Retrospective modelling of the water movement in the soil profile - probably possible tool for nutrient content reduction in the ground water

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Statistical evaluation of the retrospective modelling of the piston flow of infiltrating water in the given soil profiles and under different crop covers can be propably used for:

1. more accurate localization of critical areas in the investigated catchment in the term of possible nutrient losses to the ground water for every grown crop-plant.
2. estimation of the investigated grown crops numerical order from the point of view their influence on the input of the nutrients (agrochemicals) into the ground water
3. estimation of the „critical“ and „safe“ terms of agrochemicals application in the investigated catchment, as a function of the soil properties (in the event of their inhomogenity) and the grown crops.

These calculated curves, sometimes called „time depth curves“, involves also the depth of the ground water, hydrophysical properties of soil profile, trend of the weather processes for the last n-years (more years ensures the more reliable results) and also water requirements of the investigated crops.