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## Understanding knowledge co-creation in agroecological learning: farmer field schools in arbo-market gardens in Senegal

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### Abstract

Farmer Field Schools (FFS) provide a platform for group learning, enabling farmers to develop their skills in critical analysis and co-creation of knowledge. This approach is therefore an opportunity to implement farmer-led research, particularly in the Global South, but there is a lack of scientific data for better understanding the processes of co-creating knowledge. In Senegal, the AfriNutriForest project focuses on intensifying fruit-vegetable agroforestry systems in an agroecological and participatory way by applying the FFS approach. The aim of this study is to understand the processes of knowledge co-creation within the project's farmer groups. Three farmer groups with a total of 84 members (mostly women) were selected in Pambal, Mboudaye and Ndiamb Fall in north-western Senegal. The study uses a qualitative mixed methods approach, including document analysis, observations of processes/behaviours, focus group discussions and semi-structured interviews. A baseline has been developed which includes participants' socio-economic variables (e.g. age, education level, and gender), horticultural knowledge levels and their motivations/barriers for FFS participation. After the vegetable growing season, data on participation rates, knowledge acquisition and application, learning tools/methodologies used and participants' perceptions of progress will be collected. Differences in these parameters will be analysed and the possible influence of the facilitating organisations studied. First analyses of the baseline data show a low level of education (<17 % of members finished middle school). Respondents mainly participated in the FFS groups because of their interest in acquiring new knowledge and skills in Ndiamb Fall (83 %) and Pambal (78 %), or in increasing their financial independence in Mboudaye (58 %). Observations during FFS sessions showed that most farmers had difficulties understanding the agronomic data collection on the experimental plots implemented by the groups under the guidance of the facilitators. Data collection in the three FFS groups is ongoing and final results will be presented at the conference. The recommendations resulting from the final analysis will be used to improve the AfriNutriForest project activities and to further develop the FFS approach, e.g. through improved FFS session preparation or facilitators' training on farmer-led research.

**Keywords:** Farmer-led research, horticulture, interactive learning, participatory approaches

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