

UDC 633.63:631.861.31

INFLUENCE OF FOLIAR TOP DRESSING ON YIELD OF SUGAR BEET

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Problem setting. Sugar beet is the main sugar-containing, highly productive agricultural crop. Productivity of sugar beets can be increased by improvement of the technology of their growing. Application of fertilizers is one of the technology elements. Nutrients are supplied to the crop both by root system and through leaf apparatus. It is lately recommended to make foliar nutrition of sugar beets for a partial substitution of the deficiency of macro and microelements and their more efficient application. Such measure stimulates growth processes and positively influences sugar-accumulation. Thus, study of the effects of “Intermag” fertilizers on yield capacity and quality of root crops is an actual problem.

Fertilization is the most efficient factor to increase yield capacity and quality of sugar beets products. Considering high sensitivity of crops to microelements supply, foliar nutrition is an integral part of growing technology.

Microelements are not currently used in the form of salts, but are proposed for production in the form of chelating agents. The main function of chelate-producers is to support microelements in the forms available for the plants.

Foliar nutrition is a supplementary tool of fertilizer application, not the main one. Degree and speed of nutrients absorption by leaves from fertilizers is much higher as compared to their application from the fertilizers, applied in soil, where they can be complexed into unavailable compounds.

Task setting. The objective of the work is to outline the results of the researches concerning foliar nutrition of sugar beets.

Foliar nutrition is an economically beneficial way to overcome the deficiency of nutrients for plants. There are many fertilizers for foliar nutrition of crops. Task of those researches is to study effect of such fertilizers as Intermag BURIK, IntermagBOR, Intermag TYTAN, Intermag SIRKA on the crops of sugar beets.

The fertilizers are foliar applied by mist nutrition in the form of water solution according to the scheme of the research. The research scheme is the following:

1. Control (no foliar nutrition)
2. Intermag Buriak (2,0 l/ha) + Intermag Bor (1,0 l/ha) in the phase of 4-8 leaves; Intermag Buriak (2,0 l/ha) in the phase of 10-12 leaves.
3. Intermag Buriak (2 /ha) + Intermag Bor (1,0 l/ha) + Intermag Tytan (0,2 l/ha) + Intermag Sirka (3 l/ha) in the phase of 4-8 and 10-12 leaves.

The scope of the article. The authors of the article study yield capacity of sugar beets depending on foliar nutrition. It is determined that formation of yield capacity of sugar beets depends on foliar nutrition in the corresponding phases of plants development, forms of microelements and their composition.

The highest productivity of sugar beets (i.e. 679 hwt/ha) is obtained under two-phased foliar nutrition with a complex of chelating microelements and application of such fertilizers as Intermag Buriak (2 l/ha) + Intermag Bor (1,0 l/ha) + IntermagTytan (0,2 l/ha) + Intermag Sirka (3 l/ha) in the phases of 4-8 leaves and 10–12 leaves.

One should note that two-phased nutrition of plants with Intermag fertilizers in the phases of 4–8 leaves and 10–12 leaves secured not only growth of yield capacity of root crops, but also improved sugar content by 0,3–0,7 % as compared to the variant without application of foliar nutrition.

Conclusions. On the base of the main mineral nutrition of sugar beets, efficiency of application of Intermag mineral fertilizers is obvious. Foliar nutrition of plants with the complex of Intermag Buriak (2 l/ha) + Intermag Bor (1,0 l/ha) + Intermag Tytan (0,2 l/ha) + Intermag Sirka (3 l/ha) in the phases of 4-8 and 10–12 leaves substantially improves productivity of sugar beets as compared to the control.

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