

ISPC Commentary on the proposal CRP 4: Agriculture for Improved Nutrition & Health

Summary

The research program proposal, CRP4, as the title implies, addresses the strategic system level objective in the CGIAR Strategic Research Framework; “to improve nutrition and health”. As the only CRP to address health and nutrition explicitly, it should add considerable value to the CRP portfolio, given mounting evidence that food supply and access to food are not enough to achieve favorable nutritional outcomes. Selection of the four main research themes (Value chains for enhanced nutrition; Biofortification; Prevention and control of agriculture-associated diseases (AAD); and, Integrated Animal, Health and Nutrition (AHN) programs and policies) provides a generally logical approach to the subject matter for the CGIAR. It incorporates and builds on the Harvest Plus and Agrosalud programs and other existing activities¹. Innovative features of the proposed research programs include searching for solutions to poor health and nutrition beyond just producing more food, through value chain approaches and by targeting specific demand side outcomes through influencing poor consumers’ behavior.

The proposal is generally outcome-focused and the desired impacts are relevant, although few provide quantified information or a time frame for their achievement. Gender issues are given appropriate attention, supported by a strong justification of their importance. Simplified CRP impact pathways are described (Figure 2) with three clear entry points; value chains, development program implementation and policy. The IPG elements, however, are not well developed, and some of the work appears very local in nature. But much of the research could have strong IPG elements if efforts are made to do so. Some of the components provide a 10 year perspective but the proposal notes (p119; Table 19, p120) that a three year period is required to turn the current aggregation of subjects into a prioritized workplan. This is needed to be confident of the program’s future utility as, currently, the scope of the activities sketched under general headings would seem to be too broad. That so many “tools and approaches” are to be defined or validated as a first step in the research, and that “characterization” and “assessment” of problems still needs to be done, is a cause for concern. The ISPC expected a stronger understanding of the problems and the potential solutions as the foundation for this proposal. After many decades of discussion about the links between agriculture and nutrition it is disconcerting to read that much of the research proposed would be to improve understanding rather than generate evidence of effective solutions.

Overall, the proposed research should be prioritized. The current balance between the different components can be questioned and in two research components (1 and 3) the ISPC believes the Program

¹ In many ways the current proposal is the former CGIAR Agriculture and Health Research Platform writ large. It would be preferable in the redevelopment of the CRP4 proposal to utilize the same short and accurate statements about the objectives of each component (see <http://programs.ifpri.org/ahrp/ahrpabout.asp>) which provide a much clearer description of the true extent of CGIAR experience and capacities in the several fields.

seeks to do too much and hence is likely to lose its focus on delivery. In these cases, prioritization is needed and trade-offs in pursuing alternative research choices should be provided.

Given the lack of detail, the quality of the science has to be largely assumed based on the track record of the Centers involved. Confidence about the quality would be enhanced, however, if more reference was made to the underlying hypotheses which will be required to develop research plans. The Program has a wide variety of partners although, for some components, the involvement with ARIs remains to be defined. Fuller consultation with other key agencies is promised and is a prerequisite before new priorities can be developed or refined, particularly for the newer research components (1, 3 and 4). It will be incumbent on the program's proponents to narrow the aspirational agenda of activities and find the program's proper place in relation to global networks of research and development players (which the proposal lists) with active expertise in the nutrition and health fields.

The linkages to other CRPs are listed but it is often not easy to interpret exactly in which CRP the research will take place. This raises questions of boundaries and "co-financing", which was also a concern with the climate change proposal.

The ISPC has commented previously, in relation to CRP 3.7 (Meat, milk and fish) that relationships between basic technological research on livestock disease and the more immediate research needs that may be selected through constraint analysis of the chosen livestock and fish value chains, requires better analysis and description. In the current proposal, links are made (p71) between sub-component 1 (Food Safety) of Component 3 and the value chain work in CRP 3.7, but in sub-component 2 (Zoonoses), despite a long rationale for treating zoonotic disease in general, no explanation is proposed for the two diseases singled out (p79). Given that cysticercosis is a food-borne disease, it is difficult to see the overall strategy as to how synergies both within and between CRPs will be captured. The ISPC would welcome clarification of how the different sub-components across CRPs in this area fit together.

Overall, the document provides a good description of the "why" although, despite its lengthy text, the proposal is unclear or lacks details in several instances on the "how". This makes it difficult to apply the CRP evaluation criteria to judge the likelihood of delivery of high quality science and the intended impacts. The time frame for many of the deliverables is left quite open. Thus it does not make sense (contrary to the suggestion of the proposal, p128), to embark on a rapid deployment of CRP4 in 2011 before many of the major potential partners have been adequately consulted to refine activities and a more structured and balanced work plan is in place.

Recommendation: Because the current proposal is not sufficiently developed, the ISPC recommends that the CRP 4 approach be approved to allow the program's proponents to engage with partners so as to develop a revised proposal and work plan with greater specificity. Whilst current work, including the experimental validation of biofortification, should continue as planned, the ISPC further recommends that approval of the remaining content and substance of the program be withheld until a more detailed proposal is submitted. That proposal should take into account the general and more detailed advice contained in this Commentary:

- The articulation of the strategy in the revised proposal should give evidence that the problems identified are recognized by the authorities in countries with major under-nutrition problems and a clearer specification of objectives related to the target groups affected by agricultural intensification should be provided.

- Many of the research activities are described at a high/generic level and some are already underway or have been completed by partners. The revised proposal should identify the research activities with time-bound milestones and partner roles.
- On the basis of more detailed activities and specified outputs the revised proposal should include a strategy for how these will be utilized to maximize the IPG benefits and the impacts on/for the specific communities identified.
- In some parts (components 1 and 3 in particular) the proposals are aspirational rather than realistic and this should be addressed through further prioritization during the process of strategy development.
- The proposal should make clearer use of nutrition and health-related terminology and articulate the researchable hypotheses underlying the major areas of research to be included as well as providing a mechanism or evidence for the quality of science underpinning each approach.
- Further detail on linkages to other CRPs should be described, in particular making clear which work will be funded from which CRP.
- The ISPC encourages a strategic approach to program evolution and the avoidance of opportunistic inclusion of some activities simply because they may draw initial funding.

1. Strategic coherence and clarity of Program objectives

The overall objective and four research components of CRP4 directly address the System Level Outcome (SLO) of improvement of health and nutrition. In developing this proposal, four areas emerged from a brainstorming session of 12 CGIAR Centers. As a result, the underlying logic and potential scientific synergies which can be achieved by achieving focus of these Centers on AHN are apparent. However, it would be more convincing if these were ‘ground-truthed’ against the priorities of the 36 highest nutritionally burdened countries (based on stunting). Before embarking on strengthening such stakeholder interactions, however, it may be useful to better define the ‘problem’ of under-nutrition. Nutrition is not one status, process or situation (nor is health). The nearly interchangeable use of terms like food security, hunger, malnutrition, under-nutrition, ill health, and poverty throughout the proposal did not help provide clarity. Drilling down to what aspects of nutrition and health problems would be best tackled through investments in agriculture should be a research question in itself. The risk is that the focus on integrating agriculture, nutrition and health over time becomes a mantra which dominates over the focus on outcomes. As written, it is the food chain rather than simply agriculture which is the subject of study.

That said, the program seeks to address several of the main causes of malnutrition and agriculture-associated diseases (AAD) and to identify possible avenues for improvement. The questions leading to this identification of the research components (p 9) are the appropriate ones. However, the balance between the individual research components, with more than fifty percent of the resources going to one component (biofortification) invites review. A stronger justification is required for this apparent imbalance in the allocation of resources. The proposal seems to suggest that Harvest Plus and AgroSalud will be stand-alone elements of the new program, and the degree to which they may subsequently be merged (with other components) into a future sub-component on biofortification is unclear. An overall conceptual framework to provide a cohesive articulation of the Program is missing.

The program targets two groups: (a) those with high level of malnutrition and AAD's and (b) groups affected by agricultural intensification (see for example p ix). While the profile of the first group is well understood, the characteristics and objectives for the second are not clear. For example, the foreword (p ix) mentions the "poor people" in this group, whereas the text (p11) mentions all groups. Is there a clearly proven link between intensification and greater health and nutritional risks for the poor? What is the program's objective for this group? If it is to provide safer food, the ISPC would argue that the program would seek to cover all groups, including planning for the inclusion of the urban poor in the future, and not only the rural poor. Lastly, in considering targets, one of the challenges to the value chain work is that many value chains serve both undernourished and over nourished people, so that entry points via value chains may be a very blunt instrument.

The international public goods nature of the research is obvious in the bio-fortification component (and should be for zoonoses when this is more clearly developed), but less clear in the other components. Working on value chains, food safety and policies and institutions will result in local solutions. The program has addressed the issue of generating international public goods by including the development of methodologies and tools, but this aspect needs to be more explicitly stressed in a revised proposal.

Component 1 on Value chains. Overall this seems a sensible choice but the extent to which research can push changes in value chains to meet the numerous objectives of efficiency, sustainability, and now nutrition, should be subject to tradeoff analysis. For objective 4 (identifying the nutrition entry points for intervention), which is clearly the most significant activity in this component, the selection criteria should include a poverty focus to respond to the CGIAR's comparative advantage for being involved in this work. In addition, this component will require close interaction with the private sector to be effective but the CGIAR partners have to date little experience in developing tools for "chain agents" to assess and enhance nutrients in foods. There is a lack of reference to policy incentives and distortions as a potentially important determinant of nutritional outcomes of value chains, for example subsidies on specific products.

A significant element seems to focus on changing consumer behavior, which is a very challenging area with little clarity about likelihood of success. It is very difficult to change consumer behavior, even in rich countries, and even with so much media attention on healthy foods and diet improvement. Research in this area will need to go well beyond economics to embrace consumer psychology, an area in which the CGIAR is weak. The feasibility of success in this area is rated by the ISPC as "optimistic". Evidence of strong buy-in from stakeholders who are in a position to influence consumers would be critical here.

Component 2. Biofortification. The Harvest Plus CP appears to continue unchanged as a component of this CRP. Some protection may well be needed to ensure that the work started in this CP is given a chance to succeed, but it currently appears isolated. Indeed, it is considered an important feasibility experiment which may well temper future strategies and investment in this area. AgroSalud will work with food technologists to produce commercially prepared biofortified food resulting in urban consumers having access to biofortified food (p54/p57). This is one of the few examples of engagement with the nutrition and health of urban consumers in the proposal. Indeed, rapid urbanization underway in many developing countries is associated with a major change in diets such that a growing share of food consumed by urban poor is processed. Achieving impact on nutrition for this group may well require greater collaboration with the food processing and manufacturing industries. This will represent new partners and, as mentioned, may require further definition of target groups.

Component 3. Agriculture Associated Diseases. The text in this component is repetitive and hard to follow as it seems to have a different structure and format from the other components. Research on zoonotic and food/water-borne diseases is urgently needed but what the CGIAR should contribute is less well articulated. The description on p79 is extremely broad. In component 3, there is reference to One

Health as an overarching approach, but no specific actions on understanding and eventually overcoming the constraints to its implementation. With attention of many institutions, including the major development banks and other investors on this subject, the comparative advantage of the CGIAR in this topic needs to be clear. For instance, specific work on the constraints and benefits of the introduction of “One Health” would have to be a part of this program. However, it could equally well be argued that this activity belongs in component 4.

The attention to mycotoxins (given “initial priority” status) is supported, and the ISPC notes there are a large number of potential partners. The System-wide IPM program is mentioned as a partner for aflatoxin research without identifying what role it might play (p68). In contrast, the System-wide IPM program is not mentioned in tackling research questions associated with reducing pesticide use and effects on ecosystems (p82), which is one of the major health risks from agriculture as measured by DALYs.

Otherwise too much emphasis is given in the background text to acute food safety issues (pandemics) which are the responsibility and expertise of the OIE, FAO and WHO and their networks, when research on other more long-standing constraints could be the focus of the proposed research for the CGIAR.

In the current proposal, one sub-component focuses on zoonoses, but there is overlap with the sub-component on food safety. It is not clear how much effort will be directed at the selected zoonoses (Rift Valley Fever and cysticercosis) referred to on p79, but the rationale for their selection is missing. Further clarity is required on the zoonotic diseases to be prioritized under this proposal and the relationship between these thrusts and underpinning strategic work on livestock disease promised under CRP 3.7.

Within component 3 there are indications that concepts from economics will be used in a behavioral setting in disease control. This is extremely important, and a welcome emphasis wherever the research is placed. Diseases may originate in animals, but decisions on disease control are made by humans, and unless an effort is made to understand the incentive structures facing livestock keepers and other stakeholders in a disease control situation, technical disease control is likely to be ineffective. That said, the description of socio-economic data collection and impact assessment is sketchy, especially in comparison to the other three components. For instance, Table 11 (p74) has proper descriptions of technical disease control research activities, but just a simple bullet point noting ‘health, social and other impact assessments’.

Component 4. Cross sectoral. Focusing subcomponent 4.1 (on integrating ANH programs) could provide early understanding (for the program) of how best to create an integrated program. However, written as a stand-alone component, it comes across as verging on the theoretical; ‘Develop methods and tools to improve the effectiveness, efficiency, and timeliness of surveillance and monitoring systems and to permit meaningful evaluation of complex multisectoral programs and policies (Components 1-4)’ could rightly be seen as an objective within components 1-3. More could be done at this stage to demonstrate how the key activities of 4.1 will influence and add value to activities in the first 3 components and not just provide an *ex post* service to other donor initiatives. Such evaluations should pay special attention to prospects for scaling up. Some of the case studies may provide favorable nutritional impacts but have little chance of success at larger scale.

2. Delivery focus and plausibility of impact

In the sense that the ultimate impact statements are appropriate, the proposal could be seen as outcome focused. Considerations with respect to delivery are discussed throughout the proposal and the way in which partners have been selected shows evidence of thinking about delivering impact. There is also a clear geographic focus. However, at this stage of development, the many assertions about the program’s potential for impact on nutritional status and health are vague and unconvincing. Generic claims that the ‘health and nutrition of the poor and undernourished will be improved’ are not good enough given the

scale of funding requested. Only the Harvest Plus activities attempt to define which nutrients and quantitative nutritional metrics, and for which target demographics, the work is intended. The proposal as a whole may need to discuss its measures of success with some care. Will a 5% decline in iron deficiency anemia in children under 5 suffice to determine success, or is it a 20% decline in stunting? Is health really just a reduced exposure to, say, schistosomiasis or should it be a 50% reduced prevalence of diarrhoeal disease (which kills far more children than schistosomiasis does)?

Target groups are not well defined or the wording is unclear. The program targets two groups (a) groups with high level of malnutrition and AADs, and, (b) groups affected by agricultural intensification (see for example page ix). While the profile of the first group is well understood, the characteristics and objectives for the second are not clear. For example, the foreword (pix) mentions the “poor people” in this group, whereas the text (p11) mentions all groups. What is the program’s objective for this group? Is there a clearly proven link between agricultural intensification and greater health and nutritional risks for the poor? A closely connected choice expressed in the proposal is the focus on poor rural and peri-urban populations. In the next 20 years, developing countries in both Africa and Asia are set to join Latin America in having over half their populations resident in urban areas. The disconnect between production and consumption is going to get steadily larger, nutrition of poor urban populations is going to become ever more important, processed food is going to become more central in diets and value chains are going to become more complex and spatially dispersed. It may make sense to prepare the groundwork for eventual inclusion of urban groups in the proposal.

Page 1 notes that the “primary focus will be on improving human nutrition and health”. That requires a significant allocation of resources to demonstrate that investments in (mainly) agricultural research will indeed result in improved nutrition and health, not just in nutritionally-enhanced foods, or in a reduction of agriculture-based diseases. The absence of disease does not in itself equate with improved health, nor does increased availability of more nutritious foods equate with enhanced nutritional status of consumers (given potential anti-nutrients in the diet, nutrient losses in processing/cooking or via communicable diseases, or lack of needed investments in nutrition and health promotion separate from investments in agriculture). Thus the pathways are a) not as clearly defined as suggested in the text, and b) the impacts are likely to be more muted than claimed. Indeed, plausibility of impact can only be assessed in relation to stated objectives but the quantification of these objectives is not well defined in the text (Harvest Plus excepted). There is some discussion and attention to trade-offs - for example between bio-fortification and yield (p43), but the pros and cons of other choices are not discussed in detail. For example, on food safety, ILRI’s Kenyan raw milk sale case study (p60) is mentioned, but the critical strategic issue that stricter food safety standards increase the cost of foodstuffs, and hence affect their accessibility to the poor, is not discussed.

That so many ‘tools and approaches’ are to be defined or validated as a first step in the research, and that “characterization” and “assessment” of problems still needs to be done, is a cause for concern. The ISPC expected a stronger understanding of the problems and the potential solutions as the foundation for this proposal. After many decades of discussion about the links between agriculture and nutrition it is disconcerting to read that much of the research proposed would be to improve understanding rather than generate evidence of effective solutions. With so much vagueness around the actual hypotheses to be tested and actual interventions to be evaluated, the impact of CRP4 cannot be easily predicted. The program potentially includes some innovative social sciences; but to have the intended impacts the proposal will have to achieve and integrate both social and biotechnical outputs (e.g. p79; “*Surveillance and control options based on improved understanding of disease; diagnostics that take into account variants in circulation*” etc). Simple, illustrative impact pathways are provided for the components reflecting the actors, but lack a good description of the levers (positive or negative incentives, awareness, lobbying mechanisms) needed to get the Program findings internalized in the chain. Overall, the research is a mixed bag of plausible and feasible, difficult to achieve, and unclear (particularly in terms of defining

the precise impact pathways expected). That the CRP proposes to adopt SMART indicators and methods to determine impacts is good, and that will require a clear investment in collecting appropriate nutrition and health variables to assess impact and partner involvement.

Finally, in terms of program plausibility, the ISPC would also draw attention to some of the statements made, e.g. p9: “It is well recognized that poor quality diets and related micronutrient deficiencies are a much more widespread nutritional problem than the lack of food. Solutions to improving the poor’s access to nutritious foods are therefore needed, rather than a narrow focus on producing more food.” It is incumbent on the proponents to show that impact on this issue can also be anticipated through this new direction for research in the CGIAR.

3. Quality of science

The program has no clearly formulated hypotheses relating to the needs and constraints identified. It has formulated an objective for each component - which is generally well done, with the exception of the overall program objective - and a large number of research questions. The questions are relevant and are mostly addressed in the subsequent research program. However, these questions do not allow a rigorous validation or rejection.

The program seems, in particular in component 1 and 3, quite ambitious in the number of proposed activities as shown in table 4 and 10. Leaner, more focused research activities in these components might enhance their scientific quality.

A more explicit description of new techniques and tools used and novel outcomes expected in each research component would have given a better understanding of the innovative character of this CRP. Component 1 makes good use of case studies to develop the research issues (e.g. Box 2, providing support for the potential to enhance and increase bioavailability of Vitamin A in staples). Research component 1, objective 2, proposes to employ innovative techniques, whereas the rest is quite traditional; research component 2 is innovative overall. Component 3 starts by describing research themes at the component level, one of which aims to identify AADs with large impact on health of the poor, yet some diseases have already been prioritized. Quite a few stakeholders already work in the area of zoonosis, which raises questions about the extent to which the CGIAR should be leading in this area as opposed to conducting the research identified at the sub-component level. The participatory risk assessment and management approaches developed (box 8) are claimed to be new, although they have been developed some time ago (as part of the HP Avian Influenza epidemic); some of the techniques and technologies proposed in food safety and surveillance techniques seem new. Research component 4 has some innovative aspects in objective 4.1.1, while being rather traditional in the other sub-objectives. Sub-component 4.1 does not exhibit the same outcome focus as other components. Instead, it appears to push a concept, rather than considering under what circumstances the AHN sectors should be integrated. Sub-component 4.2, on policies, reads better as a stand-alone component, although it also lacked explicit mention of extensive interaction with the researchers in the other components, which are crucial for success.

4. Quality of research and development partners and partnership management

CRP 4 presents a thorough, pragmatic approach to building and leveraging a partnership network. It demonstrates its reliance and commitment to a robust partnership strategy by allocating 47 percent of its budget to work with partners. The principal participating Centers—IFPRI and ILRI, and the Harvest Plus Challenge Program have particularly strong track records in building and leveraging effective partnerships to advance their work. Although CRP 4 broadens the focus of the CGIAR’s work to include health more specifically, and notes as a potential risk, “coordination with the health sector, where the

CGIAR has few existing partnerships” (p121), the underlying capacity and experience of the collaborating Centers is likely to mitigate this risk.

A high priority task for this program is development of an explicit partnership strategy. This task will be supported by IFPRI’s Partnership Coordinator. ILRI has done extensive work on its own partnership strategy and IFPRI has institutionalized partnership management as an element of its management structure. A clear typology of partners is articulated early in the proposal and consistently used in the descriptions at the component level, namely: enablers (policy makers and decision makers, including donors/investors), development implementers, value chain actors, and research partners (p19). The proposal demonstrates a strong grasp of the value added as well as the strategic importance of enlisting and making use of the right mix of partners to advance the research and leverage its adoption across a continuum of beneficiaries and actors from the household level to the policy arena. However, the private sector is either ignored, or mentioned as a general category although they will be essential for implementation of several outcomes. In addition, the program seems to be well linked to the regional initiatives in Africa, but less so to other regional institutions, such as the Pan-American Health Organization, which is not mentioned at all. The proponents recognize the challenges of managing many partners and the identification of an individual to take overall responsibility for partnerships, which is commended. Because of CRP 4’s breadth of focus, the proposal itself enlists the participation of 10 CGIAR Centers in addition to the Harvest Plus CP, four of those (Bioversity, CIAT, IFPRI and ILRI) with Harvest Plus will contribute \$3 million or more to the proposal. Additionally, linkages to other CRPs are listed (Appendix 6, table 1) but are often not easy to interpret. Relationships between livestock disease activities have been mentioned. Research on fruits and nutrition is stated to take place through CRP 6 but this component (i.e. CRP 6.1) is a very modest part of that proposal. Rather than being reassuring, the treatment of linkages with other Centers and CPs raise questions of boundaries and “co-financing” which remain to be worked out.

As far as a reader can assess, no formal agreements have yet been made with the partners beyond the CGIAR Centers although many partners were involved in the IFPRI New Delhi meeting, and the core CGIAR partners have been involved in the planning process. The arrangements and responsibilities for M&E are proposed to be developed in the first year of program implementation. There is little information on the adequacy of the research facilities. As these facilities would have to come for a large part from ARIs, more explicit descriptions of which ARIs are to be involved are needed in research component 1 and 4. The other research components seem to have the appropriate partners and facilities identified.

5. Appropriateness and efficiency of Program management

IFPRI is the lead Center for CRP 4, although there is formal acknowledgment of ILRI’s standing in the program through its chairmanship of the Planning and Management Committee and a role in the recruitment and evaluation of the Program Director. As the lead Center, IFPRI will provide financial and management services to the CRP, provide accountability to the Consortium, and oversee the Program Director. The proposed structure for program management and oversight includes: An Independent Advisory Committee, a Planning and Management Committee (PMC), the Program Director, a Program Research Team, comprising the four research leaders from each of the research components, and a Program Management Unit (PMU), which includes a research coordinator, a program manager, and two administrative staff. Communications and partnership management are not included in the proposed management structure although identified as critical functions throughout the proposal. The structure accommodates the relative importance of the two principal participating Centers, and also reflects a useful balance between inside and outside perspectives. Where other CRPs give a cautionary level of attention to conflict resolution mechanisms, CRP 4 seems less concerned by the prospect of conflicts among partners or over resource allocations to research priorities. The proposal accepts a recommendation from

the Consortium Board to assign ILRI the chairmanship of the Planning and Management Committee for two years, and to provide ILRI with a role in the recruitment and evaluation of the Program Director. The Program and Management Committee itself comprises both the program's research leaders, and three representatives from participating Centers and implementing partners. It has a reasonable scope of work and authority, meeting face-to-face twice a year or more often as needed. The Program Director is the convener, which provides a subtle affirmation of the Program Director's relative relationship and authority within the structure.

Program Director: The Program Director will be identified and employed by IFPRI, as the lead Center, and report directly to the DG. As noted above, ILRI will play a role in the recruitment and evaluation of the Program Director. The position is given clear responsibility for the overall intellectual leadership and management of the CRP, and serves as the external representative of the program with a role in partnership development, communications and advocacy, and resource mobilization.

The proposal implies that research leaders will be drawn from among the Centers with existing research portfolios that align with the four research components; it is not clear who has the authority to appoint the research leaders or to evaluate their performance. Although there is a common bias within the CRPs to have very small management footprints, at some point it will be important to provide the Program Director with a more explicit role in recruitment and evaluation of research leaders.

Communications and Partnership Management: The proposal makes a convincing case for the importance of effectively identifying and developing partners, and for the central role of a coherent, well integrated communications strategy to the success of the program (p113-114). In analyzing potential risks, the proposal notes: "Linking research to implementation (Research Component 4) will require extensive investment in communication, dialogue, information sharing, internal education, and advocacy. (p122)". In both areas, the CRP proposes to identify taskforces to develop strategies for partnerships and communications, but it fails to dedicate staff capacity at the program management level to coordinating and overseeing these strategies. Neither function should be fulfilled on an ad hoc basis by borrowing existing capacity from IFPRI or other Centers. The partnership strategy will be complex and involve the engagement of new spheres of influence and different actors than have been the traditional scope of the Centers. It would be prudent to include a management position within the Program Management Unit that can protect the strategy, help to coordinate and align its implementation, evaluate its effectiveness and continue the identification and cultivation of new partners as the program moves forward. Similarly, if, as the proposal states, the program "places priority importance on establishing a strong communications function from the beginning of the program (p.113)," it must include the capacity to manage this function and the underlying strategy as part of the Program Management Unit—which it does not do.

In general, IFPRI as the lead Center has the level of authority that it needs to serve as an effective fiduciary. It has not assigned itself a level of control that curtails the influence of participating Centers and partners, or that raises serious issues about the potential for conflicts of interest. Monitoring and evaluation functions are considered in the management realm, which may deprive them of the benefit of challenging, disinterested assessments.

6. Clear accountability and financial soundness, and efficiency of governance

The budget presentation for the project is straightforward. The total CRP budget over three years is projected to be \$191 million. The proposal requests \$17 million from the Fund in 2011, rising to \$44 million in 2013. CRP management is budgeted at 2 percent of the total budget and ranges in value from \$1.3 to \$1.5 over three years. There is no separate line item for communications. It is difficult to tell from the budget narrative and the detail whether the amount assigned to management resulted from estimating the actual costs of management or deciding that 2 percent was as much as should be spent on

the management functions. IFPRI and other Centers are clearly incorporating some management functions related to the management of the CRP through the Centers' existing management structures. While this makes sense and is clearly efficient in terms of "backroom" functions like accounting, grants management, IT support and personnel, it is not ideal to disaggregate more critical management functions, like communications, partnership strategy and coordination, and resource mobilization, wholly to various Centers (even the lead Center). These are critical components of the proposal's success as outlined in the proposal itself; they are legitimate management functions, have clear costs, and should be coordinated and managed for results by the Program Director within the CRP's management unit.

Governance and Oversight: The Independent Advisory Committee will bring together scientists, partner representatives and a member of the current advisory committee of Harvest Plus. Its primary role is to advise the management committee and IFPRI DG, although the management committee is required to respond formally to its recommendations. The advisory committee is proposed to meet face-to-face once a year. Its membership may be expanded temporarily to accommodate the program's need for specific expertise or perspectives. Nominations will be solicited broadly from partners and participating centers, with the Planning and Program Management Committee (a relatively well-balanced group) advancing a slate of candidates for confirmation by the IFPRI board. The committee would be strengthened if there was a mechanism that enabled the identification of a chair for the group, and if the appointment process included a term limit. It should also meet more than once a year and could meet virtually if there are not sufficient resources to support a second face-to-face meeting.

It is difficult to judge the appropriateness of the budget and budget increases when so much of the proposal remains to be developed. Currently a very large budget is earmarked for partners/collaborators on biofortification. While Harvest Plus and AgroSalud are well described in the proposal, it is not clear to what extent the Harvest Plus activities will be generally merged into the program structure and what the final balance between biofortification (currently around 50% of the total program) and the other components will be. Thus it does not make sense to embark on a rapid deployment of CRP4 in 2011 (as suggested on p128), before many of the major potential partners have been adequately consulted to refine activities and a more structured and balanced work plan is in place. For this reason the ISPC has recommended that the proposed approach for implementing CRP4 activities be approved, but that approval of the content and substance of the program be withheld until a more detailed proposal is submitted.