Local views on Genetic Resources Conservation

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Previous UPWARD documentation studies on community-based conservation of rootcrops, especially sweetpotato, indicate that there are gardeners, farmers, and traders who by experience and skills have developed their local reputation as sources of information and "experts" in sweetpotato growing, processing and/or marketing. These local innovators also serve as indigenous farmer leaders particularly on effective cultural farm-management practices. Most often, they are sources of new planting materials making them major links in sweetpotato seed systems.

With the increasing recognition of the significance of local involvement in genetic resources conservation, several basic questions pertaining to local conservation ideas that researchers usually tend to overlook still needs to be explored. This was one of the issues tackled during the Local Conservationists' Workshop which was held last March 19-20 at ViSCA, Leyte, Philippines and which was organized by the UPWARD Genetic Resources and Biodiversity Contact Group. The workshop provided an arena for researchers and local innovators to share and clarify ideas on rootcrop genetic resources conservation. It also allowed the validation of the results of UPWARD's genetic resources projects supported by the International Development Research Center (IDRC) of Canada.

What is Genetic Resources Conservation?

A crucial question raised during the workshop is: how do local people define genetic resources conservation? For researchers on agro-biodiversity conservation, this is a clearly-defined concept with definite purpose – to stop genetic erosion and increase farm diversity. Local people, on the other hand, have very dynamic conservation perspectives. One of the insights generated from the workshop discussions is that local people view genetic resources conservation in terms of the crop's relative importance to their life – for them conservation cannot be dissociated with crop's usage. It was observed that the decision to conserve a variety depends to a large extent on its usefulness.

What Crops Do People Conserve?

Although most of the participants voiced their concern for the need to conserve different rootcrops cultivars the changing socio-economic and agroecological conditions in their respective areas limit them from doing so. Commercial sweetpotato farmers from Leyte, for example, used to maintain several traditional sweetpotato cultivars intended for various local demands. Recently, however, they were compelled to discard these cultivars in favor of high-starch containing sweetpotato varieties required by the newly opened sweetpotato starch factory in the area. Although several innovative individuals maintained in their homegardens some of the discarded varieties preferred for household uses, still a significant number of traditional sweetpotato cultivars were lost. Conversely, the Ivatans of the typhoon-prone island of Batanes have for generations conserved a wide array of sturdy cultivars of rootcrops – their traditional staple food—that have adapted to the island's harsh environment. But the introduction of rice in the 1970's changed the Ivatan's food preference. Rice, which was not a locally grown crop, has

become their staple food. Rootcrops now serve as supplemental foods especially during typhoon months when the islands rice stocks become critical. This shift in food preference has resulted in the considerable loss of rootcrop cultivars that the Ivatans found to be no longer useful.

These cases illustrate the vulnerability of the local systems of conservation to the broader socioeconomic and agroecological changes. Community-based conservation initiatives, therefore, must consider such complexities in farming communities. Conservation cannot be limited alone to the formal institution's mandate crop but must take into account the wide range of crops crucial to the farmers' survival.

How Do People Conserve?

As said previously there is a considerable dynamism in the local conservation of agricultural biodiversity. Inherently, local people tend to conserve preferred cultivars that satisfy their particular needs. They do this by continuously planting these cultivars in farms and homegardens or small plots. In Baloi, Lanao del Norte, farmers transferred some highly preferred traditional sweetpotato cultivars to or from the fertile upland areas when cassava became the dominant farm crop a few years back. Now that cassava farming has become less attractive, farmers have reintroduced sweetpotato to their farms by using the upland plots as sources of planting materials.

Conservation is also done by storing planting materials using indigenous storage techniques the farmers developed or learned from their ancestors. During prolonged drought, a gardener from Bukidnon stores sweetpotato tubers by putting them in a basket covered with dry sweetpotato leaves and placing them in a cool dry area beneath her house.

Conservation through use seems to be the prevalent strategy used by the workshop participants. The sustainability of conservation initiatives is enhanced when it leads to concrete uses and benefits for the local people. Homegardeners in Baguio City have ventured into sweetpotato-based snack food processing which utilizes various varieties of sweetpotato. It provides livelihood to the women gardeners while enhancing the conservation of traditional sweetpotato cultivars.

Who are the Local Conservators?

Since conservation is a specialized activity, only a few individuals in a community can be considered as local conservators. They are usually the key members in a farming community who have shown greater knowledge related to genetic resources conservation and have been more conscious and systematic in conserving their crops. They can be either male or female, young or old alike. Usually, men do the conservation in the farms while the women's domain is in the homegardens. In Bukidnon, young pupils and schoolteachers help conserve the traditional sweetpotato varieties found in their area by maintaining a school sweetpotato genebank. According to the teachers it helps them build a culture of conservation for these children, while at the same time, it serves the community as a source of good planting materials. Interestingly, during the workshop discussions, the sweetpotato trader participants exhibited unique knowledge and influence over conservation dynamics, which future initiatives must consider.

The above workshop discussions became the basis for the identification of two areas in community-based conservation which UPWARD can pursue in the near future. These two researchable areas are:

1. *User-driven approach to PGR conservation* – creating market demand that will encourage utilization of a wide range of rootcrop varieties by: a) linking genetic resources conservation with seed systems to answer the problem of timely availability of healthy sweetpotato seedpieces; and b) development of household-based snack food enterprises using home and school gardens as sources of raw materials.

2. Challenges in transition agroeconomies – a study that will look into how local genetic resources conservation has changed as a result of the economic , industrial, environmental, and social changes. There is also a need to explore the role of rootcrops in the light of these changing livelihood systems.