

An Unconventional Method of Growing Potatoes

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ABSTRACT

Information on the growth, development and yield of potato varieties when grown from tumor seedlings in the repeated crop.

KEYWORDS: *Potato, tubers, variety, seedling seedlings, local variety, mineral fertilizer, local fertilizer, yield, yield quality.*

Introduction

Potato is one of the main and popular strategic food crops in the world. The average yield per hectare of arable land in the world is 16-17 tons.

One of the main problems in the field of potato growing in the country is the lack of seed materials of local varieties resistant to adverse conditions.

Samarkand region is one of the most developed regions in the country in terms of potato growing, and 22-24% of potatoes grown in the country are produced.

Nowadays, potato growers, farmers and landowners mainly spend 55-60% of their potato growing costs on seeds. This leads to a sharp increase in the cost of potatoes grown. Therefore, we assessed the growth, development and yield of potato varieties Sante, Aladdin, Arizona, Picasso, Marfona, Evolution, Memphis, Manitu, Fontane and Arnova, grown in large areas in the summer in Samarkand region. At the same time, the seed pods of potato varieties were grown under washed black sand, and an average of 5-8 seedlings were grown from the seed pods of the varieties.

Main part

According to the experiments conducted by T.E. Ostonakulov, S.T. (Astanakulov, Jumaev, & Sanaev, 2015). In the field where the prepared seedling seedlings were prepared, two seedlings were planted in each nest, like vegetable seedlings, in the cool of the day. The row spacing was 70 cm and the row spacing was 20 cm. According to S.Sanaev, H.Khonkulov, I.Amanturdiyev, when growing potato varieties from seedlings in the future, placing 2 seedlings in each nest with 70 cm between rows and 20 cm between plants ensured high yields. (Sanaev, Kh, & Kh, 2021). We know that the increase in yield in potato growing depends on mineral fertilizers. Mineral fertilizers improve the nutrition of the potato plant and create good conditions for its growth and development. Therefore, with the application of mineral fertilizers and a certain increase in the rate, the number of plant height, leaves, side stems increased.

In the scientific experiments carried out by S.Sanaev, A.Khamzaev, the best results were observed when potato varieties were grown from tumor seedlings with different fertilizers and combined with local and mineral nutrients. (Sanaev & Xamzaev, 2016).

The number of stems depended to a lesser extent on the application and norm of mineral fertilizers. Feeding with mineral fertilizers also led to a slight increase in the growth period. (Ostonakulov &

Sanaev, 2017).

Sante, Aladdin, Arizona, Picasso, Marfona, Evolution, Memphis, Manitu, Fontane and Arnova varieties were selected from more than 20 varieties of potatoes studied in our experiment. Fertilization norms when grown from seedlings of selected varieties of potatoes were $N_{100}P_{80}K_{50}$, $N_{200}P_{160}K_{100}$, 20t / ha semi-rotten manure, 20t / ha semi-rotten manure + $N_{200}P_{160}K_{100}$ kg / ha according to the options. This pattern was also observed in the research of T.E. Ostanakulov and S.T. Sanaev. (Astanakulov & Sanaev, 2017).

Seed tubers and seedlings of selected potato varieties were planted in 4 repetitions, and the delyanka area by varieties in each repetition was 28 m².

Tuber seedlings obtained from seed pods of selected potato varieties were planted in two plots of 70x20 cm in each cell under the conditions of application of different fertilizer standards.

According to the results of phenological observations, the emergence of tumor seedlings from seed pods of promising potato varieties, the viability of seedlings in the field, the formation of side stems on the main stems, the onset of phases of flowering, flowering and yellowing and the timing of full occurrence. When selected potato varieties were grown under different fertilizer rates, the dynamics of plant growth, development and formation of vegetative organs by varieties were determined by biometric measurement of the growth period in the range of 30-70 days, ie every ten days.

There was no significant difference in plant neck growth during the initial development period (days 10-30 of germination) after the potato varieties had fully germinated and the seedlings had fully germinated. From 30 to 60 days of the growing season, the growth and development of plant height was accelerated, and in the 60-70 days of the growing season, the growth rate was significantly reduced.

Growth, development and formation of vegetative organs of potato varieties Arizona, Picasso, Evolution, Arnova, grown in different fertilizer rates, was observed. In the next 70 days of the growing season, the plant height of the varieties was 68.2-99.9 cm. According to S.Sanaev's experiments, the height of potato plants ranged from 55.5 to 100.8 cm. (Sanaev, 2014).

The tallest plants are fertilized at the rate of 20t / ha with half-rotted manure + $N_{200}P_{160}K_{100}$ kg per hectare. The height of the plant was 38.4-45.5 cm, 40-60 days of the growing season in accordance with the law, and the next 70 days of the growing season was 87.2-99.9 cm by plant. .

On the 30th day of the growing season of early-maturing and medium-ripe varieties of potatoes grown under different fertilizer rates, the number of lateral stems per bush was 1-4, the 40-60th day of the growing season increased in accordance with the law, and the next 70 days of the growing season the number of side stems in the plant was noted to be 7-14.

The effect of growing conditions on yield, commodity and seed yield of cultivars was studied when the separated potato varieties Arizona, Marfona Arnova were grown under different fertilizer rates. The effect of fertilizer standards on yield and yield quality when different varieties of potatoes are grown on land has also been studied by A. Hamzaev, T.E. Ostonakulov and S.T.Sanaev (Hamzaev, Astanakulov, & Sanaev, 2015).

When grown from the seedlings of isolated potato varieties at different fertilizer rates, the yield was 19.5-27.6 tons when 2-3 seedlings were planted in each nest in the 70x20 cm scheme. The highest yield was obtained when 20t / ha of semi-rotten manure + $N_{200}P_{160}K_{100}$ kg per hectare was grown using fertilizers, and the yield by varieties was 25.2-27.6 tons per hectare. (Ostonakulov, Sanaev, & Khonkulov, 2014).

When the early, middle and early maturing varieties of potatoes were grown under different fertilizer rates, the total yield of the varieties was collected separately, and healthy and high-quality, commodity and seed potato tubers that fully meet the requirements of commodity and seed material were separated from the total yield.

Conclusion. This article that the yield of potato, commodity and seed yields depend on fertilizer standards, planting schemes, crop variety and growing conditions. Therefore, the selection of varieties suitable for each soil and climatic conditions and their cultivation in optimal planting schemes and fertilization rates increases the cost-effectiveness of growing potato varieties from seedling seedlings.

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