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Effect of Application of Mineral Fertilizers on the Growth Rate of "Iskandar" Rice Against the Background of Previous Crops

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Abstract. The article presents data on the effect of mineral fertilizer application rates on rice growth against the background of soybean grown as a predecessor crop in short rotation cropping systems.

Keywords. Previous crop, soybean, rice, mineral fertilizers, nitrogen, phosphorus, potassium, growth picture.

Introduction: Rice is a food source for more than half of the world's population. Therefore, it is second only to wheat in terms of importance. In the daily consumption of our people, rice is valued as a staple product. That is why the demand for rice in our country never decreases.

In Japan, most of the soybean cultivation area is a rice-soybean cropping system. (1.) Rice-soybean rotation produced the highest results two years in a row. It was significantly higher than the rest. This may be a result of the nutrient balance between rice, a cereal crop, a high nitrogen dependent crop, supplied with nitrogen by the legume crop. This may have resulted in adequate growth and development of rice crops (2).

The level of study of the problem. In order to obtain a high yield from agricultural crops, it is very important to use mineral fertilizers correctly and on a large scale, to set the amount of fertilization correctly. In the leading rice-growing countries (China, India, Japan, etc.), rice has been continuously cultivated in the same area for 1000 years. Even in China's Hunake Valley, there are lands that have been used exclusively for rice cultivation for four thousand years, and in order to maintain the soil fertility in a highly fertile state, the land is constantly enriched with nutrients, organic and mineral fertilizers necessary for the rice plant. (3, 4).

Research results and their discussion. In our research, the effect of mineral fertilizers application on rice seedling thickness was studied against the background of continuous rice and soybean crops grown as a predecessor crop.

According to the data obtained from our research, it was found that the height of the plants of the non-fertilized control variant, which is being grown continuously, was 51.8 cm in the budding phase, and it was 112.8 cm at the end of the growing season. It was found that the height of the plants was 53.9 cm in the growing season, and 118.4 cm at the end of the growing season, when 40 t/ha of semi-rotted black cow manure was used in the background of continuous rice cultivation. It was found that the height of the plants was 55.1 cm in the growing season, and 121.9 cm at the end of the growing season, in the case where the rate of mineral fertilizers N150 R120 K100 kg/ha was used against the background of continuous rice cultivation.

It was found that the height of plants was 53.8 cm at the end of the growing season, and 119.2 cm

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at the end of the growing season. It was found that the height of the plants was 55.4 cm in the growth phase, and 125.2 cm at the end of the growing season, in the case where the rate of mineral fertilizers N50 R120 K100 kg/ha was used in the maintenance of rice after soybean grown as a predecessor crop. It was found that the height of the plants was 57.2 cm in the tillering phase, and 127.2 cm by the end of the growing season, in the case where the rate of mineral fertilizers N100 R120 K100 kg/ha was used in the care of rice after shading. It was determined that the plant height was 61.4 cm in the tillering phase, and 135.4 cm at the end of the growing season, in the case where the rate of mineral fertilizers N150 R120 K100 kg/ha was used in the care of rice after shading.

Conclusion: Application of different rates of mineral fertilizers in the 1:1 short-row rotation, soybean : rice system provided rice 22.6 cm higher compared to the non-fertilizer variant of continuous cultivation, while the highest indicators of seedling thickness in rice were N150 of mineral fertilizers after soybean grown as a predecessor crop. R120 K100 kg/ha was observed in the variant used, and it was found that it was 135.4 cm at the end of the growing season.

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