CHANGES IN SOD-PODZOLIC SANDY LOAM SOIL (UMBRIC ALBELUVISOLS ABRUPTIC) STRUCTURE UNDER INFLUENCE OF LIMING WITH LARGE CRUMBS OF DOLOMITE

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In a 10-variant micro-field experiment lasting for four experimental years, the influence of increasing rates of dolomite crumbs (size of 5–7 and 7–10 mm) on the dynamics of the indicators of the sod-podzolic sandy loam soil structure has been studied. The lowest content of agronomically valuable aggregates (AVA) in the soil was found a year after establishment of the trial (spring 2016). Two years after the liming the amount of AVA increased in all treatments of the experiment. There were no significant differences depending on the rate and the particle size of the ameliorant. As a result of mustard cultivation (summer 2017), the content of AVA either did not change or decreased in some treatments of the experiment. The relationship between the humus total carbon content for the individual experiment treatments and the amount of AVA was weak (r = 0,26). After pea cultivation (autumn 2017), a tendency to an increase in the content of ACA was revealed in most of the treatments. The increase in the content of 2017, after the harvesting of peas, the amount of WRA in most of the treatments decreased. There was no relationship between the amount of WRA and the humus C content. The seasonal dynamics of the structural coefficient (Cstr) was revealed in the most treatments of the experiment. No influence of the ameliorant rate on the soil water resistance criterion (A) was found throughout the study period.

Keywords: field experience, sod-podzolic soil, structure, liming, large fractions of dolomite.