

Agroforestry innovations in dryland area of Africa: results of 40 years of research-action in North Cameroon and Dallol Dosso in Niger

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Method: Reaching the end of his career, R. Peltier presents a brief balance sheet of the action-research activities he has carried out with many colleagues. Results: The greatest failure was the dissemination of Acacia senegal fallows. Although very successful on Cameroonian research stations (at 15 years, production of 1200 kg/ha of gum and 40 m3/ha of wood-energy, improvement of the CEC, C, N & pH in the soil, doubling of maize production and tripling of cotton production compared to continuous cultivation), the practice was rarely adopted by farmers due to the failure to set up income-generating gum arabic value chains (organic or fair trade). Mediocre results (good successes but very localised) were obtained in planting live-fences and densifying trees on anti-erosion strips by sowing (Borassus aethiopum), planting (neem, various acacias) and Assisted Natural Regeneration (ANR) with various local species, including Combretaceae, Baobab, Shea-tree. The same applies to the planting of local and exotic fruit trees in orchards and woodproducing trees in farmers' micro-groves. The best results were obtained for the enrichment of parklands with Faidherbia albida by subsidising ANR to the tune of 0.2 USD / plant kept for 3 years, i.e. 20 USD for 100 trees/ha. This enabled over one million trees to be saved in North-Cameroon, but selection slows sharply when the subsidy is no longer available as the benefits are only perceptible in the long term. The situation is similar in Dallol Dosso in Niger. Discussion: While the clearing of wooded savannahs has increased significantly, particularly in the region of North-Cameroon (40% in 40 years), tree-densification has occurred on formerly degraded areas. Conclusion: It is clear that land tenure security, and the provision of technical assistance and subsidies, are decisive for the development of agroforestry innovations, but more socio-economic studies are needed to better understand the determinants of the restoration of degraded areas.