



GCCCR

Global Conference on
Contemporary Research

INTERNATIONAL CONFERENCE ON LANGUAGES, LITERATURE AND CULTURAL STUDIES

CONFERENCE THEME:

Language, Culture and Innovation:
Bridging Global Perspectives
through Research.



LANGUAGE
STUDIES



LITERATURE



CULTURAL
STUDIES



INTERNATIONAL
COLLABORATION

INTERNATIONAL CONFERENCE
PEER-REVIEWED PROCEEDINGS



OCTOBER
2026



NEW YORK, USA



gccr.academy



GCCCR

INTERNATIONAL CONFERENCE ON
LANGUAGES, LITERATURE AND CULTURAL STUDIES

OCTOBER 2026 | NEW YORK, USA





SCIENTIFIC JUSTIFICATION OF AGROTECHNICAL PRACTICES FOR ESTABLISHING AND MANAGING JUJUBE ORCHARDS UNDER THE SOIL AND CLIMATIC CONDITIONS OF THE SYRDARYA REGION

Eshquvvatov Jasur

Mustaqil tadqiqotchi

Email: jasureshqvvatov11@gmail.com

ABSTRACT: This study scientifically justifies the main agrotechnical practices for establishing and managing jujube (*Ziziphus jujuba* Mill.) orchards under the soil and climatic conditions of the Syrdarya Region of Uzbekistan. Particular attention is given to site selection, soil preparation, planting density, irrigation, fertilization, weed control, and crown formation. The hot and relatively dry climate of the region requires rational management of soil moisture and nutrients, especially during the early stages of orchard development. Proper soil preparation and planting schemes create favorable conditions for root and crown development, while balanced irrigation and fertilization support healthy plant growth. Timely soil cultivation and weed control reduce competition for water and nutrients. The study shows that adapting agrotechnical practices to local soil and climatic conditions can improve jujube tree establishment, resource-use efficiency, and future orchard productivity.

Keywords: jujube, *Ziziphus jujuba* Mill., orchard, agrotechnics, irrigation, fertilization, soil management, Syrdarya Region.

The Syrdarya Region has specific soil and climatic conditions that should be considered when establishing jujube orchards. High air temperatures during summer, limited precipitation, intensive evaporation, and the presence of soils with different levels of fertility and salinity can affect the growth and development of trees. Therefore, the selection of a suitable planting site, proper soil preparation, optimal planting density, and rational irrigation are important components of orchard establishment.

Fertilization and soil management also play an important role in the early development and subsequent productivity of jujube trees. Balanced nutrient supply promotes root development, vegetative growth, and the formation of a productive crown. At the same time, excessive use of fertilizers or irrigation may negatively affect soil conditions and increase production costs. Consequently, agrotechnical measures should be based on the biological requirements of the crop and the specific characteristics of local soils.

In this context, scientific justification of agrotechnical practices for jujube orchard establishment and management is important for improving plant survival,



efficient use of water and fertilizers, and achieving stable productivity. The development of locally adapted orchard management practices can contribute to the wider cultivation of jujube and the sustainable use of agricultural resources in the Syrdarya Region.

RELEVANCE OF THE TOPIC

The relevance of the study is determined by the need to improve soil preparation, planting density, irrigation, fertilization, weed control, and crown formation according to the specific soil and climatic conditions of the region. Proper organization of these practices can improve tree establishment, reduce inefficient use of water and fertilizers, and create favorable conditions for long-term orchard productivity. Therefore, developing scientifically justified agrotechnical practices for jujube cultivation has important practical and agricultural significance for the Syrdarya Region.

THE PROBLEM OF THE STUDY AND ITS SOLUTION

The main problem in establishing jujube orchards in the Syrdarya Region is the insufficient adaptation of agrotechnical practices to local soil and climatic conditions. High summer temperatures, low precipitation, intensive evaporation, and differences in soil fertility and salinity can negatively affect the establishment and growth of young jujube trees. Improper planting density, irregular irrigation, unbalanced fertilization, and inadequate soil management may reduce plant growth and future orchard productivity.

The solution is to develop an integrated agrotechnical system based on the biological requirements of jujube and local environmental conditions. Proper site and soil preparation, optimal planting density, timely irrigation, and balanced application of organic and mineral fertilizers should be combined with regular weed control and inter-row soil cultivation. Appropriate crown formation is also necessary to ensure better light penetration and balanced tree development.

AIM OF THE STUDY

The aim of this study is to scientifically justify effective agrotechnical practices for establishing and managing jujube (*Ziziphus jujuba* Mill.) orchards under the soil and climatic conditions of the Syrdarya Region. The study focuses on optimizing soil preparation, planting density, irrigation, fertilization, weed control, and crown formation in order to improve tree establishment, growth, resource-use efficiency, and future orchard productivity.

CONCLUSION

The study demonstrates that proper organization of agrotechnical practices is essential for the successful establishment and productive development of jujube (*Ziziphus jujuba* Mill.) orchards in the Syrdarya Region. The specific soil and climatic



conditions of the region require appropriate approaches to soil preparation, planting density, irrigation, fertilization, weed control, and crown formation.

An integrated agrotechnical system adapted to local conditions can improve tree establishment, promote balanced growth, and ensure more efficient use of water and nutrients. Therefore, scientifically justified orchard management practices can contribute to the development of productive and sustainable jujube orchards and the wider introduction of this drought-tolerant fruit crop in the Syrdarya Region.

REFERENCES

1. Gao, Q., et al. (2022). Branch growth, leaf canopies and photosynthetic responses of *Zizyphus jujube* cv. “Huizao” to nutrient addition in the arid areas of Northwest China. *Diversity*, 14(11), 914. [MDPI](#)
2. Stănică, F., & Liu, M. J. (Eds.). (2025). *VI International Jujube Symposium*. Acta Horticulturae, 1436. International Society for Horticultural Science. [Acta Horticulturae](#)
3. Xie, B. X., Gu, Z. Y., & Wang, S. (2009). The current development and promise of fresh jujube industry in the south of China. *Acta Horticulturae*, 840, 35–40. <https://doi.org/10.17660/ActaHortic.2009.840.6> [Acta Horticulturae](#)
4. Wang, et al. (2026). Irrigation and fertilization improved vegetative growth and fruit development of winter jujube in plastic shed production through enhanced photosynthetic capacity and nutrient uptake. *Scientia Horticulturae*, 357, 114616. [ScienceDirect](#)