GCP ARM 2009
Brainstorming I—Mon 21st Sep (1330–1500)

Brainstorming Session: From good science to good payoffs: Improving the targeting, effectiveness and efficiency of crop improvement investments

September 21, 2009

Coordinator: Stanley Wood, IFPRI, PI SP5 Project: *"From Attractiveness to Feasibility - A Strategic Assessment of the Capacity to Develop and Adopt GCP Technologies"*

Presenters: Ria Tenorio, Godwin Aumugha, Glenn Hyman, Steve Waddington, Stanley Wood. Presentations can be found at: ……

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Driving questions:

(a) How do research managers including the GCP management team ensure that, if successful, their investments will deliver the expected benefits to the expected beneficiaries? What information will provide the best support for management, fund-raising and advocacy?
(b) How might better information and analysis improve the design of more cost-effective R&D investments? For example how can better methods of site and systems characterization across countries and continents be used to design more rapid and effective breeding and dissemination strategies?
(c) What is the risk to good and successful GCP science investments if national breeding, seed systems, extension services and farmers themselves do not have the capacity to use GCP technologies appropriately and successfully? How can those capacities be assessed?

Presentations:

1. Stanley Wood on "*The generation of strategic targeting and impact information for the new CGIAR strategy, and a review of relevant data and tools"*

Objective: To make sure that GCP's good science is targeted to places and to problems that will deliver greatest impacts and be as efficient as it can be in terms of resources invested. It is possible for GCP to be successful scientifically, but to be less successful for end users because of bottlenecks between GCP outputs and broad scale adoption on farmers fields. Hence our project to assess national capacities to facilitate the flow from GCP outputs to farmer adoption.

This session: Try to learn from experiences, identify bottlenecks and challenges to effective devlopement and uptake of GCP technologies, and to assess what capacities need to be strengthened.

One possible outcome of this brainstorming, apart from sharing experiences and perspectives, is to think about **how to synthesize and package up the outputs of the various SP5 targeting/priority setting studies elements, and the thing might be to develop a "best practice" manual based on targeting, priority setting and capacity assessment.**

A couple of initial questions;

- Are the Challenge Initiatives (CIs) mandated to assess capacity investments? If so then we should be directing our capacity study to their needs.

- Also, since it appears that GCP will be a core part of the CGIAR MegaProject (MP) – it might be useful to discuss scaling up the capacity assessment and development work.

2. Ria Tenorio on "*Designing a capacity assessment study for GCP*"
Ria described; the goals and objectives of the GCP SP5 Capacity Assessment study, the partners involved, the expected outputs, the progress to date, and some implementation challenges. Progress included the identification and recruitment of country studies and country study leaders, a Toronto planning an technical workshop, the design of survey instruments for Breeding Programs, for Seed Systems, and for Extension/Support and Farmer Conditions,.

3. Godwin Asumugha on *"The use of focus group discussions (FGDs) to help assess the capacity of national systems to use GCP technologies"*

Undertook two FGDs in July on cassava and rice. Invited people from seed companies, ministries, donor agencies like IFAD and documented everything. Lessons learned/challenges:

- Need for formal invitation to participants to give them incentive and commitment to participate. Need to design an official letter signed by the Director and sent to agencies. This was also done so that stakeholders understood that the CSL was doing this work in a broader context (more incentive to participate).

- FGD number of participants ideally should be small (say, 8-12). But it is difficult to turn down many people who wanted to attend. This has consequences for the budget needed to conduct FGDs.
- We used 3 questionnaires which took 3 full days to do. The CSL cannot do everything, so a modality was found in which 1-2 more junior staff supported the CSP at the meetings. These support staff helped with logistics and conduct of the meeting and in recording discussions, etc. Again, this needs to be factored in a capacity assessment budget.
- Distributing questionnaires to be filled away from the FGD location is not a very good plan, both because of turnaround time and because incentive to complete the forms reduces rapidly once they leave the FGD site. Also, once having taken part in the FGD discussions , participants feel that their role is finished).
- Finding time to go to the field and work with people, and let them see GCP technologies was good, so people will buy-in/appreciate the work.

4. Glenn Hyman on *"The use of site characterization and homologue tools in improving the effectiveness of GCP breeding strategies"*

We made a global analysis and came out with a targeting assessment of where GCP should be working. Questions raised about the whole question of getting GCP phenotypes into a research system. First question is; A lot of materials GCP is developing have to do with drought. Are local areas able to conduct drought trials in different places in their country? Do they have capacity to do that? (One of the findings was there wasn't a lot of science in conducting drought tolerance experiments). Then, what can we do to help those that need help/training etc.? What's the future? What does this mean for the GCP?

5. Steve Waddington on *"Lessons from the GCP Constraints Analysis study on potential traits and implications for GCP design and potential impacts"*

Issues raised during brainstorming:

- We try to gather an understanding of a situation in a country, to choose where best to work, and where specific technologies are needed. Research teams must demonstrate there is some credible and logical pathway from what GCP delivers to the final adoption by farmers, even if there's no intention to invest in or actively monitor the fate of all GCP technologies.
- Past and on-going SP5 studies have been designed to try to understand different GCP implementation situations. GCP researchers need to show that they are aware of those constraints, and that their research plans acknowledge those constraints and are designed to minimize risks from those constraints.
- It was established that GCP will create technologies and deliver the technologies; and choice for character trait was drought. We did not decide on interaction of

drought with pests and diseases for example. There was not a question of impact at that time. It was a mistake that we did not talk about a delivery part. One other problem was timeframe was too short. We did not have that vision at that time.

- But we should recognize that GCP is an upstream science effort and the question of expected impact on farmers was not really discussed at the outset. Unfair to expect GCP teams to take these responsibilities on board now, so questions raised about how much effort GCP should put into that.
- GCP is (by design) very science-oriented, but we do need to make sure that the marginal dollar is being targeted to the right place. GCP CIs should be prepared to illustrate that they have established a credible pathway to impact for their work in each country. This is needed even if no formal *ex ante* impact assessment is considered.
- It is true that GCP does upstream research. Impact was not mentioned initially very much. We undertake SP5 studies to try to understand and be made aware of the problems – and make sure that link exist with researchers in the national programs. It is important for us to know how to reach to farmers. If we have two potential places to do our work and one has 3 and the other 20 bottlenecks to GCP end use, we will most likely decide to work in the place that has only 3 bottlenecks. We can explain that our decision to go with this and not the other is sound.
- The intention is that the capacity assessment questionnaires designed by the SP5 "feasibility" project can be something of relevance beyond the 5 case-study countries. We will try to fine tune and focus the existing questionnaires to improve their broader application/relevance beyond this program.
- There was no infrastructure to seed and technical quality control. Already there we have a big issue in our hand. We need to start thinking more on alliances.
- Good science has been produced. But we need to think of impact. We can only expect to do that through partnerships. And we have to show community of action with others.
- For the new formula, GCP should always stay as a driver for upstream technologies, knowing beforehand that developing countries are not really so advanced.
- In KARI, in addition to carrying out upstream work GCP activities can be used to identify promising lines now, even without fully understanding why they are better from a genetic perspective. The better materials can be used immediately to save time in getting materials out of the door. This "twin track" approach complements the scientific GCP approach. "If I find inbred lines that are good on drought, I identify materials to move ahead in the breeding program. Get impact as you develop the scientific basis behind what you are developing. Complement the two systems running parallel to each other."
- Don't work alone. We are also getting support from others. Testing is supported by other programs. They seem to be working well.

- As a former breeder – do I have to follow the way we are doing now, or can I develop a quick and easy way to do this? For me, with regard to conventional traditional breeding, the GCP can help in knowing how to breed a material for a specific environment. But we never make impact just in 5 years' time. We need 12-15 years to develop material. But GCP's impact can be seen in for example, the drought materials are increasing in say 5 years time. The problem is not to set up a new thing (set up private companies, for example) – but to help the farmer achieve more yield.
- We use the word training and capacity building as similar. It is easy to think of training, but it is more difficult to get capacity building.
- We know there are problems in how to get all these technologies to reach the farmers. Is there a borderline on assessment? We know the extension system in Nigeria is poor. I wouldn't know how GCP intends to impact all these farmers. Or are you going to stop somewhere? Breeders are working very hard on traits. Maybe we just need to talk about output or outcome. And not talk about impact.
- GCP is us. We partner to get impacts. That's what we need to explain better.

Big Ideas/Outputs:

1. SP5 to synthesize the outputs and findings to develop an **Best Practice Manual for Ensuring Getting High Payoffs from GCP Technologies** (a combination of the targeting, priority setting, constraints and capacity building project outputs)
2. Developing models for the "Twin Track Approach" as explained by James from Kari on using partial information and unfinished materials from GCP for accelerating conventional breeding tracks while still pushing ahead to obtain more selective and advanced GCP materials/outputs.
3. Recognition that we need to hold ourselves accountable for articulating pathways of impact, and understanding what the specific obstacles to that pathway are in different contexts/countries.
4. We recognize GCO can't fix all obstacles, but some it might be able to; by itself, in collective action with partners, or through well targeted advocacy.