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Ways of Controlling Labour Movement and Employment in the Rural Economy of Siberia

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Most eastern areas of the U.S.S.R. are notable for rigorous climate (hard frosts in winter and short summers), but the southern part of Siberia is agriculturally productive, suitable for stock-breeding and grain-growing. The efficiency of agriculture in Western Siberia is 15-20% above the average for the Soviet Union, the cost of the most important products is the same as the average for the country. From a national point of view, the progress of agriculture in Siberia is economically profitable. Rapidly growing Siberian cities demand more fresh foodstuffs, thus giving another reason for strengthening an agricultural source of their own. At present the yield of farm produce *per capita* in Siberia is below the average for the U.S.S.R. Owing to these circumstances, planning includes a rather high rate of agricultural expansion in Siberia for the current and subsequent five-year plans.

Such expansion is well grounded, for the output resources of agriculture, especially of all land and productive livestock, are employed in Siberia less effectively than elsewhere.

Thus, in 1964, the value of the gross output of agriculture in Siberia when compared with the average indices for the R.S.F.S.R. was 76% per ha. of arable and 67% per ha. of agricultural land. By contrast the efficiency of land utilization in the areas of intensive agriculture was twice as high.

The main factor retarding the rate of agricultural development in Siberia is at present the shortage of labour. The number of workers here per 100 ha. of agricultural land is 1.7 times lower than the average for the R.S.F.S.R. and 2.5-3.0 times lower than in regions with the best labour supplies. The average annual number of workers per 100 ha. of arable is 1.5 times lower than the average for the R.S.F.S.R. and 2-2.5 times lower than in north-west or central regions. This shortage of labour in Siberia results in the growing of less labour-consuming crops and in breeding fewer livestock. But even so the demand for labour in agriculture in

Western Siberia is 1.3 times greater, and in Eastern Siberia 1.2 times greater, than the average for the R.S.F.S.R.

Evaluations made by planning bodies invariably conclude that if a fuller and more effective utilization of available production resources is the aim, the number of agricultural workers must be increased. But this is very difficult to achieve. There is a high migration rate of Siberian rural people to Siberian cities and to rural districts of other parts of the country. As a result, the number of rural workers in Western Siberia is falling even quicker than the average for the country.

As elsewhere, young people predominate among the migrants. According to our data, of all adult migrants leaving the land 43.1% are under 20 years of age 26.6% are between 20 and 30 and only one third are over 30. The comparative migration rates of these rural age groups are 350, 174 and 43% respectively. The rapid outflow of young people from the countryside has serious consequences in rural social life and it impedes agricultural progress by diminishing the number of skilled workers and equipment operators needed to run the ever expanding fleet of tractors and other machinery.

The movement of part of the rural population away from the land to industry is characteristic of all developed countries. How does this process influence agricultural development in Siberia? In order to answer this question we used the data collected from 240 collective and state farms in the Novosibirsk district whose boundaries did not change between 1959 and 1964. Our purpose was to find out the relation between production changes and the changes in the average numbers of workers on various farms. The collective and state farms were classified in five groups. The

Characteristics	Groups of collective and state farms according to numbers of workers in 1964 as percentages of those in 1959				
	less than 80	80.1-90	90.1-100	100.1-110	more than 110
Arable area under cultivation	96.0	101.6	98.6	101.3	103.0
Cost price of gross output	106.0	118.1	116.5	141.2	171.0
Gross output per ha.	110.7	116.2	118.0	139.0	166.0

first was composed of those farms where the number of workers decreased during the period by 20% or more; the second where it decreased by 10-19.9%, and the third where it decreased by less than 10%. The fourth and the fifth groups were the farms whose numbers of workers increased by up to 10% and by more than 10% respectively. The results are illustrated in the Table.

One can see that a significant rise of production was achieved only

in the fourth and fifth groups, that is, those farms succeeded in increasing their numbers of workers.

Planning calculations support the view that economic efficiency would be served by increasing the number of workers in Siberian agriculture. But this result has not been attained in practice. The number of rural workers has decreased faster than the average for the U.S.S.R.

This calls for researches into the reasons and motives for the mobility of the rural workers and for working out practical measures for controlling it from the national level down to the level of a single enterprise.

The sector concerned with urban-rural social problems recently investigated the pattern of regional differences in rural labour forces including those of collective and state farms. Our purpose was to find out the relationships between the external working conditions of rural workers in different regions and the pattern of their movement. For each of 61 district of the R.S.F.S.R. several dozens of variables were taken describing the living conditions of the rural population in both collective and state farms. By means of some formalized techniques six-seven variables were selected as most informative with regard to the process under study.

The estimations supported the assumption that regional differences in labour movements were determined above all by the working and living conditions of the rural population in the different regions. By the employment of six variables describing various facets of living conditions on state farms we obtained a multiple coefficient of correlation of 0.865 and a coefficient of determination of 0.75. In other words, 75% of the total dispersion of the index was due to the regions of the R.S.F.S.R.

The calculations showed that the most informative on the subject of rural labour movements are such variables as the mean level of pay in the collective and state farms of a region the average annual income of workers from the public economy, the proportion of youth in the rural population, the provision of teaching staff and school buildings, to medical staff, the provision of cinemas, the extent of electricity consumption in the homes, the provision of consumer goods, and the climatic conditions.

These results bring us closer to the practical task of controlling the movements of rural labour. By means of regression equations it is possible to predict with a certain degree of probability the behaviour of the labour force of a region provided a planned change in the complex of living conditions is known. An opposite task may be set: to determine what changes would be necessary in the complex of living conditions of, say, the rural population of Siberia to make possible a required change in its movements.

The completed experimental calculations are now being applied to a new object with the purpose of testing the patterns disclosed.

The redistribution of labour among the farms within a district is often

infective economically. The farms which suffer most from labour shortage continue to lose labour while those better supplied gain new workers because they can offer better working and living conditions.

In Siberian regions a strong tendency to move from collective farms to state farms was recently noticed. Thus, between 1959 and 1965 the total number of rural workers per 100 ha. of arable in Western Siberia decreased by 7%; at the same time it decreased on collective farms by 15%, and increased on state farms by 9%.

A survey of 14 collective farms and 22 state farms in the Novosibirsk district carried out in 1967 by the Institute of Economics and Industrial Engineering jointly with the Central Statistical Office of the R.S.F.S.R. showed that the natural increase of population in collective and state farms was about the same: 8.7 and 6.9% respectively. But the balance of population movement from 1962 to 1967 compared with the initial population was minus 12.2% on collective farms and 5.2% on state farms. As a result, the total population on collective farms decreased during five years by 6.4% and on state farms it increased by 1.8%.

This fact, together with the direct evidence obtained in a special survey of the population of collective and state farms, points to the need to achieve a more rational control over the movement of labour in collective and state farms. The living conditions of the people in collective farms are still far worse than those in state farms. The rates of pay are lower and the provision of housing, education and medical facilities, transport services and consumer goods is worse.

At the same time collective farms as a form of economy have as good prospects and are as viable as state farms. With equal rates of pay, provision of equipment and transport facilities, the mobility of labour in collective farms appears *more favourable* than on state farms. Therefore, the task is to level up the economic and living conditions of the population of collective and state farms. And the same should be done for suburban and remote localities, for settlements of agricultural and industrial type, for the central and outlying farmsteads of the collective and state farms. Living conditions can be levelled up by the development of transport and inter-settlement services.

Important sociological problems are connected with the control of labour mobility at the enterprise level. The relative balance of migration during the period 1962-1967 in 22 state farms in the Novosibirsk district varied from minus 23.7 to plus 66%, and in 14 collective farms from minus 46.7 to plus 8.9%.

A questionnaire survey of 200 rural settlements covering more than 5 thousand households was carried out in the summer of 1967; it showed that the motivational and other factors in migration were different in different groups of rural people.

The proportion of potential migrants among rural youth was extremely high: among persons of 16-17 years of age it amounted to 46%; of 18-20, to 35%; of 21-25, to 27%. At older ages the proportion fell. Therefore, the main goal seems to be to eradicate this almost universal orientation of rural youth towards the city.

A significant portion of migrating youth rationalize their wish to leave the land by the drive for education. Research into the experience of rural migrants in the city shows that about one third of them really raise their educational level by several grades and more than two thirds acquire technical skills. So the way to keep youth in agriculture is, presumably, to increase the educational opportunities in the countryside.

An important factor of migration to the city is dissatisfaction with the system of leadership in agriculture. The rural population suffers much from "middle-level" supervisors, such as brigadiers and others who have often had very little formal training (6-7 grades), in contrast to the young generation first coming to work in industry. The low educational level of the supervisors and their repugnance towards any innovation often cause psychological strains and conflicts in young people, who eventually leave the land. The substitution of more educated young rural people for the present middle-level leaders seems to be a prerequisite for maintaining the young generation in the countryside.

The management of collective and state farms can do much to improve the physical conditions in agriculture. The findings of our surveys show that the majority of young agricultural workers are satisfied with the actual work itself. But their working conditions they rank extremely low, such as the number of working hours, the level of work organization, and sanitation. There are many complaints about quotas and prices by those who work the equipment.

The leading personnel of collective and state farms can do much to make the workers take root in the countryside and to decrease the labour turnover. For example, they can speed up housing construction, and increase the cultural and recreational facilities and the like. At present specific recommendations for leading personnel are being prepared suggesting measures that should be taken to diminish the labour outflow from the agriculture of Siberia.