

Review of CRP4: Agriculture, Nutrition and Health

Criteria applied

Strategic coherence and clarity of programme objectives

Delivery focus and plausibility of impact

Quality of science

Quality of research and development partners and partnership management

Appropriateness and efficiency of programme management

Clear accountability and financial soundness, and efficiency of governance

General observations

CRP4 is a proposal for an ambitious multidisciplinary research programme that will bring together researchers that have been trained to work in different research cultures and for whom there may be explicit as well as subtle differences in the way research is performed. While the concept behind the proposal is to overcome these differences and, even more so, create a merger that optimally benefits from potential synergies, there are many underlying assumptions that may or may not work out in practice and, if not, can undermine the success of this programme.

The proposal consists of five components, three of which are basic research areas aimed at strengthening the evidence base on the linkages between agriculture, health and nutrition, while the last two are operational by nature and study ways to integrate at both the operational capacity and the policy levels.

The proposal draws on lessons learned from singular experiences in the past, where individual CGIAR centres embarked on agriculture/nutrition/health studies of a narrow scope, usually pulling together certain agroecosystems or agricultural practices with very specific public health problems. The current proposal lifts the concept to a much higher policy level, giving partners working in each of the five components to generate new knowledge over a range of issues on the agriculture, nutrition and health interface which will then feed into the integration process at operational and policy levels.

The current proposal can be further strengthened by clarifying the continuum it is addressing – in particular with respect to the first three components which now seem to be made up of two with a nutrition and one with a health focus. The second “nutrition” component (biofortification) has in fact a huge public health potential - and it is also the one component for

which major activities have been under implementation for a while. By expanding the public health perspective of this component (in particular, by adding public health indicators for the outcome) this component could well bridge the gap between the health and nutrition components and convincingly present the research presented for practical reasons in three components as part of one continuum.. This would also allow for a more balanced translation of the basic research findings into the integrating components of the proposals, components 4 and 5.

The proposal is clear in identifying the interfaces between agriculture, nutrition and health and is consistent (with a few exceptions) in maintaining a focus on the link flowing in the direction from agriculture to nutrition and health. This comment does not imply that the impact of malnutrition and ill-health on agricultural production systems is not important, it simply wants to confirm that for this CRP to remain manageable and output-oriented, it is best for the moment to focus on the links in one single direction.

There are several processes going on in agriculture, nutrition and health that reflect new thinking about flexible, adaptive management approaches. In agriculture and nutrition these are the value chains that maximize the benefits of agricultural production and good nutrition policies and practice. In health it is the integrate health risk assessment and incremental health risk management approach that can be found in the official WHO guidance on food safety, drinking-water quality and the safe use of wastewater. The use of these parallel concepts can be expanded further in the proposal to exemplify the commonalities between the disciplines and sectors.

Certain concepts may need further strengthening – one of these is health impact assessment, which provides a systematic approach to identifying and investigating the links between agricultural development and human health (including nutrition) in a comprehensive, yet contextualized way. It not only assists in predicting health impacts of planned agricultural development, but its approach can also be used to “x-ray” existing agricultural production systems for their health implications, both risks and opportunities.

The proposal needs further strengthening in terms of the potential and needs for partnerships. A more detailed landscaping of the public health research world would be helpful, to make sure the opportunities for partnering are used to the maximum, and to also better define the roles and responsibilities of various partners, and their geographical scope.

Ample attention is given to the communication strategies that could ensure that information generated is properly divulged. In this connection to issues need greater emphasis: the development of nutrition and health messages for the farming communities through agricultural extension workers, and the proper targeting of scientific articles to audiences that can use the information to develop, strengthen or harmonize policies. There is little point in having the outcome of a joint agriculture/health research project be published in the biomedical literature,

which will perhaps serve the biomedical researchers, but will be of no use in supporting change in agricultural policy.

Management structures for this project have been well considered and combine managerial robustness without becoming overly bureaucratic. Their main aim is to ensure a permanent dialogue between the various disciplines. The budget is in fact on the modest side considering the costs incurred by research of this type, certainly in a contextual, operational approach as foreseen for components 1, 2 and 3.

Clarity and relevance of the expected outcomes

The expected outcomes (and the process leading to them) have been clearly stated and are mostly relevant to the problematique of agriculture-associated health and nutrition issues.

However, the relevance of one particular subcomponent (Subcomponent 35 occupational health) can be questioned and it is this reviewer's recommendation that it is preferable to suppress this sub-component until a later date. The way the sub-component has been elaborated also shows it may be premature in the context of this current proposal.

The scientific quality of the conceptual framework, given the problem being addressed

All research questions asked are to the point and relevant, with the exception of the research questions under component 2 bio-fortification (page 30) – this reviewer would recommend to re-word the two bullet points as

- ◆ What are the determinants of farmer adoption of biofortified varieties in different settings?
- ◆ What will be the incentives and disincentives for consumers to purchase/eat the biofortified varieties?

Whether the approach and methods proposed are sound

Throughout the document, the approaches and methods proposed are sound and based on good practice and lessons learned from the past.

Whether this approach is likely to lead to greater coherence and coordination among partners and, thereby, more robust results and outcomes

Provided an effort is made to further define the options for health research partners in this endeavour, the proposed structure and management approach are very likely to lead to greater

coherence and coordination. In parts of the proposal's introduction a clearer distinction can be made between the concept of multi-disciplinary and intersectoral (which sometimes seem to be used interchangeably or in tandem). One operates at the research level and the other at the governance level.

In this connection, it might be useful to explore the role of National Councils of Science and Technology (which exist in many countries, certainly in many Latin-American countries) which is the place where scientists from different disciplines meet and where the research envisaged in this proposal could be promoted.

What are the innovative elements and unique features of the proposal?

Innovation comes from the fact that this multidisciplinary approach is now lifted to a higher policy level in the CGIAR and thereby departs from the single-centre ad hoc approaches of the past. Therefore there is a great potential of a sustained involvement of the CGIAR in Agriculture, Nutrition and Health research and this is important because a lot of the research will have to be operated in a long time frame. It is unique in that it takes concepts such as Ecosystem Health and One World One Health plus the existing HarvestPlus and Agrosalud initiatives all into one framework.

Whether the impact pathway is coherent and convincing and integrates the most appropriate partners

All impact pathways are coherent and clear, but as already pointed out, for the health side partnership options may be further strengthened.

Whether the division of responsibilities among partners is clear

The roles and responsibilities will require further clarification once the full partnership landscape has been developed.

Whether the proposed timeline is realistic

The proposed timeline is realistic but the extension of this work should be anticipated once results will raise new research questions, as can be expected.

The clarity and robustness of the monitoring and evaluation process

There is room for elaboration on the issues of monitoring and evaluation, but this had best be developed in dialogue with potential donors, because they may have specific demands on this part of the work, in line with their internal policies.

Whether the proposed management structure is likely to be effective and non-bureaucratic

As stated above, the proposed management structure and procedure seem to reflect an optimal balance between what is minimally required to allow for a flexible and responsive management approach that ensures all partners have a voice.

Whether the approach to gender research is appropriate and sufficiently well thought-through to be effective

The gender approach is one of the strong points in the proposal and provided it is effectively implemented it will ensure that valuable new information on the gender dimension of agriculture, nutrition and health is generated.

Whether the budget requested appears credible and defensible, given the problem being addressed and the partnership involved.

The budget appears to be on the modest side. Research like this is expensive because it will often imply epidemiological field work, combined with testing of agricultural practices, and there may be a need for incentives to engage farmer communities as well. Yet, while modest, it should also be said that in the current financial climate it is also realistic and likely to evoke a positive donor response.

Critical assessment of the proposal: strengths, weaknesses suggestions and commentary on the key issues.

Some of this has already been addressed in my introductory review. The proposal as it has been written is a strong advocate of inter-disciplinary research and as such should refer to the SIDA/SAREC recommendations of the early 1990s for more multidisciplinary research and for donor agencies to allocate funds specifically to this type of research, applying strict criteria for what is multidisciplinary (this proposal should fall well within the scope of these criteria).

As concerns weaknesses – the two issues insufficiently highlighted are environment (sustainability) and economics (sustainability as well. Most farmers practice today what can be considered the oldest form of environmental management: agriculture – and as such there

could be a greater emphasis on how farmers through proper environmental management can enhance the environmental determinants of health and reduce environmental health risks. This comes to some extent to expression in component 3 but it could be more explicit throughout the proposal as a whole.

The same is true for economics – while, as said, this proposal looks in a uni-directional way at the agriculture, nutrition, health links, in this perspective there are also important economic issues that need considering, simply because they will be drivers for changed decision making by farming communities. This goes beyond financing issues, but looks at the value of scarce resource and therefore is closely linked to the environmental issues.

For example, in a water scarce area, it will be much easier to convince farmers to use their water in a parsimonious way and then preferably in a way that will also reduce disease vector breeding in the irrigated areas. This is both good economics and good environmental management and has important health spin-offs.

Finally, some editing and typographical issues I picked up while reading:

Page 1 line 4: negative consequences **for** health and nutrition

Page 2 line 6 under the vision: **Poverty, poor health and poor nutrition are intimately linked.**

Page 3, the sentence just above the heading **The five components of CRP4** needs clarification. Are the greatest impacts expected because the disease burden is highest (and thus the potential for reduction is also highest)? Or are these considerations of feasibility in different geographical settings?

Page 8, start of last paragraph – do we really want to discuss this in terms of trade-offs, or is it a matter of distribution of risks and benefits within a population? A trade-off would often work against the interest of vulnerable groups.

Page 9, line 4: research can offer **evidence**, knowledge and technical interventions ...

Page 11 I am not at all convinced that Figure 2 adds value to the text at this point or to the proposal document as a whole. It is complicated and it is not clear what it wants to convey. I would suggest deleting it.

Page 11 bottom of the page (last para) – it should be clarified that component 3 is not only about negative and adverse impacts but also about health opportunities, and this should also be consistently stated in the remainder of the text.

Page 16, line 2 under the subheading **4.2 Capacity strengthening**: ... that effectively integrate agriculture, social protection ...

Page 20, footnote – at the end reference is made to MegaProgram 6 – shouldn't that be changed to CRP6?

Page 27, under subheading **5.5 Capacity development requirement:** *Considering the complex, multidisciplinary nature of the research under this component and the multisectoral nature of the policies it aims to strengthen,* etc etc

Page 33, line 4 ... and component 1 of CRP4 (not: *sub*component).

Page 43, Title of Section 7: **Prevention and** control of agriculture-associated diseases

(and same in sub-heading 7.1)

The information in Box 1 is not correct, according to WHO 90% of the diarrhoeal disease burden is linked to unsafe drinking-water and about 10% to lack of food safety. The number of deaths is 1.5 million children under five – the overall number of deaths is 1.8 million and if the role of malnutrition is taken into account 2.2 million.

Page 47, bullet point 2 – I would say that reference to vaccines really falls out of the scope of this proposal – it is a strictly health sectoral approach.

On page 60, IRRI and the African Rice Institute should also be mentioned – with both institutes there have been agriculture-health research cooperations in the past.

Page 67 three lines from the bottom: adapted not adapted.