International Journal of Social Science And Human Research

ISSN(print): 2644-0679, ISSN(online): 2644-0695

Volume 04 Issue 11 November 2021

DOI: 10.47191/ijsshr/v4-i11-42, Impact factor-5.586

Page No: 3363-3366

Attention to Land Reclamation in the Years of Stagnation in the Republic of Uzbekistan

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ABSTRACT: The "Farkhod Hydroelectric Power Station" which was built in Syrdarya region has irrigated 700,000 hectares of fertile land in Dalvarzin and Mirzachul districts of Uzbekistan, Tajikistan and Kazakhstan. "Andijan water reservoir" was built in the Karadarya River of Fergana Valley, and a hydroelectric power plant with a capacity of 140,000,000 kilowatt-hours was commissioned. Due to the commissioning of "Tuyamuyin" waterworks in the lower reaches of the Amudarya River, it was possible to irrigate 300,000 hectares of land in the Republic of Turkmenistan and Uzbekistan, as well as 200,000 hectares of new land for rice and cotton growing. In addition, this water facility has protected the land from erosion and provided with 150,000 kilowatts of electricity[1].

KEYWORDS: Mineralization, Waterworks, Mechanization, Land Reclamation, Irrigation, Land Reclamation, Chemicalization, Implementation.

1. INTRODUCTION

Along with improving the fertility and quality of lands, great attention was paid to increasing the technical capacity of land reclamation. It is known that mechanization of land reclamation was organized in the mid-1950s, in 1955-1960 there were 26 machines and mechanisms in the industry, and in 1966-1970 consisted of 183 pieces, in 1971-1975 consisted of 311 pieces, in 1976-1980 consisted of 311 pieces and in 1985 consisted of 346 units.

The efficiency of the annual work for water loss increased from 0.48% in 1965 to 0.62% in 1984.[2] A reduction in the amount of water used to wash the soils was achieved. Advanced technologies have been introduced using scientific and technical achievements. Open and closed, as well as coordinated drainage methods were used on more than one million hectares of land.[3]

As a result of the work done, the amount of water used in agricultural production has decreased. For example, 16.4 cubic kilometers of water were used for the production of agricultural products worth UZS 1 billion in 1965, indicator showed 8.3 cubic kilometers in 1984.[4]

However, the cost of acquiring new land has rarely paid off.[5] For example, the first land acquisition in Mirzachul was completed in 1972. The cost of relocating the Jizzakh desert did not pay off until the mid-1980s or led to additional costs.

Water use by non-standard households increased by 15 percent, and its calculation was at its lowest level. Water loss was 9,414 million cubic kilometer, of which 2,388.05 million cubic kilometer were not returned or reused at all.[2]

2. IRRIGATION

Abnormal water use by farms increased by 15 percent, and its calculation was at its lowest level. Water loss was 9414 million cubic kilometer, of which 2388.05 million cubic kilometer did not return or was not used at all.[1]

Between 1975 and 1983, the productivity of irrigated land decreased from 44.6 to 35.9 percent. The area of land with a decrease in land productivity increased from 1,684,000 to 2,434,000 hectares in those years, and 73,000 hectares of land were not used at all. In particular, this situation was formed 2.5% in Jizzakh region.

Observations of Central Asian Research Institute of Irrigation scientists on the new irrigation zone of Mirzachul showed that 50% of new lands were saline in "Pakhtakor", "Khamza", and "G. Yunusov" cotton farms. In general, non-saline lands accounted for 1.7% in the farm "G. Yunusov", 7.61% in the farm "Pakhtakor" and 16.2% in the farm "Khamza".

As a result, the yield on these farms fell to 12.8 quintals in 1983, 7.8 quintals in 1984, 12.4 quintals in 1985, and 9.5 quintals in 1986 or no crops were harvested from the newly acquired land for more than a year at "Galaba" farm in Syrdarya region.[2]

One out of every five hectares of newly allotted land in Jizzakh Province required renovation, or by the end of 1986, 4/1 of collectors and 3/1 of closed drains were out of order.[3]

As a result of mineralization of the Syrdarya River and an increase in sodium, calcium and other salts content was 1.29 grams of salinity of the water. On the other hand, the water of these two rivers often did not reach the Aral Sea. In 1960, 62 cubic kilometer of water, and in the 1970s, 40 cubic kilometer of water reached the Aral Sea. In 1985, only 0.9 cubic kilometer of collector drains were poured into the Aral Sea.

3. RECLAMATION WORKS IN THE ARAL SEA

The problem of the Aral Sea was the result of the unrealistic "experience" of the former Soviet government. In 1929, on Stalin's personal instructions, a group of water scientists led by engineer V. Zinovev arrived in Uzbekistan. According to their conclusion, in order to grow cotton, it is necessary to dry the Aral Sea and they plan to grow cotton and rice crops in the future at the place of dried-up Aral Sea. In addition, they solved the problem of the Aral Sea by themselves and it should be noted that the scientists of the center are to blame for the drying up of the Aral Sea. According to the unscheduled plan of the center, the "Aral tragedy" occurred. It was only after Uzbekistan's independence that the issue of finding a solution to this problem began to be considered on an international scale;

According to water erosion during irrigation, about 40-80 tons of fertile part of the hectare of land was drained. The saddest thing is that one centimeter of useful elements (humus) on the surface has also been washed away.

As a result, by 1990, 2 million hectares of 4164 thousand hectares of irrigated land in Uzbekistan and it was necessary to restore the reclamation condition of 62,000 hectares, including the implementation of complex reclamation measures on 62% of land, capital leveling of 540,000 hectares, rehabilitation of collector-drainage on about 300,000 hectares and improvement of irrigation on 300,000 hectares.

Irrigation and reclamation works in 1971-1989, mainly aimed at increasing gross output by any means. On the other hand, 60% of irrigation water was used extensively and 40% of it was used intensively. As a result, 95% of the crop was grown due to the increase in land area. Only 5% of the production was due to increased productivity.

The main reason for the poor condition of irrigation and land reclamation works was that the capital funds allocated for water construction were allocated through the center. Therefore, 80-85% of the allocated capital was spent mainly on the development of new lands. Thus, the intensification "experiment" used by the center in this area did not pay off, or the use of land and water was carried out inefficiently, and the state of stagnation continued.

It has been scientifically and practically proven that the chemicalization of cotton helps to increase yields on a regular basis. Proper use of mineral fertilizers, defoliants, desiccants, toxic chemicals, proper application of agro-technical rules can not only increase the yield of cotton, but also reduce its cost. The amount of mineral fertilizer has been increasing year by year, from 0.3 thousand tons in 1940 to 1,060,000 tons in 1990.[3]

Since the 1970s, there have been cases of violations of the technology of using mineral fertilizers in cotton growing. However, the idea arose that the more mineral fertilizers are added, the more raw materials can be increased. As a result, 250-270 kg of nitrogen, 140-160 kg of phosphorus and 60-80 kg of potassium fertilizers were applied per hectare. The reason for this was the administrative command of the center, which instructed only on the plan to increase the gross yield of cotton. That is why the annual reports show that the amount of cotton is growing from year to year, 50-60 quintals, and even higher. In fact, in the state and collective farms, the opposite was true and the quality of raw materials was deteriorating. There were also shortcomings in the introduction of scientific and technological advances into production. Scientific guidelines and recommendations approved by science did not justify themselves in production. Regardless of the quality of the cotton fields, the same mineral fertilizer was applied. Irrigation regime and agro-technical rules were violated.

4. CHEMICALIZATION OF THE PRODUCTION

The use of mineral fertilizers in cotton has increased the consumption of labor. For example, the use of mineral fertilizers has led to a decrease in cotton yields instead of an increase.

If in 1926-1963 the production of raw materials reached 35.9-36.6 quintals due to the use of mineral fertilizers, during 1964-1976 it increased up to 33.1 quintals, during 1981-1984 it increased up to 29.9 quintals.[1]

It is known that plants receive only 30-40% of nitrogen and potassium, and 10-15% of phosphorus. The presence of fluorine in phosphorus not only affects the biological properties of the soil, but also contributes to runoff and groundwater. One ton of superphosphate contains 60 kg, and ammophos contains 165 kg of fluorine. Phosphorus fertilizers contain toxic cadmium, strontium and even uranium. This reduced the productivity of the fields, reduced productivity, and led to various diseases in people after consuming milk and meat.

The cost of using mineral fertilizers depends on its price, supply, and storage. The use of mineral fertilizers accounts for 8-10% of the total cost of raw materials. Taking into account that mineral fertilizers are imported from distant countries, its cost will increase further or will be 450-650 UZS instead of the standard 200-250 UZS.

Despite the fact that the recommendation to apply mineral fertilizers to the field is defined as the period of plowing, sowing and growth of crops, these rules are violated in many cases. As a result, the Cotton swabs became infected with wilt disease.[2]

All beneficial living organisms in the soil were lost. Due to Wilt's disease in 1975-1976 70-80 thousand tons, in 1977-130, and in 1979-82 50 thousand tons of raw materials were received.[2]

The experiment of chemicalization used in 1971-1980 did not pay off. If in 1966-1970, on average, 339 kg of mineral fertilizers were applied per hectare and 24.9 quintals were harvested, an average of 439 kg of mineral fertilizers was used and 25.7 quintals were harvested in 1986-1990. This means that during these years the yield increased by only 0.8 quintals. In addition, the first grade of raw cotton decreased from 56.2% to 43.4%. The fourth variety increased from 12.9 to 22.0 percent.[3]

Warehouses and special buildings were not enough to store mineral fertilizers. Out of 1963 chemical stations on the farms, only 270 met the demand.[4] In 1986-1989, the construction of warehouses with a capacity of 80,000 tons was not completed. As a result of the lack of storage facilities for 350 thousand tons of mineral fertilizers, 330 thousand tons of it was lost or 40 mln. UZS were lost.[5]

In 1990, out of 1804 farms of the storage facilities and warehouses did not meet the requirements, or 336 warehouses for storage of 933 chemicals warehouses, or 40% of them were in good condition.[6] In 1989, 194,000 tons or 36 percent of the 541,000 tons of fertilizer were lost.[7] In the process of unloading, transportation and storage of mineral fertilizers, 60,000 tons were not produced, or 7.4 million UZS was lost.[10]

As a result, more than 2,700 tons of toxic chemicals and mineral fertilizers, as well as more than 200,000 empty containers were found in the fields. As a result of the theft of toxic chemicals, it was found that mineral fertilizers and toxic chemicals were stored in the yards of 212,000 people living area.[1]

One of the main reasons for the economic stagnation of 1970-1985 and the "experience" of the former Soviet Government in the field of chemicalization in the cotton industry was the lack of ownership, which led to a direct lack of ownership in the introduction of scientific and technological advances.[9]

Cotton stalks are damaged by many types of pests, fungi and bacteria, mainly spiders, thrips, three different plant lice (cotton or alfalfa or acacia, large cotton lice - kukshira), rodents.[3] If the above-mentioned pests are not treated in time, many species of locusts (Moroccan, Asian, Italian locusts, etc.) can cause damage. In addition, the most common root rot of cotton, and the fight against wilt diseases has been a topical issue in cotton growing.[6]

By the late 1950's and mid-1960's, measures to protect cotton from pests, diseases and weeds were developed and the following tasks were set accordingly:

- control of autumn pests that overwinter in the fields emptied of crops in the fall;
- pre-sowing treatment of seeds, control of wilt desease and root rot of germinating cotton, increase of resistance of cotton to pests;
- planting of wilt-resistant varieties, prevention of damage to germinated cotton seedlings by rodent insects;
- uprooting weak seedlings of sung cotton after germination. Not allow over-irrigation;
- control of spiders, aphids and carotenoids during the growing season of cotton and defoliation of cotton during the most favorable period;
- be sure to uproot the cotton stalks and complete the plowing in November;

Each year, 7.000 spraying machines and tractors, more than 500 aircraft and more than 20,000 specialists and employees worked to implement these measures.[1]

Between 1970 and 1985, the use of over-the-counter toxic chemicals increased by 15.6 percent as a result of over-instruction. Another reason for this is that ammunition spraying has increased year by year as a result of treatment of many farms without fully determining the presence of pests and diseases in the fields. In 1976, instead of pest control on 4367.6 thousand hectares, 5341.1 thousand hectares or 973.8 thousand hectares of ammunition were sprayed.[2] In particular, about 38.3% of toxic chemicals were sprayed by tractors and 51.6% by aircraft, which polluted the environment and adversely affected human health.[3]

Recommendations on the effectiveness of the use of herbicides were not used in cotton growing, and as a result, scientific recommendations or rules for the use of herbicides were violated. The reasons for this are:[7]

- Scientific recommendations for the use of herbicides in practice were considered indifferently or were not followed;
- The plan for the introduction of scientific innovations in accordance with the administrative instructions was artificially implemented;
- In many cases, based on experiments, it was recommended to produce herbicides in high doses (30-55 kg), without taking into account the effect on cotton crops (alfalfa, corn, etc.) in the planting system;
- Under the influence of cotton monoculture, the use of herbicides in one area for 20-30 years has created various toxic chemicals in the soil, which negatively affected the growth of plants;

- The provision of farms with toxic chemical means of plant protection, storage procedures were not followed.
- As a result, large quantities of toxic chemicals were stored in open field conditions or kept in unsuitable areas.

5. CONCLUSION

During the scientific research, we have witnessed a similar situation with pesticides widely used in cotton growing. When pesticides were sprayed by non-compliant technical means, 80 percent of them fell on the ground and the surrounding but not on the plants. The fact that it was not placed in special containers also caused serious problems.[8]

Based on the documents and according to the decision of the Central Committee and the Council of Ministers of the Communist Party of Uzbekistan dated August 26, 1950, the following measures were set:

- Ensuring the full operation of reclamation systems, hydraulic structures and irrigation networks;
- Improving the reclamation of soil fertility to increase cotton yields, increasing the efficiency of land through the intensification of agricultural production;
- Planning the use of water and its implementation on farms, improving the technical condition of irrigation systems;
- Rational use of water and land resources, as well as raising the technical level of irrigation systems based on scientific and technological progress and achievements;
- Expansion of cotton fields to an average of 20-40 hectares for the transition to a general irrigation system,
- If trees are planted near irrigation systems, to achieve irrigation systems to 10-20 hectares of fields and at least 5 hectares of densely populated fields;[2]

In connection with the transition to a new irrigation system, significant work has been done on the efficient use of irrigation facilities, the reconstruction of irrigation networks and the improvement of land reclamation.

REFERENCES

1) Dukhovny V. Melioration: concern for the present and the future // Communist of Uzbekistan. - Tashkent, 1985, No.5, Page. 57
2) Khamraev N. "Water resources of Uzbekistan: present and future // Agriculture of Uzbekistan" - Tashkent, 1986. - № 8. Page 36
3) “Increase the return on irrigated hectares” (UzTAg) // Pravda Vostoka. 1986, December 19.
4) Dukhovny V. Melioration: taking care of the present and future. Page 58
5) Oblomuradov N.Kh. "The development of agricultural production in Uzbekistan in 1971-1990. Experience, lessons and problems: Author's abstract of thesis, Doctor of Historical Sciences. -Tashkent, 1994. Page 28-29.
6) "To increase the efficiency of irrigated hectares" (UzTAg) // Pravda Vostoka. 1986, December 19; UzR MDA, Fund 90, List 11, Case 4163, Sheet 50.
7) Majitov Kh. "Effective use of irrigated land", "Agriculture of Uzbekistan." Tashkent, 1984.-№ 12. -Page. 2,5
8) Bocharin A. “Melioration systems: work in a new way // Agriculture of Uzbekistan. - Tashkent, 1988. - No. 4. - Page 51-52;
9) Lavrinenko L. "What to be in the drainage" - Page 54.
10) Ergashev Sh. "Taking into account environmental factors // Agriculture of Uzbekistan." - Tashkent, 1990. No. 5. Page. 36.