

Appendix 3

A summary of reports on the deliberative process for the African small producers

Ten consultations were held with small producers in six countries facilitated by NGOs and in three instances by CGIAR field officers as part of the deliberative process to ensure broad participation in the regional consultation on the proposed international assessment. Brainstorming meetings were held with the following communities:

Kenya

Arid and Semiarid Lands (ASAL) mixed crops and livestock farmers in Laikipia.
Farmers in Western Kenya
Horticultural Farmers in Makueni.
Urban farmers in Nairobi and Ruiru.

Tanzania

Fisherfolk in Zanzibar.
Mixed crop and livestock farmers in Hai District

Ethiopia

Mixed crop and livestock farmers

Uganda

Mixed crop and livestock farmers

Zambia

Horticultural farmers.

South Africa

“Resource-poor” mixed crop and livestock farmers.

Each consultation was guided by **three key questions** and their corollaries :

1. What are the S and T information gaps in terms of their farming systems?
2. How is this information generated and made available to farmers?
 - How can the information be better generated and made available for farmers’ use?
 - How do farmers access science and technology information?
1. Of what use is the information to farmers?
 - How and for what purpose would the farmers like to be able to use science and technology information?
 - How can farmers have access to and use of science and technology information?

Findings

Although there was no exchange between the different farmers groups and meetings, there was a great deal of similarity in the numbers who came to these meetings and responses to the above questions. Here is what these look like:

1. On average about 20-30 farmers were called to a meeting where the above questions were posed. In most meetings, one-third to half the participants were women.
2. The agro-ecological zones covered were highland, lowland and ASAL as well as urban periphery.
3. Information gaps:
 - How to source technologies, technical and business skills
 - New seeds and improved crop varieties
 - Reliable weather forecasting
 - Pesticide and fertilizer application methods
 - Location of nearest research stations and veterinary services
 - Guidance on market niche for various products and market information in general
 - Quality storage methods
 - Soil fertility assessment

Of particular importance is their observation that information delivery needs to be a two-way process e.g., when farmers experiment and come up with new varieties on the farm or learn new ways to produce fertiliser, they would like to be able to easily access the researchers to verify their findings and disseminate them.

4. Main sources of S and T information:
 - NGOs and CBOs, private input suppliers and other farmers (peer learning as a dissemination tool came out very strongly)
 - Government extension services were found to be inadequate or entirely non-existent, but their potential role is recognized

An observation was that many farmers watch and learn from other farmers- this peer learning is a potent method and also gives context specific criteria which agricultural S and T should constantly tap.

5. Quality of information:
 - Mostly not in an easily usable form – geared in its packaging and delivery to large-scale and educated farmers.

- Farmers feel that when technical information does reach them it is compartmentalized according to the qualifications of those who give it e.g., the vet could say what disease is ailing the cow but has no advice on how to change the feed, which may be causing the disease. For this, the farmer needs to find a forage expert.

6. Preferred S and T information delivery methods:

- Demonstrations on-farm with follow-up to check adoption rates and problems
- Learning groups and farmer-to-farmer exchange visits (interactive methods)
- Use input providers (including agro-vets) to give technology application information in simplified form
- Use local languages
- Researchers should directly transmit to farmer not through a chain of stakeholders who distort S and T information to suit their own purpose before reaching the farmer
- Involve the farmer much more in both technology design and dissemination
- Use the radio
- Use community gathering places for information delivery

Excerpts from the producers' presentations to the sub-Saharan regional meeting give some concrete examples of their challenges and successes:

Crops and Livestock Farmer from Southern Ethiopia

I am the secretary of the Farmers' Research Group at Gunny. Gunny is one of the research sites of Areka Research Centre. Areka is a highland at Bolosso Sore district) of Wollaita Zone in the Southern (SNNPR) Region of Ethiopia. We have two rainy seasons per year. The small rainy season (belg) extends from March to June while the main rainy season (meher) extends from July to the end of October.

In our consultation in preparation for this meeting, drought was considered the major problem. We have lost our good seed and our animals. Most of the livestock died this year because of lack of drinking water. One elder expressed the severity of the problem by saying "In earlier days, the night was for wild animals and the day was for the people, now both meet in the middle of the day searching for water and food".

Our other major problem is land shortage. The landholdings are very small, a quarter of a hectare per family, and there has been a decline in land productivity. Crops are growing badly even in good rainy

seasons. Sometimes, applying fertilizer is not also helping.

We also lost our oxen during the repeated drought of previous years. We do not own oxen any more, and have problems during ploughing and thrashing. We plant late and get poor harvest because of oxen shortage.

There is a project on natural resource management, conducted by the African Highlands Initiative and International Centre for tropical Agriculture (CIAT) together with Awassa and Areka research centres in our place. It has been active since 1998.

We, the Farmers Research Group, are testing different technologies with researchers on our farm. We have tested different varieties of wheat, teff, maize, beans, forage grasses, sweet potato and others. We have already identified the best crop varieties for our conditions. But if something better comes along, we will be ready to test and use it. We like varieties which have high market demand, grow on poor soils and are drought resistant. We have been also testing coffee varieties resistant to diseases. Coffee disease is one of the problems we have encountered in the last years.

Buying fertilizer has become very expensive for us, so we have now learned how to improve our soils using locally available organic fertilizers and other methods. These methods are: compost making, growing legumes, stopping erosion by construction of soil bunds, incorporation of crop residue and manure to the soil. I was able to save about 200 birr¹ per season by replacing inorganic fertilizer with these methods.

We need help with the following:

- 1. An office where we can access information.*
- 2. Organizing ourselves to address soil erosion and water scarcity*
- 3. Insect pest control measures for sweet potato, field pea, and tef and haricot beans.*
- 4. Introduction of improved high yielding varieties for field pea, faba bean, barley, taro, carrots, cabbages, garlic, onions and beetroots.*
- 5. Improved breeds of chicken and livestock*
- 6. Improved farm implements.*
- 7. Spade and fork for construction of soil conservation bunds.*

¹ One US dollar is worth about 8.5 Ethiopian Birr.

Mixed Crop and Livestock Farmers, Hai district, Tanzania

In the highlands of Northern Tanzania, small-scale farmers grow coffee, bananas and keep livestock and in the lowlands they grow beans, maize and keep livestock. They access the information they need for production and agribusiness from extension staff, NGOs and CBOs. But much of the information and technical advice received is not clearly understood by farmers and is adopted by farmer groups only to the extent they can adapt it to their own circumstances. Some farmers only experiment in groups and never adopt.

Media preferred by farmers for accessing S and T information are farmer research groups, study tours, demonstration plots, farmer field days, extension workers, village information centres, farmer conferences/meetings, radio and TV.

Effects of the HIV/AIDS pandemic to the Hai farming community have been a visible reduction in the labour force and increased poverty due to the nursing and funeral costs. Resources that could have been used for farming have had to be diverted to the care of AIDS orphans. There is also reduced productivity due to sickness and loss of trained manpower and an increase in cases of theft due to unsupported orphans. A significant portion of the national government budget is also diverted to HIV/AIDS issues instead of agriculture and education.

Horticulture Farmers, Makueni District, Kenya

An agribusiness program of the NGO CARE-Kenya for smallholder horticulture farmers Rural Enterprise and Agribusiness promotion (REAP) aims at increasing production capacity and marketing opportunities for smallholder farmers. It helps them register their farmer groups as profit-making companies that produce horticultural crops for export at consistent quality and in required quantities. Farmers are trained in collaboration with the private sector on business and production planning. The private sector has also been successfully liaising with the NGO in extending credit, agro-inputs, technical expertise, irrigation infrastructure, extension advice, legal and accounting services and market information. The participating smallholder farmers' incomes have grown from US\$ 10 per month to US\$ 120 per month.

The main characteristic of this program is that it is demand driven; the demand is for horticultural produce for export. This is what has motivated the involvement of the private sector in the delivery of S and T information to farmers. Farmers participating in this program appreciate the experience they have got in negotiating with input suppliers and exporters and the advantages of group formation in accessing and exchanging technical knowledge.

Communal Farming in the Northern Cape, South Africa

I am a resource-poor farmer from South Africa. I farm on communal land with another 184 farmers in the largest province of South Africa, the Northern Cape. In South Africa 87% of our

agricultural productive land still belongs to 13% of the population. It is the aim of the South African government to redistribute 30% of all productive agricultural land to previously dispossessed people by the year 2015. However, by the end of August 2002, only 1.2% of this had been distributed. The province where I come from, namely the Northern Cape, is not only the largest province, (30% of South Africa's land surface) but also largely a semi-desert area. There are almost equal numbers of commercial farmers and resource-poor farmers in this province.

Resource-poor farmers keep mutton sheep (especially Dorper breeds), Boergoats and cattle (Nguni breed). Commercial farmers concentrate on mutton-wool sheep including beef cattle (especially Bonsmara breeds). Dairy production is of less importance in the Province. The game industry is also growing in importance with over 4000 trophies being exported by international hunters. Mass production of grapes along the Orange River. Wheat, groundnuts, cotton, maize, lucerne and red-bush tea is produced along various irrigation schemes and also on dry land. A key challenge is how resource-poor farmers could be incorporated into this highly commercialised and competitive environment.

When we, the resource-poor farmers, met to talk about access and use of S and T information, this is what was said:

On need for and access to S and T information and technologies:

- 1. 90% of resource-poor farmers are livestock farmers (they farm with sheep, goats and cattle). They want to learn about basic farm management.*
- 2. Crop farmers need the following information/technologies: how to improve crops, alternative and high-income crops, summer and winter crops, water harvesting (storage) methods and soil classification.*
- 3. Most of the technologies (for example farming machinery) are made for commercial operations and resource-poor farmers can't afford these technologies.*
- 4. Available information is geared more towards the commercial rather than the resource-poor farmer (who is generally not well educated). There is an assumption that everybody can read and all have access to television/newspapers/magazines etc.. Resource-poor farmers often lack the money to buy a newspaper or magazine.*
- 5. Technical information is also made available via technological sophisticated means such as the internet. The information that is given very often does not provide diagnoses or remedies.*
- 6. The information is mostly in the dominant languages of the country, namely English and Afrikaans. Information provided via television and magazines is not interactive and so does not help the farmer really understand issues.*

On how farmers would like to be able to access S and T information

1. *Through practical training. Most training centres are far away from those who need the training.*
2. *Farmer to farmer. Through interaction with other farmers who have similar experiences and in their mother tongue. And via individuals who work with and respect traditional knowledge, understand it and are trusted by the farmers.*
3. *Clear, easily understandable written pamphlets and brochures, demonstrations (plots), information-cartoons, television programmes.*

Urban farmers : Nairobi and Ruiru, Kenya

Two meetings were held with urban farmers in Nairobi and Ruiru to talk about access to science and technology. Forty-three farmers, the oldest 72 years old and the youngest 24, talked about crop and livestock rearing in Kenyan cities. The impact of poverty on their access of S and T was well illustrated. For example, five years ago, many of them used commercial pesticides but with increasing poverty and worsening markets, they now use organic pesticides -- making their own concoctions with pepper, marigold, ash, tobacco and manure. Information on ingredients that work is passed on to other farmers by word-of-mouth. Some farmers have experimented and developed a new variety of potato but have been unable to access research institutions for technical support and verification. They consider their own experimentations “on-farm research,” which is worthy of formal attention.

Farmers also spoke of “quacks” who inject and kill their cows or who sell “pumice ash saying it is fertilizer”. Others appreciated the effort made by some organizations to give them good livestock (heifers) but were unable to accept because of inability to afford animal feed.

The urban farmers’ key concern is that the existing S and T services are tailored for rural farmers. Information and technology are not easily accessible due to the illegal nature of the urban farming operations (Kenyan and most African urban bylaws do not recognize farming in urban areas but it is the source of livelihoods and food for millions). Yet, 30% of Kenyan urban households grow their own food.