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The Agricultural Picture in U.S.S.R. and U.S.A.

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The agricultural sectors of the Soviet and U.S. economies present a striking contrast in behavior: In the Soviet Union there is an officially acknowledged stagnation in agricultural production and shortages of food, particularly of animal products; in the United States a continuing high level of agricultural production and overabundance of food exists. Or, to put it in another way, a battle is being waged by the Governments against agricultural underproduction and food scarcities in the Soviet Union and against farm surpluses in the United States.

A question naturally arises: Why does food production, the basic and oldest industry, behave so differently in the two countries when so much similarity is discernible, with due allowance for historical lag, in the development of the manufacturing industry. Why does Mr. Khrushchev's "threat", of a few years ago, to catch up and overtake the United States in per capita production of meat and milk seem unrealistic today, whereas, a serious view is taken of the industrial race with the Soviets? Obviously, it will not do to attribute the difference in behavior merely to the contrast between the regimes of free enterprise and collectivism, since high industrial growth occurred under both. Rather, the explanation must be sought in a complex of natural and institutional factors, of which only the major ones can be delineated within the compass of a brief report.

Natural Environment

Both countries have large areas of fertile soils. Moreover, the infertility of soils can be largely overcome by using fertilizers and, where necessary, by drainage and irrigation -- all manmade factors.

The story is different when it comes to climate, the other basic natural element in agricultural production, which is more difficult to control. The climatic situation is much less favorable in the Soviet Union than in the United States because of the northern location of the former and the continentality of its climate. The Soviet Union has considerably shorter growing, pasturing, and field work seasons, and a much more extensive dry area with low and unstable crop yields. Thus, climatic limitations on agricultural production are more serious in the Soviet Union than in most of the United States. They are most severe precisely in those eastern regions beyond the Volga and the Urals where virgin land had been still available during the recent period.

Thus, the Russian farmer has to wage a stiffer battle against the climate than his U.S. counterpart. It is well to bear in mind in this connection that the agricultural stagnation during the past 3 years partly was caused by unfavorable weather conditions which were underemphasized by Khrushchev. But a record crop was gathered in 1958, which is the bench mark for the current 7-year plan. Russian weather in its effect on agriculture may be likened to the little girl in the nursery rhyme: When it is good, it is very, very good, but when it is bad it is horrid.

Like the United States, the Soviet Union, with 220 million people and sown crop land of over 500 million acres, does not suffer from the kind of a population pressure on land which bedevils so many underdeveloped countries. This is evident from the ratio of arable land to population (a crude measure to be sure) which in Asia is less than an acre per person and in many countries much less; whereas, it is over 2 acres in the Soviet Union. This does not mean that Khrushchev has no food problem on his hands.

The Soviet population is growing at a rate of $3\frac{1}{2}$ to 4 million a year and, perhaps more important in the short run, it is becoming increasingly urbanized. Nearly half the population is urban now compared with a third before the war. This fact alone generates a demand for improvement of the predominantly starchy Russian diet. It is accentuated by the strong desire of the people to cash in on the frequent promises by the Communist leadership of an improved standard of living, of which food is so important an ingredient. To satisfy this demand, reliance was placed in the 1950's by the Khrushchev Administration, to a large extent, on the traditional Russian method of expansion of the sown area, which brought under cultivation more than 100 million additional acres. But this expansion had to take place in regions of unfavorable climatic conditions, even by Russian standards; while in the United States the partly controlled crop acreage of about 330 million acres has been confined to what is, on the whole, better agricultural land. That is why further Soviet expansion of agricultural production, which is so much stressed in Khrushchev's speeches and in official plans, is envisaged now primarily through increased per acre yields, through more intensive farming.

Selected Agricultural Machinery Inventories for U.S.A. and U.S.S.S.R.

| Implements | U.S.A. | | U.S.S.S.R. | |
|-----------------------|-----------------|-----------------|-----------------|------------------------|
| | January 1, 1962 | January 1, 1962 | January 1, 1962 | Requirements <u>1/</u> |
| | | 1,000 | | |
| Tractors | 4,660 | 1,168 | | 2,696 |
| Grain combines | 1,025 | 503 | | 845 |
| Silage harvesters | 320 | 121 | | 257 |
| Trucks | 2,875 | 790 | | 1,650 |
| Tractor trailers | <u>2/</u> 4,400 | 292 | | 820 |
| Tractor drawn ploughs | <u>2/</u> 3,555 | 784 | | 1,180 |

1/ For performance of farm operations during optimum periods.

2/ Jan. 1, 1957.

Source: Khrushchev's Report, Pravda and Izvestiya, March 5, 1962, and USDA.

Not only is the supply of machinery inadequate in the U.S.S.R., but it is also poorly cared for and maintained. For instance, equipment is often left in the open air throughout the Russian winter to rust and deteriorate. In fact, poor care of machinery has been recently made a criminal offense. Shortages of spare parts, which are so easy to obtain in the United States, are chronic and, despite considerable reduction in prices last year, parts are expensive still. It is sometimes easier to buy new implements than spare parts. Every year the Soviet press is filled with reports of breakdowns and stoppages of tractors and other machinery during the height of the season. When a great deal of trouble was experienced in 1959 with the grain crop in Kazakhstan, 32,000 combines and 11,000 reapers were not in use and 18,000 tractors needed repair and took no part in spring farm operations, according to Khrushchev.

The inefficient utilization of farm machinery adversely affects the timeliness of farm operation, which is so important under Russian climatic conditions. To the American farmer, who has no difficulties with securing spare parts and repairs, and who is helped so much by tractors to cope with the vagaries of nature, all this will sound fantastic, but it is nevertheless true.

Chemical fertilizer has played a signal role in increasing yields per acre in the United States and other industrialized countries. But Soviet agriculture is still far behind the United States in the use of chemical fertilizer, in spite of a considerable increase in Soviet production. Only a little over a third, in terms of plant nutrients, consumed in the United States was available to Soviet agriculture in 1959, even though the U.S.S.R. had 50 percent more acreage. It is necessary to emphasize "available" rather than consumed because a great deal of this valuable material is wasted annually. There are frequent indignant reports in the Soviet press of piles of fertilizer, dumped at railroad sidings, which never get to the fields and are allowed to deteriorate.

The use of herbicides to control weeds, and the use of chemicals to combat pests and plant and animal diseases have become an integral feature of farming in the United States. In this respect, the U.S.S.R. is still in the infancy stage; but not so the weeds, pests, and diseases. They present a real threat to crops and animals.

In a country with so large a dry agricultural area as the Soviet Union one would have supposed that irrigation would be stressed. It has certainly been spreading in the United States; yet in the U.S.S.R. irrigation has long been largely confined to the Asiatic cotton growing regions. An ambitious program of irrigation in the European part of the country was initiated during the last years of Stalin's regime, but it was largely jettisoned after his death and Khrushchev's project of expansion in the dry farming areas was adopted. In 1961, however, Khrushchev revived a large-scale irrigation program, but it is envisaged as a long-range development which will not bear significant fruit for some time.

Then there is the matter of improved seed stocks which also has contributed greatly to increasing yields in the United States. Who has not heard about the marvel of the hybrid corn? But in the Soviet Union the seed supply problem long has been a troublesome one. Despite the development of a number of improved varieties by Soviet plant breeders and numerous Government edicts and detailed programs, a solution is still far off. Khrushchev, on several occasions, was voicing an old complaint in the U.S.S.R.; namely, that collectives often are forced by authorities to deliver to the State grain which is designated for their seed stocks. Then, short of seed, the collectives would have to turn again to the Government for seed loans and finally plant with anything they happened to get.

To sum up, Soviet agriculture has not been obtaining the full benefits of modern technology, which helped so much to boost production and productivity per acre and per man, not only in the United States but also in western European industrialized countries and Japan.

For the reason, one must turn first to the contrast in national policies. Central to the U.S. agricultural policy has been, to put it very broadly, the improvement and support of the position of the farm sector in the national economy and national income. Whether the means adopted were always the most appropriate or effective, whether farm surpluses, for instance, could have been avoided, need not concern us here. Nor is it necessary to claim 100 percent success in the fulfillment of the central objective. What is important to note for our purposes, however, is that Government aid to private family farming, and particularly the support of farm prices and farm income, stimulated agricultural investment and technological progress in U.S. farming. Technological changes also have been encouraged by another and older feature of the U.S. national policy. Scientific research and agricultural education, in a broad sense of the term, have been promoted by the remarkable trinity of the Land Grant Agricultural College-Experiment Station-Extension Service. This trinity operates in every State, closely cooperating with the U.S. Department of Agriculture, and is financed jointly by the States and the Federal Government. Here a vehicle was developed for furthering scientific and technological knowledge of agriculture and bringing its results to the grass roots. To be sure, all this presupposes a farm system which can take advantage of such developments.

The Soviet economic policy, on the other hand, consistently has given the highest priority to the growth of heavy industry, and to nonagricultural investment at the expense of agriculture and light industry manufacturing consumers goods. It is true that greater attention has been given by the Kremlin during the post-Stalin era to the agricultural and light industry sectors than during Stalin's rule, but heavy industry is still a favorite Soviet child. In 1960, for instance, state capital investment into heavy industry was 12.3 billion rubles and into agriculture (the Government and

collectives together) 5.6 billion rubles. A recent sample of this politico-economic climate is provided by Khrushchev's concluding remarks at the session of the Central Committee in March 1962, in which he warned his audience that the contemplated measures of increased assistance to agriculture "do not mean that there will be immediately a diversion of resources to agriculture at the expense of the development of industry and of strengthening the defense of our country." Only a few days earlier he expressed genuine concern about the shortage of agricultural equipment and stressed the necessity of doing something about it. In less than 2 months, on June 1, 1962, it was announced that relief to agriculture will be at the expense of Soviet consumers. They will pay with a drastic increase of retail prices of meat and butter for the higher prices paid by the Soviet Government for these products to farmers.

To turn now to the organization of farming in the two countries, it is well known that except for small plots of land held by peasant households and some other workers, and livestock owned by them, Soviet agriculture is socialized in collective and State farms. U.S. agriculture, on the other hand, is predominantly family owned and operated. It is true that some U.S. farms are too small to be efficient producing units. But it is equally true that most Soviet farms, which have been enlarged as a result of a decade of mergers, are too large, which makes them unmanageable. The average land area per collective in 1960 was nearly 15,600 acres, and the average sown area was close to 6,800 acres. State farms are even larger; their average sown area alone in 1960 exceeded 22,000 acres. This compares with the average area of only a little over 400 acres of all land in U.S. commercial farms, which are responsible for almost all of the agricultural output.

That supervision of such large farm units as in the U.S.S.R. would tax the capacity of even the ablest managers is hardly open to doubt. The situation is further aggravated by the fact that the tenure, the initiative, and the power of decision of Soviet farm managers are seriously curtailed by the constant interference and harassment of the party-State bureaucracy. It is true that the Khrushchev Administration made some attempt to diminish this regimentation, as far as farm management is concerned, by relaxing the rigid centralized agricultural planning. A step in the same direction was the liquidation in 1958 of the state machine-tractor stations which served not only as pooling centers for tractors and other machinery, but also as important instruments of Government control of collective agriculture. The sale to the collectives of farm machinery, owned and operated by the machine-tractor stations, eliminated the dichotomy of what Khrushchev aptly called "two bosses on the land." But to a large extent this trend was offset by the continued practice of petty interference with farm management by the local party-state bureaucrats.

Nor was the central Government without its sins in this respect. The practice inherited from the Stalin regime has never stopped -- of insistence on the

well-nigh universal use of certain farm methods or crop patterns based on ideas which were "sold" to the leadership and struck its fancy because of the promise to increase production rapidly. Some of the farm practices were simply fads. Others were quite appropriate and advantageous in certain regions, but not in others. However, they had to be adopted universally, as, for example, the grassland system of crop rotation under the Stalin regime. But recently it was declared taboo again everywhere. The present "rage" is corn, which Khrushchev crowned as the "queen of the fields;" it must be grown throughout the length and breadth of the vast country. No doubt, many Soviet farm managers and agricultural specialists realize the futility and harm of such "recommendations," but once these become part of the official dogma, of the party line, they must conform. Yet even the largely theoretical trend toward decreased regimentation and decentralization was reversed by the recent reorganization of the administrative apparatus of Soviet agriculture, which established new State supervising agencies over collective and state farms.

Conversely, experience of U.S. agriculture shows the great advantage of unhampered managerial decision-making and operation within programs which the majority of farmers approve through democratic elections. The farmers also gain by being guided by an efficient Extension Service, closely linked with the State Agricultural College and the Experiment Station, and by a free farm press. There is the further advantage of U.S. farmers' freedom to choose between a number of competing firms which stand ready to sell them machinery, fertilizer, seed, etc., instead of having to take, as in the U.S.S.R., what a Government monopoly will supply. Nor should it be overlooked that the industries serving U.S. agriculture do not have to be spurred by the Government, as in the U.S.S.R., to adopt innovations which result from scientific and technical research. Competition will do the trick.

Last but not least, Soviet farm managers have to deal with a labor force which does not have adequate incentives to work hard and efficiently and to use modern farm equipment effectively. However, this is a product of collectivization. The most graphic evidence that the Russian peasant is an efficient worker when he or she has the incentive is provided by the vitality of the small private sector, of the little plots, and the few animals which members of collective farms and other workers are permitted to own. This is a consensus of all observers borne out even by Soviet statistics. Representing only 3 to 4 percent of the sown acreage, the private sector accounted in 1959 for nearly half of the total meat and milk output, more than 80 percent of the eggs, 46 percent of the green vegetables, and over 60 percent of potato production. (However, some contribution of feed, legally or illegally was procured from the socialist sector.) While the private sector has been less important in recent years, a sample survey showed that, even in a good harvest year like 1958, peasants in collectives had to depend on their private "acre-and-a-cow" farming for 38 percent of their income.

Khrushchev certainly realizes the importance of offering rewards to peasants who suffered a great deal under Stalin. His Administration has made an effort to increase the economic incentives in collective farms mainly by raising considerably the ridiculously low prices at which large deliveries of farm products formerly had to be made to the State. Only a part of the increased income of collectives, however, has been distributed among the members. It was admitted by Khrushchev in his speech on March 5, 1962, that in some collective farms, expenditures for production purposes and for common welfare objectives, such as clubhouses, schools, and hospitals, formerly strongly "recommended" by him, were excessive and encroached on the amount available for distribution to workers. But the most serious limitation is imposed by the policy mentioned earlier which gives the highest priority to heavy industry. This tends to retard an adequate growth of a reasonably priced supply of consumers goods. And, after all, the farmers and others do not want only rubles but goods which the rubles will purchase.

To sum up, when the magic touch of incentives is applied to Soviet agriculture, it prospers within the limitations imposed by the severe climate. But when there are no adequate rewards to farmers for their effort and when the decisions that should be made by farm management are dictated by Government officials, Soviet agriculture withers like an undernourished plant.