

Ca AND Sr UPTAKE BY BARLEY ABOVE-GROUND ORGANS UNDER APPLICATION OF CONVERSION CHALK TO ACID SOIL

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The translocation of calcium and strontium to the above-ground organs of barley grown on an acid sodypodzolic soil limed with a strontium-containing ameliorant in a wide range of application rates was studied in a long-term pot experiment. It was found that the transition of calcium to barley straw and grain and the transition of strontium to straw followed a barrierless mechanism. It was also found that the uptake of strontium to barley grain followed a barrier mechanism. The content of strontium in grain increased in the treatment with chalk liming at the rate of 1,6 of total acidity and was maximum in the treatment with liming at the rate of 1,9 of total acidity. The proposed empirical model is adequately describing the general trend of the calcium and strontium uptake by barley.

Keywords: conversion chalk, accumulation, calcium, stable strontium, spring barley, above-ground organs.