labor (resources) needed in the production process. Next, it is necessary to determine the precise nature of current manpower and material expenditures, the effect of discrete factors of production on the end-effect, and the relationship between the utilized resources and the effectiveness of production.

For agriculture it is necessary to know not only the extent and purpose of production cost components and their effect on the results of production but also the estimated effect of human activity and natural phenomena on the changes in material production. The task is to construct a fundamentally new system for assessing the effectiveness of the standard directions of the utilization of resources in agricultural production on the basis of a study of the underlying economic processes and laws governing the nature of production relations.

Agrarian economists increasingly hold the opinion that assessment of the effectiveness of production should be based on the functional purpose of the utilized resources, since they are extremely heterogeneous in terms of their effect on the exploitation of the biological potential of crops and livestock and their discrete components operate according to their functional purpose.

As noted previously, reproduction in agriculture is associated with soil processes, solar energy and biology of plants and animals. Increasing the productivity of land requires expending labor on its colonization and the preservation and expanded reproduction of its fertility, and hence growth of agrochemical and biochemical knowledge, the application of the latest achievements of biology and chemistry and land reclamation affect soil fertility directly. Crop yields are directly dependent on seeds, fertilizers and pesticides, while the productivity of livestock is directly dependent on feeds.

Fixed assets (other than livestock) and the material expenditures associated with their operation directly affect the reduction in the outlays of live labor and the simultaneous increase in production expenditures on depreciation and the consumption of material means. V. I. Lenin defined as follows the importance of agricultural machinery and its role in the process of expanded reproduction: "...1) it saves manpower; 2) it expedites work; 3) it makes labor cheaper; 4) it serves to equalize the year-round demand for manpower; 5) it performs work better" ("Leninskiy sbornik" [Lenin Anthology], Vol XXXII, p 163). Consequently, the fixed assets of production serve to reduce markedly the manpower demand, shorten the fluctuations in manpower expenditures during various seasons of the year, and conduct agricultural operations on a greater scale and over larger areas. The fixed assets of production can influence only indirectly the increase in the harvest of already grown crops, and that only if a disproportion arises between their demand and availability.

As the biological processes of production get intensified, expansion of research into the economic and natural-biological factors affecting the utilization of production resources in agriculture is becoming increasingly important to the national economy, not only as regards implementing the Food Program but also as regards an effective utilization of the branch's energy base.

The factors contributing to a higher effectiveness of production are usually divided into natural, technical-technological and organizational-economic factors. But this represents only a general classification of the motive factors which is unrelated to the obtained end-product. By contrast with this approach we classified the elements of expenditures on the utilized resources according to their functional effect in the production process. We thus derived three groups: factors affecting soil fertility and livestock productivity; factors associated with the productive force of live labor; and lastly, in the third group, factors on which are contingent the production processes in the circulation sphere and non-production and non-material (financial) expenditures.

/The first group of expenditures,/[printed in boldface] associated with soil fertility and livestock productivity, includes: current expenditures--expenditures of live labor and material resources on regular and expanded reproduction of soil fertility through the crop rotation system: organic, mineral and bacterial fertilizers, pesticides, expenditures on seeds and seed growing, etc.; expenditures on scientifically substantiated nutrition and selection and breeding of livestock and poultry; feeds, expenditures on pedigree breeding, etc.; capital investments and fixed assets--expenditures on land improvement and reclamation as well as on productive livestock and perennial plantings.

The organic combination of live and past labor associated with soil fertility and the productivity of crops and livestock consists in that these expenditures increasingly represent the material embodiment of a tremendous amount of human labor and the continuous increase in the economic fertility of soil is becoming a major direction of scientific and technical progress in agriculture. And although other factors also are important, the effect of crop and livestock nutrition on agricultural productivity is of decisive importance given the specific conditions of the branch with its priority on natural-biological resources.

/The second group of expenditures,/ associated with the productive force of live labor, includes: current expenditures--expenditures on augmenting equipment availability, altering the process and conditions of labor, reducing technological labor-intensiveness and reducing manpower expenditures on crop growing and animal husbandry (depreciation of equipment, buildings, structures and other fixed assets; material expenditures on their operation: petroleum products, energy, spare parts, repair materials, etc.); capital investments and fixed assets--expenditures on the acquisition of machinery and equipment as well as of means of transport and the construction of buildings and structures (exclusive of land reclamation projects) as well as of transfer equipment.

The economic effectiveness of this group of resources consists in their effect on the reduction in labor expenditures and production cost owing to savings of aggregate work time /3/ and the relieving of manpower for other branches of material production. The importance of this group of resources will diminish in measure with conversion to the technology of minimal soil cultivation as the use of plows will gradually decrease, weed control will be conducted chiefly by biological methods and with the aid of biologically disintegrated chemicals, and nitrogen fixation will be accomplished with the aid of not only pulse crops but also other crops, etc. /6/.

/The third group of expenditures/ pertains to the expenditures included in the cost of agricultural production that are associated with the process of production in the sphere of circulation and the non-production sphere, as well as with other non-material (financial) outlays. The current expenditures in this group pertain to expenditures on intra-farm transport, storage, sorting and packaging of products as well as to expenditures on supplies and consumer services, deductions for and outlays on the construction, repair and maintenance of vehicular roads, expenditures on social services, communal meals, collective kitchen-gardens, cultural-educational and physical-culture activities, insurance payments, the fire brigade, bank loan repayments, official trips, postage and telegraph fees, leasing fees, fines, etc. The capital investments and fixed assets within this group pertain to all those not included in the first two groups.

The assessment of resources from the standpoint of their functional role in the production process and the results of that process serves to clarify better the economics of the expenditures on agricultural production and evaluate more precisely the economic performance of the kolkhozes and sovkhozes and the results of management decisions at any level.

Studies have shown that 70 percent of the current expenditures of kolkhozes and sovkhozes is spent on the utilization of the biological potential of land and productive livestock; 23 percent, on increasing the productive power of live labor, reducing the technological labor-intensiveness of production and relieving agricultural manpower for the needs of other branches of the economy; and 7 percent, on purposes not linked to agricultural production. Of the capital outlays materialized in the form of the fixed productive assets of agriculture, 23 percent is associated with increasing soil fertility and livestock productivity; 75 percent, with augmenting the productive power of live labor and relieving agricultural manpower; and 2 percent, with other purposes.

The effectiveness of the production resources spent on increasing the productivity of land and livestock is increasing, which serves to constantly increase the gross agricultural output per capita and per unit of land area. During the 10th Five-Year Plan agricultural output per capita was 28 percent higher, and per 100 hectares of arable land--greater by a factor of 2.1, than during 1961-1965, while at the same time current expenditures on this purpose had decreased somewhat.

The material resources allocated for augmenting the productive power of live labor and reducing the technological labor-intensiveness of production during 1976-1980, as compared with 1961-1965, resulted in increasing by a factor of 1.8 the labor productivity of employees of the socialized sector of agriculture and relieving 2,145,000 mean-annual agricultural workers. However, the effectiveness of utilization of the resources in this group is decreasing. During the 10th Five-Year Plan the expenditures of material resources per ruble of the overall effect of current expenditures intended to augment the productive power of live labor in agriculture were greater by a factor of 2.5 than they had been during 1960-1965.

The situation is largely due to the increases in the prices of industrial output as well as of services provided to the kolkhozes and sovkhozes, and also owing to the increase in the cost estimates of the construction of production facilities. An important factor is that the prices of these products and services have risen at a faster pace than their useful effect. As a result, the "price" of relieving agricultural manpower for other branches of the economy is steadily rising. During 1965-1980, on the average, it cost 76,000 rubles in state and kolkhoz capital investments to relieve one worker from agriculture.

As the methodology of the agroindustrial complex came into being, a fundamentally new interpretation was given to the intra-branch structure of agriculture. The point is that production resources and, in particular, the capital outlays on this branch are spent on developing the complex whole of agricultural activities and operations, but in analyses and evaluations they are compared only with the output of crop growing and animal husbandry. As a result, the actual effect, and hence also the effectiveness of investments, is underestimated.

In this connection, the basic premises of the methods for measuring the gross product of the "Agriculture" branch in terms of value have once more to be re-examined and ways of refining these methods have to be considered. As known, gross national product is generated in the course of the creation of material blessings in industry, agriculture, forestry and construction and the augmentation of their value in the course of the continuation of the production process and transfer of products to the consumer (freight transportation and connections, trade and public feeding, material-technical supplies, marketing and procurements, other branches). In terms of value, gross national product consists of the transferred value of means of production (C) as the result of concrete labor and the newly created value (V+m) as the result of abstract labor. The newly created value (national income) consists of the value of the necessary product (V) plus the value of added product (m). In its general form, the aggregate gross national product represents the sum of  $C + V + m$ .

V. I. Lenin paid great attention to the reproduction of the gross national product with the object of solving problems of the theory and practice of the tasks of socialist construction: "...there can be no discussion of 'consumption' unless we grasp the nature of the process of the reproduction of all social capital and compensation of the spent component parts of social capital and gross national product" (V. I. Lenin, "Complete Collected Works," Vol 3, p 53). This premise is of tremendous importance to solving the problem of increasing the economic effectiveness of social production and determining the basic national-economic proportions of the development of branches of material production and the scale and pace of expanded reproduction. It serves to determine the actual value factors rather than mere reflections of the national-economic end-results.

Gross national product is calculated in final consumption prices (excluding the turnover tax) as the sum of the value of the gross output of branches of material production, of state, cooperative and kolkhoz enterprises, and of the privately owned land plots.

According to the All-Union Classifier of Branches of the National Economy, gross output is classified in an appropriate branch or subsector of the national economy depending on the principal form of activity of a given enterprise or organization. If an enterprise or organization maintains subsidiary-ancillary types of production and subdivisions performing functions of a different nature, these types of production and subdivisions are classified within the subsectors of the national economy that correspond to the nature of their activity in the social division of labor.

This results in the formation of "pure" subsectors in which the concept of "gross product" transcends the confines of the enterprises belonging in a given subsector. Thus, gross industrial output includes the output produced both in the industrial subsectors proper and in the other subsectors of the economy, including agriculture--in kolkhozes, sovkhoses and other state agricultural enterprises as well as in the cooperative industry. Gross agricultural output includes the output of crop growing and animal husbandry produced in kolkhozes, inter-kolkhoz organizations, sovkhoses, other state agricultural enterprises, subsidiary farms of all kinds of industrial and other enterprises and organizations, and private land plots of kolkhoz members, white-collar workers and other population groups.

The formation of types of the material activity of agricultural enterprises and organizations in terms of "pure" subsectors is of definite advantage to a scientific analysis of inter-subsector connections and proportions in the development of the national economy, the augmentation of the productive power of the socialist society and the social division of labor, the planning of the national economy as divided into subsectors, and the computation of plan fulfillment. But at the same time such an approach does not contribute to determining the real contribution of discrete subsectors to the nation's economy and to the generation, distribution and utilization of national income.

The present-day social production at kolkhozes, sovkhoses, inter-farm enterprises and other farms and organizations in agriculture adds up to multifaceted activities in the sphere of material production. This means agriculture proper

(crop growing, animal husbandry), industry (the production of foodstuffs, combined feeds, electricity; electric power plants, repairs, sewing operations, etc.), construction, transport and other activities within the sphere of material production (fishery, folklore products, etc.) being developed on the basis of the same manpower, material and financial resources of agricultural enterprises.

Calculations show that the activities of kolkhozes, sovkhozes, inter-farm enterprises and other farms and organizations of the branch that are classified as belonging to other branches of material production and considerably developed, contribute markedly to increasing the volume of the gross national product. In 1980 crop-growing and animal-husbandry output worth 4.3 billion rubles that had been produced at enterprises which the All-Union Classifier considers as belonging to the "Industry" branch was included in the gross output of the "Agriculture" branch, while at the same time gross output worth 39 billion rubles produced at agricultural enterprises was credited to other branches of material production.

The resulting inadequate assessment of the production performance of enterprises belonging in the "Agriculture" branch harms their interests in solving the problems of socio-economic growth and equalization of living standards in town and country as well as when the capital outlays and material-technical resources for the next five-year plan period are determined and, in the final analysis, when the effectiveness of social production is assessed.

The flaws in the interpretation of the concept of the "branch" and "subsector" as defined in the All-Union Classifier of Branches and Subsectors of the National Economy, are worth noting. In industry, a subsector is construed as a type of activity relating to the manufacture of products of the same type (petroleum extracting, petroleum refining, coal mining, nonferrous metallurgy, ferrous metallurgy, chemical industry). In agriculture, on the other hand, the classification is based not on type of activity but on type of enterprise or organization (kolkhoz, sovkhoz, inter-farm agricultural enterprise, horse farm, veterinary establishment, etc.) which results in varying interpretations of the term "subsector."

In its statistical work the USSR Central Office of Statistics basically adheres to the All-Union Classifier. As regards a number of items, and particularly in the plans of capital investments, the USSR Gosplan includes all types of activity of the kolkhozes and state and inter-farm enterprises and organizations as well as agricultural production performed at agricultural schools, subsidiary agricultural enterprises, horse farms, veterinary establishments, forestry farms and logging establishments, agricultural equipment maintenance stations, motor vehicle bases of the Goskomselkhoztekhnika State Commission for Agricultural Equipment, water-management organizations, inter-kolkhoz construction organizations, the production of prefabricated building materials for water-management and inter-kolkhoz construction organizations, and those construction organizations—including the sovkhozes and organizations of the USSR Goskomselkhoztekhnika—which perform all kinds of construction and work on the mechanization of animal-husbandry farms. It also includes the repair plants of the USSR Goskomselkhoztekhnika as well as the plants for the repair of construction and

road machinery and for the production of equipment under the USSR Ministry of Land Reclamation and Water Resources, the "Promteplitsa" [expansion unknown, but this concerns hothouses] of the USSR Goskomsel'khoztekhnika, 6-20 and upward-of-35 kv power transmission lines, the processing of fruits and vegetables at kolkhozes and sovkhozes, combined-fodder shops on farms, inter-farm combined fodder plants, the bioindustry, sales centers of the USSR Goskomsel'khoztekhnika and the Soyuzsel'khozkhimiya [All-Union Association for Agricultural Chemicals], etc.

As a result, the "Agriculture" branch is variously interpreted and in the publications of the USSR Central Office of Statistics the figures on capital outlays are accompanied by footnotes explaining that they are given without (or with) allowance for the expenditures on the complex whole of activities in agriculture. In the final analysis this results in failure to allow fully for the volume of the gross and net output of the "Agriculture" branch.

It is thus important to define more precisely in the existing classification of branches and subsectors of the national economy the concept of a branch or subsector as a complex whole of operations involved in developing the principal type of activity of the enterprises belonging in that branch or subsector. Such an approach will make it possible to isolate the corpus of interconnected subsectors whose operations pursue the same goal and to assure a meshed and balanced development of social production during the planned period.

It would then be possible to determine the indicators of the economic effectiveness of production (gross output, net output, material expenditures, etc.) in plans for economic and social development, statistical compilations and accounting reports for the farms, enterprises and organizations included in the "Agriculture" branch--both comprehensively and separately according to branch of material production: agriculture (including turnover tax), industry, construction, transport, material and technical supply, and other forms of activity within the sphere of material production.

The All-Union Classifier "Branches of the National Economy" should reflect the historically evolved social division of labor occurring in special forms inherent in the various subsectors of agriculture, both in general (farming, livestock raising) and in particular (cotton growing, flax and hemp growing, sugar beet growing, production of oleaginous crops, potato growing, melon growing, horticulture, viniculture, fodder production, dairy and meat cattle raising, hog raising, sheep raising, apiculture, poultry raising, camel breeding, deer raising, horse breeding, sericulture, rabbit raising, the raising of fur-bearing animals, fishery).

Accurate measurement of gross output by branch and subsector of the national economy in standard economic indicators is possible only if an integrated approach to estimating the physical volume of gross output in financial terms is adopted. So far, however, such an integration has not been achieved.

In industry, gross output is estimated by the plant method: the output produced in one shop for the needs of other shops of the same enterprise is not regarded

as finished products and is instead included in the production cost of the shops which perform the finishing operations.

Gross industrial output includes both products manufactured on the premises and operations of an industrial nature, inclusive of overhauls of equipment and means of transportation performed by the organization's own industrial-production personnel and the sales of the output of the organization's own departments for capital construction and non-industrial operations that operate on a cost-effective basis. By way of an exception, this does not include the output of the repair shops of the Goskomsel'khoshtekhnika that do not operate on cost-effective basis, nor that of similarly non-autonomous primary wine-processing enterprises at sokvhozes and certain other organizations. In the light and food industries gross output also includes the cost of the finished and semifinished products manufactured on the premises and used for processing on the premises if such finished and semifinished products are transferred from one shop to another on the basis of wholesale prices rather than in terms of production cost. In this connection, two-stage product accounting is highly important in the industry, since industrial enterprises use finished products as raw materials to be further processed (iron ore into pig iron, pig iron into steel, steel into machinery, cotton into yarn, yarn into fabric, fabric into garments, etc.).

In calculations of the gross national product the entire turnover tax and the industrial output produced at enterprises of other subsectors is included in the gross production cost of industry. This results in overestimating the contribution of enterprises of the industrial subsectors to the national economy and, conversely, underestimating the performance of agricultural enterprises.

In agriculture, value of gross output is determined by the branch method: output is estimated only once and the internal consumption of products for production purposes is not added to the output value of crop growing and livestock raising, which precludes possible distortions of the dynamics of the physical volume of output.

At the same time, however, the green crops grown on natural pasturelands are not included in gross agricultural output (unless they are grown on improved lands), although their growing requires considerable capital outlays and their utilization requires substantial current expenditures (construction and maintenance of canals, ponds, water reservoirs, wells, watering sites, livestock premises and housing for personnel, etc.). The agricultural output that is industrially processed in situ in the shops of the agricultural enterprise, utilized in the production process (seeds, fodder), or loaned and received back, is not estimated in terms of production cost. The incomplete consideration of that output is adversely reflected in its value.

Gross agricultural output in fixed prices is estimated in uniform computational prices rigorously set by the USSR Central Office of Statistics, while gross industrial output is estimated in current wholesale prices.

Gross agricultural output is also estimated on the basis of a fixed and specific nomenclature of agricultural production and in uniform 1973 prices without making allowances for quality (except in the case of raw cotton and wool). The level of

these prices is determined by evaluating the marketable part of gross output in current sales prices and the nonmarketable part, at state farms and kolkhozes, in terms of production cost--and for private land plots, in average market prices. Payments made by the kolkhozes (wage payments and payments to the assistance fund from the own production of kolkhozes) are calculated in state procurement prices. In industry, on the other hand, the estimation of output in 1973 wholesale prices merely makes official the comparability of the variation in its physical volume. New products are valued according to current prices with allowance for quality which, given the (average) 2- or 3-year period of complete updating of the variety of output, means that the gross output of industry is estimated in current prices.

Gross industrial output is markedly influenced by specialization, coproduction and the development of production ties. Thus, in financial terms the volume of gross industrial output grows even when the output of finished products is the same if the manufacture of discrete components of these products is organized at enterprises especially established for this purpose and these components are shipped by the coproducing enterprises to the enterprises where they used previously to be manufactured on the basis of an inter-shop division of labor. In agriculture, inter-farm coproduction does not affect the value of the gross output because, as noted previously, the value of gross output is calculated by the branch method.

Refining the "gross output" indicator in financial terms for every branch of material production, including agriculture, requires the combined effort of scientists and practitioners. In our opinion, attention should be focused on at least three problems.

It appears necessary to establish that the gross output of agricultural enterprises, farms and associations represents the totality of the entire output and operations of a production nature for the [agricultural or agroindustrial?] complex as a whole--for both the products and operations generated in all spheres of activity in the natural-material form during the production process as well as for the increase in their value during the continuation of the production process (trade, public feeding, transportation, etc.). This also should include the gross output of repair facilities and installation operations and the value of the increment in uncompleted production and uncompleted construction. As regards the gross output of the automotive fleet and the repair facilities of the kolkhozes, sovkhoses and associations, it should include both the operations performed on the side and those done for own needs, as specified for the enterprises and associations of the USSR Goskomsel'khoshtekhnika.

It seems to us that all products--both agricultural and industrial--should be valued in current procurement or wholesale prices with allowance for quality, regardless of the nature of their subsequent utilization. This approach is to be justified by the Marxist principle that "...the extent to which farming produces for the market--produces goods and objects for sale rather than for its own consumption--should be precisely the extent to which farming calculates its expenditures and regards all expenditure items as goods, regardless of whether it does or does not purchase these goods from itself (i.e. in its own production) or from

a third party. The extent to which products become marketable goods is the same extent to which elements of production also become such goods, since these elements represent exactly the same goods" (K. Marx and F. Engels, "Works," Vol 26, Pt. 2, p 57).

The volume of gross output of the "Agriculture" branch should also include the turnover tax.

Hence, the economic assessment of agricultural enterprises and of the entire "Agriculture" branch should be performed from two standpoints: according to the effectiveness of utilization of production resources and according to overall performance.

In measurements of the effectiveness of production resources by function the degree of utilization of the economic potential generated in the countryside should also be determined. To this end it is expedient to compare the relative indicators of variation in the volume of gross agricultural output and total production resources (land, live labor, fixed production assets) directly spent on increasing soil fertility and livestock productivity as well as on fertilizers and feeds) as reduced to comparable figures:

$$CEP_{eff} = \frac{iVP}{iAR}$$

where  $CEP_{eff}$  is the coefficient of variation in the overall effectiveness of utilization of production resources over the period in question, in %;  $iVP$  is the index of variation in the volume of gross agricultural output over the same period; and  $iAR$  is the index of variation in the aggregate volume of the applied production resources (land, live labor and fixed production assets directly spent on raising soil fertility and livestock productivity as well as on fertilizers and feeds).

The resulting indicators reflect the relationship between the volume of agricultural output and the outlays of resources on its production and the completeness of the utilization of economic potential. The procedure for the economics-oriented calculation of the utilization of resources is illustrated by the conditional example in the table below.

It follows from our calculation that in 1981, compared with 1980, the generated economic potential has on the whole been rationally utilized. Over the year, gross agricultural output increased 10 percent, aggregate production resources grew 3 percent and the effectiveness of their utilization increased 7 percent (of which: 10 percent as regards the effective utilization of agricultural land, 13 percent as regards the utilization of live labor and 27 percent as regards the utilization of fertilizers). At the same time, the effectiveness of utilization of fodder decreased 2 percent.

The same computational principles are used to calculate both the overall performance of discrete agricultural enterprises and that of the branch as a whole. Gross output and production resources in these calculations are figured

with respect to every type of activity (agriculture, industrial activities of agricultural enterprises, construction, transport, and other activities in the sphere of material production). The economic assessment of the branch as a whole should allow for including the turnover tax in the gross output.

Table. Sample Economics-Oriented Calculation of the Utilization of Production

| Indicator                                                                                               | Resources |          |                            |
|---------------------------------------------------------------------------------------------------------|-----------|----------|----------------------------|
|                                                                                                         | 1980      | 1981     | 1981<br>in %<br>of<br>1980 |
| <hr/>                                                                                                   |           |          |                            |
| Production resources:                                                                                   |           |          |                            |
| Cropland, in '000 hectares                                                                              | 9,069.0   | 9,054.7  | 99.8                       |
| Mean annual fixed production assets directly<br>linked to the production process, millions<br>of rubles | 8,868.0   | 10,326.0 | 116.0                      |
| Mean annual work force occupied in agricultural<br>production, '000 persons                             | 1,168.0   | 1,139.0  | 98.0                       |
| Quantity of fertilizers applied, in '000 tons of<br>effective substance                                 | 1,472.0   | 1,477.0  | 100.3                      |
| Quantity of fodder allocated for socialized animal<br>husbandry, '000 tons of fodder units              | 15,318.0  | 15,404.0 | 101.0                      |
| Change in aggregate volume of production resources                                                      |           |          | 103.0                      |
| Effectiveness of utilization of production resources:                                                   |           |          |                            |
| Volume of gross agricultural output, in millions<br>of rubles                                           | 3,992.2   | 4,404.4  | 110.0                      |
| Of which: crop production                                                                               | 1,578.0   | 2,012.3  | 128.0                      |
| livestock production                                                                                    | 2,421.2   | 2,392.1  | 99.0                       |
| Overall utilization of production resources                                                             |           |          | 107.0                      |
| Of which: by direction of utilization:                                                                  |           |          |                            |
| Volume of gross agricultural output per 100<br>hectares of agricultural land, in '000 rubles            | 44.1      | 48.6     | 110.0                      |
| Volume of gross output per agricultural<br>worker, rubles                                               | 3,424     | 3,867    | 113.0                      |
| Volume of crop output per ton of the nutrient<br>substance of fertilizers, rubles                       | 1,072     | 1,362    | 127.0                      |
| Volume of livestock output per ton of fodder<br>units, rubles                                           | 158       | 155      | 98.0                       |

The adoption of the above-proposed methods for the calculation, analysis and assessment of the utilization of the available production resources and estimation of the gross output of the "Agriculture" branch will serve to orient the efforts of the branch's managers and experts toward a rational and effective utilization of manpower and material-financial means, increased production and sales of agricultural output to the state and the successful fulfillment of the USSR Food Program.

#### FOOTNOTES

1. V. Demyanenko, MIROVAYA EKONOMIKA I MEZHDUNAR. OTNOSHENIYA, No 1, 1965, p 128.
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## AGRO-ECONOMICS AND ORGANIZATION

### COLLECTIVE CONTRACT SYSTEM DISCUSSED AT ALL-UNION CONFERENCE

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/Article by N. Kopanov, Yu. Savin and A. Trubnikov: "A Broad Path for the Collective Contract in the Rural Areas"/

/Text/ As reported in the press, an all-union conference was held in Belgorod on 18 and 19 March, during which discussions took place on the task of intensifying organizational work associated with introducing the collective contract into kolkhoz and sovkhoz production operations, in light of the requirements set forth by the Politburo of the CPSU Central Committee. The conference was attended by the secretaries of the central committees of communist parties of union republics and kray and oblast CPSU committees, the ministers of agriculture of union and autonomous republics and by the leaders of a number of APK's /agro-industrial complex/ and collectives which operate on a cost accounting basis.

Those in attendance at the conference warmly welcomed the speech by member of the Politburo of the CPSU Central Committee and secretary of the CPSU Central Committee M.S. Gorbachev (speech published in this newspaper on 20 March).

The conference revealed that the extensive introduction of the collective contract into agricultural production will promote the effective and efficient utilization of land, equipment, all material resources and capital investments in agriculture and it will raise the responsibility of the personnel with regard to strengthening discipline.

A report on the speeches delivered by those participating in the conference is herewith furnished.

### Effective In All Branches

The tasks confronting the agricultural workers and the entire agroindustrial complex during the 3d year of the five-year plan are indeed great and important. This year must set the stage for the mass introduction of the

collective contract in the rural areas, a most important means for raising production efficiency in all branches of the country's agrarian department. Organizational and educational work carried out in the various areas, as emphasized by those who spoke during the conference, must be subordinated to this most important goal. A great amount of work must be carried out in order to ensure that this progressive form for organizing and stimulating labor becomes a firm part of kolkhoz and sovkhoz production practice during the 11th Five-Year Plan.

The speech delivered by Ye.A. Yakovlev, Hero of Socialist Labor, delegate to the 26th party congress and team leader at the Mir Kolkhoz in Torzhokskiy Rayon in Kalinin Oblast aroused a great amount of interest among those who participated in the conference. Yevgeniy Alekseyevich came here from a leading farm in order to demonstrate the force of the collective contract. Based upon his initiative, two non-schedule teams were created at the kolkhoz, one of which he himself headed. During the very first year, both collectives achieved sharp increases in yields and improvements in the quality of their products. The high indicators they achieved in 1982 exceeded by twofold the results for the rayon.

Importance is attached to the fact that the growth in cropping power was achieved with minimal expenditures. The net income per hectare of flax increased from 50 to 1,000 rubles. Naturally, the team's wages were fine. The kolkhoz also profited from the new organization for wages and labor: the rates of growth for the production and sale of products were raised here -- instead of 600,000 rubles of annual losses, the farm began earning more than 1 million rubles of profit.

The team leader mentioned still another advantage: the moral climate in the collective improved sharply. Discipline was strengthened. The personnel are applying themselves to their work in a conscientious and creative manner as they strive to find new opportunities for achieving better results with minimal expenditures.

The practical work being performed by Ye.A. Yakovlev's team reflects the positive features of the collective contract, which are so necessary under modern conditions, with special importance being attached to those problems concerned with the effective and efficient utilization of land, equipment and other material resources and capital investments. Those who spoke during the conference unanimously confirmed the fact that the key to solving this problem lies in the rapid introduction of cost accounting procedures into operations at kolkhozes and sovkhozes, raising the responsibility of the personnel for more complete utilization of internal reserves and strengthening planning, state and labor discipline.

One of the country's deputy ministers of agriculture, A.I. Iyevlev, described in detail the work carried out by agricultural organs in connection with the mastering of the collective contract in kolkhoz and sovkhoz production. Emphasis was placed upon the great role played in this important work by the new organs of administration -- agroindustrial associations. A task of paramount importance is that of studying and disseminating the experience of leading collectives, which presently are to be found in all of the country's

zones. Analysis testifies to the fact that contractual brigades and teams are achieving higher rates of growth for production with minimal expenditures of labor, funds and material resources.

There was a time when the farms in Millerovskiy Rayon in Rostov Oblast obtained lower yields than those being obtained in neighboring rayons. Following the introduction of the non-schedule system for labor organization and payments, the workers in Millerovskiy Rayon began realizing considerable progress and for more than 10 years in a row they have maintained the lead in cropping power. This progressive method also advanced into the foreground the kolkhozes and sovkhoses in Vashtanskiy Rayon in Nikolayev Oblast. Here the grain crop yields are higher by 5 quintals than those in rayons where the old wage system still prevails.

Is it necessary to mention the complicated conditions under which the farmers at the Turgay Sovkhoz-Technical School work, where the total amount of annual precipitation is 180-200 millimeters? The brigade headed by V.T. Butym, who spoke during the conference, proved that a contract aids in raising the fertility of fields in the virgin lands. During the first year of the five-year plan -- this was the collective's first year of operation under the progressive system of material stimulation -- the machine operators obtained 16.2 quintals of grain per hectare, or 1.7 quintals higher than the average for the farm. And during last year's dry conditions, the difference turned out to be even higher -- 3.6 quintals. Moreover, the production cost for a quintal of grain in the brigade was 40 percent lower than the average level.

Similar results are being achieved not only in the grain economy. The speeches delivered during the conference convincingly confirm one conclusion: a collective contract is effective in the production of practically any type of agricultural product. For example, the secretary of the Central Committee of the Communist Party of Uzbekistan Ye.A. Aktmuratov reported such operational results for the republic's sovkhoses. At those sovkhoses where use was made of the collective contract, the cropping power for cotton was 10 percent higher and labor productivity greater by 28 percent. Having grown better quality products, the contractual collectives earned 29 percent more funds from the sale of each ton of raw cotton.

An expansion in the use of contracts in feed production holds great promise for the future. Thus the chairman of the Krasnaya Zarya Kolkhoz in Svechinskiy Rayon in Kirov Oblast, V.Kh. Zherebtsov, discussed the 8 years of experience accumulated by the team headed by V.Ye. Samsonov. Initially the collective had five machine operators, but subsequently this number was increased to nine. They are cultivating forage crops on 500 hectares and they are displaying a great amount of ingenuity in improving the technology and adapting the machines to the local conditions. And the result -- a sharp increase in forage procurements, improvements in its quality and a reduction in production costs. During the 10th Five-Year Plan, the kolkhoz was able to increase its milk production by 61 percent, and meat -- by 26 percent. During this current five-year period, the output of the farm is increasing at a fine rate. This year the strengthened feed base made it possible to complete the quarterly plan ahead of schedule.

A brigade leader at the Rodina Sovkhoz in Kuybyshev, N.V. Duboshin, cited some interesting figures. The collective headed by him grows forage crops on 731 hectares of irrigated land and numbers 22 workers. According to the norms, such an area should be serviced by 35 workers. Whereas prior to converting over to the brigade contract method, a hectare furnished 30-35 quintals of feed units, at the present time -- 60-65 quintals. With the beginning of the current five-year plan, the collective resolved to expand the range of its obligations and to fatten large-horned cattle using feed which it produced. Last year the brigade shipped from its fattening site 553 young bulls at an average weight of 416 kilograms and this year it has promised to fatten and sell to the state 1,000 animals, the overall weight of which will be 450 tons.

This same integration of feed production and animal husbandry is being followed by others. According to the 1st deputy chairman of the Saratov Oblast Executive Committee V.A. Usin, last year 109 teams in 32 of the oblast's rayons serviced 12,000 hectares of irrigated land and simultaneously fattened 45,000 young bulls. Labor productivity in such collectives has turned out to be higher by a factor of 1.5 than that for teams engaged only in the production of field crop husbandry products.

Shepherd brigades were the first to operate on a contractual basis in animal husbandry and today non-schedule subunits are operating in dairy cattle husbandry and other branches. For several years work did not proceed very well at a highly mechanized dairy complex in the settlement of Grebenka in Vasil'kovskiy Rayon, Kiev Oblast. Notwithstanding fine working conditions and the availability of feed, milk production did not progress here. This derived from the fact that the milkmaids were held mainly responsible for the final product. The milk yield curve began to rise only after the entire collective had converted over to a contractual basis. In the brigade, which numbers 45 workers, there are four non-schedule teams: operators for milking, cow tenders, machine operators for issuing the feed and collecting the farmyard manure and fitters, electricians and other auxiliary workers. The collective was provided with the planned task and the wage fund was defined for it. A rate for a quintal of milk, one which remained unchanged for a number of years, and the total amount of bonuses and incentive payments were established. A year of operation under the new system made it possible to raise the milk yield per cow to 4,085 kilograms. The production cost for the milk decreased considerably.

A collective contract is being employed successfully in animal husbandry at the Pamyat' Il'icha Kolkhoz in Moscow Oblast, at the Kuybyshev Kolkhoz imeni Il'ich and at a number of farms in Krasnodar Kray and in Novosibirsk and other oblasts.

In commenting upon the positive influence of a contract on production, all of the speakers mentioned its great educational role. Labor and technological discipline are higher in cost accounting brigades and teams. It is here that many important qualities are instilled in the personnel: collectivism, comradeship and mutual assistance, mutual respect and high principles when evaluating the contribution of each individual towards the overall goal. An individual is able to improve his professional expertise more rapidly in a collective. For it is here that he is imbued with a sense of being the master of his kolkhoz, sovkhoz or country and this motivates him to work in a conscientious, enthusiastic and productive manner.

## Obligation of Leaders and Specialists

Why is it that such an effective method has not been disseminated on an extensive scale? The participants in the conference analyzed thoroughly the reasons for this situation.

Up until recently, the introduction of a new innovation restrained to a considerable degree imperfections in the economic mechanism. A system was employed for many years under which the rates for output were established without taking into account the actual indicators achieved. They were not stable and they were reexamined annually. Quite often the production indicators achieved exerted only a weak influence on the amount of earnings.

At the present time, quite another system prevails. As emphasized by the director of the All-Russian Scientific Research Institute of Economics, Labor and Administration in Agriculture Yu.T. Buzilov and other speakers, important economic measures have been adopted in conformity with the decisions handed down during the May (1982) Plenum of the CPSU Central Committee which are promoting the extensive introduction of the collective contract. The prices for a unit of output are now being established in accordance with the production norm, which is based upon the actual cropping power achieved during the preceding 5 years. The leaders of farms are authorized to establish stable prices for a period of up to 5 years for those worker brigades and teams which operate on the basis of a collective contract. When computing the price per unit of output, the planned wage fund can be increased up to 150 percent depending upon the cropping power level for the agricultural crops and the livestock and poultry productivity. Today the kolkhoz and sovkhos leaders are authorized to combine the resources called for in existing statutes for wages, including additional payments for products and high quality work and also bonuses for output and to establish progressively-increasing prices.

However, it was emphasized in speeches delivered before the conference that objective factors of an economic nature cannot justify the weak work being carried out by the USSR Ministry of Agriculture, the union republic ministries and their organs in the various areas with regard to introducing the collective contract into operations, nor the insufficient amount of attention being given to this important work by many party committees.

Indeed, even under the conditions which existed earlier for issuing material incentives, a number of kolkhozes, sovkhoszes and rayons succeeded in achieving extensive dissemination of this progressive form of management. Here they were aided by the fact that the personnel skilfully relied upon those objective factors of production intensification which have been created in recent years. Here we have in mind the strengthening of the logistical base of the kolkhozes and sovkhoszes, raising the power-worker ratio and increasing the skills and cultural-technical level of the machine operators, animal husbandrymen and specialists.

The speakers emphasized that the Politburo of the CPSU Central Committee, in a very timely manner, has requested an intensification of organizational work in connection with the extensive introduction of the collective contract into

kolkhoz and sovkhoz production and greater responsibility to be displayed for this work by the farm leaders and specialists and agricultural organs.

This was borne out by an experiment conducted in Belgorod Oblast.

The first two teams with periodical advances and the lump wage payment system were created at the Kolkhoz imeni Frunze with the assistance of the eminent Kuban corn grower and Hero of Socialist Labor V.Ya. Pervitskiy. The experiment was a success. Especially high indicators were achieved by the team headed by A.N. Kolesnik. The kolkhoz chairman, Hero of Socialist Labor V.Ya. Gorin, discussed the fact that today all of the branches have been converted over to the brigade contract method. The collectives of non-schedule teams are participating actively in planning, in developing measures for raising production efficiency, in organizing the socialist competition and in summarizing results. The councils of production subunits are playing a most active role. The specialists and the kolkhoz's balance committee are furnishing assistance to the labor collectives in finding new reserves. It is by no means an accident that the farm is steadily increasing its production and sale of products to the state. Its profitability level has reached 39 percent and its profit is in excess of 4 million rubles.

Following a thorough analysis of the operational results realized from the non-schedule system at the Kolkhoz imeni Frunze, the oblast CPSU committee and the oblast executive committee purposefully began to introduce the new form for organizing wages at all farms in the oblast. A decree was adopted concerning the dissemination of this experience.

A special committee consisting of leading workers, scientists and specialists was created attached to the oblast party committee for the purpose of coordinating the work of introducing a collective contract. An oblast school for leading experience was organized at the Kolkhoz imeni Frunze. Here training is provided for the leaders of non-schedule subunits and for specialists attached to kolkhozes, sovkhozes and agricultural administrations. The structure of the teams and their staffing with personnel and equipment are reviewed by the rayon party committees and rayon executive committees. The councils of the oblast and rayon agroindustrial associations are devoting a great amount of attention to expanding and improving the collective contracts. The party, soviet and agricultural organs are exercising constant control over this work.

In 1980, 54 such teams operated within the oblast. They obtained 20-30 percent more output compared to the average indicators for the farms. The following year their number was increased to 278 and last year -- to 548. By combining 26 percent of the machine operators, the non-schedule subunits produced 40 percent of the gross output of field crop husbandry. The growth in cropping power is being combined with a reduction in production costs and with improving the quality of the products. This year 746 teams have been converted over to the non-schedule system; they will raise agricultural crops on an area of 946,000 hectares, or 60 percent of the arable land. A collective contract is being introduced into operations in animal husbandry.

During his speech, the 1st secretary of the Glazunovskiy Rayon CPSU Committee in Orel Oblast T.N. Konovalov discussed an interesting experiment. Based upon

the initiative of the rayon committee, a brigade contract was immediately introduced at all 14 farms. Many questioned the feasibility of such a step, expecting this work to be started at just 1-2 farms and subsequently at the remaining ones. The rayon committee and the primary party organizations had to carry out a great amount of explanatory and organizational work in order to convince people regarding the need for introducing the non-schedule system in all areas, under which all of the farms and teams operated under the same conditions. The teams were assigned entire crop rotation plans and in this manner a machine operator truly became a master of the land. In addition, better solutions were found for the problems concerned with the employment of the members of a collective and their wages.

The bureau of the rayon party committee approved the team leaders and party organizers and it defined the trend to be followed for creating stable and viable collectives. Seminars are conducted on a monthly basis for the farm leaders and specialists and team leaders. Problems associated with ensuring that the teams are provided with equipment and wages are examined during these seminars. Special attention is given to observing the conditions of a contractual agreement, to developing the initiative of subunit members and to eliminating excessive guardianship over them.

The first year revealed the vitality of the teams. The next stage in their operation involved converting them over to cost accounting. This work was begun in January 1982. An expenditure limit was determined for each team. A system of checks was introduced for controlling them.

Not everything went smoothly. However the new work methods produced fine results. Last year the rayon obtained 17.6 quintals of grain per hectare, or almost 4 quintals more than the average for the 10th Five-Year Plan. Notable increases were recorded in the production of sugar beets and forage crops. The rayon successfully fulfilled its plan for selling grain and beets to the state and became the winner of the oblast socialist competition held in honor of the 60th anniversary of the formation of the USSR. Compared to 1981, gross output production for field crop husbandry increased by 16 percent. The expenditures for output production decreased, while an increase took place in the average monthly wage for machine operators. Production costs for the crops under cultivation decreased. No longer was there a need for drawing machine operators from the city.

Even more gratifying was the fact that success was achieved in instilling a love for the land in the personnel. Instead of a number being assigned to a crop rotation field, it became known by the name of the individual who had become its true master.

The rayon CPSU committee and the primary party organizations are continuing to devote attention to those problems associated with the vital activities of the teams. The leaders and specialists are confronted by a great temptation -- that of interfering in the administrative functions of a team leader and undermining the education role played by administrative measures. On every occasion, such attempts must be rebuffed in a decisive manner.

The director of the Vedenovskiy Sovkhoz in Kokchetav Oblast, L.A. Liepa, stated that she had become convinced regarding the advantages offered by a

contract based upon her own experience. One year ago, a brigade which was responsible for two grain crop rotation plans on an area of almost 8,000 hectares converted over to this form for labor organization and the issuing of material incentives. This was preceded by preliminary work. Specialization was carried out at the sovkhoz and feed production was assigned to an independent branch. The conversion of individual teams over to the collective method during the harvest period was of assistance to the grain growers in mastering this new innovation. The earlier use of the combined-trailer method for shipping grain from combines and the successful introduction over the past 3 years of the batch method, using Kirovets tractors, have served to promote successful operations by the contractual collectives. This is increasing labor productivity to a considerable degree, it assists the machine operators during the tense harvest period and the work can be carried out with reduced resources.

Despite the difficult conditions experienced last year, the sovkhoz gathered in a good harvest within a short period of time. And how the people changed! It is by no means an accident that the machine operators of other brigades wish to know when they can be converted over to the contract method. At the present time, the farm is morally and psychologically prepared to convert over fully to the progressive system for issuing incentives. And on the farms the first step has been taken in this direction -- teams have been created and the milkmaids and cow tenders are working as a single detail.

However, the sovkhoz is disturbed regarding the following question: can the administration carry out all of the contractual conditions in behalf of the collective and will not the machine operators be "drawn" to other sectors? Unfortunately, not all of the leaders are evidencing a desire to create for a contractual subunit all of the prerequisites for achieving high results or to accept their share of responsibility for the harvest. An important task is that of adjusting the economic thought of such individuals. Special importance is being attached to improving the quality of work by the economic service and also by middle echelon leaders, since the organization of labor in a primary labor collective is dependent upon doing so.

#### Instilling a Sense of Ownership

All of the speakers discussed the importance, for the efficient operation of contractual subunits, of observing the requirements for optimum control and permitting independence in the solving of a broad range of problems.

Brigade leader L.Ya. Shlemin at the Pobeda Kolkhoz in Berezanskiy Rayon in Nikolayev Oblast mentioned that the farm has been operating on the basis of a contract since 1977. The desired results did not happen all at once. Why? A great amount of explanatory work was required in order to acquaint the machine operators with the new system for current advances. At first, negligent workers were able to conceal themselves behind the backs of conscientious workers. It turned out that the economic service had not been prepared for the introduction of the collective contract and that the chief specialists, just as in the past, had transferred equipment over to other sectors to the detriment of the interests of the contractual collective. The personnel began departing the brigade.

The situation changed radically after the farm began observing in a very strict manner the contractual obligations established between the contractual collective and the kolkhoz administration. The brigade's council began solving such problems as the placement of the equipment and personnel, encouraging and punishing workers, distributing additional payments and preparing the vacation schedules. The greater degree of independence served to raise the responsibility of the grain growers with regard to achieving high final results. As a result of improvements in the level of agricultural practices, the cropping power of the grain crops here was 5 quintals higher than the average for the rayon, corn for grain -- by 8 quintals, sunflowers -- by 2 quintals. Labor productivity was raised twofold and reductions took place in the expenditures for equipment maintenance.

The microclimate in the collective improved. At the present time, no disciplinary violations are taking place here. Jointly the machine operators determined an efficient regime for work and relaxation, with days off being provided according to a sliding scale. Youth willingly join the brigade -- senior experienced comrades take pleasure in sharing their experience with them. The machine operators with families spend their days off together and they assist those who wish to form a mutual benefit fund for their brigade.

Many such examples were cited during the conference. At the same time, it was noted in the speeches delivered by the RSFSR Minister of Agriculture V.P. Nikonov and the head of a department at the All-Union Scientific Research Institute of Agricultural Economics A.M. Yutaya that the production independence of contractual collectives is still being violated on many farms. Such faulty practice takes on many forms. Unfortunately, the damage caused by such a phenomenon, one that is still occurring, wherein a brigade or team is assigned unrealistic planning tasks or accurate final operational results cannot be determined owing to planning miscalculations, is still quite obvious.

Stability in a collective is not promoted by its removal from the planning, analysis and solving of problems associated with material and moral incentives.

The experience of brigades and teams which operate on the basis of a contract reveals that only those which perform in a purposeful and productive manner and which realize a high return will be fully able to participate actively in the administration of production operations. For it is under these conditions that the personnel will be fully able to manifest their capabilities, initiative and economic sharpness and campaign actively for fulfillment of the established plans and tasks.

A business-like atmosphere does not develop spontaneously in a collective. Its creation requires a great amount of effort on the part of the leaders and specialists. And it commences with an extensive explanation on the farm of the economic essence of a collective contract, the advantages it offers for a kolkhoz, sovkhos or a worker and with a thorough study of the experience of leading workers. It is equally important to observe in a very strict manner the principle of forming labor collectives on a voluntary basis, with consideration being given to the desires of the personnel to work with one another.

A great deal depends upon correctly determining the size of a brigade or team, the number of workers and their professional structure. Here, as mentioned during the conference, there can be no prepared solutions for all farms throughout the country. The production conditions and structure and other factors of an organizational nature must be taken into account.

First of all, the brigades and teams must be permanent. It is best if those in field crop husbandry are assigned crop rotation plans. On small farms in animal husbandry one brigade should ideally be formed and several brigades and teams can be created on large farms and complexes.

Unfortunately, the scientist-economists, according to the speakers, have still not furnished an intelligent method for computing the optimum size for intra-farm subunits. Up until now, they have been limited by general recommendations. Experience provides very diverse forms for labor organization. At sovkhoses and kolkhozes in Kalinin Oblast, spinning flax is grown by teams consisting of 3-4 machine operators. No more than 5-6 individuals -- such is the structure of a collective which cultivates forage crops under irrigation in Saratov Oblast and simultaneously fattens young large-horned cattle stock. There can be no doubt but that it is easier in a small collective to solve all problems concerned with production operations and personnel interrelationships. But large subunits also perform successfully.

An economist at the Kolkhoz imeni Shchors in Chernobayevskiy Rayon in Cherkassy Oblast V.N. Skakun reported that 90 machine operators were working in two of the farm's contractual brigades. The collective earnings are distributed taking into account the coefficient of labor participation. The regime for the farmers' work day and week has been put in proper order. There are many youth in the collectives. And the fact that the farm has begun to obtain 40.4 quintals of grain per hectare, 222 quintals of potatoes and 62 quintals of feed units is largely the result of use of a progressive system for issuing material incentives.

The experience of such farms convincingly testifies to the importance, to any leader or specialist, of raising the level of management and knowledge of the production specifics and economics. Unfortunately, proper attention is not being given to this aspect of the problem at a number of kolkhozes and sovkhoses. Great turnover in leaders and specialists in some areas is hindering operations. Is it possible to expect great improvements in the introduction of contracts in Vologda and Kostroma Oblasts, where in recent years a large number of the kolkhoz chairmen, sovkhos directors and chief specialists have been replaced? Middle echelon personnel replacements have been extensive on many farms. The economic service at a number of kolkhozes and sovkhoses is in bad need of strengthening.

Some specialists harbor the opinion that the introduction of a contract simplifies their functions. To the contrary, a team leader at the Risovyy Sovkhoz in the Crimean Oblast A.M. Samoylenko and a brigade leader at the Kolkhoz imeni XX Parts'yezda in Kominternovskiy Rayon in Odessa Oblast N.S. Dovbenko emphasized that this progressive form of management requires an improvement in the overall level of administrative activity. Considering themselves to be the masters of production operations, the farmers and animal

husbandrymen are waiting for the agronomists, engineers and zootechnicians to supply them with business-like advice on how and under what specific conditions they are to improve the fertility of their land and the productivity of their livestock and utilize their equipment, fertilizer and feed more efficiently. This will motivate the specialists into constantly increasing their knowledge.

Six contractual teams were created for the first time in 1978 at the Risovyy Sovkhoz in the Crimean Oblast. Three hundred hectares of irrigated land were assigned to each one of them. Subsequently, a crop rotation area of 900 hectares was assigned to each team. A leading technology proved to be of assistance in raising the cropping power of corn for silage to 645 quintals per hectare, fodder beets -- to 1,017 and perennial grasses for hay -- to 122 quintals per hectare.

The brigade headed by N.S. Dovbenko includes 27 skilled machine operators. The nucleus of the collective is the party group, which consists of nine communists. The most competent grain growers were elected to the brigade council and collectively they examine the vital problems concerned with production development and the working and living conditions. All of the brigade's members possess allied professions. The principle "One for all and all for one" has become a dominating one in the activities of the collective. Obviously, only an agronomist or engineer who is intelligent and who possesses a fine knowledge of scientific developments is capable of managing such a highly organized subunit.

And the machine operators skilfully employ the advice offered by the specialists. During the years in which the new method was employed, they increased the cropping power of their grain crops from 21.4 to 34.1 quintals. And this year they plan to raise it to 35 quintals. The profitability of the grain economy has been raised from 38 to 125 percent.

In particular, the importance of administrative factors has been raised considerably. Indeed the diversion of workers from a contractual collective to other sectors is often explained by the fact that the placement of forces at a farm was never well thought out. Thus it develops that there is a shortage of machine operators both for transporting the freight and also for performing work on the farms. In short, any farm must now be viewed as a system of primary labor collectives, among which correct interaction has been established in the interest of an entire kolkhoz or sovkhoz. The conversion over to a departmental administrative structure at the kolkhozes and sovkhozes will aid in solving this task.

#### Stimulating Effect of Cost Accounting

The Minister of Agriculture for the Belorussian SSR F.P. Sen'ko, the senior economist for the Sarayevskiy RAPO /rayon agroindustrial association/ in Ryazan Oblast A.D. Chernyshova and other speakers emphasized the fact that in the formation, development and stability of collective forms for organizing labor a leading role is played by correctly established distributive relationships. On the whole, the work of a collective is evaluated on the basis of the final results, that is, the output obtained. It serves as the basis for computing wages.

But how should the final result be distributed among the members of a brigade or team? Mistakes made in this area often lead to complications in the work of the contractual collectives. In some areas, attempts are being made to solve the problem on the basis of administrative measures, assigning equal advances to all members of a brigade or differentiating the amounts without taking into account the wishes of the machine operators themselves. But is it really proper to level off wages in those instances where the machine operators possess different levels of professional training and display different attitudes towards their work?

The speeches revealed that the leading farms are finding the correct solution for this important problem. In the process, they are observing one indispensable condition: in selecting the principles for distributing earnings, a strong influence is exerted by the collective itself. The specific forms of this solution vary in nature.

In the team headed by the Kalinin machine operator Ye.A. Yakovlev, an equal payment for the work-day is made to each machine operator and based upon the annual results an additional payment is distributed per ruble of current earnings. Such a principle is often employed by collectives, the members of which possess roughly the same qualifications. On many farms in Belgorod Oblast, a correction coefficient is applied to the periodic advance for those days when the personnel work with toxic chemicals and ammonia liquor or work on combines during the period devoted to harvesting the crops. At the Kolkhoz imeni Komintern in Sarayevskiy Rayon in Ryazan Oblast, the advance is differentiated according to the types of work: field, repair, transport.

Coincidental with the increase in the number of contractual collectives, their structures now include workers who possess differing levels of experience and different attitudes towards their work. According to V.I. Mordas, a brigade leader at the Druzhba Kolkhoz in Dobrushskiy Rayon in Gomel Oblast, under these conditions a need exists for differentiated wages depending upon the skills and work attitudes of the workers. Here, as on many other farms, use has been made of one particular indicator -- the coefficient of work participation. An advance is assigned depending directly upon the type of equipment serviced, the degree of discipline observed, mutual assistance, expertise and the complexity of the work carried out. Accordingly, based upon the points assigned, each member of a brigade is placed in one of five categories. And this means, for example, that the amount of an advance for an hour of work can change in the case of mechanized operations from 50 to 80 kopecks.

Other interesting forms of material stimulation were mentioned during the conference. But mention was made of another aspect of the problem with some alarm being evidenced: in recent years the kolkhozes and sovkhoses have been granted extensive rights with regard to establishing the forms for issuing incentives to the farmers and animal husbandrymen themselves. However the leaders on many farms have failed to take advantage of this right and, just as in the past, they are employing obsolete wage methods which only weakly interest the workers in achieving high final results. One of the most important tasks of the new organs of administration in the rural areas is that of developing the initiative of enterprises in this regard.

There was still another unanimous conclusion drawn by those who participated in the conference -- a collective contract is most effective and greater advantage can be realized from the opportunities it affords when internal cost accounting is introduced simultaneously. Why is this? The fact of the matter is that the task of a collective contract and cost accounting are identical -- to achieve maximum output with minimal expenditures. In the process, a requirement exists for establishing a direct relationship between the payments for labor and the final results of that labor. In addition, internal cost accounting augments the material responsibility and interest of a collective, since it requires a comparison of the results obtained against the production expenditures.

The experience of many farms indicates that a collective contract that is based upon internal cost accounting serves to ensure a more strict regime for realizing economies and a more accurate evaluation of the work of the collective. Cost accounting at the level of primary collectives is an efficient means for intensifying the labor activities of workers and motivating them into actively campaigning for raising the efficiency of production.

A clear example of this was cited by the chairman of the Kolkhoz imeni Kalinin in Berdyanskiy Rayon in Zaporozhye Oblast V.K. Butenko. Here a collective contract is being employed in both field crop husbandry and animal husbandry. It is being used by six mechanized detachments, a horticultural and gardening brigade, a dairy complex and by farms for the raising and fattening of cattle and for the raising of sheep, hogs and poultry.

And typically, each production subunit of the kolkhoz operates on a cost accounting basis. They are given tasks for the production of goods from both a natural and cost standpoint, a wage fund, prices for a unit of product, expenditure norms for the repair of tractors and agricultural machines and for carrying out technical maintenance and expense limits for fuel and lubricating and other materials. Cost accounting encompasses all of the other sectors of kolkhoz production, including the motor vehicle pool, the power economy, machine workshop and the auxiliary and service enterprises. And here the kolkhoz members and councils of the production subunits participate actively in the planning work.

Contractual collectives are being formed at the Kolkhoz imeni Kalinin on a voluntary basis. Each individual desiring to work in a particular subunit must submit an official written request to the kolkhoz administration at the beginning of the year. The structure for a detachment, team or brigade is approved during a general meeting of the kolkhoz members. This is not a meaningless formality. A detachment does not have a labor account or an accounting clerk. Throughout the year, everyone works on the basis of a single and common order -- a cost accounting task. Only the days and hours that each individual works are taken into account -- this is the responsibility of the leader of the collective. And here extreme importance is attached to maintaining a high degree of personnel stability, since the earnings of all, if we exclude the additional payments for length of service and specialist rating and assuming equal participation in the work, are created on the basis of collective activity and collective expertise.

An advance is computed monthly for each tractor operator taking into account the amount of time worked. The amount of this advance is determined in the following manner. Initially, the wage fund required for the detachment, for carrying out a volume of work associated with the cultivation of crops on assigned lands, is established. To this amount is added a raised payment for the time spent harvesting the crop within the established and optimum periods. The sum thus obtained is divided by the number of detachment members and by the number of months called for in the technological chart for the cultivation of the crops planned. This is the amount of the monthly advance. This amount is the same for all machine operators without exception. The bonuses for length of service and specialist rating and other payments are computed and issued at the end of the year.

Following the completion of all field operations, the delivery of the products obtained and the placing of the equipment in proper working order, the administration carries out a final computation for the members of the detachment. The average monthly earnings for members of collectives which operate on the basis of a contract is 250-280 rubles, and taking into account the bonuses paid out of the material incentive fund -- 290-310 rubles.

Special importance is attached to the contracts. Indeed it is the basic document for interrelationships between the kolkhoz and the kolkhoz members and it sets for the obligations and material responsibilities of the parties involved. It is prepared in two copies, with one being turned over to the kolkhoz members and the other -- retained in the administration. The contract clearly indicates the types and quantities of products to be obtained, what is required to produce the products and the additional payments that have been established for over-fulfillment of the planned indicators and for high quality output.

Importance is also attached to establishing strict control over the observance of planning discipline. The effectiveness and reliability of such control is promoted by a system of checks and mutual computations carried out among the production subunits. Any machine operator or middle echelon leader senses on a daily basis the economic status of his labor collective and he strives to develop zealotness and thrift. There is certainly material interest here: incentives are issued for thrift realized. For example, last year the mechanized detachment headed by P.P. Goma realized a savings of 7,000 rubles. Of this amount, 1,400 rubles were paid to the collective in the form of a bonus. The kolkhoz also profited on the whole. All of its branches produce profits and the overall profitability level is 42 percent.

The kolkhoz operates a so-called coupon system for controlling discipline and the quality of the work. Each machine operator is given a coupon which is roughly the same as those given to motor vehicle operators. The chief of the department, the kolkhoz chairman and the chief agronomist are authorized to add warnings to the documents of violators of labor discipline and poor workers. For the first such warning, the guilty party is deprived of up to 25 percent of his additional incentive payment, for the second -- up to 50 and for the third warning -- 100 percent of the incentive payment. The coupon system is by no means the chief method for developing in the personnel a conscientious attitude towards their work. As expected, the major emphasis is placed upon the collective and upon its maturity, exactingness and

unwillingness to tolerate shortcomings. The numerical structure for workers in primary and intra-departmental subunits has been well thought out. Usually it does not exceed 12-15 individuals. Thus one can no longer hide behind the back of another, but rather each is clearly in sight of the others.

The collectives are authorized to petition the administration of a kolkhoz to reduce the punitive measures or to remove them entirely from a guilty party. Let us say that among those whose warning coupons were "filled up" during the course of a year's time, there were some who drew the proper conclusions. The collectives can themselves distribute the additional payments internally using deductions from the kolkhoz's overall profits. The general meeting determines only the overall amount of these additional payments for each of the subunits.

The general meeting authorized the kolkhoz administration to withhold up to 10 percent of the bonus payments not only from the violators of labor and production discipline but also from the collectives of the lower subunits to which they belong. Once again this serves to promote increased mutual exactingness and responsibility on the part of the members of a collective for one another and it instills a spirit of genuine collectivism in all of the workers.

The social organizations are organizing their work to conform with the new situation. Whereas earlier the primary (departmental) party organizations at a kolkhoz were created according to the territorial principle, today the production principle is being taken into account. This has added noticeably to the specific, business-like and intense nature of party work and party management.

This example is worthy of imitation. Unfortunately, it was mentioned during the conference that quite often intra-farm accounting is not introduced into operations at the kolkhozes and sovkhoses simultaneously with organizing the brigades and teams on a collective contract basis. The tasks for the production of goods in kind and the wage fund alone are not being supplied to the contractual collectives in an adequate manner. At the same time, control over expenditures is being pushed into the background. Quite often the work is hindered by the fact that long periods of time are spent converting only one or several subunits over to cost accounting, with the remaining subunits being left to operate on the basis of the old system. In such instances, a cost accounting collective encounters many difficulties in its relationships with its farm partners and the profits and savings in resources realized by it "disappear" as a result of the negligence and extravagance of others.

The speakers emphasized the fact that such a situation is unacceptable. Agricultural development and the intensification of cost accounting relationships assume greater importance during this modern stage. Following the May (1982) Plenum of the CPSU Central Committee, all of the conditions required for raising production efficiency considerably were created. The new procurement prices and the bonuses to be added to them are making it possible for each kolkhoz and sovkhos to carry out its production operations on a profitable basis. But this raises the need for evaluating all measures and all administrative decisions from the standpoint of their economic effect and for

motivating kolkhoz members, sovkhoz workers and specialists to participate in a campaign aimed at raising production efficiency and strengthening the regime for realizing economies. Intra-farm accounting is presently promoting the achievement of this goal.

The conference once again revealed the great importance being attached to the collective contract in the campaign for implementing the country's food program and also for solving the economic and social tasks of the 11th Five-Year Plan. This year the cost accounting collectives can improve the role they play in the campaign to fulfill the plans and socialist obligations for the production and sale of products to the state. The realization of this possibility will depend upon an intensification of organizational work associated with the introduction of this progressive form for labor organization and wages.

Those who participated in the conference assured the party's central committee and the Politburo of the CPSU Central Committee that the agricultural workers are dedicating all of their strength and knowledge towards ensuring the introduction of the collective contract into kolkhoz and sovkhoz production and the successful fulfillment of the tasks of the country's food program.

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