SOVIET AGRARIAN REFORMS AND PRODUCTION IN THE SOCIALIST REPUBLIC OF UZBEKISTAN

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Summary

Uzbek agricultural sector under the Soviets (1917-1991), experienced unprecedented development. This was on account of nationalization of land, construction of irrigation network, high-tech agro-technical equipments, and introduction of fertilizers, besides experimental stations. The net result, besides elimination of feudal mode of the production, was a great development in agricultural production especially in cotton production which was made a strategic crop. Though republic was made dependent for food gains but simultaneously it was brought into the vortex of international market through the cotton cultivation.

Key Words: Cotton, regional specialization, irrigation, Kolkhoz (private cooperative farms), Sovkhoz (state farms), fertilizers, dehkans (peasants).

Introduction

Geographically, flanked by Kazakhstan to the west and the north, Kyrgyzstan and Tajikistan to the east, and Afghanistan and Turkmenistan to the south, the republic of Uzbekistan is endowed with a peculiar geo-physical frame that is dominated by deserts, semi-deserts and steppes, and has long seasons of warm dry climate. For these features and in particular lack of natural precipitation it was regarded that agriculture was almost a gamble in the region.[1] However, none of these causes have deterred the people to practice farming as the area is endowed with abundant river resources and long stretches of fertile alluvial soil. In fact, agriculture is one of the major sources of the economy.[2] Even though, presently it has squeezed due to low output and high input labour,[3] the political-
administrative order of the Republic rests on the growth of agriculture and its rising productivity.[4] Much has been achieved because of endeavours that were put by the Soviet.

There were two types of crops grown in Uzbekistan, one based on dry farming and another on irrigation. This was so for centuries and peasants devised the cropping pattern accordingly. Dry farming, called lalmikarkik or baharikarkik,[5] was conducted in the loess moisturized foothill lands where annual rainfall averaged between 250 and 400 mm[6] and cultivated cereals were mainly wheat, barley and maize.[7] But due to the low and unreliable rainfall the yield always remained low.

On the other hand irrigated farming, called suwli or ‘autumnal agriculture’,[8] was conducted on such fertile soil having access to water resources like the areas of serozems which are adjacent to streams and rivers. The crops grown in these irrigated lands included rice (shali), sugar- beets, potatoes, pomegranate, figs, almonds, melons.[9] The commercial or the industrial crops like cotton (pakhta), which occupied the greatest proportion of irrigated land in whole country,[10] alfalfa, tobacco, tea, sesame (kanjat), vegetable oil, etc were also grown on such fertile soils dependent on the river irrigation. All these crops were grown in different proportions at different times. The land use pattern is reflected in the following figure of 2002.[11]

As in the country two great rivers, Amu Darya and Syr Darya, flow from one extreme to the other their benefit was and continues to be reaped by the upstream villages and those which were situated just near them. Nevertheless, this limitation, together with the absence of normal precipitation did not debar the peasantry from organizing agricultural activities with the help of artificial irrigation mechanism. Traditionally the peasantry built, for irrigation purposes, small dikes made up of thistles filled with brash wood and stones that were used to shunt water into the mouth of the canal. For lifting water from these, large wheel with a rope and a pot attached to its ram (chigger) was operated. The water lifting device was generally driven by camel, donkey or horse.[12]
For the smooth flow of water, drugging in small canals (aryak) was carried out by the local peasantry to clear silt deposits and to enhance their capacity of water reservation. In the big canals the drugging was conducted on the community basis. Another mechanism created by the native peasantry was to store rain water at such places where irrigation system based on river water was not available. For this purpose at higher altitudes rain water was stored in ditches, which were also reinforced with embankments at some times, and then carried through underground tunnels (karizes), though this type of canal irrigation mechanism was expensive, for it required professional workers to dig underground canals.

These operations allowed the peasantry to cultivate agricultural products from the irrigated lands that were about 800,000 hectares during the Tsarist times. But the Soviets upgraded this irrigation system under the programme of ‘Nationalization of Land and Water’ in 1920’s and more so under the first two Five Year Plans (1928-1933 and 1933-1937). Serious efforts were made to upgrade irrigation system by constructing a network of irrigational canals which included: Stalin Great Farghana Canal (270 kms), the Mikoyen Southern Farghana Canal (108 kms), the Molotov Tashkent Canal (63 kms), and the Northern Tashkent Canal. Pursuant to these measures by 1938 the new canal system increased the acreage of irrigated cultivable land by more than eight times, raising it to the extent of about 14,80,000 hectares. By the end of 1947, in the Hungary Steppe, Golodnesk Canal was constructed that helped to add another 20,000 hectares of desert area under cultivation. Besides the canals, Soviets supplemented the irrigation system by constructing hydel reservoirs of which Katta-Kurgan reservoir was significant enough for having a volume of 100 million cubic meters in 1946 which was subsequently elevated to store 300 million cubic meters of water.

These measures allowed to have more land for agricultural activities that was without the facilities of irrigation mechanism so far. As a result the acreage under various crops increased many times to increase the total production of the crops in Uzbekistan. For example, in 1913 the total sown area was 2,166,000 hectares which increased to 3,495,000 hectares by 1968 and subsequently to 3,995,000 hectares by 1980. Accordingly the production of various crops also showed growth tremendously. Cotton yield per hectare was 12.2 quintals in 1913 which reached to 25.0 quintals by 1968 and subsequently to 33.2 quintals by 1980. So was the case with other products. Grain yield per hectare was 0.41 metric tons in 1940 that grew to 1.69 metric tons by 1976 while as fodder production also increased that allowed the livestock production to increase from 2.8% in case of meat and 2.9% in case of milk products between 1940 to 1965 which subsequently reached to 5.1% and 6.4% respectively by 1965 to 1975.

This, however, was not solely because of creating well developed irrigation mechanism but also because Soviets implemented new policies in the agrarian system soon after 1920. One of these was nationalization of land to dismantle the feudalism for the establishment of socialism, which was enforced subsequently by Stalin, and to implement NEP for bringing radical changes in the agriculture sector. Soon after, with the arrival of die-hard Stalin, large scale state sponsored collective farms instead of individual peasant holdings were created under the programme of mass collectivization. The programme organized the agriculture on two types of farms: kolkhoz (collective farms) and sovkhоз (state farms) respectively. In case of the kolkhoz farms the peasants in lie of their labour input were having the right to use one third of the production for their own purposes or to sell it or its share in the market. The remaining of the two third was divided in to two equals; one share was that of the State in the form of levis and the other of the cooperative that provided seed, farm equipment and fertilizers as well as provided pension and allied benefits to the
retired peasants.\textsuperscript{[27]} On the other hand \textit{sovkhоз} farms were given to peasants for cultivation but without having any right on the produce. They were simply the workers of the State paid monthly wages and pensionery benefits and it was the State that made all types of expenditure for the cultivation of the crops that were grown in these farms.\textsuperscript{[28]}

Because of some unprecedented upsurge against the forced acceptance of the programmes\textsuperscript{[29]} the Stalin government allowed peasants to hold personnel plots to grow eatables on them for their personal use with the right to sell the surplus in the market.\textsuperscript{[30]} As a result of this socialist policy, \textit{kolkhoz} and \textit{sovkhоз} households in the Republics were 60,000 in 1937 which constituted 95\% in the sown area\textsuperscript{[31]}, while the rest of the farm land was used for the personnel plots.

The personnel plots were used by the peasants to grow vegetables while as the other two farms were utilized for the cultivation of commercial crops like cotton and grains.\textsuperscript{[32]} Before the formation of the Soviet Union the farmers in Uzbekistan were growing cotton but it never assumed such importance as it did afterwards. For example in 1913 the total area under the cotton cultivation was about 400,000 hectares while as by 1938 it reached more than 917,000 hectares.\textsuperscript{[33]} The well laid out irrigation net work that Soviets created by 1938 allowed to increase the cotton crop acreage to the tune of 1, 878,000 hectares by 1980.\textsuperscript{[34]} It is generally held that Soviets initiated such programmes in the area that lead to grow only cotton in \textit{kolkhoz} and \textit{sovkhоз} farms so that the textile industry mainly based in Russia was getting bulk of the raw material from Uzbekistan. The mono-culturization even though provided the State and the cooperatives cash in lieu of the cotton produce yet at it’s cost other grain crops were almost ignored for the cultivation. The irrigation mechanism, therefore, was of little use to the farmers as far as to produce their own food that was wholly imported from Russia. On the other hand initiatives were taken to have more yield of cotton produce that in 1913 was 1,220 kgs per hectare while as in 1980 it was as high as 3,320 kgs per hectare; thereby changing the total cotton produce from 522,000 tones in 1913 to 6,237,000 tons in 1980\textsuperscript{[35]} - the production growth that was twelve times more.

Soviets along with also changed the farm equipment in Uzbekistan. Traditionally the farmers used tools that were quite simple and few; and included a kind of hoe or spade (\textit{ketman}) consisting of round iron blade fastened at right angles to the end of long handle. The other tools were wooden harrow (\textit{mola}), used for leveling and sealing the soil and the sickle (\textit{orag}) used for harvesting grain and alfalfa. A primitive plough with a small iron tipped plough-share (\textit{amach}) was driven by a pair of oxen (\textit{gosh}) to prepare the fields for cotton.\textsuperscript{[36]} In the post World War II period, under the programme of “structural transformation of agriculture”, high-tech agricultural instruments were introduced. For instance, in the Republic by 1940 the total number of tractors was 23,600 which under the efforts reached to 69,300 in 1959.\textsuperscript{[37]} The cumulative result was the great leap especially in the production of the cotton. For instance, the republic produced 8 million tons of raw cotton per seasons per \textit{kolkhoz} or \textit{sovkhоз}, an increase that changed the shape of the field agriculture in the State and Uzbekistan was thus able to produce in just two and half seasons what was produced before the revolutionary era in an aggregate of 50 years.\textsuperscript{[38]} Further improvement in its cultivation was affected when in 1949 over 200 machines and tractors were employed in the cultivation of collective farms.\textsuperscript{[39]} Cotton planting was mechanized on 70.9\% of land while as 64.9\% of land used for other agricultural products was harrowed by machines.\textsuperscript{[40]} For picking cotton, machines were introduced and agro-technical experiments were carried out in Tashkent. These experiments included the introduction of more and more research and experimental stations for improving cotton production which allowed using number of new seed varieties for high yield and resistance against potent crop diseases.\textsuperscript{[41]}
Besides earth moving machines, pipes, electrical equipments, pumps and cement for irrigation projects, a number of fertilizers were supplied to the producers of cotton in the Republic. These included nitrogen fixing agents like the sowing of the alfalfa after the harvesting of the cotton, in addition to nitrogen, phosphorous and calcium fertilizers that were chemically produced. In fact in Uzbekistan the use of chemical fertilizers was very high for the bulk yield of the cotton as in 1980 nitrogen fertilizer input was 243 kgs/ hectare while in the rest of the USSR it was as low as 35.8 kgs/ hectare.[42]

It is true that behind the Soviet agrarian initiatives, which included the up-gradation of irrigation mechanism, allocation of grants, mechanization and chemiclization, etc. in the Republic, was the cotton monoculture, but Soviets had reasons to resort to this sort of monoculture.

The first important reason was that during the Tsars, due to the Civil War in United States (1861-65), the imports from the US could not meet the requirements of the Russian textile industries, with the result the country felt short of textile products for which it depended primarily on the imports. In order to end the dependence on the overseas imports the Russian government after conquering the Central Asian region made it an economic zone for supplying raw material to the textile industries located in Russian.[43] The Soviets continued the Tsarist policy of eliminating the dependence on the foreign imports in letter and sprit and thereby making the republic a raw material supplying base for textile industries in central Russia.[44]

Second important reason for cotton mono-culturization was the principle of maintaining the inter-republican interdependence on which the Soviet statecraft rested upon. Under the system the Soviets developed the mechanism of dependency of one republic on the other to maintain the Marxist principle of ‘egalitarian society’ throughout the Soviet Union.

Another very important reason was what is called ‘regional specialization’- i.e. the favourable conditions for the growth of a particular crop in a republic like cotton in Uzbekistan. In fact, regional specialization was the characteristic of crop specialization across the whole erstwhile USSR. For instance, in the republics of Ukraine and Byelorussia rice and potatoes were made the strategic crops. Equally important reason for cotton monoculture in the republic was the lucrative feature of the crop than other crops and the fundamental source of promotion of national income. The Soviets by adopting such policies succeeded as early as 1933 in their design as they secured the ‘cotton independence’ position.

The reforms that were carried out during the Soviet period not only helped in the growth of cotton production but many other crops also developed on the same pattern even though the acreage under their cultivation was meager. For instance, by 1976 the vegetable production in the republic stood at 1710,000 tons, which in 1980 reached to 24,29000 tones, and by 1984 to 26,30,000 tons. Rice too showed the healthy trend as the production increased from 530,000 tons in 1980 to 558,000 tons by 1984.[45]

Some critics held that the cotton was given more price rates than grains therefore peasants also chose to grow cotton than anything else. But it is also true that it was the policy of the Union to lead them towards the cotton cultivation. They in fact were provided food grains, in return, at lower prices. However, cotton cultivation was more labour intensive than grains therefore the higher prices for it. For instance, for the cotton cultivation it required 1,089 man-hour labours per-hectare, where as grains required 181 man-hour labour per-hectare.[46]

Some Western scholars, like A. Beningson, K. Carpath, Michel Rywkin, Alexander Park, D. Pipes, Jeoffery Wheeler, etc. have dubbed the Soviet agrarian measures in the region reactionary to the peasants. For instance, H. Dinerstain, an American scholar, wrote, “…not only did the peasantry gain nothing from the agrarian reforms, but on the contrary their life became worse due to the lack
of ownership rights.”[47] Yes it is true that Nationalisation policy deprived the land owners from the ownership rights but most of the land owners in the republic were *kulaks*, the feudal lords who even though in minority possessed more than 60% of the cultivable land.[48] The *dehkans* were oppressed by the *kulaks* and received very little returns.[49] It is also true that ownership rights allows land tenure security and therefore leads to better crop productivity as has been proven by the Soviet system itself when they allotted personal plots, even though land without the ownership rights, to the *dehkans* who are said to have produced more than those working in the other farms. [50] Alexander Park, however, writes that the agrarian policies were carried counter to the interests of the *dehkans* for they received low income from agricultural activities than the skilled workers.

No doubt, the extensive mono-culturization destroyed the agrarian balance[51] and marred the republican capacity to produce food grains for which Soviets must be blamed, but in the long run it has also helped in foreign earnings and brought the Republic into the vortex of the international market.


[2]As per one estimate, in 1999 the share of agriculture in the GDP of the Republic was 25-30% and 55% of the country’s currency receipts. In terms of employment, more than 44% of the country’s active populations directly or indirectly were employed in agriculture: Natural Resource Aspects of Sustainable Development in the Republic of Uzbekistan, information provided by the Govt. Of Uzbekistan to the 5th and 8th Sessions of the United Nations Commission on Sustainable Development, Nov. 1999; Uzbekistan: An Agenda for Economic Reforms, Washington, D.C., 1999, pp.115-117.


[13] Small canals were cleaned before February, big canals in February and major canals in March. Allworth, Central Asia: A Century of Russian Rule, p. 271.


[17] Koates, Soviets in Central Asia, p.188.

[18] Work on Verkhno Bukhara and the South Bukhara (total 12 miles) was completed in just 25 days: Koates, Soviets in Central Asia, p.188.


[21] In India, Iran, Turkey and Pakistan it was 1.22, 1.27, 1.31 and 1.44 metric tones respectively in 1976; Aziz-ur-Rehman Khan and Dehram Ghai, Collective Agriculture and Rural Development in Soviet Central Asia, London, 1979, p. 74.


[24] New Economic Policy, implemented at the 10th conference of the Russian Communist Party, March 10, 1921, was adopted and implemented as an alternative to counter check the adverse effects of ‘War Communism’- a policy under which the peasants were forced to surrender the food grains to the state to feed the fighting forces of civil war. The important features of the policy was tax in kind called in local parlance/terminology prodnolog, legalization of commerce, private initiative in manufacturing and partial restoration of market regulation mechanism to win the peasantry to the Soviet side. In this way the policy proved as a powerful stimulant to agricultural
production. For example, in 1927 the cotton production of the Republic stood as 13,648 poods which subsequently reached to 84,681 poods by 1828. Similarly maize production increased from 21,385 poods to 90,520 poods, rice from 845 poods to 1,820 poods, mung beans from 87 poods to 396 poods, lucerne from 1,265 poods to 23,496 poods: Aminova, Changes in Uzbekistan’s Agriculture (1917-1929), Moscow, 1974, p.211; Zhores A. Medvadev, Soviet Agriculture, p.38; Olaf Caroe, Soviet Empire, New York, 1967, p. 176; R. R. Sharma, Marxist Model of Social Change: Soviet Central Asia, New Delhi, 1979, pp.73-76.


[26]Collectivization was the most important policy in the agrarian history of the USSR. The drive / programme was generally attributed to Joseph Stalin but in fact the Marxists / Communists from the early times have been strongly advocating the concept of large state sponsored collective farms in preference to individual farms. However, Lenin immediately after October Revolution also strived for collectivization, but could not do so partially because state was at embryonic stage and the peripheries like Central Asia was still under the deep shadow of feudalism: Najeda Ozerova, “Collectivization and Socialization of agricultural production in Uzbekistan. The Soviet Policy in 1930’s”, The Journal of Central Asian Studies, Vol. XV, No. 1, Srinagar, 2004-05, p. 1; Mark B. Taugher, “Soviet Peasants and Collectivization -1930–39: Resistance and Adaptation”, The Journal of Peasant Studies, Vol. 31, No. 3 and 4, April / July, 2004, pp. 427-432.


[29]The first such demonstration on June 15, 1930 by a mob of 2,000 villagers, armed with local implements like hoes and axes set off from Iskoval to its district centre where they met the district authorities against the forced programme of mass collectivization. The agitated mob was fired upon consequently several peasants and labourers got wounded and about twenty women were arrested. Such riots also took place in Fargana and Bhagdad districts of the republic. In Kaskadarya region, 14 cases of mass peasant riots with estimated participation of 3.7 thousand people were registered. According to statistical reports of the Joint State Political Department (OGRU), the number of peasants riots throughout the Soviet Union was 13,754, Journal of Peasants Studies, Vol-31, Nos.3 and 4, April/July, 2004, p.437; out of which 240 riots were registered from the Uzbek Republic alone. The Journal of Central Asian Studies, Vol. XV, No.1, Srinagar, 2004-05, p. 47.


[32]It needs to be pointed out that the personal plots were exclusively meant to fulfill the domestic needs of the kolkhoz peasants in terms of edibles and vegetables and not for cotton cultivation.


[34]Koates, Soviets in Central Asia, p.186.
The machines were also introduced in other agricultural products. For instance, potatoes digging machines were introduced to give good yield of potatoes: Allworth, Central Asia: A Century of Russian Rule, p. 186.

Long staple cotton was introduced which never suffer from wilt and ripen more quickly than the native Asian cotton. However, recently a type of cotton was introduced which resist Hommo’s disease and in this type balls grow on the branches but on stalks which allow the planting of 5 or 6 times more cotton than usual. Natural colored cotton too was introduced which by 1947 covered 18,500 acres of land: Koates, Soviets in Central Asia, p. 186.

Similarly phosphorous fertilizer was 131 kgs per hectare while in the rest of the union it was just 24.2 kgs per hectare; Uzbekistan: An Agenda for Economic Reforms, p. 222.

One important reason for the USSR was to end the overseas imports from USA was the ideological difference with the USA. Another very important was to generate the economic opportunities for the government as well as for the people within the country.

National Economy of USSR, Statistical Return, Moscow, 1997, p. 130. Among the vegetables the production of potatoes in 1976 stood at 190,000 tones which reached to 242,000 tons by 1980, and to 373,000 tons by 1984.

Sharma, Marxist Model of Social Change: Soviet Central Asia, p. 76.

[48] Devendra Kaushik, Central Asia in Modern Times: A History from early to 19th century, Moscow, 1970, p. 71. As per one estimate the total population of the kulaks and bourgeoisie (capitalist class) in the Soviet Union stood at 4.6% by 1928, which by privileged rights related to the collection of revenue from the individual cultivators in villages and other administrative divisions dominated 74.9% of the peasantry. In 1912-1913, 5.52% of the total household of kulaks (landlords), possessed 33.51% of cattle, when 49.22% of the peasant families possessed just 11-12%. L. G. Churchward, Soviet Socialism: Social and Political Essays, London, 1987, pp.26 -27; Tulepbayev, Socialist Agrarian Reforms in Soviet Central Asia and Kazakhstan, p. 24.

[49] Due to the inbuilt economic differentiation and varying control over means and forces of production, such peasants were divided into three distinct categories; the bednyaki (poor peasants), seredniaks (middle peasants) and kulaks (land lords). Besides these, there were also batraks (landless agricultural workers). These landed poor and land less section of the society worked on crop sharing basis called in the region chairikari- a system in which the peasant was entitled to 1/4th share of the gross produce from the fields of the Kulak: Kaushik, Central Asia in Modern Times: A History from early to 19th century, pp. 66, 69.

[50] The issue of personal plots and their performance has been controversial one in the context of Soviet agricultural development. Aziz-ur-Rehman Khan and Dehram Ghai report that one school of thought consisting of the western economists believe that the personal plots have much higher output per hectare than the collective agriculture. Likewise, the Soviet economists on the other side believed that throughout the Soviet period the overall performance of the personal plots in the agriculture was very negligible. In fact, they have found that these farms contributed from 18 to 40 percent of total household income in the republic. Khan and Ghai, Collective Agriculture and Rural Development in Soviet Central Asia, p. 77.

[51] Before the Soviet presence in the region agriculture system was based on self- sufficiency. Different crops diverse in nature and value were cultivated to fulfill the day-to-day requirements of the people. Arminus Vambery, Travels in Central Asia, New Delhi, revised edition 1994, pp. 341-343. However, with the Soviet dominance the resort was made to cotton monoculture to fulfill the imperial designs that too at the cost of the food grains. With the result the grain cultivation which was carried on 1,479.7 thousand hectares in 1940 reduced to 894.8 thousand hectares by 1960. When on the other hand, in some oblasts of the Republic (1987) like Fargana Valley the percentage of the cotton stood at 64-72%, in the Bukhara Oblast 70%, in Merv Oblast 68% and in Mary Oblast 65%: Peter R. Craumer, “Agricultural Change, Labour Supply, and Rural Out-Migration in Soviet Central Asia”, Robert A. Lewis, Geographical Perspectives on Soviet Central Asia (ed.), Rutledge, Taylor and Francis Group, London, 1992, pp. 143-44. It is on account of the Soviet imperial interests that the republic suffered for food gains and in fact became a major parasite for the same.

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