



**THE EFFECT OF MINERAL FERTILIZER RATE ON THE NUTRITION OF
REPEATED CROPS.**

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ABSTRACT

Taking into account the nutritional value of crops grown as a repeat crop for livestock, corn as a repeat crop provides the highest nutritional value when given the amount of mineral fertilizer. Given that soybeans are primarily grown as a food crop and the use of their stalks as fodder, they also help create a nutritious forage base for small ruminants.

Key words

corn, crop, growth, development, feed, nutrient unit, mineral fertilizer, repeated crop.

With the continuous growth of the world's population, their needs for food products are also increasing. The yield obtained from the existing agricultural land may be sufficient for the population of the earth to a certain extent, but if the product is calculated by adding the demand for the product of the industry and the need of livestock for feed, it will be observed that these products will not be enough. In order to meet these needs, technologies that protect soil fertility are used in more than 80 million hectares of land all over the world. In particular, it was introduced on 19.3 million hectares in the USA, 17.3 million in Brazil, 14.8 million in India, 12.3 million in China, 10 million in Mexico, 3.5 million in Australia and 3.7 million in Pakistan. Almost all of the world's irrigated farming areas are re-cropped.

Fundamental reforms of the agricultural sector by the leadership of our government, along with all countries with developing agricultural sector Deep reforms in the agricultural sector in our country in the program "Strategy of actions on the five priority directions of the development of the Republic of Uzbekistan in 2017-2021" developed by the initiatives of our Honorable President Sh.M. Mirziyoev it is planned to carry out a large amount of work. 3.3 of the action strategy in five priority directions. in the paragraph "In the direction of modernization and rapid development of agriculture, "expanding research and development works on the creation and introduction into production of new selection varieties of agricultural crops that are resistant to diseases and pests,



adapted to local climate and ecological conditions, and animal breeds with high productivity"; is shown as one of the important issues.

I. J. Sulaimanov [4; 12-b] notes that legumes and cover crops compact the soil less than alfalfa. Their small root systems add a certain amount of humus and organic matter to the soil during the growth of the plant, and improve the water-physical condition of the soil.

S.I. Jamoldinovich [5; 98-103-b], intercrops increase phosphate solubility in the soil. When rape, perco and other intermediate crops were planted, the amount of phosphorus in the tillage layer of the soil was 11.8-16.6 mg/kg.

According to the opinions of A. Khabibullayev and Kh. Fayziyev, calcium and micro- and macroelements in chicken egg shells are highly effective fertilizers for the cultivation of amaranth medicinal plants for wide distribution on earth as various fertilizers and bioactive compounds. It is reported that it was used in research, medicine, and as a rare raw material in agro fields, in the cultivation of Amaranth and other plants. [8; 321-325-b].

In the conditions of Surkhandarya region, I.J. Sulaimanov [6; 122-126-b], winter wheat left behind 43.7-45.7 ts/ha of stem and root residues in the 0-50 cm layer of the soil, and 45.1 ts/ha in corn planted as a repeated crop. organized.

According to A. Khabibullayev, when amaranth plants are grown on light gray soils, it is appropriate to set mineral fertilizer norms of N150R100K150 kg/ha. Also, the application of nitrogen fertilizers in the form of liquid manure at the rate of 30 kg/ha during the growing season of the plant ensures that the soil has the necessary amount of organic nutrients. [9; 7-12-b].

On the basis of the above-mentioned points, there are several optimal (2:1; 1:1:1; 1:1, etc.) systems of crop rotation that ensure the increase in the yield and quality of crops included in the cotton complex, depending on the soil fertility, which has become one of the most pressing issues to date. was created. At the same time, agrotechnologies of crop care that preserve and increase soil fertility are being developed in this created system.

Therefore, the field experiment consisted of 13 options of 4 returns, which were placed in one layer in the field in the order given in Table 2.3.1.

The planting system of the experiment is 60x30-2, in one version there are 8 egats and their length is 100 meters, the size of one plot of the experiment is 480 m², and in the experiment there are 52 such plots.

Field and production experiments and laboratory analyzes were carried out based on the following methodological guidelines. "Metodika polevyx opytov s khlopchatnikom" [2] "Metodika polevyx opytov po izucheniyu agrotekhnicheskikh priemov po vzdelyvaniyu kukuruzy" [3; p. 278] was carried out in accordance with the manuals. Clarification of the data obtained from the experiment on



productivity, correlation between the results and the factors used was carried out on the basis of the manual of B. Dospheov "Metodika polevogo opyta" [1].

In order to fully satisfy the population's needs for flour and flour products, it is necessary to replant wheat fields after wheat at the expense of irrigated lands. That's why the scientists of our republic are conducting a lot of scientific and research work on the technology of planting and growing various types of agricultural crops as repeated crops.

For this purpose, we also aimed to grow crops such as corn, soybeans, mung beans and beans as repeated crops. In the experiment, we studied the nutritional needs of these crops for livestock as well as their requirements for mineral fertilizers. In our experiment, N-200, P-170K-100 kg/ha was set for corn, and the same N-75, P-75K-50 kg/ha was taken for soybeans and beans. Together with determining the effect of these mineral fertilizer norms on the growth and development of crops, we also studied the effect of mineral fertilizers on its nutrition.

In our research, nutrient units and digestible protein amounts in grain and green mass (maize) and hay (peas, beans, soybeans) of repeated crops were affected differently by mineral fertilizers. Corn (38.2 t/ha) contains 5042.2 kg/ha of grain, stalk (307.3 t/ha) 4837.3 kg/ha, total 9879.5 kg/ha nutritional unit, and proportionately 297,5 and 338.9 kg/ha were all found to have a protein content of 636.4 g/ha.

1991.1 kg/ha of mash plant grain (15.2 t/ha), 1032.3 kg/ha in hay (32.2 t/ha), all - 3023.4 kg/ha food unit and 443.8 kg/ha and 89.8 were all found to contain 533.6 kg/ha of protein.

It should be noted that during the period of growth and development (operation), the corn plant absorbed 200-250 kg/ha of nitrogen from the soil, that's why the nutritional unit and digestible protein content of its grain and stem are proportionally 6856.1 kg/ha and 102 It was found to be more than 8 kg/ha. This means that corn is a nutritious feed for livestock.

Bean grain (12.3 tons/ha) contains 1611.2 kg/ha, hay (12.3 tons/ha) 393.4 kg/ha nutritional unit and proportionally 357.9 kg/ha and 39.3 kg/ha digestible protein amount were determined.

It should be said that among repeated crops, beans were distinguished by their low yield and low nutritional units and protein content.

3078.4 kg/ha of soybean grain (23.3 t/ha) and 1071.6 kg/ha for hay (33.5 t/ha), total 4150.0 kg/ha nutritional unit and proportionally, 687, 2 kg/ha and 93.5 kg/ha—a total of 780.7 kg/ha digestible protein was found.

So, when we take into account the nutritional value of the crops we grow as a repeat crop for livestock, the maize plant can be grown as a repeat crop with the



highest amount of mineral fertilizer given. Given that soybeans are primarily grown as a food crop and the use of their stalks as fodder, they also help create a nutritious forage base for small ruminants.

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