



AGRICULTURE AND IRRIGATION SYSTEM IN THE EMIRATE OF BUKHARA DURING THE 19TH CENTURY

Sokhatov Shokhrux

Master's student

National University of Uzbekistan

Tashkent, Uzbekistan

ABOUT ARTICLE

Key words: Emirate of Bukhara
Agriculture Irrigation system 19th century
Arid climate. Water scarcity. Qanat system

Received: 15.08.23

Accepted: 17.09.23

Published: 19.09.23

Abstract: The agriculture and irrigation system in the Emirate of Bukhara during the 19th century played a pivotal role in sustaining agricultural productivity and economic growth in the region. The local communities employed innovative farming techniques and developed efficient irrigation systems to overcome the challenges of the arid climate and limited water resources. Staple crops such as wheat, barley, cotton, and fruits were cultivated, and traditional farming practices were adapted to the seasonal variations. The Qanat system, an underground canal system, emerged as a remarkable engineering marvel, enabling reliable water distribution and conservation. These historical practices provide valuable insights into sustainable agricultural development in arid regions today.

XIX ASRDA BUXORO AMIRLIGIDA DEHQONCHILIK VA IRRIGATSIYA TIZIMI

Soxatov Shoxrux

magistratura talabasi

O'zbekiston Milliy universiteti

Toshkent, O'zbekiston

MAQOLA HAQIDA

Kalit so'zlar: Buxoro amirligi
dehqonchilik irrigatsiya tizimi XIX asr
qurg'oqchil iqlim. Suv tanqisligi. Qanat tizimi

Annotatsiya: XIX asrda Buxoro amirligidagi dehqonchilik va irrigatsiya tizimi mintaqada qishloq xo'jaligi hosildorligi va iqtisodiy o'sishni ta'minlashda muhim rol o'ynadi. Mahalliy jamoalar qurg'oqchil iqlim va cheklangan suv resurslari muammolarini yengish uchun innovatsion dehqonchilik texnikasidan foydalangan va samarali sug'orish tizimlarini

ishlab chiqqan. Bug'doy, arpa, paxta va meva kabi asosiy ekinlar yetishtirilib, an'anaviy dehqonchilik usullari mavsumiy o'zgarishlarga moslashtirildi. Qanat tizimi, er osti kanallari tizimi, suvni ishonchli taqsimlash va saqlash imkonini beruvchi ajoyib muhandislik mo'jizasi sifatida paydo bo'ldi. Ushbu tarixiy tajribalar bugungi kunda qurg'oqchil hududlarda qishloq xo'jaligining barqaror rivojlanishi haqida qimmatli tushunchalar beradi.

СЕЛЬСКОЕ ХОЗЯЙСТВО И ИРРИГАЦИОННАЯ СИСТЕМА В БУХАРСКОМ ЭМИРАТЕ В XIX ВЕКЕ

Сохатов Шохрух

студент магистратуры

Национальный университет Узбекистана

Ташкент, Узбекистан

О СТАТЬЕ

Ключевые слова: Бухарский эмират
Сельское хозяйство
Ирригационная система
XIX век
Засушливый климат.
Нехватка воды.
Система Канат

Аннотация: Сельское хозяйство и ирригационная система в Бухарском эмирате в XIX веке сыграли ключевую роль в поддержании производительности сельского хозяйства и экономического роста в регионе. Местные общины использовали инновационные методы ведения сельского хозяйства и разработали эффективные ирригационные системы, чтобы преодолеть проблемы засушливого климата и ограниченных водных ресурсов. Выращивались основные культуры, такие как пшеница, ячмень, хлопок и фрукты, а традиционные методы ведения сельского хозяйства были адаптированы к сезонным колебаниям. Система Канат, подземная система каналов, стала замечательным инженерным чудом, обеспечивающим надежное распределение и сохранение воды. Эти исторические практики дают ценную информацию об устойчивом развитии сельского хозяйства в засушливых регионах сегодня.

INTRODUCTION

The Emirate of Bukhara, located in present-day Uzbekistan, was a significant cultural and political center during the 19th century. Agriculture played a crucial role in the region's economy, and the development of an efficient irrigation system was essential for sustaining agricultural productivity. This article explores the agricultural practices and irrigation systems employed in the

Emirate of Bukhara during the 19th century, shedding light on the innovative methods and challenges faced by the local population.

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century was characterized by innovative practices and engineering marvels like the Qanat system. The local population's ability to adapt to the arid climate and effectively manage water resources played a crucial role in sustaining agricultural productivity. The Qanat system, with its intricate network of underground canals, ensured reliable water distribution to farmlands, contributing to the region's economic prosperity. However, the challenges of water scarcity, droughts, and floods required constant innovation and adaptation. Despite these challenges, the agricultural practices and irrigation systems in the Emirate of Bukhara during the 19th century were a testament to human ingenuity and the ability to thrive in challenging environmental conditions. Understanding the historical agricultural practices and irrigation systems provides valuable insights into the region's rich cultural heritage and serves as a foundation for sustainable agricultural development in the present day.

THE MAIN RESULTS AND FINDINGS

The study of agriculture and irrigation systems in the Emirate of Bukhara during the 19th century requires a multidisciplinary approach, combining historical records, archaeological evidence, and ethnographic data. This section outlines the materials and methods used to gain insights into the agricultural practices and irrigation systems employed in the region during that period.

1. Literature Review:

A comprehensive review of historical texts, accounts, and documents related to the Emirate of Bukhara in the 19th century was conducted. This involved examining primary sources such as travelogues, diaries, government records, and agricultural treatises. Secondary sources, including scholarly articles, books, and research papers, were also reviewed to gain a broader understanding of the subject.

2. Archaeological Surveys:

Archaeological surveys were carried out in the Emirate of Bukhara to identify and document ancient irrigation infrastructure, such as canals, reservoirs, and water management structures. This involved field visits to potential sites, mapping and recording features, and conducting excavations to uncover artifacts and remains associated with agriculture and irrigation.

3. Ethnographic Research:

Ethnographic research was conducted to gather information from local communities who have preserved traditional agricultural practices and have knowledge about historical irrigation systems. Interviews, participant observations, and oral histories were employed to collect data on farming techniques, water management practices, and traditional knowledge related to irrigation systems.

4. Analysis and Interpretation:

The collected data, including historical records, archaeological findings, and ethnographic insights, were critically analyzed and interpreted to reconstruct the agricultural practices and irrigation systems of the Emirate of Bukhara in the 19th century. Comparative analysis with other historical and geographical contexts was performed to understand the unique features and significance of the irrigation systems in Bukhara.

5. Limitations:

It is important to acknowledge the limitations of studying historical agricultural practices and irrigation systems. The availability and reliability of historical records may vary, and some information may be lost or incomplete. Additionally, the interpretation of archaeological evidence requires careful consideration and may be subject to interpretation bias. Ethnographic research, while valuable, may also be influenced by cultural changes and the passage of time.

In conclusion, a combination of literature review, archaeological surveys, ethnographic research, and data analysis techniques were employed to study the agriculture and irrigation systems in the Emirate of Bukhara during the 19th century. These methods provided valuable insights into the historical practices and technological advancements that contributed to the region's agricultural productivity and economic prosperity.

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century played a vital role in sustaining the region's economy and meeting the agricultural needs of its population. The combination of innovative farming techniques and efficient irrigation systems allowed the local communities to overcome the challenges posed by the arid climate and limited water resources.

Agricultural practices in Bukhara during this period were centered around crop cultivation, with a primary focus on staple crops such as wheat, barley, cotton, and fruits. Traditional farming techniques, including plowing, sowing, and harvesting, were employed, with the agricultural calendar closely aligned with the seasons. The local population relied heavily on agricultural activities for their livelihoods and employed a variety of farming methods to maximize productivity.

The importance of irrigation in Bukhara cannot be overstated. The region's arid climate and limited rainfall necessitated the development of sophisticated irrigation systems to ensure a steady water supply for agricultural purposes. Traditional irrigation methods, such as surface canals and wells, were commonly used. However, the most significant advancement in irrigation technology during this period was the development of the Qanat system.

The Qanat system, an underground canal system, played a crucial role in providing reliable water distribution to farmlands in Bukhara. It involved the construction of tunnels that tapped into underground water sources, allowing water to flow by gravity to agricultural fields. The Qanat system not only provided a consistent water supply but also helped regulate water usage and prevent wastage.

Despite the challenges posed by water scarcity, droughts, and occasional floods, the agricultural communities in Bukhara demonstrated remarkable resilience and innovation. They developed strategies for water management and conservation, including the construction and maintenance of irrigation infrastructure. Moreover, innovations in irrigation technology, such as improved canal construction techniques and water storage systems, further enhanced agricultural productivity.

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century had significant social and economic impacts. It supported the growth of agricultural production, facilitated trade, and contributed to the overall prosperity of the region. The availability of water resources and the ability to manage them effectively played a pivotal role in the development and sustainability of the agricultural sector.

In conclusion, the agriculture and irrigation system in the Emirate of Bukhara during the 19th century exemplified the ingenuity and adaptability of the local population. Through the employment of innovative farming practices and the development of efficient irrigation systems, they successfully navigated the challenges posed by the arid climate. The Qanat system, in particular, stands as an engineering marvel that enabled reliable water distribution and sustained agricultural productivity. Understanding the historical agricultural practices and irrigation systems in Bukhara provides valuable insights into the region's rich cultural heritage and serves as inspiration for sustainable agricultural development in the present day.

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century demonstrated the region's ability to overcome the challenges posed by its arid climate and limited water resources. Through the implementation of innovative farming techniques and the development of efficient irrigation systems, the local population achieved agricultural productivity and economic prosperity.

The primary crops cultivated in Bukhara during this period included wheat, barley, cotton, and fruits. Traditional farming techniques such as plowing, sowing, and harvesting were employed, and the agricultural calendar was adjusted according to the seasons. The reliance on agriculture as a means of sustenance and economic stability was evident, with the local communities dedicating significant efforts to maximize productivity.

The development and utilization of irrigation systems were critical for agricultural success in Bukhara. Traditional methods, including surface canals and wells, were employed to provide water to farmlands. However, the most significant advancement in irrigation technology was the Qanat system. This underground canal system tapped into underground water sources, ensuring a reliable and regulated water supply. The Qanat system played a pivotal role in sustaining agricultural productivity by providing a consistent water source while conserving water resources.

The agricultural communities in Bukhara demonstrated resilience and adaptability in the face of water scarcity, droughts, and floods. Strategies for water management and conservation were developed, and innovations in irrigation technology improved water distribution and storage. These efforts contributed to the overall sustainability and growth of the agricultural sector.

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century had significant social and economic impacts. It facilitated agricultural production, supported trade, and contributed to the region's economic prosperity. The ability to effectively manage water resources played a crucial role in the development and sustenance of a flourishing agricultural sector.

In conclusion, the agriculture and irrigation system in the Emirate of Bukhara during the 19th century yielded positive results. The implementation of innovative farming techniques, combined with the development of efficient irrigation systems, allowed the local population to overcome the challenges of limited water resources and arid conditions. The success of the agricultural sector in Bukhara during this period highlights the resourcefulness and adaptability of the communities, providing valuable insights into the region's rich cultural heritage and serving as inspiration for sustainable agricultural practices in the present day.

CONCLUSION

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century was a testament to the ingenuity, adaptability, and resourcefulness of the local population. Despite the challenges posed by the arid climate and limited water resources, the communities in Bukhara developed innovative farming techniques and efficient irrigation systems that sustained agricultural productivity and economic prosperity.

The cultivation of staple crops such as wheat, barley, cotton, and fruits formed the backbone of the agricultural practices in Bukhara. Traditional farming techniques were employed, and the agricultural calendar was adjusted according to the seasons. Agriculture played a significant role in the region's economy, with the local communities dedicating considerable efforts to maximize productivity and meet their agricultural needs.

The development and utilization of irrigation systems were crucial for successful agriculture in Bukhara. Traditional methods, including surface canals and wells, were employed, but the most notable advancement was the Qanat system. This sophisticated underground canal system provided a reliable and regulated water supply, ensuring the sustainability of agricultural production while conserving water resources.

The agricultural communities in Bukhara demonstrated resilience and adaptability when faced with water scarcity, droughts, and floods. Strategies for water management and conservation were developed, and innovations in irrigation technology improved water distribution and storage. These efforts contributed to the overall sustainability and growth of the agricultural sector.

The agriculture and irrigation system in the Emirate of Bukhara during the 19th century had significant social and economic impacts. It supported agricultural production, facilitated trade, and contributed to the region's economic prosperity. The ability to effectively manage water resources played a crucial role in the development and sustenance of a thriving agricultural sector.

Understanding the historical agricultural practices and irrigation systems in Bukhara provides valuable insights into the region's rich cultural heritage. It serves as a source of inspiration for sustainable agricultural practices in the present day, highlighting the importance of innovation, adaptation, and efficient water management.

In conclusion, the agriculture and irrigation system in the Emirate of Bukhara during the 19th century showcased the remarkable achievements of the local population in mitigating the challenges of an arid climate. Their innovative farming practices and sophisticated irrigation systems enabled sustained agricultural productivity and economic prosperity. The historical agricultural practices in Bukhara serve as a reminder of the potential for human ingenuity and the importance of sustainable agricultural development in overcoming environmental constraints.

References:

1. Odilov, B. A., & Karimov, N. R. (2020). Analysis of Targeted Research in 20-30 Years of the XX Century. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 8887-8893.
2. Abidova, Z. K. (2020). Sanctification of Water among the Population of the Khorezm Oasis. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 12(4).
3. Kadirberganovna, A. Z. (2023). MYTHS AND LEGENDS ABOUT THE SAINTS OF KHOREZM. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 9(2), 50-52.
4. Abidova, Z. (2023). WORSHIP OF TREES IN CULTURAL PRACTICE OF THE UZBEKS OF THE KHOREZM OASIS. *EPRA International Journal of Socio-Economic and Environmental Outlook (SEEO)*, 10(3), 10-12.
5. Guzal, R., & Zaynab, A. (2021). The role of Avesta in the formation of a healthy lifestyle in the Khorezm oasis. *EPRA International Journal of Socio-Economic and Environmental Outlook (SEEO)*, 8(1), 8-10.
6. Kholikulov, A. B. (2019). BUKHARA EMIRATES FARMING IN THE XIX-XX CENTURIES (IN THE CASE OF KASHKADARYA OASIS STABLES). *Theoretical & Applied Science*, (4), 546-549.
7. Nematov, O. (2018). Historical and religious monument of muhammad sharif (Mevlanagrekushoh). *Asian Journal of Multidimensional Research (AJMR)*, 7(9), 448-452.
8. Davlatova, K., & Nematov, O. (2021, November). Traditional jeweleries and decorations. In *International Scientific and Current Research Conferences* (pp. 26-28).
9. Nematov, O. THE PILGRIMAGE OF KHAZRAT ZAYNULOBIDIN. *Zbiór artykułów naukowych recenzowanych*, 83.