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Agroforestry and Anti-Erosion Practices of Soils Conservation in Soudanian Zone (Benin)

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Abstract

The commune of Ouaké is part of the Sudanese zone of Benin where we are witnessing advanced soil degradation. In order to contribute to the restoration of these soils, agroforestry and anti-erosion soil conservation practices (PAACS) were evaluated in this commune. Surveys and data collection were carried out from individual and group interviews with 215 farmers in 22 villages, covering all the districts of the commune, as well as at the level of agricultural and forestry development structures. A diagnosis was carried out on each PAACS by identifying their strengths, weaknesses, opportunities and threats followed by their prioritisation. A total of eight agroforestry practices (with a dominance of agroforestry parks in *Parkia biglobosa* (83.94%) and *Vitellaria paradoxa* (74.16%)) and five anti-erosion practices (with a predominance of the practice of furrows in a direction perpendicular to the slope (80.63%)) have been identified. The adoption rate of these PAACS differs according to the villages and districts, socioeconomic groups, ethnicities, sex, age, level of education and main activity. Agroforestry parks in *Parkia biglobosa* and *Vitellaria paradoxa* have a high priority followed by agro-pastoralism. Compared with anti-erosion practices, anti-erosion hedges and stony cords have high priority. The development of PAACS must be based on these priority practices. This study, based on agroforestry and anti-erosion practices for soil conservation in the commune of Ouaké, will no doubt have a positive impact on safeguarding soil quality, improving the level of production of agricultural crops and also improving ecological functions. Agroforestry as a sustainable management system will ensure effective protection of available natural forest resources, conserve biodiversity, maintain an ecological balance in order to promote a productive and resilient environment. The implementation of good agroforestry and anti-erosion practices adapted to farmers' needs could therefore encourage them to put these systems into practice, thereby increasing crop yields. This increase in yield could improve the food and socioeconomic situation. They will thus have food security and well-being in this commune.

Keywords: Agroforestry systems, commune of Ouaké, erosion, soil conservation