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THE EFFECT OF THE RATE OF FERTILIZER USED IN COTTON ON THE AGROCHEMICAL PROPERTIES OF SOIL AND THE ASSUMPTION OF NUTRIENTS BY PLANTS

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Annotation: *In the conditions of light gray soils of the Surkhandarya region, the effect of mineral and non-traditional additional organo-mineral fertilizers used in re-sowing vegetables on a field freed from winter wheat is highlighted as a study of the impact on the development of growth, productivity and yield of cotton. technological indicators of the quality of cotton harvesting.*

Key words: *mineral fertilizers, non-traditional agricultural ores, repeated crops of vegetables, development of cotton cultivation, accumulation of dry matter, cultivation of tomatoes.*

Relevance of the topic. Around 5.0 million tons of tomatoes are harvested worldwide. In particular; the USA produces 6.1-6.3 million tons, the CIS 4.7-4.8 million tons, China 4.1-4.2 million tons, Italy 4.0-4.1 million tons, Turkey 3.5-3.7 million tons, Egypt 2.6-2.8 million tons, and Spain 2.1-2.3 million tons. They are the largest tomato-growing countries in the world. In the former Soviet Union, its cultivated area is 2.5 million hectares, and the total area of vegetable crops is 24% of the total area of vegetable crops, accounting for 27.4% of the total vegetable crop. The largest tomato areas are in Ukraine and southern Russia (35-36%), Moldova (8.4%), Uzbekistan (6.5) and Azerbaijan (5%) [1;2;3;4;5;6;7;8;9;10;11;12;13;14;15].

Composts made from organic fertilizers are widely used in the world to nourish crops and maintain soil fertility, along with mineral fertilizers. The preparation of composts with non-traditional agro-minerals and various fertilizers in different proportions, the scientific substantiation of the effect of organo-mineral composts on soil fertility, soil nutrient dynamics on vegetable crops and medium-fiber cotton yields, the improvement of plant nutrient absorption from the soil, and the study of the effects of mineral and non-traditional organo-mineral fertilizers on soil nutrient dynamics are relevant. In cotton and vegetable

growing of our republic, along with mineral and local fertilizers, special attention is paid to the use of non-traditional agro-minerals rich in micro and macro elements to improve soil fertility, soil nutrient dynamics, crop yield, and crop quality [16;17;18;19;20;21;22;23;24;25;26;27;28;29;30].

Results and discussion. The aim of the study was to study the effect of different rates of mineral and non-traditional additional organomineral nutrients used in repeated vegetable crops on the field vacated from winter wheat in the conditions of light gray soils of the Surkhandarya region on the growth development, yield and technological quality indicators of cotton crops.

The amount of vitamins useful for human health in tomatoes is as follows: carotene-1.2-1.6; B1-0.6-0.15; B2-0.04-0.07; C-4-10, in milligrams per 100 grams, of the enzymes in tomatoes there are pectase, depolymerase, invertase, ascorbate oxidase-no, there is a stabilizer that prevents the decomposition of vitamin C in the air.

The root system of plants grown directly from seeds in the field penetrates into the deep soil layer (up to 150 cm) and spreads widely. When grown by the seedling method, the taproot loses its properties during the process of transferring from the greenhouse to the field, that is, it is located in the 20-50 cm soil layer. For this reason, they are demanding on soil fertility and require more moisture than tomatoes planted from seeds in the field without seedlings. In Uzbekistan, it is more effective when organic and mineral fertilizers are applied to tomatoes together. In this case, 20-30 tons of manure, 150-200 kg/ha of potassium chloride, and 230-250 kg/ha of ammophos are applied before autumn plowing. In general, high yields can be achieved when applying nitrogen fertilizers per hectare at a rate of 120-200, phosphorus 140-150 and potassium 90-100 kg/ha on light gray and typical gray soils, and nitrogen 140-150, phosphorus 140-150, and potassium 100 kg/ha on meadow and meadow-swamp soils.

By the middle of the 18th century, tomatoes began to be consumed in large quantities as a vegetable crop. Tomatoes became widespread among Europeans as a vegetable crop during the First World War. Currently, European countries rank ninth in the world in terms of cultivated area and production volume. North America and European countries account for 50% of the world's tomato production.

Non-traditional raw materials have absorbing, catalytic and purifying properties (zeolite, bentonite, polygorskite, vermiculite, glauconite, perlite, diatomite, trepel), they can be widely used in agriculture. The use of these minerals provides high efficiency and economic benefits. The use of agro-ores in various fields around the world is of particular interest to researchers and scientists, and almost all production uses agro-ores in their own form or in their processed forms to one degree or another. In Uzbekistan, scientists have conducted many studies that have yielded interesting information about the beneficial

aspects of non-traditional agro-ores. The application of 10-12 tons of bentonite clay under plowing on irrigated lands of the Khorezm region made it possible to obtain an additional yield of cotton by 10.3 -32.6%.

Conclusions. The optimal rates of mineral and additional non-traditional organomineral fertilizers used in repeated vegetable crops under the conditions of light gray soils are determined. The effect of mineral and additional non-traditional organomineral fertilizers used in repeated vegetable crops on the growth, development, dry mass accumulation, cotton yield and technological quality indicators of fiber is studied. The dynamics of nutrients in the soil and plant parts of mineral and additional non-traditional organomineral fertilizers used in repeated vegetable crops throughout the development periods of plants and the amount of nutrients contained in them that pass into the soil are determined, and recommendations are made for the production of

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