
Germplasm Cross Importer Documentation

Release 1

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Germplasm Cross Importer is developed following [Tripal Developer's Guide » Creating Custom Data Loaders](#). This module is developed for bulk load germplasm crosses into database.

1.1 File Upload

Format requirements for upload files can be found easily in UI while using this module.

Load germplasm into database

Upload file must in TSV (tab-separated values) format. Please confirm file format and column order before upload.

FILE UPLOAD

Germplasm file should be a tab separated file with the following columns:

1. Year: the year the cross was made in.
2. Season: the season the cross was made in (e.g. Spring, Fall, Winter, Summer).
3. Cross Number: a unique identifier for the cross (e.g. 12345).
4. Maternal Parent: the name of the maternal parent of this cross.
5. Paternal Parent: the name of the paternal parent of this cross.
6. Cross Type: the type of cross (e.g. single, double, triple).
7. Seed Type: either the market class or seed coat colour of the seed resulting from the cross.
8. Cotyledon Colour: the cotyledon colour of the seed resulting from the cross.
9. Comment: a free-text comment about the cross.

File Upload

FILE	SIZE	UPLOAD PROGRESS	ACTION
<input type="button" value="Browse..."/> No file selected.			

Remember to click the "Upload" button below to send your file to the server. This interface is capable of uploading very large files. If you are disconnected you can return, reload the file and it will resume where it left off. Once the file is uploaded the "Upload Progress" will indicate "Complete". If the file is already present on the server then the status will quickly update to "Complete".

1.2 Prefix and Organism

Organism must be selected from dropdown menu before upload. Prefix text box is optional to fill in and default the value is 'GERM'. The uniqueness for each germplasm will be 'GERM' followed by its `stock id` but user can give a unique prefix to replace 'GERM'.

Prefix

Please give a prefix for this germplasm cross. Unique names for germplasm contained in file will be this prefix followed by stock id. Unique prefix can help you track this germplasm in the future, and default prefix is GERM.

NOTE: unique names for existed germplasm cross will be updated with new prefix too.

Organism *

Select the organism for germplasm file you would like to upload

Import File

1.3 Bulk load germplasm crosses

As Chado is the data store for TriPal, germplasm data will be saved in five `chado tables`: `cv`, `cvterm`, `stock`, `stockprop`, and `stock_relationship` in this module.

- required control vocabularies (CVs) and CV terms will be checked before data loading
- germplasm crosses will be loaded into table `stock`
- properties for each germplasm will be loaded into table `stockprop`
- relationships with parents for each germplasm will be loaded into table `stock_relationship`

Note: CVs and CV terms used in this module is customized for our database. Users can check their own database and modify CVs and CV terms accordingly.

1.4 PHP UnitTest

PHP UnitTest is created to guarantee the integrity of data insertion.

CHAPTER 2

Installation

Note: It is recommended to clear caches regularly in this installation processes.

2.1 Download Module

The module is available as one repository for [Pulse Bioinformatics, University of Saskatchewan](#) on [GitHub](#). Recommended method of downloading and installation is using git:

```
cd [your drupal root]/sites/all/modules  
git clone https://github.com/UofS-Pulse-Binfo/tripal_germplasm_importer.git
```

Germplasm Cross Importer should be installed by now and the status of this module can be checked in “Home » Administration » Tripal » Modules”.

TRIPAL EXTENSIONS				
ENABLED	NAME	VERSION	DESCRIPTION	OPERATIONS
<input type="checkbox"/>	Tripal Germplasm Importer		Import germplasm into the Chado stock tables. Requires: Tripal (enabled), Views (enabled), Chaos tools (enabled), Path (enabled), Search (enabled), PHP filter (enabled), Entity API (enabled), Redirect (enabled)	

2.2 Enable Module

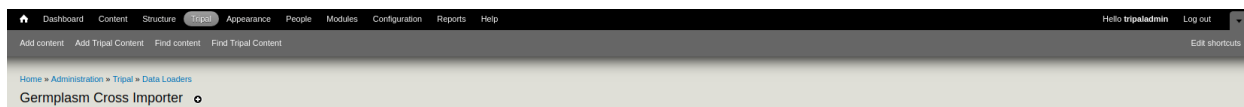
The module can be enabled in “Home » Administration » Tripal » Modules” by select the checkbox under “ENABLED” column (as shown in above image) and then click on “Save Configuration” button by the bottom of page.

Another method that can enable our module is using drush:

```
drush pm-enable tripal_germplasm_importer
```

2.3 Use Module

After Germplasm Cross Importer is installed and enabled, it should be ready to use in “Home » Administration » Tripal » Data Loader”.



Load germplasm into database

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FILE UPLOAD
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6. Cross Type: the type of cross (e.g. single, double, triple).
7. Seed Type: either the market class or seed coat colour of the seed resulting from the cross.
8. Cotyledon Colour: the cotyledon colour of the seed resulting from the cross.
9. Comment: a free-text comment about the cross.

FILE	SIZE	UPLOAD PROGRESS	ACTION
<input type="button" value="Choose file"/> No file chosen			

Remember to click the "Upload" button below to send your file to the server. This interface is capable of uploading very large files. If you are disconnected you can return, reload the file and it will resume where it left off. Once the file is uploaded the "Upload Progress" will indicate "Complete". If the file is already present on the server then the status will quickly update to "Complete".