THE INFLUENCE OF SOIL MANAGEMENT SYSTEMS ON SOYBEAN YIELD AND QUALITY TRAITS OF CROP IN PEDOCLIMATICAL CONDITIONS OF MOLDAVIAN PLATEAU

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Abstract

This report summarizes the research focused on the influence of conservation tillage in comparison with the traditional tillage, on soybean yield and some quality traits in the pedoclimatic conditions of the Moldavian Plateau. The research has been carried out since 2005 at The Experimental Research Station of the Agricultural University of Iasi, somewhere in the north-eastern part of Romania on a cambic chernozem (SRTS-2012), with a clay-loamy texture, 6.8 pH, 2.7% humus content and without irrigation. The present study mainly focuses on the agricultural year 2010/2011. The experimental soil tillage systems were as follows: V_1 – disc harrow , V_2 – paraplow, V_3 – chisel plow + rotary harrow for seedbed preparation, V_4 – plough at 20 cm (control variant) and V_5 – plough at 30 cm. Differences in yield between the control treatment (plough at 20 cm depth) and the variants of conservation tillage, chisel and paraplow, are statistically insignificant, but higher. The only differences statistically insured we observed on disk harrow treatment, negatively very significant and very important quantitatively.

Key words: soil tillage, 1000 kernels weight, test weight