

THE EFFECT OF STROKE AND ROOT RESIDUES ON SOIL FERTILITY AND THE QUALITY INDICATORS OF SOWING SEEDS

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ANNOTATION

The autumn wheat in short rotational (1:1) systems, the growth of repeated cultures (MASH), the development and scientific substantiation of the number of stroke and root residues in the soil, the influence of Andizhan-36 varieties and the Navruz on the quality of seed indicators are studied.

INTRODUCTION

The relevance of research. The progressive increase in the number of population in the world and for regularly providing them with environmentally friendly food products, it becomes necessary to improve agrotechnologies to increase and preserve the fertile soil when producing high-quality crops from crops. To date, a total of 1,195.2 tons of produce products of legumes were manufactured worldwide, including 117.208 in America; 96.297 in Brazil; 58,79999999 in Argentina; 11.963 in China; 14,008 in India; 9,163 in Paraguay; 5,827 in Canada; 4,277 in Ukraine; 3.205 in Bolivia; 3,135 in Russia; 2.208 in Uruguay; 1 081 in Italy; 968 tons in Indonesia. In agricultural activities of developed countries after autumn wheat, repetitive plant cultures were introduced to improve soil fertility, to protect plants from pests and to obtain high-quality crops, practice was carried out in the USA, Brazil, India, China, Mexico, Australia, Pakistani countries in 81 million / hectares.

The exchange fit is widespread in developed countries of the world, it is of great importance to plant plants from the legume family, such as soybeans, beans, mash twice a year. They serve to improve soil fertility, besides, provide the population with valuable, protein products, as well as nutritional animal feeders. Consequently, on farms, China, India, Brazil and in multiple other countries, in exchange and alternate crops, occupy the main place of the plant of the family of legumes.

PURPOSE OF THE STUDY

Under the hungry gray soils of the Andijan region, depending on the norms of repeated crops (mash) and ore fertilizers, determining the influence of cotton varieties of medium fiber and root residues, as well as the quality of seeds (sowing), is to determine the effectiveness of the stem and root residue.

REVIEW OF THE RESULTS OF SCIENTIFIC LITERATURE

After the independence of the republic, with the completion of the cotton monopoly, as a result, an increase in the fields of grain crops, intensifying on the autumn wheat, and then repeated cultures, the number of stem and root residues from the plants of the bean family in the soil, rotting after a certain period of time becomes organic matter, as well as and mobilized form NPK. (Kuchkarov A.S., Umarov Z, Atabaeva X, [7; 278–280–p], Rakhimov A., [5; 23–6], Iminov A.A, [3; 22–p]). (Holikov B, Iminov A, [6; 27–29–p], Massino I. and others [4; 378–381–p], Buriev S.S, [2; 413–416–p]).

According to H.M.Taylor, H.R.Gardner [9;153-p], if the mass of the soil volume is very high, which negatively affects the process of conducting, as a result of which the plant will not be able to freely develop and cease to grow.

According to V.Volger [10; 143-146-p], as a result of crushing of plant residues, 30-60 kg of nitrogen per hectare accumulate and the power of the next main plant is improved.

R.Binder [8; 29-p] also emphasizes that intermediate and repetitive cultures are considered an important factor for the intensification of agriculture.

Experiments S. Bahromov and Sh. Bakhromova in the field of hungry gray soils, as repetitive cultures, Masha's Victory variety was planted, and when cotton was planted, cotton performance was 34.9-3.0 centners / hectare, high yield was observed, up to 0.9-3.0 centner / hectare in the embodiment where there was no re-sowing of cultures. [1; 125-127-p].

Based on the above opinion, the use of intermediate, grain, legumes, an increase and preservation of soil fertility is the most important agrotechnical event.

SOIL-CLIMATIC CONDITIONS IN THE FIELD OF RESEARCH

Andijan Scientific Experimental Station of ИСУЕАИТИ is located in the north-east of the Fergana Valley of the Andijan Region, and the southeastern part consists of foothill heights. The main part of the region is located on the left bank and consists of hungry gray soils. Andijan scientific and experimental station is located in the central part of the hungry gray soils.

Agrotechnological events used in autumn wheat. In our experiment in our experience, the autumn variety of wheat "Baby" was used.

In repeated crops (Mash). As a re-harvest, Mash's grade "Victory-104" from legume crops was planted. Experimental field soil is equipped with low food elements.

Experiment system

Serial numbers	Autumn wheat			Repeated crops			
	Annual standards of ore fertilizer kg / hectare						
	N	P ₂ O ₅	K ₂ O	Types of crops	N	P ₂ O ₅	K ₂ O
1	180	120	90	Not sown (control)			
2	180	120	90	Mash	25	80	60
3	180	120	90	Mash	50	80	60

In the Phenological observations of autumn wheat, the following were identified:

- Germination of seeds, %,
- Bush plants, m² / pcs (at the end of the period of action)
- Plant Stem Height, cm (during development periods)
- Number of common stalks, m² / pcs (at the end of the period)
- Number of productive stems, m² / pcs (at the end of the period)
- The average weight of the grain of one spike, g (at the end of the period of action)
- Average grain of one spike, pcs (at the end of the period)
- Grain weight 1000 pcs, g (at the end of the period of action)
- Grains and hay of plants were found.

The following phenological observations were carried out in Mash;

- Seed germination level, %

- Number of leaves, pcs (during the period of development)
- Rising plants, cm (during the period of development)
- 1000 pcs grain mass, g (at the end of the period)
- The yield of grain crops were clarified.

Effect of plant autumn wheat on soil fertility. In the exchange system of landing, the purpose of planting autumn wheat was, to determine the impact of residues of stem and root waste of repeating crops on the yield of cotton and the quality of seeds, so we defined the total NPK in their composition. (Table 1).

So, the stem waste of this autumn wheat on return is equal to an average of 17.7 centner / hectare. The average nitrogen of the total composition of stem waste was 0.813%, phosphorus 0.708% and potassium 1.80%.

Root residues 19.2 The centner / hectare was made up, total nitrogen-0,600; Phosphorus-0.296 and potassium 0.818%, the number of total stem and root waste 36.0 centner / hectare is equal to, a total nitrogen 1.413%, phosphorus 1.005% and potassium 2.050%.

From these indicators it becomes clear that although autumn wheat has mastered the ore fertilizers and NPK in the soil used for the fruction of grain and the hay and for better soil fertility, leaves the stroke and root residues of 35-40 centners / hectares, and in their composition contains 20- 25 kg of total nitrogen, 5-10 kg of phosphorus and 25-30 kg of potassium, and then an acceptable effect on repeating cultures or cotton occurs.

The growth of the repeated plant of mash, its development and impact on the fertility of the soil. In the experiment on the background of moderate use of ore fertilizers N-25, P₂O₅-80, K₂O-60 kg / hectare, stem and root remnants of the mash plant after 3 years on average 12.4 and 29.3 centner / hectare, a total of 42, 2 centner / hectare, with an increase in nitrogen fertilizer by 25 kg / hectare average, the indicators were equated with 41.4 centner / hectare.

The total amount of NPK from their content also amounted to 2.96-2.91; 2.23-2.14 and 3.04-2.96%, the decrease in 0.05 is analyzed; 0.04 and 0.08% with increasing dose of fertilizer.

Conclusion, after autumn wheat in the conditions of gray soil, to collect more stroke and root residues of the plant, you should use as ore fertilizers N-25, P₂O₅-80, K₂O-60 kg / hectare.

Economic efficiency of planting cotton varieties after repeated crops. The economic efficiency of any applicable agricultural measures, in addition to total expenses, is measured by the amount and profitability of the net profit of the remaining conditional. If the rate of profitability is less than 10%, this event is the result of a low level.

In the context of hungry gray soils in the Andijan region, when the cotton Andijan-36 and Navruz are grown against the background, created after repeated crops (mash), it was found that the achievement of the economic efficiency of mash was obtained against the background used by P₂O₅-80, P₂O₅-80, K₂O-60 kg / hectare to standards. (Table 2).

CONCLUSIONS

1. It was revealed that in the crop of the shortly alternate rotation (1:1), winter wheat leaves 35-40 centner / hectare stem and root waste (there are 20-25 kg of nitrogen in their composition, 5-15 kg of phosphorus and 25-30 kg of potassium), when using N-25, P₂O₅-80, K₂O-60 kg / hectare in a repeated plant of mash, left 42.2 centner / hectare stem and root residues and accumulated biological nitrogen has an optimal effect on the fertility of the soil.

In the context of the hungry gray soils, cotton from the middle fiber varieties Andijan-36 and "Navruz", to obtain high-quality cotton crops in the early stages, and improve high-quality sowing seeds in the landing system short alternate rotation (1:1) (autumn wheat + repeated cultures: cotton) Masha harvest is recommended to use mineral fertilizers such as N-25, P2O5-80, P25-80, K2O-60 kg / ha in standards.

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Table 1. Stem and root remnants of Masha (centner / hectare) and the amount of total NPK in their composition (%).

Serial number	Mineral fertilizer norms kg / hectare			Stem residues	In stems			Root residues	in roots			general, centner / hectare	In stems and roots		
	N	P ₂ O ₅	K ₂ O		N	P	K		N	P	K		N	P	K
average															
2	25	80	60	12,4	1,25	0,96	1,72	29,3	1,71	1,27	1,30	42,2	2,96	2,23	3,04
3	50	80	60	12,1	1,22	0,92	1,63	29,2	1,69	1,22	1,28	41,4	2,91	2,14	2,96

Table 2. Economic efficiency of cotton landing after repeated crops

Serial number	Types of repeated crops	Norms of annual mineral fertilizers kg / hectare			Middle cotton yield in 3 years, centner / hectare	Addition, centner / hectare	Cash with cotton sales, thousand / soums	General expenses, thousand / soums	Including On the collection of additional harvest	Condition al net profit, thousand / soums	Profitability, %
		N	P ₂ O ₅	K ₂ O							
Cotton grade Andijan-36											
1	Control (not planted)			34,9	–	2617500	2207000	–	410000	18,5	
2	Mash	25	80	60	40,2	5,3	3015000	2310000	103000	705000	30,5
Cotton grade Navruz											
6	Control (not planted)			34,6	–	2595000	2207000	–	388000	17,5	
7	Mash	25	80	60	38,3	3,7	2872500	2281000	74000	591500	25,9