THE VALUE OF SULFUR IN INCREASING THE PRODUCTIVITY OF BELLADONNA

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Regardless of the N:S ratios (or the series doses), the coefficients of belladonna sulfur consumption of fertilizers applied are found to be greater on meadow soil than on typical gray soil. The obtained data on the amount of sulfur absorption in the ontogenesis of belladonna require a differentiated approach to the introduction of sulfur fertilizers, most of the annual rate of sulfur (60-70%) should be applied before sowing on meadow soil, and on typical gray earth (35-50%), the rest is in top dressing and the period of budding or flowering is belladonna. This method satisfies plants with sulfur nutrition, especially in meadow soil. It has been established that the maximum growth of the stem, seed accumulation and high yield are provided when the N:S ratio on typical gray soil is1:0.20, and on meadowsoil1:0.25.

Introduction. The task of our research was to study the distribution of sulfur in the organs and the coefficient of its use of belladonna, the effect of this element in the absorption and consumption of nitrogen by the plant, as well as the establishment of optimal ratios of nitrogen to sulfur, contributing to the formation of high yields of belladonna, grown gray earth and meadow soil and others.

Materials and methods. In order to address this issue, both lysimetric and field experiments were performed using an increasing dose of sulfur (10,15,20,25 and 30 kg or with the ratio N: S = 1:0;1:0.10;1:0.15;1:0.20;1:0.25and 1:0.30) against the background of 80 kg / ha of phosphorus 50 kg / ha of potassium and 100 kg / ha of nitrogen. The coefficients of using sulfur belladonna was determined by the method of "Difference". The initial content of available (soluble) sulfur was at the level of 9 mg / kg on typical sierozem and 7.5 in meadow soil. The plot size is 96 m2, and the lysimeter is 0.25 m2 (50x50 cm), the number of plants in lysimeters is 2, which corresponds to 75 thousand plants per hectare.The sulfur content in plants was determined by the method of Aydinyan and others. (1968).The experiments were conducted at the experimental sites of the Department of Botany and the technology of cultivation of medicinal plants of the Tashkent Pharmaceutical Institute.

Results and discussion. It has been established that as the ratio of nitrogen to series decreases, the sulfur content in plant tissues increases, especially when the ratio N: S = 1-0.20-1: 0.25 (or at a dose of sulfur 20-25kg/25), which is more pronounced on meadow soil than on typical sierozem. Similar data with some deviation were obtained in the conditions of lysimetric experiments. In lysimetric experiments, the consumption of belladonna sulfur was studied. depending on the phase of its development, the soil conditions and the level of sulfur feed. As the development phases progress, the total sulfur consumption increases, reaching a maximum in the fucking seeds of belladonna. In the flowering phase, the quantitative indicators of sulfur absorption by the plant increase in meadow soil than in typical gray soil. And here, as the N:S ratio narrows (i.e.,from1:0 to1:0.20-0.25), the consumption of belladonna sulfur increases, especially in meadow soil. Greater absorption of sulfur, especially when the N: S ratio is 1:0.25, is typical of meadow soil plants than on typical gray soil. The rate of transfer of sulfur from vegetative organs to fruit elements is greater on meadow soil than on typical sierozem. Under the conditions of field experiments in the period of mass flowering and additional. education studied the ratio of N: S on the third sheet to characterize the security of belladonna sulfur.It should be noted that the N: S ratio noticeably turns off depending on the soil conditions and the ratio of nitrogen to sulfur. In the leaves of belladonna grown on typical gray soil, the N: S ratio (annual nitrogen rate of 100 kg / ha) in the flowering phase ranged from 1: 0.10 to 1: 0.16,

and on meadow soil from 1:0.12 to1:0.18,i.e. it was broader in the latter case.This indicates a relatively high availability of plants with sulfur on the meadow soil than on typical gray soil.

Conclusions. The obtained data on the amount of sulfur absorption in the ontogeny of belladonna requires a differentiated approach to the introduction of sulfur fertilizers, that is, most of the annual rate of sulfur (60-70%) must be applied before sowing on meadow soil, and on typical gray earth (35 50%), the rest in the top dressing and the period of budding or flowering of the belladonna. This method satisfies plants with sulfur nutrition, especially in meadow soil.