Dinamica indicatorilor de caracterizare fizica a solului din campul experimental de drenaje agricole Baia - Moldova

V. MOCA, D. BUCUR - USAMV Iasi
Iuliana BREABAN - Universitatea "Alexandru Ioan Cuza" Iaşi
O. RADU, Cr. HUTANU - USAMV Iasi

In the pedo-climatic conditions of Suceava County that extends on a total surface of 855 300 ha, the balance of agricultural land affected by humidity excess with temporary or permanent character is differenciated from south to north and from east to west, between 30% till 40%, which means almost 100 000 ha. For long effect estimation of the underground drainage associated with the agropedoameliorative works upon the some physical and hydrophysical characteristics, there were analyzed the soil and the environment conditions from Baia field, the extracarpathic basin of Moldova. For this reason, we analyzed the agrophysical conditions for luvisol albic pseudogleic,respectively luvosol albic stagnic-glosic (SRTS-2003) albic luvosoil drained and cultivated, after a period of 28 years (1978-2006) use.
The evolution of soil physical state after each of those three experimental cycles have been monitored on the basis of the dynamics of the following indicators: bulk density, draining porosity, compactation degree, which have been differentiated on lots/variants, function of the different effect of the ameliorative and tillage technologies. Given the underground drainage lot, associated with microtopography modelled with ridges and gullies / tubular drainages used to evacuate the water excess were identified two distinct areas, from the point of view of the physical state of the improved soil opposite with unimproved albic stagno-glossic luvisol.
After the first cycle of agricultural exploitation between 1978 - 1986, was observed an obvious improvement of the physical state of the soil both in the tilled horizon (0-20 cm) and in the lower layer (20-40 cm) but with a relative optimum for the higher ridges against to the lower gullies with drainage tubes for rain water. In the next two periods (1986-1996) and (1996-2006) in which was reiterated deep reloosen, for the year 1989 was observed a dramatic shrink of the ameliorative effect of the applied technologies, both for the used drained lot and for the control lot used as natural pasture for the years 1992-2006. For the two distinct areas of terrain modelling there was a relative good physical state on the ridges and less favourable in the drainage trenches combined with the outflow gullies for water excess.