The social diffusion pathways of sorghum varieties and associated knowledge in the Mount Kenya region

Small-scale farming systems present a major interest for the conservation of crop diversity in situ. In these systems, farmers act on crop diversity through their management practices, mainly seed selection and exchange. Understanding the diffusion pathways of crop seeds and associated indigenous traditional knowledge (ITK) within and among farmers’ communities would hence be useful for designing conservation strategies for agrobiodiversity. In smallholders’ communities, the relationship among farmers are largely determined by social rules and customs, partly inherited from the pre-colonial period. It is notably the case in the Mount Kenya region, which still shelters an impressive cultural diversity with more than nine ethnolinguistic groups coexisting on its Eastern slope. This study focused on three of these ethnolinguistic groups: the Chuka and Tharaka groups, which had a long standing alliance but have no alliance with a third group, the Mbeere, despite their spatial adjacency. Does this social organization determine the diffusion pathways of the sorghum varieties and that of the ITK associated? This study attempts to address this question. The sorghum seed exchange network was characterized using Social Network Analysis. The dependence of seed exchanges regarding the social organization of farmers was tested based on the interviews of 218 farmers in the three ethnolinguistic groups. We also measured the consistency of 96 farmers belonging to the three ethnic groups in naming sorghum varieties, in order to test whether both the material (seed) and the cultural (sorghum variety names) diffusion pathways corresponded. This study showed that the social organization of farmers in the Mount Kenya region still shapes today not only the seed exchange network, but also the ITK diffusion pathways. This study hence illustrates the relevance of considering the social organization of farmers’ communities for the conservation of agrobiodiversity in situ.