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THE EFFECT OF DIFFERENT SOIL TRAINING METHODS AND HERBICIDES APPLICATION ON THE GROWTH AND DEVELOPMENT OF REPEATED POTATOES IN THE FIGHT AGAINST WEEDS

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Abstract: The soil is treated with a two-layer plow to a depth of 28-30 cm, along with weed control, Dafosat herbicide at a rate of 4.0 kg/ha, and Ridovn Xtra 75% herbicide at a rate of 2.0 kg when 2-3 true leaves appear. When applied, weeds are sharply reduced and favorable conditions are created for the good growth and development of cultivated plants.

Introduction. Among agricultural crops, potatoes are considered a food product consumed daily by the population. Therefore, it is cultivated annually in the world on 18-19 million hectares, yielding 3.1-3.3 million tons. It is the second largest agricultural product in the world after wheat, rice, and corn in terms of area and importance, and more than 500 different dishes are prepared from it.

Potatoes are considered the second most consumed food in the country. One of the main reasons for this is that potato tubers are rich in nutrients necessary for the human body - starch, protein, sugar, fiber, various vitamins, and mineral elements.

Among the world's potato-growing continents of Europe, Asia, North America, South America, Africa and Oceania, the countries of the European continent rank first in terms of potato planting and cultivation - the cultivated area is 9,145 thousand hectares and the gross yield is 138.2 million tons .

According to the Food and Agriculture Organization of the United Nations (FAO), global potato production could double within 10 years, making a significant contribution to global food security. By focusing on increasing yields and fully utilizing historical potato-growing areas, global production could reach 500 million tons by 2025 and 750 million tons by 2030 (FAO data 2023).
Potatoes have been grown in Uzbekistan for 160 years, mainly for food purposes. Potatoes plant farmer , agro-cluster and farm farms by is cultivated .
Population number grow village on the farm in use land and water resources limited . Therefore , in our country from opportunities reasonable used without the population good quality food products with provide and product export develop for the purpose from grain empty in the fields repetitive crop to plant big attention is being addressed .

This the field develop for the purpose Uzbekistan Republic The President's address " In the Republic " dated May 6 , 2020 potato to cultivate expansion and seed production further develop measures Resolution No. PQ-4704 on acceptance made . . To the decision mainly in our country consumption and seed potato to cultivate propagation , potato cultivation in the field cluster and cooperation mechanisms expansion and modern technologies based on in the field added value

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chain create , internal market demand satisfy , its export expansion , cultivation in 50 percent of the area seed potato super elite and elite descendants cultivation , advanced technologies , innovation solutions and scientific achievements wide current to reach separately attention focused .

The purpose of the study: to improve integrated weed control measures in potato crops planted as a repeated crop in the conditions of meadow sedge soils of the Fergana region .

Scientific novelty of the study: For the first time , the effect of integrated weed control on weeds in potato fields planted as a repeated crop in the meadow-sedge soils of the Fergana region is being determined;

The impact of integrated weed control on the agrophysical, hydrophysical, and agrochemical properties of the soil in potato fields planted as a repeated crop is determined;

To maintain potatoes planted as a repeated crop, the soil is treated in various ways and when herbicides are used, the potatoes are growth, positive impact on development, productivity and quality indicators is determined;

The economic efficiency of herbicides used in combination with soil tillage methods to control weeds in potato fields planted as a repeated crop in potato cultivation is explained.

EXPERIMENTAL SYSTEM AND CONDUCT METHODS

Field experiments will be conducted in the conditions of meadow sedge soils of the Fergana region in 2024-2026. The soil of the experimental site has an average loamy texture, has been irrigated for a long time, is not saline, and the groundwater level is located at a depth of 4-5 meters.

Experience system

No.	Potatoes (2024-2026)			
	Soil cultivation method	**Herbicide name**	**Herbicide application period**	**Herbicide rate, g,kg/ha**
1	Plowing at a depth of 28-30 cm on a conventional plow	No need for herbicides	-	-
2		Defosat (standard)	Along with planting	4.0 kg
3		Ridovn Xtra 75%,	When 2-3 true leaves appear	2.0 kg
4		Dolfuron 25%	In bloom	30 g
5	Two tiered in the plow 28-30 cm deep plowing	No need for herbicides		-
6		Defosat (standard)	Along with planting	4.0 kg

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7		Ridovn Xtra 75%,	When 2-3 true leaves appear	2.0 kg
8		Dolfuron 25%	In bloom	30 g

Potato research (2024-2026) will be conducted in 8 variants, 4 replicates and 2 layers . The area of each variant is 360 m ^{2} , the accounting area is 180 m ^{2} . The total area of the experiment is 0.30 hectares.

RESEARCH RESULTS

Phenological observations were conducted on the effect of herbicides used against weeds on the growth and development of potatoes planted as a repeated crop, along with various methods of tillage. Phenological observations were conducted on selected plants, selecting 25 plants in each variant. In this case, observations were conducted on the developmental phases of the selected potato plant in each variant.

In our scientific research, the height of the potato plant in the tillering phase was 35.2 cm on average in the control background plowed to a depth of 28-30 cm with a simple plow, while in the control background plowed with a two-row plow, the average height was 37.2 cm in the control background plowed with a two-row plow, while in the control background plowed with a two-row plow, the average height was 37.9 cm in the control background plowed with a two-row plow, while in the control background plowed with a two-row plow, the average height was 39.2 cm in the control background plowed with a two-row plow, while in the control background plowed with a two-row plow, the average height was 37.9 cm in the control background plowed with a two-row plow, while in the control background plowed with a two-row plow, the average height was 39.2 cm in the control background plowed with a two-row plow, which

was 1.3 cm higher than the control, and the number of leaves was 33.1 units on average in the control in the background plowed with a simple plow to a depth of 28-30 cm in variant 1, which was 4.3 units more than the control, while in the background plowed with a two-tier plow it was 38.6 units on average in variant 5, and in variant 8 this indicator was 43.9 units, which was 5.3 units more than the control, and the leaf surface of the plant was 452 thousand/m ^{2} on average in the control in the background plowed with a simple plow to a depth of 28-30 cm in variant 1, and in variant 4 this indicator was 560.3 thousand/m 2 , which was 108.3 thousand/m ^{2} more than the control, while in the background plowed with a two-tier plow it was 38.6 units on average in variant 5, and in variant 8 this indicator was 43.9 units, which was 5.3 units more than the control In option 5, the average was 614.3 thousand/m ^{2} , while in option 8, this figure was 681.3 thousand/m 2 , which was 67 thousand/m 2 more than the control . The number of nodules in the control background plowed with a simple plow to a depth of 28-30 cm was 7.15 units in option 1, while in option 4, this figure was 7.22 units, which was 0.07 units more than the control background plowed with a two-tier plow, while in option 5, the average was 7.46 units, while in option 8, this figure was 8.06 units, which was 0.6 units more than the control background.

Conclusion: From the results of the study, it can be concluded that the growth and development of potatoes planted as a repeated crop as a result of the combined use of both soil tillage methods and herbicides was good, but on the background of the soil treated with a two-layer plow, more favorable conditions were created for the growth and development of the plant compared to the

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background treated with a simple plow. (Table 4.3.1). The above patterns were maintained in the remaining phases of plant development.

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