

Effect of the vegetation cover the main crops about the soil erosion in Cuyaguaje River watershed

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ABSTRACT.

Erosion is a serious environmental problem that affects the whole world. In Cuba this phenomenon affects more than 40% of the agricultural land. At this moment, the watershed of the river Cuyaguaje, one of the eight prioritized watersheds of the country, is facing serious erosion problems. Nowadays, there is a trend to determine the erosion of a region by using of simulation models. One of these models is RUSLE, an empiric model that makes use of different parameters, one of this the factor vegetation that it analyzes the influence of the vegetation cover in the protection of the soil against the erosion. For the analysis of this factor, the model needs data of the of the cover crop development with time, however the crop data reported in the literature have been determined in conditions different than those in Cuba. In this work the factor vegetation is presented for the main present cultivations in the basin of the Cuyaguaje (tobacco, beans, maize, cassava and sweet potato), as well as the followed methodology for its determination, it was obtained the models that describe the behavior of this cultivations in function of the days after the sowing for the concrete conditions of the watershed, data that later on are processed by the model RUSLE Crop Factor Calculator, being obtained the values of the factor C of RUSLE, this value indicates according cultivation rotation used by the peasants of the area in study, a reduction of the floor loss of more than 60%. It is evidenced that in humid period the cultivation of the corn exercises an action superior protector to the sweet potato, not being this way in dry period. The sweet potato in the (dry period) he/she has a development something inferior to that of the humid period.

Key words: model, parameters, vegetation cover, dry period, humid period

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