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The New Lands Program in the USSR

The topic for discussion today is the so-called "new lands" program, ^{inaugurated} ~~announced~~ by the Soviets in the spring of 1954. This program was one of the numerous measures adopted by Soviet leaders to bolster agriculture, the lagging sector of the economy. In the fall of 1953 there began a long series of reports and decrees highlighting the problems of Soviet agriculture. Considerable publicity was given by the press to these pronouncements, reflecting the higher priority given to agriculture by those in authority. The decrees issued in the fall of 1953 were primarily devoted to the introduction of incentive measures to encourage peasant participation in the country's effort to increase agricultural production, particularly livestock products, potatoes, vegetables.

Then in the spring of 1954 Khrushchev launched the "new lands" program, aimed at expanding grain production for five purposes:

- (1) Better feeding of animals
- (2) Better feeding of humans
- (3) Replenishment of reserves
- (4) Facilitating specialization in other crops in parts of the USSR
- (5) Exports

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The New Lands project in its original scope, involved the reclamation and seeding, by 1955, of 13 million hectares, primarily in Kazakhstan and Siberia, and to a lesser extent in the Urals, Trans-Volga, and North Caucasus regions. However in August of 1954, when harvest prospects in the New Lands looked excellent, a new decree was published raising the goal from 13 million hectares in 1955 to 28-30 million hectares in 1956.

The tremendous land expense involved in this project becomes more real when we consider that 28-30 million hectares (70-75 million acres) is an area approximately equal to the entire arable area of Canada. Or, expressed another way, 30 million hectares is an area about 25% greater than the total U.S. wheat acreage in 1955.

The soils in much of this vast area are, in general, fairly suitable for the production of grain although alkalinity is a serious problem in some areas. More important, however, than the marginal character of some of the soils is the hazard of climate, particularly in the Kazakhstan portion of the New Lands. There is no terrain barrier between the New Lands and the Central Asian deserts to the south or the Arctic seas to the north. When the dry hot winds from Central Asia sweep northward, a disastrous drought may result, particularly if spring and summer rainfall has been light. On the other hand, arctic winds may bring snow in August.

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The average annual rainfall in the Siberian portion of the New Lands is quite similar to that of the Canadian wheat belt ranging from 21 inches at Tomsk to 12 inches at Omsk. It is generally recognized in Canada that crop cultivation is hazardous in regions where the annual rainfall averages less than 12 inches. If this is a valid criterion the rainfall in the Kazakhstan portion of the New Lands is certainly insufficient. In this region where a major part of the New Lands is being reclaimed, the average annual rainfall in general ranges from 11.5 inches at Ruzhskai to about 9 inches at Temir on the southern margin of the New Lands.

The New Lands area is a spring crop region, with grain (especially wheat) being the primary crop. On the basis of an historical yield series the long term average wheat yield for the New Lands has been estimated at about 6 centners per hectare, or 9 bushels per acre. This compares with a total USSR average yield of about 12-13 bushels per acre, a Canadian yield of 15 bushels per acre, and a U.S. yield of about 16-17 bushels per acre.

Wide annual variability in yields is to be expected in the New Lands area (especially in Kazakhstan), characterized as it is by extreme fluctuation from year to year in the amount and distribution of rainfall. This variability in yields is well exemplified by the yields obtained during the first 2 years of the program. In 1954, the first year of the program, slightly more than 4 million hectares of grain were sown in the New Lands. Growing conditions were unusually favorable, with resultant yields estimated at about 60% above the long term average. The 1954 New Lands production was slightly over 4 million tons, about 5% of the total USSR production. In 1955 most of the New Lands suffered from a drought, cutting yields to an estimated 30% below average. Thus, in spite of more than a four-fold increase in grain area, the New Lands production in 1955 was only 8 million tons, about double that of 1954. As for the 1956 harvest, it is too early at this date, to give a definitive estimate of yields but all reports indicate that another good crop has been grown in the New Lands area. The goal of seeding 28-30 million hectares was achieved this spring. It is not known what proportion of this area is sown to grain but on the basis of 1955 experience probably about 25 million hectares is grain. Early indications are that the yields per hectare this year are above average but probably somewhat below the excellent yields achieved in 1954. The combination of a sizeable grain area together with good yields per hectare probably will result in a 1956 New Lands grain production two or three times as large as that obtained in 1955.

The magnitude of the output that can be expected from the New Lands over a period of years has been the subject of considerable discussion among Soviet

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officials. The published statements on expected successes, however, are unrealistically optimistic. For example, Soviet statements on expected New Lands production imply an average yield over a period of years of 10-11 centners per hectare which is about one-third higher than the estimated average yield for the USSR as a whole for the period 1950-55. On the basis of an historical yield series for the New Lands, 6 centners per hectare is judged to be a more reasonable estimate of the yield that can be expected in the New Lands over a period of years.

Khrushchev has stated that he expects the annual (average) output of the New Lands to be not less than 33 million tons (30 million hectares with a yield of 11 centners per hectare). On the basis of Canadian experience in crop rotations under roughly similar physical and climatic conditions 30 million hectares continuously under grain would require 60-90 million hectares in the rotation system, but no acreage expansion program of this magnitude has been even implied by Soviet officials. Thus far, about 30 million hectares have been reclaimed.

Recent Soviet statements give the basis for a more precise estimate of potential production in the New Lands. These statements indicate the current intention to reclaim about 40 million hectares, out of which, on the basis of the long-run experience in Canada, 13 to 20 million hectares could be grain. With a yield of 6 centners per hectare a New Lands average production of 8 to 12 million tons could be expected. This would represent about 10 to 15 percent of the estimated average USSR production for the four year period (1950-1953) prior to the inauguration of the New Lands program. A gross production of 8 to 12 million tons of grain -- after deductions for seed and waste -- indicates a net availability for direct human consumption of 6 to 9 million tons. This quantity would supply the grain requirements of roughly 30-40 million people.

The New Lands program is being implemented with the participation of some 11,000 collective farms, 1,700 machine tractor stations, and an undetermined number of State farms, including 400-500 new State farms. In the initial phase of the program the larger share of the reclamation tasks fall to existing machine tractor stations and collective farms, which could most easily exploit the readily accessible land located on their peripheries. In the later stages of the program, however, State farms have assumed an increasingly important role so that by 1956 State farm grain storage in the USSR was double that of 1954. In establishing these new State farms Soviet authorities have been influenced by several factors:

- (1) the suitability of the land for large scale grain farming
- (2) inadequate labor resources in the region
- (3) desire to expand the state sector of agriculture, thus assuring the channeling of a larger share of agricultural products through the state distribution net.

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Agriculture in the New Lands is planned to be highly mechanized. Initial machinery requirements have been met by heavy allocations of agricultural machinery to the New Lands at the expense of deliveries to established agricultural areas, and by loans from those areas. Loans of equipment have been particularly important in facilitating the harvesting and delivery of grain to concentration points. The major effect of deliveries of agricultural machinery to the New Lands probably has been to delay the re-equipment of agriculture in the established areas, particularly the grain areas, and therefore to impose a temporarily greater workload on the existing machinery park in those areas. After 1956 the mechanization problem of the New Lands program will be largely one of replacement.

The manpower requirements of the New Lands are relatively small, amounting to about 2.4% of the total agricultural labor force of the USSR. The increase in population in the New Lands area is estimated at about 2.8 million persons or about 1.4% of the total population of the USSR.

Some of the skilled laborers and specialists for the agricultural labor force of the New Lands have been recruited from industry -- a reversal of the usual procedure in the Soviet Union. In a recent speech out in the New Lands Khrushchev spoke of the need to "strengthen concrete guidance in each collective farm and state farm." He stressed: "We must send serious people, not those who already on Thursday and Friday think what the fishing will be like during the weekend." ^{1/} Barring major changes in the New Lands acreage goals, the program will not be a continuing drain on the national manpower supply. Once manpower requirements have been met and the shifting of construction workers and other laborers to agriculture has been completed, maintenance of the labor force should not present any particular problems.

Although construction expenditures have been fairly heavy in the New Lands, they do not appear to have had a serious impact on construction in other sectors of the Soviet economy. There have been many lags in construction and a shortage of storage caused some losses of grain after the 1954 harvest and will cause losses again this year with the good harvest. In general however, it does not appear that underfulfillment of construction plans has seriously hindered the New Lands program.

At the inception of the program in 1954 the New Lands region, especially the Kazakhstan portion, was characterized by a very low density of railroads. In addition, most motor roads were not suited to year-round use. Under such conditions transport problems were inevitable, pending the expansion and improvement of the transportation

^{1/} FBIS, no 147, 30 Jul 56, p. 603.

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network. Such was the case in 1954 when a huge volume of construction materials, fuel, and machinery congested the rail system, while outbound traffic was snarled in September and October by the increased load resulting from the bumper grain crop. The situation was not as severe during 1955 due to the opening, for temporary service, of several new rail lines in the New Lands area. However this year the transportation network again is faced with a tremendous problem of moving the good harvest, and some losses may occur when grain is stored in heaps in the open, awaiting transport to storage facilities or movement out of the area. Kuznetsov recently expressed the problem rather quaintly: "We are being attacked by grain from the virgin lands. This is a great and joyful offensive. We must receive this mighty grain flow in a organized manner." 1/

The New Lands livestock program is closely related, but subordinate to the grain program. In a speech last month in the New Lands of Kazakhstan, ^{Khvelchev} Khvelchev said: "When we were setting up the state farms we geared them to grain production in order not to complicate the initial period. Today, we must think about the development of sheep breeding in the new state farms, and the breeding of beef and dairy cattle, pigs and poultry." He even mentioned horsebreeding as a concession to the Kazakhs: "It is well known that the Kazakhs eat horse flesh. May they not pay greater attention to horse breeding? This must be considered ... Let us open shops where Kazakhs, Tatars and other nationalities who consume horse flesh could buy it. Perhaps we should also plan to sell horse flesh cheaper." 2/

The New Lands program has resulted in increased allocation to agriculture from the state budget. These increased expenditures have not caused reductions as compared to previous years, in the allocations for the major non-agricultural sectors or the rest of agriculture.

In relation to total allocations to agriculture and in relation to total state investment, the budget expenditures on the New Lands are seen to be large but not excessive. The most costly year of the New Lands program was probably 1955; in which the planned New Lands budget expenditures were approximately 20% of total planned allocations to agriculture. In the same year, New Lands investment was probably less than 4% of total planned state investment (in terms of fixed capital) in the National Economy and less than 30% of the 1955 total state investment in agriculture.

After 1955, budgetary expenditures in the New Lands should decrease, although mechanization continues at a rapid pace in 1956.

1/ FBIS, #134, 11 July 1956, p. D810. CUC
 2/ FBIS, #147, 30 July 1956, p. C83-4. CUC

An adequate appraisal of the New Lands program requires consideration of several separate aspects of the development and implementation of the plan. On the one hand, as an example of the workings of the Soviet system in a major economic undertaking, the New Lands suggests some generalizations as to important strengths and weaknesses of the Soviet socio-economic system. On the other hand, an examination of the program as an economic undertaking raises the questions: Why was the New Lands program undertaken at all, why was it initiated and implemented with such haste, and will it be a success or failure?

The New Lands as Evidence of Strength and Weakness in the Soviet Socio-Economic System

The speed with which the Soviets subjected the New Lands to the plow is unparalleled in history. Never before has a country extended its cultivated area so quickly. In slightly more than two years, 30 million hectares of virgin and long-fallow land were plowed and seeded. As pointed out earlier, thirty million hectares (about 74 million acres) is an area about 25% greater than the seeded acreage of wheat in the US in 1955. The American expansion into the Western areas in the nineteenth century was not nearly so rapid. From 1889 to 1899, the decade of the most rapid expansion of the US farm area, crop land harvested increased about 63.5 million acres.

Several important conditions contributed to the speed of the expansion, including the treeless characteristic of much of the area, the pre-existence of islands of cultivation, the pre-existence of some basic transportation facilities, and the availability of an appropriate technology. Central to the accomplishment, however, was the ability of a highly centralized and monolithic state to make quick decisions, and to marshal vast resources and the products of modern technology. Similar speed would be impossible in a free, decentralized society in peace-time, ^{even} with all the other conditions listed above. In a free society, thousands of individuals must make separate decisions in order for such large amounts of resources to be allocated, and the job could not be done so swiftly.

The New Lands program also exemplifies in a striking fashion the flexibility of the Soviet system. As late as October 1952 Malenkov had stated that "the grain problem is solved finally and irrevocably." In March of 1953 Khrushchev spoke of stepping up agricultural production "particularly in the central densely populated oblasts of the country where capital investments can produce the greatest economic returns in the shortest time". Yet, by September 1953 the New Lands program was under consideration and by March 1954 a great expansion of cultivated areas was under way.

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The flexibility of Soviet planning, like the ability to act swiftly, arises from the extreme centralization of decision making and authority. On the one hand, it may be argued that frequent changes in policy are a sign of irresolution or injudicious decisions. On the other hand, however, the ability to shift the direction of major programs rapidly is a source of strength.

The New Lands program also provides an example of the ability of the Soviets to implement a very large program without major dislocations in the economy, although in this case the program was hastily conceived and carried out with great speed. Even in 1955, the year of the greatest impact of the investment in the New Lands, the demands of the New Lands appear to have been met without serious harm to other important programs. Although there have been some shortages and bottlenecks in the New Lands they have not been very significant, on the whole. The largest part of the necessary investment has now been made, and the drain on the economy will be less in the future.

The New Lands program also provides examples of the potential weakness of centralized decision making. Although a society with highly centralized decision making may act very quickly in initiating and carrying out certain programs, it runs great risks of acting with insufficient information, and making avoidable mistakes as a consequence. This weakness arises because such a society lacks the balance provided by judgments of many minds, and may lack means of gathering objective evaluations from those in a position to judge best. This weakness has not produced consequences in the New Lands so obvious or so dramatic as the positive accomplishments, yet in the long run it may prove decisive.

A major weakness of the New Lands program is that it was apparently initiated and crystallized in its major aspects without any extensive preliminary scientific planning. The New Lands area was by no means an unknown region and the Soviets had in the past accumulated a considerable amount of experience in farming in that area. There is much evidence, nevertheless, that the new program was begun without an adequate analysis of the best procedures to follow and of the results which could reasonably be expected.

The attempts of the Soviets in the early thirties, to extend cultivation to the dry steppe area failed, and much of the acreage was abandoned. During the next 20 years, the possible expansion of cultivation was the subject of some discussion in the Soviet press, but there was no appreciable increase in published technical discussion prior to 1954, and many important issues remained unsettled. In fact some of the most crucial questions are still under debate. In the summer of 1954 expeditions were sent out to make soil surveys in the New Lands area. In January 1955 the Minister of State Farms of the Soviet SSR stated that the question of rota-

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debate on suitable rotations (~~see below~~) and have not yet arrived at a feasible longrun program. Even the total area to be plowed apparently remains in doubt.

The statements of Soviet leaders on the expected results from the New Lands have been overoptimistic. The experience in the thirties could not have provided the basis for their predictions, and it seems most unlikely that they are based on a sober, scientific analysis. The haste of the program, and the evidence discussed earlier concerning crucial, unsettled issues, leads one to suspect that the Soviets may have actually proceeded on the basis of unrealistic expectations. It is possible however that the Soviet leaders do not take seriously their own statements as to what the New Lands will produce.

Why Was the New Lands Program Undertaken?

By 1953 it was obvious that the Soviets would have to obtain more food in the future to feed their expanding population. In addition it became evident that some efforts were to be made to improve the monotonous diet.

The Soviet leaders had several alternative courses which they might have chosen instead of the New Lands program to obtain increased supplies of food. They might have chosen to import more food; they might have chosen to concentrate on increasing yields (the alternative which was emphasized in the period immediately preceding the New Lands program); or they might have expanded the area of cultivation by clearing forested areas.

It has not been possible to date to estimate the costs of grain which might have been obtained by these various alternatives. However, as will be shown later, there are reasons to believe that the Soviet leaders were not motivated primarily by economic considerations in their decision to develop the New Lands program in the way that they did develop it.

Expansion into the New Lands will yield certain results, which may be considered to be "economic", which would not have resulted from the alternative programs suggested above. By expanding the area of cultivation into new territory the Soviets should reduce the year to year variability in their over-all agricultural production. This was the effect of the New Lands harvests in 1954 and 1955. In 1954 the New Lands yields were exceptionally high while in the Ukraine yields were exceptionally low. In 1955 the positions were reversed, with New Lands yields being low and Ukraine yields high.

With the increased expansion of industry into the New Lands and the other eastern areas, it is possible that food transportation costs will be reduced as a result of the New Lands production. Regional self-sufficiency is a recurring theme in Soviet economic discussion. In case of a war and invasion, the existence of this internal grain area would be of obvious benefit.

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The New Lands program ^{has} had another characteristic which apparently weighed heavily in the decision to undertake this program rather than alternatives. Excluding the expansion of food imports, none of the alternatives would have produced results so quickly, and none of them, including imports, would have been nearly so dramatic.

Why Was the New Lands Program Initiated and Implemented with Such Haste?

Speed was apparently of great importance in the Soviet decision to expand into the New Lands. This is suggested not only by their choice of this program rather than alternatives, but also by the extreme haste with which the decision was apparently reached, and the program implemented. Why the Soviets rushed into the New Lands so hastily is a question not easily answered. Soviet leaders have not publicly addressed themselves to this question. They have alleged, however, that their decisions to develop the New Lands were based on economic criteria. Matskevich, USSR Minister of Agriculture, made an obscure and unelaborated comparison indicating that the cost of grain is less in the New Lands than in other areas. Khrushchev said that "... all these riches, that is, the virgin soil, have been unused all the time ..." because "It was beyond our thought during the first decades of Soviet rule when we still did not have sufficiently developed agricultural machine building." Brezhnev recently said that the availability of skilled manpower made the New Lands development practical now whereas it was not in the past.

It is doubtful, however, that the reasons for the speedy initiation of the New Lands program were economic. It is true that the development of technology and increased supplies of machinery and manpower affect the costs of production of grain, and can make economically feasible the extension of cultivation on previously sub-marginal lands. It is possible that such conditions, along with the conditions of demand for grain in the Soviet Union did make an expansion of the cultivated area desirable. These reasons are inadequate, however, as explanations of the sudden initiation of the program, and the extremely rapid commitment of resources without adequate scientific investigation. The development of technology, machinery, and the labor force did not take place overnight, and it was not necessary to organize them and commit them overnight. The great haste might have been understandable had there been a sudden and unforeseen food crisis. Despite the poor 1953 harvest, however, there was no evidence of any ^{such} crisis in the Soviet Union in 1954. In fact the Soviets continued exports of grain in that year. Clearly, a critical need for grain cannot have been the main reason for the rapid implementation of the program. In the turbulent internal situation after the death of Stalin, it is possible that political considerations weighed heavily in the decision. The program was dramatic, and with a good probability of initial success, was well designed to gain popular

attention and approval.

In the summer of 1954 and again this year Khrushchev made a lengthy trip through the New Lands area and spoke at numerous conferences of agricultural workers. He lost no opportunity to boast of New Lands successes and to point out the (quote) "correct" policy of the Party in ^{incorporating} ~~enlarging~~ the program. Thus, at a meeting in Siberia last month Khrushchev glowed as follows: "... Such is the power of the virgin land! For thousands of years these lands were lying idle and were no benefit to man. Now they have been placed at the service of our people ... The Central Committee of the Party has rightly outlined its policy in the field of the development of agriculture, the upsurge of the economy of the country, and the well-being of the people. This correct policy is the result of the close and unbreakable links between the Party and the people." 1/ A few days later at a Kazakhstan conference Khrushchev became enthused over the prospects of the current wheat supply. "Whereas up to now there have been complaints that by the end of the year in some towns the production of white bread had been reduced and substituted by rye and gray bread, this year's harvest insures to the country supplies of wheat, and lovers of white bread may rejoice!" 2/

Will the New Lands Program be a Success or a Failure?

If Soviet statements on expected production from the New Lands are accepted as a criterion, it can be stated with considerable confidence that the program will fail. As pointed out earlier the USSR will probably achieve, on a long-run basis, an output of approximately one-third the production that official statements have predicted.

It is possible, however, that official statements are not an adequate standard for formulating a judgment concerning the possible success or failure of the program. If, as suggested above, political considerations were important in the decision to undertake the program, then the political effects are relevant to a judgment.

In any case, it may be that the Soviet leaders do not take seriously their own statements about expected production. Soviet agricultural plans are seldom fulfilled, and are apparently based on naive "planning" concepts, or else contain an exhortatory or propaganda element which raises the goals above a reasonable level.

If an appropriate rotation is followed, the New Lands will probably add an average of 8 to 12 million tons per year (about 10 to 15 percent of the average production during 1950-53), to the USSR supply of grain. This grain, in terms of direct costs (labor, fuel, machinery, etc. directly involved in production)

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1/ FBIS, no 144, 25 Jul 56, CC-1.

2/ FBIS, no 149, 1 Aug 56, CC-7.

will probably be more expensive than grain produced in the traditional regions, because yields per hectare will be lower in the New Lands, and such direct costs are more closely related to the extent of area farmed than they are to the grain produced.

If the Soviet authorities do not develop more suitable rotations for this region than they have thus far publicized, they will not be able to maintain yields, and will run great risks of developing extreme dust conditions, which might even force abandonment of large areas. Unless such extreme conditions develop there is no reason to expect large scale abandonment of the New Lands. A large part of the necessary investment has been made, and the maintenance of the program will not be a serious strain on the economy.

In any one particular year, the production in the New Lands may be significantly higher or lower than the long-run average, depending on the weather and other conditions affecting production during that crop year.