



SCIENCE COUNCIL
CGIAR

Report of the
Sixth External Program
and Management
Review (EPMR) of the
International Potato Center
(CIP)

January 2008



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Report of the
Sixth External Program and
Management Review (EPMR) of
the International Potato Center
(CIP)

Review Panel: Edgardo Moscardi (Chair)
Malachy Akoroda
Jay Gopal
Donald McKerron
Julie Noolan
Carlos Pomareda
Alejandro Avedissian
(Consultant)

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THIS DOCUMENT CONTAINS:

- Extracts from the Summary Record of Proceedings of the Annual General Meeting 2007 (AGM07)
- Science Council Commentary
- CIP Response to the Sixth EPMR
- Transmittal letter and Report of the Panel on the Sixth CIP EPMR



Consultative Group on International Agricultural Research (CGIAR)

CGIAR Annual General Meeting, 2007 (AGM07)¹

Agenda Item 11. Evaluation

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11.c CIP EPMR

Conclusion and Decisions:

- The CGIAR endorsed the ExCo recommendations on the 6th CIP EPMR.
- The SC review on SWEPs was welcomed as a basis for a more in depth discussion on partnerships.

¹ Extract from the Summary record of Proceedings of Annual General Meeting, 6-7 December 2007

Science Council Commentary
on the Sixth External Program and Management Review (EPMR) of the International
Potato Centre (CIP)

September 2007

The Report of the 6th EPMR of CIP was discussed at the Eighth Meeting of the Science Council, at FAO HQ in Rome Italy. Panel Chair Edgardo Moscardi presented the main findings and recommendations of the Report, on behalf of the Review team. CIP Board Chair Jim Godfrey and CIP Director General Pamela Anderson responded on behalf of the Centre. The SC thanks the Panel for its comprehensive, frank and analytical assessment of the Centers research, management and governance. The review's report is well written, and the conclusions clearly documented, with a good strategic assessment.

The Panel finds CIP a Centre much improved since the last EPMR, committed to adapt itself to changes in its external environment. Based on recommendations from the 5th (2002) EPMR, CIP has undertaken a visioning exercise, drafted a Strategic Plan, and revised its research structure as a result. The Panel feels that although these efforts are commendable, CIP's increased reliance on restricted funding has drifted the Centre away from its core areas of research on potato and sweet potato, and has weakened its regional work, essential to ensure that the output-outcome interface is realized. The reality of restricted funding for the System, and the potential for poor management of such funds (as seen in some other Centers) calls for CIP to have a clearer and more "robust" set of research priorities, along with a business plan to maintain a clear focus on the core business of CIP.

The SC agrees with the Panel that the high positive correlation between potato/sweet potato production areas and poverty assures that, by concentrating its research work on these two commodities, CIP can achieve significant economic, employment, health and other beneficial impacts on the poor. The SC therefore views the Panel's 18 recommendations and 25 suggestions as intended to help CIP move forward in this direction. The SC is pleased to see that the Centre has responded positively to the review's major findings and the majority of its recommendations. CIP had originally accepted thirteen of the Panel's recommendations, rejected two, and in its initial response had "partially" accepted three, two of which pertain to CIP's convening role of the Global Mountain Program (GMP) and Urban Harvest (UH) SWEPs. The issue for the latter two recommendations is that in the Panel's and the SC's view, these SWEPs do not contribute to CIP's core research, nor does their work pertain to the Center's comparative advantage. UH, furthermore, does not contribute to the SP either in its research on IPGs or on the focus on key ecosystems. The other "partially" accepted recommendation refers to recommendation 1 on regional programs and partnerships, where CIP accepts rec. 1(i), that the Centre create a Division on Partnerships and Research on Partnerships, but does not accept rec. 1(ii), that CIP establish Directors for each of the Center's four regions. The SC notes that the CIAT EPMR also has recommendations about the planning and focus of regional research (i.e. the concept of "output lines ") that might be of relevance to CIP, and looks forward to seeing how CIP manages the regional aspect of its research to maintain a focus on IPG research.

CIP does not accept recommendation 11, that CIP "phase-out" the Agriculture and Human Health (AHH) Division and instead integrate AHH research into the work of the Center's other Divisions; and recommendation 12, that CIP disengage from convening CONDESAN. In developing the SPs, the SC was aware of the important link between food and health as a crosscutting issue. In the SC's view, the linkage is best achieved through partnership with the health sector, rather than by including health expertise within the CGIAR scientific capacity. Thus the SC agrees with the Panel's recommendation that CIP phase out the AHH Division, and suggests that CIP continue to undertake work on the food-health linkage in nutrition and in health issues from the misuse of pesticides in

potato/sweet potato systems, while seeking partners with expertise in the health sector.² In the case of CONDESAN, the SC agrees with the finding of the Panel (see below for details).

Based on the Panel's assessment and evidence provided in the report, the SC endorses the findings of the review and its 18 recommendations. Nevertheless, the SC understands that implementing the recommendations will have financial implications, which implies the need for careful financial planning, and that in disengaging from its hosting role of GMP, UH and CONDESAN, CIP will need to design appropriate exit strategies. Key issues addressed in the review are further discussed below.

Visioning and Strategic Planning

The SC shares the Panel's concern that CIP's recently finished Strategic Plan was developed to address MDGs, but does not relate to the CGIAR System Priorities (SP) explicitly. The SP was also developed in the context of the MDGs, but with rigor to focus on the priorities for the CGIAR. Thus the Panel notes that the process used by CIP broadens the scope of the strategic areas (over the SP), and that this may be at the risk of moving CIP away from its core business. The SC is also concerned that the Center's strategic planning exercise appears not to have made use of its own *ex-ante* impact assessment study (Fuglie 2005). The study underlines CIP's, "excessive" concentration of work in Latin America compared to the expected benefits to the poor, which is, according to the Panel, mainly donor-driven. The SC finds CIP's justification in this respect, that LAC has been an "IPG generator" for CIP, and that CIP "does a lot of its learning" in that region, not fully convincing. Furthermore, while this lack of congruence between regional research resource allocation and expected benefits raises some important strategic considerations, it would be important to confirm that spillovers have been explicitly captured in Fuglie's analysis, as their existence can vitiate use of a simple congruence approach in such comparisons.

Regarding CIP's new programmatic structure, it is not clear to the SC why CIP has moved away from a project mode of management. HQ and regional integration can be facilitated through projects operated in a matrix mode, and the two dimensions are not necessarily in conflict if this is managed appropriately.

The Panel's recommendation on regionalization is not accepted by CIP, in view of the history of this at the Centre. CIP now conceives Regional hubs as only intended to be outcome vehicles to the research done at HQ, and considers that the creation of Regional Directorates would "be problematic" and would constitute an "institutional step backwards". The SC wonders whether this represents another "back to the future" pendulum effect of successive EPMRs, as noted by the SC in other recent Centre EPMRs. In this context, it would have been informative if the panel had interviewed the immediately preceding DG. His views would have complemented those of CIP's founding DG, who was interviewed by the panel, and whose views the panel reports extensively in an annex to the report. The views of CIP's preceding DG would have had special weight, as the current EPMR covered a period when he was in office for some 70% of the time examined by the review.

Research Programs

The Panel criticizes social sciences work at CIP for ignoring the 2002 EPMR, and in particular for dropping adoption and priorities studies. As with other Centers, social science has lost focus and human resource capacity in recent years, especially economists. Because of the widespread problems in social science research in the CGIAR, the SC is planning a stripe review in 2008. It is anticipated that this review will provide insights that will also be useful for CIP. Thus the SC advises CIP to work

² Note there are examples of this linkage in the CGIAR, e.g. the work on human nutrition in the CP HarvestPlus and the study by Pingali et al that linked excessive pesticide use in rice to poor health. In this study, the health research was conducted by the medical sector.

closely with the SC Stripe review when it convenes the CCER on social science research recommended by the Panel.

The SC agrees with the Panel, that potatoes and sweet potatoes should be the focus of CIP's efforts on germplasm conservation and characterization, and that the characterization of 9 additional roots and tubers should concentrate on genetic diversity of germplasm, and should no longer involve breeders' traits of interest or nutritional and health related attributes; especially since, as claimed by the Panel, the discovery of useful bioactive ingredients and the additional fine work of characterization and evaluation probably needs more resources than currently available to CIP. Nevertheless, and notwithstanding CIP's explanation that lack of sufficient funds to speed-up the work on germplasm conservation and characterization is directly related to the drop in core funding, this remains an important concern for the SC, for CIP, and for the System as a whole. This work should be the heartland activity for CIP and for the System, and the SC concurs with the Panel about the importance of adequately resourcing this core business of the CGIAR.

The SC notes with some surprise the low adoption of CIP-derived varieties relative to the high number released. The SC suggests that the reasons for this need to be at the centre of its decision about the management of its regional research, such that: a) parental lines/varieties expressing superiority over existing cultivars, and possessing required regional attributes are developed; and b) the main research interventions for better outcomes are identified; c) NARS collaborative roles in this regional strategy are clarified; and, d) IPR issues are suitably addressed.

The Panel notes that NRM research uses and develops models, and that most of the outcomes will come from transfer of the models to researchers and policy makers. However, the SC sees that there are few examples of the latter, and so it will be important for CIP to demonstrate that its models are being adopted and used to generate on-the-ground impacts. Sometimes modelers so differentiate and protect their intellectual property and products that outcomes can be precluded, and therefore CIP's NRM strategy should address such IPG issues thoroughly. The fact that CONDESAN found that scaling up of accumulated NRM knowledge has had limited results, and that the benchmark sites approach has now been abandoned, gives the SC added cause for concern in this respect. Based on similar concerns, the 5th (2002) EPMR asked CIP to conduct a priority setting exercise for NRM, "using an appropriate methodology, to help focus the research agenda and develop a proper balance between process oriented and application oriented research...". CIP accepted the 2002 EPMR recommendation on NRM, claims that it has implemented it "incrementally", and commissioned an NRM CCER in early 2007 to obtain expert evaluation on progress made. However, when the Panel analyzed the ToR of the 2007 NRM CCER, it found, instead, that the CCER aimed to shed light on CIP's options and means of addressing the 2002 EPMR recommendation. Nevertheless, the Panel concurs with the CCER's conclusions that a priority-setting exercise for CIP's NRM research has not yet been conducted. Although it seems somewhat prescriptive for the Panel to indicate that the Centre should initiate the NRM priority-setting exercise without further delay, the SC understands that CIP has postponed this exercise for over five years now. The SC notes that the CIAT EPMR also provides good insights into the conduct of NRM research that may be of benefit to CIP.

Partnership programs

The CGIAR conducts its research with a wide array of partners and through different mechanisms, of which networks are one. There is a generic issue in judging when, after periods of successful activities, the needs of both the Centers and the partners are best met by handing leadership responsibilities to others. Regarding CIP's role in hosting CONDESAN, the Panel states that the Program and CIP "have no extant, significant and fruitful working relations", in spite of strong 2002 EPMR recommendations in this regard, that CONDESAN "is no longer contributing to CIP's core research", and that although CONDESAN "is a success", it has "gone beyond" CIP because it has stopped its work on benchmark

sites and has refocused its activities on “innovation systems” and water management, thus erasing the logic of CIP continuing to convene the program. The SC agrees with the Panel’s analysis and conclusions in this respect, reminds CIP that relinquishing hosting need not imply that no joint research is carried out, and hopes that the new Coordinator and Road Map strengthen CONDESAN and allow CIP to further engage in joint research with the program.

Governance and Management

The Panel’s assessment of CIP’s governance and management finds the Centre well governed, with responsive leadership and management, but with space to improve Board delegation of leadership responsibilities and replacement processes, as well as human and financial resource management.

CIP RESPONSE TO THE 6TH EXTERNAL PROGRAM AND MANAGEMENT REVIEW PANEL RECOMMENDATIONS

CIP Management and the CIP Board of Trustees considered the 6th External Program and Management Review (EPMR) at its third Board meeting of 2007 (20 July 2007).

We welcome the overall message from the EPMR Panel to the Centre that CIP is a well-governed, well-managed, and fiscally healthy Centre with an excellent program of research. And we are grateful for the dedicated work of the Panel to provide formal recommendations and advice that they feel conducive to strengthening and moving the Centre forward.

Specifically, we are pleased that the Panel has commended the CIP Vision and Strategic Planning exercise and that the Panel took particular note of the quality and relevance of the new geographical targeting, which highlights the actual and potential contributions of potato and sweet potato to poverty and hunger alleviation.

We are grateful that the Panel recognized that the Centre has developed excellent skills for networking and capacity building globally and regionally, and has gained a position as a “convening Centre”. We view the continued strengthening of partnerships – the 4th pillar of the CG System - to be a critical investment for what the Panel commends as CIP’s role as a “research partner for development”.

Finally, we acknowledge that the Panel feels the CIP Board has paid particular attention to governance issues and responsibilities, including Board training, Board procedures and inclusive decision-making processes. The Panel has also noted the Center’s growth in financial revenues and human resources during the period under review, and recognized that the Center’s cautious management during this period has resulted in a sound financial position.

In summary, of the 18 recommendations given to CIP by the 6th EPMR Panel, we accept 13 recommendations, partially accept 3 recommendations, and do not accept 2 recommendations. The CIP Board recognizes that several of the EPMR Recommendations will require substantial financial resources; we will count on support from our donor partners for proper implementation. Detailed responses to the Recommendations are provided in the following section.

RECOMMENDATIONS AND RESPONSES

CHAPTER 2 – CIP’S VISION EXERCISE AND STRATEGIC PLAN

#1. The Panel recommends that the current organizational structure be modified to include:

- (i) A Division on Partnership and Research on Partnerships, with the double mission of: (1) assisting CIP in the development of regional and country program partnerships specifically oriented to the mobilization of the Center’s main OUTPUTS; and (2) conducting research of an international-public-goods nature in the field of CGIAR System Priority 5C, Rural Institutions and their Governance, whose goal is: “To enhance the role that rural organizations and innovative institutional partnerships play in maximizing impact from agricultural research and in creating marketing platforms for smallholder producers.”
- (ii) An identifiable space for CIP’s Regions as Regional Programs – with true Regional Directors; (1) to design and implement regional and country partnerships, joint research activities in association with the Research Divisions, training programs and events; and (2) to realize the potential research spillovers among countries within and across Regions.

CIP Response: PARTIALLY ACCEPTED

Since 1992, when CIP had 8 Regional Programs and 8 Regional Directors who responded directly to the DG, the Centre has worked consciously to integrate CIP’s research and training

into one coherent Program, under the leadership of the Director of Research. Creating Regional Programs and Regional Directors would represent an institutional step backwards. Further, given the size of the Centre, we do not feel that it is sensible to move from 3 to 7 Directors (if each of the 4 Regional Leaders were converted into Director positions). However, we do understand and appreciate the spirit of Recommendation 1(ii) to be that we need to strengthen and empower our research and research leaders in the regions. We welcome and accept this advice. Some of that empowerment and increased freedom of operation will come through the implementation of advice and recommendations brought forth in other sections of this EPMR report.

- # 2. The Panel recommends that CIP develops a completed version of its Strategic Plan that includes the following considerations:
- (i) The relevant Millennium Development Goal targets to which CIP expects to make a contribution through its research of an international-public-goods nature should be clearly defined as “impact boundaries” in the typical sequence:
Inputs → outputs → outcomes → impacts
 - (ii) The Centre “output boundaries” should be clearly recaptured as being new potato, sweet potato and Andean Roots & Tubers technologies, plus the policies and institutional innovations related to these commodities.
 - (iii) An analysis of the needs and opportunities in the target areas *vis-à-vis* the CGIAR Science System Priorities should be conducted for a better alignment of CIP’s research portfolio.
 - (iv) Based on the needs and opportunities assessment of target areas (following CIP’s Pro-Poor Research and Development cycle) plus the available scientific information and impact assessment analyses, a more robust, cohesive and internally complementary set of priorities should be developed together with a business plan.

CIP Response: ACCEPTED

CHAPTER 3 – QUALITY, RELEVANCE AND IMPACTS OF CIP’S RESEARCH PROGRAM

- # 3. The Panel recommends that a CCER be commissioned immediately to review the Division’s current goals, research agenda and human resources; that the CCER’s recommendations be acted-upon immediately after the review’s completions; and that the CCER’s Terms of Reference:
- i. require that the Review produce a well-defined strategy, research agenda and needed human resources; and
 - ii. Consider the desirability of making this Division the integrator of social science research at CIP as a means to make further progress in the implementation of the 2002 EPMR recommendations 6, 7 and 8.

CIP Response: ACCEPTED

- # 4. The Panel recommends that CIP:
- i. Accelerate the characterization of the remaining genotypes in the Center’s gene bank, and that this be completed for all key traits;
 - ii. produce a compendium based on passport, morphological and molecular data and characterization results for key biotic and abiotic stresses; and
 - iii. Make this information widely available to all collaborating NARS to enable them to make choices of what may be needed to enhance their genotype selection and crossing schemes.

CIP Response: ACCEPTED

- # 5. The Panel recommends that CIP implement fully-fledged potato and sweet potato breeding activities at the regions so that parental lines/varieties expressing superiority over existing cultivars, and possessing required regional attributes are developed.

CIP Response: ACCEPTED

- # 6. The Panel recommends that CIP focus on developing breeding lines tolerant to these stresses [warming and water scarcity], by using biotechnological as well as conventional approaches to develop practical screening techniques.

CIP Response: ACCEPTED

- # 7. The Panel recommends that CIP make a full assessment of the actual and potential constraint to regional potato production posed by nematodes (PCN and free-living), and plan its research on integrated crop management accordingly.

CIP Response: ACCEPTED

- # 8. The Panel recommends that the Integrated Crop Management Division should take up the opportunity to investigate jointly options for drought avoidance and tolerance, jointly with other Divisions.

CIP Response: ACCEPTED

- # 9. The Panel recommends that CIP implement Recommendations 1 to 6, and Recommendation 8; (2) CIP implement Recommendation 7, with reservations; and (3) CIP not implement Recommendations 9 and 10 of the 2007 NRM CCER, unless these actions are dictated by the priority-setting exercise.

CIP Response: ACCEPTED

- # 10. The Panel recommends that: (1) CIP uses the 2007 NRM CCER's analysis and recommendations, and the Panel's reaction to them, as inputs to conduct a sounding priority setting exercise, as recommended by the 2002 EPMP; and (2) CIP initiates that exercise without further delay.

CIP Response: ACCEPTED

- # 11. The Panel recommends that: (1) the Agriculture and Human Health Division be phased out; more specifically, that agricultural-health interface activities (crop breeding for bio-fortification, reduction of pesticide exposure and the needed trans-disciplinary research to integrate agriculture and health) be carried out through joint research activities and promotion of partnerships (for output mobilization) under the leadership of CIP's other Research Divisions; and (2) CIP agrees the terms of the recommended "phasing out" with all concerned parties, taking into account projects underway and people involved.

CIP Response: NOT ACCEPTED

In the April 2007 meeting of the CGIAR Alliance, the new Science Council Chair, Dr. Roedolf Rabbinge, shared with the Alliance Board Chairs and DGs his vision of the seven stages of evolution that the CGIAR has moved through (1. Green Revolution breeding centres; 2. Addition of other agronomic disciplines (e.g. plant protection); 3. Addition of farming systems research and policy; 4. Addition of non-productivity goals (e.g. NRM); 5. Integration of levels (e.g. the eco-regional approach); 6. Global challenge programs; and 7. Collaboration with other Systems through partnership platforms). Dr. Rabbinge further indicated his belief that we are currently faced with the challenge of moving the System from the 6th to the 7th stage of evolution, i.e. to the challenge of creating partnerships with other R&D systems. We agree with this analysis and, within this evolutionary framework, view the new Research Division on Agriculture and Human Health as a critical vehicle to articulate the agriculture and human health research systems.

Historically, the sectors of agriculture and human health have been compartmentalized, both in research and in development efforts. Agricultural technology and interventions present opportunities to enhance human health and also present the challenge of minimizing the potential risks to human health caused by agricultural activities. Over the past decade, CIP has generated unique bodies of research outputs that are the direct result of building cross-sector, trans-disciplinary teams (agricultural scientists, economists, social scientists, public health specialists). For example, our research has documented that acute poisoning events from the use of highly toxic pesticides: 1) result in neurobehavioral/cognitive impairment that (in North America) would qualify farm workers for disability insurance; 2) affect not only the farm worker but the entire farm family, through various contamination pathways; 3) handicap decision-making capacity of the farm families; and 4) result in an estimated 15% reduction in farm productivity. Thus, we come to the counter-intuitive result that the application of these pesticides does not increase farm productivity, rather (via the human neural circuit) reduces productivity. Our understanding of increased farm productivity must move beyond the traditional frame of increased land/unit productivity. The intellectual argument is that explicit cross-sector research leads to understandings and insights that would not be gained by considering the “agriculture-human health interfaces” as by-products of crop breeding or integrated pest management research.

But, we are not over-dimensioning this investment. The establishment of Agriculture and Human Health as a distinct Division at CIP involves only a modest investment (4% of our total research budget). The creation of this Research Division validates the cross-sector approach and has allowed us to attract a public health epidemiologist (MD) as the Leader for the Research Division. The Division Leader functions as a bridge between agricultural researchers in the Centre and the international public health research system. As this Division moves forward, it is anticipated that much of the research will be carried out by linking with and mobilizing research talent in partner institutions.

- # 12. The Panel recommends that: (1) CIP disengages from convening CONDESAN; (2) the Board of CONDESAN, the Head of the Coordination Unit, and CIP, in coordination with the Alliance, discuss and agree on the exit strategy, and define a working plan for a three-year transition period; and (3) this working plan addresses the financial repercussions for CONDESAN and CIP.

CIP Response: NOT ACCEPTED

CIP understands and appreciates the conceptual framework proposed by the EP MR Panel, i.e. that the Partnership Programs should function as vehicles for mobilizing CIP’s research outputs in order to enhance outcomes and impacts, and that the Center’s strategic thinking should include the identification, creation and promotion of CIP Partnership Programs that serve this purpose. This is insightful and constructive advice. However, three of the current Partnership Programs are CGIAR partnership programs, known as System wide and Ecoregional Programs (SWEPs). The SWEPs were not conceptualized to serve any one particular Centre.

Recommendations 12, 13 and 14 of this EP MR Panel suggest that the CGIAR System needs further discussion and clarification on the function of the SWEPs within the System. CIP would welcome such a discussion at the System level and feels that until such a discussion is undertaken; it would not be responsible to disengage from the SWEPs that it hosts. Based on the same argument as provided in our response to Recommendation 11, i.e. the importance of evolving and strengthening CGIAR partnership platforms, we feel that the Alliance of CGIAR Centres should be working to increase the functionality of the SWEPs rather than disengage from them.

With specific reference to Recommendation 12, CIP hosts CONDESAN as a service to the CGIAR and the Andean research and development community. Since its establishment in 1993, the CONDESAN consortium has evolved into a diverse, regional R& D platform that links CIP and CIAT to 70 partners, including a network of 16 universities (from the north and south), the private sector, NGOs, governmental organizations and inter-governmental bodies. CONDESAN creates

synergies among CIP, CIAT and other CG programs including the Global Mountain Program, Initiative for Learning and Change (ILAC), and the Challenge Program on Food and Water, for which CONDESAN coordinates the Andean System of Basins. CONDESAN serves as a link between the CGIAR and UN systems through a significant GEF-funded project and a FAO-funded policy initiative. The UN-based Mountain Partnership (MP) has just decentralized their operations, designating CONDESAN as the Latin American hub for the MP.

Previously, the Science Council has commented: "In the context of providing solutions to sustainable development of an eco-region, which is a complex task, the contribution of CONDESAN to the progress of the Andean Eco-region deserves praise. The continued operation of the network will also provide CIP with feedback for maintaining a relevant research agenda in the future" (response to MTP 2006-2008). While both the CIP and CONDESAN Boards agree with the spirit of the EPMR panel's advice, i.e. that the partnership programs are critical vehicles for mobilizing CGIAR research outputs, and CONDESAN will continue to strengthen links with the CG Centres, this point by the Science Council is of equal value. The partnership programs should be seen as critical vehicles for providing feedback to the CGIAR Centres on the regional needs and opportunities.

To this end, as the partnership has matured, under the able leadership of the CONDESAN Board, the content of the Program has become more focused and even more relevant to needs and opportunities for sustainable socio-economic development of the Andean region. The new Road Map prioritizes R&D on management of water resources, and innovation. As this EPMR Panel points out in several other sections of the Report (and emphasizes in Recommendations 6 and 8) serious and systematic attention to water/climate issues will become increasingly important. The research and policy agenda that CONDESAN is developing, within the new Road Map, is fundamental to the production of potatoes and all other commodities that depend on the water supply from the Andean System of Basins, and is highly complementary to the basic research that is being carried out by CIP on breeding for abiotic stresses and enhancing system resilience. We will continue to support the evolution of this partnership platform and strengthen our research contributions to its agenda.

- # 13. The Panel recommends that: (1) CIP disengages as the convening Centre for the GMP; the Board of the GMP and CIP, in coordination with the Alliance, discuss and agree on an exit strategy and a working plan for a transition period; and (3) this working plan address the financial repercussions for the GMP and CIP.

CIP Response: PARTIALLY ACCEPTED

The mountain regions of the developing world are pockets of extreme poverty. The Global Mountain Program is the CGIAR's vehicle for adding value to the eco-regional mountain programs (CONDESAN, African Highlands Initiative, International Centre for Integrated Mountain Development) and linking the mountain research agenda to other international platforms and systems (Mountain Research Institute, Mountain Partnership, Mountain Forum, Adelboden Group, FAO Sustainable Agriculture and Rural Development in Mountains).

Prior to 2004 the GMP was a sub-project within CIP's Natural Resources Management Project - linked much too tightly and specifically to CIP. Since 2004, with the CIP restructuring that gave GMP visible status as a partnership program, the newly-recruited Program Coordinator has worked to forge more appropriate system wide linkages across regional programs and with international programs; the Program structure and linkages as well as the financial status are much-improved. Nonetheless, CIP agrees with the EPMR panel that the GMP research outputs and outcomes still need to be more clearly focused and defined. Steps forward are reflected in the 2008-2010 Medium Term Plan. We will make every effort to strengthen the research content and oversight of this Program.

- # 14. The Panel recommends that: (1) CIP disengages from being the convening Centre for the Urban Harvest SWEP; (2) CIP sets terms of disengagement in coordination with the

Alliance; and CIP assure donors to this Program that CIP will carry on its responsibilities until the completion of current project activities.

CIP Response: PARTIALLY ACCEPTED

The dichotomy between rural and urban is rapidly breaking down. New forms of multi-locational household arrangements are emerging that span rural and urban areas and combine a wide range of farm and non-farm livelihood strategies, which families are obliged to adopt in the 21st century developing world. Half of rural household income in Sub-Saharan Africa has been found now to derive from non-farm sources, with 15% from urban-sourced remittances. In some developing countries, as little as 10% of urban-based workers enjoy formal, stable employment and therefore must engage in diverse food security and income generation based livelihood strategies, including urban agriculture. Higher land prices in urban and peri-urban areas compared to rural areas, as well as unstable labour markets demand urban producers to seek to increase labour productivity and intensified land productivity. Urban and peri-urban systems such as horticulture and zero-grazed livestock are typically much more intense than rural systems. Increased labour productivity and intensified land productivity in urban systems will depend upon technologies that are not yet developed and available, highlighting the need for a greater contribution from urban and peri-urban oriented agricultural research.

The Urban Harvest Program does not naturally fit with any single CGIAR Centre. CIP hosts this SWEP to provide a CG partnership platform for early R& D investment in urban production systems and to improve understanding of urban poverty and rural-urban livelihood linkages. A number of developments inside and outside the CGIAR indicate a growing recognition of and adjustment to the Urbanizing Developing World and suggest that it would be a premature to disengage from Urban Harvest at this time:

- The recent decision by the World Bank to merge its vice-presidencies for sustainable rural development and urban development into a single vice-presidency on Sustainable Development;
- Traditional CGIAR donors (e.g. IDRC, Rockefeller Foundation) have strengthened their funding strategies to explicitly emphasize the urbanizing world;
- Historical CGIAR country partners (e.g. Egypt, Kenya) and regional networks (e.g. CORAF) have incorporated urban and peri-urban agricultural research and development issues within their programs; FARA strongly endorsed a meeting on urban horticulture as part of their 2007 annual meeting in Johannesburg;
- A clear consensus by stakeholders on the key role of peri-urban horticultural systems in the formulation of the new Challenge Program pre-proposal on High Value Crops that is under development.

There is a need to move this program forward, not disengage. CIP agrees with the EPMP Panel that the UH research outputs and outcomes must be strengthened. We propose to undertake a CCER of Urban Harvest, with ToRs that will include developing recommendations on clarification of the program's conceptual framework; identification of the critical, global research questions that should drive the Program forward; and better articulation of this CGIAR research Program with emerging R&D programs on urban and peri-urban production systems.

CHAPTER 5 – GOVERNANCE

- # 15. The Panel recommends that the Board pay urgent attention to the systematic rotation and replacement of Board positions, and to Board and Committee leadership and succession planning.

CIP Response: ACCEPTED

- # 16. The Panel recommends that the Board establish a systematic and comprehensive schedule of programmatic CCERs for the next five-year period and that funds be budgeted for this purpose.

CIP Response: ACCEPTED

CHAPTER 6 – MANAGEMENT AND FINANCE

17. The Panel recommends that: (1) CIP budget annually and explicitly, for Board approval, its capital expenditures, based on the Center's actual needs; and (2) that the Centre allocate the necessary funds to respond to the most urgent needs as identified in its recently prepared capital assessment plan.

CIP Response: ACCEPTED

18. The Panel recommends that CIP invest, without delay, in a commercially available ERP suitable to its requirements.

CIP Response: ACCEPTED

Edgardo Moscardi
Av. Chenaut 1957, 11B
Buenos Aires, Capital Federal, 1426
Argentina
Tel: (+54) 11 47781257;
Mobile: (+54) 91161375506
email: emoscardi@mac.com

15 July 2007

Dr. Roelof Rabbinge
Chair, Science Council
Consultative Group on International Agricultural Development
University Professor
Wageningen University
Lawickse Allee 11
6701 AN Wageningen
The Netherlands

Dr. Ren Wang
Director
Consultative Group on International Agricultural Development
The World Bank
1818 H Street, N.W.
Washington, D.C. 20433, USA

Dear Drs. Rabbinge and Wang,

On behalf of the Panel, I am pleased to transmit to you the Report of the Sixth External Program and Management Review (EPMR) of the International Potato Center (CIP). The Panel has reviewed CIP's performance in the four broad areas of: i) mission, strategy and priorities; ii) quality and relevance of the science; iii) effectiveness and efficiency of management (including governance and finance); and iv) accomplishments and impacts. We have also addressed the list of strategic issues received from the Science Council.

The Panel finds CIP a Center much improved since the last EPMR, but that relies too heavily on restricted funding. Today, CIP's agenda is almost entirely financed by so called "research contracts", contracts that often include resources for broad development endeavours that go beyond CIP's expertise and comparative advantage, affecting CIP's core work significantly. Committed to adapt itself to this change in its external environment, CIP has undertaken a Visioning Exercise, drafted a Strategic Plan, and revised its research structure as a result. And although these efforts are commendable, the Panel finds that CIP's Strategic Plan still lacks clear research priorities and needs a business plan. The Panel is convinced that the Center's new research structure, which reflects the Center's funding reality, has seriously limited, not increased, its ability to adjust to new situations and to take advantage of new opportunities. CIP has drifted away from its core areas of research

on potato and sweetpotato germplasm characterization and improvement, and has weakened its regional work, essential to ensure that the output-outcome inter-phase is realized.

The Panel finds CIP to be a well governed institute with responsive leadership and management. Under the dedicated leadership of the present Chair, the CIP Board has paid considerable attention to governance issues, procedures and training. However, it has not been fully effective in its delegation of leadership responsibilities and replacement processes. In addition, Center management needs to put more attention on human resource management and capital investments.

It is quite evident to the Panel that CIP has a clear and relevant future down the road. The high positive correlation between potato/sweetpotato production areas and poverty assures CIP that by concentrating its research work on these two commodities, significant economic, employment, health and other beneficial impacts on the poor can be realized. The eighteen recommendations that the Panel has put together as result of this EPMP should help CIP to move forward in this direction.

Finally, the Panel members join me in expressing our appreciation for the opportunity to participate in the challenging task of conducting this Review, and for the Science Council's support through Beatriz Avalos, Panel Secretary. We hope that the Report will be useful to CIP and its partners, as well as to the CGIAR.

Yours sincerely,

Edgardo Moscardi
Panel Chair
Sixth EPMP of CIP

**CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
SCIENCE COUNCIL AND CGIAR SECRETARIAT**

**Report of the
Sixth External Program and Management Review (EPMR)
of the International Potato Centre (CIP)**

Review Panel: Edgardo Moscardi (Chair)
Malachy Akoroda
Jay Gopal
Donald McKerron
Julie Noolan
Carlos Pomareda
Alejandro Avedissian (Consultant)

SCIENCE COUNCIL SECRETARIAT

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SUMMARY

During the last five years CIP has undergone a series of important changes that have affected significantly the life of the Centre. Soon after the 2002 EPMP, the Centre committed itself to produce the necessary changes to adapt to “corresponding changes” in its external environment. The high positive correlation between potato/sweet potato production areas and poverty assures CIP that by concentrating its research work on these two commodities, significant economic, employment, health and other beneficial impacts on the poor can be realized. Indeed, a recent ex-ante impact assessment study conducted by CIP shows that the Center’s research agenda offers significant opportunities to contribute to the Millennium Development Goals (MDGs) over the coming decades. It has been quite evident to the Panel that CIP has a clear and relevant future down the road.

The Panel has conducted the 6th EPMP addressing three dimensions of CIP’s work: (1) Vision and strategic directions (a view of future outputs and impacts); (2) research results (outputs, outcomes and impact), plus the quality and relevance of research (quality of inputs, research processes and outputs); and (3) governance and management efficiency (converting inputs into outputs). In order to address these three dimensions of CIP’s work comprehensively and rigorously, the Panel met with Board members, scientists, administrators, as well as a range of stakeholders, both at headquarters and site visits to several countries within the four CIP’s regions.

Vision and Strategic Planning

This Panel’s recommendations regarding the Centre Vision and Strategic Plan focus on the following issues: First, they address the additional objectives from the Visioning exercise, which, in the Panel’s view, are outside CIP’s core comparative advantages. Next, they refer to CIP’s new organizational structure, which is based on Research Divisions and Partnership Programs, which resulted from the Vision exercise, and which substituted the previous “project” based research structure). In the Panel’s view, CIP needs to open a space for partnerships and research on partnerships, and to empower CIP’s regions to assure that the output-outcome inter-phase is realized. Lastly, recommendations address CIP’s Strategic Plan, which still needs to be completed, among other things, by integrating a business plan.

Research Programs

The Centre research programs include work on germplasm conservation and characterization; crop improvement and protection; integrated crop and natural resource management; agriculture and human health; social sciences; and urban and peri-urban agriculture.

This Panel’s recommendations regard CIP’s main technology supply factory (germplasm-breeding-protection), on which the Centre has established a clear scientific and institutional identity. They address the need for CIP to speed up germplasm characterization, to implement full-fledged potato and sweet potato breeding activities at the regions, to give more emphasis to water scarcity and water and temperature stress through breeding and crop protection; and to assess the problem of nematodes as a potential constraint to potato production.

CIP’s Natural Resource Management (NRM) work is carried out by three units: The NRM Division, CONDESAN and the Global Mountain Program (GMP). A CCER conducted in early

2007 for the NRM Division to address questions of critical mass, conceptual framework and linkages to CIP's commodity research, recommended the need to develop a "road map" and a "tool kit". After reviewing the CCER, *the Panel recommends* that CIP use the CCER's analysis as an input to conduct the sound priority-setting exercise recommended by the 2002 EPMR. Regarding CONDESAN and the GPM, two ecoregional System Wide Programs (SWEPs) currently convened by CIP, the Panel found no evidence of any significant contribution to CIP's research outputs. Based on this, the Panel has recommended that CIP disengage from convening both Programs.

CIP's Agriculture and Health program seeks to promote the agriculture-health inter-phase through activities such as crop breeding for bio-fortification and pesticide reduction. This program constitutes one of CIP's new Research Divisions, developed from the Vision exercise. Since the value added of this Division is negligible due to the absence of research outputs of an IPG nature, and part of its work is outside CIP's core comparative advantage, the Panel has recommended that this Division be phased-out and that its relevant agriculture and health research activities be mainstreamed into the work of other Divisions related to human health.

The Social Sciences program at CIP has traditionally been integrated with biological and physical scientists. Relevant work of this program has been related to: economic trends affecting potatoes and sweet potatoes, adoption and diffusion of CIP-related technologies, science and technology policy issues pertinent to potatoes and sweet potatoes in the developing countries, institutional social science capacities in NARS, and impact assessment of new technologies on different outcomes. In 2004, CIP dropped its previous "project" research structure, where some of the social scientists were placed, and designed an Impact Enhancement Division. In the opinion of the Panel, during the last years the Social Science program at CIP has lost focus and the necessary human resource capacity. The Panel recommendation is that a CCER be commissioned to review this program's current goals, research agenda and staffing.

CIP's initiative on urban and peri-urban agriculture, housed by the Urban Harvest system-wide program convened by CIP, is supposed to be the strategy to address the development of "resilient, sustainable urban livelihood systems" to contribute to "improved lives of slum dwellers", as one of the MDG targets selected by CIP as part of the Visioning exercise. In the opinion of the Panel, the Urban Harvest program is neither complementing CIP's main outputs nor is it addressing any of the CGIAR system priorities. Thus, *the Panel recommends* that CIP disengages from being the convening Centre for the Urban Harvest SWEP.

Governance, Management and Finance

The Center's policies, vision, mission and strategic directions, aka "governance", are within the work of the BoT charged as well with the fiduciary responsibility of the Center's work. The Panel has examined Board responsibilities according to the newly revised CGIAR Roles, as in the document "Responsibilities and Accountability of Centre Boards", the report on "Stripe Review of Corporate Governance of CGIAR Centres", and the 2005 CCER on Financial Systems, Reporting and Controls.

During the time of the review, CIP experienced incumbent changes in both the Board Chair and the Director General positions. The size of the BoT was reduced by one position and the number of Board meetings was increased from two to four (two face-to-face and two via teleconference).

The Panel recommendations on Governance were the following: urgent attention to the systematic rotation and replacement of Board positions, establishing a comprehensive schedule of programmatic CCERs, appropriate budgeting (with Board approval) of capital expenditures, and investing in a commercially available ERP (enterprise resource planning) to enable both research and corporative services to work more efficiently and accurately.

RECOMMENDATIONS

Visioning and Strategic Planning

Recommendation 1. Because of the need to improve the effectiveness, transparency and visibility of the CIP program structure components, *the Panel recommends* that the current organizational structure be modified to include:

- i. A Division on Partnership and Research on Partnerships, with the double mission of: (1) assisting CIP in the development of regional and country program partnerships specifically oriented to the mobilization of the Center's main OUTPUTS; and (2) conducting research of an international-public-goods nature in the field of CIGAR System Priority 5C, Rural Institutions and their Governance, whose goal is: "To enhance the role that rural organizations and innovative institutional partnerships play in maximizing impact from agricultural research and in creating marketing platforms for smallholder producers." The additional work needed to complete the implementation of the 2002 PERM recommendation regarding the need to formulate a strategy for engaging in different types of partnerships (See Chapter IV, Crosscutting Issues), should be developed under this new Division.
- ii. An identifiable space for CIP's Regions as Regional Programs - with true Regional Directors: (1) to design and implement regional and country partnerships, joint research activities in association with the Research Divisions, training programs and events; and (2) to realize the potential research spillovers among countries within and across Regions.

Recommendation 2. Because CIP must have in place a sound Strategic Plan to guide the Centre through global changes in the policy and science environments, and to make the Center's direction clearer in terms of research priorities in response to the needs of the poor potato and sweet potato producers in the identified target areas, *the Panel recommends* that CIP develop a completed version of its Strategic Plan, that includes the following considerations:

- i. The relevant Millennium Development Goal targets to which CIP expects to make a contribution through its research of an international-public-goods nature should be clearly defined as "impact boundaries" in the typical sequence: inputs → outputs → outcomes → impacts.
- ii. The Centre "output boundaries" should be clearly recaptured as being new potato, sweet potato and Andean Roots & Tubers technologies, plus the policies and institutional innovations related to these commodities.
- iii. An analysis of the needs and opportunities in the target areas *vis-à-vis* the CGIAR Science System Priorities should be conducted for a better alignment of CIP's research portfolio.

- iv. Based on the needs and opportunities assessment of target areas (following CIP's Pro-Poor Research and Development cycle) plus the available scientific information and impact assessment analyses, a more robust, cohesive and internally complementary set of priorities should be developed together with a business plan.

Research and Partnership Programs

Recommendation 3. Because the Panel has observed that the work of the Impact Enhancement Division lacks a sound strategy on socio-economics at CIP and the appropriate human resource capacity to carry out quality research on the Division's stated goals, *the Panel recommends* that a CCER be commissioned immediately to review the Division's current goals, research agenda and human resources; that the CCER's recommendations be acted-upon immediately after the review's completion; and that the CCER's Terms of Reference:

- i. require that the Review produce a well-defined strategy, research agenda and needed human resources; and
- ii. Consider the desirability of making this Division the integrator of social science research at CIP as a means to make further progress in the implementation of the 2002 EPMR recommendations 6, 7 and 8.

Recommendation 4. Because the characterization of genetic resources is important for its utilization in the breeding program, and because this process has been relatively slow at CIP, *the Panel recommends* that CIP:

- i. Accelerate the characterization of the remaining genotypes in the Center's gene bank, and that this be completed for all key traits;
- ii. produce a compendium based on passport, morphological and molecular data and characterization results for key biotic and abiotic stresses; and
- iii. Make this information widely available to all collaborating NARS to enable them to make choices of what may be needed to enhance their genotype selection and crossing schemes.

Recommendation 5. Because of the low adoption of CIP-derived varieties relative to the high number released, *the Panel recommends* that CIP implement full-fledged potato and sweet potato breeding activities at the regions so that parental lines/varieties expressing superiority over existing cultivars, and possessing required regional attributes are developed.

Recommendation 6. Because warming and water scarcity are perceived as increasing constraints to sustainable agriculture as a result of climate change, *the Panel recommends* that CIP focus on developing breeding lines tolerant to these stresses, by using biotechnological as well as conventional approaches to develop practical screening techniques.

Recommendation 7. Because nematodes present a threat recognized in at least some of the Regions, *the Panel recommends* that CIP make a full assessment of the actual and potential constraint to regional potato production posed by nematodes (PCN and free-living), and plan its research on integrated crop management accordingly.

Recommendation 8. Because water stress is the abiotic factor that presents the most serious and common depressant of yields of potatoes and sweet potatoes, and because the solution to the

problem requires an integrated approach from genotype to landscape, *the Panel recommends* that the Integrated Crop Management Division take up the opportunity to investigate options for drought avoidance and tolerance, jointly with other Divisions.

Recommendation 9. Because the Panel analyzed the Terms of Reference of the 2007 NRM CCER, and is of the opinion that they were designed to shed light on CIP's options and means of addressing recommendation # 3 of the Center's 2002 EPMR, and because the Panel studied the report of the review, *the Panel recommends* that: (1) CIP implement Recommendations 1 to 6, and Recommendation 8; (2) CIP implement Recommendation 7, with reservations; and (3) CIP not implement Recommendations 9 and 10 of the 2007 NRM CCER, unless these actions are dictated by the priority-setting exercise. (The Panel's reactions to the recommendations of the 2007 NRM CCER are described in detail in Annex 8.)

Recommendation 10. Because the development of greater synergies between CIP's commodity research and its NRM work would be likely to strengthen the overall coherence of CIP's research agenda, and given the need for CIP to improve the focus of its NRM research agenda and to define impact pathways to NRM research outputs, *the Panel recommends* that: (1) CIP use the 2007 NRM CCER's analysis and recommendations, and the Panel's reactions to them, as inputs to conduct a sound priority setting exercise, as recommended by the 2002 EPMR; and (2) CIP initiate that exercise without further delay.

Recommendation 11. Because CIP needs to concentrate on fulfilling its mission, by developing disease/pest resistant and more nutritious potato and sweet potato varieties, as well as complementary crop protection and management practices, and because it needs to promote more integration among the Research Divisions responsible for the Center's research outputs, *the Panel recommends* that: (1) the Agriculture and Health Division be phased out; more specifically, that agricultural-health interface activities (crop breeding for bio-fortification, reduction of pesticide exposure and the needed trans-disciplinary research to integrate agriculture and health) be carried out through joint research activities and promotion of partnerships (for output mobilization) under the leadership of CIP's other Research Divisions; and (2) CIP agrees the terms of the recommended "phasing out" with all concerned parties, taking into account projects underway and people involved.

Recommendation 12. Because CONDESAN and CIP have no extant, significant and fruitful working relations, in spite of strong previous recommendations on this regard, CONDESAN is no longer contributing to CIP's research outputs. Furthermore, current CONDESAN achievements are due mainly to its own efforts. Therefore, *the Panel recommends* that: (1) CIP disengages from convening CONDESAN; (2) the Board of CONDESAN, the Head of the Coordination Unit, and CIP, in coordination with the Alliance, discusses and agree on the exit strategy, and define a working plan for a three-year transition period; and (3) this working plan addresses the financial repercussions for CONDESAN and CIP.

Recommendation 13. Because, since its creation in 1997, the GMP has concentrated on addressing policies, understanding processes, and analyzing technology "offers" from CGIAR for mountain people, the Program makes a negligible contribution to CIP's core research outputs. Therefore, *the Panel recommends* that: (1) CIP disengages as the convening Centre for the GM; (2) the Board of the GMP and CIP, in coordination with the Alliance, discuss and agree on an exit strategy and a working plan for a transition period; and (3) this working plan address the financial repercussions for the GMP and CIP.

Recommendation 14. Because the research challenges to improve the livelihood of poor potato and sweet potato farmers are still of great importance for CIP, working to alleviate the poverty of poor urban dwellers distracts CIP's resources away from the rural poor. Furthermore, the Urban Harvest Program is neither complementing CIP's main outputs nor addressing the CGIAR System Priorities, as expected from SWEPS. Therefore, *the Panel recommends* that: (1) CIP disengages from being the convening Centre for the Urban Harvest SWEPS; (2) CIP set the terms of disengagement in coordination with the Alliance; and that CIP assure donors to this Program that CIP will carry on its responsibilities until the completion of current project activities.

Governance

Recommendation 15. Because the Board has not followed its Statutes regarding length of term limitations for some of its members, and has not been fully effective in its delegation of leadership responsibilities and replacement processes, *the Panel recommends* that the Board pay urgent attention to the systematic rotation and replacement of Board positions, and to Board and Committee leadership and succession planning.

Recommendation 16. Because of the shift to smaller governance Boards which need mechanisms to provide oversight to a broad scientific remit, and the need for CCERs as a part of the EPMP process, *the Panel recommends* that the Board establish a systematic and comprehensive schedule of programmatic CCERs for the next five-year period, and that funds be budgeted for this purpose.

Management and Finance

Recommendation 17. Because of the inadequacy of CIP's practice of funding capital expenditures only to the level of its annual depreciation cost, *the Panel recommends* that: (1) CIP budget annually and explicitly, for Board approval, its capital expenditures, based on the Center's actual needs; and (2) that the Centre allocate the necessary funds to respond to the most urgent needs as identified in its recently prepared capital assessment plan.

Recommendation 18. Because of the need to enable both research and corporate service staff to work efficiently and accurately, *the Panel recommends* that CIP invest, without further delay, in a commercially available ERP suitable to its requirements.