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GROWTH, DEVELOPMENT AND HARVEST ACCUMULATION OF ROOT AND CROP RESIDUES OF WINTER WHEAT AND OILSEEDS IN THE SOUTH OF UZBEKISTAN

Таджиев Марданкул
Ph.D., Senior Researcher,

Таджиев Карим Марданкулович
д.с.х.н , senior researcher
Research Institute of Fine-Fiber Cotton, Termez, Republic of Uzbekistan
e-mail: karimgeobio@mail. ru

Telephone: Таджиев Марданкул: +998 93 637 82 37
Таджиев Карим Марданакулович: +998 99 428 42 63

Annotation
Data on growth, development of grain yield, accumulation of root and crop residues of winter wheat and oilseeds during re-sowing after winter crops are presented.
Root and crop residues of winter wheat in the layer of 0-50 cm of soil 45.6 c / ha, soybeans 36.4 c / ha, sunflower 40.2 c / ha, sesame 35.9 c / ha, peanuts 23.5 c / ha, safflower 36.0 quintals per hectare. In addition, winter wheat and re-sowing in the layer of 0-50 cm of soil accumulated organic residues of 71.1-85.8 c / ha per hectare.
Oilseeds are the main source of providing the population with vegetable oil. Vegetable oils in the republic are consumed in greater quantities than animals.
In recent years, after the sovereignty of the republic, a reduction in the sown areas of cotton has begun. In this regard, in order to provide the population with vegetable oils, the expansion of sown areas for oilseeds, which better provide the population with vegetable oil, has begun. Oilseeds give not only oil, animal feed for animal husbandry, but also oilseeds for animal husbandry. and raw materials for the processing industry.
Key words: oilseeds, growth, development, harvest of oilseeds, accumulation of root crop residues of winter wheat and oilseeds.
Oilseeds are the main source of providing the population with vegetable oil. Vegetable oils in the republic are consumed in greater quantities than animals.

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In recent years, after the sovereignty of the republic, the reduction of cotton acreage has begun. In this regard, in the Republic of Uzbekistan, in order to provide the population with vegetable oils, the expansion of areas for oilseeds, which better provide the population with vegetable oil, has begun.

Scientists abroad and in Uzbekistan study the usefulness of vegetable oils, they have a number of useful properties, contain less cholesterol.

I.I. Vaviloin (1931) notes that the role of Central Asia in the origin of cultivated plants, including oilseeds.

V.M. Lukomets (2004) notes that oilseeds are better zoned in the conditions of Krasnodar.

Oilseeds provide not only oil, animal feed for animal husbandry, but also raw materials for the processing industry.

The world annually produces soybean oil 221.9 million tons, rapeseed oil 45.7 million tons, cottonseed oil 42.8 million tons, sunflower oil 28.9 million tons, palm oil 10.4 million tons (6).

The main producers of sunflower oil are Ukraine, Russia, USA, Brazil, Argentina, China, India, France, Germany, Canada, which produce more than 78.0 percent of sunflower oil (3).

Sunflowers develop roots (1.0–2.0 m) and use moisture and nutrients from deep layers into the soil (5, 6, 7) before the basket appears.

According to Z. Khafizov, selective varieties of soybeans Selecta 302, Selecta 201 should be sown in the spring (in April) and precocious varieties of Amigo soybeans. Sparta, Arlette after harvesting winter wheat when re-sowing (7).

Research methods. "Methods of State Variety Testing of Agricultural Crops" (Moscow. 181) and "Methods of Conducting Field Experiments with Agricultural Crops" of the Uzbek Research Institute of Plant Growing (2007) (1).

Research results. Our research was conducted at the experimental site of the Surkhandarya scientific experimental station of the Uzbek Research Institute of Seed Breeding and Agrotechnology of Cotton Cultivation in 2017-2020.

The soils of the experimental site are mechanically heavy loamy. Weakly saline, groundwater occurrence is 2-3 meters. Little provided with humus and other nutrients, well provided with carbonates (8-10%).

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Research results of sown crop varieties. Winter wheat Termiz-5, soybean Uzbekistan-6, sunflower Zhakhongir, peanuts Tashkent-112, sesame Tashkent-122, safflower Milyutinsky-114.

In the conditions of the experiment, all cultures grew, developed normally. Optimal densities of standing of winter wheat and oilseeds were irradiated (Table-1).

The yield of winter wheat amounted to 77.4 c / ha with re-sowing, the soybean yield for the year after winter wheat was 19.8 c / ha, sunflower 22.5 c / ha, sesame 21.4 c / ha, peanuts 15.4 c / ha and safflower 18.4 quintals per hectare.

The yield of dry weight of winter wheat is 97.1 quintals, peanuts additionally for the year after winter wheat 34.0 quintals, safflower 58.5 quintals per hectare.

The results of the studies have shown that cultures of different families accumulate root and crop residues in different quantities (Table-2).

Table-2 Accumulation of root and crop residues of oilseeds by re-sowing, c/ha

№	Options	Horse and crop residues. c/ha		Total in 0-50 cm layer of soil
		0-30 cm in soil layer	30-50 cm in soil layer	
1	Winter wheat	42,7	2,9	45,6
2	Re-sowing soybeans after winter wheat	34,4	2,0	36,4
3	Re-sowing of sunflower after winter wheat	38,4	1,8	40,2
4	Re-sowing of sesame after winter wheat	33,9	1,9	35,9
5	Re-sowing peanuts after winter wheat	34,2	1,3	25,5
6	Re-sowing fromaflora after winter wheat	34,1	1,9	36,0

The results of the conducted field experiments show. That the bulk of the roots and crop residues of the culture accumulates in the arable (0-30 cm) layer. And in the sub-arable much in a smaller amount of plant residues. Winter wheat in 0-30 cm of soil accumulated root and crop residues of 42.7 c / ha, and in 0-50 cm layer 45.6 quintals per hectare.

Soybeans during reseeding accumulated root and crop residues in a layer of 0-50 cm of soil of 36.4 quintals, sunflower 0.2 quintals, sesame 35.9 quintals,

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safflower 36.0 quintals and the least accumulated root and crop residues in a half-meter layer of soil peanuts 25.5 centners per hectare.

Table 1 Resource requirements by component

№	Name of cultures	Number of shoots per 1 m^2 pieces	Density of standing plants. tys/ha	Height of plants, cm	Number of fruit branches, pieces	Number of fruit elements, pieces	Number of leaves, pieces of green mass yield, c/ha	Harvest of green mass, c/ha	Harvest of dry mass, c/ha	Grain harvest, c/ha
1	Winter wheat	275,0	200,1	98,4	-	-	5,2	-	97,1	77,4
2	Re-sowing soybeans after winter wheat	208,0	88,8	110,1	2,2	56,8	19,8	180,5	60,3	19,8
3	Re-sowing of sunflower after winter wheat	90,4	201,0	135,0	1,0	1,0	25,1	220,4	72,0	22,5
4	Re-sowing of sesame after winter wheat	210,0	90,7	110,2	1,0	60,0	34,4	178,6	57,5	21,4
5	Re-sowing peanuts after winter wheat	92,2	160,0	40,5	1,0	8,2	43,2	105,0	34,0	15,4
6	Re-sowing of safflower after winter wheat	162,2		110,2	3,0	9,3	71,6	190,8	58,5	18,4
									NSR_{05}	1.37 inches/ga
									NSR_{05}	2,19%

Growth, development and yield of winter wheat and oilseeds when re-sowing them after harvesting winter wheat

Table 3 shows that the two crops, winter wheat and repeat crop, significantly enrich the soil with plant residues. Than one crop is winter wheat.

Winter wheat in the soil layer 0-50 cm accumulated organic residues of 45.6 c / ha, winter wheat + re-sowing of soybeans 82.0 quintals, winter wheat + re-sowing of sunflower 85.8 quintals, winter wheat + re-sowing of sesame 71.1 quintals, winter wheat + re-sowing of peanuts 81.5 quintals, winter wheat + re-sowing of safflower 81.6 quintals of organic residues.

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Table 3. Accumulation of root and crop residues of winter wheat and oilseeds, c/ha

№	Name of cultures	Winter wheat			Repeat crops		Repeated cults	Total in a layer of 0-50 cm of soil
		0-30 cm	30-50 cm	0-50 cm	0-30 cm	30-50 cm		
1	Winter wheat	42,7	2,9	45,6	-	-	-	45,6
2	Re-sowing soybeans after winter wheat	42,7	2,9	45,6	34,4	2,0	36,4	82,0
3	Re-sowing of sunflower after winter wheat	42,7	2,9	45,6	38,4	1,8	40,2	85,8
4	Re-sowing of sesame after winter wheat	42,7	2,9	45,6	24,2	1,3	25,5	71,1
5	Re-sowing peanuts after winter wheat	42,7	2,9	45,6	33,9	1,9	35,9	81,5
6	Re-sowing of safflower after winter wheat	42,7	2,9	45,6	34,1	1,9	36,0	81,6

In conclusion, it can be said that winter wheat and re-sowing of oilseeds for one year significantly enrich the irrigated arable land in the south of Uzbekistan with organic residues and which are the best precursors of the main cotton crop.

Table 4. Chemical composition of winter wheat and oilseeds

№	Options	Chemical composition aboutcent		
		nitrogen	phosphorus	potassium
1	Winter wheat	0,380	1,20	1,10
2	Soybean re-sowing	3,74	1,64	0,93
3	Earthen pear during re-sowing	3,77	1,12	1,12
4	Sunflower at re-sowing	3,55	1,00	3,00
5	Sesame in re-sowing	3,22	1,24	8,26
6	Mahsar in re-sowing	3,33	1,0	0,75

Laboratory research has established thatoilseeds contain nitrogen 3.22-3.77%, phosphorus 1.0-1.64% and potassium 0.75-3.0%, and winter wheat nitrogen 0.380%, phosphorus 1.20% and potassium 1.10%. A relatively high percentage of soybean phosphorus and a high percentage of potassium (3.0%) contain sunflower.

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In conclusion, it can be noted that repeated oilseeds after harvesting winter wheat in the conditions of the southern zone of Uzbekistan grew and developed normally and a high yield was obtained and accumulated root and crop residues, which serve to increase the fertility of the soil of irrigated arable land.

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