Plant Ontologies for Agronomic Traits
Workshop 8-9th December 2011
European Bioinformatics Institute, Hinxton Cambridge UK

Deliverables:
Consideration of a number of key use cases and the fit of current ontologies to them.
Potential establishment of a UK Crop Ontology Network.
Initiation of technical working groups.

Day 1

10:00 Welcome and Introduction (to include initial use cases) – Chris Rawlings

10:20 Plant / Crop Phenotype Ontologies
10:20 – 10:35 Pankaj Jaiswal (OSU) - Current Status of Plant/Crop Ontologies
10:35 – 10:50 Jane Lomax (EBI) – Community Ontology development: Lessons from
           the Gene Ontology
10.50 – 11:00 Paul Kersey (European Bioinformatics Institute) - transPLANT: a
           trans-national infrastructure for Plant Genomic Science
11.00 – 11.10 Cyril Pommier (INRA) Ontologies for Genotype, phenotype and
           environment interaction studies at the INRA

Open floor: more ontology presentations 2 slides /5 minutes per person from meeting
attendees

11:10 – 11:15 Elizabeth Arnaud (CGIAR) - Online GCP Crop Ontology (CO) to
           annotate trait information useful for breeders
11:15 – 11:20 Naama Menda (SGN) - Phenotype Ontology for Solanaceae breeders
11:20 – 11:25 Rex Nelson (USDA) - Cross species ontologies and phenomics:
           legumes, from beans to trees
11:25 - 11:30 David Marshall (JHI) - Real traits for "real" plants.

11:30 Coffee break

12:00 Current Problems – Crop Breeding and Physiology
12:00 – 12:15 Peter Jack RAGT – Breeders Perspective
12:15 – 12:25 Martin Parry (RRes) - Traits Related to Photosynthesis
12:25 – 12:35 Daniel Kindred (ADAS) – Field Phenotyping

Open floor: more plant sciences presentations 2 slides /5 minutes per person from
meeting attendees

12:35 - 12:40 Malcolm Hawkesford (RRes) - Nutrient Use Efficiency in Wheat
12:40 - 12:45 Jill Wegrzyn (UC Davis) - Moving Towards Ontologies in Forest Tree
Genomics

13:00 Lunch

14:00 Break out Session 1

Capabilities and limits of current ontologies (1) – To capture and explore genotype to phenotype relationships

15.15 Feedback from all groups

15.45 Coffee Break

16:15 Break out session 2

Capabilities and limits of current ontologies (2) – To capture and explore cross-species phenomic comparison. For example is possible to relate flowering time in Arabidopsis with bolting in field brassica. ?

17.30 Feedback from all groups

18:00 Finish for day
19:00 Dinner

Day 2

9.00 Working session (Break out session 3)

Further Development of Initial Use Cases: Mapping of commonly used breeding terms to academic ontologies (supervised by ontology "experts")

11.00   Coffee

11.30 Break out Session 4

Problem Areas where action is needed
- Areas not covered by existing ontologies
- Composition of existing ontologies
- Translation between commercially used coding systems/controlled vocabularies and ontologies
- Mechanisms for stewardship/development
- Recommend areas and mechanisms for further development

12:30 Feedback From All Groups

13:00 Lunch

14.00 Concluding session

Agreement of Action Items and Working Groups

15:30 Departure