



Long term effect of soil tillage system on organic matter and soil structure conservation

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Long-term field experiments provide excellent opportunities to quantify the long-term effects of soil tillage systems on the soil properties. The paper presents the influence of conventional plough tillage system on soil structure and humus conservation of soil in comparison with the alternative minimum tillage system (paraplow, chisel plow and rotary harrow). The appliance of minimum tillage systems determine an increasing of the humus content with 0.8-22.1% and an increasing of the hydro stabile aggregates content with 1.3-13.6%, on 0-30 cm depth towards the classical system. In the case of humus content and also the hydro stability structure, the statistic interpretation of the dates shows the increasing of the positive significance of the minimum systems appliance while the soil fertility and the hydro stability of the macro-aggregates were initially low, the effect being the conservation of the soil features and also their reconstruction, with a positive influence upon the permeability of the soil for water.