

Making agricultural research work for small farmers and agroecological approaches in West Africa¹

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This paper highlights some of the outcomes of recent farmer deliberations on the governance and priorities of food & agricultural research in West Africa.

The choices that are available to farmers, other food producers and consumers, - and the environments in which they live and work -, are partly shaped by publicly-funded research. For a very long time, agricultural research has largely been thought of as the domain of scientific experts, with farmers at the receiving end of the research outputs. If a variety or an idea fails, farmers are often blamed for their “ignorance and inability” to farm correctly. The question is rarely asked: Is there something wrong with the research itself?

The use of traditional seeds is declining in West African farming. The use of organic manure is also declining, and trees in fields are being excessively felled. Agriculture in West Africa is increasingly based on the use of imported fertilisers and pesticides. As a result, cultivable land is being degraded by the use of chemical products and poor agricultural practices. The agricultural research system is dependent on external funding. As a result, research on agriculture is externally oriented, and this is detrimental to family farming.

In West Africa, farmers and other food producers are beginning to raise their voices to ensure that agricultural research better meets their needs and priorities. Federations of peasant organisations have a key role to play in democratising and transforming agricultural research for agroecology and food sovereignty.

Why isn't agricultural research working for farmers?

For more than 20 years, agricultural research by organisations like ICRISAT in Mali and national research systems in West Africa have produced new varieties of cereals like sorghum and millet, and groundnuts, based on selections made in the research station. But very few varieties have been adopted by the peasants, who continue to favour their traditional varieties.

This constant failure has driven scientists to involve farmers more in the process. However, this participation is still rather superficial because the research and legislative framework do not take the farmers' needs and conditions as its starting point:

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- Farmers and other producers are not involved in drawing up strategic plans for agricultural research. This is especially the case for women, even though they are involved in all aspects of food production—cultivation, selection and conservation of seeds—and have a deeper understanding of culinary and nutritional quality than men. Farmers are involved in testing and replicating seeds but have little opportunity to explain what improvements they need to the traditional varieties which they prefer and which are adapted to their growing conditions.
- Research does not support sustainable farming based on the functional use of biodiversity (genetic, species and ecosystem levels). The emphasis is on genetic improvements. Varieties produced tend to be hybrids, which cannot be resown year after year. They also require additions of artificial fertilisers, which undermines the autonomy farmers are striving to maintain. On the other hand, traditional varieties do not need synthetic fertilisers. Promoting improved hybrid varieties increases farmers’ dependence on the system, and on external inputs, and increases their likelihood of becoming indebted.
- Research findings are documented in a language that most producers do not understand. The results of research on livestock rearing and fishing are not sufficiently disseminated among herders, fisherfolk and others.
- The legal context also undermines the conservation of traditional varieties. For example, certification laws dictate that only improved, certified seeds can be sold. Thus traditional varieties will gradually disappear along with the genetic diversity they represent. Certification is expensive and difficult for peasant farmers, whose self-reliance and resilience depends on being able to store, breed, exchange and resow their own seed and animal breeds.
- Finally, agricultural research pays insufficient attention to food processing activities.

Local women prefer to sow local varieties which do not need fertiliser. They particularly appreciated a local variety of sorghum which is tolerant to the noxious weed Striga, but this was becoming extinct. They find that sorghum is good for breastfeeding because it “gives good milk”.

How are farmers making themselves heard?

Over the last four years, a series of citizens’ juries have been held in Mali. Their aim is to allow ordinary farmers and other food producers, both men and women, to make policy recommendations after cross examining expert witnesses from different backgrounds. The three citizen juries held so far have explored the following themes:

- GMOs and the future of farming in Mali. In January 2006, at a citizen jury organised by the government of Mali’s Sikasso region, 45 farmer jurors voted against the introduction of genetically-modified crops in Mali. The citizen jury allowed the



jurors to cross-examine 14 international witnesses representing a broad range of views on this controversial issue. These included biotech scientists, agencies such as the FAO and farmers from South Africa and India with first-hand experience of growing GM crops. The approval of national legislation needed for the introduction of GM crops in Mali has since been delayed.

- What kind of knowledge and agricultural research do small scale producers and food processors want? This citizens' jury, held in January 2010, involved 45 jurors drawn from different agroecological zones in Mali, Senegal, Burkina Faso and Benin.
- Democratising the governance of food and agricultural research? Held In February 2010, this third citizens' jury involved 40 men and women farmers who questioned specialist witnesses from West African and European countries on this subject.

The most recent two juries each lasted six days and were designed to complement each other. They are part of an international action-research initiative known as *Democratising the Governance of Food Systems: Citizens Rethinking Food and Agricultural Research for the Public Good*, co-ordinated by IIED. They were guided by an oversight panel to ensure that the entire process was broadly credible, representative, trustworthy, fair and not captured by any interest group or perspective. The outcomes of each jury were publicised widely in the national media.

What are farmers calling for?

The following recommendations for agricultural research reform were made by the farmers involved in the three citizens' juries:

A ban on genetically-modified organisms

- As the number of small-scale producers in Mali represents 98% of the farming population and as crop genetic modification is only viable for large-scale producers—who represent only 2% of the farming population—this new technology should not be introduced.
- Considering that the technology of organic cotton cultivation is already used in Mali, and given that it is highly viable in terms of women's participation, availability of a market and minimum guaranteed price, the cultivation of Bt cotton should not be encouraged; instead it should be stopped.
- Women farmers should instead be given the technical training needed to produce organic sesame and cotton.
- Farmers should be directly involved in agricultural research. Research on GMOs should never be carried out in the name of Malian farmers because



we farmers do not want GMOs.

- Research programmes must focus on improving and adding value to traditional crop varieties instead of working on transgenic crops.
- Strategies are needed to promote organic farming which is based on local resources and local produce.

Research that meets the needs of small farmers and other food producers

- Reconstruct agricultural policy to give farmers a central role in defining it. Develop consultation procedures to identify producers' needs and values before starting to draw up priorities for agricultural research to ensure research focuses on the concerns and resources of the poorest sectors of society. Directly involve producers, users and consumers (both women and men) in controlling, designing, conducting and monitoring research activities
- Organise citizen conferences/citizens' juries to define the overarching policies and strategic priorities for food and agricultural research
- Involve farmers in every stage of creating and selecting crop varieties and focus research on improving the productivity of local varieties (growing practices, local adaptation, land use, and soil fertility management). Take into account local products such as *datou*, *soumbala*, dried fish, etc. in research protocols and topics, and their potential to replace imported condiments like stock cubes.
- Find strategies to promote the storage, exchange and use of local seeds as a means of achieving food sovereignty. Hybrid seeds and GMOs should be avoided.
- Identify and investigate mechanisms that will enable the state and national economy to provide more funding to research, thereby avoiding dependence on external funding
- Generate knowledge and technologies to support sustainable agriculture (agricultural tools and machines adapted to small-scale farming, use of natural mineral resources and compost, integrated pest management, mixed cropping)
- Involve research much more in producing knowledge on local biodiversity in order to add value to its use and values.
- Increase efforts to circulate and disseminate the results of participatory research, especially using local languages
- Help producers to organise themselves to ensure that their voice is heard in policy-making processes for legislation and agricultural research and to strengthen their own research capacities



Notes

1. A few more photos on these citizens' deliberations on food and agricultural research can be accessed on web sites indicated below.
2. A multimedia publication on the process and outcomes of the Nyeléni Citizens' Juries on the governance of food and agricultural research in West Africa will be available in early September 2010. The full set of farmer jury recommendations on the governance and priorities for agricultural research will be presented in this on line publication, - along with a

series of video interviews with the specialist witnesses, oversight panel members, farmers and other participants.

Further information

- The West Africa Steering Committee members have developed a website (www.ecid-nyeleni.org) to describe the process and outcomes of the West African citizens' juries on the directions and governance of agricultural research in both Bambara and French.
- More information on the food sovereignty concept and movement can be found at www.iied.org/pubs/pdfs/G02268.pdf
- For more details on the citizen jury on GMOs in West Africa, visit: www.iied.org/natural-resources/key-issues/food-and-agriculture/deliberative-democracy-citizens-juries
- For more information on the *Democratising Food and Agricultural Research* initiative in the Andean Altiplano, South Asia, West Asia and West Africa see: www.iied.org

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