



## **T3/Oat: Status update October 2016**

Clare Saied<sup>1</sup>, David Matthews, Clay Birkett, Shiaoman Chao, Nicholas A. Tinker,  
and Jean-Luc Jannink

<sup>1</sup>T3/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](http://www.oatglobal.org)) and provides flexible queries for extracting desired datasets for analysis, as well as integrated tools for data analysis (<http://triticeaetoolbox.org/oat/>).

### *Uniform Oat Performance Nurseries*

The 2016 Uniform Early and Midseason Oat Performance Nursery data will not be published in a nursery report this year; rather, the data will be made available through T3/Oat.

The selection “Wizard” provides the easiest way to select the 2016 data from the UE&MOPN (see [T3/Oat: Status update March 2016](#) for a summary of this tool). Navigate to the selection wizard and choose “Experiment” as the starting point from the dropdown list. Work through the subsequent selection windows to create a set of trials, traits, and lines to add to the “Current selections” for download or for analysis using one of T3’s integrated analytical tools.

The “Traits and Trials Table” tool generates data summary tables that are similar to the tables found in the UE&MOPN nursery reports (see [T3/Oat: Status update July 2016](#) for a summary of this tool). The tool now appears under the subheading “Summary statistics” in the “Analysis” menu.

For collaborators still needing to submit data from the 2016 UE&MOPN, please see the data submission tutorials that are available on the “Data Submission” page for help uploading your data, or contact the T3 team for support using the “Contact Us” tab in the top right of each T3 webpage.

### *Featured T3/Oat tool: Track alleles through pedigree*

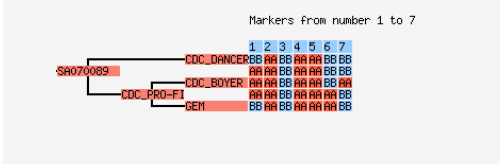
Pedigree information can be stored in T3/Oat in two formats. Pedigrees are first submitted as a text string when a line is added to the database; however, if the parents of the line are stored in T3, then it is possible to link the related lines by providing the T3 names of the two parent lines. Pedigree trees can be constructed in T3 for these lines, and the alleles of the lines in the pedigree tree can be displayed for the markers in the “Current selections” (Figure 1).

Show Pedigree Tree : SA070089

Alleles of selected markers are shown on the right.

- 1: BA\_grs\_c10318\_236
- 2: GMI\_DS\_A3\_213\_352
- 3: GMI\_DS\_A3\_262\_190
- 4: GMI\_DS\_A3\_340\_378
- 5: GMI\_DS\_A3\_37\_143
- 6: GMI\_DS\_A3\_388\_107
- 7: GMI\_DS\_A3\_39\_99

Select markers.



Line Name:  Examples: cree, nd20448

Figure 1. The T3 “Track Alleles Through Pedigree” tool.

First, select a set of markers using the “Select Markers” tool (see [T3/Oat Status Update: August 2016](#) for a summary of this tool). Next, navigate to the “Track Alleles Through Pedigree” tool under the “Analyze” menu, and enter the name of the line of interest, using the correct T3 line name format.

There is no limit to the number of markers that can be displayed in this tool; however, smaller numbers of markers will be quicker to process and easier to visualize.

Alleles will be displayed in a grid formation in line with the corresponding T3 line within the pedigree tree. Grey cells indicate missing data, and an empty row indicates that the line alleles have been displayed higher in the grid, as the line appears more than once in the pedigree.

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