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# INVESTIGATIONS ON WATER, SOIL, HUMUS AND MINERAL ELEMENT LOSSES BY EROSION IN DIFFERENT CROPS GROWN IN THE MOLDAVIAN PLATEAU
# CERCETARI PRIVIND PERDERILE DE APA, SOLUL, HUMUS SI ELEMENTE MINERALE DATORATE EROZIUNII IN DIFERITE CULTURI DIN CAMPIA MOLDOVEI

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The experiments carried out at the Podu-Iloaiei Agricultural Research Station, during 1965-2003, had the following objectives: The study of water runoff and soil losses, by erosion, in different crops; The annual rate of erosion processes under the influence of anti-erosion protection of different crops; The influence of water runoff and soil erosion on losses of organic matter and mineral elements from soil. The determination, in different crops, of water runoff, soil, humus and nutritive element losses by erosion was done by the help of plots for loss control, which are isolated from the rest of the area by metallic walls and have basins and devices for division; we took water and soil samples from plots for determining the partial turbidity and for chemical elements analyses. The determination of water runoff, soil, humus and nutritive element losses on fields arranged by anti-erosion was done on the whole area of the retention basin (159 ha), where experiments were conducted, since 1980, bands with grasses and field strips were set up. The erosion control was done by the help of hydrological station with triangular waste weir, rain gauge, recording rain gauge, limn-graph and devices for water and soil samples uptake during rainfalls. Mean annual losses of soil by erosion, registered during 1986-2003 were of 0.262 t/ha in perennial grasses on the second growth year, 4.77 t/ha in beans and 7.872 t/ha in maize and 8.297 t/ha in sunflower. 22 years after slope arrangement with sod bands and strip crops, runoff was reduced by 14 %, compared to unarranged areas and soil losses diminished by 66 %.