Impactul pierderilor de elemente fertilizante de pe terenurile agricole în pantă, prin eroziune, asupra fertilitaţii solurilor

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The soil, considered like a natural unique resource, can be quickly destroyed, its fertility being able to remake by suitable measures, in a long period of time, but the soil's ecological restoration can last centuries or even millenniums. The main elements that have an important contribution in crop nutrition are: humus, nitrogen, phosphorus and potassium. These elements are lost hrough soil eroded, who contribute at removing of these elements on slope and laying down of them to the base slope, in flood plain or in reservoirs, depended by force of flow, in the same time with solid material carry out; water flowing on the soil surface and, these losses being in direct dependence with soil solubility and element quantity from soil; moving of these elements together with the water piercing downwards the soil profile.

The maximum value of the lost elements, at runoff control plots, was computed after three successive rainfalls that summarized 103 mm from 22.06.1999 (between 16 and 24 hours) excepted was only plot cultivated with grain. At cereal crops, the nutrients lost through water flowing balance between 12% and 83%, while at row crops (corn) these are between3% to 31% from total losses, and to annual leguminous plants (soybeans, beans) this lost oscillate between 9% and 50%. It is necessary to remark that to crop plot with brome grass, the great nutrients lost it was recorded when the crop was in first year, when it was insufficiently developed.

Make a ratio of nutrients losses recorded at crop plots to nutrients losses computed for acceptable erosion with are 8 to/ha/year, we see that at cereals, the lost of nutrients represent 0.2 – 15% from calculated losses; at row crops the lost of nutrients represent 99 – 138% from calculated losses; at annual leguminous plants the lost of nutrients represent 71 – 126 % from calculated losses.