

**Cold Spring Harbor Laboratory
WORKSHOP ON CEREAL GENOMICS
September 13 – 19, 2005**

MaizeGDB Exercise 2 of 2 to be completed on your own, to the best of your ability.

In this, the second of two required exercises intended to familiarize you with how to use MaizeGDB, you will use the MaizeGDB website to locate seed stock at the Maize Genetics Cooperation– Stock Center to use for crosses intended to determine whether a mutant you discovered in your field is a new mutation of a locus which has already been characterized.

Your lab is working on a locus called *terminal ear1* (*te1*). In the past year, you grew 30 plants from a seed stock known to generate insertional mutants due to one or more active copies of Robertson's mutator being present in the line. Each of those 30 plants was selfed, and seed were planted in a field. The phenotype displayed by progeny from plant 5 is of interest to you: about one fourth of the plants make a terminal ear instead of a tassel! To determine whether you may have generated a new allele of the *te1* locus, you decide to order seed from the MGC–SC so that you can test for allelism. There are two basic ways to get to stocks, and you will do both.

Name: _____

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MaizeGDB Exercise 2 of 2

1. First go to MaizeGDB (<http://www.maizegdb.org>). At the search bar at the top of the page, search all records using the term *terminal ear*. What kinds of records do you find?

2. Select the four loci, and then select the gene *te1*. What alleles (alleles are a type of variation) of the *te1* locus are listed? Does the MGC-SC make available seed stocks for any of these variations?

3. What other sorts of information are available from the *te1* locus page (<http://www.maizegdb.org/cgi-bin/displaylocusrecord.cgi?id=12673>) that might be of interest to you for your research? How might you use these data?

4. Now for the shortcut: click on the MaizeGDB icon in the top left corner of your browser window. You should now be at <http://www.maizegdb.org>. In the left green column, click on the link to Stocks beneath the Data Centers header. Using the Advanced Stock Query Tool, search for stocks that have the genotypic variation *te1*. What variations of *te1* are represented in the MGC-SC collections?