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# AGROTECHNICS OF GROWING RE-PLANTED BEAN VARIETIES

**Guliston Abdalova*; Jasurbek Tajiyev**; Sherali Odinayev*****

*Candidate of Agricultural Sciences,
Tashkent State Agrarian University, Tashkent, UZBEKISTAN
Email id: 1963gulistan@mail.ru

**1-year student at Master's Degree
Tashkent State Agrarian University, Tashkent, UZBEKISTAN

***1-year student at Master's Degree
Tashkent State Agrarian University, Tashkent, UZBEKISTAN

## ABSTRACT

*This article provides information about agro technology of fertile cultivation of Rovot, Productive varieties of beans, which are grown as a secondary crop in the typical gray soils of Tashkent region. In the experiment, local white beans, Rovot, Makhsuldor varieties are grown. Irrigation is carried out in the order of soil moisture 70-70-60%, 65-65-60% relative to limited field moisture capacity. In the foothills and irrigated areas, groundwater is saturated mainly by surface water. The water resources of rivers and groundwater are interconnected. Excessive use of groundwater will reduce river flow.*

**KEYWORDS:** *Typical Gray Soil, Fertigation, Black Polyethylene Film, Rovot, Productive Bean Varieties*

## INTRODUCTION

**Relevance and necessity of the topic** The world's oceans, groundwater, glaciers, soil moisture, river water, atmospheric vapors, and the hydrosphere, according to some estimates, have 145,4327.2 thousand km of stable water resources. Theoretically, water resources are inexhaustible, because when these resources are used wisely, water resources are constantly renewed. However, in many countries, the problem of water scarcity arose in the late 20th century due to the increasing use of water resources for agricultural, industrial, communal and other purposes, as well as the pollution of water sources by discharging wastewater into rivers and lakes. In the foothills and irrigated areas, groundwater is saturated mainly by surface water.

The water resources of rivers and groundwater are interconnected. Excessive use of groundwater will reduce river flow. In the irrigated agricultural regions of Central Asia, the annual water resources are 114 km, including 74.7 km in the Amudarya (along with Zarafshan and Kashkadarya), 39 km in the Syrdarya, and 2.4 km in the Tajan and Murgab. Although water resources are geographically unevenly formed in the mountains, they are used by a wide range of irrigation canals, mainly in the plains.

**The main purpose of the study.** In the conditions of typical irrigated gray soils of Tashkent region, beans are irrigated by simple tillage and black polyethylene film between the rows, fertilization of organic fertilizers in different norms and proportions, ie dissolved in water. To study the effect of application on plant growth and productivity.

**The main objectives of the study:**

- Improving the elements of irrigation technology by applying mulching between rows of beans with black polyethylene film;

- To determine the effectiveness of the application of organic fertilizers in water, ie fertilization, using a simple furrow and irrigation with a black polyethylene film between the rows;

- Mulching of beans between rows with black polyethylene film to obtain a fertile layer of soil and prevent the leaching of nutrients;

- Improving the efficiency of irrigation by mulching between rows of beans with black polyethylene film;

- Achieving to saving of water and resource by mulching between rows of beans with black polyethylene film;

- Achieving a rich and high yield.

**The object** of the study was the second crop of beans "Rovot", "Mahsuldor".

Field experiments will be conducted in 2021 on the Small Experimental Farm of TashDAU. The mechanical composition of the soil of the experimental field is heavy sand, typical gray, groundwater is located 15 m below, and is irrigated from the old. The experiment is performed in the following system

Before plowing, the norm of local fertilizers is 5-10 tons per hectare. Irrigation is carried out by flexible pipes instead of ditches, with black polyethylene film between the rows. In the experiment, local white beans, Rovot, Makhsuldor varieties are grown. Irrigation is carried out in the order of soil moisture 70-70-60%, 65-65-60% relative to limited field moisture capacity. The experiment consists of 5 variants, each delyanka area is 280 m2, placed in three rows, one tier.

Beans are a widely grown crop. Yields decrease when planted in bulk. Row spacing can vary from 50 to 70 cm. 300-400 thousand bushes per hectare provide high yields.

On irrigated lands in Uzbekistan, beans are grown mainly in rows with a spacing of 60 cm. Beans are also planted at 45.70 row spacing. In the experiments conducted at Samarkand Institute of Agriculture, the average yield of beans when planted in the scheme 60x15x6 was 20.9 s / ha, when planted between rows 45x15x6, the grain yield decreased by 18.6 - 17.3 s / ha.

Numerous experiments show that in the conditions of beans in Uzbekistan the yield is highest when the sowing rate of 60 cm between rows is 70-75 kg / ha. Reducing the sowing rate by 70 kg or 120 kg per hectare led to a decrease in grain yield.

The convenience of sowing between rows is 60 cm. The main crop in the Republic is cotton, which is often planted at 60 cm between rows. Therefore, the techniques used in the cultivation of cotton can be easily used in the cultivation of beans.

Bean seeds are sown to a depth of 4-5 cm. If the mechanical composition of the soil is sand, the planting depth is increased by 6-8 cm. Throwing seeds too deep will reduce field germination and cause many seeds to rot. Sowing is carried out on seeders SPCH-6, SPCH-8A, SST-12A. When using beet seeder SST-12A, an additional section STYA-31000 is installed. STVX-4 or SON-2,8 vegetable seeders can also be used for sowing seeds.

## CONCLUSION

For the cultivation of ecologically clean products from water-scarce, arid and eroded, prone to irrigated areas of the country, using organic fertilizers and water-saving technologies, high-yield agro-technology of "Rovot", "Productive" bean varieties will be developed . As a result of scientific research, the positive effects of legumes on the agrochemical and agrophysical properties of soil due to biological nitrogen and organic matter left in the soil are studied.

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