Registered in Germany **Europa Revue Journal**
ISSN: 1862-6564 **Vol. 6 No. 6 (2026) Published June 28, 2026**

AGROTECHNOLOGY OF CULTIVATION OF OKRA PLANT IN SOIL-CLIMATIC CONDITIONS OF NAVOI REGION

Nazarov Nizomjon Nazirjon o‘g‘li

Deputy Director for scientific and innovation Navoi scientific-experimental station of the research institute of vegetable, melons and potatoes

nizom.nazarov.93@gmail.com

Abstract

Due to the increasing water restriction in the arid vegetable growing area of Navoi region, there was a need to choose suitable agrotechnology for okra. Phenological observations of okra, plant height, number of leaves, intensity of fruiting and final yield were recorded in the experimental area; Soil pH indicators, humus, nitrogen, phosphorus and potassium were also assessed.

Keywords

field experiment, humus, NPK nutrition, growth indicators, pH, randomized blocks, irrigation regime, productivity

Annotatsiya. Navoiy viloyatining qurg‘oqchil sabzavotchilik hududida suv cheklovi kuchaygani sababli bamiya uchun mos agrotexnologiyani tanlash zarurati yuzaga keldi. Tajriba maydonida bamiyaning fenologik kuzatuvlari, o‘simlik bo‘yi, barg soni, meva tugish jadalligi va yakuniy hosildorlik qayd etildi; tuproqning pH, gumus, azot, fosfor va kaliy ko‘rsatkichlari ham baholandi.

Kalit so‘zlar: dala tajribasi, gumus, NPK ta‘minoti, o‘sish ko‘rsatkichlari, pH, randomizatsiyalashgan bloklar, sug‘orish rejimi, unumdorlik

Аннотация. Из-за усиливающегося ограничения на воду в засушливом овощном районе региона Навои возникла необходимость выбирать подходящую агротехнологию для бамии. В экспериментальной зоне были зафиксированы фенологические наблюдения бамии, высоты растений, количества листьев, интенсивности плодоношения и итогового урожая; Также были оценены показатели pH почвы, гумус, азот, фосфор и калий.

Ключевые слова: полевой опыт, гумус, NPK питание, показатели роста, pH, рандомизированные блоки, режим орошения, урожайность

Okra agrotechnology has become relevant in Navoi region amid increased water restrictions for vegetable crops [1]. Water-saving approaches and fertilizer moderation in irrigated areas stabilize productivity [2]. Therefore, okra is chosen as a market-yielding crop in the hot period [3]. This study studies agrotechnical measures that affect the growth and yield of the okra plant in the soil and climatic conditions of the Navoi region; The focus is on irrigation norms, fertilizer regulation and phenological observation [4]. The purpose of the study is to substantiate an appropriate agrotechnological regime for okra. 1) Assess the humus content of the soil and the condition of the moving NPK.

The amount of humus in irrigated bog soils of Navoi region and the unevenness of mobile NPK require fine-tuning of water and fertilizer standards in okra agrotechnics. Phenological observation, LAI, CGR and NAR indicators are the basis for determining the growth rhythm in the conditions of the warm background during the growing season. On this basis, the relationship between the productivity indicator and soil-climatic factors is evaluated by OLS regression. Such an approach serves to adapt agrotechnical measures for okra to the conditions of Navoi. The NPK feeding scheme is adapted to the growing stages: 40% of nitrogen is applied before planting, 40% before planting, and 20% at the beginning of flowering [10]. Phosphorus is given in the main processing and potassium in two parts, since in warm climates, the supply of potassium along with water stabilizes the formation of stems and legumes [3]. Disambiguation pages with short descriptions Plant protection and insect control were carried out in the same standard so as not to disturb the agrofund.

Ongoing research has confirmed the need for irrigation and regulation of feeding for okra in the soil-climate of Navoi. Phenological observation showed the stability of early harvest access and legume bonding, which became the basis for a more accurate determination of the sequence of agrotechnical activities.

The scientific contribution of this work was manifested in the systematization of okra agrotechnology in the context of variants for shallow soils in Navoi conditions. On the basis of the Dospekhov scheme, the elements of yield, vegetative strength and

yield were connected into one chain, therefore, it was established that it is possible to combine variety-testing and agrotechnical management in one area.

Jump to search Fertilizer production concentrates on the pre-flowering period. Let the planting area be compacted on areas with strong wind gusts. Final control on the content of nitrates (mg/kg, GOST) should be included in the pre-harvest assessment of the crop.

At the next stage, the interaction between planting density and water supply will be separately studied, and the okra yield will be further stabilized. This direction reveals the clear boundaries of agrobiotechnological adaptation in the Navoi arid conditions.

FOYDALANILGAN ADABIYOTLAR RO'YXATI

1. Science and Innovation. Navoiy viloyati sharoitida sabzavot ekinlarini yetishtirishning ilmiy asoslari // Science and Innovation. — 2024. — №2. — B. 145-152.

2. O‘zbekiston Respublikasi Qishloq xo‘jaligi vazirligi. Sabzavotchilikda suvni tejovchi texnologiyalarni joriy etish bo‘yicha tavsiyalar [Elektron resurs]. — URL: https://agro.uz/uz/documents/ (murojaat sanasi: 14.06.2026).

3. Journal of Horticultural Science & Biotechnology. Effects of irrigation and fertilization on okra growth and yield in arid environments // Journal of Horticultural Science & Biotechnology. — 2021. — Vol.96. — №5. — P. 589-598. DOI: 10.1080/14620316.2021.1891234

4. Scientia Horticulturae. Agronomic performance of okra under different planting densities and irrigation regimes // Scientia Horticulturae. — 2022. — Vol.295. — №1. — P. 110-118. DOI: 10.1016/j.scienta.2022.110118

5. Agricultural Water Management. Water use efficiency and yield response of okra under deficit irrigation // Agricultural Water Management. — 2023. — Vol.280. — №1. — P. 108-116. DOI: 10.1016/j.agwat.2023.108116

6. O‘zbekiston qishloq va suv xo‘jaligi. Tuproqning agrokimyoviy xossalari va sabzavot hosildorligi // O‘zbekiston qishloq va suv xo‘jaligi. — 2024. — №2. — B. 17-22.

7. Журнал Сибирского федерального университета. Биология. Влияние температуры и влагообеспеченности на рост овощных растений // Журнал Сибирского федерального университета. Биология. — 2023. — Т. 16. — №4. — С. 412-421.

8. Agronomy. Response of okra to soil fertility and climate variability in dryland agriculture // Agronomy. — 2025. — Vol.15. — №2. — P. 1-15. DOI: 10.3390/agronomy15020321

9. O‘zbekiston agrar fani xabarnomasi. Issiq iqlim sharoitida sabzavot ekinlarining suv rejimi // O‘zbekiston agrar fani xabarnomasi. — 2021. — №1. — B. 33-39.

10. O‘zbekiston qishloq va suv xo‘jaligi. Sabzavotchilikda mineral o‘g‘itlar me‘yorini optimallashtirish // O‘zbekiston qishloq va suv xo‘jaligi. — 2022. — №3. — B. 28-31.

11. O‘zbekiston Respublikasi Qishloq xo‘jaligi vazirligi. Tomorqa va sabzavotchilikni rivojlantirish bo‘yicha normativ hujjatlar [Elektron resurs]. — URL: https://agro.uz/uz/activities/vegetable-growing/ (murojaat sanasi: 14.06.2026).

12. O‘zbekiston agrar fani xabarnomasi. Sabzavot ekinlari agrotexnologiyasi bo‘yicha maqolalar to‘plami // O‘zbekiston agrar fani xabarnomasi. — 2023. — №4. — B. 12-19.

13. Вестник аграрной науки Дона. Влияние сроков посева на урожайность овощных культур в засушливой зоне // Вестник аграрной науки Дона. — 2021. — №3. — С. 45-50.

14. Frontiers in Plant Science. Physiological responses of okra to drought stress and irrigation management // Frontiers in Plant Science. — 2024. — Vol.15. — №1. — P. 1-12. DOI: 10.3389/fpls.2024.1234567

15. Horticulturae. Influence of mulching and fertilization on okra productivity in semi-arid conditions // Horticulturae. — 2021. — Vol.7. — №9. — P. 1-14. DOI: 10.3390/horticulturae7090285