

Assessment of optimal soil properties and lack of nutrients for plants using methods based on the principles of feedback

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Abstract

In work the estimation of requirement of plants in elements of a feed on their introduction in plants and the analysis of a reaction of plants is spent. Deficiencies of nutritional elements in plants according to the color range of leaves are determined, so the deficit for plants of the biotest of individual elements leads to a change in the intensity of the color range of the leaves. Deficiencies of nutritional elements in photosynthetic parameters were determined by electrophoretic introduction of elements into leaves, so electrophoretic introduction of Mg, Ca, Zn rose leaves photosynthesis, which indicates a lack of plants for these elements. The lack of food elements for plants on the activity of a suspension of chloroplasts by the method of A.S. Pleshkov and B.A. Yagodin was determined that the need for plants in food elements depends on the phase of development of plants. An assessment was made of the provision of soils with nutrients by introducing them into the soil and analyzing the response of soils. The estimation of plants' need for food elements after introduction into the soil and the analysis of the response of plants showed that a more informative study of the state and soil and plants, and the use of feedback systems. On the dandelion and plantain, an assessment was made of the plants' need for food elements in the composition of the products of evaporation from soils and transpiration from plants. Absorption of nutrients by the plants from the soil suspension and nutrient solution indicates that the plants lack potassium and excess calcium. Deficiencies of biophilic elements for plants were also determined by changing the parameters of plant photosynthesis when elements are introduced into the soil suspension on which plants are grown.

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