THE DYNAMIC RELATIONS BETWEEN THE CONTENT OF CHEMICAL ELEMENTS IN THE ROOTS AND REPRODUCTIVE ORGANS OF PLANTS IN CONDITIONS OF PRIMARY SOIL FORMATION

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The dynamic interconnections between the content of chemical elements in the roots and reproductive organs of plants was observed when the plants were grown in the primary soil formation conditions. Spring wheat and tomato were cultivated under controlled conditions in a long-term experiment (a serial of 23 continuous vegetations) which was carried out using initially abiogenic crushed granite and zeolite. The dynamics of interrelationship of the following chemical elements was studied: *Si, Al, Fe, Mg, Ca, K, P, S, Cl, Na, Mn, Zn.* The transformation of the mineral substrates accompanied by the process of primary pedogenesis and the formation of soil-like bodies was observed in the long-term and continuous experiment. The processes significantly alter the quantitative antagonistic and synergistic relationships between the chemical elements, while the qualitative dynamic interconnections are maintained.

Keywords: chemical elements, ash composition of plants, antagonism, synergism, mineral substrate, pedogenesis, dynamics.