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Influence of Agrophysical Properties of Treated Soil on Typical Grace

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Annotation. The article presents data on the influence of moss crops on the agrophysical properties of soil from legumes grown on typical irrigated gray soils.

Keywords. Typical irrigated gray soils, legumes, mosses, agrophysical properties, volume end, specific gravity, porosity.

Legumes have a positive effect not only on food crops, but also on soil fertility. At the same time, the agrophysical properties of the soil lead to a change in the agrochemical properties.

Under the conditions of typical irrigated sierozems, when moss is cultivated as a secondary crop, substances that are difficult to digest by crops into easily digestible mobile forms are observed, as well as a positive effect on the agrophysical properties of the soil. Data on the results of the experiment are given in table. one.

According to the data obtained in the first year of the experiment, when growing moshes, a decrease in the volumetric mass of soil was observed in the driving and underdriving soil layers. At the beginning of the application period, the volume of soil in the topsoil (0-30 cm) before sowing was 1.28 g/sm^3, and at the end of the application period, i.e. after maturation of the mash, the volumetric volume of the soil decreased by 0.03 g/sm^3. Even in the subsurface layer of soil (30-50 cm), it was found that the volumetric mass of the soil decreased by 0.02 g/sm^3. The porosity of the soil improves accordingly, respectively at the beginning of the application period 51,6 % by the end of the period, this figure was 52.7%. In the second year of the experiment, the same patterns were observed.

Table 1
Agrophysical properties of the experimental field

№	Indicators	Sloi pochvy, sm			
		0-30	30-50	0-30	30-50
		pered posadkoy		At the end of the validity period	
2020 year					
1	Udelnaya mass, g/sm^3	2,64	2,65	2,64	2,65
2	Weight size, g/sm^3	1,28	1,32	1,25	1,30
3	Poristost, %	51,6	50,2	52,7	51,0
2021 year					
1	Udelnaya mass, g/sm^3	2,64	2,65	2,64	2,65
2	Weight size, g/sm^3	1,27	1,30	1,24	1,27
3	Poristost, %	51,9	51,0	53,1	51,9
2020-2021 average over the years					
1	Udelnaya mass, g/sm^3	2,64	2,65	2,64	2,65
2	Weight size, g/ sm^3	1,27	1,31	1,25	1,28
3	Poristost, %	51,9	50,6	52,7	51,6

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Thus, under the conditions of typical irrigated gray soils of the Samarkand region, as a result of the cultivation of mosh, agrophysical processes that determine soil fertility improve at different times and according to different norms. The subsequent impact of organic and other moss residues on crops has also been studied in detail.

However, scientific sources indicate that the yield and quality of crops after mosh increase significantly. Therefore, moss has a positive effect on the agrophysical properties of the soil.

After harvesting winter wheat, its roots remain in a 1.5-2.0-meter soil layer along with the remains of antlers, and in the second half of summer they act as capillary tubes that provide water and nutrients to crops grown as a secondary crop.

As mentioned above, when watering and plowing winter wheat with a two-tier plow, when the soil matures, heavy mulch and a hurricane presses on the longitudinal and transverse field, and heavy molasses compacts the soil layer up to 8-10 cm. forms a thin soil layer. The compacted soil layer prevents unnecessary evaporation of moisture, passing through the compacted layer of moisture, which rises to the drive soil layer through capillary tubes formed by the root residues of winter wheat. A layer of loose soil 4-5 cm thick, formed by storms on the soil surface, serves to protect against high temperatures and contributes to the conservation of soil moisture. This measure will help improve the water supply of secondary crops in the second half of summer.

Since the depth of groundwater in the experimental field was about 1.5 m, their depth after providing reserve water was about 1.0-1.2 m. . Such a “gap”, that is, a broken state of the capillaries, prevents the physical evaporation of moisture in the lower layers.

With a supply of water in the injection layer, the moss seeds germinated completely and did not require excessive watering due to the transition of the root through the "gap" to a layer with sufficient moisture, creating the basis for good growth and development of plants. moss. It should be noted that the pre-sowing soil moisture in the bulk soil layer was 17.8-18.9%, in the "desert" layer the moisture content was 8.5%, and under it (35-50 cm) - 17.6%. -16.5%. Although this moisture gradually decreased during the growing season, this supply of water allowed the mash to ripen.

Therefore, the cultivation of moshy in a field of winter wheat with a supply of water in the second half of summer is a convenient and promising measure in conditions of limited water supply.

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