



Development of erosion hazards and elaboration of erosion prevention plans in Southern region of the Republic of Moldova

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Water erosion is one of the most serious and widespread form of topsoil degradation in Republic of Moldova. Such process is caused by a very faulted relief, pouring precipitations (over 1.5-2 mm/min) and intensive utilization of land on slopes. Recent intensification of erosion processes has significantly increased, especially in hydrographic basins of arable lands on hill-sides. In Southern region of Moldova there are disperse basins, but most of them have an accumulative nature. One of those fragments was selected for future research. In order to plan and apply erosion prevention plans and works it is necessary to identify the erosion hazard in hydrographic basin area.

Total area of hydrographic basin was calculated on the basis of research and constitutes – 1010,73 ha. Out of which soil with different degree of erosion are:

- not eroded soil – 94,4 ha
- soil with different level of erosion – 784,1 ha
- clogging soil – 78,71 ha
- clogging stratified sunk soil – 52,98 ha.

The research has shown that the topsoil in a given hydrographic basin of regular black clay soil has different degrees of erosion (from very small degree to a very high degree of erosion). Contents of humus in arable lands from 3,5-3,0% to 1,5-1,0%. Also it was found that soil erosion can be seen at different ranges from watershed, subject to relief, granulometric composition and intensity of torrential rains. So, in 12 years

soil with different degree of erosion have lost humus from a 0-30 cm thick stratum approximately 0,5 t/ha on lightly eroded soil, 1,1 t/ha on medium eroded soil, 1,5 t/ha on highly eroded soil. Nevertheless, none of the soils reached an advanced degree of soil degradation. It demonstrates that agrotechnical actions and works have had a positive effect on maintenance of soil fertility.