

RELATION OF THE FLOATER ON SULFUR FOOD CONDITIONS IN DIFFERENT SOIL CONDITIONS

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As the development phase progresses, the total sulfur consumption increases, reaching a maximum in the ripening of bolls in cotton; in the flowering phase, quantitative indicators of sulfur absorption by the plant increase on meadow soil than on typical gray earth; here, as the N: S ratio narrows (that is, from 1:0 to 1: 0.20-0.25), cotton consumption increases sulfur, especially in meadow soil. Greater absorption of sulfur, especially when the N:S ratio is 1:0.25, is characteristic of plants on meadow soil than on typical sierozem. In the phase of ripening of the bolls, the absorption of sulfur by cotton is almost doubled in relation to the flowering phase. It was revealed that greater absorption of sulfur by a plant on meadow soil occurs at a ratio of N: S = 1: 0.25, and on a typical gray earth -N: S =1:0.20.

Key words. Cotton, sulfur nutrition, lysimetric experiments, sierozem, meadow soils, cotton consumption of sulfur, reproductive development, flowering phase, development phase.

Introduction. It should be noted that non-saline irrigated soils of the cotton zone are deficient in sulfur. On the other hand, the dynamics of the sulfur content in irrigated soils and its effect on cotton have practically remained insufficiently studied.

Materials and methods. To study the effect of increasing doses of sulfur, i.e. at different ratios of nitrogen to sulfur, an annual dose of nitrogen of 5 g per lysimeter, laid lysimetric experiments against the background of the optimal introduction of phosphorus and potassium. The experiments were laid in 4 times with the use of typical sierozem and meadow soil. The size of the lysimeter is 0.25 m² (50x50 cm), the number of plants in the lysimeters is 3, which corresponds to 100 thousand plants per hectare. The sulfur content in plants was determined by the method of Aidinyan(1968). The experiments were conducted in the agricultural experimental station of the Tashkent State Agrarian University.

Results. Studies in lysimetric experiments have established that the distribution of sulfur in a cotton plant is uneven across different organs. In all phases of the determination, a high content of sulfur is characteristic in the leaves and fruit elements than in the conductive tissues - the stems and sash. In the phase of the beginning of the reproductive development of plants (budding), regardless of the level of sulfur nutrition (or the N: S ratio), the sulfur content is higher in cotton organs grown on typical sierozems relative to meadow soil. With the onset of the flowering phase, the opposite is observed, i.e. an increase in sulfur in the cotton organs on the meadow soil than on typical gray soil. With the transition of plants to the flowering phase, the quantitative indicators of the sulfur content in the cotton organs increase, on the contrary, in meadow soil relative to typical sierozems, which is consistent with its content in the soil environment. The pattern of absorption of sulfur in the phase of maturation of the bolls, depending on soil conditions, the level of sulfuric nutrition is maintained in the phase of maturation of cotton bolls. It has

been established that as the ratio of nitrogen to sulfur narrows, the sulfur content in plant tissues increases, especially when the ratio N: S = 1:0.20-1:0.25 (or when the dose of sulfur is 40 -50 c /ha), which is more expressed on meadow soil than on typical sierozem. In lysimetric experiments, cotton consumption of sulfur was studied depending on the phase of its development, soil conditions and the level of sulfur feed. In the budding stage, a large sulfur consumption is typical for cotton cultivated on typical gray soil than on meadow soil, which is consistent with the materials obtained from the percentage of this element in plant tissues. At the same time, with an increase in the dose of sulfur (or the N:S ratio), the total sulfur removal by cotton increases. The maximum absorption of sulfur by the plant was observed at a ratio of sulfur to nitrogen equal to 1:0.20 and 1:0.25 in both meadow soil and typical gray soil.

Conclusions. As the development phase progresses, the total sulfur consumption increases, reaching a maximum in the ripening of bolls in cotton; in the flowering phase, quantitative indicators of sulfur absorption by the plant increase on meadow soil than on typical gray earth; here, as the N: S ratio narrows (that is, from 1:0 to 1:0.20-0.25), cotton consumption increases sulfur, especially in meadow soil. Greater absorption of sulfur, especially when the N:S ratio is 1:0.25, is characteristic of plants on meadow soil than on typical sierozem. In the phase of ripening of the bolls, the absorption of sulfur by cotton is almost doubled in relation to the flowering phase. It was revealed that greater absorption of sulfur by a plant on meadow soil occurs at a ratio of N:S = 1:0.25, and on a typical gray earth-N:S = 1:0.20.