

INFLUENCE OF SOIL MANAGEMENT PATTERNS ON MAINTENANCE OF  
FERTILITY IN THE BRAZILIAN CERRADO

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ABSTRACT

The experiments that have been carried out during the 4 last years by our team on 3 different locations representing various soil and climate situations of the cerrado, have shown that:

- 1 - traditional cultural practices (superficial soil tillage and monocropping) lead to a progressive physical and chemical degradation of the soil and to a significant decrease of yields:
- 2 - introduction of improved cultural practices (deep plowing, scarification) combined to proper rotations have given an increase of soil fertility. Physically we have observed an increase of the soil macroporosity and a decrease of the apparent soil density. Thus water infiltration is improved, running off and erosion are partly avoided. Chemically we have observed an increase of pH, a reduction of Al content and a good repartition of cations in the soil.

All these modifications have increased the rooting system development, the availability of water nutrients for crop and the yields.