American Journal of Science and Learning for Development

ISSN 2835-2157
Volume 2 | No 4 | April -2023

Economic Efficiency of Use of Water Resources in Agriculture

Musayev Sharof Mamarajabovich [1], Baxromova Bonu Tolmas qizi [2]

[1] JizPI "Engineering Communications" department, professori v.b. t.f.f.d

[2] JizPI "Engineering Communications", department, student

Abstract: *In this article, we discuss the economic efficiency of the use of water resources in agriculture, the use of irrigation water in agriculture, determining water consumption in irrigated agriculture and finding an effective solution to it, the efficiency of irrigation systems, and chemicalization of agriculture. we will learn about broad concepts.*

Keywords: *water supply, water basin, waste water, irrigation system useful work coefficient, irrigation branch, inter-farm canals, water use coefficient, water use efficiency, water use efficiency, water protection.*

Introduction

Land acts together with water as the main means of production in agriculture. Water is an indispensable factor in the production of agricultural products. The land is fertile only when it has optimal moisture and ensures a high yield. Growing crops requires a lot of water that is irreversibly wasted. During plant growth, thousands of tons of water are released into the atmosphere from each hectare of soil. Hundreds of cubic meters of water must pass through plants and evaporate in order to produce a product. For example, in the cultivation of 1 ton of potatoes, the need for water is 1500 m3, in the cultivation of winter wheat - 600 m3, in the cultivation of cotton - 3000 m3, in the cultivation of rice - 13500 m3

Use of irrigation water in agriculture.

For the normal development of cultivated plants, the soil moisture during the growth period should be 70-75%. In most of the region it is much lower than that. Lack or excess of soil moisture has a negative effect on the level of productivity of agricultural crops. The soil water regime can be regulated only with the help of melioration measures aimed at creating moisture balances in the soil active layer and maintaining it throughout the growing period. A fully regulated type of soil water regime can be provided only by technologically perfect irrigation systems. The use of irrigation water in agriculture is inextricably linked with the use of land.

The consumption value of water can be considered only taking into account the final results of irrigated agriculture. The value of water, which is a means of production, is lost if it is separated from the production process. Irrigation water taken from irrigation sources has its own characteristics. This water should be sent to a certain area in the specified period and in the required amount. Failure to meet these conditions will have a negative impact on agricultural production. Improving the efficiency of irrigation water use is a task of state importance. The essence of effective use of water resources is to obtain the maximum amount of water per unit of irrigation water with low costs.

This is achieved by implementing various technological, organizational and economic measures. Increasing the efficiency of irrigation water use is a task of state importance. The essence of effective use of water resources is to obtain the maximum amount of water per unit of irrigation water with low costs. This is achieved by implementing various technological, organizational and economic measures. The following indicators characterize the efficiency of water use in irrigated agriculture.

- coefficient of useful operation of the irrigation system - coefficient of water use in the irrigation system - productivity of irrigation water

The loss of water is reflected in the coefficient of useful performance of the irrigation system (KPD), which is the ratio of water flowing into the area (Wn-t) to water received from irrigation sources (Wbr) during a certain period (decade, month, growing season). is proportional to the amount.

KPDs Wnt/Wbr

The difference between the volume of water intake and the amount of water supplied is absorption and evaporation losses. The percentage of water losses in the system is determined by the expression [(1-KPD)*100]. is determined.

KPD=KPDmx*KPDvx

The useful performance coefficient depends on the technical level of the irrigation system, the nature of the soil, relief, etc. It varies throughout the year for each system. si indicators are presented in Table 1.

Xo'jaliklararo sug'orish tizimlari foydali ishlashining koeffitsiyenti

Viloyatlar	1997– 2000 yillar	2001–2005 yillar
Qoraqalpog'iston Respublikasi	0,56	0,56
Andijon	0,66	0,66
Buxoro	0,58	0,58
Jizzax	0,80	0,80
Qashqadaryo	0,68	0,68
Navoiy	0,61	0,61
Namangan	0,69	0,69
Samarqand	0,64	0,64
Surxondaryo	0,77	0,77
Sirdaryo	0,66	0,66
Toshkent	0,66	0,66
Farg'ona	0,64	0,64
Xorazm	0,61	0,61

Loss of water in the fountain causes great material damage. In addition to the direct loss of moisture, its absorption causes groundwater to rise, soils to become saline, and irrigated lands to deteriorate. In addition, it is necessary to spend a lot of money to divert this water away from the irrigated plots. , is added to the underground water, as well as evaporates from the surface of the fields. Total water losses are reflected in the system water use (KIVS) coefficient. This coefficient is the ratio of useful consumption of water by plants in fields to the amount of water received from irrigation sources.

KIVS Ye•F Wbr

where: useful water consumption of agricultural crops in a certain time, per m3

F - per irrigated area

Wbr - amount of water received from the irrigation source, m3

Conclusion: The efficiency of water use in agriculture is measured by the efficiency of the irrigation system, the water use coefficient and the productivity of irrigation water, and the amount of profit per m3 of water.

References

1. A.S. Sultanov "Economics of Water Management", text of lectures, TIMI, 2005.
2. Law of the Republic of Uzbekistan "On Water and Water Use". A collection of laws and regulatory documents on deepening reforms in agriculture, Tashkent, "Sharq", NMK, 1998.
3. Safarov, B.N. (2022). PEARLS-ADVANCE IN THE STUDY OF INTERNATIONAL READING LITERACY. Innovative development in educational activities, 1 (5), 134-138.
4. Safarov, B.N. (November 2022). EFFECTIVENESS OF ORGANIZING PEDAGOGICAL COACHING IN PRESCHOOL EDUCATIONAL ORGANIZATIONS. AT THE INTERNATIONAL CONFERENCE ON THE PLACE AND SIGNIFICANCE OF INNOVATIVE EDUCATION IN THE 21ST CENTURY (Volume 1, Issue 8, Pages 30-35).
5. Safarov, B. (2021). Importance of mathematics lessons in preparing 6-7 year old children for school education: Importance of mathematics lessons in preparing 6-7 year old children for school education. Journal of Early Childhood Education, 2 (2).
6. Norboyevich, SB, & Akhmadjonovna, BM (2023). MANAGEMENT PRINCIPLES OF EFFECTIVE ORGANIZATION OF EDUCATIONAL PROCESS IN EDUCATIONAL INSTITUTIONS. Innovative development in educational activities, 2 (4), 18-23.
7. Daminova Shoxista Farxodovna.The role of national cadres in the formation of social behavior culture in preschool children "Pedagogy" Scientific-theoretical and methodical journal of TDPU named after Nizomi 6\December 2022 155-157
8. Daminova Shoxista Farxodovna.The role of national cadres in the formation of the culture of social behavior in children of preschool age.
9. Daminova Shoxista Farxodovna.Education of creative abilities of children of preschool age through fiction.
10. Mugalim khem continuous education scientific-methodical magazine December 2022 149-151
11. Daminova Shoxista Farxodovna.The role of national mentality in the development of a child's personality. Analytical Journal of Education and Development. Volume: 03 Issue: 02 Feb-2023 ISSN: 2181-2624 31-34
12. Daminova Shoxista Farxodovna.Ecological education and modern information technologies. Scientific and practical conference on ecological stability and youth education, 2016, pages 57-58
13. Daminova Shoxista Farxodovna Forming the culture of social behavior of preschool children by means of fiction. "Modern trends of primary education: integration of education and training" international scientific and practical conference. City of Jizzakh April 17, 2021 199-201
14. Daminova Shoxista Farxodovna.Norkulova R. Methods of developing native language lessons in elementary grades. Science in the education system? Prospects for the development of innovation and digital economy" International scientific and practical online conference Jizzakh city (November 20, 2021) 243-245
15. Daminova Shoxista Farxodovna.The role of imaginative literature in the comprehensive 8evelop‘ment of ‘reschool children SJIF Im’act Factor (2021): 8.013 ISI IFValue: 1:241 Monthly, ‘eer Reviewed (refereed) & Indexed International journal Volume – 6 Issue – 8 August 2021. 72-74
16. Ganiev A., Tursunov B. A., Kurbanov Z. K. Prospects for the use of multiple vermiculitis //Science and Education. – 2022. – T. 3. – №. 4. – C. 409-414.

17. Ganiev A., Tursunov B., Karshiev E. Study of physical and mechanical properties of high strong concrete with chemical additives //AIP Conference Proceedings. – AIP Publishing LLC, 2022. – Т. 2432. – №. 1. – С. 050046.
18. Yusuf I., Tursunov B. A. SANOAT CHIQINDISI VA MINERAL QO'SHIMCHALAR ASOSIDA OLINGAN SEMENTLARNING FIZIK-MEXANIK XOSSALARINI O'RGANISH //Journal of Integrated Education and Research. – 2022. – Т. 1. – №. 1. – С. 324-329.
19. Khursanovich T. F., Orologli N. I. The study of physical and mechanical properties of construction gypsum and its study on the construction //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 19. – №. 5. – С. 1990-1995.
20. Tursunov B. A. The usage of composite armature in construction. – 2019.
21. Tursunov B. A. ADVANTAGES AND DISADVANTAGES OF COMPOSITE AND STEEL ARMATURE //Строительные материалы, конструкции и технологии XXI века. – 2019. – С. 87-88.