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Twenty Years of Agroecological Practices on a Family Farm in Pinar del Río, Cuba

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Abstract

The research is integrated with the DiveCropS project supported by DAAD, Germany, and shows that experience of more than twenty years of agroecological practices in a family farming, located in an area of slate heights in the Guaniguanico mountain, in the municipality of Los Palacios, province of Pinar del Río, Cuba. The studied is located in areas of fragile agricultural ecosystems with lithosol-type soil, which for many years have been subjected to poor management and intensive use, as a consequence they have been degraded by erosion and compaction, limiting their productive capacity. In the experience carried out, the effect of the system of agroecological practices implemented for the management of soils that allows them to improve, conserve and increase their productivity over time is evaluated. The study has a surface area of 5 hectares where they applied technologies for the improvement and conservation of soil, crop rotation, minimum tillage and agroforestry management. The results achieved show a reduction in erosion, by improving the chemical, physical and biological properties of the soil, increasing its fertility and the biodiversity of the agro-ecosystem, on the basis of reaching an increase in Organic Matter in the soil with values of 0.97 to 1.96 %, achieves a greater cation exchange capacity, with an increase in structural porosity and soil permeability, contributing to a 30 % increase in yields. These results allow a greater stability of the family, improve their quality of life and guarantee their permanence in the environment without the need to emigrate to other areas

Keywords: Agroecology, agroforestry, biodiversity, family farming, soil

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