

les dossiers d'**AGROPOLIS** INTERNATIONAL

Expertise of the scientific community



Biodiversity

Science for humans
and nature



- ▲ Role-playing game with Malian farmers to discuss seed dynamics concerning farmers' sorghum varieties on a village scale.
- Germination of red sorghum seeds for malting prior to brewing of *dolo*, a local beer.

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MALI—role-playing games on sorghum

Because of the extent of available food plant diversity, humans are able to tailor their cropping to prevailing and future environmental, climatic, economic and social conditions. Over a 7 year period, within the framework of the 'Sorghum agrobiodiversity in Mali and Burkina Faso' project, funded by the French Global Environment Facility, the recognised role of farmers in biodiversity preservation and creation was highly promoted. Local conditions have been taken into very little account in plant breeding programmes to date. In Mali, 90% of the sorghum seed planted is derived from on-farm propagation of traditional varieties disseminated via local seed management systems. Through participatory breeding, varietal innovations can be co-built with farmers by integrating local know-how. Research has been focused on the dynamics of varietal diversity on a village scale.

In four successive workshops involving farmers, leaders of farmers' organizations, NGOs and researchers, elements of the seed system were differentiated so that they could be separately treated so as to gain an overall understanding of farmers' choices and seed trade mechanisms. Each workshop resulted in the construction of a specific stakeholder role-playing game that can be used to analyse local practices and assess knowledge acquired previously by researchers so as to draw up the role-playing game rules.

The workshops led to the gradual development

of a model of joint knowledge. Participants pointed out that the workshops helped shed light on what the researchers wanted and do. The assessment of prospective scenarios during the role-playing game sessions, or via multiagent computer simulations based on the same conceptual model, provide access to spatiotemporal scales that are not accessible in real situations. Farmers can thus monitor and discuss the impacts of their practices on varietal diversity on a village scale during several successive years, in response to events that they have previously found to be of interest.

In this specific case, solid potential areas for action emerged for setting up collective *in situ* seed management structures with the support of NGOs. It is now essential to develop other operational support tools that would be more suitable for setting up these new collective projects.

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For further information:
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