P4P promoting increased access to micronutrient-rich crops

In Rwanda, Uganda and Zambia, P4P is collaborating with HarvestPlus and national governments to increase the availability of micronutrient-rich staple foods. In these countries, P4P-supported smallholders have begun to cultivate Iron Beans, Vitamin A Maize and Vitamin A Sweet Potato, benefitting from improved nutrition and increased incomes from selling their produce, which is then used as seed or in school meals programmes.

HarvestPlus works to reduce micronutrient deficiencies worldwide by developing and disseminating high yielding staple crops rich in vitamins and minerals. These crops are bred conventionally through a process called biofortification. New evidence has suggested that biofortification can be a particularly effective strategy to reduce micronutrient deficiencies, particularly when it can be complemented by other interventions, such as fortification and supplementation. Micronutrient deficiencies can occur even when individuals have enough staples to eat, but are lacking fruits, vegetables and animal products in their diets. This can lead to stunting, lower resistance to disease and increased risks during childbirth. Because it is a one-time investment, biofortification is considered to be both sustainable and cost-effective. Once seeds are adopted by smallholders, most of these nutritious crops can be grown year after year without requiring additional interventions or cost.

Increasing access to nutritious staples

To date, P4P has developed a partnership with HarvestPlus in three of their target countries: Rwanda, Uganda and Zambia. To increase the amount of seed in circulation, smallholders are participating in multiplication activities, growing the biofortified crops and selling part back to HarvestPlus for re-distribution. They are also retaining a portion for household consumption. Since 2012, 19 farmers' organizations in Rwanda have been involved in multiplying Iron Beans, selling some 210 metric tons (mt) (210,000 kg) back to HarvestPlus and 77 mt (77,000 kg) to WFP. The production of biofortified crops provides smallholders with a source of increased income. It also has the potential to improve their nutrition, as well as that of their families and communities, by introducing
micronutrient-rich foods to their diets.

In Zambia, Vitamin A Maize is being multiplied by smallholder farmers’ organizations with the support of HarvestPlus. In 2013, 6 mt (6,000 kg) of biofortified maize was supplied to six schools through WFP’s school feeding programme to test its acceptability. While the maize was well received, greater quantities of seed are required to scale up efforts. In order to catalyse production, partner organizations have also linked smallholders’ surplus orange maize to millers through the AgResults programme, which promotes the consumption of industrially produced orange maize meal. In Uganda, HarvestPlus is supporting farmers to grow Iron Beans and Vitamin A Sweet Potatoes. Some of these farmers are also participating in P4P.

**Increasing demand through awareness-raising**

Unlike Iron Beans, the biofortification process causes crops such as maize and sweet potatoes change flavour and colour, becoming more orange. This may pose a challenge when introducing the unfamiliar variety into communities’ diets. In Zambia, a government-led awareness-raising campaign was fundamental to overcoming this challenge. When introducing orange maize to the home grown school feeding programme, WFP, in collaboration with HarvestPlus, held cooking demonstrations at school and community levels to illustrate the benefits of orange biofortified maize in comparison to the traditional white variety. These efforts proved successful, as the schools later requested orange maize seeds, which were donated by HarvestPlus for planting in their school gardens. Studies have shown that the orange colour of the maize does not pose a significant challenge to its acceptance when nutrition education is provided.

**The importance of government ownership**

P4P has learned about how to encourage the production and consumption of nutritious biofortified foods by working with smallholder farmers. Raising awareness about the advantages of nutritious crops has been particularly effective when health benefits are explained during training on agricultural production. As seen in Zambia, government involvement, particularly in advocacy efforts, is vital to the initiative’s success and can ensure its sustainability.

The Government of Rwanda illustrated their continued commitment to nutrition-sensitive agriculture by hosting the Second Annual Conference on Biofortification, where Prime Minister Pierre Habumuremyi said: “Our time is now, to scale up what we know works to end hunger and malnutrition because we have the resources, tools and evidence at our disposal.”

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**Quick facts about HarvestPlus:**

- The HarvestPlus Challenge Program was officially launched in 2004, when it became the first recipient of funding for biofortification research granted by the Bill and Melinda Gates Foundation.
- Harvest Plus has released 7 different biofortified crops in 27 countries. These crops have been cultivated and consumed by over 1.3 million farm families.
- Crops bred by HarvestPlus include Cassava, Maize and orange flesh sweet potato rich in Vitamin A, iron-rich beans, and rice and wheat rich in zinc.
- HarvestPlus is a part of the CGIAR Research Programme on Agriculture for Nutrition and Health (A4NH).
- The HarvestPlus program is coordinated by the International Center for Tropical Agriculture (CIAT) and the International Food Policy Research Institute (IFPRI).

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HarvestPlus's Second Global Conference on Biofortification was hosted by the Government of the Republic of Rwanda from March 31 to April 2, 2014. More than 300 leaders from around the world discussed opportunities and affirmed commitments to scale up efforts to improve nutrition by increasing access to biofortified crops.

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Read more about P4P’s work with nutrition:

- Soya production in Afghanistan supports P4P efforts to improve nutrition
- P4P West Africa: Boosting smallholders’ sales of local bean
- Guatemalan smallholders support improved nutrition
- From food beneficiaries to food suppliers
In many post-conflict countries, an atmosphere of distrust and suspicion may make collaboration among smallholder farmers challenging. In Liberia, P4P has assisted smallholders to overcome this challenge. By helping farmers to re-build relationships and grow their businesses, the pilot has been driving a shift of mindset among farmers and their communities.

More than a decade of civil war in Liberia left the agricultural sector in pieces. The limited infrastructure in place prior to the conflict was destroyed, and displaced communities returned to overgrown land. The few remaining farmers’ groups were loosely organized and struggled to produce high-quality rice in large quantities. When the P4P pilot was initiated in 2009, mistrust was pervasive among farmers – of one another, of the Ministry of Agriculture and of WFP. Identifying cooperatives to join P4P proved difficult, and members were wary of working together and therefore hesitant to hand over their rice to be sold collectively to WFP.

“Farmers were worried they wouldn’t get paid, especially since cooperatives didn’t have the capital to pay them immediately at the time when they delivered the rice,” says Lonnie Herring, who was working with Liberia’s Ministry of Agriculture.

Many Liberian farmers also doubted that producing high-quality, local rice in greater quantities was possible or worth the effort. Local rice, traditionally milled by hand, was sold by the kilo or in “sardine can” quantities, and was considered inferior to imported rice. Without trusting that their efforts would pay off, many farmers were unwilling to invest the time and resources needed to increase production.

Increasing capacity and trust
Addressing these issues proved challenging, in part due to a lack of supply-side partners in the field. However, P4P, in collaboration with FAO, other UN agencies and the government’s Ministry of Agriculture, soon began supporting smallholders to rebuild relationships while developing their production capacity in a culturally relevant manner. Groups worked together to rehabilitate lowland production areas, using an approach which mirrors the Liberian concept of kuus – communal farming groups that work together to prepare and harvest fields. While lowland production areas are more environmentally friendly and produce three times as much rice as upland areas, the rehabilitation process is lengthy and labour-intensive.

“Working in the swamps, which even had leeches in them, wasn’t easy,” recalls Danlette Dillon, the deputy chairlady of the Welekemei Rural Women’s structure in Sanoyea. Despite difficulties, the group came together to prepare the swamp area for rice planting. The group then joined P4P and was able to deliver the full contracted amount of 35 metric tons (mt) (35,000 kg) in the 2013 procurement season.

Improving community
Connections within farmers’ communities have also been reinforced as participants have shared the benefits of capacity development. For example, the War-Affected Rural Women’s Structure was contracted by WFP to process rice for another farmers’ organization, benefitting both groups. The Welekemei Rural Women’s structure has begun passing on their knowledge by voluntarily providing training to other farmers in the region, particularly focusing on youth. With the money earned from sales to WFP, they’re hoping to build a guest house, hut and training area to expand their work.

In many areas, P4P has been closely connected to other WFP projects. The Kpayaquelleh United Women’s Association was originally a participant in WFP’s community grain reserve (CGR) project. The CGR programme not only develops smallholder capacity by providing them with training and allowing them to gain experience managing money, but also encourages individuals to work together to benefit themselves and their communities.

Building businesses
One of P4P’s greatest achievements in Liberia has been the building of trust among smallholders, enabling them to work collectively and take ownership of their

Continues on page 4
P4P-supported smallholder farmers in El Salvador have sold an estimated US$ 2,750,000 (5,866 mt) worth of commodities to sustainable markets including the agroindustry and retail markets. Despite these successes, further efforts are needed to increase national purchases from smallholders, and to support farmers to aggregate and market crops through their organizations. Read the P4P in El Salvador fact sheet to learn more.

P4P in El Salvador focuses on capacity-building and strengthening farmers’ organizations. Due to reduced food assistance requirements, WFP does not constitute a significant market for P4P-supported organizations. Therefore, P4P focuses on strengthening relationships with private sector buyers, including agroindustry and retail markets, and carries out negotiation rounds to teach farmers’ organizations how to meet buyers’ requirements and to negotiate input purchases. Farmers’ organizations have also strengthened relationships with both private sector input suppliers and financial institutions. The Government’s new “Plan de Agricultura Familiar” (PAF), the Family Agriculture Plan, which is inspired by the P4P concept, also presents market opportunities for P4P-supported farmers’ organizations.
P4P supporting farmers’ cooperatives for sustainable growth

The 20th International Day of Cooperatives was celebrated on 5 July, 2014, emphasizing the important role which cooperatives play in sustainable development. Cooperatives are powerful tools which can be utilized by smallholder farmers to participate in formal markets. Because of their ability to organize farmers, P4P has used farmers’ organizations as an entry point, supporting smallholders to better access financial services, agricultural inputs and equipment, and to aggregate and market crops. According to FAO, one of the key organizers behind the International Day of Co-operatives: “cooperatives and producer organizations can play a key role in rural development and building a food secure world for all.”

P4P has worked to support agricultural cooperatives with capacity development in both agricultural best practices and organizational management and business skills. Throughout the pilot period (2008-2013), P4P has supported farmers’ organizations in 20 countries. The size and capacity of P4P-supported FOs varies widely from one country to another and includes a variety of structures, from small grassroots organizations to large farmers’ federations.

Examples of P4P efforts highlighted in local media on the International Day of Cooperatives:

In Rwanda, P4P has collaborated with FAO and IFAD to develop smallholder farmers’ cooperatives capacities in storage, marketing, financial management, and institutional strengthening. One smallholder benefitting from this work is a 46-year old mother of four named Murekatete Patricia. Patricia joined a cooperative in 2012, and after receiving training in post-harvest handling and storage, was able to market her maize collectively in order to make over US$ 1000. Read the article here

In Malawi, the home grown school feeding programme sources some of its food from smallholder farming cooperatives. This encourages student enrolment and ensures that schoolchildren have adequate nutrition. It also supports smallholder farmers by providing them with an assured market for their crops. One family benefits doubly from this programme. Through her farmers’ organization, Clara Bamusi markets her food to the school feeding programme, increasing her income, and providing part of the meals her daughter receives at school. “The greatest benefit has been the reliable market,” says Clara. “With my earnings I bought double the fertilizer and hybrid seed, and because of these inputs I was able to grow and harvest 65 more bags of maize this year compared to last.” Read the article here
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**P4P News**

**CGAP 2014 Photo Contest**
The 2014 CGAP Photo Contest calls for the entry of photos showing how financial services can improve smallholders’ lives and livelihoods. Winners will have their photos displayed in Times Square as well as the World Bank headquarters. Deadline is 8 October 2014. [Submit here](#)

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**Collaboration for cross border trade monitoring**
WFP donates tablets to the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA) to assist in the gathering of trade data that will assist governments to better support smallholder farmers. [Read full article](#)

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**P4P highlighted at ECOSOC**
PAA Africa coordinator Darana Souza speaks about P4P and Cash and Vouchers at a side event to the Economic and Social Council Humanitarian Segment organized by the Brazilian Mission. [Watch the video](#) (from 00:17:19)