

RURAL POVERTY and ENVIRONMENT



Listening works

African researchers and farmers show the way

IDRC: Peter Bennett

Bananas are a key source of household income in Uganda.

From banana cultivation in Uganda to fighting desertification in the Sahel, researchers are learning that they need to change the way they confront natural resource issues. With help from Canada's International Development Research Centre, they are recruiting local people to lead the fight.

Back in the late 1990s, researchers at Uganda's National Banana Research Programme (NBRP) were frustrated. The solutions they had found to the problem of low banana productivity — solutions that worked fine in the controlled environment of the research station — were less successful out in farmers' fields.

The banana is one of Uganda's leading staple foods and a key source of household income. Since the 1970s, however, production has been declining. The reasons are erosion, disease, pests, and decreasing soil fertility. Thus, the mysterious failure of banana farmers to take up the valuable laboratory knowledge was a serious concern.



Nora Odoi

A team from NBRP decided to challenge the traditional approach to such a problem. It experimented with an exciting new research technique called participatory development communication, or PDC.

Ddwaniro farmers share information with the group.

From vertical to horizontal

NBRP is mandated by Uganda's National Agricultural Research Organisation (NARO) to carry out research on bananas. Typically, under NARO, research station scientists will develop a new method for increasing the productivity of a specific crop. Then, this information is passed on to extension workers who visit farmers to teach them how to use the innovation.

An obvious problem with this top-down approach is that communication tends to be one way — from researchers to extension workers to farmers. Farmers are seldom able to provide feedback on the methods they have been shown.

PDC, on the other hand, relies on two-way communication between farmers and researchers. It takes a “horizontal” approach and tries to engage farmers in the research process from start to finish. PDC aims to involve them in identifying problems, finding solutions, and, eventually, sharing their new knowledge with other farmers.

According to NBRP director Wilberforce Tushemereirwe, researchers learned of the PDC method by taking part in the *Isang Bagsak* network, a pioneering program launched by Canada's International Development Research Centre (IDRC). *Isang Bagsak* is a Filipino term that means “arriving at consensus.” The program uses a blend of face-to-face meetings, field practice, and

online discussion to enable researchers and farmers to apply the PDC system in the communities where they work.

Setting priorities

Ddwaniro, a sub-county in south-west Uganda, was selected as

the site for the PDC research because it is one of the leading banana growing areas in its district, communities are accessible by road, and production there had suffered from soil management problems, such as erosion and declining fertility. The NBRP team set about collaborating with local farmers to solve these problems.

They began by conducting consultative meetings with local leaders, extension agencies, and farmers to generate general support for the research in the community. Next, interviews and group discussions with villagers and others pinpointed the specific natural resource management problems desperate for solutions.

The team found that soils were being degraded as a result of overgrazing, bush burning, improper tillage practices, continuous farming on the same plot of land, and charcoal and brick burning. The constraints on production were declining soil fertility, drought stress, improper application of animal and household refuse as manure, and soil erosion. Other issues were a weak extension system, high interest rates, a very short grace period from credit institutions, scarcity of mulching materials, and migration of youth to towns.

Confronted by such a formidable array of complex problems, farmers first agreed on the three issues that were most pressing — soil fertility, moisture management, and soil erosion — then divided themselves accordingly into focus groups. Aided by researchers, each group identified its communication needs and developed a strategy for addressing them.

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Collaborating on practical solutions

Working together, the farmers and researchers selected three local methods for improving soil fertility and preventing erosion — mulching, trenches, and composting. Researchers suggested additional plants for mulching that would add more nutrients to the soil. They demonstrated how farmers could reduce the speed of running water on sloping land by building trenches at a 45 degree angle. And they helped farmers improve their compost making and use compost manure supplements to increase soil fertility.

Once the farmers had implemented these techniques, they developed a communication strategy to share what they had learned with other farmers. They experimented with media such as video, brochures, posters, songs, and poems.

The farmers also formed and registered the Ddwaniro Integrated Farmers Association (DIFA), a platform from which to continue communicating with researchers and other farmers.

Wild about PDC

According to DIFA president, Daniel Birimuye, because of their PDC experience, “farmers can now sit together and find solutions to a common problem.” Most important, they have developed their own communication tools for disseminating their new knowledge to other farmers. For example, DIFA now runs a weekly program on Radio Uganda, the national carrier, to enable all Ugandan farmers to learn from their Ddwaniro colleagues.

Another key result observed by the research team is that farmers’ banana yields have increased as a result of the three management techniques learned through the project.

Farmers gained confidence in sharing these methods also via on-farm visits, videos, photographs, and audio cassettes. Women who were previously shy in the presence of men



Nora Odoi

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also participated in natural resource management activities. Communication specialist Nora Odoi explained that the new knowledge-sharing systems make it easier for

farmers to access the information they need rather than having to track down the single government extension worker who serves the subcounty of 200 000 people.

That extension worker is happy because his job has been “multiplied.” Meanwhile, he is available to provide backup information and training wherever needed.

Although early in the process he had many reservations, NBRP director Wilberforce Tushemereirwe is now passionate about PDC: “Since it was something we had not tried before, I was not convinced it would work. One year into the project working with banana farmers and seeing how enthusiastic and satisfied the farmers were, I realized the PDC approach was working and I went wild! I think it is the best project out of all the projects we’ve done at the NBRP since I’ve been here.”

A farmer and researcher examine a particular pest.



Blythe McKay

Bananas yields have increased as a result of applying new techniques.



Nora Odoi

Branching out

As a direct result of the initial PDC banana research, two other innovative projects are underway.

First, scientists who had been involved in the initial project are now joining forces with other NBRP researchers in three central Ugandan districts. They are introducing techniques aimed at integrated pest management, such as new banana cultivars that are resistant to certain pests and appropriate soil and water management.

Banana plantations in all three districts had been severely affected by a new disease called banana bacterial wilt (BBW), which spreads easily and can cause yield losses of up to 90%.



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A priority for farmers is controlling the spread of BBW.

Given the success of PDC in Ddwaniro, researchers decided to see whether it would be an effective approach in controlling the spread of BBW.

Meanwhile, Ddwaniro farmers — acting through DIFA — continue to develop their communication tools for reaching other farmers. To date they have created 41 village groups, and membership in DIFA has grown to 210 farmers. Not only have they conducted farmer-to-farmer training in Ddwaniro subcounty, but in three neighbouring subcounties as well.

According to Odoi, other organizations are starting to notice how resourceful the Ddwaniro farmers are and want to work with them. “Organizations associated with other agricultural commodities are realizing that Ddwaniro farmers involved in the PDC project can train other farmers because they are organized and have useful skills,” she says. “Now within DIFA there are program coordinators for the different commodities — vanilla, rice, coffee, and animals.”

The energy created by the process reaches beyond farmers’ fields. “I can feel the momentum created by PDC and it’s going to continue because it’s an effective way for us to solve a problem,” says Tushemereirwe. “Now almost every project of the NBRP has a PDC element to it, and even without support from IDRC, we will continue using the approach.”

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PDC in West Africa

Encouraging communication between researchers and rural dwellers is hardly unique to Uganda. IDRC has also been supporting several PDC initiatives in West Africa's Sahel. These projects aim at fighting desertification, improving soil fertility on land farmed by women, and resolving conflicts around water in areas where it is scarce.

In the Nakanbe River basin of Burkina Faso, approaches to water resource management were often centralized and allowed little participation by the local people — those who are most affected by these issues. For example, field research in this basin revealed that fully 50% of hand pumps and new wells were not functioning because of the lack of involvement by these communities.

The IDRC-supported research team used a PDC approach that emphasized dialogue among the stakeholders. The exercise focused on local capacity-building in four areas: management and organization, decision-making in water resource management, conflict resolution, and establishing or reinforcing local water management committees. The process also enhanced the confidence of community members in identifying their own problems and seeking their own solutions.

This project recognized that women are key stakeholders in water issues, and saw an increase in the number of women taking part in water management committees — thus increasing their decision-making power. This research also had an impact on state policy because it influenced Burkina Faso's national plan for water.

PDC puts people first: the 10-point plan

The PDC process follows a series of clearly defined steps:

1. Establish a relationship with a local community and understand the local setting.
2. Involve the community in the identification of a problem, its potential solutions, and the decision to carry out a concrete initiative.
3. Identify the various community groups and other stakeholders concerned with the identified problem (or goal) and initiative.
4. Identify communication needs, objectives, and activities.
5. Identify appropriate communication tools.
6. Prepare and pretest communication content and materials.
7. Facilitating partnerships.
8. Produce an implementation plan.
9. Monitor and evaluate the communication strategy and document the development or research process.
10. Plan the sharing and utilization of results.

Adapted from *Involving the Community: A Guide to Participatory Development Communication*, by Guy Bessette, Ottawa, IDRC, 2004.

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Under the PCD approach, the community identifies the problem and agrees on a plan of action.



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Maintaining momentum

In both Uganda and Burkina Faso, these projects have had one big challenge — how can the energy they create be sustained once IDRC funding comes to an end?

In Uganda, the banana research team seems likely to continue because of support from NBRP and NARO. In Burkina Faso, however, half the PDC initiatives stagnated at the end of the IDRC funding period and no national institution could take on supporting the research.

Nonetheless, the expanding use of the PDC method in Uganda and in the Sahel demonstrates that this research and communication

tool helps improve the lives of rural people from one side of Africa to the other.

This brief was prepared by Patrick Kavanagh based on a case study by Blythe McKay and Guy Bessette.

IDRC's Rural Poverty and Environment (RPE) program is a global program launched in 2005 to support research that meets the needs of the rural poor who live in fragile or degraded ecosystems in Africa, Asia, Latin America and the Caribbean, and the Middle East. Its goal is to strengthen institutions, policies, and practices that enhance food, water, and income security.

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