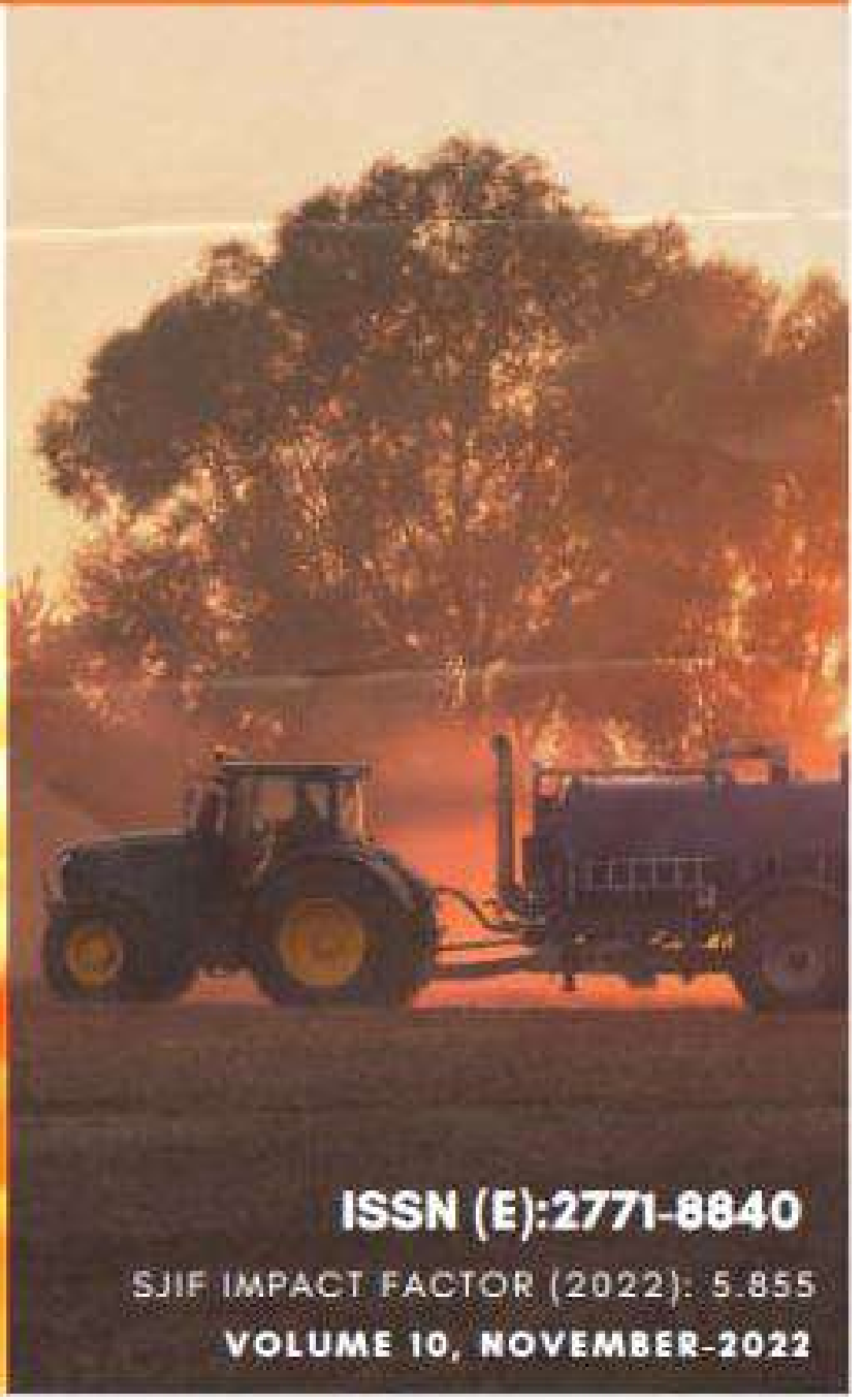
AN AMERICAN SCIENTIFIC JOURNAL

Texas Journal of Agriculture and Biological Sciences

HTTPS://ZIENJOURNALS.COM

5700 TENNYSON PARKWAY, SUITE 300, PLANO, TEXAS 75024



ISSN (E):2771-8840

SJIF IMPACT FACTOR (2022): 5.855

VOLUME 10, NOVEMBER-2022

ISSN NO: 2771-8840
Date of Publication: 10-11-2022

Influence Of Planting Methods And Density On Growth, Development And Yield Of Early Potatoes.

Rustam Yunusov, Bukhara State University, Associate Professor, candidate of agricultural sciences
Feruza Ganieva Amrilloevna, Bukhara State University, Lecturer
Adhamjon Rustamov Abdixoshim ugli, Bukhara State University, Lecturer
Tukhtaev Ilkhom Yusuf ugli, student of Bukhara State University

Annotation. This article presents data on the cultivation of early potato varieties "Condor" and "Sante" in the open field using resource-saving innovative technologies for the cultivation of early varieties. Ultimately, when sowing potatoes in the open field, it was found that when cultivating early sowing varieties of Condor and Sante, data were obtained on growth, development, yield, protection from pests and the collection of early potatoes.

Keywords: open ground, early potato, Condor variety, Sante, sowing pattern, planting density, growth, development, productivity, pest control, harvesting, resource-saving innovative technologies.

Introduction. The use of resource-saving innovative technological factors in the care process in order to fully meet the needs of the population of Uzbekistan in the future potato product is considered one of the most important and topical issues of our time, the solution of this issue will bring high efficiency. In addressing these important and necessary issues, Resolutions of the Cabinet of Ministers of the Republic of Uzbekistan of August 30, 1996 No. 30 “On measures to deepen market relations in potato growing and increase potato production in our republic” and July 27, 2001 “Seed production” were adopted. As well as decisions No. 274 "On additional measures to improve the system of the agro-industrial complex" in sequential order,

It should be noted that, since the future potato crop is a little-demanded crop, the soil structure of the cultivated field improves and is well cleared of weeds. The early potato crop is considered the best, high-yielding predecessor in crop rotation, responding to all agrotechnical activities carried out under grain and leguminous crops [1,3,5,7,8].

Science-based potato farming, fully compatible with modern requirements, advanced science and scientific achievements, efficient, rational, the use of water and resource-saving innovative technologies, the production of inexpensive, environmentally friendly products in agriculture. Fully meet the needs for food and manufactured goods, dramatically improve the welfare of the population of our country and ranks best among the developed countries of the world [2,4,6,9,10].

Of great scientific importance is the fact that the soil and climatic conditions of the Bukhara region correspond to the cultivation of potatoes does not exceed 0.7-1.2% of humus in the soil, early planting of potatoes in early spring, the choice of planting methods and suitable varieties for unfavorable extreme conditions. In the soil and climatic conditions of the Bukhara region, the cultivation of potatoes in the open field on the basis of resource-saving innovative technologies has not been studied, and has also been introduced into production [11,12]. A plentiful and high-quality harvest of early potatoes largely depends on the choice of variety, time and method of planting. In the soil and climatic conditions of the Bukhara region, the optimal time for planting potatoes is from February 5 to 15 and the end of planting is March 5. During 2021-2022, at 05.02.2021-05.02.2022, on the old-irrigated meadow soils in the educational and experimental farm of the Agronomic and Biotechnological Faculty of the Bukhara State University of Bukhara fog, the varieties "Condor" and "Sante" were planted in open ground on an area of 0.10 hectares. Before planting, to increase the yield and improve the soil of open ground, 500 kg of rotted local light was added to the soil, and the soil was mixed with humus to a depth of 20-25 sm. Before sowing, 300-350 m3 / hectares of water were washed salts. In the process of preparing the land for planting potatoes, the main agrotechnical measure using resource-saving technological methods (Table 1).

ISSN NO: 2771-8840
Date of Publication: 10-11-2022

Table 1

Resource-saving innovative technological measures used in the care of potatoes in the open field in the educational and experimental farm of the Faculty of Agronomy and Biotechnology located Bukhara region (during 2021-2022)

T/r	Completed agrotechnical activities	Deadline
1.	Loosen the ground in open ground to a depth of 20-25 sm.	December 2021-2022
2.	Soil washing	December
3.	Application of mineral fertilizers to the ground before planting (40 kg of ampho, 4-6 kg of potash fertilizers)	February 2021.05.02 - 2022.10.02.
4.	Method, duration and depth of planting	Two-line and row 60smx20smx2 and February, 70x20sm, depth 8-10sm
5.	Irrigation rate for the period of operation (3-4 times) 150-200m3	During the growing season 450-800 m3
6.	Manual processing between rows	2 mowing, weeding
7.	top dressing 2 times	March, April
8.	Aisle (manual weeding)	March, April
9.	Harvesting	May month

From the data presented in Table 1, it was found that the growing season of early varieties planted in open ground in 2021-2022 was 90-96 days. The planting time of early potatoes planted in open ground significantly affected the increase in potato yield and quality.

The Dutch varieties "Condor" and "Sante" were used for planting early potatoes in the open field. Varieties "Condor" and "Sante" were created by the Dutch company "Agrico". Entered into the State Register in 1998. Tubers are large, rounded. The skin is reddish, the flesh is yellow. The average weight of tubers is 170-180 grams, the yield is 23-29 t/ha. The growth period lasts up to 100 days per growing season.

In open ground conditions, the feeding of early potatoes, the number of irrigations, the rate and consumption of water were studied. Water- and resource-saving innovative care technologies are the main indicator in the cultivation of early potatoes, where the timing of planting the norm and the timing of irrigation, methods of fertilizing, early varieties and agrotechnical methods of caring for them are studied. Timely implementation of the technology of growing early potatoes leads to an increase in yield and economic efficiency of potato production.

In 2021-2022, the experiments conducted in old-irrigated meadow soils in the educational farm of the Faculty of Agronomy and Biotechnology, the most optimal time for planting early potatoes of the Condor and Sante varieties is February 15 when using indicators of water- and resource-saving innovative technologies (Table 2).

Table 2

Effect of planting time and density on the yield of early potato varieties "Condor" and "Sante" (during 2021 and 2022)

t/r	Planting period	Landing method, order, sm	productivity	
			kg	c/ha
	Variety Sante			
1.	02/15/2022	60smx20smx2	0.680	154.0
2.	02/15/2022	70smx20smx2	0.720	130.0
	Variety Condor			
3.	02/15/2022	60smx20smx2	0.752	175.0
4.	02/15/2022	70smx20sm	0.800	150.0
HCR095 P, %				2.4 2.1

ISSN NO: 2771-8840
Date of Publication: 10-11-2022

The data presented in Table 2 show that high results were obtained when potatoes were planted according to the scheme 60smx20smx2 in the Condor and Sante varieties. With a different method and planting in the first variant, with a two-row method, 0.680-0.752 kg/bush was obtained, and when planting in a simple row method, 0.720-0.800 kg/bush. The yield of early potatoes with two-row planting was 154.0 c/ha for the Sante variety and 175.0 c/ha for the Kondor variety.

Summary. In the years of independence, cardinal changes are taking place in the potato industry due to the fact that a number of specific measures have been developed for the full use and further development of the treasury of our country, and the improvement of scientific achievements in the field of growing early potatoes has been set. In order to increase the yield of potatoes in the future, it depends on a sharp reduction in the cost of grown products, the creation of new promising, productive, resistant to diseases and pests varieties and the use of resource-saving technologies for caring for them. In recent years, breeders and specialists have carried out breeding and seed work in the field of breeding and potatoes, the creation of varieties on a scientific basis, the introduction of early, medium and late potato varieties with high yields and good qualities.

As a result of the effective implementation of the above measures taken by the state, the organization and development of super-elite, elite and virus-free local potato seed production ultimately led to a sharp increase in yield and quality improvement. Ultimately, the efficiency of the economic indicators of the potato industry in the country sharply increases.

References

1. Yunusov, R., Ganieva, F. A., Artikova, M. I., & Atayeva, Z. A. (2022). //THE
2. DEPENDENCE OF THE GROWTH, DEVELOPMENT AND PRODUCTIVITY OF APPLE TREES ON THE FACTORS OF CARE ON LOW-SALINE SOILS OF THE BUKHARA REGION//. *Web of Scientist: International Scientific Research Journal*, *3*(02), 773-781.
3. Ganieva, F. (2021).//РОСТ И ПЛОДОНОШЕНИЕ ДЕРЕВЬЕВ ПЕРСИКА В ОРОШАЕМЫХ САДАХ В ЗАВИСИМОСТИ ОТ КОНСТРУКЦИИ КРОНЫ.//*ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz)*, *6*(6).
4. Tukhtaev, S. H., Ganieva, F. A., & Artikova, K. S. (2021).//Application of carbophos in the control of plant spiders in Bukhara region//*Asian Journal of Multidimensional Research*, *10*(10), 1282-1285.
5. Ganieva, F. (2021).//РОСТ И РАЗВИТИЯ ВЕГЕТАТИВНО-РАЗМНОЖАЕМЫХ ПОДВОЕВ ЯБЛОНИ В ЗАВИСИМОСТИ ОТ ПЛОТНОСТИ ПОСАДКИ//.*ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz)*, *6*(6).
6. Rustam, Y., & Amrilloyevna, G. F. (2022, February).//INTENSIV PAKANA NOK NAVLARINING O'SISHI, RIVOJLANISHI VA HOSIL ELEMENTLARI SHAKLLANISHINING NAV-PAYVANDTAGLAR KOMBINATSIYASI VA KO'CHAT QALINLIGIGA BOG'LIQLIGI//.In *INTERNATIONAL CONFERENCE ON LEARNING AND TEACHING* (Vol. 1, No. 2).
7. Yunusov, R., F.Ganieva (2021).//Studying the different formations of apple trees in intensive orchards//. *ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz)*, *6*(6).
8. Ganieva, F. (2021).//Kotoran 80% SP Against Turnip Moths//. *ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz)*, *6*(6).
9. Atayeva, Z., Yunusov, R., Nazarova, S., & Ganiyeva, F. (2020).//INFLUENCE OF CULTIVAR COMBINATIONS AND SEEDLING THICKNESS ON THE FORMATION OF PHYTOMETRIC INDICATORS AND PRODUCTIVITY OF PEAR TREES IN INTENSIVE ORCHARDS//.*ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz)*, *10*(9).
10. Y Rustam, GF Amrullovna, AM Israilovna .//Growth and fruiting of trees in intensive dwarf apple orchards depending on variety-rootstock combinations and planting density. Texas Journal of Agriculture and Biological Sciences, 2022.
11. R Yunusov, YL Tolibovich, FA Ganieva, AI Utkir ugli //THE NUMBER, WEIGHT AND STRUCTURE OF BRANCHES SHORTENED WHEN PRUNING AN APPLE TREE//**.** EUROPEAN INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND MANAGEMENT STUDIES ISSN: 2750-8587. 2022 - eipublication.com.

ISSN NO: 2771-8840
Date of Publication: 10-11-2022

12. TS Khozhievich, GF Amrilloevna //Influence of Damage of the Winter Cutworm on the Yield of Cotton//. Texas Journal of Agriculture and biological science, 2022 - zienjournals.com.
13. Юнусов Р., Ганиева Ф., Тўхтаев И., Рўзиев Ш. Бухоро вилоятида эртанги картошка навларининг экиш муддатларининг ўсиш ва ҳосилдорликка таъсири. Сабзавотчилик, полизчилик ва картошкачилик сох,асида илмий ютуцлар, тадцщ отлар кулами ва ишлаб чщариш билан интеграция мавзусида утказиладиган Республика илмий-амалий анжумани материаллари туплами 20 октябрь 2021 йил.