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USSR Report

AGRICULTURE

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4 April 1986

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LIVESTOCK

LIVESTOCK WINTERING DATA VIEWED

Moscow SELSKAYA ZHIZN in Russian 20 Feb 86 p 3

[Article by N. Skorolupov: "Half the Winter is Over: a Review"]

[Excerpts] According to the example of leading collectives, workers of many farms and complexes have completed ahead of time the tasks of 2 months this year and have sold thousands of tons of milk and meat, and tens of millions of eggs above the plan.

According to reports of the USSR Central Statistical Administration, during January kolkhozes, sovkhozes and interfarm enterprises have sold more than 1,919,000 tons of cattle and poultry--a 15 percent increase over the month's attainment a year ago. Milk production amounted to 4,626,000 tons--6 percent more than last year, and egg production was 4,892 million --7 percent more than last year.

Milk production was 252,500 tons more than in January 1985. All the union republics except Azerbaijan achieved an increase in gross yield. In republics of Central Asia and in Kazakhstan milk production increased 11-13 percent. Moldavian and Belorussian livestock breeders are confidently raising the production of dairy farms. The greatest increase--117,000 tons--was achieved in RSFSR farms. Records of Ukrainian livestock farmers indicated an increase of about 51,000 tons.

Workers of the meat shop have reliably commenced the new five year plan. They have dispatched for processing 245,000 tons of cattle and poultry more than last January. All union republics have achieved an increase except Estonia.

In due course livestock breeders in each kolkhoz and sovkhoz and in each farm decided that it was necessary to conduct a successful cattle wintering. Then obligations were undertaken and conditions of socialist competition were determined. Did farm workers succeed in achieving what they had intended? To respond to this question, again we turn to Central Statistical Administration data.

From 1 October to 1 February livestock workers of the country dispatched to processing 97,000 tons more cattle and poultry than during a corresponding period last year. Agroprom workers of the RSFSR made the greatest contribution. During 4 months of winter they sold over 3 million tons of meat (live weight), 79,000 tons more than during the same period a year earlier.

Agricultural workers of the Ukraine, Belorussia, Moldavia, and other union republics achieved considerable gains. Only 3 republics--Kazakhstan, Uzbekistan and Kirgiziya did not succeed in overcoming the lag tolerated in the last Five Year Plan. Thus, kolkhozes and sovkhozes of the Kirgiz SSR have sold only 88,200 tons of cattle and poultry--11.4 percent less than was dispatched at the beginning of February 1985. Farms of the Kazakh SSR sent 30,000 tons less cattle and poultry to processing, although there are many examples of intensive beef cattle raising in the republic.

In order to measure up to the indexes of the Food Program, it was noted at the Tselinograd conference of the Party economic aktiv, last year's farm production increase needs to be doubled. Tasks of the 12th Five Year Plan represent the most accurate reference point. Thus it is necessary to consolidate the success achieved in leading farms and raise the production of farms everywhere from day to day.

CSO: 1824/245

REGIONAL DEVELOPMENT

RSFSR PARTY, APK OFFICIALS REVIEW APK PROGRESS, PROBLEMS

Moscow SELSKAYA ZHIZN in Russian 1 Feb 86 p 2

[Article by Yu. Maksimenko and Yu. Semenenko, Rostov Oblast: "Following the Course of Increasing Effectiveness: The Decisive Factors of Acceleration--Cost Accounting, Collective Contracts and Intensive Technologies"]

[Excerpts] As previously reported, a conference of the secretaries of kray and oblast party executive committees and chairmen and first deputy chairmen of agroindustrial committees of autonomous republics, krays and oblasts of the Northern, Northwestern, Central, Volga-Vyatka, Central Chernozem, Northern Caucasus and Transvolga regions of the RSFSR took place on 28-29 January in Rostov-on-Don. Discussed at the meeting was the subject of strengthening organizational work to introduce cost accounting, collective contracts and intensive technologies in farming and livestock raising.

A speech was made by L. B. Yerminev, first deputy chairman of the RSFSR Council of Ministers, and chairman of the republic's Gosagroprom [State Agroindustrial Association].

I. I. Skiba, first deputy director of the Department of Agriculture and the Food Industry of the CPSU Central Committee, spoke at the conference.

Participating in the work of the conference were the first deputy chairman of USSR Gosagroprom, Ye. I. Sizenko, the first secretary of the Rostov Oblast party committee, B. M. Volodin, the president of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], A. A. Nikonov, party, soviet and economic directors, scientific workers, specialists and production leaders.

In the light of the decisions of the April and October 1985 plenums of the CPSU Central Committee and of the directives to further improve management of the agroindustrial complex, a multi-faceted and demanding analysis was made at the conference of the activities of agroindustrial committees, associations, directors, kolkhoz and sovkhoz specialists and other APK [Agroindustrial complex] enterprises with regard to the transition of the economy to intensive methods of development.

The key to growth in effectiveness and to improvements in the productivity of agricultural crops and livestock is the overall development of economic

initiative within labor collectives, a significant improvement in the material interest of all workers as concerns the end results of labor, the extensive introduction of collective contracts and cost accounting in all production links, the assimilation on their basis of intensive and industrial technologies, the economic use of material resources and the active introduction into production of present-day achievements of science, technology and progressive experience.

Conference speakers noted that progressive experience, resources and possibilities available to kolkhozes, sovkhozes and other agroprom enterprises are not being utilized fully by far as of yet.

During the last five-year plan a number of oblasts, krays and autonomous republics not only did not increase, but even decreased, the production of agricultural products. The enterprises of Rostov, Voronezh, Saratov, Tambov and Penza oblasts noticeably decreased average annual production of grain. A number of oblasts are consistently not fulfilling plans for the production and procurement of potatoes, vegetables, sugar beets, sunflowers, flax and other products. Especially in debt to the state with regard to potatoes are the kolkhozes and sovkhozes of potato-raising oblasts such as Ryazan, Orel and Bryansk, and with regard to vegetables--Vladimir, Ivanovo, Yaroslavl and Volgograd.

Not everything is going well with the procurement of livestock products. The enterprises of the same Volgograd, Ryazan and Bryansk oblasts as well as of Kirov, Kalinin, Kaluga, Novgorod and a number of other oblasts are systematically not fulfilling their plans for procurement of meat, milk and wool.

At the conference priority attention was given to the introduction of scientifically-based farming systems, to improving soil fertility, to the extensive utilization of organic fertilizers and to the efficient use of every hectare of land, especially reclaimed plowland. After all, a significant portion of irrigated and drained lands in the republic is located in the Transvolga region, the Northern Caucasus and the Non-Chernozem Zone.

It was noted at the conference that in the interest of the situation a sharp turnabout is required in efforts in the direction of basically improving reclamation of already existing systems, of utilizing and assimilating them more efficiently by the agricultural enterprise and of expanding cultivation operations. Within the complex of measures to raise the stability of farming we must increase the role of clean fallow, the area of which has been brought up to optimal size.

The main grain fields of Russia are located in the region of the Transvolga, the Northern Caucasus and the Central Chernozem. The speakers emphasized that these regions can and must produce more grain of the very highest quality.

In the RSFSR last year grain crops were cultivated according to progressive methods on over 10 million hectares. Moreover, on 3.3 million hectares corn for grain, sunflowers, sugar beets, potatoes, rape and several other intertilled crops were cultivated according to industrial technology.

According to preliminary data, the average productivity of grains on the entire area of intensive technology comprised 24.2 quintals per hectare. The productivity of the remainder of crops was 18.7 quintals. The largest increase in yield--10-14 quintals per hectare--was achieved in the kolkhozes and sovkhozes of Rostov, Ulyanov, Lipetsk, Kursk, Tula, Moscow and Ryazan oblasts, Stavropol and Krasnodar krais and the Tatar ASSR. Intensive technologies have had a noticeable effect on production quality. Last year in the RSFSR over 9 million tons of high-quality grain, or 53 percent of the volume of wheat procurement, were procured.

The experience of leading kolkhozes and sovkhozes convincingly shows that success is achieved by those enterprises in which directors, specialists and party and komsomol organizations take the complicated matter of introducing innovations into their own hands and approach it creatively and with great responsibility and in which experienced, highly trained workers and first and foremost--communists, are in charge of brigades and links.

Enterprises achieved great results when they adhered to the entire complex of measures. Orlovskiy Kolkhoz of Kirovskiy Rayon, Stavropol Kray, raised and harvested 52.6 quintals of grain per hectare, which is over 15 quintals more than the yield on regular fields.

For the 1986 harvest in Rostov Oblast the area in grains cultivated according to intensive technology will increase almost fourfold and will comprise 1,160,000 hectares; this includes 850,000 hectares sown in winter wheat. These crops have been assigned to brigades primarily on the basis of collective contracts. It is planned to produce over 900,000 tons of grain from them additionally.

However, many rayons and oblasts have not achieved the return which they anticipated when they introduced intensive technology. The reason for this is that the norms for fertilizer application were not adhered to and that crop-care measures either were not fulfilled or were carried out incompletely. This type of attitude toward new grain production technologies has been exhibited in the enterprises of Kostroma, Smolensk, Yaroslavl and a number of other oblasts. This year RSFSR enterprises will cultivate 16.7 million hectares of grains according to intensive technology; it is planned to produce no fewer than 14 million tons of grain, including no fewer than 10 million tons in the Non-Chernozem Zone, the Central Chernozem oblasts, the Transvolga and the Northern Caucasus, on this area. It was noted at the conference that the directors and specialists of the agroprom system, together with party organizations and scientists, must make a multi-faceted critical analysis of the results of introducing new technologies, make use of all the best and eliminate all of the errors and shortcomings that have been tolerated. It is important to make sure that every link and detachment that cultivates agricultural crops by means of progressive methods is headed by professionally-trained individuals and above all--by communists and komsomol members. Everything must be done to fully supply brigades and links with the necessary material-technical resources that guarantee the unconditional fulfillment of tasks related to raising large and stable harvests.

In his speech, VASKhNIL president A. A. Nikonov discussed the problems of accelerating scientific-technical progress in agriculture and first and foremost of introducing farming systems and intensive and industrial production technologies on fields and farms, and of increasing the contribution of scientific-research institutions. The chairman of Zavety Ilich Kolkhoz of Lipetskiy Rayon, Lipetsk Oblast, and other conference members focused the attention of scientists on the important questions of breeding and developing new, highly-productive varieties of agricultural crops and animal breeds for use in intensive technology.

The restructuring of production management requires an improvement in the level of organizational and economic work in all links, a decisive elimination of shortcomings, a struggle against formalism, the dedication of all cadres toward improving economic management and toward increasing its effectiveness on the basis of the extensive introduction of cost accounting, brigade contracts and intensive technology--these urgent questions were focused on by the secretary of the Belgorod Oblast CPSU committee, A. T. Gnilitzkiy, the General Director of Stavropol's Niva NPO [Scientific Production Association], V. M. Pinchukov and other conference speakers.

"In Kuybyshev Oblast," said the chairman of the oblast agroprom, B. A. Tregubov, "the formation of new management organs has been completed. The apparatus has been brought up to full strength in all links. The effective use of existing production potential and the rapid improvement of lagging and unprofitable enterprises to the level of leading enterprises occupy a key place in the work of kolkhozes, sovkhoses and other enterprises of the complex."

The number of contract collectives in farming and livestock raising is increasing; directors and specialists of enterprises have had their first experience in work on a contractual basis.

Of great interest to conference members was the speech by M. M. Lomach, the general director of the Kuban Agroindustrial Combine, the first of its kind in the country, in Timashevskiy Rayon of Krasnodar Kray. It was created according to the principle of a whole economic organism and consists of 56 kolkhozes, sovkhoses, enterprises and organizations with annual product sales of 369 million rubles. The greatest emphasis is placed on maximal use of internal reserves and possibilities for production development. Intensive and industrial technologies for cultivating agricultural crops are being introduced on almost the entire sowing area. Cost accounting and a limit-check system of expenditure control has been introduced in all kolkhozes and sovkhoses.

Cost accounting is also being assimilated in industrial enterprises, at building sites and in the transportation association. Collective contracts are being utilized systematically in all links of the agricultural combine. A large portion of workers in agricultural production and building now work according to this method. Plans have been overfulfilled for the majority of indicators; all types of combine production has become profitable.

It was noted at the conference that in places where an attempt is made to introduce intensive technologies but where the leading methods of labor organization and its stimulation are forgotten, a high return is not achieved. Only a comprehensive approach and close interrelations among all parties involved in technology and organizational-economic activities yield good results. This was convincingly born out to conference participants by examples, especially from the important branch of livestock raising, in which little attention is still given to mechanizing production processes and to introducing a flow-shop system of milk production and an industrial method for raising and fattening cattle and hogs.

The chairman of the Domodedovskoye RAPO [Rayon Agro-Industrial Association] of Moscow Oblast, K. M. Tozliyan, spoke about the transition of enterprises to intensive development methods and singled out the integral parts of a single plan being assimilated persistently by the economic service, specialists and workers--intraenterprise cost accounting, the utilization of collective forms of organization and wages and production output by means of utilizing progressive technology. He emphasized that village workers are expecting the agroprom to strengthen cost accounting incentives to raise the responsibility of all links of the agroindustrial complex and above all of those who supply equipment, fertilizer and chemical resources for cultivating grains, feed and other crops according to new technologies. Supplies of mineral fertilizers and herbicides are often interrupted, which violates the agrotechnical schedule and in the final analysis brings harvest losses. These types of interruptions should be avoided in the future; they are expensive for enterprises and for the state. Farmers also have great complaints about machine builders.

Conference members discussed measures which, once implemented, will enable all kolkhozes, sovkhoses and APK enterprises to make the transition to contracts and cost accounting. The use of industrial technology in farming and livestock raising will increase on the basis of leading forms of labor organization. This is the true path toward accelerated development of the agroindustrial complex in all regions and toward the successful solution to tasks foreseen by the draft of the Basic Directions for the Development of the National Economy.

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CSO: 1824/230

REGIONAL DEVELOPMENT

KUNAYEV ATTENDS ALMA-ATA AGRICULTURE CONFERENCE

PM151311 Moscow SELSKAYA ZHIZN in Russian 14 Feb 86 p 2

[Report by special correspondents G. Brandt and V. Yelufimov: "The Main Sphere"]

[Excerpts] Alma-Ata--A conference was held in Alma-Ata on 11-12 February on the introduction of financial autonomy, collective contracts, and intensive techniques in farming and livestock raising. It took place in a businesslike atmosphere, in the spirit of high demands on the standard of organizational and economic work in the main spheres of activity of the State Agroindustrial Committee. It was attended by senior personnel of party and soviet organs, leaders of republican and oblast agroindustrial committees and kolkhozes and sovkhozes, leading production workers, scientists and specialists from the Kazakh, Kirghiz, Tajik, Turkmen, and Uzbek SSR's and senior personnel of the CPSU Central Committee and USSR State Agroindustrial Committee.

D.A. Kunayev, member of the CPSU Central Committee Politburo and first secretary of the Kazakh Communist Party Central Committee, participated in the conference work.

The conference was opened by V.S. Murakhovskiy, first deputy chairman of the USSR Council of Ministers and chairman of the USSR State Agroindustrial Committee. A.I. Iyevlev, first deputy chairman of the USSR Agroindustrial Committee, delivered a report.

A considerable proportion of the country's agricultural land and nearly one-half of all irrigated land is in this region, it was stressed at the conference. The fixed production capital is worth R54 billion and power capacities increased by 19 percent over the 5-year plan. But grave concern is caused by the fact that the return on the accumulated potential is still low, agricultural production is not rising quickly enough, and such oblasts as Andizhan, Fergana, Dzhambul, and Kokchetav are clearly lagging behind today's demands. What is the problem? Much depends on the standard of economic work, more effective exploitation of existing reserves and opportunities, and diligent management in all spheres of the agroindustrial complex.

There was a concrete discussion of all this, accompanied by an equally concrete display of leading workers' achievements.

The Persuasive Power of the Graphic Example

The existing production potential of the majority of kolkhozes and sovkhoses in the country's eastern region now permits extensive, general introduction of much of what only the leading farms could handle in the recent past. And the leading elements in this important matter are perhaps the human factor, people's creative initiative and increased responsibility, and resolute abandonment of the hackneyed approach and the well trodden path of extensive management.

The seminar participants displayed special interest in economic levers for influencing production. And this is no accident. At the Kamenskiy pedigree stock farm they create a precise correlation between labor and material expenditure and the end results of economic activity. People cherish each kopek and handle resources in an economical fashion. And the principles of financial autonomy, to which 33 subunits have been switched, are being established in the services sphere as well as in the main sectors. Every practical step is monitored from the financial viewpoint.

And there is another detail which some farms have underestimated and burned their fingers in doing so. They are firmly convinced here that financially autonomous targets must not be "passed down from on high" in the form of recommendations which practically become directives. The targets are painstakingly calculated in the subunits themselves, among those for whom the calculations are being made, with the direct participation of economists and planners. Norms are set for resources per unit of output. Technology and economics are seen as closely interrelated. After the setting of material and monetary limits, the checkbook is in the hands of the leader of the component or team. Now, before writing a check, he carefully weighs up the return on the expenditure and studies whether or not it is possible to make do with a more modest outlay without detriment to the task in hand.

The participants in this highly instructive seminar familiarized themselves with the farm's experience in introducing financial autonomy. The only reason we are not now covering this question at length is because the sovkhos' chief economist K. Novikova discussed it in detail in SELSKAYA ZHIZN a few days ago.

For High End Results

It is gratifying to note that the economic indicators of kolkhozes and sovkhoses have improved recently. Processing enterprises are working rather more smoothly. But without minimizing what has been achieved, it is necessary first and foremost to assess the state of affairs self-critically, describing things as they really are. Many kolkhozes and sovkhoses, it was stressed at the conference, fail to ensure the set rates of production growth, show only low profits, and mark time for years on end.

At the present stage, when the material and technical base of agriculture and associated sectors has strengthened considerably, questions of labor organization, material incentives to labor, and the skillful utilization of the achievements of scientific and technical progress are coming to the fore.

The collective contract based on financial autonomy is the most progressive form of labor organization and remuneration, and nobody can doubt it now. Impressive facts were cited at the conference. On a countrywide scale, by 1984 teams and components which had gone over to contract working were already harvesting 15.6 percent more grain. Results for the fattening of cattle were 22 percent higher and in hog raising they were 14 percent higher than with the forms of production organization which are becoming obsolete. Labor productivity is 50 percent higher here than in other collectives. Unity of purpose and orientation toward end results rally people together, cultivate collectivism, and prompt people to improve their professional skill. Such people are the true masters of the land. In these conditions labor is profoundly satisfying and people have a better sense of involvement in the cause of the whole people.

An example which tells us much about the enormous potential of the collective contract for enhancing labor productivity was cited by V.I. Dvurechenskiy, secretary of Kustanay party obkom, in his speech. On the Moskalevskiy Sovkhoz, T. Mukuyev's team of seven people is fattening up nearly 3,000 head of cattle, and each animal weighs half a ton. Those seven people are bringing the farm R1 million of profit!

However, individual positive facts do not make up the whole picture. The Central Asian republics and Kazakhstan lag behind other regions of the country in terms of the scale and depth of understanding of the collective contract and financial autonomy. In this respect there were justified reproaches for many kolkhozes and sovkhoses in Tajikistan and Turkmenia and in Dzhabul, Karaganda, and Semipalatinsk Oblasts. There is no evidence of an organizing role being played by leaders and specialists of agricultural organs, although it is not a question of a short-term campaign, but of a radical restructuring of the whole system of labor organization and remuneration and of increasing responsibility for achieving high end results. One leader, in order not to acquire a reputation as someone who clings to routine, renames old structural subunits as contract units without giving it any particular thought. Formalism must be combated resolutely! After all, there was a time when one kolkhoz in Alma-Ata Oblast's Dzhabulskiy Rayon counted out the wages of so-called "contract" components "at random," because there was no question of itemized accounting of output and expenditure.

Reclaimed land is the gold reserve of our farming. In only 5 years 800,000 hectares of irrigated land has been commissioned in Central Asia and Kazakhstan. So why has their yield not only failed to increase, but even fallen in some places? Some Uzbek farms, alas, are satisfied with 34 quintals of corn grain per irrigated hectare, although that yield is nothing remarkable for many kolkhozes and sovkhoses even for dry farming.

Let us take a look at the whole wide zone of irrigation in this region, with its good bioclimatic potential, sufficiency of manpower, and many years' experience of work with land and water. Some people do set an example here,

but on the whole, as already stated, the return on irrigated land is not increasing. Yet in itself, the principle of payment by the end result of labor is accessible and clear to everyone. All that is needed in practice is a more careful analysis and profound consideration of actions in forming the wage fund, in making valuations per unit of output, and in distributing the wages within the contracting collective. That is where the serious blunders usually occur!

It is hardly possible to tolerate a situation where, on Kirghizia's Kyzyl-Oktyabr sovkhov, with an increase in labor productivity of only one percent and with the production targets being fulfilled by only three-fourths, wages increased by...16 percent. What were the specialists and leaders of the rayon agroindustrial association doing? In the Central Asian republics in general, a whole series of farms clearly fail to ensure that remuneration for labor is commensurate with gross output and real income. Yet the collective contract is based on true financial autonomy--quantity and quality of output and consideration of such economic factors as price, prime cost, and profit. The effectiveness of intrafarm accounting is higher where the check form of on-the-spot control of expenditure is used, as is done at the Iselinograd Oblast Moskovskiy sovkhov, which was once chronically loss-making and now makes an annual profit of some R2.9 million, with production profitability running at 50.6 percent.

In this connection there were good words for the Krasnoyarskiy sovkhov in Iselinograd Oblast, Karagandinskiy sovkhov in North Kazakhstan Oblast, Gissarskiy Sovkhov in Tajikistan, and a number of farms in Uzbekistan and Turkmenia. But when a table was produced at the conference summarizing the production return per hundred rubles of basic wages in arable and livestock farming on kolkhozes and sovkhovs in the Uzbek, Kazakh, Tajik, Kirghiz, and Turkmen republics, those present could not regard it as satisfactory. We do not work economically or assiduously, and sometimes we fail to look in the mirror of financial autonomy--financial discipline. The diversion of circulating resources is constantly allowed to happen. Orders for machinery are not always correlated with financial potential. Capital investments in construction are not used thriftily.

A Subject of Particular Attention

A subject of particular attention at the conference was the question of introducing intensive and industrial techniques. In this region there are great opportunities for steadily increasing the production of output in both arable and livestock farming--systematically and confidently. This is indicated by the experience accumulated by the Kustanay Oblast Mayskiy Sovkhov, the Kokchetav Oblast Zlatopolskiy Sovkhov, the Chimkent Oblast Pakhtaaral Sovkhov, and a number of others which have achieved a steep increase in yields and a reduction in the prime cost of wheat and cotton through the introduction of progressive techniques. However, the results are not so significant everywhere. What is the reason for the more modest return on this indisputably powerful means of increasing yields in, say, Uralsk, Kokchetav, and Karaganda Oblasts, where each intensively farmed hectare has given an increase in wheat grain output of only 2-3.7 quintals?

The slightest hiccup in the timing of the sowing, the quality of seed, the dose of fertilizers, or the cultivation of sowings blurs the whole beneficial effect, which lies precisely in the comprehensive use of all agricultural techniques and organizational methods. Agroindustrial associations and committees must draw sound conclusions from these lessons, and--most important--adopt every measure to prevent similar mistakes this year. Especially since the area of sowings cultivated by intensive techniques is increasing markedly in all the republics. In Kazakhstan alone the intensive area of strong and durum varieties of wheat is to be extended to 5 million hectares, from which it is planned to obtain an additional 3 million metric tons of grain.

In general, it is time to sharply improve the standard of production. There must be no room for the violation of crop rotations or for neglecting the spheres of seed cultivation and work on fallow land. In livestock raising, the production of young animals is low and specialist livestock work with pedigree and improved livestock is poorly organized.

The conference had serious complaints about science, which is being slow to restructure its work in the light of production needs. The Central Asian Scientific Research Institute of Economics, the Kazakh Scientific Research Institute of Economics, and agriculture organizations have done far too little to improve the economic machinery and introduce financial autonomy and the collective contract on kolkhozes and sovkhoses. The following facts are also highly significant. People at the Kazakh Scientific Research Institute of Farming are fond of boasting about their innovations in corn selection work at every opportunity, but why, in that case, do the production workers prefer Yugoslav hybrids? And how can it happen that the Kazakh Scientific Research Institute of Meadow and Pasture Farming, which is supposed to be a model experimental production farm, makes a loss and obtains considerably less per cow than its neighbors?

For the kolkhozes and sovkhoses of Central Asia and Kazakhstan, the 12th 5-Year Plan must be a 5-year plan of steep improvement in the standard of production both in the fields and on the livestock units, a time of energetic action and progressive economic methods of management.

/8309

CSO: 1824/237

REGIONAL DEVELOPMENT

UDC 634.0.232

IMPORTANCE OF AVOIDING EXCESSIVE TREE CUTTING IN DAGHESTAN

Krasnodar SELSKIYE ZORI in Russian No 8, Aug 85 pp 25-26

[Article by A. Gadzhiyev, doctor of economic science, Daghestan State University imeni V.I. Lenin: "Our Timber Resources, Preserving Them is Common Concern"]

[Text] I recently had occasion to visit several areas in Daghestan's plains and uplands. In delivering lectures and talking with agricultural workers I was able in passing to pin down some facts and to ask questions about the nature of this region, about how the population is employed, and about the condition of land resources and especially timber resources.

In this semiarid zone of the autonomous republic many natural phenomena, for example, the climate, rainfall and economic results - the yields of agricultural crops and the productivity of animals - are determined to a considerable extent by the forestland. The forest dries up the bogs and brings moisture to the mountains. The forest protects the fields and gives nature its beauty. But it is a pity that the process of reducing the area of natural forests has been taking place here in the recent past.

Three decades ago there were many oak and poplar forests on the farms of Magaramkentskiy Rayon in the valley of the Samur River. Quite a few nut trees and oaks were growing in the Belidzhi and Terekemin Zones of Derbentskiy Rayon and in the extensive zone of Kayakentskiy and Kaytagskiy rayons in the zone around the Caspian. Now some of the timber tracks have been eradicated in all these rayons, and the fate of the Aktash Forest in Khasavyurtovskiy and Kizilyurtovskiy rayons hangs in the balance. Sizable areas of forest land are being constantly turned into places for pasturing cattle. Tracts of small woods near the health resort Talgi and the village of Agach-aul, which are protected, have suffered from the excessive load of animals.

The cutting of trees by poachers (for firewood) is still taking place in the forests of Novolakskiy, Kazbekovskiy, Sergokalinskiy and other rayons in the foothills, while in Kayakentskiy, Magaramkentskiy, and Khasavyutovskiy rayons vineyards are being expanded at a rapid rate at the expense of forestland, which actually needs to be preserved carefully.

In one of my talks with Murtuzali Alibekov, chief agronomist of the "Gerginskiy" Sovkhoz in Kayakentskiy Rayon and a deputy to the rural Soviet, it

turned out that there are no fruit trees at all in the sections of land near the homestead set aside for the sovkhos's workers. Grapes do not grow well here, nor are cucumbers, tomatoes and other vegetables taking to it very well. I was interested in the reason for this. Why do people not raise gardens on good irrigated land when there is an abundance of heat and light, and why don't they plant other farm crops which people need so badly? The main reason, it became obvious, lay in the mineralized groundwater, the level of which has increased sharply since the forests were cleared several years ago as grape growing developed. At one time the forests absorbed an immense amount of subsurface water and regulated the soil and air regime of the microzone.

The forests in Magaramkentskiy, Belidzhinskiy, Derbentskiy and Kayakentskiy rayons, which every day evaporate a great deal of moisture help to form precipitation and have been an important factor in enriching the air with oxygen and protecting the animal kingdom of the rayons in the plains and foothills. These forests brought many springs and streams to life that flow into the Samur, the Rubas, the Ullu-chay and other rivers.

In raising cultivated plants on cleared land that was once forest, man must be concerned about forest plantings, must surround the vineyards and farmcrops with strips of trees, must conserve the soil, plants and the harvest from the effect of wind erosion, drought and other harmful natural phenomena. In this connection it cannot be forgotten that forest plantings for the purpose of protecting farm fields also have a rather favorable impact on the level of the yield.

In fields which have been adequately protected by forest belts the kolkhozes and sovkhoses raise comparatively high yields of winter wheat, corn, vegetables and grapes. We might take as an example two grapegrowing sovkhoses in Derbentskiy Rayon -- "Gedzhukhskiy" and "50 Let DASSR." They are located near one another, their soil and climate are approximately the same. Yet on the "Gedzhukhskiy" sovkhos the annual yield per hectare of grapes grown on irrigation is as a rule 10-15 quintals more than on the neighboring farm. The forest belts to protect the fields are helpful in this regard. But there are very few forest belts for protecting the fields either on the "Gedzhukhskiy" or on the other grapegrowing sovkhoses in Derbentskiy, Kayakentskiy and especially Leninskiy and Sergokalinskiy rayons, which are located in the middle zone of the lowlands around the Caspian. Hundreds of kilometers to the south and north of the capital of the republic - Makhachkala - there are endless fields and vineyards unprotected from the wind and hot weather, constantly exposed to the destructive influence of the dry east winds.

All of this has a severe effect on the yields and the volume of output of farm crops. In the 1982-83 period many kolkhozes and sovkhoses in the plains which do not have protective forest plantations came face to face with the harmful forces of nature (cold winds in early spring, frosts, and droughts), and the grape harvest was not what it should have been. On the farms of Novolakskiy, Khasavyurtovskiy and Babayurtovskiy rayons the level of the average productivity of vineyards was 3-5 quintals lower during those years than in the period 1976-1981. The farms in Kayakentskiy, Tabasaranskiy, and Suleyman-Stalskiy rayons, located in the plains subzone in the south, also fell far short in the

quantity of grapes, grain, fruit and vegetables. Forest belts to protect the fields - had they been provided for the crops of grain and the vineyards -- would have preserved quite a bit of the harvest.

The forest is one of our national resources, and it has to be used sensibly if the land is not to be impoverished.

In our complicated century, when man's capabilities for influencing nature have grown immeasurably, when the voices for natural resource conservation are becoming increasingly persistent, practical measures are needed for conservation and renewal of timber resources. The principal attention should be concentrated on the establishment and further development of forest belts to protect fields, which would become an important factor in regulating the water and air regime of the soil of many sovkhoses growing either fruit and vegetables or grapes. In the heart of the forest plantings small animals, fowl and other living things would multiply, thereby enriching our nature, which has been impoverished through man's fault. Aside from everything else, the forest belts would become a good place for farmworkers to enjoy rest and recreation.

Another important measure is to cut back the felling of trees for firewood. The pace of gasification of settlements in the plains and foothills and construction of gas pipeline systems between and within rayons needs to be speeded up: Daghestan possesses immense reserves of natural gas sufficient to meet the population and all organizations and institutions for natural fuel. That will also save a great deal of wood and will improve the conditions for establishing and expanding our forest land - which is a source of joy and health to man and an indispensable factor in natural beauty and conservation and improvement of the productivity of the land.

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REGIONAL DEVELOPMENT

UDC 632.931.2

COUNTERACTING EFFECTS OF DUST STORMS IN NORTH CAUCUSUS

Krasnodar SELSKIYE ZORI in Russian No 8, Aug 85 pp 26-27

[Article by G. Koshkin, senior scientific associate of the North Caucasus branch of VIM (All-Union Order of Labor Red Banner Scientific-Research Institute for Mechanization of Agriculture): "And There Will Be No Dust Storms"]

[Text] Dust storms are a frequent phenomenon in the Northern Caucasus. A situation dangerous from the standpoint of erosion is created when the fall is dry, there is no snow in the winter, and there are temperature fluctuations so that thaws and freezes alternate. Such conditions came about, for example, in advance of the spring of 1984 in Krasnodar Kray. Over a period of three months (January through March) 41 millimeters of precipitation fell in the Armavir region, which is 58 millimeters less than the average over a period of many years. Strong winds with a velocity of 10 meters per second or higher blew 17 days in January, 26 days in February and 20 days in March. The first phase of erosion was noted on the farms of Novokubanskiy Rayon. Particles of soil were moved by the action of the wind and the force of gravity from the tops of the ridges to the low places in the microrelief and they accumulated in furrows and other depressions. And the process of erosion entered the second phase on the unprotected fields exposed to the attack of the wind. Soil particles rose to a height of several meters and were carried away from the field in a stream of air and dust. On 9 February 290 grams of fine earth went through the slit of the dustcatcher (10 centimeters high and 1 centimeter wide) in 40 minutes at a height of 5-15 centimeters from the surface of the soil in one of the fields of the first department of the "Armavirskiy" Grain Sovkhoz. Consequently, 121 grams of soil were being carried every second at that height by the wind through a section with an area of one square meter.

In the first ten days of March the dust storm extended to several regions in the kray. The rate of erosion was so high that in 20 hours (from midday on 6 March to the evening of the next day) [sic] 9,835 grams of soil were deposited through a slit with an area of 10 square centimeters in a dustcatcher mounted on the mold board of a plow at a height of 10-20 centimeters from the surface of the soil. On 10 March 5,760 or more soil particles accumulated in 10 hours in a dustcatcher at a height of about 10 centimeters, and 4,670 grams at a height between 10 and 20 centimeters. On 6 March the amount of soil carried by the wind across a front 100 meters wide and up to 1.4 meters in height was 17.5 tons per hour, and on 10 March it was all of 19.1 tons. According to measurements made on 6 and 10 March in the layer within 20 centimeters of the

surface 60 percent of the eroded soil moved. Soil aggregates larger than 3 millimeters were blown by the wind at a height of 50-60 centimeters. The wind speed reached 19 meters per second on those days.

A dust storm left the sprouts of winter crops plucked clean or altogether destroyed, and the forest belts, construction sites and agricultural machines were covered with soil.

Recently the wind has been carrying away 57 cubic meters of soil in an average year from the unprotected fields of Novokubanskiy Rayon, or about 6 millimeters of the surface layer of the soil.

The costs of making up the losses of humus - the principal factor in fertility - by applying organic fertilizers to the soil exceed 50 rubles per hectare.

The intensity of wind erosion last year was considerably reduced, but the damage caused by dust storms was reduced by a system of cultivation aimed at soil conservation which has begun to be introduced on many farms in the kray. This system includes subsurface tillage so as to leave on the surface of the soil the stubble of the cereals grown as interrow crops and surface cultivation of the winter cereals following the interrow predecessors.

The effectiveness of the system being recommended has been confirmed by the data of research done in an experimental soil-conservation crop rotation of our branch of VIM, in which each field was divided into four sections with two variants of the main operation of cultivating the soil. In sections planted to corn and sugar beets the first phase of erosion ended when 17.7 hectares were turned over in the fall, and about 1200 cubic meters of soil were moved within the sections. But over an area of 12.4 hectares about 1500 cubic meters of soil were blown away by the wind and carried off the fields (the second phase of erosion). In sections with subsurface tillage erosion was not noticeable over an area of 7.3 hectares, and on 10.5 hectares 1993 cubic meters of eroded soil carried from other fields was retained by the stubble. The height of the drifts on the stubble was as much as 15 centimeters in places.

Nor have the processes of erosion affected the fields on the farms of Novokubanskiy Rayon where the recommended technology has been used for cultivating farm crops. For instance, there has been no erosion on 1157 hectares of the Kolkhoz imeni Lenin using a soil-conservation crop rotation, while the soil carried off fields which had been plowed in the fall was as much as 250 cubic meters per hectare.

Nor were the fields damaged by the wind on the "Konokovskiy" Livestock Fattening Sovkhoz in Uspenskiy Rayon, where a soil-conservation system of crop rotation has been in use for several years now on the initiative of the chief agronomist V.S. Kotlyarov. The stubble of cereal crops left on the surface after the subsurface tillers protects the surface layer of the soil from being blown away. It prevents erosion from getting started, reduces evaporation of moisture, and as a consequence the yield of interrow crops is increased by 5-10 percent. For instance, the average harvest of sugar beets in nine years was 418 quintals following fall plowing, but it has been 27 quintals per

hectare more following subsurface tillage. And over the last four years the average annual addition to the yield has increased to 48 quintals. The average yield of shelled corn following subsurface tillage has over ten years exceeded its harvest after deep fall plowing by 5.5 quintals per hectare and in the last four years the difference has been 14.4 quintals per hectare. A sizable addition has been achieved on sunflower and castor crops.

At present there is a shortage on the kray's kolkhozes and sovkhoses of the set of machines used for the full transition to a soil-conservation system of cultivation, but the area being cultivated in accordance with that technology is increasing every year. The farms of Kanevskiy Rayon, for example, have started the introduction of this system.

In all rayons affected by wind erosion progressive soil-conservation technologies must be used widely. Then there will not be any dust storms.

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REGIONAL DEVELOPMENT

UDC 633.14

COMBATTING EROSION IN STAVROPOLSKIY KRAY

Krasnodar SELSKIYE ZORI in Russian No 8, Aug 85 pp 27

[Article by N. Petrova, scientific associate of the Laboratory for Protection of Soil Against Erosion of the Stavropol Agricultural Scientific-Research Institute: "In Soil Conservation Zones"]

[Text] We have checked the benefit to erosion control and agronomy of contour-buffer zones on plowland in Stavropolskiy Kray. In our opinion perennial rye is promising for this purpose. Its best variety is one used for animal feed: Derzhavinskaya-29. It has high productivity, resistance to freezing and drought, and it can be used as feed for three or four years. Its maximum yields have reached 512 quintals per hectare in the Stavropol NIISKh in its first year and a total of 992 quintals over the three years.

On the slopes of the Stavropol highlands, in the Sengiley wind corridor, where wind and water erosion are vigorously manifested, the effectiveness of buffer zones consisting of perennial grasses and perennial rye in regulating runoff was studied in the period 1978-1982. The grasses (brome grass, quackgrass, rye grass and oat grass) and perennial rye were planted in September in strips 10 meters wide and 42 meters apart. The possibility of a combination with buffer strips of loose mulch (shchelevaniye) was also tested.

The buffer strips of grasses and rye "worked" well even during 1979, when the control versions of the experiment and the interbuffer strips were plowed. Following the dry period there were rainstorms, an average of 98 millimeters of precipitation fell, and there was a considerable erosion of soil (9-31 tons per hectare) on the unprotected part of the field. At the same time there was no rill erosion on the plowland where the system of strips of perennial grasses and rye was planted. Later the water absorbtive capacity of the buffer strips varied in a wide range and increased sharply when combined with loose mulch.

In the dry fall of 1978 (the first year after planting) the perennial rye had given the soil an effective cover (70-80%) and the perennial grasses not so well (25-60%). A stand of grass in which these crops combined was formed only in the fall of the next year. The highest yield of the perennial grasses and rye was observed in the second year.

In plantings on the northern slope the perennial rye survived three years; on

the southern slope it lasted two years and died in the severe 1981 drought.

The ability of the plant cover to resist wind erosion and water erosion of the soil is related to root development in the upper layer. Consolidated by the roots, the soil mass offers greater resistance to the destructive force of water and wind. From the soil conservation standpoint, then, the particular crop's ability to accumulate the largest possible root mass even in the early stages of its development has fundamental importance.

By the end of the first year the perennial rye had built up the largest mass of roots, which is indicative of its higher capacity for soil conservation in that period. This indicator was only half as high for the perennial grasses.

Thus perennial rye can be used effectively as a buffer crop in soil conservation.

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AGRO-ECONOMICS AND ORGANIZATION

1986 PLANS, PRIORITIES OUTLINED; 1985 PROGRESS REVIEWED

Moscow EKONOMIKA SELSKOGO KHOZYAYSTVA in Russian No 1, Jan 86 pp 3-8

[Editorial: "The Starting Year of the Five-Year Plan"]

[Text] The Communist Party is on the way to its own 27th congress. It is firmly and consistently leading the Soviet people on a course of social progress. A most important feature of the present stage is the policy of accelerating the country's social and economic development and of qualitative transformation of all aspects of our society's life. This policy of the party finds its fullest reflection in the drafts of the new edition of the CPSU Program, the CPSU Charter and Basic Directions of USSR Economic and Social Development for 1986-1990 and for the Period to the Year 2000.

A regular session of the USSR Supreme Soviet examined the most important questions of the Land of the Soviets' life--the State Plan of USSR Economic and Social Development and the State Budget for 1986, the results of the Soviet-American meeting at the highest level in Geneva and the international situation.

In a speech at this session, General Secretary of the CPSU Central Committee M.S. Gorbachev gave a deep analysis of domestic and international life, realistic conclusions were made and concrete ways of realizing the party's policy in reference to present-day conditions.

1986 is the starting year of the 12th Five-Year Plan. This plan is a striking expression of the party's strategy developed in precongress documents. It determines priority development of sectors that have been called on to assure scientific and technical progress and accelerated development of the whole economy. At the same time, great importance is attached to the agroindustrial complex.

On the eve of the session of the USSR Supreme Soviet, the CPSU Central Committee and the USSR Council of Ministers adopted a decree "On Further Improving Management of the Agroindustrial Complex." It was recognized necessary to form a union-republic USSR State Agroindustrial Committee (Gosagroprom SSSR) for the purpose of providing for planning, financing and management of the agroindustrial complex as a single whole at all levels. A

corresponding reorganization is going on in republics, krays, oblasts, okrugs and rayons.

The very first job of the new organs is to produce a scientifically based development of plans for 1986 and for the 12th Five-Year Plan providing for a higher return of the production and scientific potential created in sectors of the agroindustrial complex as well as the most efficient utilization of material and financial resources allotted here. Even now the USSR State Agroindustrial Committee has at its disposal basic production capital in the amount of 359 billion rubles. Practically all agricultural production as well as industrial production in the amount of 143 billion rubles are produced here.

Thanks to the unflagging concern of the CPSU Central Committee, the attitude toward developmental problems of agroindustrial complexes has significantly changed. In agriculture and in sectors processing its products, the level of intensification is being systematically raised. At enterprises, the machine and tractor park is being renewed and equipment is modernized. Kolkhozes and sovkhoses are getting increasingly more construction materials, mineral fertilizers, plant-protection agents and other resources. The size of reclaimed land is growing. The scale of social transformation of the countryside is expanding.

The work results of enterprises and organizations of the agroindustrial complex during the 11th Five-Year Plan attest to the rightness of measures outlined in the May (1982) CPSU Central-Committee Plenum. In 1985, the biggest volume of gross agricultural production in the 11th Five-Year Plan was secured. It exceeded the 1984 level by 2.1 billion rubles. In the course of the year grain production grew and purchases of cattle and poultry, milk and eggs and the production of meat, dairy and fish products increased. Kolkhozes and sovkhoses prepared a record amount of coarse and succulent fodder, and its quality was higher. Profitability of kolkhoz and sovkhos production in recent years has amounted to 18-22 percent, and the economics of all enterprises and organizations of the agroindustrial complex has become stronger.

Thus a good foundation has been created for production growth of food and agricultural fresh products.

A most important task of the 12th Five-Year Plan and its start in 1986 is to provide high growth rates of agricultural products and products of the food sectors of industry, to achieve a significant increase in labor productivity and to boost effectiveness of use of all material resources. A total of 58.7 billion rubles of capital investment, or significantly more than in preceding years, is being allocated this year for the development of sectors ensuring the accomplishment of the USSR Food Program, including housing construction for agricultural workers.

Agriculture will be supplied with many tractors, trucks, tractor trailers, agricultural machinery, including for plant growing, mineral fertilizers, pesticides as well as a significant quantity of construction materials, equipment, petroleum products, fuel, electric power and other material and technical resources.

The 1986 plan provides large-scale measures for accomplishment of the Long-Term Program of Land Reclamation. At the same time special attention is being paid to modernization of the existing reclaimed land fund and improvement of use of irrigated and drained lands. It is planned to put to use more than 1.3 million hectares of reclaimed land.

As a first-priority task, capital investment and material resources should be allocated for stability of agriculture and growth of soil fertility to increase production of grain, fodder and other plant-growing products. The accumulated experience convincingly attests to the extraordinary importance of this priority direction in capital investment use. This is graphically shown by the work results of farms of Belorussia, the Baltic republics, Stavropol Kray and Saratov Oblast and many oblasts of the Nonchernozem Zone of Russia. Thanks to growth of the production potential under last year's difficult conditions, good results were obtained by farmers of Bashkiriya, Tataria and Omsk, Kustanay and several other oblasts.

The transition to intensive technologies is providing a big return. Experience in recent years has shown that with concentration of investment and strict observance of a complex of organizational and agrotechnical measures, it is possible to get a guaranteed per-hectare return of 50-60 and more quintals of grain, 10,000-14,000 feed units of fodder balanced as to protein. Last year, grain crops were cultivated according to a progressive technology on an area of 17 million hectares, which made it possible to secure additionally millions of tons of grain.

Due to able utilization of resources and proper organization of work, many farms get additional grain of 15-20 quintals and fodder of 4,000-6,000 feed units per hectare. On farms of Cherkassy Oblast, winter wheat was cultivated in a new way on more than 100,000 hectares, as a result of which its yield attained an average of 45 quintals per hectare. The best fields here produced 55-65 quintals per hectare. In the production experience of Elitnoye Experimental Demonstration Farm in Novosibirsk Oblast, the yield of spring wheat, cultivated according to an intensive technology, amounted to 46 quintals per hectare. Farms of Kirovskiy Rayon of Stavropol Kray obtained a high yield of perennial grasses and corn. There are many such examples in different natural and climatic zones of the country.

This year, grain crops are to be cultivated by means of intensive technologies on an area of 31.3 million hectares, which will make it possible to obtain additionally a solid increase in grain yield. It will be necessary to significantly expand areas of fodder crops cultivated by means of intensive technologies and providing a high yield per hectare of both fodder units of both protein and carbohydrates as well as reduction of expenditures per quintal of crop.

The fodder problem in terms of its urgency, scale and national-economic importance is a strategic problem. Its solution requires a comprehensive approach and the efforts not only of all subdivisions of the USSR State Agroindustrial Committee but also those of many other ministries and departments. Half of the area of our entire plowland, 325 million hectares of

hayfields and pastures, are required for fodder production today, that is approximately three-quarters of agricultural land. Nonetheless, there is a fodder shortage.

In working out plans at all levels of management, it is necessary first of all to allocate funds for improving the fodder-production structure and for accelerated cultivation of those agricultural crops which under concrete conditions provide the highest return. It is essential to consistently transfer this sector to irrigation and to radically improve natural hayfields and pastures. Only by means of a steady rise in yield is success possible in providing livestock with fodder. And this in turn requires corresponding capital investment, material and financial resources. It is necessary to use mineral and organic fertilizers on a wider scale.

The state agroindustrial committees of republics, krays and oblasts, agroindustrial associations of rayons (okrugs) and kolkhozes and sovkhozes in working out a plan have the obligation of providing a complex of measures aimed at transferring all agricultural subsectors to intensification. The main thing here is to secure able use while taking into consideration the needs of zonal agricultural systems for a high yield of each sector not only of plowland but also of meadows and pasturages. Full development of the agricultural system, introduction of intensive crop rotations, improvement of the structure of sowing areas and improvement of seed growing should in the immediate years ahead assure crop stability and raise production output per hectare. All the necessary prerequisites have been created for this: an area of clean fallow land has been brought up to optimal size, a large scientific potential exists, farms have at their disposal many value strains, equipment and chemicalization agents are being received in growing quantities and more than 33 million hectares of irrigated and drained land are available.

This year, in addition to ensuring growth of gross grain output, it will be necessary to boost the the yield of oil-yielding crops, sugar beet and raw cotton. Conditions and reserves for this exist.

Leading links, brigades and farms of many regions of Russia, the Ukraine and Moldavia in 1985 produced per hectare 15-20 quintals of sunflower seed and 280-350 quintals of sugar beet. Good results were obtained by cotton growers of a number of regions and Oblasts of Uzbekistan, Tajikistan, Turkmenia and Azerbaijan. It is essential to disseminate more widely their experience and to utilize more efficiently material resources allotted for these crops. It is particularly important to raise qualitative parameters: growth of output of oil, sugar and fiber and to ensure high quality of end products.

Despite the measures adopted, many questions connected with providing the country's population with potatoes, fruits and vegetables still remain unresolved. In recent years, considerable work was done on concentration of sowings of potatoes and vegetables, planting and reconstruction of orchards and vineyards in zones most favorable for their cultivation. The irrigation of fruit and vegetable crops has been widely introduced. Chemicalization agents are being allotted for potatoes, vegetables, vineyards and fruit plantings. Much has also been done on construction of hothouses and hothouse combines.

But major defects still exist: the yield of potatoes is for all practical purposes not increasing, one continues to wish for an improvement in their quality, the vegetable-crop assortment is poor, little early produce is produced and the population's demand is not being satisfied for table varieties of grapes and fresh fruits.

In 1986 it is planned to increase production of potatoes, vegetables, fruits, berries and grapes. Nothing is too small for the solution of this problem throughout the entire chain stretching from the field to the consumer. Here, as nowhere else, diligence and love of work are required from each worker: the plowman, the vegetable grower, the horticulturist, the machine operator of a water spraying installation, the packing manufacturer, the transport worker, the procurement worker and processor. The plan of production and sale of fruit and vegetable products must be compiled at all levels of Agroprom system in order to unite into one the efforts of all collectives, ensuring for the population this important type of food.

The growth rate of production of animal-husbandry products is growing in the first year of the 5-year plan. Currently almost all kolkhozes and sovkhoses have been provided with standard animal-husbandry quarters, and the level of mechanization of work on animal-husbandry farms has grown. Large complexes have gone into operation in recent years for the production of milk, beef, pork as well as poultry factories and specialized areas for fattening livestock. The country has 121 million head of livestock, including 43.6 million cows, 77.9 million pigs, 149.2 million sheep and goats and more than 1.1 billion poultry. The necessary genetic potential has been created in animal husbandry and poultry raising, which is being raised from year to year through the efforts of breeders and scientists.

Consequently the task of bringing meat production up to 17.3 million tons and milk production up to 100 million tons are quite realistic. Its accomplishment primarily depends on growth of the volume of fodder production, reduction of protein shortage and balancing of diets in regard to protein and carbohydrates.

On many farms there is a shortage of fodder storehouses and feed shops. Feed grains are fed livestock in the form of plain grain mixtures. All this leads to losses, lowering of quality and inefficient expenditure of feeds. It is necessary to speed up introduction of hay storage facilities, structures for haylage, silage, fodder root crops, feed shops on livestock farms as well as mixed-feed plants.

The main direction for improving production of milk, meat and other animal-husbandry products is raising the productivity of livestock and poultry. Currently the country has about 6,000 farms which get up to 4,000 kg and more of milk from a cow. In recent years, the number of kolkhozes and sovkhoses has grown on which the productivity of the dairy herd exceeds 3,000 kg. There are many cows on animal-husbandry farms producing 8,000-10,000 kg of milk per year. Last year compared to the preceding year, milk productivity of cows increased by an average of 40 kg for the country's kolkhozes and sovkhoses. On farms of many oblasts, average annual yields per cow have grown by 60-90

kg. For this reason, the problem is quite solvable of ensuring growth of milk production by 1.7 million tons through raising productivity of cows.

Reserves must be utilized at meat farms. This was discussed in September 1985 at a conference of the party economic aktiv in the city of Tselinograd. Both in working out a plan and in the process of its realization, it is necessary to ensure an improvement in herd reproduction, to boost the intensiveness of bearing cow stock and output of young stock and to reduce the withdrawal of animals. Possibilities exist on each farm for boosting average increases of live weight in rearing and fattening livestock and poultry and for reducing fattening time periods.

Attaching exceptional great importance to increased production and sale to the state of animal-husbandry products, the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee adopted the decree "On All-Union Socialist Competition for Successful Carrying Out of Livestock Wintering and Increasing Production and Purchases of Animal-Husbandry Products in the Winter Period of 1985/86." The duty of economic organs, economic services and heads and specialists of kolkhozes, sovkhoses and interfarm enterprises is to do everything possible to see to it that this competition achieves real scope. This will make it possible to improve provision of the population with animal-husbandry products and will create a good foundation for the further rise of animal husbandry during the 12th Five-Year Plan.

This year should be critical in growth of agricultural production. Its gross production is planned to reach 220 billion rubles (in comparable 1983 prices).

In increasing production output, it is necessary to boost its saleability in every possible way and to assure unconditional fulfillment of state-purchase plans. Reference is made first of all to grain.

A real possibility exists for increasing marketability of sunflower, the seeds of which remain on kolkhozes and sovkhoses each year in an amount of 1 million to 1.3 million tons. In recent years, the marketability of sugar beet dropped from 94 to 87-89 percent.

Following sales to the state, farms likewise retain a large amount of fruit and vegetable products. This amounts on the average for the years of the 7th Five-Year Plan to 2.4 million tons of fruits and berries, in the 8th--3.4 million tons, in the 9th--4.2 million tons, in the 10th--4.4 million tons and in the 11th--4.8 million tons, or 46 percent of their gross production. Each year 9 to 10 million tons of vegetables are not sold to the state.

Reserves also exist for boosting the marketability of animal-husbandry products. It is sufficient to say that more than 32 million tons of milk, or 35 percent of its gross production, are used on kolkhozes and sovkhoses for feeding livestock and for other needs.

This cannot but help create big concern if state trade requirements for food products are fully satisfied. Consequently, living conditions demandingly require raising the authority of purchase plans, achieving their unconditional

fulfillment for all forms of agricultural production and expanding capacities for its storage and processing.

An important feature of the current year's plan is the need of ensuring acceleration of scientific and technical progress. At the same time, it is necessary to proceed from the directives of the June (1985) conference at the CPSU Central Committee. The system of the USSR State Agroindustrial Committee requires special goal complex programs providing for concrete ways of transiting to intensive production methods, development and introduction of resource- and energy-conserving technologies and a sharp increase of socialized labor's productivity.

In addition to an increase in production and purchase of products, the 1986 plan provides for further improvement of the economics of kolkhozes, sovkhoses and other enterprises of the agroindustrial complex. Profits of farms are growing, which will have a favorable effect on the financial results of their production activities.

A question of special concern for each labor collective should be economy of all resources that are at the disposal of agroindustrial production. This was discussed at the last session of the USSR Supreme Soviet. Possibilities for conserving material and technical resources, raw and other materials and their more efficient use exist in all spheres of the agroindustrial complex.

It is necessary to work out and implement special organizational and economic measures for this in each link, brigade, sector, shop and for the enterprise or organization as a whole. First of all, it is necessary to go most carefully into expenditure of electric power, petroleum products, gas and other types of fuel. The agroindustrial complex is a big user of energy resources. Something else is also known: on many animal-husbandry farms and production facilities, records are poorly conducted of expenditure of electric power and gas, their economy is poorly motivated and no demand exists for overexpenditure.

There are operating on the fields of the country today 2.755 million tractors, 822 thousand grain harvesting combines and a large number of other equipment using millions of tons of fuel. Analysis shows energy-intensiveness of agricultural production has not been dropping but growing in recent years. In the 10th Five-Year Plan compared to the 8th, expenditure of fuel per million rubles of gross agricultural production grew by 2.1 percent and for 4 years of the 11th Five-Year Plan compared to the average annual level in the 10th it increased another 3.2 percent. At the same time, farms of Georgian SSR, Azerbaijan SSR and Tajik SSR achieved during these years a reduction in expenditure of fuel per production unit.

Significant reserves exist on kolkhozes and sovkhoses for reducing feed expenditure per quintal of milk or meat and for economy of concentrates as the form of raw material that is in shortest supply in the production of animal-husbandry products. Feed outlays per quintal of milk during the 9th Five-Year Plan amounted to 144 feed units, during the 10th--1.5 [sic] and during the 11th--1.55 [sic]. Leading farms and rayons expend only 110-120 feed units per quintal of milk.

In recent years, farms have been expending from 1,320 to 1,380 feed units for a one quintal growth of cattle live weight, whereas hundreds of leading kolkhozes and sovkhoses have reduced this outlay to 800-900 feed units.

Possibilities exist for reducing feed outlays in pig raising, sheep raising and poultry raising. It is necessary to demandingly strive for the reduction of relative expenditures of feed by means of balanced diets with regard to protein and carbohydrates and for improvement of organization of preparation of feeds and their norm-regulated use.

Economy of resources is a broad concept. For this reason it is necessary to more efficiently utilize not only energy resources and feeds but also mineral and organic fertilizers, plant protection agents, metal and construction materials, seeds, raw materials and the most important thing--agricultural products ready for sale.

To economize means to strive for a high return from the machine and tractor park and from all production capacities and funds and to reduce current outlays on their operation, repair and care. Only by solving all these questions in a comprehensive manner will it be possible to ensure reduction of production cost in amounts provided by the draft of Basic Directions of USSR Economic and Social Development for 1986-1990 and for the Period to the Year 2000.

The new directives of the CPSU Central Committee require intensification everywhere of economic work in all parts of the agroindustrial complex, improvement of the economic mechanism and a higher role of such indicators as production cost and labor productivity, assortment and quality of products, profit and profitability. It is necessary to boost the effectiveness of cost accounting, material accountability for nonfulfillment of qualitative indicators and to increase the motivating role of bonuses for the attainment of high end results.

In addition to the tasks of raising agricultural productivity, expansion and modernization of the production base of the agroindustrial complex and growth of the efficiency of its sectors, questions of social development of the countryside will be systematically resolved. There will be a significant growth of housing whose floorspace in 1986 will amount to more than 40 million square meters. It is planned to increase allotments for construction of health-care, cultural, educational, and municipal services facilities. Pay will grow for personnel of the agroindustrial complex.

The Communist Party has embarked on the final period of preparing for its next, 27th, congress. Millions of workers of field and animal-husbandry farms, enterprises and organizations of the USSR State Agroindustrial Committee are taking part in the ongoing socialist competition for a worthy greeting to the party congress.

Each CPSU congress and each five-year plan are marked by major achievements in economic and social development of Soviet society and open up new horizons for the Land of the Soviets.

An integral component in the preparations for the congress is the development of a plan for the 12th five-year period in which the party's economic strategy will be embodied and concretized. The principal aim of the five-year plan is, while relying on growing productive forces, to boost to a qualitatively new stage the well-being of the Soviet people. The Central Committee points out: one should not wait for Basic Directions to be adopted by the congress. It is necessary now when the main parameters have been determined to carry on the development of the five-year plan and to demandingly strive for the successful realization of the USSR Food Program.

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AGRO-ECONOMICS AND ORGANIZATION

IMPROVED COST ACCOUNTING EFFICIENCY SOUGHT IN KUYBYSHEV OBLAST

Saratov STEPNIYE PROSTORY in Russian No 11, Nov 85 pp 7-8

[Article by F. I. Koledinov, director of the Planning and Economics Department of the Agricultural Administration, Kinel'skiy Rayon Executive Committee, Kuybyshev Oblast: "A New Stage in Cost Accounting"]

[Text] Nine kolkhozes and six sovkhoses in the region have been involved in cost accounting for over 10 years. But after the acceptance of socialist obligations for 1978-1980 as concerns further improvements in production effectiveness, in work quality and in the organization of a model economic service, cost accounting became the focus of an especially great amount of attention. Similar obligations were accepted once again for 1981-1985 and measures were developed to ensure their fulfillment. These measures were approved by the board of the RSFSR Ministry of Agriculture and by the presidium of the republic's trade union committee of agricultural workers. The experience of organizing cost accounting in conjunction with collective contracts in the region was examined and approved by the Presidium of the RSFSR Council of Ministers on 2 April 1984.

In the region cost accounting is viewed as one of the components of scientific-technical progress and it is constantly being coordinated with a check system of controls, collective contracts, the shop system of production management and improved material stimulation of labor. A comprehensive approach to increasing the effectiveness of production potential is accompanied by improvements in planning and by constant controls over the results of cost accounting activities of all subdivisions and over the quality of work of every kolkhoz farmer and worker.

All of these questions have been discussed on the pages of the journal STEPNIYE PROSTORY on numerous occasions and from various points of view.

Let us recall several facts.

Table
Economic Indicators of Enterprises in Kinel'skiy Rayon

	Average for 1980-1982	Average for 1983-1984	Percent growth
Cost of gross production in 1973 comparable prices, millions of rubles	36.8	48.5	132
Production output per worker, rubles	5494	6870	125
Annual wages, rubles	1750	2032	116
Productivity of cows, kg/year	2941	3318	113
Delivery to the state, tons:			
Of grain	9814	37577	by factor of 3.8
Of sugar beets	10394	15484	149
Of milk	34417	40259	117
Of meat	9126	11347	124
Production profitability, %	3.8	33	

All subdivisions, of which there are 121, have made the transition to cost accounting and the check control system. About 60 percent of workers and kolkhoz farmers have accepted the conditions and principles of collective contracts. Specialists and directors of the middle link in Kolkhoz imeni Kalyagin and Leninskoye Znamya Kolkhoz are already working with a consideration of the coefficient of labor participation. Each kolkhoz and sovkhoz has brigade councils, permanent production conferences and balance commissions.

Not only the economic service, but branch specialists such as agronomists, zootechnologists and engineers as well, have been recruited for the introduction of cost accounting. The conditions for socialist competition for the title of "Best Rayon Specialist" have been accepted. This title will be given to the person who achieves the timely submission of cost accounting plans to subdivisions, who adheres to schedules for carrying out cost-accounting days, and who implements controls over the expenditure of material-monetary resources, which affects growth of labor productivity and production profitability. The first-place winner receives a monetary prize of 100 rubles and an Honorary Certificate from the Presidium of the Rayon Committee's Trade Union and is given the title of best rayon agronomist, zootechnologist (and so on). The department or specialist placing second receives an award of 70 rubles.

Each month the main specialists of enterprises prepare a draft of the decisions of the balance commission according to the work results of cost-accounting subdivisions. Specific decisions are made, with instructions on the completion schedule and an indication of responsible parties. At the commission meeting, which takes place monthly prior to the 14th of the month, the senior economist reports on the degree to which the previous decision was carried out.

A great deal of attention is given to economizing on material and monetary resources. Thus, a significant proportion of expenditures for production output in livestock raising involves expenditures related to the operation of tractors and trucks (cultivation and transport of feeds). For this reason, the machine-tractor fleet and the fleet of trucks have also made a transition to cost accounting.

Here is another example. It was discovered that in the rayon's enterprises due to a growth in labor productivity there has been a drop in wages per unit area or per head of livestock. But at the same time there has been an increase in general production and general economic expenditures. Thus we have begun to analyze general production (according to account 25) and general economic (account 26) expenditures and to compare them with data on the production-financial plan (Table 22). This also contributes to the discovery of ways to decrease production costs.

Quality also plays an important role in this plan. As a result of the work done in 1984, for example, on the average 97 percent of the milk delivered in the rayon was first quality.

Similarly, in farming, including feed preparation, improvements in production quality are achieved by means of data from laboratory analyses, of conditions of material stimulation and of the point evaluation of labor.

In addition to the resolution on wages, all enterprises utilize the resolution on the fund of material incentives. The deduction of resources into this fund by kolkhozes, for example, is carried out by determining the norm for net income.

Above-tax payments are calculated for cost-accounting subdivisions basically for work-quality indicators which are not taken into consideration in tax rates, i.e. for work quality, an economic or efficient utilization of material-monetary expenditures, a curtailment of the service period and so forth. Bonuses for the latter have enabled us to decrease barrenness in the maternal herd and to increase the output of calves per 100 cows from 93 in 1981 to 97 in 1984.

For cost accounting the check-control book has become the main document. It does not duplicate, but replaces the "Plan-Report" utilized previously. Here the work volume of specialists does not increase. The book of checks also includes a measure for material incentives, which is implemented with the help of a comprehensive coefficient which takes into account the percent fulfillment of the production output plan and the relationship between actual and plan expenditures. A corresponding measure for responsibility is also foreseen.

As for the enterprise's own collective contracts on the basis of cost accounting, their effectiveness is confirmed by the following data. In 1984 production output per worker equalled an average of 5,610 rubles in the rayon, whereas with collective contracts it equalled 14,240 rubles. The difference is overwhelming--a factor of 2.5.

Now the time is ripe to take the following step.

Enterprises have researched the organizational conditions for introducing cost accounting. Already last year planning was carried out in such a way as to take into consideration a large number of different factors such as production specialization and concentration, the average levels achieved during the last 5 years, the actual delivery of standard products per unit area and so forth. Directors and specialists of enterprises and subdivisions were given the opportunity to make their own plans concerning the production and procurement of agricultural products, the structure of the sowing area, the size of the livestock herd, the production of feeds and sales prices with a consideration of achieved production quality, financial expenditures and other indicators. Despite the absence of directives concerning what to sow, what to deliver and what to buy, profits from the sale of agricultural products were to be 6.4 percent higher than indicated previously in the five-year plan. As a result, the delivery of livestock products was greater but that of grain was smaller.

By way of preparation and apart from our own experiments we studied the experience of organizing economic work in the enterprises of Krasnodar and Krasnoyarsk krais and Moscow and Tselinograd oblasts. Preparations have begun for introducing cost accounting for the vehicle fleet, following the experience of Za Mir Kolkhoz of the Lithuanian SSR, which the enterprise's economists became acquainted with in June of this year. Workers of the Main Planning-Economic Administration of the RSFSR Ministry of Agriculture, the Transvolga Central Directorate and the oblast agricultural administration are giving us great practical aid. The support of scientists from VNIESKh [All-Union Scientific Research Institute of Agricultural Economics], and especially of VNIETUSKh [All-union scientific research and experimental institute for the technical management of agriculture] has been significant. These scientists often visit enterprises and help to introduce into production the recommendations they have developed.

Right now work is being carried out in the form of an experiment on ways to improve management and economic interrelations and the expansion of economic independence in order to have agricultural and service enterprises make the transition to self-support. We in particular are striving to make every subdivision profitable.

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AGRO-ECONOMICS AND ORGANIZATION

NEED FOR S & T SUPPORT IN PRIVATE PLOT DEVELOPMENT

Moscow SELSKAYA ZHIZN in Russian 22 Jan 86 p 3

[Article by V. Sidorenko, candidate of economic sciences: "Yield of the Domestic Shift--Private Farming a Common Concern"]

[Text] The time is now long past when private subsidiary farming of the rural population was considered the private concern of the peasant family. Party and state decisions of recent years have placed this sphere of rural life in its proper place. Thus the draft of the new edition of the CPSU Program, submitted for nationwide discussion, states that subsidiary farms of enterprises and farms, collective horticulture and vegetable growing will be utilized for the purpose of adding to the country's food resources.

With each year, the rural household is becoming an increasingly large user of mixed feeds, construction materials, small-scale mechanization equipment, polymer film, fertilizers, electric power and fuel, and increasingly more products are coming from there. This is happening because of significant aid which kolkhozes and sovkhoses are rendering to the population in farming operations.

Still growth of production output in the rural household so far has been basically attained extensively through growth of the number of families with private land plots and of the quantity of private livestock. Productivity of domestic animal husbandry and yield of agricultural crops in private farming remain low as before. Can we ourselves accept this? After all, we are dealing with an additional contribution to the country's food resources.

Thirty-five million families engaged in private-plot farming and animal husbandry, utilizing public pastures and hayfields allocated to them by local governmental authorities and feed assistance, put out in 1984 about 29 percent of the total production of milk, meat and eggs, 24 percent of the wool, 31 percent of the vegetables, 58 percent of the potatoes and 59 percent of fruits and berries. Each fifth head of cattle, pig and sheep and each third cow is now maintained on private farms. Incidentally, let us note that a considerable portion of these numbers has also come to the household from public animal-husbandry farms. Just in 1984 kolkhozes and sovkhoses of the country sold to the population 15.9 million piglets and 664 million chicks. Kolkhozes and sovkhoses in turn purchased from the population that same year

6,369 head of cattle and 2,748,000 pigs, most of which were supplied for further rearing and fattening on public animal-husbandry farms, while a part was used for herd reproduction.

Under conditions of cooperation and integration of public and private farms, their economic interests are closely interwoven. And it is perfectly without foundation that in the survey of letters under the heading "From Sector A to Sector B...." (SELSKAYA ZHIZN, 18 January of this year) an attempt is made to set up one against the other, muddled discussions concerning an ostensible disharmony are engaged in and doubt is cast on the ability of private farms to create additional products without detriment to public production. One must not forget that the possibility exists to use on the "domestic farm" additional manpower resources of the rural population, to employ on it pensioners and adolescents and to utilize that portion of free time of those members of the family who are employed in public production. This is why it is so important for scientific and technical progress to more actively penetrate into the sphere of farmstead production.

Let us take, for example, milk yield. In 1984, one cow on the country's kolkhozes and sovkhoses produced on the average 2,401 kilograms and on the private subsidiary farm--2,135 kilograms.

At the same time, in those union republics, where more attention is paid to improving the pedigree and breeding qualities both of public and private livestock, differences in it are not so significant, and the general level is rather high. For example, in Lithuania average annual milk yield per cow on kolkhozes and sovkhoses amounted to 3,318 kilograms and for the household--3,247 kilograms, in Estonia--3,855 and 4,716 kilograms and in Latvia--respectively 3,147 and 3,359 kilograms. It is no accident that in these republics 2,500 and more kilograms of milk per cow are yearly purchased contractually from the population. At the same time, enough of the production remains for the personal consumption of the family.

Tremendous reserves are to be found for boosting the productivity of the population's cows. For example, if in 1984 average milk yield per privately owned cow had been the same as on public farms, an additional 4.3 million tons of milk would have been produced.

The high productivity of private cattle in the Baltic republics is largely due to zooveterinary assistance provided to the population by specialists from kolkhozes and sovkhoses. For example, on Koknese Kolkhoz in Stuchkinskiy Rayon of Latvian SSR, pedigree cards have been introduced for every cow maintained on a private farm, judging is conducted, control milkings are regularly held, the percentage of fat in the milk is determined and a journal for rearing of young stock is maintained. Zooveterinary specialists of the kolkhoz are engaged in preventing diseases among animals and in diagnostic research.

Such work is also carried out in other rayons and farms of the republic. All this provides the possibility not only to improve breeding cows for kolkhoz members, workers and employees of sovkhoses but also to purchase them for further reproduction on public farms.

Utilization of the achievements of science and leading practice is of major importance to boosting the efficiency of private-plot farming. Provision to rural inhabitants of good seeds and sowing materials, help in fighting pests and plant diseases and different consultation services on the technology of cultivating crops on private kitchen gardens are all paid back with growth of yield on the family field.

A great deal is being done to achieve comparable objectives in Belorussia where a special program was developed. For example, in 1984, 35-40 percent of sowings on private subsidiary farms in the republic were located on public land areas of kolkhozes and sovkhoses. The replacement of private land plots helps to clear fields of weeds and pests.

It is not a matter of indifference to agricultural and procurement organs as to what a peasant grows in his own garden or on his vegetable patch. Families are supplied with nematode-resistant varieties of potatoes. In the republic an effort is made to provide gardeners with seedlings of fruit trees of varieties that yield fruit suitable for extended storage. This should remove pressure in purchasing fruit from the population during peak periods.

And what does assistance to the peasant practiced in Belorussia in mechanized planting, interrow cultivation and potato harvesting mean? It is easement and economy of his labor and improvement of worktime balance. He has more time left for rest and other useful pursuits.

Here it would be timely to speak about use by households of small-scale mechanization equipment. According to calculations of specialists, the employment of this equipment on the plot makes it possible to reduce labor outlays fivefold on the average. For a long time the shortage of such equipment was a stumbling block in development of the private farm. Now, it would appear, things have started to move. In 1984, production volume of horticultural manual and mechanized implements increased by one-third. A number of enterprises developed mass production of motorized units and began to supply them for wide-scale sale in the trade network. The production of small-scale mechanization equipment for operation in animal husbandry has increased significantly.

At the same time, the needs of the population are still not being satisfied for a number of items. For example, in 1985, it was proposed to put out only 3,200 motorized hay cutters, which constitutes about 5 percent of the number declared by the USSR Ministry of Trade. Last year, demand for forcing frames, hothouses, garden augers and other items of this kind also was not fully satisfied.

All these are very important questions. The time has come to seriously think about strengthening the bases of private subsidiary farming by the rural population and about penetration into this sphere of achievements of science and technology.

Of course, penetration of the household by achievements of scientific and technical progress by no means signifies only the sale of these or those

mechanisms. Reference is made first of all to the creation of specialized agronomic services for the private farm and to the fact that specialists should establish diverse connections for the rural household with public production, more active dissemination of advanced experience and many other measures aimed at boosting the efficiency of domestic animal husbandry and farming.

In evaluating the place and role of the private subsidiary farm in the country's food complex, it is important to remember that it is for this reason called subsidiary and plays an auxiliary role in rural life compared to public production. The development of the rural household and the volume of acquisition of these or those products should be primarily regulated not by administrative measures but first of all by the measure of participation of each able-bodied person in kolkhoz and sovkhoz production.

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AGRO-ECONOMICS AND ORGANIZATION

MEASURES SOUGHT TO REDUCE LOSS IN STORAGE, TRANSPORT

Moscow ZAKUPKI SELSKOKHOZYAYSTVENNYKH PRODUKTOV in Russian No 11, Nov 85 pp 34-36

[Article by V. Podkopayev, Chief, Central State Inspectorate for the Quality of Agricultural Products and Raw Materials, board member, USSR Ministry of Procurement: "The Protection of Products, a Major Reserve for Fulfilling the USSR Food Program"]

[Text] Among the Food Program's basic directions are the struggle for economy and thrift, reductions in losses and improvements in the quality of agricultural products through the extensive introduction of progressive technology for production, processing and storage and the hauling of products by specialized vehicles.

The problem of protecting agricultural products, and the rational use of raw material for increasing the country's food resources flows directly from the decisions of the 26th CPSU Congress, CPSU Plena and the draft of the CPSU Program. It is not only an economic, but also a political problem. Its solution should be the goal of combined efforts, financial and material resources of sectors in the national economy, first of all partners in the agro-industrial complex.

More than three years have passed since the Food Program was approved. During this time there has been a systematic course to strengthen and improve the material-technical base for agriculture and other sectors in the APK. During 4 years of the 11th Five-Year Plan capital investments in all sectors of the APK totalled 212 billion rubles, including 175.4 billion in agriculture.

All these and other measures are bringing positive results, as is convincingly shown by data on increases in agricultural production during 1983-1984. Average annual agricultural gross output increased from 124.1 billion rubles in 1981-1982 to 134.1 billion rubles in 1983-1984, or by 8.1 percent. Sizable increases in the production of meat and other animal products helped improve supplies to the public.

The growth in agricultural production is ever more sharply posing the question of the complete delivery of all products to the customer. It is not sufficient to grow a good harvest, it all must be promptly hauled from the field,

qualitatively and quantitatively preserved and rationally used for its direct purpose. Only under these conditions can one successfully handle the tasks presented by the Food Program and meet the Soviet people's steadily growing needs for high quality food products.

Science and the progressive experience of farms show that in order to effectively reduce agricultural product losses it is necessary to know the reasons for them. On 11 June 1985 at the CPSU Central Committee Conference on questions of scientific-technical progress it was noted: "At this stage in the economy's development, the problems of the production infrastructure have become acute. The lagging of transportation, communications, material-technical supply and other sectors is causing large losses."

There are two main directions in the struggle against losses of agricultural products. The first is the elimination of the subjective reasons and conditions which give rise to them, cases of waste, violations of state and technological discipline. The second is the liquidation of objective causes, through the modernization of equipment and technology, the expansion and strengthening of the material-technical base, improvements in workers' skills and the level of their economic knowledge, as well as improvements in the economic mechanism and management.

The struggle against agricultural losses gives a high economic effect. For example, calculations show that each ruble spent on protecting plants from predators, diseases and weeds results in an additional 3-5 rubles of output.

The gathering of the harvest is the final stage in a complex of measures for the production of agricultural products. Product losses take place for various reasons and can reach great magnitude. Just as a result of delays and stretching out of harvest times, grain shattering can cause losses of 1.5- quintals per hectare. The optimal time for harvesting grain crops is 7-8 days. In practice, because of shortages of combines and other reasons, some farms take 20-25 days for the harvest. This unavoidably leads to shortfalls in the grain harvest. Considerable damage is caused by grain lodging. Depending upon the stage of plant development, in some sections crop lodging can cause shortfalls of 10-25 percent. This phenomenon is to some extent prevented by the application of nitrogen fertilizer and the use of appropriate chemicals.

If grain is stored in the open, the natural losses are 2-2.5 greater than for grain stored in elevators. There are also inevitable losses from deterioration in quality and spoilage. Therefore, kolkhozes, sovkhozes, grain receiving and processing enterprises are expanding grain elevator capacity in order to eliminate or minimize grain storage in the open.

The decontamination of grain is one of the most important measures for assuring grain and grain product quality. Insects feeding on grain, flour and groats considerably (by 3-4 percent) reduce its weight, and contaminate and spoil products. The taking of timely measures in the struggle against grain pests will help make it possible to overcome these losses.

It is necessary to attentively approach the selection of optimal times for harvesting the main groat crops: buckwheat, millet and rice. The times of

grain ripening should be observed. If one waits until complete ripening, grain can be lost through shattering, while harvesting too early results in large amounts of unripe, underdeveloped and unformed grain. Practical experience shows that it is best to harvest these crops by the separate stage method.

The improper operation of combines also leads to considerable losses of grain to its breakage and hulling. Especially large losses are caused by failure to observe the technology for harvesting millet, rice and buckwheat. Thus, when millet, or rice with increased content of hulled and broken grains are processed, or if there are difficult to separate weeds, not only is groat output reduced, but there is a sharp deterioration in higher quality groats.

Because of delays in sunflower harvesting or the use of grain combines with unimproved attachments, the seeds are crushed and shattered. This reduces the quality of seeds and the oil obtained from them. They are suitable mainly for industrial purposes.

Delays in the harvest of tomatoes, cabbages and other vegetables also lead to sizable losses. Thus, if tomatoes are harvested 3-4 days after ripening, losses do not exceed 7 percent, while if the time between harvests is increased to 12-15 days, losses grow to 12-20 percent. With a 3 day period between harvest, cucumber losses are 7 percent, while if it is 5 days, losses increase to 14 percent. If the onion harvest is delayed for only 2 days after the plants reach biological ripeness, 2 percent of the crop is lost.

In a number of cases sizable losses of sugar beets have been observed. After harvest, beets are often stored in small open pits in the fields for 7-10 days, and in some cases up to 20 days. According to scientists' data, with this kind of storage, every day more than 1 percent of root weight is lost.

In 1984 large intervals between beet digging and hauling were allowed on farms in Altay Kray, Kursk, Lipetsk and Tambov oblasts, and in the Ukrainian and Belorussian SSR's. Thus, in the first 10 days of October 1984, up to 40 percent of the beets dug remained on the fields of farms in Altay Kray, Ryazan, Volyn, Odessa, Dnepropetrovsk, Rovno and Ternopol oblasts. Shortages of hard surfaced area and active ventilation units at some sugar beet receiving sites and refineries also lead to additional losses and reduced quality.

Insufficient use is being made of the proposed methods of storing beets under various types of synthetic materials, processing by ammonium carbonate and electron-ion technology to prevent losses at sugar refineries.

Previously, the simplest methods were used to preserve beets in pits: straw and reed mats were laid down and lime was sprinkled in the pits. To some extent this prevented root quality deterioration and spoilage due to unfavorable climatic conditions. Now this is rarely done, even though the means for using it should be fully accessible to all enterprises and farms and it is needed to preserve beet quality and prevent spoilage. In order to minimize beet and sugar losses, beets should be promptly hauled from the field and refineries should sharply reduce their processing time.

At some farms and enterprises potato losses arise because of the poor organization of harvest work, unimproved harvest equipment and violations of rules for transporting and storing products. At sorting points an average of up to 25 percent of the middle fraction tubers are damaged and up to 55 percent of the large ones. A sizable share of these tubers spoil and become unsuitable for food purposes. Practice shows that potato losses during storage in pits reach 28 percent, and in storage units without active ventilation they are about 20 percent. It is necessary to force the pace of building potato storage units with active ventilation and temperature-moisture regulation.

In order to preserve the quality of potatoes, vegetables and fruits stored for long periods it is necessary to have varieties with good keeping qualities and which ripen within optimal times. Products must be sorted by quality and size, packed in standardized packages, protected from mechanical damage during transportation and loading-unloading operations.

Reductions in potato, fruit and vegetable losses during storage and processing are also attained through comprehensive processing. For example, the cleaning of potatoes by steam, which removes only the skin and leaves the tuber undamaged, saves 8 percent of the product compared to mechanical cleaning. In addition there is a sharp improvement in labor productivity.

Shortfalls in output are also characteristic of animal production. This is due to insufficient levels of feeding and low quality feeds. For these reasons animal product operations at some farms do not produce as much as the animals' potentials would allow. Thus, cows are capable of producing up to 3,000 and more kilograms of milk, while the actual productivity in 1984 was considerably lower. The same thing takes place in meat production. Cattle's potentials make it possible to fatten young animals up to 400-500 kilograms in 16-18 months. Actually, at some farms it takes up to 30 months for animals to reach this weight. The time required to raise pigs to 100 kilograms live weight is stretched out to 400-500 days at some farms instead of the 300 day optimum. Just because of underfeeding, farms have 20-30 percent shortfalls in output.

In recent years agriculture and processing sectors have developed and are widely using technology assuring the more reliable preservation of raw materials and products and the reduction of losses during transportation, processing and storage. One of the most progressive methods of storage is the use of artificial cold. This increases the keeping time of grain 5-6 fold and fruit and vegetable losses are reduced 5-10 fold. The freezing of meat reduces natural losses during storage by 35-40 percent, while polymer packaging protects meat quality and reduces losses during storage by another 2-3 percent.

Resources invested in the construction of enterprises to store and process fruit, vegetables and potatoes are paid off in 3-4 years, especially if they are built at production sites.

The use of specialized transportation is a major factor in protecting agricultural products during haulage. The use of ordinary transportation causes serious damage to products. Thus, if potatoes, fruit and vegetables are

hauled in bulk, their self-protective qualities are seriously damaged and they cannot be stored for long periods. Progressive farms' experience is evidence that if progressive methods of transportation and storage are introduced, these losses can be avoided. For example, to haul grain it is essential to have grain wagons; to haul flour -- trucks and flour trailers, and to haul fruits, vegetables and other perishables -- trucks and refrigerator trailers. It is advisable to transport freight in containers, packets and on pallets. This not only better protects products, but also makes it possible to mechanize loading and unloading operations.

At the end of the season the output of standard potatoes is 5-6 percent higher if they are hauled and stored in containers than if they are hauled and stored in bulk. Savings in storing potatoes in containers are 3-12 rubles per ton. The storage of vegetables in containers increases the output of standard produce compared to storage in pits: carrots by 5 percent, cabbage by 15 and beets by 5-6 percent.

The rational use of food raw materials is a major factor in increasing food resources. For example, more than 50 percent of the total gross harvest of grain is used for animal production. It is better to process it into mixed feeds and then use it. The production capacity of mixed feed plants in the USSR Ministry of Procurement and at interfarm mixed feed plants permits this. However, for various reasons, a sizable share of feed grains is used in unbalanced form for feeding livestock. This leads to the excessive use of concentrates.

About 8 percent of the milk produced in the country is used to feed calves and piglets. About half of this could be used for food purposes and replaced by reconstituted milk.

The establishment of direct ties between trade-procurement enterprises and organizations and kolkhozes, sovkhoses and interfarm associations is an effective measure leading to reduced losses and preventing reductions in the quality of agricultural products, especially fruit, vegetables, milk and cattle. This is helped by the receiving of products directly at farms, and their haulage by the procurer.

The majority of procurement organizations and enterprises assure the quantitative and qualitative preservation of agricultural products. However, there are serious shortcomings at some enterprises. In 1984 the largest grain shortfalls were discovered at enterprises in the Armenian SSR, Krasnoyarsk Krai and the Bashkir ASSR, Taldy-Kurgan, Uralsk, Lvov and Nikolayev oblasts.

Because of violations of the rules and temperature-moisture conditions for storing potatoes, fruits and vegetables, large deteriorations in the 1984 harvest were allowed at bases of the Saratov fruit and vegetable trading system, fruit and vegetable stores in Kalinin, Kursk, Saransk, Barnaul, Kaluga, Kishinev, Yerevan and some other cities.

The party's course to improve the economy's efficiency and intensiveness directs all procurement workers to center their attention upon conservation

and concern about supplementing the country's foodstuffs reserves, assuring their complete protection and rational use for their direct purposes.

The ministries of procurement of union republics, production administrations for grain products, grain receiving and grain processing enterprises, state procurement inspectorates and state grain inspectorates are obligated to carefully review and examine each case of grain shortfall or irrational use, and energetically take measures to eradicate the conditions giving rise to the waste and loss of grain and other agricultural products.

The completion of measures to prevent losses should be at the center of attention of workers at agro-industrial associations, kolkhozes, sovkhozes, grain receiving and processing enterprises. State inspectorates for the purchase and quality of agricultural products must constantly monitor the accumulation and storage of agricultural products, the preparation of the material-technical base for their trouble free reception and complete protection.

As an integral component of the country's agro-industrial complex, it is a party and civil duty of all workers in the USSR Ministry of Procurement not to allow the loss of even a kilogram of grain or other product during reception, storage, haulage and processing and thus worthily celebrate the 27th CPSU Congress.

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AGRO-ECONOMICS AND ORGANIZATION

VOLOGDA OBLAST ECONOMIC EXPERIMENT, APK OPERATIONS VIEWED

Moscow SELSKAYA ZHIZN in Russian 19 Jan 86 p 2

[Article by L. Vologdin, chairman, Vologda Oblast Agroindustrial Committee:
"The Agroprom Today--The Economic Mechanism of Management"]

[Text] What is our oblast's agroindustrial complex like today? It consists of more than 700 kolkhozes, sovkhoses and enterprises for serving agriculture, procurement, sectors of the processing industry and construction, installation and other organizations. Their basic capital is estimated at 2.5 billion rubles. The agroindustrial complex has at its disposal a large machine park. Tractors and motor vehicles alone number about 35,000. Annual production volume comes close to 1.5 billion rubles.

Although management improvement among us proceeds just like in the rest of the country, that in the oblast has its own special features. They are due to implementation of the economic experiment at certain agroindustrial associations of the RSFSR. Thus we retain an experimental approach to construction. A state Vologdaagrostroy Cooperative Association has been created. Our kolkhozes and sovkhoses have been granted major rights in planning and organizing capital construction. They themselves will now determine its volume on the basis of available financial resources, taking into account Gosbank credits and capital for materials as well as procurement of local construction raw materials. Heads of farms have been granted the right to approve planning estimates for construction of facilities costing up to 200,000 rubles.

Above all, we are striving to ensure high growth rates of production and procurement of basic products on the basis of a sharp upgrading of farming and animal-husbandry standards. During the 12th Five-Year Plan, we intend to increase production of growth agricultural production 1.5-fold faster than during the past 5-year plan. The task was set of attaining per-hectare yields of 20 quintals of grain, 160-180 quintals of potatoes and 35-40 quintals of hay from perennial grasses. We plan to increase yearly the milk yield of cows by an average of no less than 100 kilograms for the oblast and by the end of the 5-year plan to bring it up to 2,900-3,000 kilograms and the average delivery weight of cattle to 420-450 kilograms.

Only through the attainment of such indicators, will the oblast be able to fulfill the trade order and the delivery plan of meat, milk, eggs, potatoes and vegetables to union-republic stocks. Such orders have been conveyed by the oblast planning commission to each rayon. Moreover, plans of production and sale of products for the oblast and the rayons are set as the total of plans worked out by the farms. These farms are compiled independently at kolkhozes and sovkhozes and at other agricultural enterprises. There is one requirement for this--they must be no lower than the average annual level reached in the preceding 5-year plan.

These days a lot of diverse work on improvement management is going on at all levels--in the oblast, in the rayons and among labor collectives. While thinking over questions relating to the creation of an effective organ for management of the agroindustrial complex, party raykoms are engaged in the selection and placement of agroprom personnel. In this work, we try to promote to leadership politically mature, competent people who are able to work in a new way. We pay special attention to those who will have to work on the oblast agroindustrial committee.

Important personnel changeovers are occurring directly in rayons, kolkhozes and sovkhozes. Some heads of strong farms are shifted to weak, lagging ones. We support this campaign in every possible way. Unfortunately, a few managers have interpreted granting of broader rights and independence as an opportunity not to carry out the state's orders. It is also difficult to work with those who, on receiving the right to plan independently, for example, sowing areas, number of cattle, simply lost their heads. The long standing habit of looking back at superior organs and sharing with someone responsibility for economic decisions has had its effect.

There is also a group of farm heads who look upon independence in planning as a means of making life easier for themselves. Quite recently, I had the occasion to talk with one such manager. He openly stated that as soon as he has the authority he will reduce the cattle herd. And cited an ostensibly valid reason--the shortage of concentrated feed. A part of it has to be bought from the state, which affects production cost.

I asked: but has everything been done on the farm for it to have its own forage. It turns out that the yield on the farm is only 15 quintals per hectare. And in order to fully provide themselves with concentrates it is necessary to boost the yield to 22 quintals. But this is not a real problem when neighboring farms of the same rayon get up to 30 quintals per hectare. It turns out that this manager is intent not so much on strengthening the feed base as adjusting the number of livestock to the scanty forage stocks.

However, there are not many such cases. Most heads of farms and enterprises understand the importance of the adopted decisions and apply all their efforts to increase production of agricultural products. This is particularly noticeable there where cost accounting and the collective contract are being introduced.

In Kharovskiy Rayon, we have Put Lenina Kolkhoz. Only recently it was unprofitable. Three years ago, they switched over here to the brigade

contract in farming and introduced the check form of accounting expenditures. Each brigade is given cost-accounting targets. On the initiative of N. Smirnova, a young energetic economist, the shop structure of management is employed. Animal-husbandry workers have been shifted to the collective contract. A regime of economy is observed in each sector of kolkhoz production. And for 3 years now, net income has been growing here and production plans are being fulfilled for the principal types of products.

Put Lenina Kolkhoz is not the only example where unprofitable farms, realizing existing opportunities, have been strengthening their economy. There still remain about 40 farms in the oblast that ended the year with a loss. The committee of the oblast agroindustrial association is doing everything possible to sharply rectify the matter.

What objectives are we putting before us? First of all, we are increasing the responsibility of all managers for the use and yield of those resources which have been invested into the economies of rayons, kolkhozes, sovkhoses and industrial enterprises. There are rayons in the oblast in the zone of industrial hubs--Vologodskiy, Cherepovetskiy, Sheksninskiy and others where a large economic potential exists. And they should provide significantly more products than at present. For example, Vologodskiy Rayon received over the course of many years about one-fourth of the capital investment for land reclamation, 16 percent of all the investment intended for construction and many other resources. But the average annual amount of gross production here is far from that designated.

There is also a great difference in development of rayons and in providing farms with production resources and capital. Hence the difference in production level. And the reasons for this diversity, of course, are not only because farms, organizations and enterprises of agroprom up to the present time have been under more than 20 ministries and central departments but also because in the oblast itself not everything was planned rationally.

This is all the more sad because we have a good basis for rather precise scientific prediction of the production growth rate. For the first time, a data bank was formed in the oblast and provision of resources was calculated for rayons and farms. With the help of computers, agroprom bottlenecks and principal priority directions of capital investment and of material and technical resources were determined. Now all this information is bound to help the oblast's agroprom committee to determine where and in what amounts to allocate capital investment during the new ongoing five-year plan. Much work still remains to be done with personnel in their mastery of new methods of management involving the employment of electronic technology.

We believe that in the sphere of the agroindustrial complex the advantages of specialization, concentration and interfarm cooperation must be fully utilized. The experience of the past 5-year plan shows that the main production growth, for example, of meat was to be found at specialized pig and poultry factories and cattle fattening complexes. Production is intensively conducted at specialized seed-growing and pedigree breeding farms. Why is it necessary to speak of this? In recent years, the tempo of specialization has slowed down.

An object of special consideration by rayon agroindustrial associations will be raising the level of economic work, perfecting interrelations first of full with servicing organizations and making them directly dependent on the results obtained at kolkhozes and sovkhozes.

And, finally, the need of boosting agricultural-production efficiency demands a sharp rise in demands on and responsibility of economic managers for faultless carrying out of all the methods and requirements of technology. During the past 5-year plan we invested a large amount of capital into construction of fodder storage facilities. For example, we have barns with active ventilation of 60 percent of procured hay and 100 percent of haylage capacities. And how are these structures used? Sometimes because violation of time periods of harvesting grass and technological errors, spoiled fodder is placed in these sound structures. And in the winter, animal husbandry personnel reap bitter fruit from the careless work of fodder procurement workers.

From the first days of operation of the new organs, we have been creating such an atmosphere that it would aid in revealing the potential resources of each labor collective and of the entire agroindustrial complex as a whole.

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AGRO-ECONOMICS AND ORGANIZATION

READER RESPONDS TO ARTICLE ON KUBAN EXPERIMENT

Moscow IZVESTIYA in Russian 27 Jan 86 p 2

[Comments of Hero of Socialist Labor A.I. Maystrenko, director of Krasnoarmeyskiy Rice-Growing and State Breeding Plant, recorded by A. Dergach, Krasnodar Kray: "Who on Earth Is the Boss...."]

[Text] "One does not joke with economics," he says and knits his gray bushy eyebrows.

My companion is Hero of Socialist Labor A.I. Maystrenko, the director of Krasnoarmeyskiy Rice-Growing and State Breeding Plant. He had read in IZVESTIYA a discussion with the general director of Timashevskiy Kuban Experimental Agroindustrial Complex and phoned the IZVESTIYA correspondents' office: "Come over, we need to talk."

"I have always asserted, and I repeat once again, it is very important for the peasant and, incidentally, for a representative of any other vocation, to have the right and possibility to plan his tomorrow as well as work a month ahead, a year or a five-year period as a minimum.... This provides him with the sense of being a boss on earth, and without such a feeling there can be no peasant! Why? Because in our work there are many unforeseen emergencies--for we to a large extent depend on the weather, and it is changeable and at times unpredictable. And only a man with the feeling of being the boss can react to any unforeseen happening and to make the sole correct decision. The fact is that our party calls on us for this in pregress documents and, in discussing them, people refer to this.

"What is it that I like in the Timashevskiy experiment? The peasants there have the possibility of independently planning not only what to sow and how much to sow, but also at what price to sell what has been grown. The entire cycle--from the field and the processing enterprise to the counter--is in their hands. This is very important--to see one's customer face to face and to know his needs and his habits.

"We, unfortunately, do not have such a possibility. Others 'think' for us, although there are many decrees--party and government--which are aimed first of all at having peasants think, at having initiative proceed from below.

But, alas....

"The damage to planning from the vaunted "achieved result" is by no means as harmless as might appear at first glance. Here is an example. Last year we overfulfilled the meat plan back in October: we turned over 2,100 instead of 1,775 tons and could have turned over another 500 tons, but then we would have had "imposed" on us a minimum target of 2,600 tons (2,100 + 500).

"What did we do? We were obliged to hold over livestock in the last months of departing 1985: 3,000 pigs and 500 head of cattle. We spent on this nonsense more than 1,000 tons of concentrated feed and suffered a loss of more than 100,000 rubles. And we were not the only ones--many farms in the kray held over livestock, meat combines remained empty and workers were paid average earnings.... And all the farms suffered a loss because of this and continue to suffer from it since from the very first days of the new year. Meat combines, although working three shifts (workers are paid overtime), still cannot immediately cope with all the livestock which the farms are now foisting on them. Holding it over is continuing even now because the meat combines are unable to 'digest' the herd swamping them....

"One thing is clear: this is a mess that neither the farms nor the state wants. For this reason I am absolutely convinced that the plan for turning over meat in the first quarter of the new year will be overfulfilled ahead of schedule. And our farm will overfulfill the plan. I have already mentioned the monetary loss to our farm--100,000 rubles, but something else should be added to this: the 1,000 tons of concentrates expended 'for no good reason.' They could have provided 150 tons of pork had these concentrates been used for feed.... So look at the amount of losses both in money and in kind!

"I think that these losses are unnecessary to planning commissions--oblast and kray, nor, of course, is Gosplan USSR interested in them. Who then is interested in them? No one! It is simply necessary not in words but in deed to decisively change obsolete forms and methods of planning. In such cases, I always ask myself the question--would a peasant plan a loss for himself? Would he console himself with doubtful triumphant reports? He would not need them, inasmuch as they are alien to his rational and hard-working nature. A real peasant does not permit pranks with economics.

"As long as I have been working (and I began back in the first kolkhozes when from evening and sometimes till morning we decided with the entire mir whether to buy a breeding bull or a new sower), so long have I been hearing the term 'cost accounting.' There is incomplete cost accounting, partial cost accounting and so on. But who needs it--partial or incomplete? Calculation is economic! It can be seen that the whole thing lies in who conducts this computation: the peasant or the man 'from above'? In other words, which one of them reckons how to earn and 'spend' the earned money?

"At the Timashevskiy Kuban Agroprom, they themselves do the apportioning--for what purposes should capital be invested, we are fettered with 'classes of expenditures,' that is, objectives are assigned to us ahead of time, what to do and how to do it. The point is neither to the left nor to the right, otherwise there will be 'violation of financial discipline.' No one knows who

it was of the 'most high' who ahead of time assigned on the basis of 'classes,' for example, the development of our sovkhos's economy. But they say that there is financial discipline and it is the law. So what is the result?

"In 1984, for example, 5.3 million rubles of net profit were planned for us, we made 7 million. According to prescribed classes of expenditure, we could 'spend' only 3.5 million rubles of this sum. The remaining 3.5 million rubles naturally were withheld. Last year the profit was smaller--5.3 million rubles and 40 percent of this money was again withheld from us. Which is better? To make more of a profit or less?

"Why do I speak of this? Our sovkhos grows rice, but we were also able to develop other sectors: a breeding herd of a black particolored strain (1,600 cows) with an average yield from each cow of more than 5,500 kilograms of milk per year, a very large stud farm (about 130 head of pure-blood breeding mares, more than at the famous Voskhod Stud Farm). A big-capacity fishery--400 tons of commercial fish plus 150 tons of fry....

"I shall say outright: these sectors arose not on the basis of the well-known 'classes of expenditure,' but frequently in spite of them. You are a rice-growing farm, he says, you are not supposed according to your authorized personnel to have a cattle-breeding specialist, nor do you have the right to maintain a senior fish raiser and even more so a shop chief for horsebreeding. I reply: dear comrade, we have had these sectors for a long time. And when you legitimatize them, he says, then come to us and they will be included as part of your authorized personnel.

"We started raising sheep with the same kind of initiative--2,400 (in our Krasnoarmeyskiy Rayon, not a single farm has sheep). We graze them on intercheck ridges. A flock of sheep goes over them and removes weed grass like with a razor, and there is no need for the rice growers to cut it down with scythes. As a result we turn over 6.2 tons of wool in pure fiber. I enumerate all the 'secondary' sectors for a grain sovkhos not for the sake of bragging--it is necessary that this become fodder rather than an exception to the rules. You live on this food-providing earth--using its power to full capacity, otherwise a half kopeck to you as a boss!

"In my view, real cost accounting is being introduced at the Timshevskiy Kuban Agroindustrial Complex--by 1990 this agroprom should be a full paying operation. This is very good; you know that you will not be getting a kopeck from the state budget--this means that you have to think and figure out things for yourself. The subsidy from the state budget has given rise to a vast number of dependents. Recently a comrade visited our sovkhos from a kolkhoz in Adyge Autonomous Oblast. He purchased alfalfa seeds. So, he says, we have money, although we owe the state 10 million rubles. Nothing but a joker.... And we thought: could we possibly become self-paying? Yes! And, incidentally, without that large capital investment which will go from the state budget until 1990 to the Timashyevskiy Kuban Agroindustrial Complex.

"How could we become self-paying? First, if we were given a plan which corresponded to the average rayon indicator and we could sell above-plan

production at our own trade places that we could open right here on the sovkhos, and at the Krasnoarmeyskaya stanitsa, and in Krasnodar. At present we are given targets which are almost 1.5-fold higher than the average rayon targets. For example, for 1986 we must sell 5,150 kilograms of milk for every cow. Is this a joke? Would we cease our development if we were assigned the average indicator for the rayon? No way! Even now we have compiled an entire complex of measures, including those of a breeding character in which we will bring up the milk yield of each cow to 6,000 kilograms during the 12th Five-Year Plan.

"We wish to and will operate while qualitatively upgrading the labor level. But the problem is that the already 'attained level' will cost a pretty kopeck for the farm's specialists. For example, the sovkhos's animal-husbandry workers produced 120 percent compared to the average level of the 10th Five-Year Plan. And so what? You would think that the specialists could expect a bonus? No. They failed to reach last year on the average for the farm a rise over this 'level'--and all Krasnoarmeyskiy's specialists were left without a bonus. Their earnings are about half as much as those of a member of a rice-growing link, a milkmaid or a brigade leader on the animal-husbandry farm. But they are specialists-technologists who organize production! If we were to go on to full cost accounting and did not depend on the authorized staff-member list, which was at one time compiled at one stroke for everybody without exception, we would reduce the number of specialists, while those that remained, only the most capable of them--would be paid as much as they actually earned. I suppose this idea should be added to the draft of Basic Directions.

"Of course, the transition to work on the self-paying principle will be quite troublesome for people. It will force them to think independently and not sit behind the back of the state. Yes, problems arise, and they are most diverse and sometimes unexpected. Such, for example, as the problem... of large collars. We have a heavy-work breed of horses that can pull "on a hook" no less than a tractor, but the Krasnodar enterprise puts out 3-4 size collars, while we need 7 and 8. This is a serious matter: the use of horses for internal hauls is one-eighth to one-tenth as dear as that of a tractor.

"I am not saying for nothing that we could even now sell food products in different localities of the kray: kumiss, three kinds of sausage, hams, fish (fresh, sun-dried, smoked), cucumbers, tomatoes, honey, meat (beef, pork, lamb), compotes, dairy products (kefir, sour milk, yoghurt). We have sectors processing agricultural products: juice shops, a dairy shop, smokehouses, sausage production operations, but all of them, so to say, are in a primitive condition. They operate for 'internal' consumption, and there is no sense developing them. If we were given an opportunity, we would expand these production operations (the farm has a construction shop employing 120 workers, we have our own brick plant whose capacity can be brought up to 5 million bricks a year).

"I believe that no one should use land for free--deductions from profit stipulated in advance should go into the central agroprom fund--customarily that 30 percent of net profit which we up to now have been transferring yearly to the insurance fund of the RSFSR Ministry of Agriculture. But deductions

going into the agroprom fund should be, first, of a constant size, and, second, that for the existing money we should when necessary get resources-- construction materials, equipment so as not to mark time but develop the material base for processing and firm trade.

"The systematic reorganization farm management inspires big hopes and fills one with optimism. If administrative forms were not distinguished by diversity, and they would not be able to, cost accounting could open up such a diversity of forms for creative economics that it takes one's breath away!"

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TILLING AND CROPPING TECHNOLOGY

RESERVES FOR INCREASING GRAIN PRODUCTION

Moscow AGITATOR in Russian No 19, Oct 85 pp 16-18

[Article by G. Seregin: "Reserves of the Grain Fields" under the rubric "The Food Program in Action"]

[Text] Workers attached to the agroindustrial complex are presently confronted by the tasks concerned with the scientific-technical renovation of the national economy, the need for which was emphasized during the April (1985) Plenum of the CPSU Central Committee. The party's agrarian policy calls for extensive intensification of the agricultural branches and particularly grain production.

The methods for intensifying the grain economy have been defined. This includes the introduction of scientifically sound farming systems, the mastering of crop rotation plans and an expansion of the fallow areas. It includes improvements in the structure of the areas under crops, protecting soil against erosion and increasing the cadres of skilled personnel. Taken as a whole, such measures are raising the return being realized from the grain fields. For example, during the extremely dry years of 1981 and 1984, 50 million more tons of grain were harvested throughout the country than were obtained during 1963 and 1965, years characterized by similar weather conditions.

At the same time, our farming is still greatly dependent upon the caprices of the weather. From year to year, the fluctuations in cropping power and in the gross grain yields continue to be considerable and this adversely affects the country's economy.

During the 12th Five-Year Plan, as called for in the Food Program, the average annual gross yields for the grain crops must be raised to 250-255 million tons and the grain yields raised to 21-22 quintals per hectare. The plans call for this high yield level to be obtained based upon the extensive introduction of intensive technologies.

During a recent conference held in the city of Tselinograd, the General Secretary of the CPSU Central Committee M.S. Gorbachev stated: "During the years of the forthcoming five-year plan, we must attach priority importance to the cultivation of grain crops based upon the use of intensive technologies." In turn, these technologies are based upon the use of correct crop rotation plans and high yield varieties, thorough and efficient cultivation of the soil, balanced nutrition in the form of organic and mineral fertilizers, the use of

integrated systems for protecting plants against pests, diseases and weeds and strict observance of the schedules for the carrying out of agrotechnical work and also over the quality of that work.

The expenditures for a hectare of winter wheat sowing are increasing by an average of 30 percent. But such expenditures are repaid with interest in the form of full-weight ears, since the new technology guarantees an average increase in the grain yields of 35 percent and is capable of furnishing yields of 45-50 quintals and more per hectare. This is an average. The growth in yields may be even higher on tracts having a raised fertility.

The advantages of the intensive technologies are beyond dispute. At the same time, this work is very delicate and requires high skills on the part of farm leaders, specialists and machine operators. A requirement exists here for exceptionally high technological discipline, organizational ability and interest by the personnel in achieving high labor results. This is ensured best of all when the brigades and teams operate on the basis of a collective contract and cost accounting procedures and when the economic levers are reinforced by active mass-political work. Thus, in connection with converting over to the use of intensive technologies, extreme importance is being attached to solving the organizational, economic and educational tasks simultaneously and in a coordinated manner.

This year, grain crops will be grown using the progressive method on an area of approximately 17 million hectares. More than 20,000 farms will be using this method. Despite unfavorable weather conditions, generous yields were obtained from fields in those areas where all of the rules of the new agricultural technology were observed. Thus, the intensive technology was used for growing winter wheat on almost 5,000 hectares in Tetyushskiy Rayon in the Tatar ASSR. This was the first step and by no means a timid one: here the yield turned out to be 20-30 percent higher than that obtained from other fields. In particular, the field crop brigade of V. Abmayev at the Avangard Kolkhoz, which operates on a collective contract basis, obtained an average of 45 quintals of grain per hectare. This was an extremely high yield for the area concerned. Similar examples could be cited for Stavropol Kray, Ivano-Frankovsk, Lipetsk, Moscow and other oblasts.

But there are also kolkhozes, sovkhoses and other farms where use of the intensive technology has not produced the desired return. Why? They used it in a half-hearted and wasteful manner. For example, at the Kolkhoz imeni Engels in Aleksandriyskiy Rayon in Kirovograd Oblast, only a quintal of mineral fertilizer was applied to rows of winter wheat during sowing and in the spring a quintal of ammonium nitrate was scattered from an aircraft. Nor were the crops treated either in the autumn or spring with agents for combating pests, diseases and weeds. The technological tracks left over from the autumn became overgrown with weeds. And in the final analysis the yields turned out to be considerably lower than that expected from the Ukrainian chernozem soil.

Nor was the new technology employed successfully at the Put K Kommunistu Kolkhoz in Miloslavskiy Rayon in Ryazan Oblast. Last autumn the RAPO /rayon agro-industrial association/ specialists persistently required the management of the farm to sow its winter crops using the new method, even though all of the agro-

technical periods for carrying out such work had long since passed. The result was deplorable: the sowings perished. In the spring the tract was harrowed and sown in barley. Elite seed and fertilizer had been expended in vain.

In July, the CPSU Central Committee and the USSR Council of Ministers adopted the decree entitled "Measures for Increasing the Production of Grain From Winter Crops, Spring Wheat, Corn, Millet and Rice During 1986 Through the Introduction of Intensive Technologies for Cultivating Them." It called for an expansion in the area of use for these technologies. A requirement was advanced for ensuring strict fulfillment of the entire complex of operations, with special attention being given to carrying out the sowing work during the best periods and using high quality seed for the best regionalized varieties, to applying optimal fertilizer dosages in behalf of a programmed yield and to the extensive use of an integrated system for protecting plants against weeds, pests and diseases.

Conditions for the extensive introduction of intensive technologies are being created in connection with the persistent development of zonal scientifically sound farming systems. Unfortunately, there are many shortcomings here which serve to hold back a conversion over to the progressive method for cultivating grain crops.

Crop rotation plans remain undeveloped over considerable areas. In the republics of Central Asia, the Trans-Caucasus and Kazakhstan, a considerable portion of the winter crops are being grown following stubble field predecessor crop arrangements.

Use of the soil protective method for cultivating arable land is increasing only slowly. Last year it was used on 54 million hectares throughout the country. However, computations have shown that more than 100 million hectares of arable land must be protected against erosion.

In the principal farming regions, losses of the fertile layer caused by erosion amount to from 15 to 67 tons per hectare annually. The shortfall in yield from eroded fields alone is estimated by scientists to be 7-8 million rubles. A great amount of harm is caused by wind erosion. In recent years, such harm has been felt in particular in the north Caucasus, the southern Ukraine and in the Volga region. For example, in the spring of last year, in Rostov Oblast and Krasnodar Kray, the losses in the fertile layer of soil caused by wind erosion reached 70-100 tons per hectare. In a number of areas, dust storms swept away up to 10 centimeters of the arable layer. Nor was the situation any better in Volgograd Oblast, where soil-protective cultivation is being employed on only one third of the erosion-prone arable land.

In a number of areas, concern is not being shown for conserving in the use of moisture. On many farms in the north Caucasus, the central chernozem zone and the Volga region, when preparing the soil for the sowing of winter crops, a preference is being shown for mouldboard plowing, which dries out the soil. This leads to late and sparse seedlings and, in the final analysis, to considerable crop losses.

Quite often the schedules for preparing the soil are not followed and this disrupts the sowing program. During the 1981-1984 period, throughout the

country as a whole, only 75 percent of the sowing areas were worked during the best periods, in the Russian Federation -- 66, in Moldavia -- 52 and in Belorussia -- 42 percent.

This is having an especially ruinous effect on winter crops. If the periods for their sowing are dragged out, the plants will enter their hibernation period in a weakened and thin state. Over the past 10 years, sparse and non-germinated winter crops have occupied from 6 to 11 million hectares, or from 14 to 30 percent of the overall sowing area. Moreover, the weediness of such sowings is higher by a factor of ten than that for normally developed plants.

When winter crops are sown prematurely, especially following fallow, they enter the winter period in an excessively overgrown state and they also perish. Thus, according to data furnished by the Ukrainian Scientific Research Institute of Farming, the survival rate this year for early and mainly overgrown winter wheat sowings was 78-86 percent, rye -- 57-70 percent. And in those areas where attention was given to the schedules and to the quality of all work carried out -- 96 percent.

Clean fallow is not being used correctly in all areas. It is not being supplied with sufficient fertilizer and quite often it is not worked in a timely manner and becomes overgrown with weeds. During the current five-year plan, for example, approximately 80 percent of the fallow fields in Kazakhstan were plowed during the best periods. An inspection of such areas on farms in the Russian Federation revealed that one fifth of them are badly contaminated by weeds. In Yaroslavl, Gorkiy, Voronezh, Smolensk and a number of other oblasts, mineral fertilizer is being applied to only one half of these fields. There have been instances in which the kolkhozes and sovkhoses have sown in various crops a portion of the fields intended to be used for clean fallow.

Proper importance is not being attached to the role played by strip fallow. And indeed fallow is a powerful lever for raising the stability of farming. Based upon experiments carried out over a period of many years, it has been established that clean fallow, compared to non-fallow predecessor arrangements, furnishes an average increase in grain yield of 6.4 quintals per hectare in the Volga region, approximately 7 quintals in the central chernozem zone and 10-12 quintals in the north Caucasus and the Ukraine. During extremely dry years, the yields obtained from fallow land are higher by a factor of 3-4 than those being obtained from non-fallow predecessor crop arrangements.

Special importance is attached to fallow for making farming more stable in the steppe regions of Siberia and Kazakhstan, where in the opinion of scientists it must occupy 15-20 percent of the arable land.

The effectiveness of clean fallow increases sharply against a background of fertilizer and yes the fertilizer returns better yields when employed on fallow fields. According to data accumulated over a period of 9 years at the Scientific Research Institute of Agriculture for the Southeast, the winter wheat yields following non-fallow predecessor crop arrangements amounted to an average of 17 quintals per hectare and following well fertilized clean fallow -- 37 quintals.

In 1981, subunits of Selkhozkhimiya commenced the so-called all-round agro-chemical cultivation of fields (liming of soil, application of organic and mineral fertilizers, removal of rocks, leveling off of microrelief and so forth). In those areas where this work was carried out, the grain crop yields were raised by 5-8 quintals. In behalf of this year's harvest, such cultivation was carried out on an area of approximately 4 million hectares and in behalf of next year's harvest the volume of this work will be increased by 1 million hectares. During the coming years, all-round chemical cultivation must be carried out on all of the clean fallow.

On a number of farms, the mineral fertilizers are not being used in an efficient manner. At times they are stored outdoors and, as a result, they lose their nutritional value and contaminate the surrounding environment. There have been instances of direct squandering of fertilizers. At times they are applied by eye and without taking into account the chemical composition of the soil. This results in a mediocre return from the mineral fertilizers. In many oblasts of the northern, northwestern, Volga and central economic regions of the Russian Federation, more mineral fertilizer is being received than was earlier the case and yet no corresponding increase in the grain crop yields is being achieved. Thus, in 1984 it amounted to only one half of the norm in Ulyanovsk, Penza and Gorkiy oblasts. And in Orel, Bryansk, Vladimir, Ryazan, Smolensk and Pskov oblasts, no increase whatsoever was realized. Nor is the situation here any better this year.

The technology for employing agents for protecting plants against weeds, pests and diseases is not being used correctly on many farms. For example, on an area of 285,000 hectares of grain crops that underwent inspection in Kirov Oblast, there was an average of up to 100 weeds per square meter. Roughly the same situation prevails in Orenburg and Penza oblasts.

Some kolkhozes and sovkhoses are preparing their seed for sowing in a poor manner. A portion of the seed is being sown without disinfection and this leads to massive infection of the plants by fungus diseases. Only a weak campaign is being waged against blight, powdery mildew, conditions which cause the grain losses to reach up to 7 and more quintals per hectare.

All of these problems result from mismanagement, irresponsibility and low agrotechnical competence on the part of some leaders, agricultural specialists and machine operators. Such an attitude towards the work hinders the introduction of new and progressive developments into farming practice.

An important role in this work is played by the production agronomists and technologists. The party and professional trade union committees and farm leaders must raise their role and responsibility for the introduction of intensive technologies, for obtaining high yields and for the efficient utilization of the chief means of production in agriculture -- land.

A critical need exists for the rural activists of political agitation to analyze their work. We must not tolerate waste out on the grain fields in the belief that this is the responsibility only of the leaders and specialists. The kolkhoz and sovkhos agitators are responsible for waging a decisive and uncompromising campaign against all manifestations of mismanagement. In

addition, they must rely more boldly upon the achievements of science and leading experience and promote the creation of a strong foundation for carrying out the tasks called for in the Food Program.

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