

CONSIDERATION UPON SOIL MOISTURE CONTENT VARIABILITY ON ARABLE SLOPING LANDS IN MOLDAVIA PLAIN

Ana Andreea GURITA¹

E-mail andreeagurita2005@yahoo.com

Abstract

Stochastic distribution of precipitation in the area of reference and their insufficient revaluation on sloping lands make that the water is not provided to the physiological requirements of crop plants, irrigation being necessary even in some rainy years. The analysis of soil humidity in the period 2007-2011, allowed the adjustment of irrigation system components in a manner that will produce economically efficient crops, while maintaining the control of erosion process.

There were differences in the vertical variation of soil moisture content of different land use types, and the greatest variation of soil moisture content distribution was in 0-40 cm range of soil layer, it was a common feature of the profile distribution of soil moisture that amplitude of variation of soil moisture becomes smaller with the increase of soil layer depth.

Soil humidity deficit control in the phenophase of maize panic appearance - grain development, and in stages of 6-8 leaves and milk ripening, by distributing relatively low volumes of water (60 mm), determines the average production increases of 1400 kg / ha, with variations between 900-1700 kg / ha, producing a water stress between this stages, not influencing visibly the crops.

Key words: Moisture, soil erosion, soil humidity, yield

¹ University of Agricultural Sciences and Veterinary Medicine of Iasi