THE EFFECT OF SOWING DATES AND METHODS ON THE PROTEIN CONTENT OF MUNG BEAN RE-PLANTED

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Annotation. *The role and importance of the agricultural sector in ensuring the food security of the world's population is increasing every day. Currently, legumes occupy a special place in improving the well-being of the world's population, increasing incomes, and providing livestock with nutritious feeds with a high protein content. This article presents the relationship of protein in mung bean grains with the timing and methods of sowing, when mung bean is grown as a repeat crop in winter wheat, and conclusions are drawn.*

Keywords: *food security, leguminous crops, mung bean, protein, sowing dates, sowing method.*

In world agriculture, the introduction of resource-saving innovative technologies increases soil fertility and allows obtaining two harvests per year by fully utilizing bioclimatic resources. Growing mung bean plays an important role in supplying the population with quality food products and producing environmentally friendly products. Improving agrotechnologies for mung bean cultivation is considered one of the urgent issues in ensuring soil fertility, stability, and food security, as well as meeting the population's demand for food.

During the short period of independent development in our country, profound reforms have been carried out, which made it possible to almost completely diversify agriculture and provide the population with basic food products. In addressing these issues, Presidential Decree of the Republic of Uzbekistan on the Development Strategy of New Uzbekistan for 2022–2026 sets out Goal 30: to double the incomes of farmers through scientifically based intensive development of agriculture, and to ensure at least 5 percent annual growth of agriculture. Based on this goal, tasks have been defined such as increasing the production of export-oriented products, improving and preserving soil fertility, creating conditions for efficient use of household plots, and other objectives.

In this regard, it is necessary to further deepen reforms in the agrarian sector to adequately provide the population of our republic with agricultural products, and to create an effective system of measures aimed at ensuring food security.

Currently, due to recurring water shortages in the world and our republic, rising food prices in the global market, and the need to expand the production and variety of food

products, the cultivation of mung bean – one of the leguminous crops – is of great importance in meeting the growing demand for food, as well as increasing rural incomes and living standards.

Our field experiments were carried out at the Samarkand Experimental Station of the Institute of Grain and Leguminous Crops Research on gray soils. In the experiment, the 'Durdona' variety of mung bean was sown as a repeat crop in winter wheat stubble on June 25, July 5, and July 15 by row planting (60x15) and broadcast methods.

According to the results obtained, when mung bean was grown as a repeat crop in winter wheat stubble, the protein content in mung bean grains depended on the sowing time and method. When sown early (June 25) by row planting, the protein content ranged from 26.3–27.1%, while in the broadcast method it ranged from 23.8–24.6%, with a difference of up to 2.5%.

When mung bean was sown on July 5 by row planting, the protein content of the grains was 24.9–25.4%, whereas in the broadcast method it decreased by 1.9–2.2%.

When mung bean was sown in mid-July (July 15) by row planting, the protein content was 23.9–24.5%, while in the broadcast method it was 22.7–23.1%, showing a decrease of up to 1.2% compared to row planting.

In conclusion, when mung bean is sown late (July 15) and by the broadcast method, the protein content of the grains decreases further due to insufficient temperature and light, as well as incomplete photosynthesis, which reduces the protein content in the grain.

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