**Center Commissioned External Review (CCER) of**

**ICARDA’s Research on Food Legumes**

**Terms of Reference, Proposed Panel and Timetable**

**1. Terms of Reference**

ICARDA has the global mandate for the improvement of four food legumes – lentil, kabuli chickpea, faba bean and grasspea. In light of the recommendations of the External Program and Management Review (EPMR) of 2006 and the CCER on Integrated Gene Management in 2005, and the development of ICARDA new Strategic Plan 2007-2016, the Center wishes to assess and review the progress made in its food legumes research and seek advice for future directions.

The Center is therefore commissioning an external review of its research program in food legumes that would address the aspects listed below and give recommendations for future improvement.

The review is expected to consider the entire scope of ICARDA’s food legumes research for development: from plant genetic resources (PGR) conservation, evaluation and utilization, though plant breeding and crop management, to transfer to and adoption by farmers and its ultimate impact in the context of global food security and poverty alleviation.

The Review Panel is expected to develop a rigorous approach to conducting the review and a section on the methodology used should be included in the report. The Panel’s final report shall include a summary of its findings together with its principal recommendations.

The review is expected to examine, through available documentation, meetings with Center staff and NARS partners, and visits to field research activities and outreach programs, the following issues and developments in ICARDA’s food legume research program since 2005:

***Research aspects***

1. What is ICARDA’s progress in addressing the recommendations of the 2006 EPMR and the 2005 CCER on Integrated Gene Management with respect to lentil, kabuli chickpea and faba bean?
2. Does the research program address the new directions and overall objectives adopted in the Center’s Strategic Plan 2007-2016?
3. Are the program’s research activities consistent with the CGIAR’s systemwide research priorities and what is their relevance to the new research agenda and program structure of the CGIAR System?
4. In light of the recent food crisis, what is the role of legumes in global food security and how may this change over time? In this context, does ICARDA’s food legumes research program address the priorities of national governments and agricultural research programs (NARS) in the dry areas? Are ICARDA’s current research priorities for food legumes appropriate in addressing the constraints to increased productivity of these crops?
5. Is food legume research conducted within a production systems approach? Are there system-specific aspects of legume production within the farming system and farmer practices that demand a specific crop improvement strategy, which is identified and that could facilitate technology diffusion particularly among small scale producers?
6. Is the Center’s food legumes research multidisciplinary and participatory? To what extent are socio-economic and policy aspects incorporated to improve research targeting, adoption and impact? To what extent is the research designed and conducted within a participatory framework with all partners and stakeholders including farmers? Are specific gender aspects associated with legume production, processing and consumption considered?
7. What are the implications of climate change for food legume production? Should ICARDA’s food legume research be modified to address these challenges and, if yes, how?
8. What is the quality of the science applied in the research program, and are there approaches that should be newly implemented or expanded?
9. Should research on biological nitrogen fixation in food legumes be resumed?
10. How important is the need to strengthen research on anti-nutritional factors?
11. Is the research agenda addressing major pests and diseases affecting pulse production?
12. How effective are the activities of the Center’s Seed Production Section in supporting both ICARDA’s breeding program, and in assisting to transfer ICARDA’s outputs to farmers’ fields?
13. What is the scope and effectiveness of ICARDA’s food legume PGR activities, including both *ex situ* and *in situ* approaches to agrobiodiversity conservation and utilization, plant genetic resource documentation and characterization, and the impact of the new International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) on conservation and exchange?
14. To what extent is research staff up to date with, and have the required capacity in, the latest research methods and technologies? Does the current mix of research staff provide the capacity needed to carry out the targeted activities?
15. Are the food legume technologies, including improved germplasm, developed by ICARDA, widely adopted by farmers and, if not, are the reasons known? Are appropriate routes to improving the adoption of these technologies being explored and followed? How is the feedback from the field on the constraints to legume productivity incorporated into the research priorities of the program?
16. What is the actual and potential impact emanating from food legume research and has it been adequately measured and published?
17. Has ICARDA clearly established its global position as an international Center of Excellence in lentil and faba bean research?
18. What research areas ICARDA should focus on more in the near future, and in the longer term?
19. Are there regions and/or agro-ecosystems in dry areas that require more attention and focus?

***Coordination and Partnerships***

1. Considering the balance of funding, globally, between the private and public sectors for R&D of food legumes, compared to other major crops, is ICARDA’s food legumes research strategically well positioned in terms of research priorities, resources and partnerships?
2. Are current partnerships, including those with other CGIAR centers (e.g. ICRISAT for chickpea), advanced research institutions, national programs, civil society and the private sector, appropriate for advancing ICARDA’s research in food legume improvement?
3. Is the research continuum, i.e. the relationship between strategic research at ICARDA’s headquarters and collaborative research with NARS, adequate and effective? Are the research planning and coordination mechanisms between ICARDA and NARS partners sufficient and effective in maintaining the research continuum?
4. Are the Center’s activities in institutional and human capacity development, and in strengthening regional cooperation, in food legumes improvement adequate?
5. Is the Center’s relationship and advocacy with key national policymakers and NARS leaders effective in promoting the adoption of improved food legume production systems?

***Program resources and management***

1. Are the program’s research resources (personnel, equipment and financial resources) adequate, and are they utilized and managed efficiently and effectively?
2. Are project management, monitoring and reporting arrangements effective and efficient?
3. Is the program successful in mobilizing funding and are resource mobilization efforts adequate?

**2. Proposed list of Panel Members:**

*Genetics and breeding:*

Dr. Frederick J. Muehlbauer, Grain Legume Genetics Physiology Research Collaborator, USDA/Washington State University, Pullman, Washington, USA (Panel Chair)

Dr. Ana Maria Torres, IFAPA-CICE, Spain

*Cropping systems & dryland agriculture:*

Dr. Masood Ali, Ex-Director, Indian Institute of Pulses, ICAR, Kanpur, India

*Resource Persons:*

*Socio-economics:* Dr. Pramod Kumar Joshi, Director, National Academy of Agricultural Research Management (NAARM), Hyderabad, India; former Director, National Centre for Agricultural Economics & Policy Research (NCAP), New Delhi, India

*Mechanization of legume crops:* Dr. Bassam Snobar, Professor of Agricultural Engineering, University of Jordan

**3. Proposed Timetable**

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| 9-27 May 2010 | Panel carries out review at Tel Hadya. A detailed program for the presentations, meetings, and visits to outreach sites and NARS will be developed in consultation with the Panel chair. |
| 27 May 2010 | Panel presents preliminary findings to ICARDA management and staff |
| 7 June 2010 | Panel submits draft report to ICARDA management |
| 14 June 2010 | ICARDA submits to the Panel chair “factual” corrections and remarks |
| 21 June 2010 | Panel submits final report to ICARDA |
| 21-28 June 2010 | Review of final report and development of draft response. Draft response reviewed by ICARDA Management Committee |
| 5 July 2010  BOT48 2010 | Center’s draft response finalized for submission to Board  Board of Trustees reviews the report and the Center’s draft response. |