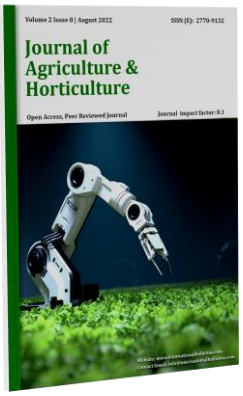

THE ADVANTAGE OF USING NO-TILL TECHNOLOGY IN GROWING COTTON

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Annotation : The advantage of using No-till technology in growing cotton
Key words: technology, yield, No-till, without plowing, composition, soil, fenologic observation

The agrotechnical possibilities of the cotton growing process should be focused on the cultivation of high-yielding early-ripening plants, well developed in various soil and soil-reclamation conditions. Therefore, the study of new agricultural techniques and methods consists, first of all, in identifying their influence on the greatest fruiting, in identifying the influence of early pisivin, on accelerating its growth and development in various periods of the domestication process.

While growing cotton using No-till technology, special plants are also used as a resource-saving principle as a more effective means of protecting branches. This technology has been widely applied mainly in the work with wheat germ, and excellent results have been achieved. Currently, we have used the alfalfa plant, applying this technology to the cotton plants. Alfalfa is considered one of the plants of agrotechnical importance. The lands freed from alfalfa are the best place for crop rotation for other plants, since the perennial collects 250-340 N kg, 150-184 c of vascular residues on one hectare. The ball contains 1. The humus content increases to 58%. Alfalfa is a reclamation plant, the reason is that the salt content in the lands sown with alfalfa is decreasing. This is due to the fact that alfalfa is densely planted, evaporation from the surface of the branch decreases somewhat, part of the salt goes away with the harvest, the salts are washed out when watering alfalfa, and also due to the fact that the deep layers of alfalfa use water, and groundwater does not rise up

No-Till technology in land cultivation is a modern system of tillage, which implies the rejection of plowing the land using software methods. Before working with the land using this technology, you definitely need to prepare the acreage well. This includes loosening, plowing, harrowing and capital leveling of the field using a laser planing machine. It is necessary to dig out the veins of wild grasses from the field. In particular, it is required that the field level be even. Work on tillage using this technology is carried out only in the first year. From next year, tillage will not be carried out, agricultural crops will be planted directly with the help of seeder equipment.

The experiment was conducted at an experimental site around the Karakalpak Institute of Agriculture and Agrotechnologies.

The research examines the effect of soil tillage technology without plowing on the agrochemical properties of the soil and conducts phenological observations.

The area in which the experiment is conducted consists of iteration III and option IV, each options consists of 3 lines. Based on the experimental scheme, the culture was given mineral fertilizers according to the option.

Table 1

The scheme of the experiment

Cotton	N,P,K
Cotton - alfalfa	P_{50} K_{25}
Cotton - alfalfa	P_{100} K_{50}
Cotton - alfalfa	P_{150} K_{100}

While having calculated mineral fertilizers according to the variants, 30% of the annual nitrogen rate was introduced during the period when cotton produced 3-4 whorls of leaves, 30% - during the cotton period, the remaining 40% - during the flowering period. Ammonium nitrate from nitrogen fertilizers, superphosphate from phosphorus fertilizers and potassium chloride from potash fertilizers were added to the steps. 30% of the annual rate of phosphorus and potassium was given during the quenching period.

During the survey, the following control, measurement and calculation works were carried out.

Soil samples at the experimental site for the second year were also taken soil samples by season. The sample was subjected to agrochemical analysis in the laboratory. At the same time, the humus content in the soil is I. V. According to the Tyurin method, the amount of mobile phosphorus is B. P. In the mashigin method and mobile potassium, the content of P. V. was revealed by the Protasov method (list 2).

Table 2

Humus, mobile phosphorus and mobile potassium
(may,2023)

№	Repetitive actions	Depth, cm	Humus %	P_2O_5 mg/kg	K_2O mg/kg
1	I	0-15	1,576	43	104
		15-30	1,209	37,4	72
2	II	0-15	1,48	38,7	154
		15-30	1,42	41	98
3	III	0-15	1,109	38,6	124
		15-30	1,417	45	141

Below are the results of the analysis of soil samples taken from the experimental site during the summer season (table 3).

Table 3

Humus, mobile phosphorus and mobile potassium
(june,2023)

№	Repetitive actions	Depth, cm	Humus %	P_2O_5 mg/kg	K_2O mg/kg
1	I	0-15	1,612	39	98
		15-30	1,285	38	78
2	II	0-15	1,53	35,9	162
		15-30	1,44	38	106
3	III	0-15	1,189	39,3	132
		15-30	1,512	43	140

According to the results of the analysis, it was found that the humus content in the soil is average in the 0-15 cm category at each repetition and low in the 15-30 cm category. We see that the content of mobile potassium in the soil is very low in category 0-15 cm at I and very low in category 15-30 cm at III and low in the rest. It was found that the content of mobile phosphorus in the soil is very high in categories II to 0-15 cm and 15-30 cm, while in the remaining categories I and III it occurs in moderate and low amounts.

Phenological observations were carried out in an experiment ,when studying the phases of development during the growing season. The cotton was planted to the experimental field on April 12, 2022 and was sprout on April 22. At the end of May, he began to give 3-4 green leaves. At the beginning of June, the bud period began (list 4). Table 4

Phenological observation of cotton

№	Options	Plants taken under observation, number	Plant height by repeatability, cm(average)			Fruit branches of plants by repetition number (average)		
			I	II	III	I	II	III
July,2023								
1	Cotton NPK	10	55,1	61,1	45,7	6,9	5,0	3,9
2	Cotton+Alfalfa	10	47,8	46,2	44,6	4,5	4,3	3,9
3	Cotton+Alfalfa	10	68,2	56	48	7,5	4,6	4,6
4	Cotton+Alfalfa	10	80,1	66	43,6	9,5	4,9	3,8
August ,2023								
1	Cotton NPK	10	69,9	64	47	7,1	6	4,7
2	Cotton+Alfalfa	10	52,3	47,7	47,1	5,1	5,4	4,4
3	Cotton+Alfalfa	10	71,4	57,9	49,4	7,8	5,9	4,7
4	Cotton+Alfalfa	10	83,5	67,1	45	10,8	5,5	4,1
September,2023								
1	Cotton NPK	10	70,2	65,3	48,7	7,4	6,6	4,7
2	Cotton+Alfalfa	10	54	48,4	48,6	5,3	5,7	4,7
3	Cotton+Alfalfa	10	73,7	59	51,5	7,8	6,1	4,8
4	Cotton+Alfalfa	10	84,6	68,6	46,8	11,3	5,6	4,4

The phenological control was carried out in early July 2023. It is obvious from the table that plants of the I- variant in each iteration have a height comparable to the height of plants of the other variant, and the number of fruit branches also developed earlier.

During the experiment, in early September, a noble cargo variety was harvested and the yield was calculated (list 5).

Cotton yield (2023).

Date of collection	Options	Callculation of the options square,m²	Yield to maturity, gr		
			I	II	III
I	Cotton NPK	3,6	730	750	420
	Cotton + Alfalfa	3,6	515	460	390
	Cotton + Alfalfa	3,6	425	390	380
	Cotton + Alfalfa	3,6	440	280	350
II	Cotton NPK	3,6	680	730	400
	Cotton + Alfalfa	3,6	485	430	370
	Cotton + Alfalfa	3,6	390	350	365
	Cotton + Alfalfa	3,6	420	260	315
III	Cotton NPK	3,6	620	680	350
	Cotton + Alfalfa	3,6	430	410	290
	Cotton + Alfalfa	3,6	650	650	250
	Cotton + Alfalfa	3,6	390	250	260

In conclusion, cotton was not allowed to work on the implementation of this technology in the aisles. Alfalfa planted with cotton improves soil fertility, reduces the amount of salts in the soil, reduces the evaporation of water from the soil surface. As we can see in the above table, the performance of the cottton when using this technology shows good results.

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