



## **Soil organic matter and soil biodiversity spots in urban and semi urban soils of southeast Mexico**

Esperanza Huerta

El Colegio de la Frontera Sur, Agroecología, Campeche, Mexico (ehuertaecosur@gmail.com)

We have observed how the constant use of compost or vermicompost has created spots of soil restoration in urban and semiurban soils of Chiapas (Huitepec and Teopisca), increasing soil organic matter amount, soil moisture and soil porosity, and enhancing then the presence of soil biodiversity; for example, in a Milpa with vermicompost (polyculture of *Zea mays* with *Curcubita pepo*, and *Fasolius vulgaris*) we have found a high density of an epigeic earthworm (640 ind.m<sup>2</sup>), *Dichogaster bolahui*, not present in the same type of soil just some meters of distance, in an Oak forest, where soil macroinvertebrates abundance decreased drastically. In another ecosystem within a *Persea Americana* culture, we found how above and below ground soil biodiversity is affected by the use of vermicompost, having clearly different microcosmos with and without vermicompost (30-50% more micro and macro invertebrates with vermicompost). So now in Campeche, within those soils that are classified by the mayas as tzequel, soils not use for agriculture, we have implemented home gardens and school gardens by the use of compost of vermicomposts in urban and semiurban soils. In school gardens (mainly primary schools) students have cultivated several plants with alimentary purposes; teachers have observed how the increase of soil biodiversity by the use of compost or vermicompost has enhanced the curiosity of children, even has promoted a more friendly behavior among students, they have learned how to do compost and how to apply it. Urban and semiurban soils can be modified by the use of compost and vermicompost, and soil biodiversity has extremely increased.