EL HORIZONTE DEL SUELO

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ABSTRACT

Soil and water together comprise the natural resource base for food production for the world´s population. For this reason the conservation of these finite resources is essential to maintain or improve the global food supply. However, since the beginning of large scale agriculture these resources have been undervalued, being seen as infinite in terms of both quantity and quality. Consequently, overexploitation has contributed to degradation and/or losses that are now reflected in a loss of productive capacity. Soil degradation has contributed significantly to global warming, mainly through the emission of large quantities of CO_2 to the atmosphere, but now this environmental effect is acting indirectly against the expansion of the agricultural frontier to the detriment of the poorest small land areas. As a result of the increasing incidence of drought and losses of soil fertility, hunger in the World is increasing and today affects around 1 billion people, and could become significantly worse in the middle term. Under traditional soil management practices, the degraded soils cannot produce enough food to meet demand. Therefore, a new approach is required for the management of the 10% of the world´s land that is used for food production, , Studies must be carried out to develop new soil management techniques to optimize its productive capability, in perfect harmony with the other components of the agricultural system, giving special attention to replenishment of soil nutrients and plant adaptation to biotic and abiotic stresses.

Key words: soil degradation, soil fertility, soil management, food production, agricultural frontier, global warming, sustainability