T3/Oat status update, May 2016

Clare Saied1, Calvin Lietzow, David Matthews, Clay Birkett, Shiaoman Chao, Nicholas A. Tinker and Jean-Luc Jannink

1T3/Oat curator, Cornell University
crs298@cornell.edu

T3/Oat is the repository of oat phenotype and genotype data for the Oat Global Initiative (www.oatglobal.org) and provides flexible queries for extracting desired datasets for analysis, as well as integrated analysis tools (http://triticeaetoolbox.org/oat/).

2015 Uniform Winter Oat Yield Trials

Data from the 2015 Uniform Winter Oat Yield Trials (UWOYT) have now been uploaded to T3/Oat. There are currently data from 185 UWOYT phenotype trials stored in T3/Oat dating back to 2003 and providing data on 46 phenotypic traits and over 200 lines.

Featured T3/Oat tool: Select Lines by Phenotype

The “Select Lines by Phenotype” tool can be used to select T3 lines based on their performance in phenotypic trials.

The first stage of selection is to choose a phenotypic trait of interest (Figure 1). A full list of the phenotypic traits currently available in the database, along with further information about these traits, can be found in the “About T3” menu under the heading “Trait descriptions”.

A list of trials that measured the selected trait will be generated. More than one trial may be selected by holding control (PC) or command (Mac).

The data selection is summarized by the mean and range, and a histogram is generated. The “Search between” boxes can be used to restrict the data selection to lines that performed within a defined phenotypic range. The default values will select all of the lines that were tested by the selected trials.

The lines that fall into the selected phenotypic range will appear in a table along with details of the breeding program, trial name, and the phenotypic value recorded.
The selected data will be added to the “Current selections”, which can be reviewed in the “Quick Links” sidebar. Current selections can be replaced or combined with any additional selections that are made (Figure 2). In this manner, T3’s selection tools can be used together to create a customized dataset for download or for analysis using one of T3’s integrated analytical tools.

An up-to-date summary of all of the data that is available in T3/Oat can be obtained from the “Content Status” page, which can be reached through the “About T3” menu.

Figure 2. The T3/Oat selection tools can be used in sequence to create a custom dataset.

Please contact the curator with any suggestions or questions, or to discuss uploading data to T3/Oat; any feedback will be gratefully received.