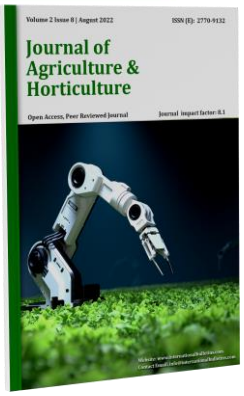

GROWTH, DEVELOPMENT, YIELD AND ROOT AND SEED SETTING OF WINTER WHEAT AND REPROVED OIL CROP

M. Tadjiev
Candidate of Science, Senior Researcher
K. M. Tadjiev
Doctor of Science, Senior Researcher
Scientific-research institute of fine fiber cotton production
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Abstract. Winter wheat and repeated crops are considered to be the most important source of providing food for the population, raw materials for industry, and fodder for livestock in the extreme climatic conditions of the southern regions, enriching the soil of the motherland with organic substances.

Аннотация. Озимая пшеница и повторные посевы считаются важнейшим источником обеспечения продовольствием населения, сырьем для промышленности, кормом для скота в экстремальных климатических условиях южных районов, обогащая почву органическими веществами.

In the conditions of global warming, the quality care of agricultural crops in irrigated areas is the most urgent problem of agriculture, in a situation where it is increasingly difficult to grow high and quality crops from agricultural crops. When the natural climatic conditions change to an unfavorable state, keeping moisture in the soil, collecting more plant residues (roots and shoots) in the soil is the main guarantee of an abundant harvest and the cultivation of quality products. Applying more local manure, compost, and crop residues to the soil will help produce abundant crops in all weather conditions. In fertile soils, farmers produce high yields in any climate.

Key words: winter wheat, intercropping, repeated crops, height, leaf, stem, oilseeds, root, stubble, yield, 0-30 cm, 0-50 cm soil layers, etc.

Ключевые слова: озимая пшеница, промежуточный, повторный посев, высота, листья, количество стебля, масличные культуры, корни и пожнивные остатки, урожай, 0-30 см, 0-50 см слои почвы и др.

Method of conducting research. The following methodological manuals were used: "Methods of conducting field experiments" (2007) and "Metodika polevyx opytov s xlopchatnikom" (1981), "State variety test of agricultural crop varieties" (Moscow, Kolos, 1969), yield indicators, B. Mathematical processing was done according to the method of A. Dospekhov (1966). The manual "Metody dispersionnogo analiza" (Moscow, 1966) was used. Soil and plant analyzes were carried out using "Metody agrofizicheskikh issledovaniy" (1973) and "Metody agrokhimicheskikh issledovaniy" (1973) methods.

The growth, development, productivity of repeated and oil crops planted after winter wheat, as well as the accumulation of roots and roots, their influence on soil fertility and the productivity of main crops were studied by our country and foreign scientists and made correct conclusions.

Namozov F, Khalikov B (2013) Winter wheat and repeated crops enrich the soil with organic matter, increase humus, nitrogen, phosphorus, potassium and other nutrients in the soil and increase the yield of main crops. (3)

Khalmanov N (2019) Green manures strengthen the ecological environment and microflora of the soil. It improves the agrophysical, agrochemical and microbiological condition of the soil (5).

Tadjiev M, Tursunov Sh (2020) repeated and siderate crops increase soil fertility, enrich the soil with sorghum and root residues, and increase cotton yield by 10-15 percent (6,7).

Volger B (1979) repeated crops (autumn rye) are the best catch crop under the conditions of European countries, improve soil structure, are the best green crop, nutritious fodder crop for cattle, enrich the soil with organic matter (8).

Abdualimov Sh (2011), Khalikov B (2010), Khalmanov N (2019), Tadzhiev M (2015), Volger B (1979) stated that repeated and intermediate crops enrich the soil with organic matter, increase soil fertility, and are the best predecessors of the main crops. is considered

Research results. Growth, development and yield of winter wheat. Green crops planted after winter wheat are used as food, nutritious fodder for livestock and green manure. Especially green crops planted after winter wheat are agrophysical and agrochemical of the soil. Microbiological. It is possible to improve the ecological and reclamation situation. These crops were considered good predecessors of cotton and winter wheat.

According to the results of the observation of the winter wheat crop, the number of grasses in 1 m^2 area was 250.0-260.0 pieces, the plant height was 96.5-97.3 cm, and the number of leaves was 5.0-5.5 pieces.

The length of one spike is 12.9-13.6 cm, the weight of one spike is 1.2-1.3 grams, the number of grains in one spike is 46.0-48.0, the weight of grains in one spike is 1.1-1.2 grams, the weight of 1000 grains is 42.0-44.0 grams, the number of stalks in 1 m^2 area is 578-588, including the number of productive stalks is 565-578, the grain yield is 4.87-4.92 t ha^{-1}, and the accumulation of roots is 4.63-4.66 t ha^{-1}.

In the 0-50 cm layer of the soil, it was found that the amount of roots and roots was on average 4.63 t ha^{-1}. Green crops were planted in the field where the autumn wheat harvest was harvested.

Growth, development, and yield of green crops replanted after winter wheat. According to the results of the research, it was found that the green crops (dill and parsley) planted after winter wheat grow rapidly, develop and produce a certain amount of leaves, and collect roots and stems.

It was observed that the lawns of winter wheat crop were 255.6 pieces per 1 m^2 and 578.0 pieces at the end of the growing season. The height of the winter wheat plant was 96.5 cm, and the straw yield was 13.05 t ha^{-1}.

1-table

Seedling thickness, growth, development of winter wheat

№	Observation points	Number of lawns, m^2/pc	Plant height, cm	Number of leaves, pcs	Spike length, cm	Weight of one spike, g	The number of grains in one ear, pcs	Grain weight in one spike, g	Weight of 1000 grains, g	Total number of stems, pcs	Number of productive stalks, pcs	Grain yield, t ha^{-1}	Grain yield, t ha^{-1}
1	First	254,0	96,7	5,0	12,9	1,2	48,0	1,1	43,0	578,0	565,0	4,87	4,63
2	Second	256,0	96,3	5,5	13,3	1,2	47,0	1,1	42,0	580,0	580,0	4,90	4,66
3	Third	255,0	96,7	5,3	13,7	1,3	47,0	1,2	44,0	585,0	575,0	4,92	4,66
4	The fourth	250,0	97,3	5,3	13,6	1,2	46,0	1,1	43,0	588,0	578,0	4,90	4,62
5	The fifth	260,0	96,5	5,4	13,2	1,2	47,0	1,1	42,0	587,0	575,0	4,90	4,62
	Average	255,6	96,5	5,3	13,2	1,2	47,2	1,1	43,1	580,0	570,0	4,90	4,62

$НСР_{05}$=1,17 ц/га

$НСР_{05}$=2,26%

2-table

Seed and root accumulation and yield of winter wheat and green crops replanted on fields free from winter wheat, c/per

№	Options	Number of lawns, 1 m^2/pc	At the end of the growing season, 1 m^2/pc	Plant height, cm	Yield, t ha^{-1}	
					Blue mass	Dry mass
1	Winter wheat	255,6	578,0	96,5	-	130,5
2	Dill harvest is harvested	115,0	85,0	51,8	215,0	32,1

3	Dill crop is used for siderate	113,0	85,5	52,4	224,0	31,8
4	Parsley is harvested	110,0	75,4	54,5	240,0	33,5
5	Parsley harvest is used for siderate	107,0	76,0	52,3	235,0	32,7

The number of dill seeds per 1 m^2 of dill crop is 113-115 pieces, at the end of the growing season 85.0-85.5 thousand pieces ha^{-1}, plant height is 51.8-52.4 cm, blue mass yield is 21.50-22.40 t ha^{-1}ha and dry mass yield was 3.18-3.21 t ha^{-1}.

Similarly, 107-110 sprouts sprouted on 1 m^2 of parsley crop, and at the end of the growing season, the seedling thickness was 75.4-76.0 thousand sprouts per hectare. The height of the parsley plant was 52.3-54.5 cm, the yield of green mass was 23.5-24.0 t ha^{-1}, and when it was dried, it was 3.27-3.35 t ha^{-1}.

In conclusion, it was found in the experiment that when winter wheat and repeatedly planted green crops are taken care of, the yield of green mass is 21.5-22.4 t ha^{-1} in dill crop and 23.5-24.0 t ha^{-1}.

Stem and root accumulation of winter wheat and replanted green crops. It is known that various types of organic matter enrich the soil with humus and improve the water-physical condition of the soil and increase soil fertility. Organic substances not only increase soil fertility, but also fundamentally improve soil melioration, ecological and microbiological conditions. Improves soil structure, restores soil fertility, increases porosity.

The remains of organic matter of leaves, stems, roots and roots serve to increase the amount of humus in the soil. If more organic matter is added to the soil, the soil fertility will increase and the yield of cotton and winter wheat will increase and the quality of the product will improve.

According to the results of the research, it was found that different types of green crops planted repeatedly after winter wheat accumulate different amounts of shoots and roots.

3-table

Seed and root accumulation of winter wheat and replanted green crops, c/per

№	Experience is optional	Winter wheat, per centner			Repeated crops, per centner			Total winter wheat and repeated crops root and stem residue in the 0-50 cm layer of the soil, t ha^{-1}
		0-30 sm	30-50 sm	0-50 sm	0-30 sm	30-50 sm	0-50 sm	
1	Winter wheat	43,6	2,6	46,2	-	-	-	4.62
2	Winter wheat + repeated crop dil	43,6	2,6	46,2	30,1	2,33	32,4	7.86
3	Winter wheat + repeated crop dill	43,6	2,6	46,2	31,0	2,10	33,1	7.93

4	Winter wheat + repeat crop parsley	43,6	2,6	46,2	30,4	2,6	33,0	7.95
5	Winter wheat + repeat crop parsley	43,6	2,6	46,2	31,1	2,7	33,7	7.99

It was determined that the winter wheat crop accumulates 43.6 t/ha in the 0-30 cm soil layer, 0.26 t ha^{-1} in the 30-50 cm soil layer, and 4.62 t ha^{-1} in the 0-50 cm soil layer.

Dill crop 3.01-3.10 t ha^{-1} in the 0-30 cm soil layer, 0.210-0.233 t ha^{-1} in the 30-50 cm soil layer and 3.24-3.31 t ha^{-1} in the 0-50 cm soil layer It was found that / has a root and a root.

Parsley planting 3.04-3.11 t ha^{-1} in the 0-30 cm soil layer, 0.210-0.233 t ha^{-1} in the 30-50 cm soil layer and 3.24-3.31 t ha^{-1} in the 0-50 cm soil layer the accumulation of roots and roots in / was observed in the experiment.

It was found that the agricultural crops planted in Angiz accumulate less roots in the sub-ploughing layer of the soil than in the plowing layer.

It was found that winter wheat and replanted dill crops accumulated 7.86-7.93 t ha^{-1} of roots and shoots in the 0-50 cm layer of the soil.

Winter wheat and replanted parsley together accumulated 7.95-7.99 t ha^{-1} of roots and shoots in the 0-50 cm soil layer.

In summary, winter wheat in the 0-50 cm layer of soil is 4.62 t ha^{-1}, winter wheat and dill crops together 7.86-7.93 t ha^{-1}, winter wheat and parsley crops together 7.95-7.99 t ha^{-1} It was found that / has a root and a root. It was found that replanted green crops (dill and parsley) accumulated almost twice as many roots and stems in the soil as compared to winter wheat.

It is important to know the chemical composition of agricultural crops. Plant leaves and root residues enrich the soil with organic matter, humus, nitrogen, phosphorus and potassium.

In the experiment, the chemical composition of the dry mass of dill and parsley crops planted repeatedly was analyzed in the laboratory at the end of the growing season.

According to the analysis results, nitrogen content of winter wheat straw was 0.31%, phosphorus content was 1.2%, and potassium content was 1.21%.

The amount of nitrogen in the dry mass of the dill crop replanted after winter wheat was 3.28%, phosphorus 0.33% and potassium 3.0% in the leaf, nitrogen 3.18% in the stem, phosphorus 0.38% and potassium 3.9% in the root. It was found that nitrogen and potassium are high in the dry mass of dill crop, with nitrogen being 1.46%, phosphorus 0.31% and potassium 3.8%.

The content of nitrogen content in the dry mass of the parsley crop replanted after winter wheat was 2.27% in the leaf, 0.5% phosphorus and 3.0% potassium, 2.72% nitrogen in the stem, 0.62% phosphorus and 3.0% potassium in the root. Nitrogen and potassium were found to be high in dry mass of parsley crop, with nitrogen being 2.49%, phosphorus 0.35% and potassium 3.3%.

The amount of nitrogen in the dry matter of green crops was 3.22-3.77 percent.

It was determined that the content of phosphorus in plants is 1.0-1.64% and potassium is 0.93-3.0%. It was determined that nitrogen content of dill plant dry matter was 2.72%, 2.27% in leaf, 2.72% in stem and 2.49% in root.

Nitrogen in dry matter of parsley plant was 2.05%, 3.28% in leaf, 3.16% in stem and 1.46% in root.

Nitrogen was found to be 1.46% in the root of dill and 2.49% in the root of parsley. Phosphorus was found to be 0.35-0.62% in the dry matter of parsley, more phosphorus in the stem (0.62%), and 0.3% in the root and general condition. Phosphorus content was found to be more (0.56-0.62%) in the stem of green crops and less (0.31-0.35%) in the root.

4-table

Chemical composition of winter wheat and green crops

№	Experience options	Chemical composition, percent		
		nitrogen	phosphorus	potassium
1	Winter wheat (control)	0,31	1,20	1,21
2	Parsley was replanted after winter wheat			
	1. Chemical composition of dry matter of parsley crop	2,72	0,35	3,0
	2. Leaf	2,27	0,5	3,0
	3. Stem	2,72	0,62	3,0
	4. The root	2,49	0,35	3,3
3	After winter wheat, dill was planted again			
	1. Chemical composition of dry matter of dill plant	2,05	0,39	3,0
	2. Leaf	3,28	0,53	3,0
	3. Stem	3,16	0,56	3,9
	4. The root	1,46	0,31	3,0

Green crops (dill and parsley) are rich in potassium and have been found to accumulate potassium in the amount of 3.0-3.9%. It was found that potassium content is more in the root and stem of the plant (3.0-3.9%).

It can be concluded that green crops are rich in nitrogen and potassium and moderately supplied with phosphorus.

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