



CSRS SCIENTIFIC SEMINAR N°2

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Theme: Coffee-based agroforests in the South-West of Ethiopia: structure and species diversity of the tree component.

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Abstract: Ethiopia is famous in the agroforestry community for the richness and diversity of the homegarden systems developed by local farmers. Ethiopia is also famous for it is the country of origin of *Coffea arabica* L. . Coffee is nowadays an important cash generating resource for smallholders in Ethiopia.

Two smallholder coffee production systems have been described in the scientific literature:

- cultivation in homegardens, in the various parts of the country where ecological conditions are favorable to its growth,
- harvesting from the few remnants of "natural" forests in the Kafa zone, where the tree grows wild or semi-domesticated.

Here, we report and describe coffee-based agroforests encountered between Jima and Agaro, in the southwest. These agroforests appear as forest patches, a few tens to hundreds of hectares in area, in a rural landscape usually dominated by croplands, homegardens and pastures. They make up a third smallholder coffee production system, clearly different from the two others.

After exposing a typology of the agroforests encountered, we present and analyze our datas collected through interviews and field inventories that allow characterizing the ecological basis of this system: silviculture (establishment, tree management), tree structure (density, vertical stratification, basal area, DBH distribution) and tree species richness and diversity (various indices) at various stages.

We conclude in detailing one important finding, that, contrary to most reported agroforest examples, these coffee-based agroforests have been built by farmers on cropland and pastureland, not on forest land. Consequences of this finding in terms of contribution of local farmers to the sustainable development debate are presented.

Key-words: Agroforest, coffee, tree stand, biodiversity, Jima, Ethiopia

