

World Café – Can we manage drought phenotyping as a service?

This group discussed the needs for phenotyping services among the GCP scientific community. How could these services be managed? What is needed? How might the GCP proceed in providing phenotyping services to the community?

Identifying Needs

Several discussants mentioned the need to identify what GCP scientists and partners need with respect to phenotyping. These needs could be classified as those relating to services, equipment, information and training. With respect to services, several participants mentioned the need for something along the lines of the Trait Phenotyping Platform (TPP), central hubs where detailed phenotyping work could be carried out. The community may reject a disperse network of many phenotyping sites that may have poor infrastructure or human resources. It would be useful to canvass the GCP community regarding equipment needs. Is there some equipment that could be shared among the community to reduce costs? For example, the use of remote sensors to measure attributes like leaf area could potentially be shared among the GCP network.

Needs for knowledge and information were mentioned by several discussants. The planned phenotyping manual might address this need. It should be a resource that is more than just a book – something online that the GCP community can refer to, and perhaps add information to (Wiki? Web 2.0?).

Training and capacity building was a repeated theme in the discussions. Many people working in crop improvement do not know how to conduct phenotyping experiments. One participant said that everybody needs some basic training.

Participants cited the need for improved phenotyping for traits secondary to drought. They also mentioned the need to address intellectual property concerns with respect to carrying out trials in more than one country.

Funding Support

Several participants mentioned the need to fund logistical needs around their current institutional and GCP projects. For example, they are interested in funding to support the communities of practice around each crop. This might involve travel support for crop specific meetings. These meetings could have a specialized training component. Participants also cited the need for support for student theses that would focus on some aspect of phenotyping related to on-going GCP projects. One participant suggested that the development of phenotyping services could be managed like an investment portfolio, where close attention is paid to which services are most likely to help GCP reach its goals.

Simplicity

One theme that recurred throughout the discussion of phenotyping services is the need for simplicity to ensure effectiveness in the delivery and use of services. The GCP does not necessarily need the most “high tech” solutions to phenotyping. More important are solutions that are proven to have worked and where we know the chances that they can be effectively implemented.

Participants made several suggestions related to the “simplicity” theme. One suggestion was to start small, instead of building an elaborate phenotyping program at the outset. There is a sense that a great deal of GCP work is being diluted by additional activities that are not needed. Therefore, a program that would build on the current focus of GCP work would be preferred. Another suggestion was to build the program around communities of practice focused on individual crops.

Participants cited the need for a “bottom up” process related to phenotyping services. These services need to be tied to on-going GCP projects. There is a danger that the GCP’s phenotyping network could develop services that don’t really respond to the needs of the community. In this sense, some way to quickly assess needs in the community is needed.