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Wild boars as soil erosion agents in agriculture land in Eastern Spain

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The effect of animals on ecosystem processes is a new and interesting field of study. Soils are affected by an intense microbiota activity, which has been studied, but the effect of the meso and macrofauna is not researched. The effect of insects, mainly ants, and small mammals such as rodents, were studied during the last decades, although more research is needed. However, very little is being researched about the effect of large mammals on the soil formation and soil erosion. This research show a field survey of the effect of wild boars on the sediment removal and changes on the soil surface. The research was conducted on agriculture land in Eastern Spain on citrus and olives plantations, and on abandoned agriculture land covered by herbs and shrubs.

The measurements consisted in topographical surveys to calculate the amount of soil removed by the wild boars. The survey was done after each event of activity of the wild boars on selected plots of 100 m2. Those measurements shown that wild boards removed within 0 to 6.45 Mg ha-1 y-1. The activity was higher on the citrus plantations than on the olive and the abandoned field, and it was concentrated on the irrigation drips were more water and roots were available.

One plot of the Soil Erosion Experimental Station of El Teularet-Sierra de Enguera was affected in 2005 by the wild boars burrowing, and the measurements shown an increase in the runoff sediment concentrations from 0.45 gr l-1 to 5,45 gr l-1 during the first rainfall after the burrowing. After one year the sediment concentration returned to the previous values.

The surveys done since 2005 inform that wild boars are important soil removal agents in semiarid land.