Global Oat Genetics Database (Instant Oatmeal)

March 11th, 2014 Conference Call

Attendees

- Catherine Howarth (cnh@aber.ac.uk)
- Gabe Gusmini (gabe.gusmini@pepsico.com)
- Gerard Lazo (gerard.lazo@ars.usda.gov)
- Jean-Luc Jannink (jeanluc.work@gmail.com)
- Tinker, Nicholas (Nick.Tinker@AGR.GC.CA)

Absentees

- Bruce Roskens (bruce.roskens@grainmillers.com)
- Dave Matthews (matthews@graingenes.org)
- Jack Okamuro (jack.okamuro@ars.usda.gov)
- Joe Lutz (Joe.Lutz@genmills.com)

Minutes

Project Structure

Updated committees as follows:

- Steering Committee: Jack Okamuro (USDA-ARS), Gabe Gusmini (PepsiCo), Joe Lutz (General Mills), Bruce Roskens (Grain Millers), to be designated (POGA), Nicholas Tinker (AAFC), Catherine Howarth (European Oat Community), Pamela Zwer (Austral-Asian Oat Community).
- Project Committee: Jean-Luc Jannink (TCAP), Gerard Lazo (GrainGenes), Dave Matthews.

Outcomes from Winnipeg Meeting

- Three levels of data management:
  1. Local as today with flexibility to use either a private instance of the global database or other systems. Need the "sandbox" approach or similar interface.
  2. Among breeders sharing within a specific project.
  3. Global and public.
- Breeding tools would be useful but not critical.
- Analytical tools will be critical.

Database Development Update and Targets
- Curating CORE data underway but some data still in transit from Gerry to Nick's group.
    - Taxa and naming being curated.
    - Currently being assembled in an off-line database and will be then transitioned to T3 by end of April.
- Final target for launch remains the AOWC meeting in July.
    - CORE data.
    - GBS data.
    - Phenotypic data.
    - Uniform oat nurseries.
- Data Sharing in/from Europe
    - Most breeding is private which creates some challenges in data sharing.
    - Experimental populations data should be shared globally and this initiative could help.
    - Nick will attend the meeting in Europe in March to present the initiative.
    - Need a EU-looking interface on the T3 back-end.

Data Curator
- Update on funding needed.
- Best option for hiring is probably as ARS employee on soft money.
- Need a candidate with a MS degree minimum.
    - An option could also be to fund a graduate student.
    - Will require some travel to interact with the breeders.
    - Location could be either Cornell or Ottawa.
        - Ottawa best choice for succession planning from Yang-Fen.
        - Ottawa may be because of administrative processes.
        - Nick's student (1 of 2) may be interested.

Open Questions and Action Items
- For Jack:
    - What do we need to do to secure the funding of an ARS position for data curation for next year?
- For Bruce:
    - What is the current status of the NAMA funding?
    - Who is the appointed POGA representative?
- Uniform nursery data:
    - Keep on-hold until we have a curator.
    - Jean-Luc starts talking to Howard Rines.
    - Gabe/Bruce update on curator.
- Develop role profile for Data Curator: Jean-Luc.
- Reconnect with absentees and schedule next calls.
- Develop a first version that can be shared by Nick at European meeting: Dave/Jean-Luc/Gerry.

Potential duties of a North American Oat Curator:

1. Work with GrainGenes / TCAP team to establish an oat-specific instance of T3, ensuring that there is a reliable and internationally accessible host and an open conduit to technology and feature updates.

2. Complete the capture of CORE and additional pre-competitive data deemed public into an integrated public database. This includes phenotypes, markers, and pedigrees.

3. Assist in developing and populating an enhanced GrainGenes Portal providing additional 'static' and legacy data (non-standard data sets, links, maps, etc) as well as a front-end to "Oat-T3".

4. Be familiar with the International oat community and assist in curating data from International colleagues. *Potentially: assist with establishment of "modular portals" that will allow major contributors (e.g. CORE-Europe) to populate the shared database while maintaining some independent visibility.

5. Suggest and (possibly) contribute to new T3 features and functionality.

6. Potential: Establish a restricted instance of T3 to provide "mid-competitive" access to a consortium of breeders. Advise and provide limited assistance with "personal T3 instances".

Benefits:

1. Establish that North American oat workers are serious about long-term leadership in the oat community.

2. Establish CORE data as a visible and useful resource that is generously provided to the world, and inspire other communities to be open and transparent. (I think this is currently very relevant).

3. Ensure all breeders in key environments for North American Milling oats have complete access to data that will allow them to apply molecular breeding efforts.