ABC

In Situ Agricultural Biodiversity Conservation Project[1]

A research project of the Intermediate Technology Development Group (ITDG) and the Overseas Development Institute, UK (ODI)[2]

SUMMARY

The aim of the ABC project is to find out the extent to which farmers in Kenya, Peru and Zimbabwe are interested in having a wide range of agricultural biodiversity on their farms, their strategies for maintaining and developing this and how they, and farmers in other parts of the world, can be supported in the on-farm conservation and development of their agricultural biodiversity.

1998 Maragwa Seed Show

Displays were mounted by 29 women and 47 men as well as some community groups. Women farmers had more seed varieties than men and the grand prize for the best quality of seeds and stand with the highest number of crop varieties was won by Gakia Seed Banking Group. The displays are evaluated by a panel of judges for diversity and variety and the most diverse are awarded prizes.

The total number of crop varieties displayed increased in 1998 to 149 from 134 in 1997. More varieties of sorghum and cowpeas were recorded in 1998 than in 1997 on more than 35 stands. KARI's Mtama 1, a sorghum variety introduced about three years ago, featured in all stands in 1998, compared with only two in 1997 and 1996. Also in 1998, the atilano variety of cowpeas was displayed by 22 farmers compared with only 2 the previous year. The more traditional and popular cowpeas varieties of mugeta, kaguru and itune were displayed on all stands. There were more displays in 1998 of yellow and black grams.

BACKGROUND

The need to develop practical strategies for supporting farming communities in conserving and using agricultural biodiversity sustainably is now widely recognised as important to ensuring food and livelihood security, especially in marginal areas[3].

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[3] *See, for example, Priority Activity #2 of the Leipzig GPA*

This project will contribute to the overall understanding through developing and promoting participative strategies for supporting the sustainable use of agricultural biodiversity in farming communities in marginal lands. This would usefully complement the work of other projects[4] in two main ways.

- First, by exploring the community dynamics (as well as the scientific aspects) of agricultural biodiversity conservation and use, and the implications of this for national and international action.
- And second, by focusing on strategies that will achieve sustainable use and conservation over the long-term, i.e. without requiring the continued intervention of outside agencies.

Research hypothesis

People accept that `sustainable use' of agricultural biodiversity involves dynamic portfolios of crops and varieties, with ingress and egress of individual genes - not merely the preservation of existing farming systems without change. Therefore, the challenge for the International ABC project is to find out to what extent farmers actually want to maintain a number of crops and varieties, and how farmers' efforts to maintain this agricultural biodiversity can be supported. The project's research hypothesis can thus be stated as:

> ***Maintaining a number of varieties and crops provides for sustainable use of agricultural biodiversity***

Research objectives

The project's specific research objectives are therefore:

- to find out the extent that farmers want to maintain a number of varieties and crops in the farming system;
- to find out the reasons for this (why/why not);
- to find out the strategies farmers use to maintain a number of crops and varieties;
- to find out what forces - positive and negative - help or hinder the maintenance of a number of crops and varieties.

Method

The project is using participatory rural appraisal (PRA) methods, individual household interviews, focus groups, seed sampling and analysis, and secondary data.

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[4] *A number of institutions have initiated international projects, which attempt to support the conservation and sustainable use of particular components of agricultural biodiversity. For example:*

- *The Community Biodiversity Development and Conservation Programme (CBDC) is an initiative developed by agricultural NGOs in 11 countries in Africa, Asia and Latin America, including our case study countries Peru and Zimbabwe.*
- *The International Plant Genetic Resources Institute (IPGRI) has a project "Strengthening the Scientific Basis of In situ Conservation", which will work in up to 9 developing countries, including Peru.*
- *The Seeds of Survival programme of the Unitarian Service Committee of Canada (USC) has successfully established in situ conservation of selected endemic crops in Ethiopia.*
- *FAO has a regional project in Mozambique, Swaziland, Tanzania, and Zimbabwe on Gender, Biodiversity and Local Knowledge Systems to Strengthen Agricultural and Rural Development.*
- *IFAD, working with FAO and IPGRI, is supporting new work on in situ conservation in Zimbabwe and Zambia, as part of the implementation of the Leipzig Global Plan of Action.*

Project outputs:

- identify and evaluate strategies used by rural communities in marginal lands to exploit agricultural plant biodiversity on a sustainable basis
- identify viable national and international actions for supporting the existing use and wider uptake of such strategies
- promote participative actions amongst target institutions for supporting the existing use and wider uptake of these strategies at community, national and international level

Activities

- The programme of work in two *similar* locations in each country started around the time of annual seed fairs/ shows in 1998/9 and will continue for 12 to 18 months. The research is being carried with communities in Maragwa and Gikigo Locations, Tharaka, Kenya; Canchis Province (communities served by Combapata and Sicuani markets), Cusco, Peru; and wards in Nyanga District in Manicaland Province and Chivi district in Masvingo Province, Zimbabwe. Using PRA, focus groups, and key informants at critical points in the annual agricultural cycle, strategies used in case study areas to conserve and utilize agricultural biodiversity sustainably, and threats to these strategies will be identified. To the extent possible, it should be those responsible for PGR decisions at household level who participate in each exercise: the initial PRA exercises, which will be carried out in a number of communities within each location, and subsequent detailed interviews, which will be conducted out over a full year. From the PRA exercises the households for the detailed interviews will be identified. The communities' perceptions of the contribution of target institutions to maintaining PGRFA options will be collected as well as secondary data from other projects and from national institutions.
- The findings of this research will be validated with the community and, in accordance with the protocol of engagement, will be summarised in quarterly reports and in the final report from each case study area. A further project report comparing the results from each of the case study areas will be compiled.
- Comparative information about how the conservation and sustainable use of agricultural biodiversity has been supported elsewhere in the world, using published information, grey literature, and interviews with key informants, will be collected by project staff.
- Actions that institutions could take to support communities' continued use and wider uptake of sustainable strategies for exploiting agricultural biodiversity, using information from the above community-based activities, will be identified through: interviews with key informants in Peru, Kenya and Zimbabwe; and the above comparative information. The feasibility and utility of these possible actions will be validated by:
  - obtaining feedback from community-level meetings in Kenya, Peru and Zimbabwe, and
  - obtaining feedback from target institutions in each country through national seminars.
- At community and national level within Kenya, Peru and Zimbabwe, the continuing use and wider uptake of strategies for the sustainable use of agricultural biodiversity will be promoted as part of the activities above.
- At the international level, appropriate pathways for promoting the continuing use and wider uptake of community-level strategies for the sustainable use of agricultural biodiversity will be identified and used. The outputs of the project will be written up formally, as well as in more accessible summary forms using different media and will be published in hard copy and electronically.

INITIAL FINDINGS

There has been an impressive range of information gathered so far through the initial community meetings (Peru), PRAs (Kenya and Zimbabwe), individual household interviews (Kenya and Zimbabwe) and secondary data study (Zimbabwe). Much of this is, as yet, not analysed, but some has been collated to generate tables of information about e.g. reasons for maintaining or not maintaining diversity, or impacts of farming and planting systems on diversity. These papers will become available over the next few months.

The results of the initial PRAs and the first sets of interviews are confirming that the interest in having access to a wide range of varieties of seeds within the community is common in most households but that maintaining a wide range on-farm is limited to fewer households. The numbers of varieties of sorghum are upwards of 15, of millet are more than 10 and potatoes up to 200, in the selected communities, although individual households may plant only a few. Many reasons are given for having access to a wide range of varieties of which the most prevalent is the need to spread risk, as well as having varieties for different uses or tastes, increasing food security and so on. Seeds are sourced from many different places within and outside of the communities, especially markets and neighbouring communities. Seed from commercial, research and relief sources is prevalent in all communities.

The Seed Shows / Seed Fairs in Kenya and Zimbabwe (and soon in Peru) have generated important information about diversity in the selected communities and the usefulness of these events as incentives for maintaining (or even increasing) diversity. For example, participants in the 1998 Maragwa Seed Show noted that they were mainly looking to purchase or exchange seeds, especially seeds of 'better quality', rather than 'win prizes'. They gave the following reasons why the seed show should continue to be held:

- Farmers obtain rare crop varieties from the seed show
- They identify seed sources through the show
- It is a good forum for exchange of ideas on farming and exchange of seeds
- Farmers are exposed to research work by institutions such as the Kenya Agricultural Research Institute
- The spirit of competition boost farmer's morale and motivates farmers to diversify their crops indirectly enhancing food security
- It is a platform for interaction between farmers, students, researchers, extension staff and other development agents.

NEXT STEPS

The research is on-going and, subject to further funding, the findings to date will be presented at an international workshop, together with other similar case studies, in Nairobi in May 2000, prior to CBD/COP V. Further work analysing the results and developing national strategies will also be undertaken, as possible.

INTERMEDIATE TECHNOLOGY DEVELOPMENT GROUP (ITDG)[5]

ITDG is a specialist international development NGO founded in 1966. It works on a range of technical areas with, and in support of, communities in developing countries from national offices in 8 countries - Bangladesh, Kenya, Nepal, Peru, Sri Lanka, Sudan, UK, Zimbabwe. ITDG believes that it is essential to sustain agricultural biodiversity and productive agro-ecosystems in order to achieve food and livelihood security for the majority. The current International Food Production Strategy (1997-2000) prioritises the conservation and sustainable use of agricultural biodiversity through the improvement of policy and the development of the technological and institutional capabilities of small-scale farmers, herders and fisherfolk and their ability to negotiate equitable terms in a rapidly changing policy, legal, commercial and institutional environment.

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