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THE TECHNOLOGY OF GROWING EARLY POTATOES IN THE CONDITION OF THE REPUBLIC OF KARAKALPAKSTAN

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Abstract:

The article presents the results of research on the selection of potato varieties for the cultivation of early potatoes in the region of the Republic of Karakalpakstan. Early ripening-5 varieties were used in the sowing of fairy tales as the object of research. The study examined the growth and development of potato varieties, the duration of the growing season, yields and commodity yields. Local varieties of potatoes Dusm palak (20.7 t / ha), Zarafshan (19.5 t / ha), Kuvonch 16 \ 36 M (18.4 t / ha), Fresco and Red Ccarlet (23.4 t / ha) will be planted tomorrow. Recommended for planting in the area.

Keywords: plant, variety, growth, development, soil salinity, soil temperature, stem, tuber, tuber weight, number of nodules, germination, weeding, flowering, stalk yellowing, stalk drying, bush yield, yield.

INTRODUCTION

Potato is one of the food products used by the population, it is also used as a food and technical crop for livestock, so alcohol production is a valuable commodity for industrial enterprises and is a universal crop. Potatoes are distinguished from other crops due to their rich content of starch, carbohydrates, protein, vitamin C, mineral salts and other substances. Potatoes are used throughout the year in public consumption. In the soil and climatic conditions of the Republic of Karakalpakstan, planting potatoes in early spring has the potential to fully meet the needs of our people. Depending on the climatic conditions, it is recommended to sow potatoes in the Republic of Karakalpakstan at the end of the first flour day and the beginning of the second flour day in March, based on annual experience and scientific research. If the sowing period of potatoes is delayed by 10 days, the yield will decrease by 10–12%. Among the early ripening varieties of potatoes with a short ripening period: It is recommended to plant local varieties Dusm palak, Zarafshan, Kuvonch 16 \ 56, Fresco, Red Scarlet. If you plant medium or late ripening varieties of potatoes without knowing the exact variety, the white tubers will appear late and the days will be hot. To increase potato yield, improve quality, and ensure early ripening, medium- and large-sized seed tubers should be planted. When seeds are sown with a weight of 35-70-130 g, germination is 2-3 days, the period from sowing to flowering is 8-13 days, which leads to an increase in yield by 35-40%. One of the main factors in preparing early ripening potatoes for planting is to harvest the tubers. Harvested seedlings germinate 12-25 days earlier than uncultivated ones and their yield increases.

Phenological observations were made to determine the growth phases of potato varieties planted in this agro-climate and soil conditions.

The results of potato varieties selected for the study has been studied for the germination, combing, flowering, yellowing and construction phases were observed.

In this case, the growth of the plant in the days after planting the tubers was 15–16 days in the early varieties. It is noted that the early ripening of these varieties blooms 30-35 days after plant growth.

The growing season of tomorrow's potato varieties lasted until the end of June, when it took 73-79 days from germination to ripening.

Taking into account that the length of the plant stem, the number of leaves and the level of the plant are the main factors in the branching of the crop.

As a result, the length of the plant stem was 82-85 cm in the early varieties, the number of observed varieties stem was 3.3-4.5 pcs., the number of plant leaves was 165-179 and the level of emerging leaves was 0.65-0.79m 3.

In the case of planted potato varieties, the weight of the fruits that appear in one bush were 79-87 grams, it was in early ripening varieties, and 65-80% of them were formed during the phase of plant development and fruiting. When calculating the yield at the end of the growing season, it was taken into account that 299-413 g of crop was collected at one bush of the early ripening varieties.

It was clearly proved from the analysis of the data given in Table 1 that the weight and number of tubers of potato varieties depends on the characteristics of the harvested varieties in general.

Table 1

Tuber weight, number and yield of tubers in the bush when planting early potatoes (2018-2020)

№	The name of the variety	Weight in a bush, gr	Number of nodes in a bush	Yield of nodules in a bush, g
Early maturing varieties (Early varieties)				
1	Local Dusm stem	73	4.9	358
2	Zarafshan	77	4.4	339
3	Quvonch 16\36 m	68	4.4	299
4	Fresco	106	3.9	413
5	Red Scarlet	111	3.7	411

It was noted that the largest tubers were found in early ripening varieties Red Scarlet, Fresco varieties. During the research, reports were made to determine the yield of varieties and the yield of the commodity, and the results are given in Table 2.

Table 2

Yields and commodity yields of early potato varieties

№	The name of the variety	Yield by years t / ha									The difference in yield compared to the standard variety	
		2018		2019		2020		average				
		Yield	Product	Yield	Product	Yield	Product	Yield	Product t / ha	Product %	t / ha	%
Early maturing varieties (Early varieties)												
1	Local Dusm stem	20.4	20.0	20.4	19.7	21.4	17.9	20.7	19.2	93	-	100
2	Zarafshan	18.6	17.7	19.9	19.3	19.9	17.0	19.5	16.0	92	-1.2	94
3	Quvonch 16\36	17.5	17.0	18.0	17.3	19.2	16.7	18.4	17.0	92	-2.3	89,9
4	Fresco	23.4	21.0	21.8	21.7	24.5	23.3	23.4	22.0	94	2.7	113
5	Red Scarlet	22.0	21.0	23.9	21.3	23.7	21.7	23.4	22.0	94	2.7	113
		S_x (%)=		1.39;		1.45;		0.57;		0.16;		
		EKF_{05} (t/ha)=		0.32;		0.34;		0.14;		0.04;.		

As a result of the analysis, it was observed that the total yield of early ripening potatoes was 19.5-25.4 t / ha, and the yield was 92-94%.

CONCLUSION:

70% of irrigated lands in the Republic of Karakalpakstan are saline, and potatoes are grown on unsalted, low-salinity and moderately saline lands of the region. It was taken into account the need to select varieties suitable for growing potatoes in conditions of soil salinity.

According to research, in the first period of plant development, the roots and plant bush grow strongly. During this period, the yield of potato is 65-87 g. It was taken into account that the process of nodule formation accelerates in the second stage of plant development. It was proved that the total yield in early ripening varieties is 19.5-23.4 t / ha, the yield of the commodity is 92-94%, respectively. It has been proven that high economic efficiency is achieved when these varieties are introduced into production.

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