

# **Civil society perspectives on agricultural research as a global public good**

by Ann Waters-Bayer, NGO Committee of the CGIAR  
October 2000

## **Introduction**

The primary product of research is knowledge. Classically defined, knowledge is a "pure public good": its consumption by one person does not reduce the amount available for consumption by others.

Knowledge produced by agricultural research can be techniques or methods, which could likewise be defined as public goods, or it may be packaged in material form such as new cultivars. These can be sold in distinct units to individuals. However, society may judge that the knowledge packaged in certain materials is so necessary for the wellbeing of society as a whole that they must be treated as public goods. Or society may judge that privatising them would mean that certain segments of the society would not have access to enough for their well-being. The products of research that can alleviate poverty and hunger and protect the environment are examples of such goods that must be kept in the public domain.

## **Who carries out agricultural research as a public good?**

Agricultural knowledge can be generated by various actors, not only scientists. For example, it is due to the informal research of millions of farmers throughout the world that innumerable plant varieties and animal breeds fitting different agro-climatic conditions have been developed. Here, it is interesting to note how poor farmers understand "public goods" in local research. At a workshop this year involving African smallholders who developed their own innovations in land husbandry, the farmers clearly stated that their innovations are for the benefit of everyone. All they wanted was recognition of what they had achieved (Mitiku et al. 2000), just as all of us here would expect acknowledgement when our work is being referred to. A recent study of farmer innovation in Ethiopia revealed that the farmers regard the innovations as having sprouted out of the common local knowledge; they are therefore for the benefit of the whole community (Yohannes GebreMichael 2000). Although they did not put it in these terms, they were talking about agricultural innovation as a public good. Putting a price on the new knowledge would hinder or prevent others from using it to further advance the community's knowledge in agriculture. It should be noted that this was found in communities with a

strong sense of solidarity to seek food security. Such solidarity is not strong in the so-called "international community".

Obviously, in view of the rapidly increasing number of patents being filed for the products of agricultural research, not all are universally regarded as public goods. But, for the sake of our planet, we will have to ensure that certain types of agricultural research remain public and, for the sake of the poor, we will have to ensure that research outputs that they need are being produced and made accessible to them. These types and products of research will not come from the companies seeking patents and profits. They come from organisations concerned with the welfare of both the poor and the planet - primarily international and national public research institutes, universities, NGOs and small-farmer organisations.

### **Who benefits from public research and through which products?**

The work of publicly-funded agricultural research institutes should benefit, in any case, the people, systems, areas and commodities that are not of interest to the private sector. These are the poor farmers, the semi-subsistence systems, the marginal and remote areas, and the orphan crops.

An argument to confine publicly-financed research exclusively to marginal areas would be based on an over-simplified map of poverty. It disregards those who are being marginalised in the more favoured areas, and the threat that so-called modern agriculture in these areas poses to the natural resources. For public research, it is not just a matter of taking on only that which the market does not cover - taking the leftovers, so to speak. The market does not give attention to equity and resource conservation, unless policies force it to do so - and this is where public research is necessary.

Also referring to research on such global issues as agrobiodiversity or climate change, the beneficiaries of international agricultural research are all of us who depend on this planet for our survival.

Research for poverty alleviation and productive management of natural resources requires a different set of public goods than the high-yielding varieties that were produced in the past. In order to have a real impact in diverse, complex, highly variable and resource-endangered areas, the types of public goods needed include:

- innovative low-external-input, low-cost and sustainable (LEISA) technologies
- innovative research methods and approaches that empower small-scale farmers to deal with a changing environment, and
- innovative policies and strategies for strengthening and scaling up promising local initiatives by farming communities (Berdegue & Escobar 2000).

Thus, public research goods go beyond new technologies and methods to include institutions and information that can help smallholders cope better with and have more influence on the framework conditions that impact on their farming. Here, public bodies still need to do considerable research on socio-economic, institutional, legal and policy issues in support of the disadvantaged and to make the results known in widely understandable language.

### **How to keep the fruits of agricultural research in the public sphere?**

This research should lead to scientific products that are available to all. Those which can be commercialised - which could lead to patents, restrictions and additional costs for the rights to use them - must be protected by scientists through publication.

In this connection, let us not forget the output of the most numerous agricultural researchers -the farmers. Ways must be sought to protect small-scale farmers from being robbed of the results of their own experimentation and innovation. Local individuals or groups have often found solutions, such as pest- or drought-resistant varieties or species. Such innovations need to be documented and shared - e.g. by publishing them in the names of the individuals or groups, with permission - in order to protect them from patenting for commercial purposes. This would make local knowledge a public good from recognised sources. The methods of discovering, documenting, preserving from piracy, promoting local innovation and creating favourable policy environments for it can be applied globally.

A global information system of innovation in agriculture and NRM - whether by scientists or by farmers - would not only enrich the store of knowledge on which all can build. It could also be referred to by Intellectual Property offices: it would be a global knowledge bank that precludes patent claims. It may be necessary to put in place Non-Patent Patent laws to confirm that the knowledge published in the database is in the public domain and cannot be subjected to patents claims by anybody anywhere. This would have to be adopted in national legislation and international conventions on IPR.

Civil-society organisations have an important role to play in ensuring that public agricultural research needed for the well-being of humankind is safeguarded. Civil society needs to strengthen its voice to express what must be preserved as public goods. It needs to stimulate and become more active in decision-making processes and bodies that can determine our common future, rather than leaving it in the hands of a few multinational corporations seeking to patent life itself.

### **Who should pay for agricultural research as a public good?**

We share the concern of scientists in public institutions that funding for agricultural research and development is decreasing. We are fully aware that we need public research to help improve agriculture and the environment and that this research needs adequate funding.

It should be possible to obtain some support from the so-called "life-sciences" industry. If public institutions focus on research for farmers who cannot benefit from the life-science industry because they can't afford to buy the industry's products, the industry will not be attracted to joint marketing ventures. But it may be prepared to buy a better reputation for itself - as a generous benefactor - using foundation funds from the industry for public research.

The 0.7% of gross national product expected from industrialised countries for development in the Third World was meant as a form of voluntary international tax. Part of this goes to agricultural research. Very few countries are actually contributing the expected amount. This situation has to be remedied.

Even beyond this 0.7%, the financing of research and services related to public goods that indeed benefit the entire globe, such as the maintenance of genetic resources, should not come out of overseas development assistance. For such truly global goods, global mechanisms must be created to finance them.

Finally, the developing countries themselves should be paying for public goods research - both by taxing the wealth in their own countries and by using multilateral or bilateral loans to finance international research that benefits them.

## **Conclusion**

According to the Universal Declaration of Human Rights (1948), "Everyone has the right freely ... to share in scientific advancement and its benefits". If the fruits of agricultural research are being privatised through patents, then poor people may be denied access to their share. On 17 August of this year, the UN Sub-Commission on the Promotion and Protection of Human Rights challenged the World Trade Organisation's agreement on trade-related aspects of intellectual property (TRIPS) as infringing on the rights of poor people to benefit from new technologies.

The countries signatory to the Declaration pledged to make what should be universal human rights available to those who are still deprived of them. It is this Declaration, and the spirit behind it, which obliges all of us - whether in the public or private sector or in civil society - to ensure that research is being carried out to improve the livelihoods of the deprived and that they have access to the results of this research.

## **References**

Berdegue J & Escobar G. 2000. Electronic conference on CGIAR governance, organisation and structure: final synthesis. 1 September 2000 (jberdegue@rimisp.cl).

Mitiku Haile et al. 2000. Farmer Innovation in Land husbandry: Proceedings of Anglophone Regional Workshop, 6-11 February 2000, Mekelle, Tigray, Ethiopia. Mekelle: Indigenous Soil and Water Conservation Programme.

Yohannes GebreMichael. 2000. Local innovation and community values. In: Reij C & Waters-Bayer A (eds). Source of inspiration: farmer innovation in Africa. London: Earthscan (in preparation).