



The Effect Of Organic Fertilizers On Plant Growth On The Amount Of Nutrients In The Soil

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ABSTRACT

Today, organic fertilizers have a complex effect on the soil and have a positive effect on the growth, development and productivity of crops, including cotton. However, in order to increase their efficiency, organic fertilizers, including half-rotted cattle manure, should be studied individually in each soil-climate condition and agricultural crop. The main role in this is played by the state of soil fertility. The main substance determining soil fertility is humus. The higher the quantity and quality of humus, the higher the productivity. However, according to most scientists, the amount of humus in the soil has been significantly decreasing over the last 30-50 years. One of the main reasons for this process is the lack of organic fertilizers in agriculture.

Keywords:

Effect of organic fertilizers on nutrient content and plant growth in humus, pre-rotted and well-rotted soil.

Introduction

Organic fertilizers have a sharp effect on soil fertility, and in this the amount of humus, the main substance of the soil, increases significantly. For a long time (125 years), the application of mineral fertilizers every year (N 48 P 48 K 48) keeps the amount of humus at the initial level. In the first 20 years, the use of organic fertilizers increased the amount of humus from 1.2% to 2%, but in the next 100 years, failure to apply organic fertilizers reduced the amount of humus from 2.0% to 1.6%. Regular application of organic fertilizers for 125 years has increased the amount of humus in the soil by 3 times. (A. Johnston, 1982). As an organic fertilizer, manure, poultry quince, ulegumin fertilizer, bentonet, weeds that have been removed from the field and rotted can be added. Organic fertilizers are of immense

importance to soil fertility and crop yields. Organic fertilizers increase the biological activity of the soil. When compost manure, not only weed seeds disappear. Serves to reduce various diseases and increase productivity. It is also important to give well-rotted manure and compost before scratching in spring, in addition to applying it under the canopy of the eyeball. It improves soil microbiological activity, also increases soil nanness and softness, reduces the negative effects of scab, and promotes rapid germination of seeds and good rapid development of sprouts. When the norm of organic fertilizers was increased from 20 t/ha to 40 t/ha, their positive effect on the amount of nitrogen increased even more. Compotes made from a variety of waste compared to semi-rotted cattle manure have had a stronger effect on nitrogen in the form of ammonium and nitrate.

This high nitrogen content in compost is explained by the presence of phosphogips in FAM. Because phosphogips magnesium carbonate improves the soil absorption complex of saline grassland soils by enriching them with calcium cation, which in turn significantly improves the natural agrochemical properties of the soil. The regular application of mineral and organic fertilizers to research conducted in different soil types of the Republic of Uzbekistan increases the amount of humus. To achieve a deficit-free humus balance, it is necessary to Apply 18 T of manure to each hectare of land (D.S.Sattorov, A.E.Ergashov, 1989).

32 years of crop rotation in Meadow-rich soils, an increase in the amount of humus and gross nitrogen was observed as a result of the application of manure and mineral fertilizers in moboyrn (D.A.Akimaliyev, V.M.Zoloyev, 1995). The decrease in the amount of heavy metals in the mobile form in soils where organic

fertilizers are applied every year is associated with their adsorption and retention in the impregnated state. In addition, the application of organic fertilizers increases the amount of humus in the soil. Organic fertilizers can also independently hold heavy metals in an impregnated state and reduce their mobility. Dosing organic fertilizers at 30 t/ha and applying manure with NPK at the same dose drastically reduces the amount of heavy metals. (I.N.Bobobekov, 2017).

It turns out that the application of organic fertilizers on the basis of peat increases the amount of humus by 15-20% compared to straw manure (A.I.Zhukov, P.D.Popov, 1988). In turf podzol soils, the use of manure at a dose of 100, 200 t increases the amount of humus. Dung at a dose of 50 t/ha was unable to provide a stable no-deficit humus balance (S.S.Sdobnikov, O.V.Yabangen, 1990).

Organic Fertilizers Influence The Height Of The Main Stem And The Number Of Leaves On The Acorn Plant

T/r	Variants	The height of the main stem in the Acorn plant, CM					Number of leaves, pieces		
		15.05	1.06	1.07	1.08	1.09	15.05	1.06	1.07
1	Without fertilizer (control)	3,3	11,8	37,7	50,04	68,6	1,4	3,8	9,8
2	Chicken manure per 30 tons	8,3	19,7	44,8	78,6	91,5	2,0	7,1	16,5
3	30 tons of manure	7,0	13,1	41,3	70,5	81,5	2,0	4,3	12,5

Along with the growth of the Acorn plant, the number of leaves in a single plant is also an important indicator. Because the process of photosynthesis, that is, the formation of organic and dry matter, will depend on the number and surface of the leaves. It has been found that the number of leaves is much lower when the Acorn grows by feeding on natural nutrients when organic fertilizers are not applied. In such a bursa in July, the number of leaves was slowly formed. The dynamics of the number of leaves in one plant in the control option, which is not given fertilizer, has changed slowly. While the number of leaves in the chicken gungi Acorn

plant has increased rapidly in the early development phases, but in the variants where semi-rotted cattle manure has been applied, the number of leaves has increased slightly more strongly compared to mineral fertilizers in the later development phases. The number of leaves in one acorn plant increased significantly when organic fertilizers were applied, including semi-rotted manure in the norm of 30 t/ha. Therefore, an increase in the amount of nutrients in the soil when organic fertilizers are applied has a positive effect on the formation of leaves in the Acorn plant.

Research methodology. The study of the effect of organic fertilizers on the agrochemical properties of irrigated typical rich soils and on the growth, development, yield and product quality of acorns. To achieve this goal, it will be necessary to perform the following tasks.

- Determination of the effect of organic fertilizers on irrigated typical-rich soils agrophysic texture.

- Study of the effect of organic fertilizers on the chemical and agrochemical properties of soil.

- Study of the effect of organic fertilizers on the nutrition, growth, development, yield and crop quality of acorns.

- Research on the degree of absorption of nutrients in fertilizers and their removal from the soil.

- Determination of the economic effectiveness of the application of organic fertilizer in the cultivation of cotton.

Research results and their analysis.

The presence of motile nutrients in the soil ensures good plant growth. Thus, the application of organic fertilizers to the soil leads to a convincing increase in the amount of nitrate and ammonium nitrogen in the soil (in the entire period of growth of the Acorn). In general, the soil of the experimental field was found to have a significantly higher nitrogen content in the nitrate form compared to the nitrogen content in the ammonium form. This suggests that there is a strong nitrification process in soil compared to ammonification. Because when the amount of ammonium in the soil reaches a very large concentration, it is dangerous for living organisms, including myroorganisms.

As a result of the application of organic fertilizers, the amount of mineral nitrogen in the soil has significantly increased at the expense of both ammonium and nitrate. In early spring and early growth, the amount of mineral nitrogen in the soil was strongly influenced by organic fertilizers, organic fertilizers again at the end of the growing season with the application of nitrogen fertilizers. While the effect of Mineral fertilizers was short-lived, organic fertilizers had a long-term effect on the amount of mineral nitrogen. This situation was achieved in one way

at the expense of both ammonium nitrogen and nitrate nitrogen.

Therefore, the application of organic fertilizers, including semi-rotted cattle manure and chicken manure, significantly increases the amount of mineral nitrogen in the soil. In general, chicken manure and semi-rotted cattle manure have a significant positive effect on the nitrogen regime of the soil, that is, they strengthen it. Chicken manure has a strong effect on cattle manure.

Another important nutrient in the soil is motile phosphorus. The phosphorus regime of the soil also plays an important role in determining the fertility of the soil. The transition of phosphates to motile in the soil is very slow. Phosphates are less mobile in soil than nitrogen. After the application of organic fertilizers, the growth and development of the Acorn accelerated as a result of the alternation of the soil food regime, increased Acorn nutrition. Hence, the increased soil fertility as a result of the application of manure, including the amount of mobile nutrients, has had a positive effect on the growth and development of acorns. The dynamics of the number of hives in the control option, which is not given fertilizer, has changed slowly. In this variant, the intensity of growth of the Acorn, the formation of bruises were also weakly manifested. As a result of the application of organic fertilizers, the growth of Acorns has increased significantly. This is especially explained by the high nitrogen content in chicken manure. The effect of chicken manure on the formation of cocoons in Acorns was strong compared to semi-rotted cattle manure. For example, in fertiliser-free control, the number of broods in a single plant was 6.5 on the date of August 1, 11.4 on the date of September 1, while in the option where chicken manure was applied to 30 t/, 10.1, corresponding to the above; in the option where 17.2, semi-rotted cattle manure was applied to 30 t/, respectively, 7.8; 14.0

Conclusions

Applied as an organic fertilizer, chicken manure and semi-rotted cattle manure steadily increase the amount of motile nutrients in the soil-nitrogen in the form of ammonium,

nitrogen in the form of nitrate, mineral nitrogen, motile phosphorus and volatile calcium-related to control throughout the growing season. This condition is also observed when organic fertilizer is applied to each individual.

Applying organic fertilizers in moderation to 30 t/ha has a positive effect on the development of Acorn growth. In this regard to control, the height of the Acorn plant, the number of leaves, the number of sympodial branches, the number of bulbs, the number of flowers and the number of buds increases significantly.

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