



Changes in the agrophytocenoses of peas and sugar beet crops as affected by short crop rotations in Lithuania

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Over the period 1997-2003 a series of field experiments were conducted in Dotnuva (Lithuania) on Endocalcari-Endohypogleyic Cambisol with the aim of testing the possibilities of shortening crop rotations, to choose an optimal preceding crop in relation to weed incidence.

At the beginning of the growing season, by shortening crop rotations the great weediness increase was registered in pea stand when one course of a crop rotation was a row crop.

In the case when preceding crop of the peas was spring barley, winter wheat and sugar beet the weed incidence doubled at the end of the growing season.

When sugar beet was grown on a properly cultivated soil, and timely and appropriate herbicide application strategy was employed, it did not result in any marked increase in weed incidence in springtime during the seven-year period. The exception was when sugar beet was grown after spring oil-seed rape and in the sugar beet monoculture.

During a 3-year of monoculture of sugar beet the weed incidence increased twice while amount of perennial weeds increased more than 4 times.