



Meridian Institute

Connecting People to Solve Problems

MEMORANDUM

To: Generation Challenge Program Management Team
From: Todd Barker, Meridian Institute
Date: 22 January 2008
Re: ARM and GCP Survey

I am writing in regard to the survey of Generation Challenge Program (GCP) community members in September and October 2007. During an approximately six-week period, 115 members of the GCP community participated in an online survey that was administered by Meridian Institute (<http://www.merid.org>). The survey was announced at the 2007 GCP Annual Research Meeting (ARM) and contained two parts: 1) feedback about the 2007 ARM (8 questions); 2) general feedback about the GCP (12 questions).

In the memorandum below, I provide a high-level overview of the survey results and provide *selected* highlights from the survey. Given the desire to encourage frank responses, respondents were not required to share information about their identity. Therefore, detailed results of the survey have been provided by Meridian Institute to the GCP Management Team (MT) in a not-for-attribution format.

Overall, the survey indicated members of the GCP community have positive impressions and feedback about the 2007 ARM and, more broadly, the GCP. In particular, community members are pleased with progress to date, clarity of the GCP strategy, and vision for the future. Survey respondents stressed the importance of continued focus on downstream products delivery, which is required for meaningful impacts.

In regards to the ARM, 97% of respondents had a very good or good impression of the overall ARM. Feedback about the major elements of the ARM is listed below.

- Plenary sessions (93% very good or good)
- Brainstorming sessions (83% very good or good);
- Poster sessions (97% very good or good);
- Informal time (55% very good or good)
- Representativeness of participants (82% very good or good)

Based on the survey and discussions with participants (especially participants in multiple ARMs) and Management Team members, the success of the ARM can be attributed in part to: a deliberate attempt to reflect on the 2006 ARM and adjust the program for 2007; sharing information about the GCP's progress, vision, and strategy at the start of the ARM; more tightly structured and managed plenary sessions, which were designed in a

manner to help people understand linkages across SPs and towards product delivery; and improved format (e.g., 15 minutes plenary presentations; 1 minute poster sessions).

Future ARMs can be improved further by: focusing even more on linkages across Sub-Programs (SPs), especially linkages between “upstream” activities (SP1 and SP2) and “downstream” activities; making plenary sessions less about reporting and, instead, more forward looking; more informal time (but not necessarily field trips); distributing information further advance of the meeting with more guidance about issues to be considering (e.g., brainstorming sessions).

In regard to the GCP in general, 85% of survey respondents had a very good or good impression. 75% of respondents felt the GCP is doing a very good or good job creating synergy among institutions. 81% of people felt the GCP is doing a very good or good job supporting their work as scientists. And, 82% of respondents had a very good or good impression of GCP communications.

In the following paragraphs, some selected highlights from the survey are provided. These highlights represent recurring and clear messages from the survey.

The following activities need more support:

- Developing genomic resources for small genomes and orphan crops
- Capacity building
- Phenotyping for drought / accurate phenotyping / large scale phenotyping
- Delivery / reaching end users / product development and delivery

The top challenges for the GCP are:

- Understanding the mechanism for drought tolerance
- Linking marker work to plant breeders
- Product development and delivery
- Effective capacity building and collaboration with the NARS
- Complementing, not replicating, work by other CG Centers and research institutions
- Identifying genes and alleles associated with drought tolerance that are useful to breeders
- Phenotyping for drought tolerance and related traits
- Quality

The unique features of the GCP are:

- Diversity of the GCP community
- Unusually strong linkages and synergy among CG Centers, ARIs, and NARS
- Consortium approach / partnerships / network
- Drought
- Linkage between “upstream” and “downstream”

The GCP could provide the following to better support the work of GCP scientists:

- More information and clarity about delivery chains

- More support for building linkages and networking
- Training and equipment
- More funding
- Longer-term funding (and continuity of funding)
- Help in accessing genetic resources

The GCP could do the following to take better advantage of GCP scientists' skills, resources, and infrastructure:

- Better assess partners' resources and capabilities (in part through visits to GCP scientists in their own institutions)
- Continue supporting and strengthening partnerships and collaborations among institutions
- Create a GCP spatial analysis database that could respond to research questions related to the entire program
- Use infrastructure and resources for training purposes, genotyping services and phenotyping services

In regard to SP1, respondents provided the following positive feedback:

- The Genotyping Support Service was a great idea
- Good support from SP leader; useful workshops organized
- Provided resources to characterize a large number of germplasm across crops. Forced many centers to look hard at their collections and to do something with them
- Much progress has been done in crop diversity assessment by neutral markers
- Good advances have been made on several crops
- Inclusive SP leader
- The SP has generated much-needed information on diversity within many orphan crops--and disseminating information on how to do this appropriately to a larger group globally

In regard to SP1, respondents suggested the following areas for improvement:

- Better communication
- Data quality control, validation and release
- More technical workshops
- Could have more group discussion outside of ARM
- Better feedback on progress reports
- Enforcing IP-related issues that have been agreed to by GCP members (e.g., the inability of CAAS to provide seed of accessions that it contributed to the GCP composite germplasm collections).
- Support seed multiplication, conservation, and distribution for all accessions in the GCP composite germplasm collections for each mandate species

In regard to SP2, respondents provided the following positive feedback:

- Great leadership and enthusiasm
- This SP has really allowed to our group to make a lot of progress in developing new genomic resources.
- SP2 is well placed to benefit from developments in SP1 and SP4 and to contribute to developments in SP3.
- High quality science and excellent management
- Has developed an innovative strategy for capturing key genes in drought tolerance

In regard to SP2, respondents suggested the following areas for improvement:

- More focus on drought tolerance

- Be careful not to be technology driven, better formulate the biological questions and put more emphasis on phenotyping
- Increased feedback from breeders in SP3 is essential for defining the target varieties and target environments for drought tolerance
- Find the best paths and make a home run; cannot afford to follow all paths (more focus)
- Biotic stresses are not represented enough represented in this SP
- More gene and QTL discovery work using the resources developed in the program

In regard to SP3, respondents provided the following positive feedback:

- Good diversity of target crops and objectives within SP.
- Tools coming in place for use in marker assisted breeding
- Encouraging sharing of materials and knowledge
- In contact with breeders
- Implementation is improving
- SP3 has provided African NARS with an important opportunity to explore genomic tools in breeding programs and has opened potential among and capacity of African NARS
- Good cooperation with other SPs

In regard to SP3, respondents suggested the following areas for improvement:

- Need to put in place a comprehensive strategy for use of markers in breeding for key crops
- Address the phenotyping bottleneck (which involves both physical and human facilities)
- Better integration of field versus controlled environment activities
- Consideration of implementation for complex traits (e.g., drought adaptation)
- More root crop experts should be involved
- SP3 linkage with SP5 has to be strengthened further to maximize the effective impact of SP3 activities and to facilitate MAS technology transfer to NARS
- Put more focus on germplasm phenotyping (trait identification and utilization) since much of the molecular diversity in germplasm collections has now been described.

In regard to SP4, respondents provided the following positive feedback:

- Products delivered this year; results are appearing
- Collaboration with project partners has accelerated some research in new areas.
- Improved collaboration between CG institutions.
- Interesting strategic view of what should be the ideal GCP bioinformatics environment
- The tools are now coming together with good end-user focus
- SP4 has taken on very ambitious objectives and we are starting to make an impact by working closely with scientists in other SPs

In regard to SP4, respondents suggested the following areas for improvement:

- SP1/2/3 workshops should routinely have SP4 member(s) as participants. Equally, SP4 workshops should have participation from other SPs.
- Transaction costs for SP4 collaboration remains very high, sometimes impeding progress.
- Real progress in the broad platform design and implementation by core partners is often overshadowed by quick and dirty product delivery by other less collaborative partners.
- Focus more on implementation and delivery of products.
- Establish more reasonable ambitions
- Be more pragmatic and user-directed
- Some tools like the Domain Model are still claiming to be all things for all people, but are not focused enough
- Listen more to the other SPs
- Increase collaboration with GCP biologists

In regard to SP5, respondents provided the following positive feedback:

- It seems to be highly effective in getting the results of research to the plant breeders

- Excellent support from GCP staff.
- Capacity building of NARS scientists is encouraging and must be sustained
- Trying hard to get established and make a difference.
- Good management of this SP
- Has a good analysis of challenges to capacity building
- Provides training IN the region avoiding brain drain, which might be a consequence of classical PhD programs provided by other funding agencies
- It is on a good track; conceptualizing work in the right direction
- The definition of the delivery strategy was very important

In regard to SP5, respondents suggested the following areas for improvement:

- It should be expanded because it has many objectives: delivery, training, capacity building
- More practical (hands-on) training
- SP5 developed a crop bioinformatics training course. SP4 is developing an online crop bioinformatics resource independently. Efforts need to be combined.
- More interaction with clientele
- SP3 linkage with SP5 has to be strengthened further to maximize the effective impact of SP3 activities and to facilitate MAS technology transfer to NARS
- Needs more impact, economics, spatial analysis work
- Associate more with national programs.
- Establish regional focal points or even national focal points who would act as ambassadors for GCP