Annual Report 2012

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CIP
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CGIAR
Science for a food secure future

CIP's Contribution to the Global Agenda:

Economic Development

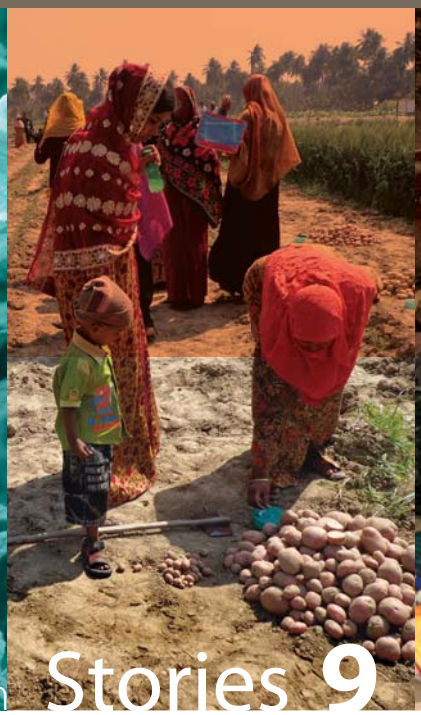
Social Inclusion

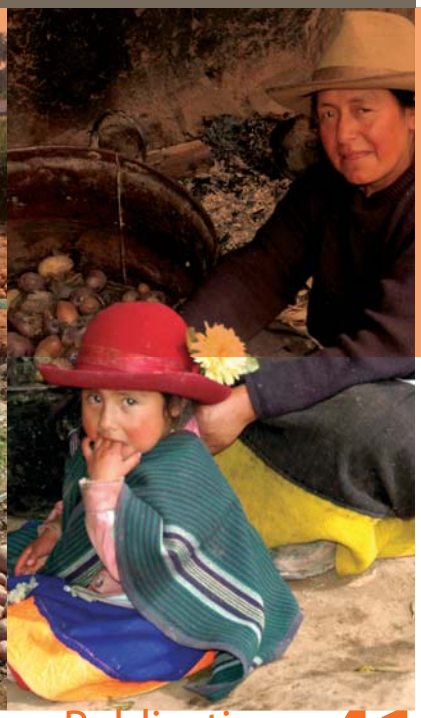
Environmental Sustainability

International Potato Center

The International Potato Center (known by its Spanish acronym CIP) is a research-for-development organization with a focus on potato, sweetpotato, and Andean roots and tubers. CIP is dedicated to delivering sustainable science-based solutions to the pressing world issues of hunger, poverty, gender equity, climate change and the preservation of our Earth's fragile biodiversity and natural resources.

Our vision is roots and tubers improving the lives of the poor. Our mission is to work with partners to achieve food security, well-being, and gender equity for poor people in root and tuber farming and food systems in the developing world. We do this through research and innovation in science, technology, and capacity strengthening.





From left to right: Dr. Arturo Flórez, Dr. Bir Pal Singh, Dr. Rodney Cooke, Dr. Pamela Anderson, Dr. Peter VanderZaag, Ms. Phyllis Kibui, Dr. Simon Best, Dr. Stella Williams, Eng. Andrés Casas

Statement by the Board Chair

Dr. Peter VanderZaag

2012 was another successful year in the 40-plus year history of CIP. The International Potato Center (CIP) has seen steady programmatic and financial growth in recent years and 2012 continued this trend.

The year's highlight was taking the lead in implementing the CGIAR Research Program on Roots, Tubers and Bananas. CIP is the lead Center in this new and exciting research program and is joined by three other CGIAR partner centers: International Center for Tropical Agriculture (CIAT), International Institute for Tropical Agriculture (IITA), and Bioversity International. CIP is also working in a total of seven other CGIAR Research Programs (CRP): Agriculture for Nutrition and Health, Climate Change, Agriculture and Food Security, Dryland Systems, Managing and Sustaining Crop Collections, Integrated System for the Humid Tropics, and Policies and Institutions and Markets. These new CGIAR Research Programs also allow CIP to expand its research programs to continue playing an important role in improving potato and sweetpotato production systems and the livelihoods of millions of people around the world.

Financial indicators for CIP reflect sound financial stewardship. At the end of 2012 CIP showed year-on-year growth over the previous year. Moreover, CIP continued to implement streamlined and transparent administrative processes to be more accountable to stakeholders.

On behalf of the board, I would like to thank CIP's donors, investors, and all CGIAR partners for their support. I also extend my appreciation to CIP's management and staff for their continued dedication to the organization and its important mission.

Dr. Peter VanderZaag
Chair, Board of Trustees

Foreword from the Director General

Dr. Pamela K. Anderson

In 2015 the world will assess the success of the Millennium Development Goals. These United Nations goals set in 2000 were a framework designed to help more than a billion people rise out of extreme poverty. In 2002, CIP aligned its vision with the Millennium Development Goals on Poverty, Hunger, Child and Maternal Mortality, Sustainability, Slum Dwellers, Least Developed Countries, and New Agricultural Technologies. These areas became the foundation upon which we developed our research for development activities.

At the time, World Food Prize Laureate Pedro Sanchez noted that "CIP has taken leadership in assessing and realigning its program to meet the Millennium Development Goals, setting an example that can be followed by other Centers in the System". We should take pride in our decision to align with the Millennium Development Goals but in doing so recognize that the factors underlying our decision were based in the firm understanding that our research will only remain relevant if it delivers the results required for the time.

Today the world is focusing on Sustainable Development Goals. These include Economic Development, Social Inclusion, Environmental Sustainability, and Good Governance. The stories in this report demonstrate how CIP's research aligns with, and will continue to contribute to, the post-2015 global agenda that is emerging. You will discover how CIP's work on sweetpotato viruses has helped economic development in Africa and how CIP research is focused on improving incomes and gender equality in Bangladesh. You will also read how CIP scientist Roberto Quiroz has mapped

climate change to mitigate the impact of pests and disease and plan for future sustainable potato production, while on CIP's Lima campus plumber Juan Palomino devised an innovative way to reduce our water consumption to improve our environmental sustainability. These stories and our success in building a smarter, stronger CIP governance structure reassure me that CIP has done well to align with the Sustainable Development Goals and deliver a more food-secure world.

I would like to take the opportunity to thank all of our stakeholders, from the Heads of State, business leaders, and donors to the individual extension workers, laboratory technicians, and smallholder farmers who motivate and support us. We are also are grateful to the donors, policymakers, and other key partners who have challenged us. I would also like to recognize all of the researchers, staff, advisors, and leaders who have accepted the challenge to make the world more food-secure.

We look forward to continuing our work together through another year and advance CIP's vision of roots and tubers improving the lives of the poor.

Pamela K. Anderson
Director General

Stories

Economic Development

Social Inclusion

Environmental Sustainability

Economic Development

Facing up to Sweetpotato Viruses in Africa

The central challenges of sustainable development are the tasks of ending extreme poverty and promoting economic development, particularly in Sub-Saharan Africa (SSA), where food security remains a huge challenge for the millions of people who depend on agriculture for survival.

Sweetpotato is an extremely important crop for this region's subsistence farmers, who produce over 7 million tons of sweetpotato annually. However, SSA faces a major limitation in sweetpotato production due to the cumulative effect of virus infection. In 2011, CIP launched a collaborative project with the Boyce Thompson Institute (BTI) to study the Pan African sweetpotato virome. Since then, the initiative has been evaluating the deep sequencing and assembly of small RNAs from field-grown sweetpotato samples collected throughout Africa, to systematically and efficiently identify virus genomes.

The US National Science Foundation's Basic Research to Enable Agricultural Development (BREAD) and the Bill and Melinda Gates Foundation fund this research project.

There is a general lack of data and understanding of virus populations throughout Africa, even though such basic information is required to manage the spread and impact of these viral diseases. In order to identify sweetpotato viruses in the field and understand the dynamics of virus distribution, the project carried out sample surveys, with the assistance of local collaborators across SSA in 2012, collecting more than 500 samples of sweetpotato for viral testing. The team collected samples at random every 5-50 km in Ethiopia, Guinea, Benin, Nigeria, and Tanzania. These samples were each tested for viruses.

The most common potato viruses include the Feathery Mottle Virus (SPFMV) and the Chlorotic Stunt Virus (SPCSV). Understanding these viruses and their distribution patterns is crucial for efforts to eliminate them from the field. Crops such as sweetpotato are prone to virus infection because they are grown vegetatively – farmers sow plant cuttings rather than seeds – so diseases can easily spread from one generation to the next. The only way to eliminate viruses from infected plants is through a laborious, time-consuming process that involves a combination of heat or cryotherapy treatment with meristem tip culture, which involves using the ends of shoots or roots

that contain the tissue that produces new cells. It is a process that has advanced little since its inception more than 60 years ago

The initiative that CIP is spearheading aims to develop an alternative method by cracking the RNA silencing code of different viruses, which would enable scientists to add modified RNA to a test tube and rid plants of viral infections through a simple, one-step process.

"It's like a plant vaccine," says Jan Kreuze, Principal Virologist at CIP. Viruses contain pieces of DNA or RNA (a complement of DNA) that fool the plant into copying and spreading them, causing diseases in the process. Plants can defend themselves against viruses using a type of RNA called small interfering RNA, or siRNA. The siRNA recognizes the viruses and destroys them by cutting their DNA or RNA into tiny pieces – a process called RNA silencing. However, the plant does not always win the battle, so CIP scientists are looking to find ways to boost the plant's defenses through its RNA silencing mechanism.

Kreuze is leading this innovative CIP research project, in collaboration with the Crop Research Institute of Norway. "Basically we're going to add bullets, in the form of siRNA, to the plants' defense arsenal," says Kreuze. "It's science fiction right now, but if it works, then the lengthy, expensive cleanup process could be shortened from a year to a matter of minutes."

The purpose of the CIP project is to use new knowledge of RNA and plant defense mechanisms to help plants fight off viral infections. Kreuze and his team will stimulate RNA silencing and Systemic Acquired Resistance, or SAR, in infected plants in vitro. The goal is to tip the delicate balance between the plant's RNA silencing mechanism and the virus's ability to avoid and suppress this mechanism, in favor of the plant.

If successful, Kreuze and his team will produce 'kits' containing appropriate cocktails for different sweetpotato viruses, which could be used to help sweetpotato subsistence farmers throughout SSA, and the rest of the world, to increase their harvests and improve their livelihoods. While the project is initially focusing on sweetpotatoes, a successful outcome could see the technique being applicable to a wide range of viruses and crops, meaning it could enrich the lives of millions of the world's poor and underprivileged.


M. ZTACHIN


D. GUTIERREZ

CIP's Dina Gutierrez records sweetpotato samples in Guinea.

Collecting sweetpotato samples in Zimbabwe.

Improving Potato Production in Peru

The International Potato Center (CIP) and Peru's National Institute for Agrarian Innovation (INIA) created a new catalogue to promote a range of genetically improved potato varieties that were recently released in Peru. Catalog of new potato varieties: Flavors and colors

for Peruvian tastes, was launched at the Hotel la Posada del Rey in Trujillo on September 6, 2012, followed by similar events in Cajamarca, Huancayo, Ayacucho, Cusco, and Puno.

Over the last ten years, CIP and INIA have collaborated to develop and release 12 new varieties of potato for rural farmers in Peru. These new varieties have characteristics that include higher yields, improved quality and flavors, better pest and disease resistance, higher resistance to frost, and the ability to better adapt to new environments. Smallholder farmers directly selected most of the varieties based upon what they consider to be the "ideotypes" of a preferred potato.

The dissemination of new potato varieties poses a major challenge for potato breeders and supply chains. It is a slow process owing to factors that include potato's low multiplication rate; the absence of sufficient quantities of tuber seed during a varietal release; limited access of poor or isolated communities to new technologies; an inadequate supply of tuber seeds with guarantee of origin, volume, and health; and a lack of information within state agencies and NGOs with regard to promoting new technologies and varieties.

With these limitations in mind, CIP collaborated with so-called 'decentralized research consortia' involving INIA, NGOs, universities, municipalities, and agricultural schools to find alternatives for selecting and disseminating new varieties more rapidly, through participatory varietal selection, demonstration plots, and other strategies. CIP prioritized participatory selection directly in the communities where the potato can make a difference, with special attention paid to involving women farmers. Information is key to spreading diversity, and the catalogue consequently emerged as a vital tool in promoting the new varieties.
The publication was designed in a simplistic, colorful, and attractive manner so as to encourage a better dissemination of new potato varieties through active marketing

Many local farming communities are beginning to produce greater varieties of native potatoes to meet growing market demands.

and communication, and thereby increase the welfare of farmers with limited economic resources through the adoption of new technologies (the catalogue contains a directory of providers of quality tuber seed). CIP developed the improved varieties promoted by the catalogue in order to mitigate the effects of social and environmental change.

The catalogue's launch came at an important time for Peru, a country where more than 600,000 families directly depend on subsistence farming and income generated from potatoes. In the Andes, potato is the principal crop for smallholders, and its commercialization represents US$ 500 million annually for Peru. New trends in the Peruvian and global potato markets, and access to the Brazilian market through the recently completed Inter-Oceanic Highway, as well as the ongoing search for processing varieties, have further increased the importance of the potato as a vehicle for development. The need to expand and diversify crop production is of growing importance for the economy.

There has been a clear trend in supermarkets, both domestic and global, to demand a greater diversity of potatoes, better quality, and longer shelf life. There has also been a huge increase in demand for environmentally friendly products, and CIP developed the new varieties in the catalogue based upon models of sustainable agriculture without an increased need for agrochemicals.

Given the boom of Peruvian cuisine, which has generated greater interest in native potatoes,

Participatory varietal

Participatory Varietal Selection

Since 2008, CIP and INIA have systematically conducted field studies in order to access varietal selection through the participation of local farmers in poverty hotspots. During field days, farmers identify and prioritize key characteristics they would like to see in improved varieties ranging from shape and color for producing chuño (freeze-dried potato) to issues such as taste, texture, cooking time, and resistance to frost or late blight disease. They also assess and select preferred characteristics (size, shape, color, quality, texture, taste, and others) among all improved potato clones derived from native landraces (i.e. CIP's B1C5 and biofortified populations). While voting is always anonymous, differences in preferences and priorities are divided along gender lines.

the catalogue should help to encourage farmers to focus on the production of indigenous varieties of potato currently in demand – both globally and domestically. At the same time, CIP's progress toward increasing the nutrient content (higher zinc and iron) of new potato varieties through biofortification will reduce the likelihood of malnutrition across the Peruvian highlands.

Varieties promoted by the catalogue range from CIP's Serranita, which is very resistant to late blight, to Pallay Poncho, which is popular with potato farmers in the south of the country for its flavor and texture. The catalogue presents these potato varieties and their benefits and characteristics in detail, as well as those of ten other varieties. Farmers across Peru interested in growing any of these can obtain inexpensive seeds from INIA stations or NGOs located throughout the country.

"Our ancestors domesticated and improved Andean potatoes for thousands of years. They were the original breeders. With this legacy we have a large genetic diversity to create new varieties with higher yields that help reduce poverty," explains CIP scientist Manuel Gastelo. "The huge potato biodiversity we have inherited is what allows us to use genetic material with features such as high tolerance and performance. It is incredibly important that we encourage farmers throughout the country to work towards preserving Peruvian potato diversity while increasing production, as this will boost their levels of livelihood through the participatory development of new technologies."

Sweetpotato at London Olympics 2012

The International Potato Center's (CIP) innovative contribution to the reduction of child undernutrition through the promotion of sweetpotato cultivation and consumption received attention from world leaders on the closing day of the Olympic Games in London. British Prime Minister David Cameron and Brazilian Vice President Michel Temer hosted the Global Hunger Event at 10 Downing Street on August 12, 2012, along with double Olympic gold medal winner Mo Farah, to urge a global drive to reduce or eliminate child undernutrition by the next Olympics. Maria Andrade, a CIP Sweetpotato Breeder and Seed Systems Specialist, participated in the event along with various heads of state and government, NGOs, and private-sector leaders.

Maria Andrade traveled from Mozambique to London to attend the event where she stressed the importance of orange-fleshed sweet potato (OFSP) as a crop with enormous potential for reducing child undernutrition. She was also able to share insights about her work on the Sweetpotato for Profit and Health Initiative (SPHI), a CIP multi-stakeholder program that aims to improve nutrition and livelihoods in 10 million households across 17 Sub-Saharan Africa countries over the next 10 years through the effective production and expanded use of sweetpotatoes.

During a discussion, she explained how repositioning OFSP within African food economies is resulting in the reduction of child undernutrition across the continent. "Orange-fleshed Sweetpotatoes are packed with vitamin A and other vital nutrients," she explained during a presentation. "A sweetpotato a day can supply undernourished children with the recommended amount of vitamin A. This is especially important in regions like Sub-Saharan Africa where 43 million children are stunted and suffer from vitamin A deficiency, which is a significant contributor to early childhood mortality."

CIP's Maria Andrade leads a discussion at the Global Hunger Event.

Andrade went on to emphasize other sweetpotato advantages. They grow in marginal conditions and require little labor and few chemical fertilizers, making them a cheap and effective crop in developing countries that need to grow more food in smaller areas.

During the event, Andrade also discussed 15 new drought-tolerant varieties of OFSP developed by CIP and released in Mozambique in February 2011, before calling on world leaders to invest in nutrition training at a community level and acknowledge that farmers adapt technologies faster when there are market opportunities.

"We join Prime Minister Cameron's and Vice President Temer's call to end global hunger and childhood undernutrition," said CIP's Director General, Pamela Anderson. Concerted action to promote agricultural research and innovative, pro-poor agricultural strategies are vital to achieving this goal."

Promoting a Participatory Market Chain Approach

CIP´s PMCA story began in the late 90's, when CIP's Papa Andina regional program began work to strengthen the capacity of R&D organizations in Bolivia, Ecuador, and Peru, in order to increase competitiveness and improve the livelihoods of small potato farmers.

This led to a partnership with the Project for Potato Innovation and Competitiveness in Peru (INCOPA) and experimentation with a participatory approach to stimulate agricultural innovation. This in turn led to the development of PMCA in 2003.

PMCA essentially involves all the players that make their living from the market chain, including public and private service providers (such as researchers, credit providers, development professionals and chefs) in a facilitated process to identify and exploit market opportunities. The approach consists of three phases, beginning with an R&D organizational phase to identify potential partners and carry out research on the market chain. This is followed by a joint analysis of potential market opportunities, in which individuals from participating R&D organizations, such as CIP, facilitate groups to explore and analyze potential market opportunities. The last phase involves the joint development of innovations where partners focus on developing, testing, and launching specific market initiatives with private partners.

CIP contributed significantly to the approach's development and its adaptation for different regions. CIP first developed PMCA in 2002 and applied it to market chains in the Andean region of South America. Its success led to subsequent applications in countries as diverse as Uganda and Indonesia.

Through a combination of market-chain innovation, policy changes and public awareness, PMCA has contributed to changing the image and perception of native potatoes in Peru. Previously considered a mere staple for poor farmers, native potatoes are now a Peruvian delicacy worth a premium in gourmet restaurants and foreign markets. As a result of increasing values in the market chain and greater recognition of native potatoes in different rural and urban contexts, the volume of native potatoes sold by farmers has increased by more than 70%

over the past decade, while the value of native potatoes sold has increased by more than 150% (at constant prices of 2011).

Since 2003, CIP has applied the PMCA in several Andean countries after improving the approach through the implementation of two PMCA cycles in Peru. The first application focused on the marketing of improved potato varieties; the second cycle focused on marketing native potatoes. Both initiatives were hugely successful, and resulted in the establishment of permanent organizations such as CAPAC (Productive Agricultural Quality Chains in Peru), which promotes the marketing of high-quality local agricultural products, and the creation of Peru's National Potato Day, which was established in 2005. CIP applied the same strategy to Ecuador in 2008.

As a means of promoting South-South Cooperation, the PMCA was then applied in Uganda, where the approach was used from 2005-2007 for the country's potato, sweetpotato, tomato, and hot pepper market chains. Reviews of the work done in Uganda reveal that the PMCA permitted R&D professionals and market chain actors to collaborate in developing mutually beneficial innovations. In 2012, it became evident that as a result of the innovations triggered by the PMCA in Uganda, farmers, processors, market agents and, in particular, women were able to increase their incomes and, in some cases, acquire productive assets, including land. Through the Uganda PMCA, CIP identified three ways to improve future PMCA applications: the development of funding for innovation facilitators, the development of services for entrepreneurs with emerging innovations, and the provision of support to small farmers to improve their capacity to respond to changing market demands.

The PMCA was applied to market chains for fresh and processed potatoes in West Java, Indonesia from 2008-2009. Upon evaluating the Indonesian case in 2012, CIP determined that the PMCA strengthened relations among market chain actors and between them and agricultural researchers and other service providers. These improved relations contributed to innovation processes and created an environment conducive to future collective action for market chain development such as the Farmer Business School for supporting farmers in their business activities.

In order to foster economic development more effectively in the coming years, CIP will continue improving upon the PMCA based on experiences of its application to market chains in developing countries. The PMCA represents a new way to do agricultural R&D as it triggers innovation processes, which often continue and evolve long after PMCA projects have formally ended.

"The experience of the PMCA in the Andes, Africa, and Asia illustrates the value of engagement with partners in the field as both innovators and as innovation facilitators or brokers," says André Devaux, CIP Regional Leader for Latin America and the Caribbean (LAC). Devaux emphasized the importance of South-South learning to share knowledge and new approaches with other regions and partners. "The PMCA will no doubt serve as an increasingly useful tool for bolstering economic development around the globe in the future."

PMCA process replicated and applied to Uganda.

CIP Project Wins Prestigious Agricultural Award in Uruguay

Judges awarded a CIP-led INCOPA/Papa Andina project first place in a competition titled "Agricultural Innovation Success Stories 2012," hosted by the Regional Fund for Agricultural Technology (FONTAGRO) in partnership with the InterAmerican Institute for Agricultural Cooperation

(IICA) and the InterAmerican Development Bank (IDB). The award was announced during the Second Global Conference on Agricultural Research for Development (GCARD2)in Punta Del Este, Uruguay from October 29 to November1, 2012.

FONTAGRO received 102 nominations. The CIP project called "Innovations to assess the biodiversity of indigenous potatoes; the case of INCOPA/Papa Andina in Peru" won first place in the category for international organizations.

The award recognizes CIP's work over the course of thirteen years, when the Papa Andina and INCOPA Projects coordinated actions within a wide network of public and private partners in Bolivia, Ecuador, and Peru. A principal objective was the promotion of innovation systems for poor farmers to improve food security, facilitate market access, and reduce poverty.

The project stressed the importance for smallholders to take advantage of the biodiversity and international culinary trends of native potatoes, socially and culturally. Hugo Li Pun, executive secretary of FONTAGRO, noted that those efforts have resulted in nine new commercial products, the celebration of National Potato Day, the Wholesale Trade Law for the Potato, improved technical standards, improved management of postharvest crops, production of quality seeds, selection of native varieties for processing, and integrated crop management.

Pamela Anderson, Director General of CIP, and André Devaux, CIP Regional Leader for Latin America and the Caribbean, accepted the prize at the GCARD2 conference. During the ceremony, Anderson acknowledged the 20 public and private partners for the INCOPA/ Papa Andina project that helped to generate innovations to improve competitiveness for small producers of native potatoes in Peru.

Biofortification of the Potato


CIP Archives

Biofortified potatoes will improve nutrition in the Andean region.

According to the World Health Organization (WHO), iron deficiency is the most common nutritional disorder in the world. In developing countries, half of the pregnant women and about 40% of preschool children are estimated to be anemic. Health consequences include impaired physical and cognitive development, increased risk of morbidity in children, and reduced work productivity in adults. In the Peruvian highlands, up to 60% of preschool children suffer the stunting effects of malnutrition, with iron deficiency as the main contributing factor.

CIP scientists are consequently focusing on adding nutritional value to potato through breeding, or biofortification, as a way to improve health in poor communities where people cannot afford commercially fortified foods and vitamin supplements. Interestingly, the bioavailability of iron in potato can be greater than in cereals and legumes due to the presence of high levels of ascorbic acid, which promotes iron absorption, and low levels of phytic acid, an inhibitor of iron absorption. Their efforts are focused on identifying and breeding varieties that are rich in concentration and bioavailability.

The potato is recognized as a key food staple, but its potential for combating malnutrition is not well known. "In the Andean altiplano, where there is little access to meat, it is an important source of dietary iron," says Gabriela Burgos, who coordinates the Quality and Nutrition Laboratory at CIP. "For example, in Huancavelica in the Peruvian highlands, women and children consume an average of 800 g and 200 g of potato a day respectively. So improving iron concentration and bioavailability in potato can have real impact in these areas."

In 2006, as part of the HarvestPlus program, CIP started to screen the genebank's potato germplasm for micronutrients (Fe, Zn, vitamin C, and phenol). Initial screening of 579 native Andean landrace cultivars and 315 improved varieties showed a wide variation for iron and zinc concentration and a large genetic diversity that CIP could use in breeding programs. CIP breeder Walter Amorós explains: "We selected a group of potatoes for their high levels of iron and we have done a series of crosses with them and studied the progeny. From a baseline iron content of 19 mg/k, after two selection cycles we've achieved levels as high as 35 mg/k." The future challenge is to combine these cultivars with CIP's advanced breeding lines that have disease and pest resistance, high yields and high acceptance from farmers and consumers for whom potato is an important component of their diet.

Social Inclusion

Improving Incomes and Gender Equality in Southern Bangladesh

CIP, in collaboration with the Asian Vegetable Research and Development Center (AVRDC) and national Bangladeshi partner organizations, has begun implementing a four-year Horticulture Project to improve the nutritional security and incomes of 100,000 poor households in Southern

Bangladesh through the exploitation at scale of the full potential of potato, sweetpotato, and targeted vegetables, as well as through the sale of planting materials. Shawkat Begum, CIP's Chief of Party in Bangladesh, is optimistic about the project's potential for improving the nutritional security and incomes of some of the country's poorest households. She is especially enthused about the impact it will have on her countrywomen, since CIP designed the project to be gender- responsive.

The four-year project, which began in October 2011 aims to improve the incomes and nutritional security of more than 100,000 households by securing food availability through increased crop activity and ensuring better access through income generation, seed markets and through participatory gender-aware intervention strategies. The project also aims to offer more profitable and healthier uses of produced crops by adding value and building capacity and through the establishment of greater food system stability through yield stability, sustainable production systems, improved storage, and value chain resilience.

Begum and her team are integrating adapted varieties, such as nutritionally rich sweetpotatoes, into local farming systems using disease-free planting material, teaching the farmers techniques to improve their crop productivity, and potato storage, and helping them to access new markets.

While the project works with both men and women, several components are specifically for women. Bangladesh's unequal land inheritance laws and patriarchal society leave most rural women extremely poor and marginalized. Begum is all too familiar with the barriers her countrywomen face, but she is also well prepared to manage a project designed to strengthen capacities for innovative farming methods and increase their participation in value chains.
She was born in the small town, Rangpur, in northern Bangladesh, and has two decades of

Community women in participatory varietal evaluation of sweetpotato clones.

experience in development with organizations such as CARE and USAID.

"It will be a challenge to reach our ambitious target of 100,000 households within four years," she observes, adding that it is important that they contribute to changes in attitudes to ensure that the enterprises they help women create continue after the project ends.

Despite the demands of an ambitious start up, the project made great progress during its first year, 2012, reaching approximately 5,000 men and women. This included 1,216 women that the project trained in sweetpotato vine multiplication, to grow the crop and sell vines as planting material. Participants learned about the sweetpotato's nutritional value – the varieties are rich in beta-carotene (a precursor to vitamin A) and iron – and that the plant's leaves are also nutritious. Sweetpotato-leaf curry has since become popular in the communities.

"I think that sweetpotato has a huge potential to contribute to the poorest households, since it can be grown in tiny plots and it doesn't require a lot of labor," Begum says. She explains that one group of landless women in Barisal, which the project trained in vine multiplication, earned approximately $130 per member over an eight-month period. The group generated this income from the sale of vine cuttings and sweetpotatoes – and spent the majority of their earnings on school supplies and milk for their children. Another group in Jessor began grafting tomato seedlings in the tiny spaces behind their homes, but after selling a couple of crops of seedlings, the women had enough money to rent a small plot of land where they now produce seedlings. They are now receiving advance orders, so the project will begin to provide the group with small business training.

Begum claims that, "Female participants have said that in addition to improving their household diets and providing income, their participation in project activities have earned them prestige and a new identity within their communities." She adds that the project includes a gender research component, the results of which CIP can use to improve project activities, and apply in the design of future projects.

Rural women in Bangladesh, as is the case in many developing countries, are responsible for more than 50% of the food production and yet are often underestimated and overlooked in agricultural policies and strategies. Having recognized that increasing the role of women in agricultural production is essential for improving the nutritional status of families and generating greater levels of income in Bangladesh, CIP is committed to integrating a gender-responsive approach throughout the country. "I am enthusiastic about the positive impact that we are having on the lives of local women," affirms Begum, "and I am very confident that this project will be gender transformative."

The Dynamic Conservation of Native Potato

Over the past 15 years, the International Potato Center (CIP) has carried out an initiative focused on the repatriation of native potatoes to communities located throughout the Peruvian highlands. In the early nineties, a number of traditional potato farmers began to notice that the rich diversity of their native potato varieties was dwindling due to changes in traditional farming practices, terrorism, increased poverty, the outbreak of new potato diseases, and urban migration. This in turn led to a low supply of quality potato seed, which resulted in poorer yields and increased susceptibility to pests and diseases.

Fortunately, beginning in 1971, CIP collected cultivars from many of these communities, which were conserved in in its earthquake-proof genebank in Lima. As a result of this effort, the Center is now able to return lost cultivars, disease free, to communities in a dynamic conservation cycle. This in turn leads to greater levels of biodiversity, increased social capital within the communities, and creates a relationship built on trust between CIP and rural farmers.

Concerned farmer groups catalyzed the effort by appealing to CIP for help, which marked the beginning of the collaborative repatriation of more than 400 different native potato varieties to various communities scattered across the Peruvian Andes. Rene Gomez, the native potato curator at the CIP's genebank, puts it simply, stating that, "This is a restoration of diversity, which in turn leads to a restoration of productivity with increased social harmony."

One of the first communities to receive repatriated clean potato seed was San Jose de Aymara. CIP repatriated more than 200 accessions of lost potato lines to the community. Since then the community has experienced a great deal of development, and today they generate a healthy profit by producing a wide array of diverse tubers.

However, the repatriation of native potatoes provides more than economic benefits to those impoverished populations. As Janny van Beem, CIP's Head of Genetic Resource Acquisition and Distribution points out, "The potato is sacred to Andean communities, and by repatriating lost tubers to these peoples, we are essentially helping them restore a sense of their cultural heritage."

Ruta del Condor

The Ruta del Condor is a CIP initiative focused on the repatriation of native potato varieties back to their communities of origin, and the establishment of micro conservation sites spanning the spine of the Andes from Mérida in Venezuela, to Jujuy in Argentina. The aim of these centers is to restore, conserve, and develop a market chain linking enhanced production to consumption to improve the lives of rural farmers.


J. VAN BEEM

In situ conservation efforts of the Ruta del Condor help local farmers manage and protect their resources.

She continues, "The older generations can remember a lot of the really strange purple and semi curved cultivars we are returning to them. To see them again and to have a younger generation be able to cultivate them is incredibly important to these elders."

In 2012, for the first time, CIP repatriated native potato varieties to the communities of the Potato Park in Pisac, as in-vitro potato plantlets.

"Repatriation through in-vitro seedlings offers the highest quality of clean seed compared to other planting material," says Gomez. "It took us 10 years to build the infrastructure and train the communities so that they could receive potato samples as in-vitro plantlets."

Through such programs as the Ruta del Condor, CIP has now repatriated over 1,200 varieties of potato, and more than 90

Flowering potato plants brighten fields at the Potato Park.

accessions of oca, olluco, and mashua, to more than 50 communities throughout Peru. Rene Gomez explains that, "CIP has helped create more than 12 community seed banks throughout the country where farmers can go to directly receive lost genetic lines." Once CIP has established these community seed banks, the communities manage and maintain them.

A further benefit to the communities in this cycle of restoration is that the cultivars they receive from CIP are all disease free. CIP treated all of the collected material accessions for viruses using the thermotherapy laboratory at the genebank. Returning the same cultivars to communities free of viruses and pathogens greatly helps the farmers, who in many cases lost those genetic lines as a result of viral diseases.

Repatriation creates an environment of trust between communities and CIP, and when farmers receive tubers they thought they had lost, they are far more likely to trust CIP with other cultivars for future safekeeping. As van Beem puts it, "repatriation leads to a dynamic cycle of conservation where rural farmers are more inclined to turn over new cultivars to the genebank for security." This greatly benefits the conservation efforts of CIP. The reception of accessions from the same areas where they were once collected, and their comparison to older germplasm collections, will strengthen the scientific understanding of how the tuber landscape has developed over the past 40 years, and help scientists understand the effects of climate change on the development of tubers in these areas.

The dynamic conservation of native varieties of potato effectively provides communities with the tools, knowledge, and social capital needed to improve their livelihoods. While bolstering social inclusion, the repatriation of lost lines of potato also holds huge potential for positive scientific and environmental results, and CIP will continue to ensure the success of such projects well into the future.

Sweetening Social Inclusion in Rwanda with a Sweetpotato Project

CIP has successfully launched the Sweetpotato Super Foods project in Rwanda as part of the Sweet Potato Action for Security and Health in Africa (SASHA) Project, which promotes the breeding, dissemination of high-quality planting material, production, post-harvest process, and consumption of orange-fleshed sweetpotato (OFSP) in ten African countries. This project works to develop the essential capacities, products, and methods of mainly female sweetpotato farmers in Rwanda, to improve their income levels and social status within their respective communities.

Rwanda has some of the highest sweetpotato production in Africa, with more than 80 kgs per capita produced annually. Women are the main growers of sweetpotato in Rwanda, and the crop has become increasingly important due to serious disease problems that currently affect cassava and banana. The Sweetpotato Superfoods in Rwanda Project promotes an effective public-private sector partnership that provides evidence that sweetpotato products can be profitable and enhance the value chain while increasing revenues for local farmers.

In 2012, the project developed high-value sweetpotato value chains, and involved different local partners and national institutions such as the Rwanda Agricultural Board (RAB), Kigali Institute of Science and Technology, non-governmental organizations led by Catholic Relief Services (CRS), and the private sector.

Initially seen as a poor people's crop, sweetpotato gained acceptance with the introduction by CIP and RAB of new orange-fleshed varieties with higher yields and better taste than local varieties. The OFSP varieties are rich in B-carotene, a precursor of vitamin A. Rwanda Super Foods Project supplies these varieties to RAB, which does seed multiplication through tissue culture and on-field rapid multiplication, and makes planting material available to cooperatives and other contracted farmers. "The Kotemu cooperative in Rulindo district, for example, decided to give it a try," explains Kirimi Sindi, CIP's Impact Specialist at the Nairobi office. "While the cooperative members could take some home to feed their families, they also had enough to sell to Urwibutso (SINA) Enterprises, the main processor working with the project. Success is contagious and soon neighbors were asking for vines to plant."

RAB has produced thousands of disease-free plantlets, driving yield increases.

Encouraged by the results, the cooperative expanded its production and all members received a profit from the sales. Kotemu members also learned how to process sweetpotato into bread, cakes, and doughnuts called mandazi. The Tuzamurane farmer group located in Rubugurizu village, Muhanga district, joined them. Initially reluctant to grow sweetpotato, the Young Women's Christian Association (an NGO contracted to work in the area) managed to persuade these groups to do so. In 2012, the farmers planted over 12 hectares and were able to harvest 700 kg of sweetpotato, 500 kg of which they sold to SINA. They hope to increase their profit in the next season, with the planting of sweetpotato on a 25-hectare plot.

CIP's SASHA project continues its work through training in production methods, and careful harvesting and storage practices, to avoid losses and damage during handling and to prevent rot. Since vines are in high demand, SASHA held training events in Rulindo and Muhanga districts in September 2012. These focused on how to build vine conservation tunnels to protect the vines from insects and aphids that spread diseases.

In early November 2012, the Rwanda Sweetpotato Super Foods project in collaboration with SINA Gerard Enterprises, RAB, CRS, and its partners launched the "Akarabo Golden Power Biscuits", Rwanda's first orange-fleshed sweetpotato biscuits, which are rich in Vitamin A. Those tasty and healthy biscuits are now sold in supermarkets and local shops in Rwanda and neighboring countries. Only four Akarabo Golden Power biscuits provide 48% of daily vitamin A requirements of a child under nine years old, and 28% of a non-pregnant woman's daily needs, or 21% of an adult man's daily requirement.

The Project has positive social impacts on a daily basis, and while gender inequality persists in many areas of Rwanda, women


K. SINDI

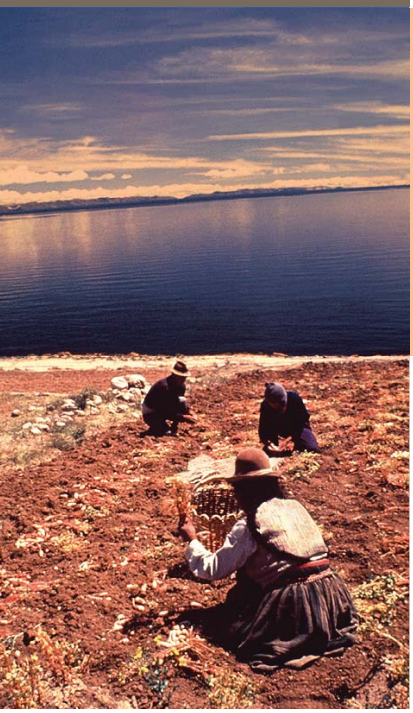
K. SINDI

Community nutrition and sweetpotato education seminar hosted by Rwanda Sweetpotato Super Foods project in Muhanga.

Launch of Akarabo Golden Power Biscuits – Rwanda's first orange-fleshed sweetpotato biscuits.

who have taken up sweetpotato farming under the Project's guidance have found a firmer foothold within their own society. CIP continues to support such initiatives to give economic and social rights to all members of society and reduce all elements of inequality in a concerted drive towards sustainable development. As part of CIP's broader, 10-year, multi donor SASHA initiative, the project is expected to lay the groundwork for improving the lives of 10 million Sub-Saharan households over the next decade.

Environmental Sustainability



Sustainable Potato Production and Climate Change

Potato yields are susceptible to the increased atmospheric carbon dioxide (CO2), temperature, and precipitation levels associated with climate change. These factors can also result in an increase in pests and diseases. In response to the serious threat that climate change poses to potato production, CIP has developed tools to assess probable impacts. In 2012, a CIP-led study reviewed potato responses to climate change variables, analyzed the likely outcomes of host-pathogen interactions, and developed models for simulating the behaviors of potato genetic diversity to assess adaptation options.

Climate change is expected to affect agriculture in general, but potato crops in particular are deemed more susceptible than others to the expected changes in temperature, radiation, water regimes, and CO2 concentration in the atmosphere. Contrary to a number of global studies that reported that increased levels of atmospheric CO2 benefit potato production, CIP's research reveals evidence that long-term exposure to an enriched CO2 environment can bring about a partial stomatal closure resulting in a decline in photosynthetic rates.

A rise in global temperatures as a result of climate change could signal a very real threat to potato production in the form of increased pests and diseases. According to Roberto Quiroz, CIP's Leader for Production Systems and the Environment, "Major climate change factors likely to influence plant disease severity and the spread of pests include elevated CO2, heavy and unseasonal rains, higher humidity, drought, cyclones and hurricanes, and elevated temperatures." The CIP study also points out that genetic changes in pathogen population and higher infection pressure could increase the impact of diseases. Furthermore, temperature has a strong influence on insect development, reproduction and survival. While the long-term effects of increased vectors, pests, and pathogens are not altogether clear at this time, Quiroz argues that, "It is absolutely vital to begin creating models and assessing the results beforehand in order to be prepared." To measure the potential consequences of climate change, researchers rely on modeling tools, and in the case of potatoes, a potato growth model is fed with present and prospective climate data and the results are

compared. However, in developing countries such as Peru, where the weather station network is quite limited and the mountainous terrain results in microclimates, traditional climate change modeling is unfeasible. Quiroz and the team from CIP consequently used a groundbreaking approach to develop models using remote sensing and mathematical tools to obtain and generate daily weather data for complex landscapes where conventional linear corrections have failed. While this approach produced accurate models for potato growth, it also holds huge potential for application for climate change study in general.

In Peru, farmers cope with frequent droughts, frosts, hailstorms or excess rainfall by planting an assortment of potato varieties and landraces. Climate change will result in increased severe weather events, and the models developed by CIP simulate the expected behaviors of a wide genetic diversity, including the native and commercial landraces and varieties planted in Peru to deal with climate change. CIP assessed these varieties under variable climate conditions to determine adaptation options for future climates. Recent studies based on local meteorological networks have evidenced a significant warming since 1979 (0.32 -0.34° Celsius per decade). CIP simulated the behaviors of several potato varieties at a number of different sites with varied altitudes and climatic conditions, using a model to assess whether this warming trend had a significant effect on potato productivity. The findings were consistent with the warming trends and observation that there has been an upward migration of potato-based agriculture to higher altitudes.

Quiroz's team speculates that this upward migration of the Andean agricultural frontier will encroach upon grasslands and peatlands. While moving potato production upwards is supported from the point of view of productivity, Quiroz pointed out that the feedback to the environment in CO2 emissions caused by converting grasslands into cropland must be factored into the equation. Wet grasslands and peatlands in the Andes are very rich in carbon content and the carbon molecules stored in those soils are likely to be released rapidly into the atmosphere as a result of crop production.

Rural farmers may experience increased hardships as climate change affects potato production.

The Dual Purpose Sweetpotato

Sustainable development cannot be attained without ensuring environmental sustainability, and this means finding green solutions that support economic progress. In 2012, an 18-year-old CIP research program on the dual-purpose qualities of sweetpotato – for production of both tubers and leaves – resulted in a model that CIP could use to increase the livelihoods of millions of poor rural farmers and have a positive global impact on environmental development.

The reality faced by poor farmers worldwide is that growing human populations create increased demands on the output per unit of land for crops and livestock. This exacerbates malnutrition and poverty and leads to a food production model that is environmentally destructive and unsustainable. These intensified production systems employ continuous cropping methods, utilize few external nutrient inputs, and include the removal of fodder for livestock with limited recycling of nutrients and organic matter back into the soil. The result is the depletion of soil nutrients and organic matter, leaving barren lands and severe hardships for a great deal of poor farmers and those who depend on them.

More than 20 years ago, CIP's Carlos Leon-Velarde realized that mixed crop-livestock systems can play a crucial role in improving the environmental stewardship and incomes of smallholders, and that better sweetpotato cultivation methods could improve the food security and diet of their families. Leon-Velarde and his colleagues at CIP recognized sweetpotato's potential as a remedial crop for such farmers because of its high productivity and low input requirements, while its usefulness for both food and feed (dual-purpose) makes it attractive in areas where land availability is declining.

Leon-Velarde formed a dual-purpose sweetpotato team focused on utilization rather than breeding, and as this team incorporated different management strategies for sweetpotato over the years, they began to increase the amount of foliage produced, and improved the quality of vines as animal fodder. The team tested different cutting frequencies as well as several genetic materials from the collection at CIP's genebank, before they managed to define an index of root to biomass to develop varieties that produce abundant vines while simultaneously maintaining good tuber productivity.

Carlos Leon-Velarde leads a training event on dual-purpose sweetpotato in Eldoret, Kenya.

Farmers in Central Kenya admiring sweetpotato silage.

Sweetpotato production takes approximately 150 days from planting to harvest, and if cropped for tubers alone, the plant will produce large amounts of roots, but relatively little vine and leaf material for fodder. However, Leon-Velarde's research revealed that if sweetpotato vines are cut 65 to 70 days after emergence, high quality fodder can be obtained. This fodder can be fed directly to livestock or stored in microsilos, and cutting does not affect the roots, so farmers produce the same quantity and quality of sweetpotato crops as usual.

As CIP-led research into dual-purpose sweetpotato progressed, the team conducted studies throughout Peru and in Ecuador, the Dominican Republic, Vietnam, China, Indonesia, Thailand, Kenya, Uganda, and Papua New Guinea. Initially the team sought two partners in each country to conduct tests and analyze how increased foliage could improve the bio-economic situation of farmers in different cultures and environments.

Global research conducted by the team over the past five years has consistently demonstrated evidence to support the hypothesis that dissemination of dual-purpose sweetpotato can help to improve the livelihoods of smallholders using mixed crop–livestock systems around the world. It could furthermore lead to a system of food production that is far less demanding on the environment. Dual-purpose sweetpotato farming therefore holds huge potential as an environmentally sustainable means of agricultural food production that allows farmers to produce more quality fodder for animal feed and crop fertilization without harming their tuber yields, while simultaneously easing the environmental strains on cropland.

Applying Environmental Sustainability Practices at CIP

In Lima, water problems are always an issue. Because the city is located in a coastal desert, water supplies are limited, whereas demand has been growing for years. A steady supply of water ranks as a high priority for CIP's Lima headquarters.

In 2001, the 60-meter well that supplies water for the agricultural research center was nearly dry. Only 70 centimeters of water remained, compared to 17 meters in 1989. Thanks to sustainable water management practices, the well's water level had been largely restored by 2012, and CIP's water usage decreased by roughly 50 percent from 200 m^3 to just over 100 m^3.

In 2001, when it looked as if CIP's well was going to be tapped out, the decision was made to dig the well 60 meters deeper. Juan Palomino, a plumber at CIP, came up with a proposal to reduce waste and increase recycling.

Palomino realized that clean water was being lost due to inefficient pumps. Using techniques such as reverse osmosis, he helped set up a new system to recuperate wasted water and store it in a cistern to be used for irrigating CIP's fields. Today, nearly 80 percent of the water that Palomino's system recovers is clean water that was previously lost. The remaining 20 percent is recycled after usage in fields, air conditioning units, and other areas.

"In addition to the important scientific work done by the researchers, we in the administrative department try to do our part by conserving vital resources like water," says Palomino. This includes irrigating CIP's gardens and lawns after six o'clock in the evening in order to avoid water loss from evaporation.

Inspired by the positive results of his water management project, Palomino attended a training course on how to construct solar panels, which was offered at the Agrarian University of La Molina, located across the street from CIP's Lima campus. He subsequently built a pair of solar water-heating units, which he and colleagues tested in Lima and at CIP's Huancayo station. The panels are currently installed in the dormitories of CIP-Huancayo.

In addition to conserving water and energy resources, Palomino has helped CIP's

CIP ARCHIVES

Palomino built a pair of solar water-heating units. The panels are currently installed in the dormitories of CIP-Huancayo.

researchers with innovative designs and construction for hydroponic, aeroponic, and drip irrigation systems. Palomino would like to install more thermal solar systems and is always looking for other ways to increase efficiency.

"When we talk about sustainable agriculture and the preservation of our earth's precious resources, we cannot just look to the farmers," notes Palomino. "It's important that we do our part too."

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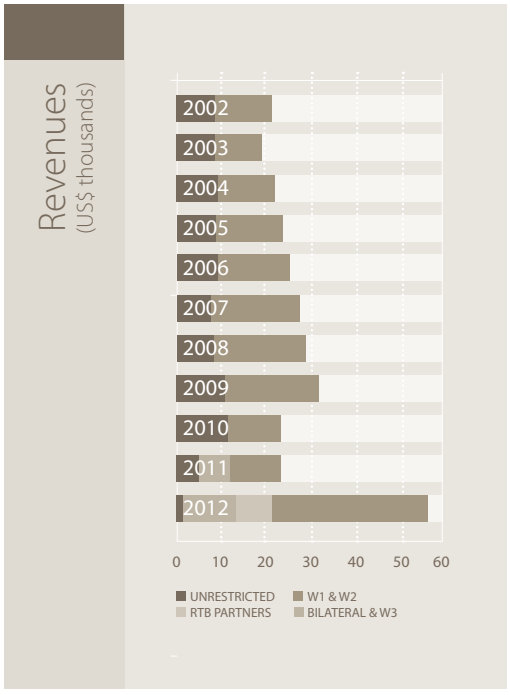
CIP in 2012

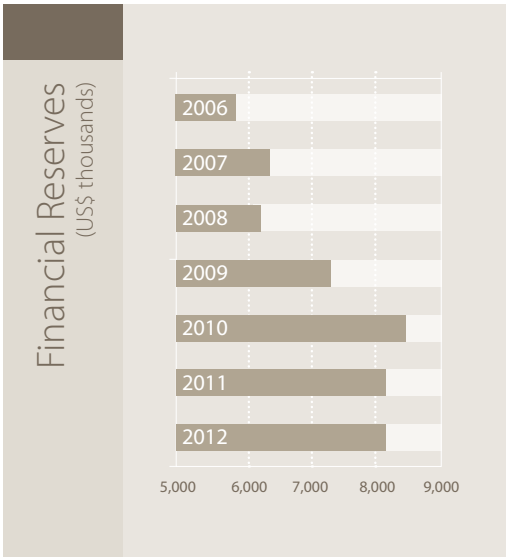
Financial Report

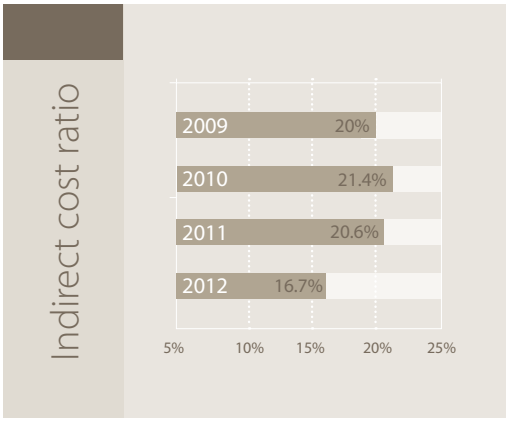
The International Potato Center's total revenue reached USD$57.1M, 69% above 2011. This large increase over 2011 is due to the start of the CGIAR Research Program Roots, Tubers and Bananas, in 2012, for which the International Potato Center is the lead center. Total Revenue included USD$16.7M in CGIAR Research Programs revenue, USD$13.2M in CGIAR Research Program Roots, Tubers and Bananas CGIAR partner center pass through revenue, USD$25.5M in bilateral restricted revenue, USD$1.1M in unrestricted revenue, and USD$0.8M in other revenue, consisting of interest earned on investments and exchange rate gains. Although total revenue increased 69% compared to 2011, when the Roots, Tubers and Bananas CGIAR partner center revenue is discounted from the total CIP's revenue, the increase is 30% compared to 2011.



The International Potato Center achieved a USD$0.2M surplus in 2012. CIP's reserves, measured as net assets minus net fixed assets remained steady at USD$8.1M.

CIP's indirect cost ratio decreased from 20.6% to 16.7% in 2012. CIP is currently implementing a new ERP Accounting System and is still working on cost allocations to bring the center into line with the full costing principles in FG5.





The liquidity indicator (measured as net working capital plus long-term investments divided by the daily average expenditures excluding depreciation and CGIAR Partner

Center pass through funds) decreased from 113 days in 2011 to 90 days in 2012. The financial stability indicator (calculated as the unrestricted net assets minus net fixed assets, divided by the daily average expenditures excluding depreciation and CGIAR Partner Center pass through funds) decreased from 92 days to 72 days in 2012. Both indicators decreased due to the increase of 30% in operating expenses in 2012; both these indicators are reasonable given the 30% increase in 2012.

Liquidity

Adequacy of Reserves

CIP's financial position as of December 2012 is presented in the table below. A copy of the complete audited financial statements may be requested from the office of the Chief Financial Officer at CIP headquarters in Lima, Peru.

AUDITED FINANCIAL

Statement of financial position

Year ended 31 December 2012 (USD $000)

	2012 US$	2011 US$
ASSETS		
Current assets		
Cash and cash equivalents	11,003	7,775
Investments	21,132	15,135
Accounts receivable:		
Donors	2,701	2,304
Other - CGIAR Centers	8,199	1,728
Allowance for doubtful accounts	(1,336)	-
Employees	148	123
Others	268	672
Inventory	475	343
Advances	3,969	2,525
Prepaid expenses	379	399
Total current assets	**46,938**	**31,004**
Non-current assets		
Investment	51	66
Property and equipment, net	5,675	4,431
Total non-current assets	**5,726**	**4,497**
Total assets	**52,664**	**35,501**

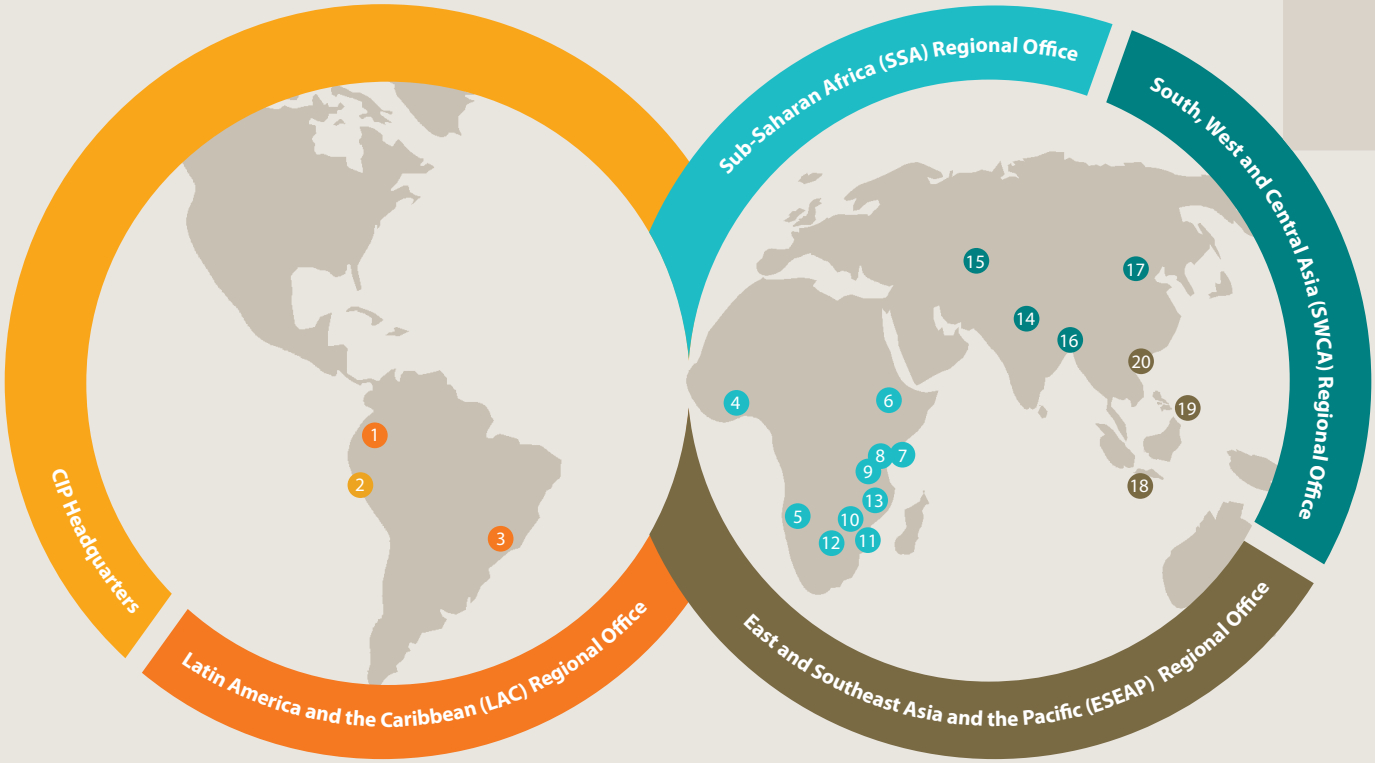
	2011 US$	2010 US$
Liabilities and net assets		
Current liabilities		
Accounts payable		
Donors	15,750	13,992
Other - CGIAR Centers	15,253	1,280
Employees	263	231
Others	5,321	5,191
Accruals and provisions	194	399
Total current liabilities	**36,781**	**21,093**
Non- current liabilities		
Employees	1,454	1,260
Accruals and provisions	527	597
Total non-current liabilities	**1,981**	**1,857**
Total liabilities	**38,762**	**22,950**
Net assets		
Designated	5,778	6,001
Undesignated	8,124	6,550
Total net assets	**13,902**	**12,551**
Total liabilities and net assets	**52,664**	**35,501**

Donors

STATEMENT OF GRANT REVENUE For the Year Ending December 31, 2012 (US$ 000)

Donors List	Unrestricted	Restricted	Total 2012
Accion Contra el Hambre		66	66
Asociación Pataz		1	1
Australian Centre for International Agricultural Research (ACIAR)		242	242
Austrian Development Agency (ADA)		634	634
Bill & Melinda Gates Foundation		6,744	6,744
Bioforsk (Plant Health and Plant Protection)		3	3
Branston LTD		13	13
Cabinda Gulf Oil Company (Chevron)		631	631
Canadian International Development Agency (CIDA)		125	125
CGIAR Climate Change, Agricultural and Food Security		65	65
CGIAR Independent Science and Partnership Council (ISPC)		62	62
CGIAR International Fund for Agriculture Research (IFAR)		8	8
Commisision of the European Communities		2,384	2,384
Common Fund for Commodities (CFC)		503	503
Danish International Development Agency (DANIDA)		11	11
Fondo Regional de Tecnología Agropecuaria (FONTAGRO)		98	98
Food and Agriculture Organization of The United Nations (FAO)		107	107
Generation Challenge Program (GCP)		18	18
Global Enviroment Facility (GEF)		536	536
Government of Belgium		573	573
Government of China	120	914	1,034
Government of Finland		426	426
Government of Germany (BMZ/GIZ)		1,100	1,100
Government of India		61	61
Government of Luxembourg		179	179
Government of Peru		150	150
Government of Philippines	8	-	8
Government of Spain		142	142
Government of the Republic of Korea		138	138
Harvest Plus Challenge Program		363	363
ICGEB-TWAS-UNESCO/IBSP Joint Programme on Capacity Building in Basic Molecular Biology		19	19
International Bank for Reconstruction and Development (IBRD)		190	190
International Fund for Agricultural Development (IFAD)		550	550
Irish Aid	606	1,077	1,683
Julius Kuhn Institut		8	8
Latin American and Caribbean Environmental Economic Program (LACEEP)		9	9
Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCARRD)		6	6
Swedish International Development Cooperation Agency (SIDA)		18	18
Swiss Agency for Development and Cooperation (SDC)		187	187
Syngenta Crop Protection AG		55	55
The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)		399	399
CGIAR Centers	413	29,929	30,342
The Global Crop Diversity Trust		503	503
The Howard G. Buffett Foundation (HGBF)		26	26
The McKnight Foundation		182	182
The OPEC Fund for International Development (OFID)		43	43
The Scottish Government International Development Fund		74	74
United States Agency for International Development (USAID)		5,740	5,740
United States National Science Foundation (NSF)		86	86
TOTAL	**1,147**	**55,398**	**56,545**

Global Offices



1 Quito (Ecuador)
2 Lima (Peru)
3 Sao Paolo (Brazil)
4 Kumasi (Ghana)
5 Huambo (Angola)
6 Addis Ababa (Ethiopia)
7 Nairobi (Kenya)
8 Kampala (Uganda)
9 Kigali (Rwanda)
10 Lilongwe (Malawi)
11 Maputo (Mozambique)
12 Chipata (Zambia)
13 Mbeya (Tanzania)
14 New Delhi (India)
15 Tashkent (Uzbekistan)
16 Dhaka (Bangladesh)
17 Beijing (China)
18 Lembang (Indonesia)
19 Los Baños (Philippines)
20 Hanoi (Vietnam)

CIP Headquarters

International Potato Center (CIP)
Avenida La Molina 1895, La Molina, Lima, Peru
P.O. Box 1558, Lima 12, Peru
Tel: +51 1 349 6017 / 5783 / 5777
Fax: +51 1 317 5326
Email: cip@cgiar.org
Website: www.cipotato.org

Latin America and the Caribbean (LAC)

Regional Office
Santa Catalina Experimental Station
Panamericana Sur Km 1
Sector Cutuglahua Canton Mejía
Apartado 17-21-1977
Quito, Ecuador
Tel: +593 2 3006 443/30069063
Fax: +593 2 3006 154
Email: cip-quito@cgiar.org or
a.devaux@cgiar.org

San Ramon Experimental Station
International Potato Center (CIP)
Ex Fundo El Milagro s/n
Chanchamayo
San Ramón, Peru
Tel: +51 064 331086
Email: r.duarte@cgiar.org

Huancayo Experimental Station
Fundo Santa Ana s/n Hualahoyo
El Tambo
Huancayo – Junín, Peru
Tel: +51 064 246767
Email: v.otazu@cgiar.org

CIP, La Paz, Bolivia
Dirección: C. Gabriel Gosalves Esq. 6 de Agosto # 240, 3er Piso, Sopocachi, La Paz, Bolivia
Tel: 00 591 2 2118825
Fax: 00 591 2 2116439
Correo Electrónico: c.velasco@cgiar.org

Embrapa/Agricultural Instrumentation, San Paulo, Brazil
Dirección: Embrapa/Agricultural Instrumentation
Rua XV de Novembro 1452,
Sao Carlos, Sao Paulo, Brazil
CEP: 13560-970, P.O. Box. 741
Tel: +55 16 2107-2906
Fax: +55 16 2107-2902
Correo Electrónico: ca.posadas@cgiar.org

CIP, Bogotá, Colombia
Nombre: Juan Pablo Fernández
Dirección: Calle 9 No. 4-84 Apartamento 103
(Bogotá DC, Colombia)
Tel: 2860331
Mobile: 3003202408
Email: jpfnandez@gmail.com

Sub-Saharan Africa (SSA)

Regional Office
c/o ILRI Campus
Old Naivasha Road, Uthiru, Nairobi, Kenya
P.O. Box 25171, Nairobi 00603, Kenya
Tel: +254 20 422 3602
Fax: +254 20 422 3001 / 3600
Email: cip-nbo@cgiar.org

Liaison Office - Ghana
c/o CSIR - Crop Research Institute
P.O. Box 3785, Fumesua, Kumasi, Ghana
Tel: +233 322 060929
Fax: +233 51 60396
Email: e.carey@cgiar.org

Liaison Office - Uganda
Naguru Hill, Katalima Road, Plot 106
P.O. Box 22274, Kampala, Uganda
Tel: +256 414 286 209
Fax: +256 414 286 947
Email: b.lemaga@cgiar.org

Liaison Office - Mozambique
c/o Instituto de Investigação Agraria
de Mozambique (IIAM)
Avenida das FPLM 2698
Box 2100, Maputo, Mozambique
Tel / fax: +258 21 461 610
Email: m.andrade@cgiar.org

Liaison Office - Malawi
Chitedze Research Station, SARRNET Building
P.O. Box 31600, Lilongwe 3, Malawi
Tel: +265 1 707 014
Fax: +265 1 707 026
Email: p.demo@cgiar.org

Liaison Office - Republic of Angola
Centro Internacional da Batata (CIP)
Rua Coluna do Sul
Casa Nº 2
Bairro Cidade Alta
Huambo
Republic of Angola
Tel: +244 9141 36087
Fax: +244 2412 22687
Email: b.kowalski@cgiar.org

Liaison Office - Ethiopia
c/o ILRI - Ethiopia

P.O. Box 5689, Addis Ababa
Ethiopia
Tel: +251 11 617 2291
Fax: +251 11 617 2001
Email: s.schulz@cgiar.org

CIP-Zambia
Msekera Regional Research Station – Chipata
Tel: +260 974 342 135 or +260 979 577 880
Email: Emily Mueller or Nicholas Zimba

CIP-Rwanda
Concord Buiding, Boulevard de l'Umuganda
Tel: +250 252 580 271
Email: Jean Claude Nshimiyimana

CIP-Tanzania
ARI UYOLE Research Center – Mbeya, Tanzania
Tel: +255 686 644 605
Email: Roger Kakuhenzire

South, West and Central Asia (SWCA)

Regional Office
CGIAR Centers Block, NASC Complex
DPS Marg, Pusa Campus, New Delhi 110012, India
Tel: +91 11 2584 0201 / 3734
Fax: +91 11 2584 7481
Email: cip-delhi@cgiar.org

Liaison Office - Orissa
c/o RCCTCRI, Dumuduma
Bhubaneswar-751019, Orissa, India
Tel: +91 674 247 2244
Fax: +91 674 247 0768
Email: s.attaluri@cgiar.org

Liaison Office - Uzbekistan
c/o ICARDA- PFU
P.O.Box 4564, Tashkent 100 000, Uzbekistan
Courier address:
c/o ICARDA- PFU
6, Osiyo Street, 100 000 Tashkent, Uzbekistan
Tel: +998 71 237 1782
Fax: +998 71 120 7125
Email: c.carli@cgiar.org

Project Office - Nepal
c/o International Centre for Integrated
Mountain Development
G.P.O. Box 3226, Khumaltar, Kathmandu, Nepal
Tel: +977 1 500 3222
Fax: +977 1 500 3299 / 3277
Tel (ILRI switchboard): +251 11 617 2000
Email: m.spordeler@cgiar.org

Project Office - Bangladesh
USAID Horticulture Project,
CIP/AVRDC Bangladesh
H 1/A, HB Tower, Road # 23,
Gulshan-1, Dhaka-1212.
Bangladesh
Tel: +88 02 9854240
Email: s.a.begum@cgiar.org

East and South East Asia and the Pacific (ESEAP)

CIP-China Center for Asia and the Pacific (CCCAP)
708 Pan Pacific Plaza
A12 Zhongguancun Nandajie
Beijing 100081
China
Tel: +86-10-6210-9999
Fax: +86-10-6210-9990
Email: cip-china@cgiar.org

Regional Office - China
c/o The Chinese Academy of Agricultural Sciences
Zhong Guan Cun South Street 12
Beijing, People's Republic of China
Tel: +86 10 8210 5690
Fax: +86 10 8210 5690
Email: cip-china@cgiar.org

Liaison Office - Indonesia
c/o BALITSA
Jl.Tangkuban Perahu no. 517
P.O. Box 8404 Lembang-Bandung 40391, Indonesia
Courier address:
c/o BALITSA Jl.Tangkuban Perahu no. 517, Lembang
Bandung, 40391, Indonesia
Tel: +62 22 278 5591 / 5586
Fax: +62 22 278 5549
Email: cip-eseap@cgiar.org

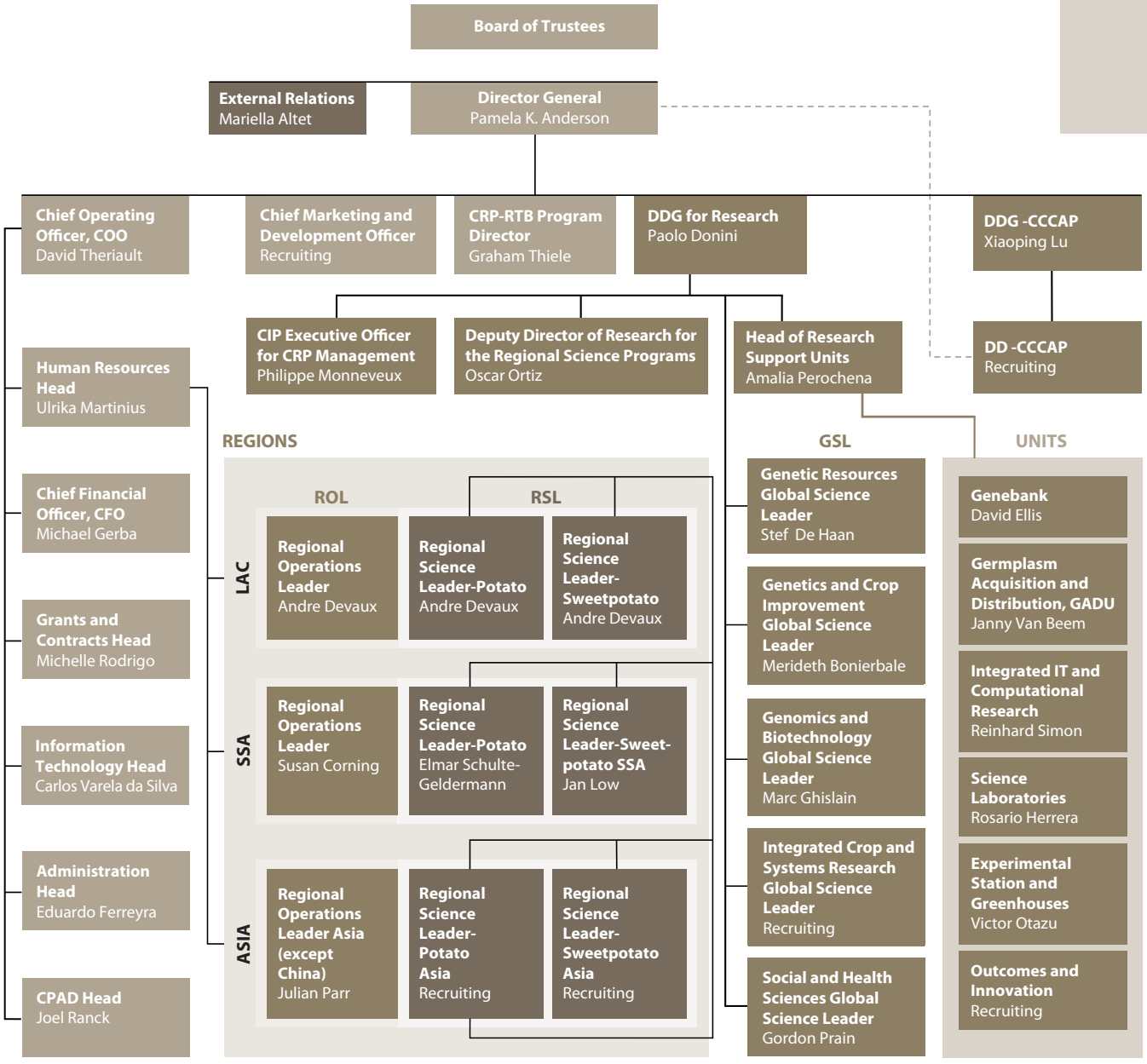
Liaison Office - Philippines
PCARRD Complex, Los Baños, Laguna 4030, Philippines
Tel: + 63 49 536-8185; +63 49 536-1662
Email: cip-manila@cgiar.org

Project Office - Vietnam
Phong 215, Nha A,
Vien Chan nuoi
Thuy Phuong, Chem
Tu Liem, Hanoi, Vietnam
Tel: +84 4 741 0004
Fax: +84 4 741 0003
Email: tnguyen@cgiar.org

Executive committee

1. David Theriault • 2. Paolo Donini • 3. Pamela K. Anderson • 4. Amalia Perochena • 5. Ulrika Martinius • 6. Michael Gerba • 7. Lu Xiaoping

CIP's Internal structure



ROL= Regional Operating Leader

RSL= Regional Science Leader

GSL= Global Science Leader

Staff list

1. Administration

Director General's Office
Director General, Anderson, Pamela K.
Altet, Mariella, Manager for External Relations
Gorvenia, José, Driver
Infantas, Viviana, Visitors Officer
Mendoza, Julio, Driver

Chief Operating Officer
Theriault, David
Koechlin, Bertha, Executive Assistant

Deputy Director General for Research
Donini, Paolo
Monneveux, Philippe, Executive Officer For CRP Management
Salinas, Lilia, Executive Assistant

Director General for Strategic Corporate Development
Alonso, Carlos
Koechlin, Bertha, Executive Assistant

Director for Roots, Tubers and Banana Research Program
Thiele, Graham
Vásquez, Zandra, Executive Assistant

Human Resources Department
Martinius, Ulrika, Human Resources Global Head
Lazarte, Carla, Human Resources Manager
Alberco, Roque, Human Resources Assistant
Castillo, María Cecilia, Human Resources Analyst
Contreras, Virginia, Recruitment Specialist
Guzmán, Melissa, Human Resources Analyst
Huanes, Martha, Training and Development Officer
Isla, Rocío, Social Worker, Social Welfare and Health Supervisor
Olazo, Liliana, Administrative Assistant
Palacios, Pilar, Global Head Compensation & Benefits
Polo, William, Human Resources Analyst
Puccini, Alfredo, Human Resources Analyst
Romero, Pablo, Human Resources Assistant
Suito, Mercedes, Administrative Assistant
Varas, Yoner, Salary Administrator
Vargas, Maria Alejandra, C&B Assistant
Villa, Walter, Doctor

Finance Department
Gerba, Michael, Chief Finance Officer
Alburqueque, Luis, Accounting Assistant
Arenas, Elena, Finance Analyst
Bardalez, Eliana, Regional Accountant
Barrantes, Katia, Budget Analyst
Copete, Victoria, Finance Analyst
De Anda, Luis, Finance Controller
Espinoza, Mercedes, Junior Finance Assistant
García, Harry, Finance Analyst
Mendoza, Patricia, Finance Projects Supervisor
Monteverde, Carla, Accountant Analyst
Neyra, Gladys, Administrative Assistant
Orellana, Sonnia, Cashier
Patiño, Milagros, Budget Supervisor
Peralta, Eduardo, Accounting Assistant
Saavedra, Miguel, General Accountant
Sánchez Antonio, Budget Analyst
Tapia, César, Restricted Project Accountant
Villar, Ledy, Accounting Assistant
Zambrano, Mamerto, Administrative Auxiliary
Zapata, Susana, Financial Analyst
Zuñiga, Carlos, Accounting Analyst
Zuñiga, Tania, Treasurer

Grants & Contracts
Rodrigo, Michelle, Head
Alor, Waldo, Contract Assistant
Bellido, Maria, Grants & Contracts Specialist
Carrillo, Gonzalo, Grants & Contracts Specialist
Harrison, Gary, Proposal Manager/Technical Writer
Madalengoitia, Javier, Grants & Contracts Specialist (RTB)
Mel, Isabel, Bilingual Secretary
Romero, Flor de María, Grants & Contracts Administrator
Wood, Brandy, Proposal Manager

Information Technology Unit
Varela, Carlos, Head
Cabello, Percy, OCS Project Manager
Del Villar, Roberto, Server Administrator
Estrada, Rommy, OCS Process Analyst
Galindo, Victor, Systems Analyst

Garcia, Harol, Systems Assistant
García, Paulo, Helpdesk Assistant
Herrera, Xavier, Network Assistant
Iturriaga, Alfredo, OCS Training Assistant
Junchaya, José, Network Administrator
Llantoy, César, Helpdesk Assistant
Navarro, Mayra, Systems Assistant
Puchuri, Jacqueline, Administrative Systems Analyst
Quintana, Miguel, Systems Analyst
Rodríguez, Saúl, Web Systems Analyst
Torres, Edgardo, Systems Development Administrator
Valdivieso, Peter, Helpdesk Administrator

Administration Office
Ferreyra, Eduardo, Manager of Administration
Córdova, Silvia, Procurement Services Assistant
Logistics
Ganoza, Gimena, Head
Auqui, Filomeno, Purchasing Assistant
Cárdenas, Bryan, Purchasing Assistant
Dueñas, Javier, General Services Assistant
Kuwae, Mariella, Logistic Analyst
Noa, Martín, General Services Auxiliary
Ramos, Jenner, Import Purchasing Assistant
Tinco, Pablo, Warehouse Assistant
Tintaya, Teófilo, Warehouse Coordinator
Maintenance
Alarcón, Willy, Maintenance Coordinator
Blanco, Dalmecio, Maintenance Technician
Dávila, Rogger, Maintenance Technician
Franco, Manuel, Maintenance Technician
Palomino, Juan, Maintenance Technician
Peláez, Pedro, Maintenance Technician
Quispe, Kini, Maintenance Technician
Yancce, José, Maintenance Technician
Motor Pool
Alminagorta, Luis, Driver
Enciso, Wilmer, Motor Pool Mechanic
Garay, Marino, Driver
Marquina, Juan, Driver
Cleaning
Ccenta, Alberto, Janitor
Enciso, Facundo, Janitor
Reception
Bruno, Genaro, Receptionist
Security
Briceño, Antolín, Plant Security
Montalvo, Hugo, Plant Security
Vásquez, Lisardo, Plant Security
Lodging and Food Services
Alfaro, Jorge, Cooking Attendant
Barrios, Teófilo, Cooking Attendant
Chávez, Raúl, Cook
Ferreyros, Mónica, Lodging and Food Services Supervisor
Lapouble, Sor, Lodging and Food Services Assistant
Llallico, Joel, Cooking Attendant
Quico Venturo, Cook
Vargas, Gerardo, Cooking Attendant
Ventura, Jerónimo, Cooking Attendant

Communications and Public Awareness Department,
Ranck, Joel, Head
Avendaño, Juan Carlos, Exhibits/Display Auxiliary
Durroux-Malpartida, Veronique, Deputy Head, CPAD
Fernández-Concha, Nini, Graphic Designer
Gwinner Valerie, Head, (until July 2012)
Lafosse, Cecilia, Chief Designer
Lanatta, María Elena, Departmental Assistant
Mejia, Juan, Web Specialist
Taipe, Elena, Graphic Designer
Torres, José, Graphic Designer
Library
Ferreyra, Cecilia, Head Librarian
Hoyos, Alexis, Library Auxiliary
Lay, Griselda, Library Assistant

2. Global Programs

Genetic Resources Global Science
De Haan, Stefan, Leader
Gallo, Patricia, Administrative Assistant
Heider, Bettina, Plant Genetic Resources Specialist
Nuñez, Jorge, Intermediate Researcher
Polreich Severin, Associate Scientist
Roca, Luis, Research Technician
Romero, Elisa, Agronomist, Research Assistant

Genetics and Crop Improvement - GS
Bonierbale, Merideth, Senior Potato Breeder, Division Leader
Aliaga, Vilma, Greenhouse Auxiliary
Amorós, Walter, Agronomist, Research Associate
Aponte, Maruja, Research Technician
Asto, René, Field Laborer
Bastos, Carolina, Agronomist, Research Assistant
Blanco, Mónica, Administrative Assistant
Cabello, Rolando, Agronomist, Intermediate Researcher
Caraza, Maria, Laboratory Auxiliary
Carpio, Rossemary, Research Assistant
Colachagua, Eloy, Research Technician
Cosme, Anastacio, Research Technician
David, Maria del Carmen, Junior Reesarch Assistant
Del Villar, Faviola, Research Technician
Díaz Carmen, Administrative Assistant
Díaz, Federico, Biologist, Intermediate Researcher
Díaz, Luis, Agronomist, Intermediate Researcher
Erquinio, Efraín, Field/Greenhouse Auxiliary
Eyzaguire, Raúl, Statistician, Research Assistant
Fernández, Máximo, Research Technician
Frisancho, Julio, Research Technician
Gastelo, Manuel, Agronomist, Intermediate Researcher

Gómez, Félix, Research Technician
Gómez, Walter, Research Technician
Gruneberg, Wolfgang, Sweetpotato Breeder Geneticist
Gutiérrez, Luis, Research Technician
Gutiérrez, Raymundo, Agricultural Engineer, Intermediate Researcher
Heider, Bettina, Plant Genetic Resources Specialist
Huaccachi, Juan, Research Technician
Huamani, Kelvin, Biologist, Research Assistant
Khan, Awais, Geneticist
Lindqvist-Kreze, Hannele, Biotic Stress Geneticist
Loayza, Wilder, Research Technician
Maguiña, Sergio, Research Technician
Martínez, Roberto, Greenhouse Auxiliary
Mihovilovich, Elisa, Biologist, Research Associate
Munive, Susan, Research Technician
Ordoñez, Benny, Junior Research Assistant
Portal, Leticia, Biologist, Research Assistant
Pozo, Víctor, Research Technician
Ramos, Shamir, Research Technician
Rodríguez, Daniel, Greenhouse Auxiliary
Salas, Elisa, Agronomist, Research Assistant
Salcedo, Carlos, Greenhouse Auxiliary
Sánchez, Jacqueline, Research Technician
Saravia, David, Junior Research Assistant
Tasso, Carolina, Junior Research Assistant
Vega, Jorge, Research Technician
Vega, Ricardo, Field/Greenhouse Auxiliary
Vélez, José, Research Technician
Zum Felde, Thomas, Plant Breeder/NIRS Specialist

Genomics and Biotechnology Global Science

Ghislain, Marc, Program Leader (Nairobi)
Gati, Jean Maurine, Scientific Assistant (Nairobi)
Irukan, Quinata, Plant Laboratory Technician (Nairobi)
Jara-Vidalon, Laura, Research Assistant
Magembe, Eric, Plant Molecular Biologist (Nairobi)
Manrique, Sandra, Ph.D. Biologist, Intermediate Researcher
Montenegro, Juan Daniel, Junior Research Assistant
Mwathi, Margaret, Plant Molecular Biologist (Nairobi)
Orbegozo, Jeanette, Biologist, Research Assistant
Prentice, Katterine, Biologist, Research Assistant
Quispe, Dora, Junior Research Assistant
Reyes, Eddy, Research Technician
Rivera, Cristina, Biologist, Research Assistant
Román, María Lupe, Biologist, Junior Research Assistant
Sumi, Ada, Research Technician
Wamalwa, Lydia, Research Assistant (Nairobi)

Integrated Crop and Systems Research Global Science

Ortiz, Oscar, Deputy Director of Research For the Regional Science Program
Abidin, Erna, Sweetpotato Production Specialist (Malawi)
Alarcón, Nikolai, Research Technician
Alcazar, Jesús, Agronomist, Research Associate
Arellano, Jaime, Research Technician
Balcazar,Mario, Junior Research Assistant
Barreda, Carolina, Agronomist, Research Assistant
Cañedo, Verónica, Biologist, Intermediate Researcher
Carbajal, Mariella, Research Assistant
Carhuapoma, Pablo, Statistician, Research Assistant
Caycho, Tania, Junior Research Assistant
Chuquillanqui, Carlos, Agronomist, Intermediate Research
Cotera, Daniel, Field Laborer
Cruz, Mariana, Biologist, Intermediate Researcher
Cucho, Gonzalo, Junior Research Assistant
De la Torre, Elvin, Laboratory Technician
De Souza Joao, Junior Research Assistant
Demo, Paul, Potato Specialist, Liaison Scientist
Espinoza, Hugo, Research Technician
Fernández, Elizabeth, Junior Research Assistant
Flores, Betty, Research Assistant
Forbes, Gregory, Pathologist
French, Edward, Scientist Emeritus
Fuentes, Segundo, Plant Pathologist, Research Associate
Gálvez, Marco, Junior Research Assistant
Gamarra, Heidy, Biologist, Research Assistant
Gamboa, Soledad, Biologist, Intermediate Researcher
Gávilan, Carla, Agronomist, Research Assistant
Girish, Basavapatna Halappa, Potato Scientist
Gonzales, Manuel, Laboratory Technician
Guerrero, Beder, Greenhouse Auxiliary
Guerrero, José, Systems Assistant
Gutarra, Liliam, Agronomist, Intermediate Researcher
Gutierrez, Dina, Post Doctoral Scientist in Plant Virology
Heidinger, Haline, Enviroment Engineer, Research Assistant
Huamán, Eva, Research Technician
Izarra, Myrian, Junior Research Assistant
Kreuze, Jan, Molecular Virologist
Kroschel, Jurgen, Entomologist
Kwon, Min, Visiting Scientist
Lanatta, Amalia, Administrative Assistant
Lara, Raúl, Greenhouse Auxiliary
León-Velarde, Carlos, Agricultural Systems Analysis Specialist
Loayza, Hildo, Research Assistant
Mendoza, Carlos, Research Technician
Mendoza, Diego, Junior Research Assistant
Meza, Marco, Research Technician
Miethbauer, Thomas, Associate Scientist,
Mujica, Norma, Agronomist, Intermediate Researcher
Muller, Giovanna, Biologist, Intermediate Researcher
Ochoa, Francisco, Research Technician
Orrego, Ricardo, Agronomist, Intermediate Researcher
Palacios, Susan, Junior Research Assistant
Paredes, Catalina, Research Technician
Pérez, Ana, Junior Research Assistant
Pérez, Willmer, Plant Pathologist, Intermediate Researcher
Ponce, Luciano, Research Technician
Posadas, Adolfo, Physicist, Research Associate, Liaison Officer Brazil
Quiróz, Roberto, Land Use Systems Specialist
Quispe, Gian, Junior Research Assistant
Ramirez, David, Associate Researcher
Raymundo, Rubí, GIS, Research Assistant,

Rojas, Mercy, Junior Research Assistant
Sánchez, Juan, Research Technician
Santivañez, Sonia, Administrative Assistant
Sierralta, Alexander, Laboratory Technician
Silva, Luis, Database Technician
Sporleder, Marc, Entomologist, ICM Specialist
Tenorio, Jorge, Biologist, Intermediate Researcher
Tineo, Isidoro, Field Laborer
Tonnang, Henri, Entomologist
Trebejo, Marcelo, Research Technician
Trillo, Antonio, Research Technician
Valdivia, Roberto, Agronomist, Coordinator Altagro-Puno
Valdizán, Ivonne, Administrative Assistant
Vega, Adan, Research Technician
Ventura, Fredy, Laboratory Technician
Yactayo, Wendy, Junior Research Assistant
Yarlequé, Christian, Research Assistant
Zamalloa, Jesus, Laboratory Technician
Zamudio, Julia, Administrative Assistant
Zegarra, Octavio, Biologist, Research Assistant
Zorogastúa, Percy, Agronomist, Intermediate Researcher

Social and Health Global Science
Prain, Gordon, Leader
Campilan, Dindo, Sociologist
Fonseca, Cristina, Agronomist, Intermediate Researcher
Grant, Frederick, Nutritionist Project Manager (Nairobi)
Hareau, Guy, Impact Enhacement Specialist
Kleinwechter, Ulrich, Post Doctoral Fellow
Low, Jan, Economist, CIP-SSA SASHA Project Manager
Maldonado, Luis, Economist, Intermediate Researcher
Marcovich, Rosario, Administrative Assistant
Mbabu, Adiel, RAC Project Manager
Miethbauer, Thomas, Associate Scientist
Pradel, Willy, Zoologist, Intermediate Researcher
Sindi, Kirimi, Impact Specialist
Suárez, Víctor, Statistics Assistant

Research Support Unit
Perochena, Amalia, Head
Chiscul, Eduardo, Junior Finance Assistant
Seminario Karla, Research Support Analyst

Genebank
Ellis, David, Head
Acevedo, Reina, Laboratory Technician
Acosta, Carlos, Research Technician
Alagon, Rocio, Research Technician
Alfaro, Delio, Research Technician
Ara, Fabian, Laboratory Auxiliary
Asto, Gladis, Laboratory Technician
Barrientos, Marleni, Laboratory Technician
Bendezú, Néstor, Research Technician
Berrocal Alfredo, Research Technician
Biondi, Jorge, Research Assistant
Cárdenas, José, Research Technician
Cárdenas, Saúl, Laboratory Auxiliary
Carrillo, Oscar, Research Technician
Chávez, Oswaldo, Systems Analyst
Cruzado, Juan, Research Technician
De Paz, Wendy, Research Technician
Durand, Marisol, Research Assistant
Egusquiza, Veronica, Research Technician
Espinoza, Francisco, Research Technician
Espirilla, Janeth, Research Technician
Fernandez, Andrea, Field Laborer
Fernández, Víctor, Laboratory Auxiliary
Flores, Kari, Greenhouse Auxiliary
Franco, Nataly, Junior Research Assistant
Gago, Amparo, Research Technician
Garcia, Aura, Research Technician
García, Luis, Greenhouse Auxiliary
García, Paulo, Research Technician
Gaspar, Oswaldo, Field/Greenhouse Auxiliary
Gomez, John, Field Laborer
Gómez, René, Agronomist, Intermediate Researcher
Gonzales, Roberto, Research Technician
Guerreros, Maria Luis, Field Laborer
Huamanlazo, Girali, Laboratory Auxiliary
Javier, Miguel, Research Technician
Llanos, Cynthia, Research Technician
López, Serapio, Research Technician
Mallma, Victori, Field Laborer
Manrique, Iván, Biologist, Intermediate Researcher
Martín, Mariana, Administrative Assistant
Meza, Charo, Research Assistant
Monteblanco, Tjark, Field Laborer
Ortiz, Elena, Field Laborer
Ospina, Joselin, Field Laborer
Palomino, Dionicia, Laboratory Auxiliary
Panta, Ana, Biologist, Intermediate Researcher
Poma, Edith, Research Technician
Porras, Irina, Junior Research Assistant
Povis, Sara, Laboratory Auxiliary
Puma, Josue, Field Laborer
Quisepe, Violeta, Junior Research Assistant
Quispe, Saadi, Research Auxiliary
Ramírez, Carlos, Research Technician
Rivera, María, Research Technician
Robles, Olegario, Research Technician
Robles, Ronald, Biologist, Research Assistant
Rodríguez, Wilder, Research Technician
Rojas, Héctor, Laboratory Auxiliary
Rojas, Luis, Systems Assistant
Roman, Angie, Research Technician
Romero, Jajhaira, Field laborer
Romero, Sandra, Research Technician
Rossel, Genoveva, Biologist, Intermediate Researcher
Ruíz, Benito, Field Laborer
Ruíz, Mario, Research Technician
Salas, Alberto, Agronomist, Research Associate
Sánchez, Juan, Research Technician
Sanchez, Moises, Field Laborer
Santa Maria, Ana, Research Technician
Santayana, Mónica, Research Technician
Santos, Jackelin, Laboratory Technician
Silvestre, Rocio, Junior Research Assistant
Soto Charles, Field Laborer

Soto, Julián, Biologist, Research Assistant
Uribe, Lucio, Research Technician
Valverde, Miguel, Laboratory Auxiliary
Vargas, Fanny, Agronomist, Intermediate Researcher
Velásquez, Eduardo, Laboratory Auxiliary
Vicencio, Domingo, Field & Greenhouse Auxiliary
Villagaray, Rosalva, Research Technician
Vivanco, Francisco, Agronomist, Research Assistant
Vollmer - Rainer, Research Assistant
Ynga, Alberto, Research Technician
Zamudio, Tessy, Laboratory Technician
Zea, Brenda, Biotechnologist, Research Assistant

Germplasm Acquisition & Distribution Unit
van Beem Janny, Head GADU
Falcón, Rosario, Biologist, Intermediate Researcher
Grande, Enrique, Research Technician

Integrated IT & Computational Research
Simon, Reinhard, Head
Córdova, Raúl, Systems Analyst
De Mendiburu, Felipe, Statistician, Intermediate Researcher
Flores, Mirella, Systems Analyst
Guzman, Fabiola, Research Assistant
Hirahoka, Daniel, Systems Technician
Hualla. Vilma, Biologist, Research Assistant
Juárez, Henry, Agronomist, Intermediate Researcher
Perez, Ivan, Systems Technician
Plasencia, Franklin, Systems Analyst
Rojas, Edwin, Systems Analyst
Tejada, Sofia, Systems Technician

Science Laboratories
Herrera, Rosario, Biologist, Head
Burgos, Gabriela, Biologist, Intermediate Researcher
Cayhualla, Edith, Research Technician
Fernández, Luciano, Research Technician
Inga, Silvia, Laboratory Auxiliary
Lozano, Marco, Laboratory Auxiliary
Muñoa, Lupita, Junior Research Assistant
Porras, Eduardo, Research Technician
Ramos, Martín, Research Technician
Ramos, Moises, Laboratory Auxiliary
Rodríguez, José, Research Technician
Romero, Edgar, Laboratory Auxiliary
Sosa, Paola, Junior Research Assistant

Experimental Stations and Greenhouses
Otazú, Victor,PhD, Head, Experimental Stations

Experimental Station-La Molina
Duarte, Roberto, Agronomist, Field/Greenhouse Supervisor
Alburqueque, Juan, Field Laborer
Barrientos, Herminio, Gardener
Callañupa, Francisco, Field Laborer
Castro Benito, Field Laborer
Cumpa, Jhony, Field Laborer
Domínguez, Augusto, Field Laborer
Espinoza, Israel, Gardener
Huarcaya, Alberto, Field Laborer
Lara, Carmen, Secretary
Lifoncio, Domingo, Field Laborer
Mena, Víctor, Greenhouse/Field Laborer
Merma, Luis, Greenhouse/Field Laborer
Noa, Fernando, Field Laborer
Olmedo, José, Driver (tractor)
Quino, Miguel, Experimental Station Assistant

Experimental Station - Huancayo
Frisancho, Rebeca, Agronomist, Exp. Station Supervisor
Ayquipa, Agustín, Driver
Blas, Walter, Mechanic
Cardoso, Reymundo, Field Laborer
Cipriano, Jorge, Field Laborer
Coz, Armando, Driver
Cristóbal, Juan, Field Laborer
Falcón, José, Cooking Attendant
Flores, Julián, Office Auxiliary
Gaspar, Demetrio, Field Laborer
Limaylla, Jenny, Administrative Assistant
Marín, Fernando, Maintenance Technician
Montes, Marco, Field Laborer
Piana, Vanna, Administrative Assistant
Porras, Jorge, Warehouse Assistant
Romero, Emeterio, Field/Greenhouse Auxiliary
Suárez, Julio, Field Laborer
Velasco, Diogardo, Field/Greenhouse Auxiliary

Field Research Support - San Ramón
Salazar, Jorge, Agronomist, Experimental Station Supervisor
Espinoza, Angel, Research Technician
Llacta, Eusebio, Field Laborer
Quispe, Héctor, Research Technician

3. Regional Offices

Latin America & the Caribbean (LAC)
Liaison Office, Quito, Ecuador
Devaux, Andre, Regional Operation Leader LAC
Alcocer, Julio, Field Laborer
Ayala, Sofía, Project Assistant
Babini, Claudia, LAC Project Coordinator
Calle, Tania, Research Assistant (Páramo Andino)
De Bièvre, Bert, Coordinator (Páramo Andino)
Espinoza, Jorge, Agronomist, Research Assistant
Jiménez, José, Network Management and Systems Maintenance
Lema, Martha, Field Laborer

Lutuala,Gabriel, Field Laborer
Oña, Marlene, Administrative Assistant
Pallo, Edwin, Agronomist, Research Assistant
Patiño, Segundo, Field Laborer
Potosí, Byron, Research Assistant
Reinoso, Lidia, Field and Greenhouse Laborer
Ruggiero, Susana, Training Advisor (Páramo Andino)
Suasti, David, Assistant Accountant
Taipe, Jaime, Research Assistant
Vinuesa, Marcelo, Research Technician
Yepez, Yolanda, Finance & Administrative Officer

Issandes Project

Devaux, André, Agronomist, Program Coordinator
Andrade, Jorge, Coordinator
Flores, Paola, Technical Assistant ,Bolivia
Kromann, Peter, Consultant, Ecuador
López, Gastón, Consultant, Regional
Manrique, Kurt, Agronomist, Intermediate Researcher, Peru
Ordinola, Miguel, Consultant, Peru
Ramirez, Melissa, Administrative Assistant
Rodríguez, Tatiana, Communication Officer
Rojas, Abel, Consultant, Bolivia
Vela, Ana María, Administrative Assistant, Peru
Velasco, Claudio, Coordinator in Bolivia

Sub-Saharan Africa (SSA)

Ghana Liaison Office

Carey, Ted, Regional Sweetpotato Breeder (Ghana Liaison Officer)
Akansake, Daniel, Assistant Sweepotato Breeder
Alhassan, Yusif, Assistant Sweetpotato Breeder
Dahoundo, Léandre, Sweetpotato and Yam Bean Technician
Obeng, Bio, Ebenezer, Assistant Sweetpotato Breeder
Owusu, Dramani, Field Laborer
Owusu-Mensah Eric, Food Scientist
Tiero, Kofi, Field Laborer
Tweneboah, Shadrack, Office and Laboratory Assistant
Zakariah, Muhammad-Awal, Finance /Administrative Officer

Sub-Saharan Africa - Nairobi, Kenya

Corning, Susan, Regional Operation Leader
Agili, Sammy, Breeder, Research Assistant
Atieli, William, Research Assistant
Atieno, Elly, Research Assistant
Barasa, Joel, Research Assistant
Borus, Dinah, Research Assistant
Claus, Aluda, Research Assistant
Gati, Jean Maurine, Scientific Assistant
Gatimu, Rosemary, Technician
Ghislain, Marc, Biotechnology Advisor/Head Applied Biotechnology Laboratory(Nairobi)
Gitona, Evelyn, Research Assistant
Grant, Frederick, Nutritionist Project Manager
Irukan, Quinata, Plant Laboratory Technician
Kioko, Christopher Musau, Executive Assistant/Office Manager
Labarta, Ricardo, Regional Economist
Lisutsa, Edelinda, Research Assistant
Low, Jan CIP-SSA SPHI Leader & SASHA Project Manager
Magembe, Eric, Plant Molecular Biologist
Maina, George, Driver
Malala, Timina, Research Assistant
Mambiri, Gilbert, Supply Chain Manager
Maunda, Milton, Driver
Mbabu, Adiel, RAC Project Manager
Mbiri, Daniel, Research Assistant
McEwan, Margaret, DONATA Project Leader
Mogere, Kefa, Regional Accountant
Muia, Faith, Research Assistant
Mulwa, Chalmers, Research Assistant,
Munyasia, Elizabeth, Office Assistant
Munyua, Hilda, Communication and Training Specialist
Muraguri, Daniel, Accountant
Musita, Peris, Research Assistant
Mwamba, Rael, Accountant,
Mwangi, Hellen, Research Assistant
Mwathi, Margaret, Plant Molecular Biologist
Namisi, Mildred, Research Assistant
Ndoho, Emily, Project Accounts Manager
Ngugi, Abigail, Research Assistant
Nyamasa, David, Potato Chain Leader
Obunga, Stephen, Accountants/Administrative Assistant
Ochieng, Bruce, Research Assistant
Odeny, Elijah, Driver,
Odhiambo, Patricia, Research Assistant
Ojwan Frank, Research and Office Assistant
Okuku, Haile Selassie, Monitoring and Evaluation Specialist
Onsongo, Wesely, Research Assistant
Onyango, Truphena, Research Assistant
Osikuku, George, Driver
Reuben, Anangwe, Messenger/Cleaner
Schulte-Geldermann Elmar, ICM Specialist,
Sindi, Kirimi, Impact Assessment Specialist,
Tonnang, Henri, Entomologist
Wabwire, Philis, Research Assistant
Wahonya, Olivia, Research Assistant
Wainaina, Priscila, Research Assistant/Agricultural Economist
Wamalwa, Lydia, Research Assistant
Wamalwa, Moses, Research Assistant
Wambugu, Stella, Research Assistant
Wanjala, Rose, Field Coordinator
Wanjohi, Luka, Research Information Systems and Data
Wegulo, Jerusa, Research Assistant
Zani, Naomi, HR Manager

Liaison Office, Kampala, Uganda

Mwanga Robert, Sweetpotato Breeder
Agaba, Joseph, Security Guard
Ameru, Martha, Administrative Assistant

Amony, Susan, Office Messenger/Cleaner
Heck, Simon, Deputy Manager for SP Program
Kakuhenzire, Rogers, Regional Potato Research Fellow
Kiirya, Stephen, Regional Project Manager
Kyalo, Gerald, Field Crops Agronomist
Mayanja, Sarah, DONATA Research Assistant
Migisa, Isaac, Driver
Najjingo, Janefrances, Accounts Assistant
Namanda, Sam, Seed Systems Scientist
Okobdi, Moses, Technician
Okonya, Joshua Sikhu, Entomology Assistant
Ssekyewa, Henry, Technician
Ssempa, Saamu, Research Assistant
Ssenyonjo Andrew, Quality Laboratory Technician
Tumwegamire, Silver, Breeder, Senior Assistant Breeder SSA
Tumwirize, Ronald, Driver
Wakulira, N. Rachel, Accountant

Liaison Office, Lilongwe, Malawi
Demo, Paul, Regional Potato Expert
Abidin, Erna, Sweetpotato Production Specialist (Malawi)
Chadzala, Tiwonge, Laboratory/Field Technical Assistant
Chifundo, Banda, Field Technical Assistant
Chimwala Lucius, Research Assistant
Chinoko, Gift, Laboratory/Field Technician
Chipembere, Elias, Mechanic/Driver,
Kachiwanda, Agnes, Accountant/Administrative Assistant
Kapalasa, Eliya, Market Chain Development Officer
Kazembe, John, Field Officer
Kumukumu, Ephrain, Driver/Office Assistant
Mvula Bakolo Thokpzani, Field Technical Assistant
Mvula, George, Accounts Assistant
Ndovi, John, Driver/Office Assistant
Njiwa, Godknows, Accountant/Administrative Assistant
Nyekanyeka, Ted, Monitoring and Evaluation Official
Phiri, Pearson, Field Technical Assistant

Liaison Office, Mozambique
Andrade, Maria, Sweetpotato Breeder and Seed Systems Specialist
Alvaro, Abilio dos Santos, Agronomist
Armando, Lourenco, Driver
Artur, Tanquene, Field Worker
Banze, Esmeralda, Green House Assistant
Chichualo, Alda, Field Worker
Chiconela, Luisa, Greenhouse Assistant
Chimica, Benvinda, Field Technician
Chivambo, Benildo, Field Technician
Daida, Oete, Accountant
Devuvane, Jose, Driver
Duzenta, Jorge, Field Worker
Fanheiro, Joaquin, Field Worker
Faria, Maria de Lourdes, Assistant Nutritionist
Furede, Antonio, Driver
Guambe, Abrahamo Alberto (Gardener)
Harahagazwe, Dieudonne, Regional Scientist on Crop Modeling
Jeque, Junior, Agroprocessing Technician,
Jorge, Fernandes J., Technician
Langa, Ligia, Administrative Officer
Langa, Pedro, Project Accounting Manager
Luabo Mariana, Laboratory and Greenhouse Supervisor
Mabui, Arlindo Lucas, Field Technician
Machel, Julieta, Field Worker
Mauariha, José Albino, Driver, Gaza
Mazive, Arnaldo, Field Worker
Mbambi, Estevao Mango, Monitoring and Evaluation Official
Menete, Zelia, Technology Transfer Specialist,
Mubetei, Silva, Field Worker
Munda, Eliah, Agronomist
Munguambe, Shelzia, Greenhouse Worker
Naico, Albino, Agricultural Economist
Ndimande, Fabiao, Field Worker
Nhanteme, Claudia, Field Worker
Nhanteme, Gloria, Field Worker
Peixe, Jacinta, Field Worker
Ricardo, José, Agronomics
Ruco, Amelia Ozias, Accountant and Administrator
Sitoe, Mario Francisco, Field Worker
Sondo, Luisa, Field Worker,
Sozinho, Alberto, Field Worker
Tembe, Rosa, Field Worker
Vasco, Julio, Driver
Viegas, Adilia, Virologist
Zaqueu, Antonio, Agronomist

Liaision Office, Huambo, Angola
Kowalski, Britta, Potato Agronomist, Project Leader
Alberto Diambo, Driver
Andrade, Caetano, Driver
Andrade, Paulo, Accountant and Administrative Assistant
Kupatia, Florencia, Principal Accountant and Administrative Assistant
Mambi Mango, Estevao, Monitoring and Evaluation Official
Tchipilica, Pedro, Driver

Liaison Office, Ethiopia
Schulz, Steffen, Country Liaison Officer
Abera, Negash, Driver
Abiyot Aragaw, Senior Research Assistant
Amele, Asrat, Potato Breeder
Andarsa Daniel, Driver
Asfaw, Frezer, Data Proccessing Assistant
Berhanu, Tewodros, Driver
Biruk, Girma, Junior Accountant
G/Medhin, Freweini, Administrative Clerk
Gebreselassie, Solomon, Monitoring & Evaluation Specialist
Haile Selassie, Azeb, Junior Accountant
Hailemariam, Gebrehiwot, Project Coordinator
Hemmen, Lemma, Accountant
Kalkidan Damte, Administrative Assistant
Kassa, Nebiat, Administrative Assistant

kidan, Abreha, Driver
Lemaga, Berga, Potato Agronomist
Negash, Berket, Driver
Tesfaye, Haile, Project Coordinator
Tsigie, Mahlete, Office and Finance Manager
Yemegnushal Mulu Zerga, Accountant

Liaison Office, Tanzania
Mkumbira, Jonathan, Seed Systems and Production Specialist
Chiwanga, Charles, Project Accounting Manager
Mulongo, Godfrey, RAC Regional Monitoring & Evaluation Specialist
Kakuhenzire, Rogers, Country Project Manager

Liaison Office Rwanda
Nshimiyimana, Jean Claude, Seed System Officer
Nyaminani, Aloys, Driver/SASHA Project

Liaison Office, Zambia
Mueller, Emily, Sweetpotato Crop Management Specialist
Lubinda, Mwala, Market and Impact Specialist
Mweemba, Chikandi, Driver
Namonje, Mary, Agronomic Research Assistant
Zimba, Nicholas, Project Acountant Manager

Regional Office : Asia, New Delhi, India
Parr, Julian, Regional Operation Leader
Arya, Sushma, Researcher
Barik, Anjan, Driver
Bharti, Ashok, Operations Manager
Kadian, Mohinder Singh, Potato Agronomist Regional Scientist
Kumar, Raj Barun, Administrative Assistant
Kumar, Vinod, Office Driver
Ram, Jag, Office Assistant
Shahid, Ali, Potato Pathologist
Sharma, Neeraj, Potato Breeder
Surjit, Vikraman, Scientist

Liaison Office, Bhubaneswar, India
Attaluri, Sreekanth, Programme Manager, GAINS Project

Project Office, Dhaka, Bangladesh
Begum Shawkat, Chief of Party
Abu Masud Tarafder, Finance Manager
Hossain Mohammad, Research Assistant
Hossain, Gazi, Driver
Ibrahim, Farhana, Administrative Assistant
Islam, Rafiqui, Monitoring and Evaluation Specialist
Mohidul Hasan, Field Co-ordinator
Rahman Ebna, Research Assistant
Siraz, MD, Office Messenger

Project Office, Kathmandu, Nepal
Sporleder, Marc, Entomologist, ICM Specialist

Liaison Office, Tashkent, Uzbekistan
Carli, Carlo, Potato Seed Production Specialist, Scientist Liaison Officer
Abdurakhmanov, Timur, Research Assistant
Khalikov, Durbek, Agronomist Assistant
Khegay, Eduard, Office Driver
Kuchkarova, Minavar, Office Attendant
Muzaffar, Aliev, Administrative Officer
Pak, Natalya, Translator
Yugay Tamara, Accountant
Yuldashev Firuz, Research Assistant, Potato Breeding

East and Southeast Asia and the Pacific (ESEAP)

Lembang, Indonesia
Albert Soplanit, Wamena Project Field Coordinator
Budhi, Prasetya, Program Officer
Isman, Project Interpreter
Kosay, Luther, Wamena Project Research Assistant
Nawawi, Kusye, Accountant
Satiman, Partono, Office Driver
Sukendra Mahalaya, Project Manager
Syahputra, Aris, Research Assistant
Tjintokohadi, Koko, Sweetpotato Breeder

Los Baños Liaison Office
Aquino, Mylene, Administrative Officer
Liu, Bin, Value Chain Specialist
Nadal, Marietta, Office Manager
Sister, Lorna, Project Specialist

CCCAP
Deputy Director General of CCCAP, Lu, Xioping
Forbes, Gregory, Pathologist
Gu, Jianmiao, Senior Administrative Officer
Hawke, Frank, Deputy Director of CCCAP
Liu, Yang, Translator

Liaison Office, Beijing, China
Chen Guangming, Field Laborer
Gao, Chong, Accountant
Hawke, Frank, Regional Operation Leader, ESEAP
Li, Simeng, Administrative Officer
Li, Wenjuan, Research Associate
Shi-an, Liu, Driver
Xie, Kaiyun, Agronomist
Nguyen, Thi-Tinh, Consultant, Animal Scientist, Liaison Scientist
Huy Chien Dao, Project Coordinator (Consultant)

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International Potato Center

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cip@cgiar.org

www.cipotato.org

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Joel Ranck

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Cecilia Lafosse

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International Potato Center • Av. La Molina 1895, La Molina • Apartado 1558 Lima 12, Perú.
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