GRIN-Global Curator Tool





Revision Date April 21, 2021



This guide provides an overview to the GRIN-Global Curator Tool (CT) and provides details on the program's interface. Individual topics are documented online under the *User Documents* section of the GRIN-Global Project website at: https://www.grin-global.org/userdocs.htm

Please look at the index of that webpage for detailed documents on specific topics.

The Curator Tool software release notes are online at <u>https://www.grin-global.org/docs/CT_Release_Notes.pdf</u>

Appendix A contains this document's revision notes.

Review the <u>Table of Contents</u> which contains links to the document's sections.

This video [<u>https://www.ars-grin.gov/npgs/gringlobal/videos/interface_basics.mp4</u>] provides a brief overview of the main Curator Tool window.

Author Marty Reisinger

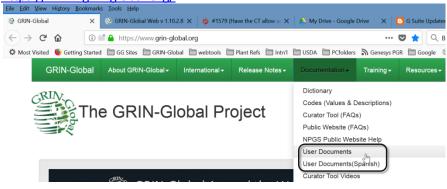
Comments/Suggestions:

Please contact <u>feedback@ars-grin.gov</u> with any suggestions or questions related to this document.

Related Resources

GRIN-Global Documentation Website

Links to various GRIN-Global documents, videos, project history, etc. <u>https://www.grin-global.org/</u>



This and other GRIN-Global –related documentation can be downloaded from the GRIN-Global documentation website. See especially <u>https://www.grin-global.org/userdocs.htm</u>. Many topics discussed in this general user guide are explained in detail in their respective documents.

Videos Illustrating Curator Tool Concepts

These videos illustrate basic Curator Tools concepts and features: <u>https://www.grin-global.org/videos.htm</u>

Accessions and Passport Data

Accession overview and instructions for adding, editing, and deleting accession data: <u>https://www.grin-global.org/docs/gg_accessions_and_passport_data.docx</u>

Multicrop Passport Descriptors

The FAO/BIOVERSITY Multi-Crop Passport Descriptors (MCPD V.2) is the result of a thorough revision of the original publication released by FAO/IPGRI in 2001. This document describes how GRIN-Global handles these descriptors.

https://www.grin-global.org/docs/gg_multi_crop_passport_descriptors_MCPD.docx

Source Habitat Observations

Five new (after version 1.0.7) tables provide an extremely flexible method for adding more detailed information about the collection site which was not possible with 1.0's single accession_source table. Now genebank personnel can create custom descriptors and codes for an unlimited amount of detail on the collection site.

https://www.grin-global.org/docs/gg_observations_and_descriptors.docx

Inventory

Overview of the Inventory-related dataviews and inventory processing. Inventory is the physical stock for each accession, whereas accession tables contain, among other items, the passport information and other descriptors.

An accession may have several inventory samples. For example, there may be different generations, storage types, locations, sites, etc.

https://www.grin-global.org/docs/gg_inventory.docx

Adding Images & Other File Types

In the Curator Tool Release 1.9.8.14 (initially released in the USDA in Dec, 2017), an Inventory Attachment Wizard was introduced. If using the CT Release 1.9.8.14 or later, refer to the online documentation at https://www.grin-global.org/docs/gg_inventory_attachment_wizard.docs

Order Processing

Explains how to process orders and use the Order Wizard https://www.grin-global.org/docs/gg_order_processing.docx

Observations: Crop Descriptors (Traits) & Observations

Examples explain the relationship among the dataviews in the family of Crop dataviews <u>https://www.grin-global.org/docs/gg_observations_and_descriptors.docx</u>

English vs. ENG

An "alternative" language to English was developed specifically for the National Plant Germplasm System (NPGS) – some of the GRIN users prefer to use Codes rather than the longer Titles when entering Observations and other data; this document explains how to use the ENG language to accomplish this. <u>https://www.grin-global.org/docs/gg_alternative_languages.docx</u>

Contents

Related Resources	2
GRIN-Global Documentation Website	2
Videos Illustrating Curator Tool Concepts	2
Accessions and Passport Data	2
Multicrop Passport Descriptors	2
Source Habitat Observations	2
Inventory	3
Adding Images & Other File Types	3
Order Processing	3
Observations: Crop Descriptors (Traits) & Observations	
English vs. ENG	3
Introduction to GRIN-Global	9
What is Needed to Access GRIN-Global?	9
End User Components	10
Server Components	11
Conventions Used in this Manual	11
Keyboard Shortcuts	12
Drag Data	13
Drag and Drop	13
Selecting Multiple Rows	14
Selecting Cells	15
Curator Tool Overview	16
Starting the GRIN-Global Curator Tool	16
Starting Up the CT	16
Changing Passwords	18
International Password Guidelines	18
Curator Tool Two Panels	18
Data Grid (or "Datagrid")	19
Deleting "Stuff"	20
Typical Screen	20
Definitions	22
Lists (Folders) Overview	23
Static Folders ("Static Lists")	23
Using Lists to Organize Your Accessions	25
Using Lists to Organize Your Order Requests	
The List Panel is a File Cabinet	25
Displaying a List of Accessions	
Dynamic Folders ("Dynamic Lists" or "Dynamic Queries")	
Deciding Which Type Folder to Use	28

Steps in Creating Dynamic Folders	
Refreshing a Dynamic Folder	
Dataviews	
To Display a Dataview Whose Tab is Visible	
To Display a Dataview Whose Tab <i>isn't</i> Visible	
Some Dataviews Display Data, Some Do Not	
Form View	
Displaying Forms	
Visual Clues	
Icon Legend	
Cell Colors	
Warning Indicators	
Spreadsheet Similarities	
Columns & Rows	
Column Order	
Hiding / Displaying Columns	
Personalizing Your Curator Tool: Other Options Tab	
Cell and row colors	
Max rows allowed	
Performance Enhancement Option: Query Paging Size	
Save User Settings Now	
Active Web Service (Switching to another Database)	
Sorting and Filtering Records	
Sorting Data	
Filtering Records	
Lookup Tables	41
Code Groups	41
Background Information	
Importing Your Data from an Existing Database into GRIN-Global	42
Drag & Drop	
Using a Spreadsheet to Import Data into GRIN-Global	
Two Importing Methods	
Copy the Data <i>from</i> a Spreadsheet <i>to</i> the Curator Tool	
Copying Column Names from the Curator Tool into a Spreadsheet	
Copying, Block-Style	
Copying Curator Tool Data into a Spreadsheet	47
Copying Curator Tool Data into a Spreadsheet	
Using Lists to Organize Data	48
Tabs	
To Create a New Tab	
To Rename a Tab	

To Hide and Display Tabs	50
Lists	51
To Create a New List	51
To Delete or Clear a List	52
To Delete Items from a List	52
Name a List	53
To Move a List	53
To Add Additional <i>Items</i> to a List	54
Sorting & Custom Naming List Items	55
Sorting List Items	55
List Items' Custom Naming Feature	55
Inventory Lists	58
Virtual (or System-Generated) Inventory Items	58
Searching for Records	59
Search Tool Introduction	59
Search Tool Window	60
Two Distinct Search Methods	61
Search Tool: Query By Example ("QBE Searches")	62
Starting a QBE Search	62
Adding Tabs in the Search Tool	63
Deleting Tabs in the Search Tool	63
Editing or Saving the Results of a Search	64
Search Criteria (QBE)	64
QBE Search Code	64
Case Sensitivity	65
Special Characters	65
Wildcards	66
Date Fields	67
Manually Modifying the Search Text	69
Any Word vs. All Words ("OR" and "AND" in the QBE Search Method)	70
Adding Criteria	72
Criteria Code Explained	73
Text Box Searches	75
Case Sensitivity	76
Filtering the Search Results	76
Searching a List of Items	77
Moving Records from the Search Grid to the Curator Tool Data Grid	79
To Move Records from the Search Tool to the Curator Tool	79
Creating, Updating, and Deleting Records	80
Overview	81
Cell Colors	81

To Create a New Record	
Keyboard Shortcuts in Edit Mode	
Copying from the Cell Above	
Duplicate Data (Ctrl-D)	
Restricted Fields (Lookup Picker)	85
Using the Lookup Picker	86
Updating (Editing) Data	
Highlight Changed Data Option	88
Warning Indicators	88
Deleting Records	89
Security (Ownership & Permissions)	90
Owner Concept	
To Transfer Ownership to a Different User	
Parent and Owner Relationships Between Dataviews	91
Permissions	91
Assigning Permissions to Other Users	
Image Handling (Attachments)	93
Reports	94
Report Overview	
Wizards	94
General Notes about Curator Tool Wizards	
Wizards	
Accession Wizard Overview	95
Subordinate Accession Dataviews	
Cooperator Wizard	100
Cooperator Wizard Background Information	
Background Information	
Background Information Using the Curator Tool Cooperator Wizard	
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes	
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021	
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020	100 101 101 101 101 101 101
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020 – July 12, 2018	100 101 101 101 101 101 101 101 101
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020 – July 12, 2018 – May 9, 2018	100 101 101 101 101 101 101 101 101
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020 – July 12, 2018 – May 9, 2018 – March 13, 2018	100 101 101 101 101 101 101 101 101 101
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020 – July 12, 2018 – May 9, 2018 – March 13, 2018 – December 27, 2017	100 100 101 101 101 101 101 101 101 101
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020 – July 12, 2018 – May 9, 2018 – March 13, 2018 – December 27, 2017 – December 1, 2017	100 100 101 101 101 101 101 101 101 101
Background Information Using the Curator Tool Cooperator Wizard Appendix A: Document Revision Notes – April 20, 2021 – September 21, 2020 – July 12, 2018 – May 9, 2018 – March 13, 2018 – December 27, 2017 – December 1, 2017 – October 25, 2017	100 100 101 101 101 101 101 101 101 101

– May 11, 2016	102
– March 14, 2016	102
– March 11, 2016	102
– January 14, 2016	102
– January 13, 2016	102
– December 29, 2015	102
– November 30, 2015	102
– November 5, 2015	102
– October 5, 2015	102
– June 10, 2015	102
– April 30, 2015	102
– April 8, 2015	
– March 9, 2015	103
– January 14, 2015	
– January 6, 2015	103
– November 18, 2014	
– October 21, 2014	103
– June 23, 2014	103
– June 17, 2014	103
– May 6, 2014	103
– April 8, 2014	103
– April 4, 2014	103
– November 11, 2013	103
– August 14, 2013	104
– April 2, 2013	104
Appendix: Database and GRIN-Global Basic Concepts	105
GRIN-Global Overview	105
GRIN-Global is a Relational Database	105
Relational Database Example: Accessions and Inventory	107
Schema	108
GRIN-Global Tables	108
Dataviews	108
GRIN-Global's Table Relationships	112
Keys: Primary and Foreign	114
Getting Started with the Curator Tool	
Appendix: Updating the Curator Tool	117

Introduction to GRIN-Global

GRIN-Global (GG) is a plant genebank management system. The initial GG project involved the <u>USDA</u> <u>Agricultural Research Service</u>, <u>Bioversity International</u>, and the <u>Global Crop Diversity Trust</u>. Project information and background, software download links, documentation, and training resources can be found on the <u>GRIN-Global website</u>.

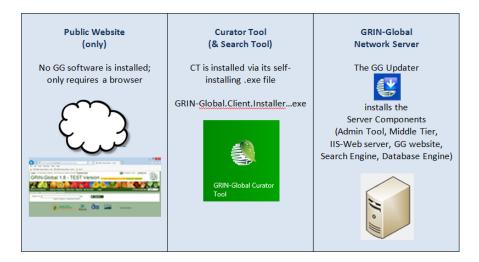
GRIN-Global is public-domain software freely available to the world's crop genebanks.



GG is versatile – it can be implemented different ways, ranging from a simple genebank inventory application on a single PC to a widely distributed networked system supporting on-line user searching and germplasm ordering. It is generally used in a networked environment.

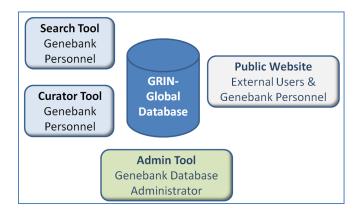
What is Needed to Access GRIN-Global?

The GRIN-Global (GG) germplasm information system consists of several distinct components. Typically, the GRIN-Global administrator will install the GG database onto a server. (Note to GG administrators: administrator guides are online at <u>https://www.grin-global.org/admindocs.htm</u>)



End User Components

The main GRIN-Global components are:



- **Curator Tool** (CT) Genebank workers connecting to the server have several GG programs installed on their PCs. The **Curator Tool** is an application that must be installed on the user's PC in order to connect to the GG database. The CT is used by internal genebank staff who manage the genebank's data.
- Search Tool (ST) the Search Tool is automatically installed when the Curator Tool is installed. The ST can run as a stand-alone application, but generally it is launched from within the CT. (There is a Search button in the CT. This guide documents the CT and ST.)
- Public Website (PW) the Public Website is accessed via a browser such as Chrome, Internet Explorer, or Firefox. No additional software is installed – the user points to a valid GG URL in a browser window. For example, the U.S. National Plant Germplasm System (NPGS) uses this URL: <u>https://npgsweb.ars-grin.gov/gringlobal/search.aspx?</u>

IIS

Note

[Note for admins and personnel responsible for installing the CT] The CT requires IIS. Without Windows IIS, the Curator Tool (CT) cannot communicate with the GRIN-Global database. Since the Curator Tool cannot communicate with the database directly, the CT needs the GRIN-Global Web Application, which includes the GRIN-Global "Middle Tier," to communicate with the database. The GRIN-Global "Middle Tier" gui.asmx application runs under the IIS web server.

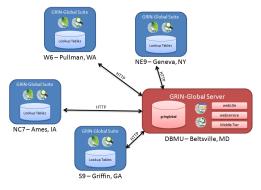
SQL Server / Server Express

Currently the CT requires a copy of SQL Server to be installed on the user's PC. Why? SQL Server manages a set of lookup tables that were installed when the Curator Tool was installed onto the user's PC.

Crystal Reports Viewer

When the CT is installed, a copy of the Crystal Reports Viewer application is also installed on the Curator Tool user's PC. This program makes it possible to view existing Crystal Reports, but not create them.

Server Components



GG Updater (Used only by the GG Administrator)

The GRIN-Global **Updater** program is used to install the GRIN-Global *server* software components. Refer to the online documents on the GG documentation website (<u>https://www.grin-global.org/</u>) under the Documentation option.

Public Website

The GRIN-Global Public Website (PW) is designed for anyone who will be querying the GG database for germplasm information or who will be requesting germplasm. Besides researchers, breeders, and other scientists, curators and other internal genebank staff may use the PW to complement the CT for searching for information on Accessions, Orders, Observations, etc. (No GG software installation is required since this is browser based.)

Admin Tool (Used only by the GG Administrator)

This program is used by administrators responsible for managing an organization's GG database environment on a server. Rarely, in smaller organizations, GG could be installed on a single PC which would serve as the server, where one person may function as both the administrator and the primary user. Users working on a shared, networked GG database will not have the Admin Tool installed on their PCs. (Administrator documentation is online at https://www.grin-global.org/admindocs.htm.)

Database Engine

GRIN-Global requires an underlying database engine to be installed. GG has been designed to work on any of the following four databases: Microsoft SQL Server, Oracle, MySQL, and PostgreSQL. However, for the past few years, only dataviews that are supported by MS SQL Server have been maintained.

In most organizations running GG, a database administrator will be responsible for initially establishing the GRIN-Global database table structures on the organization's server.



GG consists of many tables which relate to each other by key fields. By dividing data into relational tables, the database can grow over time without restructuring the tables. For more background information, read <u>the overview of relational databases</u> in the appendix.

Conventions Used in this Manual

To simplify directions in this manual, "Excel" or "spreadsheet" will sometimes be substituted for "Excel or your preferred spreadsheet program" since the Curator Tool data is compatible with many spreadsheet programs.

The following instructions primarily illustrate *how* you work within the Curator Tool interface.

Keyboard Shortcuts

The CT adheres to many of the standard Windows conventions. (The following shortcuts work within the CT and Windows, but on non-English keyboards the Windows keyboard shortcuts may be different.) For instance, when you need to copy data on the screen, you can highlight the data being copied and then use the keyboard shortcut **Ctrl-C**. This notation means "*while holding* the Ctrl key, *tap* the '**C**' key."

Keyboard Combinations	Effect
Ctrl + A	Select all (highlight everything in the current "group")
Ctrl + C	Сору
Ctrl + D	When a group of cells are selected, the top cell in the group is duplicated <i>down</i> from the top cell to the bottom cell. (Must be in Edit mode; also works when a block of cells across multiple columns are selected.)
Ctrl + E	Edit – when the cell is a text cell, you can display the full text in a separate text window. If the Datagrid is in Edit mode, you can edit or add new text.
Ctrl + N	Create a <i>new</i> record (when in Edit Mode). Select a record to be duplicated; press Ctrl-N (the duplicate record is created below the selected record).
Ctrl + '	Duplicates the contents from the cell directly above into the cell you are currently editing
Ctrl + V	Paste
Ctrl + X	Cut
Ctrl + ~	Puts the CT into "block select" mode. In this mode, a user can select one cell or a block of cells to be copied and pasted into another program, such as Excel. To exit "block select" mode, complete the copy /paste operation or press any key (Esc, Spacebar, etc.). (Note: two key exceptions: the CTRL and ALT keys will not exit the "block select" mode.)
F2	When in Edit mode, you can double-click on a cell to edit it or press the F2 key. If the cell uses a Lookup Picker, F2 will open the Lookup Picker window.
Del(ete)	When in Edit mode, press the Del key to clear the cell

There are other standard Windows keyboard combinations that are frequently used:

Drag Data

As with other PC applications, such as word processors or spreadsheets, you can drag the mouse to select text or data. To "drag" the mouse involves clicking on some text or a graphic, and then *while holding the mouse button*, dragging the mouse. The following example illustrates dragging records in the data grid:

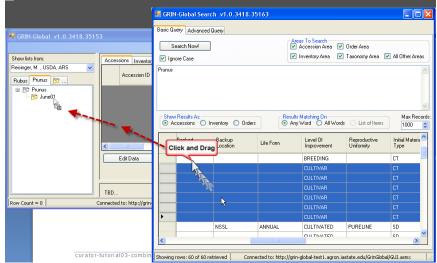
	Acces	sions Inventory (Orders AccessionNa	me Observations	OrderItems 📂		
		Accession ID	Accession Prefix	Accession Number	Accession Suffix	Accession Name	Site
		385102	PI	502973		CARDINAL	NSGC
	14	388538	PI	506409		DYNASTY	NSGC
	4	390415	PI	508286		GR855	NSGC
		390416	PI	508287		GR863	NSGC
	Access	internety e	rders AccessionNar	ne Observations C Accession	OrderItems 📂	Accession	
	Access	ions Inventory C	1			Accession Name	Site
	Access	internety e	Accession	Accession	Accession		Site
	Access	Accession ID	Accession Prefix	Accession Number	Accession	Name	
header cells	Access	Accession ID 385102	Accession Prefix PI	Accession Number 502973	Accession	Name CARDINAL	NSGC

four corresponding rows were highlighted (selected)

Drag and Drop

The expression "drag and drop" indicates that the mouse is being used to copy data from one location to another. For instance, records displayed in the Search or Curator Tool data grids may be dragged to a spreadsheet. (The detailed specifics will be explained later.)

In this example, highlighted rows in the right window (a Search Tool window) are being dragged to a List, "June01," in the Curator Tool window.



To accomplish this, the person using the Search application selected the rows in the right window, clicked in the highlighted area, dragged the mouse to the left Curator Tool window, and then "dropped"

(released the mouse key) when the cursor was over the **June01** folder name. This is easier to do than to describe! For a "drag and drop" demonstration, see the [<u>https://www.ars-grin.gov/npgs/gringlobal/videos/interface_basics.mp4</u>] video.



The easiest method for accomplishing dragging and dropping is to position both windows on your screen so that they are simultaneously visible.

Selecting Multiple Rows

When working within a grid, you can either highlight (select) multiple records by using the mouse "Drag" method described on page 12, or use the Shift or Ctrl keys to include multiple records.

To Select	Do This
A contiguous group of records	Click the header cell of the first row in the group, and then while holding down the Shift key, click the header cell of the last row in the group. You can scroll to make the last cell visible.
Non-adjacent records	Select the header cell of the first row, and then while holding down the Ctrl key, click on other nonadjacent rows.

^ click, Accession Accession Accession Accession Accession ID Site Prefix Number Suffix Name then while 426071 ΡI 543945 823637 DAV holding 426075 543949 the Shift 42 426076 543950 key, ΡI 134345 click in the 426079 ΡI 543953 bottom 426082 134349 row's 426083 PL 543957 134350 DAV header cell

Selecting Contiguous Rows

Selecting Non-Adjacent Rows

		Accession ID	Accession Prefix	Accession Number	Accession Suffix	Accession Name	Sit
		426071	PI	543945		823637	DA
while holding	-	426075	PI	543949		134343	DA
the Ctrl key,		426076	PI	543950		134344	DA'
click on the	-	426077	PI	543951		134345	DA
header cells of the records	-	426079	Pl	543953		823641	DA
to be included		426082	PI	543956		134349	DA'
to be moraded		426083	PI	543957		134350	DA
	1	426206	PI	544080		528817	S9
	, v	100007	DI .	F 4 44 4 4		F20004	00

Selecting Cells

"Edit Mode" – the **Edit Data** button has been clicked. You can then create, copy, update, or delete records in the datagrid (on the right side of the window). The alternative to Edit Mode is Read-Only (or "Display") Mode – you can only display records in the grid.

In Edit Mode, you can select a single cell or a block of cells and then copy and paste the cells' contents into a spreadsheet.

Search.			essions Invent		0				operators Get Taxonor		Ite S9 I	•
inger Resou Include Sub	Folders		Accession ID	Accession Prefix		Accession Suffix	Taxon	Name	Origin	Maintenanc Site	ls Core?	^
rch Feb	Jan 🚺		1493225	NA	66456		Rhododendron si	12451 Elias	Soviet Union, For	NA		-
Po Feb F	Root Folder		1493255	NA	66992		Halesia diptera	Marianna, Fla	United States, Fl	NA		ī
			1493406	PI	103359		Acer ukurunduen		Unknown	NA		
i⊞™ images_wisconsin i⊞™ Nutt		1493589	NA	67065		Chimonanthus pr	Nanjing		NA			
- 0	Irders		1493640	NA	67072		Sassafras tzumu	Nanjing		NA		-
1	lew List (1) I 606281		1493642	NA	66597		Comus kousa	NA 66597	Korea, South, Ky	NA		
1 1 1 1	lew List (2)		1493657	NA	66619		Vitex rotundifolia	NA 66619	Korea, South, Ch	NA		_
⊕-@ S			1493659	PI	103939		Clematis simensis		Zaire, Bas-Zaire	NA		-
N Q			1493691	PI	104141		Abies nephrolepis		Unknown	NA		
	lew List (3)		1493693	NA	65628		Weigela subsessilis	#22	Korea, South	NA		
	lew List (4)	<	1493723	PI	104226		Tsuga formosana		Japan	NA		~
		Data	I Editing Edit Data	of 2000	• • • • •	× Cancel	Edit Mode Hide Non-Err		lighlight Changed Data		Refresh [

Note

Clicking theCTRL + ~ key combination places the Curator Tool into "block mode." If you do this accidentally, or no longer intend to copy and paste, press the **ESC** key or the **Spacebar** to exit "block mode."

Curator Tool Overview

Starting the GRIN-Global Curator Tool



The Curator Tool must be installed on your PC.

Starting Up the CT

Windows 7:

To access the CT, you need a **Username** and **Password**. The username is generally your email address; the password is assigned by a GG Administrator.

1. Select **GRIN-Global Curator Tool** program icon



or Windows 8.1/10:



2. In the Login window, input Username and Password.

Use the **Connect To:** box to select the database server's name; click OK.

Typically, most organizations have their GRIN-Global database on a remote server.

The default (or only) server will be listed	However, when other servers are available,
in the Connect To: dropdown box. In the	it is possible to select a different one from
following example, the default server is	the dropdown. This example is from a
PROD uction:	Curator Tool tester who uses many different
	servers.
🐁 Login — 🗆 🔀	
Usemame: heman@rginc.com Password: Change password Connect To: PROD uction Edit Server List OK Cancel	Login – × Usemame:



Most organizations typically have only one server listed and users are limited to that server. A stand-alone document is online at <u>https://www.grin-global.org/docs/selecting_gg_server_CT_PW.docx</u> GG administrators can customize this document to include their specific server details.

NPGS Example

In the following example, the user, a tester who accesses multiple databases, has DEV as his default server. (It is listed first.)

The actual server name information for the NPGS production GG database is highlighted. Since NPGS is using Secure Sockets Layer (SSL) security, the **Use SSL** checkbox has been selected.

List (Friendly) Name		Properties
DEV TRNG db	^	List Display Name: PROD uction
Azure Blue PROD uction ocalhost	Move Up	✓ Use SSL Server Name (or IP Address):
		npgsweb.ars-grin.gov
	Move Down	Examples: grin-global-test1.agron.iastate.edu ncrpis-anven.agron.iastate.edu 129.186.234.51 129.186.234.4
Add New Del	ete	Test Server Address

Each organization running GG determines its own Server Name / IP Address. Contact your organization's GG administrator if you do not know what server name to use. Your organization's GG administrator will provide the server information and indicate if SSL must be checked (when the organization will be using SSL).



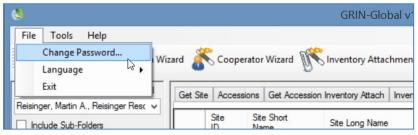
1	Login	- • ×				
Usemame:						
Password:						
	Cha	nge password	e	We	eb Services Lis	st Editor 🛛 🗕 🗖 🗙
	nd password, then click t login to GRIN-Global. S web (Production)	the 'OK' button to	List (Friendy) Name NPGS web (Production) transingGG dev Add New	<pre>^</pre>	Move Up Move Down	Properties List Display Name: 2 trainingGG Ues SSL 3 Server Name (or IP Address): training ars grin gov 4 Examples: grin global-test 1.agron iastate edu noptis-arwen agron iastate edu noptis-arwen agron iastate edu noptis-arwen agron iastate edu 129 186 234 51 129.186 234 51
						OK 5 Cancel

To add a server to the list: in the **List Display Name** box (2), input a meaningful name; select SSL if your organization is using SSL; input the correct server name or IP address (4); click OK. **To delete**: click on the name in the list of names in the left box; click the Delete button.

Adjust the list's order in the left box by selecting a server name and then clicking on the **Move Up** and **Move Down** buttons. Position the server which you will use most often to the list's top. The top server in the will display as the default server when you log in.

Changing Passwords

To change the Curator Tool password, click the **Change password** button on the **Login** window or when in the Curator Tool, select from the menu **File | Change Password**. Complete the **Change Password** window.



International Password Guidelines

Organizations implementing GRIN-Global can determine their own organization-specific password requirements. The organization's GG administrator controls the password settings (via the Admin Tool) and should indicate the organization's requirements to the Curator Tool users.

NPGS Password Guidelines

In NPGS, the user name is the user's email address.

NPGS Passwords

Passwords must follow the current ARS guidelines:

- 12 characters minimum
- at least one of each are required: upper case, lower case, digit, and special character
- passwords can change only once per day
- five failed logins initiates a temporary lockout for 15 minutes

If a password is forgotten, the GG administrator must be contacted (to create a new one).

Logging on to the CT

For NPGS, VPN or being on the ARS network is not required.

Curator Tool Two Panels

The Curator Tool's main screen is similar to other Windows programs in that it has menus, buttons, and icons.

Left Panel

Note

We refer to the left panel as the "List Panel." Some users refer to it as the "Tree View." Just as Windows Explorer uses folders and subfolders to organize files, so too does the Curator Tool. You can use folders and subfolders to organize your personal lists and review GG records.

Right Panel

The records' data is displayed in the right panel, also called the "data grid." The records may be accessions, inventory, orders, observations – any type of GG record.

Curator Tool Window

Essentially empty in this example – similar to the opening screen of any new copy of the Curator Tool. The basic left and right panels are shown.

File Tools Help Q Search 🛠 Accession Wizard 🛣 Coope Show lists from:		ard			_ □ ×
Include Sub-Folders Tab 1 Image: Tab 1	Accession ID Accession ID C C Data Editing	Orders Cooperators Accession Prefix	Accession Number	Accession Suffix	Taxon

Windows Explorer Window

🔄 🌛 👻 🕆 👢 🕨 This P	 ▶ This PC ▶ Windows (C:) ▶ aGG ▶ a_wip ▼ C Search a_wip ▶ This PC ▶ Windows (C:) ▶ aGG ▶ a_wip > Search a_wip > Date modified T > L description labels > 6/23/2014 4:26 PM > Fi ↓ files for manual build > 6/12/2014 6:37 PM > Fi > add to the admin tool guide.docx > 12/17/2013 11:57 N > C example.docx > C heat sheet NPGS docx > 1/28/2014 3:44 PM 	
D 📘 Pictures	↑ Name	Date modified T
Videos Windows (C:)	🐌 description labels	6/23/2014 4:26 PM Fi
▲ ↓ aGG	👢 files for manual build	6/12/2014 6:37 PM Fi
⊿ la wip	add to the admin tool guide.docx	12/17/2013 11:57 N
description labels	c example.docx	3/5/2014 4:18 PM N
▶ ↓↓ files for manual bui	ild	1/28/2014 3:44 PM N

Note

In Curator Tool jargon, a "folder" has the same meaning as "list." If the directions indicate "...the folder's name ...," this is equivalent to stating "...the list's name..."

Data Grid (or "Datagrid")

The CT's right panel, the "Data Grid," is similar to a spreadsheet, with the data displayed in columns and rows. The sample window below displays existing data. We'll see later how data gets placed here.

w lists from:		essions Inventory	Orders Cooperato	rs 🚜				
inger, Martin, USDA, ARS Include Sub-Folders	~	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name	Origi
ib 1 🚒		1917625	mar	32601	rei	Malus domestica	Malus 32601	Unte
⊡-100 Tab 1 Root Folder ⊕-100 New List		1917706	mar	42141	mar	Ocimum spp.	malus 42141	
		1917707	mar	42142	mar	Ocimum spp.	MRDucks 42142	Unite
		1917708	mar	42143	mar	Ocimum spp.		
		1917709	mar	42144	mar	Ocimum spp.	MR144 MR145	
		1917710	mar	42145	mar mar	Ocimum spp. Ocimum spp. Ocimum spp.		
		1917711	mar	42146				
		1917712	mar	42147	mar			~
	<							>
		√ 1 of 17 a Editing	 +	×			n Ref	resh Data

Deleting "Stuff"

List Panel (the left side)	Data G	Grid	the	righ	it side)			
These are your lists – it is your call what	Rows i	n th	e dat	ta gi	rid are	e data	base records. In some		
you do with them.	cases,	you	can'	t de	lete tl	ne rec	cords even if you tried.		
Show lists from: Show All	(More	late	r on	owr	nershi	p and	l permissions.) When y		
can delete records – once deleted, they are									
Mrch Feb Jan •	Accessions Inve Accession ID		Accession Number	Accession Accession Suffix		ame Orders Co Name	operators Get Tax: Origin		
⊕- ☑ New List	1493233	NA	66463		Rosa rugosa	12458 Ellas	Soviet Union, F		
I Images_wisconsin	1493283	PI	102159		Abelia fioribunda		United Kingdom		
⊕-⊠ Nutt	1493466	PI	236939		Rosa acicularis Philadelphus schr	var. saylana #265	Canada Korea, South, C		
Orders	1493683	NA	66723		Cedrus libani	#203	Porea, Journ, C		
B-∞ New List (1)	1493701	NA	66638		Styrax obassia	NA 66638	Korea, South		
PI DUDZO I	1493851	PI	91010		Pinus bungeana		China		
	1493865	NA	92198		Magnolia sieboldii	#153	Korea, South		
	1493883	PI	91240		Acer cissifolium		Japan, Hyogo		
List items are not the actual database	1493915	PI	91518		llex latfolia		Japan, Kanagar		
	< 1494051	NA	63185		Cercis gigantea	NA 63185	United States, 1		
<i>records</i> , but pointers to the database records.	Data Editing	of 2000		X					
· · · · · · · · · · · · · · · · · · ·									

Typical Screen

The image below illustrates a typical Curator Tool screen. In this example, the user has created lists (shown in the left panel) and has opened additional dataview tabs in the right panel:

Q. Search S Accession Waard S Cooper Show lists fram	10-			y Name Accession	Source Cooperator	Order Graph Reports	Accession Inven	koty Grou 🔹				
Reisinger, Marin, USDA, ARS 🛛 😭	1	Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inventory Type	Accession	Invent A Mainte Policy				
Rubus Orders 🚒		1021257	CRUB	1726	.001	PL.	PI 618399	RUBU!				
🗟 📴 Rubus Root Folder	18	1060150	MIA	24788		PL.	MIA 24788	MISC-A				
🗃 📂 Rubus spp	18	1060151	MIA	26560	0	PL .	MIA 26560	MISC-A				
	8	1060152	MLA.	26826	0	PL	MIA 26826	MISC-8				
281 Rubus spp. 1004991	8	1060153	MIA	29144		PL.	MIA 29144	MISC-N				
297 Pubus spp. 1005110 296 Pubus spp. 1005106 301 Pubus spp. 1480822 305 Pubus spp. 1480822	3	1540496	W/6	10931	920	SD	W6 10931	v6.ta				
	8	1999498	CRUB	38	.001	PL	PI 553888	RUBU!				
	8	1999509	CRUB	49	.001	PL.	CRUB 49	RUBUS				
307 Rubus opp. 1005189		1999520	CRUB	57	.001	PL.	PI 553894	AUBU!				
# 9 310 Pubut spp. 1005205		1999570	CRUB	132	.001	PL .	P1 553895	RUBUS				
a 🍄 311 Rubus spp. 1005226		1999586	CRUB	140	.001	PL	PI 290096	RUBUS				
# 311 Rubus spp. 1480832 # 420 Rubus spp. 1006172		-	1999590	CRUB	143	.001	PL.	PI 553897	RUBU!			
# 478 Pubus spp. 1006533			8	18-	8	8-	3-	1999631	CRUB	177	000	50
🛞 🍄 618 Rubus spp. 1007575	8	1999657	CRUB	193	.000	50	PI 553901	RUB-S				
628 Rubus opp. 1007652 769 Rubus opp. 1008703	8	1999681	CRUB	219	000	SD	PI 553903	RUB-S				
1008716 770 Rubus app. 1008716	18	1999682	CRUB	219	.001	PL.	PI 553903	RUBU!				
 801 Rubus spp. 1008963 1074 Rubus spp. 1482325 1099 Rubus spp. 1011344 1155 Rubus spp. 1482413 	3	1999715	CRUB	248	000	SD	PI 553910	RUB-S				
	<	1999716	CRUB	248	.001	PL	PI 553910	RUBU!				
 1390 Rubus rpp. 1013458 1411 Rubus rpp. 1013937 1676 Rubus rpp. 1015433 1678 Rubus rpp. 1015433 1679 Rubus rpp. 1015444 1691 Rubus rpp. 1015451 	1 1	ata Editing	99 > >1 @	Carcel				Refresh Data				

This screen is similar to a user screen when the user has been working with the Curator Tool for some time. When you initially start the Curator Tool, you do not see records listed in the datagrid, nor the number of dataviews that are shown here. As you proceed to use the Curator Tool, you typically create lists in the left List Panel; the lists point to database records displayed in the right data grid.

(The table below relates to the preceding illustration.)

Num.	Screen Component	Feature
1	Menu	The menu options include features such as changing the interface language or password, resetting lists and the user defaults. The Help option contains an important item for CT administrators to use when setting up user connectivity.
2	Search Button	Opens the Search Tool in its own window for initiating database searches.
3	Wizard Buttons	Start wizards which assist you in supplying data for a new record
4	Show lists from dropdown	Use the dropdown to view other users' lists. (The owner of the data determines the authorizations for editing lists.)
5	List Panel	You as the user can organize data into lists that are meaningful to you. The List Panel is covered in detail, starting at page 48.
6	Dataviews	Initially four tabs display. The user can display an infinite number of tabs; each tab has a corresponding dataview related to it.
7	Data Grid	Each dataview in this area displays its respective column headings. When data (records) are brought into this area, columns and rows will display.
8	Column Chooser & Other Options	You can select which columns to display in the Data Grid. Under the Other Options tab there are various features that will be explained later.
9	Navigation Bar	Used for moving to different records I the dataview. Also, when in Edit mode, the "+"key initiates the adding of a new blank record; the "x" key deletes a record.
10	Status Bar	Displays information about the records in the data grid (such as count) as well as the name of the current server.
Тір		he Curator Tool on a PC, both the List Panel and the Data Grid are basically ta in the Data Grid, you will either create new records or search for existing Global database.

[tbd – links to videos]

Торіс	References
Create new records	p. 82; video
Search for existing records	p. 59; video
Copy records into the Curator Tool	p. 43; video
Deleting records	p. 88

Definitions

Data Grid	(Also Datagrid) Spreadsheet-like table with columns and rows and header cells.
Dataview	A pre-defined, programmed query to the database. Within the Curator Tool, the user can select from various dataviews. Physically, the data may be stored in multiple tables, but it will appear in the dataviews as if it is coming from one table.
Dynamic Folder	(New in CT 1.8.3) A dynamic folder is a hybrid of a query and a folder – you set up criteria in the folder's properties, so that the displayed records dynamically reflect any database changes. Beginning with the release 1.8.3, there are two folder types: static, and dynamic.
Folder	Synonym for List. A folder is user-defined – a user decides what database records he is interested in reviewing and then creates lists to point to those records. The user decides what lists he needs, what records to point to, and whether the folder should be static or dynamic. (Folders are explained in detail within this document.)
List Panel	Left-side of the screen where users manage their folders ("lists") and list items. (Some users refer to this as the treeview, since the folders may have subfolders, which after awhile resemble branches.)
List	A list contains pointers to records in the database. If you delete items in the list, the original database records remain intact. You are essentially deleting the pointers to the records, not the records.
Nulls	NULL data is sometimes called "absent" data because there is no data value stored in the field. A NULL is not equal to a space character. NULL data will sort to the bottom if the sort is in ascending order and to the top if the sort is in descending order.

Lists (Folders) Overview

The main focus of the Curator Tool is to provide a tool with which genebank staff can:

- manage their genebank's accessions
- track their inventory
- review cooperator data
- process germplasm orders
- record observations

With the Curator Tool, users build and maintain lists pointing to database records which interest them and which they may need to periodically review.



The Curator Tool now has two kinds of lists, static and dynamic. This section focuses on static lists; <u>dynamic Lists</u> will be explained later. As you get comfortable querying, you will most likely create dynamic lists for managing much of your data.

What are "lists" and how are they different from the database records? This section explains the rationale for creating lists. It also provides a broad overview of the Curator Tool's interface so you can see how the lists point to the physical database records.

Static Folders ("Static Lists")

As you continue to work with specific accession records, you will want to access these records, perhaps on a fairly frequent basis. GRIN-Global has a "list" feature that provides a means for pointing to records in the database:

CANADIAN RICE ACCs.	Acc#	Name	Species	Level of Imp.	Date Recd
accession 122212 accession 123456	122212				
accession 124567	123456				
accession 145645 accession 123726	124567				
accession 123726	145645				
accession 134556	123726				
	123789				
mylist	134556				



Build as many lists as you want. The lists are personal; you create them as you need them. As a CT user, you can build lists in unique ways to match your particular workflow. Lists can also be shared with other users.

Typically, a static list points to database records that you have grouped together for some reason.

You maintain these lists in your copy of the CT. For example, you may want to keep track of a group of accessions received by a specific donor. Lists can point to other record types besides accessions. With lists, you can easily track inventory records, orders, even people (Cooperator records).

Curator Tool Overview

			1				Lev	elot	Dat	te		
CANADIAN RICE A	CCs.	Acc#	Na	me	Spe	cies	Imp	.	Red	cd		
accession 122212		122212										
accession 123456												
accession 124567		123456						•				
accession 145645		124567						-				
accession 123726		145645										
accession 123789		123726										
accession 134556								•				
-		123789						-				
my list		134556										
	INVENTORY			GG	data	a (reco						
							,					
	ToBe Rviewd.					Form						Avail.
	inv 345678			Inv#		Code	•	Distr	ib?	Availt	ol?	Status
	inv 345678			3456	78							
	inv 368907			357901								
	inv 389012											
	inv 391234			3689	07							
	inv 391235			3890	12							
	inv 391236		_	3912	34							
	my other list			3912	35							
	-			3912	36							
							GG	data (reco	ords)		

Each time you start up the CT, your lists are displayed giving you a quick way to display the records. Think of lists as shortcuts pointing to specific records. The list items *are not the actual database records*, but just pointers to the database records.

In the illustration below, the user's tabs and lists are shown on the screen's left side in the **List Panel**. The right side, the **Data Grid**, displays the actual contents of Accession dataview records.

Ele telp Q Search Accession Wizard Show lists from: Accession Accession Accession Accession Accession Core Rubus Accession Accession Accession Accession Accession Core P Felsa PI 548922 Rubus sp. 14077 Ecuador, Imbabure N P PI 548932 Rubus sp. 14104 Ecuador, Azuay N P PI 548932 Rubus sp. 14104 Ecuador, Azuay N P PI 548932 Rubus sp. 14104 Ecuador, Azuay N P PI 548932 Rubus sp. 14104 Ecuador, Azuay N P S48932 PI 548925 Rubus sp. 14180 Ecuador, Azuay N P S48932 PI 548926 Rubus sp. 14194 Ecuador, Azuay N P S48937 PI 548927 Rubus megaloco 14196 Ecuador, Azuay N PI 548936	S GRIN-Global v1.0.3748.									
Accession Accession Accession Number Taxonomy Accession Name Origin Is one Rubus Image: Second accession Pl_548933 Accession Accession Taxonomy Accession Name Origin Is one Pl_548933 Pl_548933 Accession Pl_548922 Rubus sp. 14077 Ecuador, Imbabura N Pl_548932 Pl_548933 Accession Pl_548923 Rubus sp. 14104 Ecuador, Azuay N Pl_548929 Pl_548929 Atoms provided accession Pl_548926 Rubus sp. 14180 Ecuador, Azuay N Pl_548927 Pl_548927 Rubus megaloco 14196 Ecuador, Azuay N Atoms pl_548926 Pl_548927 Rubus megaloco 14196 Ecuador, Azuay N Atoms pl_548927 Pl_548928 Rubus sp. 14224 Ecuador, Azuay N Pl_548927 Pl_548929 Rubus uticifolius 14225 Ecuador, Azuay N Pl_548928 Pl_548929 Rubus uticifolius 14226 Ecuador, Azuay N Pl_548929 </td <td></td> <td>d 🎸 Or</td> <td>der Wizard</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		d 🎸 Or	der Wizard							
Accession ID Accession Prefix Accession Number Taxonomy Accession Name Origin Is Core PL548933 PL548933 431048 PL 548922 Rubus sp. 14077 Ecuador, Imbabura N PL548931 PL548931 431049 PL 548923 Rubus sp. 14104 Ecuador, Azuay N PL548931 PL548932 PL 548924 Rubus megaloco 14123 Ecuador, Azuay N PL548929 PL548929 431051 PL 548925 Rubus sp. 14194 Ecuador, Azuay N PL548929 431051 PL 548926 Rubus sp. 14194 Ecuador, Azuay N PL548927 PL548927 Pubus megaloco 14194 Ecuador, Azuay N PL548926 PL548927 Rubus megaloco 14194 Ecuador, Azuay N PL548927 PL548928 Rubus sp. 14224 Ecuador, Azuay N PL548928 Pubus urticifolius 14225 Ecuador, V N PL548929 Pubus urticifolius 14226 Ecuador, Tungu	Show lists from:	Acces	sions Inventory	Orders Met	hod 🚒					
B PI_548933 PI_548932 PI_548932 Rubus sp. 14104 Ecuador, Azuay N B PI_548932 PI_548932 Rubus sp. 14104 Ecuador, Azuay N B PI_548932 PI_548932 Rubus sp. 14104 Ecuador, Azuay N B PI_548930 PI_548925 Rubus sp. 14104 Ecuador, Azuay N B PI_548929 PI_548926 Rubus sp. 14194 Ecuador, Azuay N B PI_548927 PI_548926 Rubus sp. 14194 Ecuador, Azuay N B PI_548927 Rubus megaloco 14194 Ecuador, Azuay N B PI_548926 PI 548927 Rubus megaloco 14196 Ecuador, Azuay Y B PI_548926 PI 548929 Rubus urticifolius 14224 Ecuador, M Y B PI_548920 PI 548930 Rubus sp. 14226 Ecuador, Tungur N Y B PI_548920 PI 548930 Rubus sp. 14226 Ecuador,						Taxonomy		Origin		Column Chooser
a PI_548932 PI 548923 Hubus sp. 14104 Ecuador, Azuay N b PI_548931 PI 548924 Rubus megaloco 14123 Ecuador, Azuay N b PI_548930 431050 PI 548924 Rubus megaloco 14123 Ecuador, Azuay N b PI_548929 PI 548925 Rubus sp. 14180 Ecuador, Azuay N c PI_548929 PI 548926 Rubus sp. 14194 Ecuador, Azuay N c PI_548926 PI 548927 Rubus megaloco 14194 Ecuador, Azuay N c PI_548926 PI 548927 Rubus megaloco 14196 Ecuador, Azuay Y e PI_548926 PI 548928 Rubus sp. 14224 Ecuador, M N e PI_548923 PI 548929 Rubus urticifolius 14225 Ecuador, Y Y e PI_548920 PI 548930 Rubus sp. 14226 Ecuador, Tungur N N <t< td=""><td></td><td></td><td>431048</td><td>PI</td><td>548922</td><td>Rubus sp.</td><td>14077</td><td>Ecuador, Imbabura</td><td>N</td><td>U U</td></t<>			431048	PI	548922	Rubus sp.	14077	Ecuador, Imbabura	N	U U
PI=548931 431050 PI 548924 Rubus megaloco 14123 Ecuador, Azuay N PI=548929 PI=548929 431051 PI 548925 Rubus sp. 14180 Ecuador, Azuay N PI=548929 PI=548929 PI 548926 Rubus sp. 14194 Ecuador, Azuay N PI=548926 PI 548926 Rubus megaloco 14196 Ecuador, Azuay N PI=548926 PI 548926 Rubus sp. 14196 Ecuador, Azuay N PI=548926 PI 548927 Rubus megaloco 14196 Ecuador, Azuay N PI=548926 PI 548928 Rubus sp. 14224 Ecuador, N PI=548927 PI<548929			431049	PI	548923	Rubus sp.	14104	Ecuador, Azuay	N	Colc
PI_548929 431052 PI 548926 Rubus sp. 14194 Ecuador, Zuay N PI_548927 PI_548927 Rubus megaloco 14196 Ecuador, Azuay Y PI_548926 PI 548926 Rubus megaloco 14196 Ecuador, Azuay Y PI_548926 PI 548927 Rubus megaloco 14196 Ecuador, Azuay Y PI_548926 PI 548928 Rubus sp. 14224 Ecuador, Azuay Y PI_548926 PI_548926 PI 548929 Rubus urticifolius 14224 Ecuador, Azuay Y PI_548927 PI_548920 PI_548920 Rubus sp. 14224 Ecuador, N PI_548928 PI_548920 PI_548920 Rubus sp. 14226 Ecuador, Tungur N ✓ PI_548919 PI_548918 PI_548918 PI_548918 Total a Save Data Cancel ✓			431050	PI	548924	Rubus megaloco	14123	Ecuador, Azuay	Ν	2
B PI_548928 431052 PI 548926 Rubus sp. 14194 Ecuador, Azuay N PI_548927 PI_548927 Rubus megaloco 14196 Ecuador, Azuay Y PI_548926 PI_548927 Rubus megaloco 14196 Ecuador, Azuay Y PI_548926 PI_548926 PI 548928 Rubus sp. 14224 Ecuador, N PI_548927 PI_548928 PI 548929 Rubus urticifolius 14225 Ecuador, Y PI_548929 PI_548920 PI 548930 Rubus sp. 14226 Ecuador, N PI_548920 PI_548920 PI 548930 Rubus sp. 14226 Ecuador, N PI_548920 PI_548919 PI_548919 PI_548919 Save Data Cancel Save Data PI_548917 Edit Data Save Data Cancel Cancel Save Data Cancel			431051	PI	548925	Rubus sp.	14180	Ecuador, Loja	Ν	Other Options
⊕ PI_548326 ⊕ PI_548326 ⊕ PI_548323 ⊕ PI_548324 ⊕ PI_548320 ⊕ PI_548320 ⊕ PI_548310 ⊕ PI_548319 ⊕ PI_548319 ⊕ PI_548318 ⊕ PI_548317			431052	PI	548926	Rubus sp.	14194	Ecuador, Azuay	N	ler O
⊕ PI_548925 ⊕ PI_548924 ⊕ PI_548923 ⊕ PI_548920 ⊕ PI_548919 ⊕ PI_548919 ⊕ PI_548919 ⊕ PI_548918 ⊕ PI_548917	🖬 🍦 PI_548927 💦		431053	PI	548927	Rubus megaloco	14196	Ecuador, Azuay	Y	ă.
⊕ PI_548924 ⊕ PI_548923 ⊕ PI_548923 ⊕ PI_548920 ⊕ PI_548920 ⊕ PI_548920 ⊕ PI_548920 ⊕ PI_548920 ⊕ PI_548920 ⊕ PI_548919 ⊕ PI_548919 ⊕ PI_548917			431054	PI	548928	Rubus sp.	14224	Ecuador,	N	
PI_548922 PI_548921 PI_548920 PI_548920 PI_548919 PI_548918 PI_548917 Edit Data Save Data Cancel			431055	PI	548929	Rubus urticifolius	14225	Ecuador,	Y	
B→ PI_548921 B→ PI_548920 B→ PI_548919 B→ PI_548919 B→ PI_548918 B→ PI_548917 Edit Data Save Data	T 3		431056	PI	548930	Rubus sp.	14226	Ecuador, Tungur	N	~
		<				1			>	
Image: Pi_548918 Data Editing Image: Pi_548917 Edit Data Save Data Cancel	🗉 🌞 PI_548920	M 4	44 of 4	8 🕨 🕅	+ X			🐻 Refre	sh Data	а
🖬 🐈 PI_548917 💦 Edit Data Save Data Cancel	⊕ 🌾 PI_548919									
<u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>										
	🚊 🌾 PI_548916 🔛									
Row Count = 48 Connected to: http://localhost/GRINGlobal/GUI.asmx	Row Coupt = 48	,		Connected	to: http://localb	ost/GRINGlobal/GULa	ISTOX			

Using Lists to Organize Your Accessions

With the Curator Tool, you can build and arrange lists to meet your specific needs. For example, lists could be used to organize accessions by:

- recently added inventory
- work-in-progress
- dates: review dates
- location: field, shelf, etc.
- utility patents
- group (e.g., cultivated pears vs. wild pears)
- sources, such as material from overseas or by supplier

Using Lists to Organize Your Order Requests

Lists may be used to organize orders by:

- date or by batch
- type of processing needed
- completion status: pending, filled and ready for shipping, shipped, sent to pathologist, etc.
- phytosanitary test results: e.g. tracking accessions with pathogen infections for regulatory considerations

Undoubtedly you will discover additional reasons for building lists.

The List Panel is a File Cabinet

The List Panel on the left side of the Curator Tool may display tabs, folders ("lists"), and items within the folders. What is the difference between a tab and a folder? What is a folder?

Think of the List Panel as *your* filing cabinet. Most filing cabinets have multiple drawers, and the drawers can store multiple folders. The folders in turn store documents. Just as a filing cabinet can have multiple drawers, the Curator Tool can have multiple tabs. Think of tabs as your "drawers" in which you organize your lists and items. You can create as many tabs as you desire, whenever you need them, to organize your lists that you intend to use. You can hide tabs and redisplay them when needed.



Tip

As you use the CT, most likely you will create many lists and tabs. When you have many large lists with many items pointing to many records, the responsiveness of the CT may be affected. Periodically do "house cleaning" and remove lists that are no longer meaningful to you. Alternatively, create dynamic lists when appropriate. (See the *Dynamic Folders* section for details.)

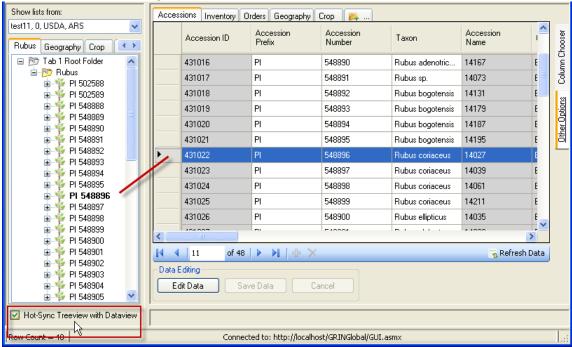
The **Cerasus** folder is expanded here showing 10 items in it. The Data Grid on the right side is displaying 10 Accession records; each item in the list points to a database record in the datagrid.

	Show lists from:	Acces	sions Invent	ory Orders	#					
tabs	test11, 0, USDA, ARS		Accession ID	Accession Prefix	Accession Number	Accession Name	Species	Level Of Improver		
	😑 📴 Prunus 🔥	Þ	392931	PI	510802	NA 58847	Prunus sargentii	Wild mate		
folders	- 🗁 Amygdalus - 🕞 🎯 Cerasus		392933	PI	510804	NA 58849	Prunus sargentii	Wild mate		
iolueis -			392934	PI	510805	NA 58850	Prunus sargentii	Wild mate		
	PI_510836		392938	PI	510809	NA 58855	Prunus sargentii	Wild mate		
list items			392945	PI	510816	NA 58862	Prunus sargentii	Wild mate		
(in the Cerasus			392948	PI	510819	NA 58865	Prunus sargentii	Wild mate		
folder)	⊕ 🍟 PL_510816 ⊕ 🧳 PL 510809		392949	PI	510820	NA 58866	Prunus sargentii	Wild mate		
· · · · · · · · · · · · · · · · · · ·			392964	PI	510835	NA 58895	Prunus sargentii	Wild mate		
	PI_510804		392965	PI	510836	NA 58896	Prunus sargentii	Wild mate		
	N PI_510802 → 100 Persica		392967	PI	510838	NA 58898	Prunus sargentii	Wild mate		
	₽ ₩ ₩ ₽ 501280 ₽ ₩ ₩ ₽ 1501280 ₽ ₩ ₩ ₽ 1501286	Data Grid								
	List Panel									

Because she created this list, the user can now easily review and track these 10 records repeatedly without needing to search the entire database again. Typically, a list points to records that have something in common and which the user intends to track or review again later. In this case, the folder is pointing to 10 specific Cerasus accessions records in the database.

Displaying a List of Accessions

In the example below, the list **Rubus** points to 48 Accessions items. Each list item points to a record in the Accessions dataview. The **bolded** item in the list panel corresponds with the **Accession** row highlighted in the grid. (Note: The **Hot-Sync Treeview with Dataview** checkbox must be selected in order to invoke the bolding feature.)



Inventory Items when the Hot-synch Feature is Enabled

When this Hot-Sync feature is on, when an *inventory record* in the datagrid is selected, the related *inventory list item* will be underlined and displayed in italics:

Show lists from:	Acces	sion: Inventory Or	ders Geography (Crop 🚒				
test11, 0, USDA, ARS		Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inventory Type	 	hooser
🖻 🏆 PI 548904 🛛 🔼		13530	CRUB	1295	.000	SD	F	olumn C
		13535	CRUB	1249	.000	SD	F	Colu
PI 548907	1	13536	CRUB	1257	.000	SD	F	2
		13537	CRUB	1257	.002	PL	F	Detions
₽ ₽ 548909 ₽ <i>₽ 548910</i>		13588	CRUB	1248	.000	SD	F	Other O
🗉 🌪 PI 548911		13589	CRUB	1264	.000	SD	F	ð
		13590	CRUB	1273	.000	SD	F	

Dynamic Folders ("Dynamic Lists" or "Dynamic Queries")

Starting with Curator Tool version 1.8.3, a second folder type, dynamic, was created. Basically a dynamic folder uses a query to list records matching the query. A dynamic folder contains embedded search criteria, typically copied from the Search Tool. Records that meet the criteria are displayed in the datagrid. Some CT users refer to these folders as "dynamic queries."

Recognizing Dynamic Folders

The dynamic folder below has neither a "+" (plus sign) indicator or any items listed under it. The magnifying glass in the icon also indicates this is a dynamic folder; as shown here, the folder is red because the user had clicked on it to make it the active list.

ile Tools Help								
Search 👫 Accession Wizard 🥈	Cooperator Wizard	order Wizard						
now lists from:								
eisinger, Martin, USDA, ARS	Accessions Inventory	Orders Coopera	ators 🛼					-
Include Sub-Folders	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name	Origin	Î
ab 1 🙀	1021621	PI	650089		Helianthus tuberosus	TUB-1765	United States, South Dakota	P
E-1 Tab 1 Root Folder	1021634	PI	650090		Helianthus tuberosus	TUB-33	United States, South Dakota	1
	1021635	PI	650091		Helianthus tuberosus	TUB-1769	United States, South Dakota	1
New List (2)	1021652	PI	650092		Helianthus tuberosus	TUB-1774	United States, South Dakota	1
	1021653	PI	650093		Helianthus tuberosus	TUB-1775	United States, South Dakota	1
§	1021658	PI	650094		Helianthus tuberosus	TUB-1776	United States, South Dakota	1
	1021659	PI	664614		Helianthus tuberosus	TUB-1777	United States, South Dakota	1
š.	1021678	PI	650095		Helianthus tuberosus	TUB-49	United States, South Dakota	1
	1021681	PI	650096		Helianthus tuberosus	TUB-1783	United States, South Dakota	1
	1021690	PI	650097		Helianthus tuberosus	TUB-1786	United States, South Dakota	1
	1021696	PI	650098		Helianthus tuberosus	TUB-1789	United States, Iowa	1
	1021704	PI	650099		Helianthus tuberosus	TUB-64	United States, Iowa	1
	1021713	PI	650100		Helianthus tuberosus	TUB-1797	United States, South Dakota	1
	1021717	Ames	2745		Helianthus tuberosus	TUB-1798	United States, South Dakota	1
	1021718	PI	650101		Helianthus tuberosus	TUB-1800	United States, South Dakota	1

Deciding Which Type Folder to Use

So why ever use a static folder? First, they are simpler in some respect. Secondly, many times you will want to review specific records, and *only those* records. Listed below are a few examples of when each folder type is preferable:

Situation	Folder Type
Keep track of what you are working on from one day to the next	Static
List of orders processed on a specific day	Static
Maintain a list of all accessions for a specific Taxon	Dynamic
Review a site's inventory	Dynamic

Steps in Creating Dynamic Folders

There are several methods for creating a dynamic folder. Each starts similarly: In the Curator Tool, create an empty folder.

Method 1 (Recommended method)

Switch to the Search Tool; create a query. Drag the *code* from the text box (generated by the <u>QBE</u>) onto the empty folder in the Curator Tool.

8		GRI	V-Global v1.9.6.17			
File Tools Help						
🔍 Search 👎 Accession Wit	zard 🔏 Co 🥹		GRIN-Global Sea	arch v1.9.6.17		
Show lists from: Reisinger, Martin, USDA, ARS	Acce Basic Query	** Under Construction **				
Include Sub-Folders	Searc	h Now!	Limi	t: 100 🜩		
Tab 1 🙀	Find: O Defau	t 💿 taxono	my_species	~		
Hoot Folder Hoot Folder Hoot Folder Hot List H, tuberosus - USA	Matching O Any W	ford All Wor	ds 🔿 List of Iten	ns		
New List (1)	(@taxonom tuberosus	_genus.genus_name = 'Heliar	thus' AND @taxonomy_specie	s.species_name =	^	
N						
					\sim	
	Add T	o Query Clear Qu	ery			
	Cooperato	rs Source Descriptor Web	Cooperator Web Order Requ	est Taxonomy Species		Show All Colum
						Helianthus
		axonomy Nomen pecies ID Number	Current Taxon	Is Interspecific Hybrid?	Extended Genus Name	Genus

The Dynamic List Options will include the radio button for the **Resolve To:** option Dynamic List Options

Resolve To:	Dynamic Folder Search Criteria:	
O Default	@taxonomy_genus.genus_name = 'Helianthus' AND	^
O Accession	@taxonomy_species.species_name = tuberosus'	
O Inventory		
Order Request		
O Cooperator		
Taxonomy_Species		~

Method 2

While still in the Curator Tool, right-click on the empty folder. Select **Properties** from the menu. Switch to the Search Tool; create a query. *Copy the code* in the large text box (generated by the <u>QBE</u>) into the **Dynamic Folder Search Criteria** box in the Curator Tool.

Method 3

A third method for creating a dynamic folder is to copy the query criteria of an existing dynamic folder and use that code as the basis for a new dynamic folder. Edit the new folder's criteria as desired.

A dynamic folders lists the same records found by an equivalent search in the Search Tool:

🔩 GRIN-Global v1.7.8.0									
File Tools Help									
🔍 Search 🚿 Accession Wizard 🥈	60	ooperato	r Wizard 🛛 🎸 Orde	r Wizard					
Show lists from:		Accessio	ons Inventory 0	Inventory Orders Cooperators Acc Inv Name Get Accession Action Order Matrix Report				oy Genus/Year 🛛 🙀	
		,	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Accession Inventory Name	Origir
H. tuberosus Orders2 🚒 . < >			1021621	PI	650089		Helianthus tubero	TUB-1765	Unite
🖃 💯 Dynamic Root Folder		1	1021634	PI	650090		Helianthus tubero	TUB-33	Unite
🛶 💓 H. tuberosus		1	1021635	PI	650091		Helianthus tubero	TUB-1769	Unite
		1	1021652	PI	650092		Helianthus tubero	TUB-1774	Unite
		1	1021653	PI	650093		Helianthus tubero	TUB-1775	Unite
		1	1021658	PI	650094		Helianthus tubero	TUB-1776	Unite
		1	1021659	PI	664614		Helianthus tubero	TUB-1777	Unite
		1	1021678	PI	650095		Helianthus tubero	TUB-49	Unite
			1001001		050000		11-C	TUD 1700	11.3.4

Refreshing a Dynamic Folder

If any new records are added to the GRIN-Global database that meet the folder's criteria, the records will be displayed when the dynamic folder is the active folder and has been refreshed. You can refresh a dynamic folder by invoking any of the following methods:

- right-click on the folder and select the **Refresh List** command
- switch to another tab and then back to the tab with the dynamic folder
- switch to another user and return back to the original user
- click the Refresh Data button in the right panel
- press F5
- start the CT

Dataviews

In the Curator Tool, the dataviews serve as camera lenses to the GRIN-Global data. A dataview is a programmed query that displays data stored in the GG tables. These dataviews will have been programmed by someone who coded SQL (Structured Query Language). Fortunately, as a CT user, you do not need to know how to write SQL to use dataviews – you only need to understand the data displayed in the dataviews.

The CT installation provides many dataviews that are used by most genebanks. Additionally, an organization may create supplementary dataviews to match a genebank's specific needs.

To Display a Dataview Whose Tab is Visible

As a Curator Tool user, you typically display only the dataviews that you intend to use – you do not need to display all of them.

To use a dataview, click on the dataview's tab:





You must be in **Read-Only** mode to switch dataviews. When your **Edit Data** button is grayed out, you are in Edit mode. To switch dataviews, you will need to either save your data or cancel (click **Save Data** or **Cancel**).

 PL_5021 PL_5021 PL_5021 PL_5021 PL_5021 PL_5020 PL_5370 PL 500000 te 	<
	I I of 10 ▶ ▶ + ×
	Data Editing Edit Data Save Data Cancel

To Display a Dataview Whose Tab *isn't* Visible

1. Click the **New Tab** icon. (When there are many tabs displayed, use the right arrow button to scroll to the right to display the New Tab icon):

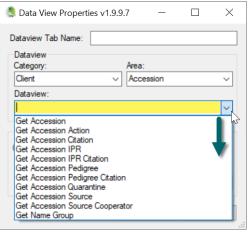
1								New Tab		
	Invent	ory Orders Names	CodeVa		OrderRequestAction	OrderRequestItem	Cooperators	CooperatorGroup	#	< >
		Code Value ID	Group Na	New Tab	Value	Created Date	Created By	Modified Date		M
		1900	100	Delete Tab	a	6/8/1995	SYSTEM, 0,	9/28/2010 2:5	i8	0'
		1901	100	Properties	c	6/8/1995	SYSTEM, 0,	9/28/2010 2:5	8	0'

Alternatively, you can right-click on any tab and select **New Tab** from the menu. However, there is a slight disadvantage if many records are currently being displayed. Generally, it will be quicker to use the **New Tab** icon.

2. Typically, the **Category** is "Client." Rarely will you need to change that option.

The **Area** must be selected; this assumes that you know which area your dataview is stored under. As you become more experienced, this will become second nature. (Use the online <u>dictionary</u> (column A) if you can't determine the Area.)

Similar dataviews are grouped under one Area. For example, the **Accession** area holds the accession-related dataviews: Accession, Accession Source, Accession Action,...





Dataview Naming Conventions

Dataviews designed for use within the Curator Tool were consistently named with **Get...** such as **Get Accession** or **Get Inventory**. You can delete the word "Get" from the Tab name if desired.

Children Dataviews

Certain dataviews are considered the parent dataview and the dependent dataviews can be considered as the "children." Names of the children dataviews are typically prefixed by the parent's name. Accessions ("Get Accession") is the parent dataview for various children dataviews such as "Get Accession IPR" and "Get Accession Quarantine." In the example above, the dataviews display records that are children of both the Accession table and the Inventory table, hence the name **Get Accession/Inventory**...

Some Dataviews Display Data, Some Do Not

CT dataviews fit into one of two broad groups, explained in more detail below. The dataview...

- 1. has an associated list object -- when the dataview is active, the list in the List Panel points to related records. (*typical*)
- 2. is designed to show all of the records referenced by the dataview. When looking at the data grid, you see all of the records related to the dataview

In the example below, the Accession dataview is the active dataview, and the list in the left List Panel is pointing to the accession records shown in the data grid on the right side:

Show lists from:	Acces	sions Inventory O	rders Cooperators	Get Site Get Inven	tory Maintenance Pol	icy Get Accession A	Action
Reisinger, Martin, USDA, ARS 💌		Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name
Favorite Accessions Tab 1		1016461	PI	650346		Helianthus annuus	Novi S
😑 📂 Favorite Accessions Root F		1016476	PI	650347		Helianthus annuus	Vniimk
iaccessions ia∛ Ames 19293		1021562	PI	597890		Helianthus annuus	ANN-
		1021563	PI	597891		Helianthus annuus	ANN-
🖻 🤶 PI 435094		1021569	PI	597892		Helianthus annuus	ANN-
		1021570	PI	597893		Helianthus annuus	ANN-
PI 597892		1082719	Ames	19293		Zea mays subsp	Wf9
📄 👘 🌾 PI 597893		1330030	PI	435094		Cucurbita foetidis	

The second group of dataviews displays all of the records in the associated table(s). For example, the **Get Site** dataview lists all of the records in the **Site** table when the active list on the left is empty. Crop is another dataview that displays all of the Crop records when the list panel active list is empty.

🔍 Search 🜾 Accession Wizard 🥻 Cooperator Wizard 🎻 Order Wizard											
Show lists from:	Acces	sions Inve	ntory Orders	Cooperators	Get Site	Get Inventory Ma	intenance Policy	Get Acc			
Reisinger, Martin, USDA, ARS Include Sub-Folders		Site ID	Site Short Name	Site Long Na	me	2	Organization Abbreviation	ls Inter			
marAccessions CROPS Im <>	۱.	1	COT	Cotton Collect	tion		СОТ	Y			
🖃 📂 CROPS Root Folder		2	BRW	Natl. Germpla	sm Repositor	y - Brownwood	BRW	Y			
⊕ ·		3	COR	Natl. Germpla	sm Repositor	y - Corvallis	COR	Y			
		4	DAV	Natl. Germplasm Repository - Davis			DAV	Y			
RP a falder		-	051		• •	<u> </u>	OF N	0			

Form View

A few dataviews, such as **Accession**, have associated forms. The forms are alternative means for displaying (or editing) the data records. One record at a time displays in a form, as opposed to the grid (spreadsheet) view, where multiple records are visible. The form and grid can be displayed at the same time, with the form in its own window:

🖳 GRIN-Global v1.0.3575.24985									×			
Show lists from:	Acce	ssions Inventory										
Dr. Test11, USDA, ARS		Accession Prefix	Accession Number	Accession Suffix	Taxonomy	Accession Name	Origin	Is Core?	Other Options Column Chooser			
🖃 📂 Vicuna_Beans	ר	VICUÑA_ID	95001		Phaseolus vulgaris			N	UU D			
iansfer_oct_09 ₩ VICUÑA_ID_95001	•	VICUÑA_ID	95005		Phaseolus vulgaris			N	Colur			
🚽 VICUÑA_ID_95005		VICUÑA ID	95006		Phaseolus vulgaris			N				
VICUÑA_ID_95006	🖶 Accessi	on Form						N	ption			
VICUÑA_ID_95008	1 1 2	of 11 📗 🕨	N + X					N	Der O			
					cession ID 508870			N	ð			
VICUÑA_ID_95011	Accession	n Name		Ac	cession ID 508870			N				
	Accessi	on Prefix	Accession Number	Accessi	on Suffix			N				
VICUÑA_ID_95020	VICUÑ		95005					N				
WICONA_ID_33021	Taxono	my				N						
	Phased	olus vulgaris						N				
		Initial Received Date Initial Received Date Format										
	10/19/	2009 💌	*									
	Site											
	CIAT	1		📃 ls Co	ore?							
	Васкир	Location			acked Up?							
					icked op:			>				
	Initial M	aterial Type Life F	orm Le	vel Of Improvement	Reproductive Uniform	nity						
		~	~									
II L									—			
	3	Search		TBD								
	J Ľ											
Row Count = 11	,	Connected t	o: http://grin-global-t	est1.agron.iastate.e	du/GRINGlobal/GUI.a	smx			1.::			

Displaying Forms

To display a form or to switch from a form view to the	😫 Data View Properties 📃 🗖 🔀
spreadsheet view, right-click on a tab; select Properties .	Dataview Tab Name: Accessions
Currently this feature is available for four tabs:	Dataview Category: Area:
Accessions, Inventory, Order Requests, and Accession-	Client Accessions V Dataview:
Inventory Attachments.	Get Accession
💀 GRIN-Global v1.0.3575.24985	Viewer Style
right-click the tab Show lists from: Accessions Inventoru F Dr. Test11, USDA, ARS A New Tab Delete Tab Vicuna_Beans P Delete Tab Properties Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans Vicuna_Beans	Form: Accession Form (Accession Form.d) OK Cancel On the Data View Properties window, select the desired Viewer Style .

ccessions Data Form	Navigation Bar
Accession Form	Use the Navigation Bar icons to move through the records. You must be in Edit mode for the Add new and Delete buttons to be active.
10/19/2003 Ske CLAT Backup Location Is Backed Up?	Move previous Move next Add new ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

Visual Clues

When selecting an Inventory record in the grid, the record's <u>corresponding Accession</u> item in the List Panel will be <u>underlined</u> and *italicized* when the **Hot Synch Treeview with Dataview** checkbox is checked.

SRIN-Global v2.0.3915.38126						_	
🖁 🔍 Search 🬾 Accession Wizard 💣 Order Wiz	ard						
Show lists from:	Acces	sions Inventory ()	rders Crop Crop	Trait Geography	Names CodeValue	Co <	>
test11, Lolly, USDA, ARS Prunus Vicuna Cooperators Crop ##		Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inver Type	
🖃 🔊 Vicuna Root Folder		1706634	VICUÑA_ID	95001	rei	ж	
ia - 10 New List ia - 10 VICUÑA ID 95001 rei		1706635	VICUÑA_ID	95005	rei	яя	
VICUNA_ID 35001 rei	•	1706636	VICUÑA_ID	95006	rei	ж	
		1706637	VICUÑA_ID	95008	rei	жи	Other Ontions
VICUÑA_ID 95008 rei VICUÑA ID 95009 rei		1706638	VICUÑA_ID	95009	rei	**	- C
🗄 🐳 VICUÑA_ID 95010 rei		1706639	VICUÑA_ID	95010	rei	××	đ
VICUÑA_ID 95011 rei VICUÑA ID 95012 rei		1706640	VICUÑA_ID	95011	rei	**	~
	<					>	
■ VICUÑA_ID 95020 rei	₩ 4	3 of 12	🕨 🕅 🕂 🗙		🕞 Rel	ⁱ resh Da	ita
₩ VICUÑA_ID 95021 rei ₩ VICUÑA_ID 95023 rei	Data E		re Data Ca	ancel			_
Hot-Sync Treeview with Dataview							
Row Count = 12	C	onnected to: http://l	ocalhost/GRINGlobal	/GUI.asmx			

Icon Legend

Each object type has its own unique icon; however, icons are customizable and may be different for your organization. (Two alternatives for each are shown here.)





Icons and labels for the list items are highly customizable. Detailed information for doing this is included in the Admin Guide. (An AppSettings.txt file on your PC affects the labels for the list items. Most CT users will simply use the settings defined for them by their GG administrator.)

Cell Colors

When changes are being made to database records, the Curator Tool must be in "Edit Mode." The following table summarizes the implication of the cell's color when In Edit mode:

Cell Color	Meaning
gray	cell cannot be edited
violet	field is required; a record cannot be saved until all required fields are filled
yellow	when a record is being edited, fields that have changed
blue	current cell

In Edit mode, click to select the **Highlight Changed Data** option. Another handy option is the **Hide Unchanged Rows** option.

Acce	essions	Inventory	Orders	Cooperators	Inventory Main	tenance Policy	Get Inventory Viability	Source Descriptor
	Core	?	Is Back	ked	Backup Location 1	Backup Location 2	Status	Life Form
•							Active	Perennial
				•	COR		Active	Perennial
							Inactive	Perennial
c				_				
c 4	∢ 1	of	3	X + K				
		of	3 🕨) + ×		Edit Mode □ Hide Non-Em		

Warning Indicators

This screen example also illustrates a warning indicator. Move the mouse over the **!** and the message tooltip will display:

 WILD		N	
Wild mater	Alue exceeds maxim	v um length - truncated	Meet to 10 characters
Wild mater	G	Y	NSSL
Wild mater	0	Y	NSSI

Spreadsheet Similarities

Columns & Rows

The data grid columns and rows are similar to the columns and rows in a spreadsheet. For instance, you can widen and narrow both columns and rows. **Drag** the mouse on the edge of the column or row when the mouse pointer appears as a double-arrow. **Double-click** on the column or row edge to return to the original size.



The CT *should** remember your view and will display the view in the same manner (same columns, widths, etc.) the next time you use the program. (*Settings are not currently being saved correctly; this is a known a bug that will be corrected.)

You can adjust the widths of columns and the height of rows just as you do with Excel – drag the dividing bar between the headings to adjust column width or between the left row header cells to adjust row height.

🔮 GRIN-Global v1.0.3715.3896	7							
<u>File H</u> elp								
🖁 🔍 Search 💣 Accession Wizard 🧉	Corder \	Vizard						
Show lists from:	Acce	ssions Inventory 0	rders Cooperato	r 🚜				
Dr. Test11, USDA, ARS		Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inventory Type	Inventory Maintenance Name	Column Chooser
🖃 📴 Prunus		1284362	NA	58896	.001	PL	wlpgr.perm.plt	E E
		1284363	NA	58896	.002	PL	wlpgr.perm.plt	Colu
		1284364	NA	58896	.003	PL	wlpgr.perm.plt	- <u>-</u>
⊕ 🍄 PI_510820	Þ	1670178	PI	510836		××	SYSTEM	Options
								0 ther 0



Many of Excel's keyboard shortcuts and navigation keys also work in the Curator Tool and Search grids. Two that are very useful are **Ctrl-D** and **Ctrl-**⁴ – these are discussed in detail later. Refer to the <u>list</u> for others.

Column Order

Reorder the columns by dragging any column heading left or right. Release the mouse and the column will be repositioned in the location where you "drop" it.

Acc	essions Inventory	Orders Names I	Actions 📂		
	Accession ID	Accession Prefix	Accession Number	Taxonomy	Accession Suffix
F	509134	new21	11	Phaseolus vulgar	is
	509135	new22	12	Phaseolus vulgar	is
	509136	new23	13	Phaseolus vulgar	is
*					

In this example, the Taxonomy column in the Curator Tool was shifted to the left. To reposition a column, drag the column heading left or right as needed.

Demo: See https://www.ars-grin.gov/npgs/gringlobal/videos/datagrid.mp4

Hiding / Displaying Columns

Not only can you reorder columns, but you can also choose which columns to display or not display. For each dataview, certain columns are displayed automatically. However, you can control which columns are displayed (or not).

To Select Which Columns to Hide / Display

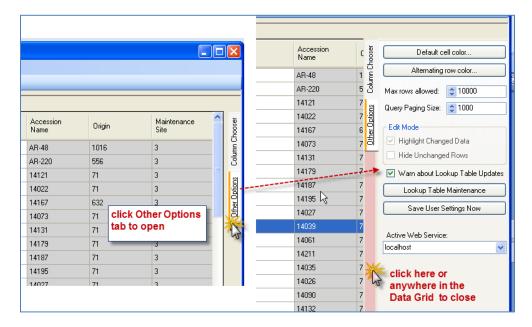
Click on the **Column Chooser** tab near the right edge of the data grid.

Accessions	Accession Source Cooper	ator Accession Sour	rce Method Citat	tion Accession Acti	ion In	vent	ory Inventory Action Get N(• •
Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Nan	Chooser	Select/Deselect All
1138525	PI	159177		Avena sativa	49-1	_	Accession ID Accession Prefix
1389723	PI	494787		Arachis hypogaea	ZFA	olumn	Accession Prenx
1389742	PI	494806		Arachis hypogaea	Chik	ä	Accession Suffix
1440394	PI	545458		Avena fatua	AF-2	33	✓ Taxon ✓ Name
						Other Option	Origin Maintenance Site Is Core? Is Backed Up? Backup Location 1

Select which columns to display by clicking in their checkboxes; click anywhere in the data grid to close the **Column Chooser Panel**.

Personalizing Your Curator Tool: Other Options Tab

The **Other Options** tab on the right side of the Grid has various settings that can be used to adjust the row colors, the number of rows allowed, and options for highlighting charged data and for hiding unchanged rows. Click on the **Other Options** tab to open this panel; click anywhere in the Data Grid to close the tab.



Cell and row colors

Use the **Default cell color...** and **Alternating row color...** buttons to change colors. Each dataview can have its own color mix, making it easier to quickly recognize which dataview is currently being displayed.

Max rows allowed

Use this setting to control the maximum number of rows displayed in the Data Grid. (The number must be greater than one.) Be aware that a very large value for **Max Rows Allowed** could negatively impact the response time when accessing data from a remote server. Typically, **1000** or even **10,000** is okay.

When considering setting the value, remember that the Curator Tool stops displaying rows at whatever maximum level you set. If you import a large number of records, some may not display because the total number of rows has reached the upper limit. It may seem that all of your records did not get imported when in reality they were imported, but they are just not displaying.

Performance Enhancement Option: Query Paging Size

By increasing the **Query Paging Size**, you can greatly enhance the performance of your PC. By adjusting the **Query Paging Size** to fit the conditions – keep it lower if slow conditions exist. **1000** is typical.



When increasing **Query Paging Size**, remember that a large page size means a less responsive Escape Key. If you increase the size too high, you might experience a "server timeout" error indicating that you are asking for so much data in one round trip that the server cannot deliver the volume of data in the allotted time. If that happens, reduce the size.

Save User Settings Now

Click the **Save User Settings Now** button to save the dataviews' row colors and column settings (column order, width, and visibility) as well as the **Options Tab** settings "Max rows allowed" and "Query Paging Size."



If you are experiencing network issues, before leaving the CT for a length of time, save your settings. Otherwise, you could lose your lists and the dataviews tabs that you had set up.

Active Web Service (Switching to another Database)

Under the **Other Options** tab, you can switch databases if your PC has been configured to use different databases. Why would you need to do this? In the U.S., in the NPGS, there isn't a need to do this, but some international organizations may be using different servers to house completely separate GRIN-Global databases.

In the following example, the user has access to multiple servers, primarily for testing and training purposes. More typical for most users would be just one available service.



Sorting and Filtering Records

Frequently you will want to sort or filter records to organize and locate specific data easier.

Sorting Data

Select a column heading on which the sort will be based; right-click. Then select the appropriate menu option, **Sort Ascending** (or **Sort Descending**).

You can sort by multiple columns. The sequence is important – the column sorted first will be the first level sort, the second column selected will be second, etc.

Acces	sions Inventory	Orders 🕅	<u> ۲</u>					
	Accession ID	Accession Prefix	Accession Number	Ac		Site	Inactive Site Code Reason	ls (
•	388524	PI	506395		Sort Ascending			N
	388525	PI	506396		Sort Descending	N		N
				-	No Sort	NS.		
	388526	PI	506397					N
	388527	PI	506398		Reset All Sorting			N
	388528	PI	506399		DURKHEIM JV	DAV		N
	388529	PI	506400		Durkheimer Riesen	DAV		N

Other Sort Options

Option	Effect
No Sort	"undo" the sorting of one specific column – click on the column heading first; then right click and select No Sort
Reset All Sorting	clears all sorting, returning the records back to their original order

Sort Indicator

Accessions Inver	ntory T axonomy Citat i	iene Orders Names	🔊	
Accession Name ID	Accession	Category	Name	Name Rank
472790	PI 501110	COLLECTOR	ZM-1011	1070
596407	PI 501110	LOCALNAME	Mapopwe	1030
472791	PI 501111	COLLECTOR	ZM-1021	1070
472792	PI 501112	COLLECTOR	ZM-1022	1070

Filtering Records

You can filter the data grid in order to display a subset of the records. Use any cell's contents as the basis for your filtering criteria. Right-click in the data cell; select the desired filtering choice from the menu.

Before the filter is se	t:						
н 🐇 🤞 мод 55010		508281	MOA	20091105	Zea mays subsp. mays		11/5/
ш. 🌾 MDA_55011		508282	MOA	20091105	Zea mays subsp. mays		11/5/
		508283	MOA	20091105	Zea nicaraguensis		11/5/
∰		508175	MOA	55003	Zea nicaraquensis	Show only rows with this dat	a 8/
		508176	MOA	55004	Zea nicaraguensis	Hide rows with this data	8/
		508177	MOA	55005	Zea nicaraguensis	Reset row filter	8/
		508178	MOA	55006	Zea nicaraguensis	Reports	▶ 8/
		508179	MOA	55007	Zea nicaraguensis	N	3/18/
		508180	MOA	55008	Zea nicaraguensis	N	3/18/
		508181	MOA	55009	Zea nicaraguensis	N	3/18/
		508182	MOA	55010	Zea nicaraguensis	N	3/18/
			1			1 1	
₩ ₩ MOA 55026	N 4	[1 of	f 208 🗼 🔰	- ×			
	Data B	diting					
			Cours Dista	1			
	E0	it Data	Save Data	Cancel			
		1					
🖶 🌪 MOA_55033 🖃	🕉 s	earch			TBD		
Row Count = 208	, 		Connected	to: http://grin-	-global-test1.agron.iasta	te.edu/GRINGlobal/GUI.asmx	
HUG. 33 01 00 100 100 12.313 1.0							

Display after the filter was set:

	508181	1 MOA	55009	Zea nicaraguensis	1
⊕	508182	2 MOA	55010	Zea nicaraguensis	
⊕ 🌾 MOA_55015	508183	3 MOA	55011	Zea nicaraguensis	
■ 1 MOA_55016	508184	4 MOA	55012	Zea nicaraguensis	
⊕	508185	5 MOA	55013	Zea nicaraguensis	
	508186	6 MOA	55014	Zea nicaraguensis	
■ MOA_55020	508187	7 MOA	55015	Zea nicaraquensis	
⊕ ₩ MOA_55021 ⊕ ₩ MOA_55022	508188	3 MOA	55016	Zea nicaraguensis	
	508189		55017	Zea nicaraquensis	
■ 1 MOA_55024			100011		
⊕		of 101			
■ ₩ MOA_55027	Data Editing =				
i ∰ MOA_55028		1			
⊞ ∰ MOA_55029 MOA 55030	Edit Data	Save D	ata Lar	ncel	
	р- Г				
		1			
⊕ 🦞 MOA_55033 🔽	🔰 💰 Search			TBD	
Row Count = 208		Coni	nected to: http://g	rin-global-test1.agron.	iastate.edu/G

To turn off filtering, right-click in *any* cell in the grid; select **Reset row filter**.

Lookup Tables

Please refer to the online Lookup Tables document at: https://www.grin-global.org/docs/gg_lookups.docx

Code Groups

Background Information

Many of the dataviews in the Curator Tool use dropdowns to assist in selecting a valid entry – the fields do not allow any random text data to be entered, but instead require a value from a pre-populated set of values. Various codes and data values are stored in the Code Group tables by the GG administrator.

Inventory	Category	Name	Name Rank
PI 652793 **	Local name	Blackbeard Elder	1030
PI 652793 **	Site identifier	NF 395	1080
PI 652793 **	Site identifier	OLD CSAM 41 N	1080
PI 652793 **	Site identifier	CSAM 41	1080
	CGIAR International Center Identifier 😽		
	CGIAR International Center Identifier Collector identifier Cultivar name Developer identifier Donor identifier Exploration identifier		

ography Source/Habitat Descriptor Order Request Phyto Log Accession Inventory Name 🚒

Five fields in the Accession dataview that use Codes are shown below. In the example, the user clicked on the **Level Of Improvement** to display and then select a code:

Accessio	ons	Inventory	Orders	Cooperators	Get Accession Inv	ventory Name	Crop Attach	Accession	Inventory Attach	E4
		kup ation 2	SI	atus	Life Form	Level O	f Improvement		Reproductive Uniformity	Initial Materia Type
•			[N	[]]	[Null]	[Null]		~	[Null]	[Null]
						Genetic r Landrace Rootstoo	d material material e k n improvement	status		



Only the GG administrator can add or edit the codes, ensuring consistency and integrity. As a CT user, if you need a code to adequately describe a record, contact your GG administrator or follow your organization's procedure for establishing codes.

Importing Your Data *from* an Existing Database into GRIN-Global

Drag & Drop



The term "drag and drop" is used to describe bringing data from a spreadsheet into GRIN-Global. The following text describes in detail the process for doing this. An important guideline to remember: there are 2 types of drag & drop situations:

1) adding new records

2) updating existing records

When *adding new* records, *you must not include* an ID field when dragging records from the spreadsheet (since these are going to be new records, they couldn't possibly have ID fields yet - the ID field is generated by the computer when the record is saved).

When *updating existing* records, you *must include* the ID fields of the records you are updating. The software is matching the spreadsheet data with the existing records in the GG database.

Using a Spreadsheet to Import Data into GRIN-Global

The following directions detail how to upload data originally stored elsewhere, such as in a spreadsheet, into the GRIN-Global Curator Tool. (Some people refer to this as "bulk loading" or "mass loading.") During this process, you will match column names in the Curator Tool with the corresponding column names from your source spreadsheet data.

Why would you copy data from a spreadsheet into the GRIN-Global Curator Tool? There are multiple reasons when you would do this. When initially converting to GRIN-Global, many genebanks have existing data stored in spreadsheets or databases and will want to import their data into GRIN-Global. The genebank will then use GRIN-Global as its information system going forward and will no longer continue keeping data in a spreadsheet.

On an ongoing basis, some GRIN-Global users may opt to keep their data in spreadsheets before it is convenient to upload their data into the Curator Tool. (The same is true for importing data from a database, such as Access or FoxPro.)

Two Importing Methods

The Curator Tool was designed to be compatible with spreadsheets. It is a straightforward process to copy and move data from a spreadsheet to the Curator Tool. There are two alternative methods for doing this.

In the first approach, you will copy the data from a spreadsheet and drop it into the Curator Tool. During this process, the *column headings in the spreadsheet are used* to match up the spreadsheet data with the respective columns in the Curator Tool.

In the second approach, the "Block-Style" approach, a *block of data is copied* from the Curator Tool into a spreadsheet. In this method, you will *not be including the column headings;* in this case it becomes

important where you physically place (drop) your data. The step-by-step details are described later, on page 45.)

Copying Data from a Spreadsheet (Including the Column Headings)



To make it easier to visually verify any changes to Curator Tool data, *it is highly recommended* to select the **Highlight Changed Data** and the **Hide Unchanged Rows** options. Changed cells will be displayed in color (see page 35).

	Checkboxes display in Edit Mode
4 4 0 of 0 ▶ ▶ - + ×	
Edit Data Save Data Cancel	Mode Hide Non-Error Rows Hide Unchanged Rows 🗹 Highlight Changed Data

Copy the Data *from* a Spreadsheet *to* the Curator Tool

Open the GRIN-Global Curator Tool and your spreadsheet application (e.g. Microsoft's Excel, OpenSource.org's Calc, or Google Docs). They both must be open, but ideally not both in full screen. By having both windows at least partially visible, you will be able to drag data from the spreadsheet into GRIN-Global easier than if the screens were full screen. (You will be able to copy data even if the windows are full screen, but you will use the Windows Taskbar to facilitate switching between the two programs.

🖳 GRIN-Global v1.0.3509.1886	4					_ 🗆 🗙	3	
Show lists from: Postman, I., Sakata Seed Corporati ▼ Prunus … ⊕ ™ cultivars	Accessions Inventory accession_id		lers 📂 Accession Prefix	Accession Number Chile_F	Accessi Suffix rejol_test (2).3	Choos		_ 8
barton Louiveis Grie Barton New List Barton Wild		Pa Clip	Home Ins Arii Baste board 5	ert Page I For al 🔹 8	T Data Revi	ei View Deve	tyles	b @ - □ Σ - 27- ↓ - 27- ∠- Editing
			E36	- (9	f _x			
			А	В	С	D	E	F
		1					Registra	ation data
	<	2	Accesion identifier	Donor's name	Donor ID	Breeder Name	Breeder ID	
	Data Editing	3	REGIS_NUMBER	DONOR/_NAME	DONOR_ID	BREEDER_NAME	BREEDER_ID	VICUÑA_ID
	Edit Data	4	F0314 F0300		D4546 D4546			95001
	L	6	F0300 F0311		D4546			95005
		7	F0289		D4546			95008
		8	F0744		D4546			95009
	💰 Search	9	F0785		D4546			95010
la c i al c		10	Encon		DAEAR			05011

- 1. In the Curator Tool, locate and click on the folder (list) that will be updated.
- 2. Also in the Curator Tool, click the Edit Data button (if you are not already in Edit mode).
- 3. In the spreadsheet, highlight the data that will be copied; it is essential to include a column header row in which the spelling of the column names *matches exactly* with the Curator Tool column names. (See <u>Importing Column Names</u> if you wish to avoid typing the column names.)



- only the columns with data being updated must be included
- the spreadsheet columns do not need to be in the same order as the Curator Tool columns
- the spreadsheet column names *must be spelled identically* to the Curator Tool column names
- 4. In the spreadsheet, using the cursor, grab the box outlining the selected cells, drag the box and drop it anywhere in the GRIN-Global Data Grid.



When dragging from one application to the other, if the target application is not visible on the desktop, drag the mouse to the target application's icon on the Windows Taskbar. The target application will then display; drop the box outline.

Click to review the <u>video</u>.

- 5. Any changes made in the spreadsheet should now be visible in GRIN-Global.
- 6. If satisfied with the data, click **Save Data**.



Each table has a primary key – for instance in the Accession table it is the **Accession ID** field. It is important to review the primary key field in the spreadsheet before dragging the data into the Curator Tool. Dragging spreadsheet records with:

- matching key fields will update existing records in the Curator Tool Data Grid
- non-matching (or empty) key fields will add new records in the Curator Tool Data Grid



After dragging data into the CT, and when saving, the data is validated. Whenever fields using codes are involved, if the spreadsheet data does not match any of the field's valid codes, an "**!error!**" message will display in the cell. If you later edit that cell, the cell will be appear to be empty. Contact your GG administrator if you think a code is missing or need to be added.

Read-Only Mode a(after a drag and drop where the codes used for the Status field did not match the valid codes)

Accessions	Inventory	Orders	Coope	erators	E4					
Ad	cession ID	Acc Pref	ession ix	Acce Numb		Accession Suffix	Taxon	Status	Life Form	
19	1919853 1919854		MAR 170239 MAR 180806		9	REI Arrhenatheru	Arrhenatherum el	Error!	Perennial	
19					180806 RE		Arrhenatherum el	Error!	Perennial	
1919855		MAF	{	18679	1	REI	Arrhenatherum el	Error!	Perennial	

Accessions	Inventory 0	rders Co	operators	64		
ł	Backup Location	1	Backup Location		Status	Life Form
2	NSSL				[Null]	Perennial
2	NSSL				[Null]	Perennial
2	NSSL				[Null]	Perennial
•	NSSL				[Null]	Perennial

Same data, but in Edit mode:

Copying Column Names from the Curator Tool into a Spreadsheet



To ensure that the spreadsheet column names match identically to the Curator Tool column names, drag a row (blank or filled) from the Curator Tool datagrid into a spreadsheet. This technique is also a quick way to start building data in a spreadsheet that will eventually be dropped into the Curator Tool.

(To display the actual database field names, instead of the column headings, *depress and hold down* the **CTRL** key *before* dragging the data into the spreadsheet. "Typical" users will not need to do this, but Curator Tool administrators may find this handy.)

- 1. In the Curator Tool, start a new list or select an existing list.
- 2. In the data grid in the right panel, you need to select a row, either empty (a new record), or already filled with data. You can simply drag a filled row from the CT without even being in Edit mode.

Either select a new blank row by clicking on the row's header cell; copy (**Ctrl-C**); paste in a spreadsheet (**Ctrl-V**). Alternatively, do a "drag and drop." (See "<u>Drag and Drop</u>" for details.)

	392934 3 92938	PI PI	510805 510809		25215 25215	NA 58850 NA 58855	Other Op	
•*	1							
click in the row's header cell; cut and paste into the spreadsheet								

Copying, Block-Style

Use the Block-style copying approach to copy blocks of data from a spreadsheet into the Curator Tool. (This method also works in the reverse direction for copying data from the Curator Tool to a spreadsheet.)



When using this method, since you will not be including the column names, *it is critical where you line up the cells* when you copy and paste. Open both the Curator Tool and your spreadsheet application, but not in full screen.

1. Determine what data will eventually be replaced in the Curator Tool or what data is to be copied into a spreadsheet. Arrange your spreadsheet so that its columns *are in the same order* as the Curator Tool's. (You can rearrange the columns in either the Curator Tool or the spreadsheet.)

Acc	Accessions Inventory Orders Names LActions 🔊							
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxonomy	Accession Name	Is Core?	Life Form
•	509134	new21	11		Phaseolus vulgaris			[Null]
	509135	new22	12		Phaseolus vulgaris			[Null]
	509136	new23	13		Phaseolus vulgaris			[Null]
*								[Null]
	* determine what data range will be changed							

	Acces	ssions Inventory C	Irders Names I Ac	tions 📂		
		Accession ID	Accession Prefix	Accession Number	Taxonomy	Accession Suffix
1	•	509134	new21	11	Phaseolus vulgaris	
		509135	new22	12	Phaseolus vulgaris	
		509136	new23	13	Phaseolus vulgaris	
	*					

In this example, the Taxonomy column in the Curator Tool is shifted to the left. Remember that to reposition a column, *drag* the column heading left or right as needed.

- 2. In the Curator Tool, click the Edit Data button to get into Edit mode.
- 3. In Excel, highlight the spreadsheet data that will be copied; use **Ctrl-C** to copy the block.

<u>ا</u>					
I	Accession	Accession	Accession	Taxonomy	Accession Initial MatInitial Received D
0	509134	new41	1	Zea luxurinans	1/25/
1	509135	new42	2	Zea luxurinans	1/25/
2	509136	new43	3	Zea luxurinans	1/25/
3					
4					
5					
_					

4. In the Curator Tool, position the cursor in the *top, left cell* of the range of data that will be updated; use **Ctrl-V** to paste the data.

	Accession ID	Accession Prefix	Accession Number	Taxonomy	Accession Suffix
•	509134	new21	11	Phaseolus vulgaris	
	509135	new22	12	Phaseolus vulgaris	
	509136	new23	13	Phaseolus vulgaris	

Result of the Block-Copy:

Acce	essions	Inventory	Orders Names I	Actions 😥		
	Acc	ession ID	Accession Prefix	Accession Number	Taxonomy	A
•	5091	34	new41	1	Zea luxurians	
	5091	35	new42	2	Zea luxurians	
	5091	36	new43	3	Zea luxurians	
*						

The top left cell is blue because it currently is the active cell; the yellow indicates that a cell's content has changed.



Besides using the cut and paste method, the drag and drop method also works. The key is to properly align the block of spreadsheet data with the top, left "target" cell in the Curator Tool.

Copying Curator Tool Data into a Spreadsheet

Copying Curator Tool Data into a Spreadsheet

- 1. Open both the Curator Tool and the spreadsheet application (e.g. Excel). They both should be open, but not full screen.
- 2. If necessary, filter the files that will be copied (see Filtering Records).
- 3. Select the records from the Curator Tool that will be copied into the spreadsheet. See <u>Drag</u> and <u>Selecting Multiple Rows</u> instructions for general directions.



When dragging from one application to the other, if the target application is not visible on the desktop, drag the mouse to the target application's button on the Taskbar. The target application will then display; drop the box outline.

[Click to review the video.]



Another method for importing data into GRIN-Global requires the Admin Tool, which generally is restricted to database administrators. However, you should be aware of this capability, because the Admin Tool has Import Wizards that were designed specifically for importing data. If you are in a networked environment, your administrator may be able to assist you with this initial loading of data. If your GRIN-Global database resides on your PC, then you can use the Admin Tool Import Wizard to load datasets into GRIN-Global.

Copying Blocks of Data

Press the **ALT** key (in either Edit or Read-only mode.) Use standard Windows Copy and Paste technique to copy highlighted data from the CT into a spreadsheet. In this type of copy, the column headings are not copied.

Using Lists to Organize Data

This section explains in detail the steps for establishing and maintaining lists for managing data. For an overview on the Curator Tool List feature, refer to page 23.

One of GRIN-Global's fundamental features is its ability to organize virtual lists of database records that are of particular interest to you. These lists can point to records which you need to track or manage, such as accessions, inventory records, or orders.

Show lists from:	Acce	ssions Invento	ry Orders	#					
test11, 0, USDA, ARS Prunus Pyrus Malus Rubus		Accession ID	Accessic Prefix	Accession Number	Species	Accession Name	Origin	ls Core	Level Of Improvement
E-100 Prunus	-	388524	PI	506395	Prunus domestica subsp. domestica	Burja		N	Cultivar
⊕ · j⊘ domestica 100 Peach	_ i	388525	PI	506396	Prunus domestica subsp. domestica	Kinstendilsva		N	Cultivar
		418817	PI	536688	Prunus domestica subsp. domestica	Pozegaca D-13		N	Cultivar
PI 501286	- i	418818	PI	536689	Prunus domestica subsp. domestica	Pozegaca P-24		N	Cultivar
	- 5	418819	PI	536690	Prunus domestica subsp. domestica	Pozegaca P-25		N	Cultivar
🖬 🔶 PI 502018	F	418820	PI	536691	Prunus domestica subsp. domestica	Pozegaca		N	Cultivar
	\ i	426082	PI	543956	Prunus domestica subsp. domestica	Pozegaca D-6	Yugoslavia,	N	Clone
₽ 502024 ₽ 502028	1	426083	PI	543957	Prunus domestica subsp. domestica	Pozegaca M-1		N	Clone

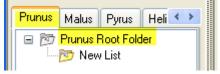
You populate lists by pointing to records in the database. You can set up "dummy" folders which are initially empty, but eventually will include specific records for your unique needs. When you no longer need a folder, you can delete it. You are merely deleting your folder, not the actual database records to which the folder's list had pointed.

In the introduction to this User Guide, we briefly described using the Curator Tool to manage accessions and orders. (See <u>Using Lists to Organize Your Accessions</u> or <u>Using Lists to Organize Your Orders</u>.)

Tabs



By default, when the List Panel tabs are created, they will have a "root folder" with practically the same name as the tab. In the following example, the **Prunus** tab has its highest-level folder assigned the name "Prunus Root Folder."

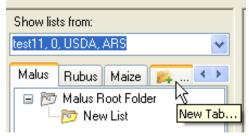


By "highest-level," think of each tab having a main folder which in turn can hold subfolders. (If you are familiar with Windows Explorer, folders having subfolders is a similar concept.) There is no limit to the number of times a folder can be subdivided.

In addition to creating a "root folder," the Curator Tool also creates a subfolder with the default name "New List." It is recommended that the user rename the **New List** folder to a more meaningful name, one that reflects the database records the list will be pointing to.

To Create a New Tab

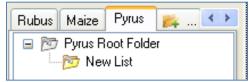
1. In the List Panel, click on the **New Tab** icon with the ellipsis ("...").



2. In the pop-up window, input a **Tab Name**; click **OK**.



Result:



To Rename a Tab

- 1. **Right-click** on the tab name.
- 2. Select Properties



3. Type in the name; click OK.

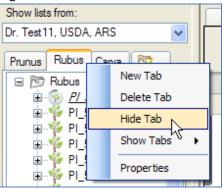


To Hide and Display Tabs

Tabs in the List Panel can be hidden or displayed as desired. This is particularly helpful when you have created many tabs.

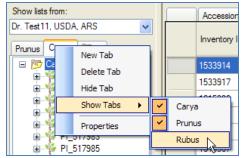
To Hide a Tab

Right-click on the tab to be hidden.



To Display a Hidden Tab

Right-click on any tab that is visible; select **Show Tabs** from the menu and then click on the hidden tab's name. (In this example the Rubus tab is hidden and will be displayed again.)





At least one tab must be displayed – you cannot hide all tabs simultaneously. Also, you can rearrange tabs by dragging them left or right.

Lists

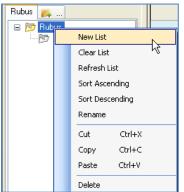
Dynamic lists (folders) were introduce in version 1.8.3. See the section on <u>dynamic folders</u> for details. The following directions primarily pertain to static lists.



List *items* must be individually moved or copied. Hence, consider creating smaller lists and sublists to organize your items. By doing so, the items will be better organized, but also can be readily rearranged at a later time. (You can move a list containing many items.)

To Create a New List

1. Right-click on the parent list (the list that will be one level higher than your new list) and select **New List.**



A new, empty list with the name "New List" will be created below the existing list. (Adding items to your list is discussed later.)



If the parent list already contains other items or lists, look *below* the existing items for the new list. Initially this can be confusing if the list is long; you may need to scroll down to see the newly created list.

To Delete or Clear a List

You can delete lists that are no longer needed or empty lists that you intend to use again. In either case, you are not deleting the actual database records, but rather the record pointers that were stored by your folders. "Delete" removes the folder and items; "Clear List" only empties the list items in the folder.

To Delete a List

Right-click on the list name; select **Delete**.



Also, use the **Refresh List** option on the context menu after you have made any changes to the list:



To Clear a List

To remove the items from a list, but retain the list name, right-click on the list name; select Clear List.

nus Rubus Malus M	Mai 🔹		Access	sion ID	Prefix
D Rubus Root Folder			431042		PI
E-B Rubus			431043	l	PI
🗐 🦞 F	New List				PI
🗏 🖞 💆 🗖	Clear List	N			PI
■¥ F	Refresh List	13			PI
🗄 🦫 F	Sort Ascend	ing			PI
E P	Sort Descen	dina			



These "Delete" and "Clear List" actions do not delete the database records; they only impact the lists.

To Delete Items from a List

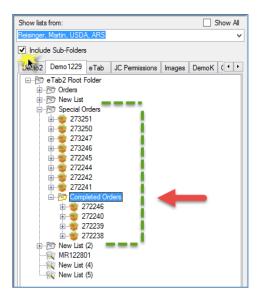
To remove *one* item from a list, select the item; right-click; select **Delete**. Use **Clear List** to empty the list of all items.



Currently you cannot select *multiple items* within a list in order to delete them simultaneously.

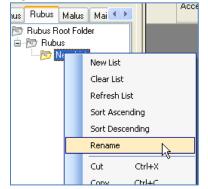
Also, remember that deleting an item from a list does not delete the item's corresponding record in the database; this action is only deleting the list item.

You can also impact a folder's sub-folders. For example, if you want to clear a list as well the contents of any lists under that list, select the **Include Sub-Folders** option



Name a List

Right-click a folder name to rename it with a meaningful name; select **Rename** from the menu.



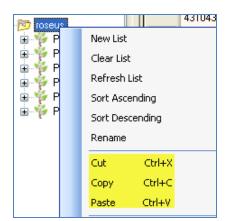
To Move a List

The method for moving a list is similar to moving a folder in Microsoft Explorer and other programs. Depending on your preference, you may opt to move a list using any of the following methods:

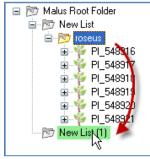
- right-click menu
- keyboard shortcuts (Ctrl-X, Ctrl-C, Ctrl-V)
- "drag and drop" (with the mouse)

Note that in addition to moving from one folder to another, you can also move or copy folders or even individual list items from one tab to another. Highlight the list or item being moved; right-click on that folder and select **Cut** or **Copy**.

Using Lists to Organize Data



Locate the new parent list; right-click on that folder name and select **Paste**.



To move a list using the keyboard shortcuts (Ctrl-X, Ctrl-C, Ctrl-V) Highlight the list name; use **Ctrl-X** (to move) or **Ctrl-C** (to copy). Locate the new parent list; use **Ctrl-V**.

To move a list using the drag and drop method Highlight the list name; drag to the new "parent" folder.

To Add Additional *Items* to a List

Additional accession / inventory / order requests, and other records can be added to an existing list at any time using the same methods described in the **Creating New Records** section, p. 80. You can always drag additional records form the Search Tool to a list that already has some items in it.

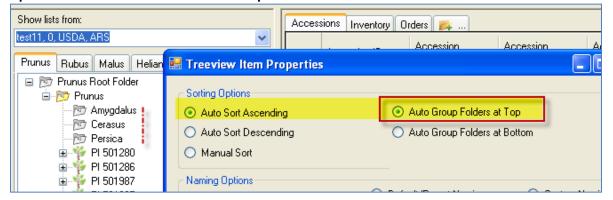
Sorting & Custom Naming List Items

You can customize the manner in which the lists are sorted as well as specify how the items are labeled within the lists. These features are available via the **Properties** command on the List menu (right-click on a folder in the List Panel.)

Aug6 🙀	.]
🗐 📂 Prunus	
- Altro	New List
1977 Ap 1977 Ch	Clear List
Pe	Refresh List
🗁 📴 Plu	Sort Ascending
⊞ 🌾 'V ⊕ 🌾 90	Sort Descending
	Rename
🖬 🔶 AF	CA CHIN
🕀 🍟 Bu	Cut Ctrl+X
🕀 🌱 Bu	Copy Ctrl+C
i ∰ 🌾 Ce ∎ 🐝 Cir	Paste Ctrl+V
	Delete
🕀 🦞 🖬	
🖻 🏆 Du	Properties

Sorting List Items

You can designate whether a list containing both items and sub-lists has its folders displayed at the top of the list, above the list's items, or at the bottom, below the items. The following illustrates the **Sorting Options** section of the **Treeview Item Properties** window.



List Items' Custom Naming Feature

You can change how List items are named.

Default Item Names

By default, the names for accession list items combine the accession prefix, number, and suffix fields from the corresponding accession database record. Similarly, each object type (Accession, Inventory, Order Request, etc.) has a default naming convention.

(In the following example, the accessions have blank suffix fields, so the items' names include just the Prefix and Number.)

Show lists from:	Invento	ory Orders Na	me Acces	sions _芦	1
test11, 0, USDA, ARS		Accession ID	Accession Prefix	Accession Number	Spec
🖃 📂 Pyrus Root Folder		423696	PI	541570	Pyrus
ia™ Pyrus		423699	PI	541573	Pyrus
⊕ jabra		423701	PI	541575	Pyrus
i⊒™ fauriei		423703	PI	541577	Pyrus
□ □		423706	PI	541580	Pyrus
🕀 🌪 PI_541573		423707	PI	541581	Pyrus
		423708	PI	541582	Pyrus
		423709	PI	541583	Pyrus
		423717	PI	541591	Pyrus
PL_541582 PL_541583 PL_541583 PL_541591					

To revert back to their defaults when the list items do not have their default names, highlight the folder, right-click, and then select the Default/Parent Naming option.

🔡 Treeview Item Properties		
Sorting Options Auto Sort Ascending Auto Sort Descending Manual Sort Naming Options		
Object Type	Oefault/Parent Naming	Custom Naming
 Accession 	Name Buiker	
O Inventory	Dataview	×
Order Request	Field	~
O Cooperator	Auto Add Spaces	Add
🔘 Genus	{get_accession.accession_nt	
🔘 Geography	<pre>{get_accession.accession_nt {get_accession.accession_nt {get_accession.accession_nt } } }</pre>	
О Сгор		
	Example: PI 12345	
		OK Cancel

Custom Item Names

Right-click on a *folder* to create custom item names. In the **Treeview Item Properties** window:

- 1. Select the desired **Object Type**. This ultimately determines what field names you can use for the name.
- 2. Click the Custom Naming button.
- 3. Build the custom name by selecting from the list of available fields in the **Name Builder** frame. Select a **Dataview** and a **Field** from that Dataview. Click the **Add** button as needed to add additional fields; click **OK**.

魓 Treeview Item Properties	
Sorting Options Auto Sort Ascending Auto Sort Descending Manual Sort Naming Options Diject Type Accession Inventory Order Request Cooperator Genus Geography Crop	 Default/Parent Naming Custom Naming Name Builder Dataview Get Accession Field Drigin Auto Add Spaces Add {get_accession.accession_number_part2} + "" + {get_accession.geography_id} Example: Pl 12345
	OK Cancel

4. To see the list items with their custom names, you may need to refresh the list:



(Certain names will automatically update; if your names do not, invoke the **Refresh List** command.)



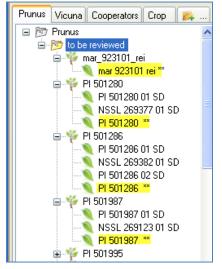
The trailing item for the custom name cannot be text – it should always be a fieldname (this is a known bug).

Inventory Lists

You can make lists of inventory items just as you do with accessions. Most likely you will have many different reasons for building inventory lists. For example, you could create an inventory list to track your current year's "grow out" and harvest. If you handle thousands of accessions, having this list to aggregate just the current year's inventory would be very helpful – you can generate labels from the list for your seeds, you can review the year's results, etc.

Virtual (or System-Generated) Inventory Items

Whenever you review Accessions in the list panel, you will notice an inventory item with a double asterisk (**) next to its name. For every Accession record in the database, GRIN-Global automatically associates a virtual Inventory record.



The ** indicates that the inventory item was generated by the system. Because GG needs every Accession record to have at least one Inventory record attached to it, this virtual inventory record ensures that this condition is always met. It is not referring to physical inventory – these virtual Items are not pointing to inventory records of physical germplasm.

In the above screen, the Prunus folder has a subfolder labeled "to be reviewed." In this folder, the first accession item, **mar_923101_rei**, has only one inventory item associated with it, and that inventory item is a virtual inventory item. The other accession items shown in the list have multiple physical inventory items as well as one virtual inventory item.

In the **Inventory** dataview, the **Inventory Type** for virtual inventory records is also indicated with a ** Since these ** records are virtual, the quantiry fields such as Quantity-on_hand should be empty.



Searching for Records

Search Tool Introduction

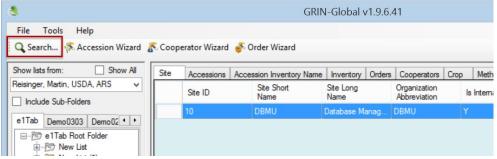
Use the Search Tool to search for records from the main GRIN-Global database.

A complete guide focused on searching is online at <u>https://www.grin-global.org/docs/gg_searches.docx</u>



The Search Tool is typically launched from the Search Tool button on the Curator Tool, but it also can be started from the Windows Start screen. Although the Search Tool is completely separate from the Curator Tool, the two programs are greatly intertwined.

From the Curator Tool:



Windows 10 (or 8.1)::

Start	, , , , , , , , , , , , , , , , , , ,					
Junos Pulse	GRIN-GI	obal	Microsoft Office Excel 2007		Fiezula	
Desired.		× *	37° Lutherville Partly Cloud	dv /	• Order germplasm	1 to-do
	8 0	© (2)	Today 45°/24° Light Rain Tomorrow 33°/6° Snow Weather		Tera Term	Microsoft Office PowerPaint 2007
	03.03	R PM				

You can search for records meeting specific criteria and then use the search results in various ways. For instance, you can:

- build static lists in the Curator Tool for ongoing tracking of these specific records. Refer to stepby-step details for managing lists. See the <u>Using Lists to Organize Data</u> section.
- build dynamic folders to manage a group of records that may change over time, with records being deleted or added the Dynamic Folder can manage these records dynamically and remain up-to-date. See the *Dynamic Folders* section.

• drag the search results directly to a spreadsheet for further review

GRIN-Global Search v1 Basic Query Search Now! Find: Default Matching Any Word Search Criteria @order request ordered da	web_order_rec All Words	juest O List of It	tems 2				
Search Now! Find: Default Matching Any Word Search Criteria		•	tems 2				
Find: Default Matching Any Word Search Criteria		•	tems 2				
Default Matching Any Word Search Criteria		•	tems 2				
O Any Word Search Criteria	All Words	◯ List of It	tems 2				
Search Results Add To Query	Clear Query						Limit: 1
Accession Get Accession		Request Get Inven	ntory Maintenance Policy	Get Inventory Ge	t Accession Sou	irce Get	
Order	>1/1/2021	4 Web Order	Query Results v1.2		- 🗆	×	
Request ID	Ordered Date	Request	Found at least 3417 'po Continue to retrieve dat	ssible' matches in th a?	e database.	^	Owner Site

Number	Note
1	Find Panel: the Default radio button will usually be selected. In relatively rare cases, you will need to select a dataview name from the dropdown button.
2	Matching: Options for indicating the general type of search. For more details, refer to the online searching guide at <u>https://www.grin-global.org/docs/gg_searches.docx</u>
3	The Text box: the search criteria are ultimately placed here for review. (You can enter "text" search criteria directly in this box, but "text box searches" are not recommended. See <u>Text Box Searches</u> for details.
4	QBE ("Query By Example") Cells: Enter sample search criteria in these cells. This is the recommended way for using the Search Tool. See <u>QBE Searches</u> for details.
5	Results grid: After the Search Now! button is clicked, the records satisfying the criteria are displayed here.

Two Distinct Search Methods

The Search Tool uses two distinct search methods:

- Note
- The user inputs basic criteria "freeform" in the text box. This is **not** the recommended approach for searches, but in some cases it is convenient.
- The recommended approach is the "query-by-example" search method. The user inputs sample data into the QBE cells directly above the search window's results area. When you click the Add To Query button, a statement is generated in the text box. The found records will be listed in the results grid.

.		GRIN-Global	Search v1.9.6.19	9		×		
Basic Query ** Under Cor	nstruction **							
Search Now!			.imit: 50000 🜩					
Find: Default	O accession		¥					
Matching Any Word	All Words	◯ List of	ltems					
				^				
te	ext box							
				~				
Add To Query	Clear Query		QBE ce	lls	_			
Inventory Quality Status	Get Taxonomy Family	Senus Species	Method Cation	Accessions Invest	Show All C	Columns		
	-							
Inventory Quality Status ID	Inventory	Test Type	Contaminant	Plant Part Tested	Test Result	Test Sco		
Quality Status Inventory Test Type Contaminant Test A Test Result Son								
Showing rows: 0 of 0	Conn	ected to: https://	npasweb.ars-arin.c	jov/GRINGlobal/GU	Jl.asmx			

Tip

Use QBE as much as possible. After the QBE criteria is entered, you can click either the **Add to Query** or the **Search Now!** buttons. We recommend clicking **Add to Query**, because you can then review the search criteria (or edit the criteria if necessary).

In the background, the GRIN-Global search engine software differentiates QBE searches from the free form text searches by looking for the pattern **@table.field** -- if the search string doesn't match that pattern, it isn't a formatted QBE criteria – in that case, the search string is treated as a text search. (Users often ask if this @search parameter is "SQL" – it isn't (not exactly).)

Search Tool: Query By Example ("QBE Searches")

Starting a QBE Search

1. Click the **Search** button (from within the Curator Tool).

			GRI	N-Global v1.	.9.6.43			
le Tools Help								
Search Accession Wizard	🖲 Coope	rator Wizard 💣	Order Wizard					
w liste from: Show All	Site	Accessions Acce	ession Source Cooper	ator Accession	Source	Method Citation	Accession Actio	n Invent
singt , manun, Reisinger Resc ∨		Site ID	Site Short America Ame	Site Long Name	e			Organiza Abbrevia
	<mark>ا</mark>	2	BRW	Natl. Germplasm	n Reposito	ory - Brownwood		BRW
ab (1) July 22 Icons L · ·		30	CLO	Clover collection	n			CLO

2. A separate Search window displays.



Before invoking the search steps below, increase or decrease the Limit as needed.

(1) Input search criteria in the "query-by-example" (QBE) cells; (2) click the **Add To Query** button; (3) click the **Search Now!** button; (4) click OK.

÷		G	RIN-	Global Searc	h v1	.9.6.41		-	_ □	×
Basic Query										
Search	Now! 3				Limit	500	-			
Find: Default		O accessio						_	~	
Matching		1	•	GRIN-Gl	obal	v1.9.6	5.41		X	
 Any Wor Search Crite 		All Words		und at least 500 's ntinue to retrieve			es in the o	database.	^	
41872, 4187 41887, 4188 41903, 4190 300679, 300 311851, 311	73, 41874, 41 88, 41889, 41 94, 41905, 41 9680, 310324 852, 311853	858, 41860, 418 875, 41876, 418 890, 41891, 418 906, 41907, 101 , 310648, 31139 , 311854, 31185 , 316285, 31628							~	
Search Res	ults						ОК	4 Cancel		-
Add To	Query 2	Clear Que	ny -							
Crop Trait C		Taxonomy Genus	Tax	onomy Species	Acce	ession Ir	nventory	🔹 🕨 🖌 Sho	w All Co	lumns
								Vitis%		
Ac	cession ID	Accession Prefix		Accession Number		Accessio Suffix	n	Taxon	1	Nam ^
100	0090	PI		588054				Vitis riparia	lo	wa
100	0512	DI		50005C				Vitia opignoting		di-t

If the database contains records that match your criteria, the text box will be filled with the relevant code generated by your search criteria. (Shown above in yellow highlighting.)

In the following example, the user had entered **Allium%** in the Taxon QBE cell. The percent symbol (%) and the asterisk (*) are wild card characters indicating any character. 4446 records were returned, all

asic Q	uery									
S	earch N	low!			Lin	nit:	10000	*		
Find:	efault		0	accession				v		
Match O Ar	hing hy Word	Ê.	١	All Words	◯ List of Ite	ems				
Pacce	ession ta	axonomy_sp	pecies_id	IN (2211, 221	2, 2213, 2214, 2215,	^				
		218, 2219, 229, 2230, 1		21, 2222, 222 32, 2233, 223						
2238, 2 2249, 2	2239, 22 2250, 22	240, 2241, 251, 2252,	2242, 22 2253, 22	43, 2244, 224 54, 2255, 225	5, 2246, 2247, 2248, 6, 2257, 2258, 2259,					
2238, 2 2249, 2	2239, 22 2250, 22	240, 2241, 251, 2252,	2242, 22 2253, 22	43, 2244, 224 54, 2255, 225	5, 2246, 2247, 2248,	~				
2238, 2 2249, 2 2260, 2	2239, 22 2250, 22	240, 2241, 251, 2252, 262, 2263,	2242, 22 2253, 22 2264, 22	43, 2244, 224 54, 2255, 225	5, 2246, 2247, 2248, 6, 2257, 2258, 2259,	~				
2238, 2 2249, 2 2260, 2	2239, 22 2250, 22 2261, 22 dd To Q	240, 2241, 251, 2252, 262, 2263,	2242, 22 2253, 22 2264, 22 C	43, 2244, 224 54, 2255, 225 65, 2266, 226	5, 2246, 2247, 2248, 6, 2257, 2258, 2259,	↓ y Ge	et Taxo	1 1	Show All Colur	mns
2238, 2 2249, 2 2260, 2 Ac	2239, 22 2250, 22 2261, 22 dd To Q	240, 2241, 251, 2252, 262, 2263, luery	2242, 22 2253, 22 2264, 22 C	43, 2244, 224 54, 2255, 225 65, 2266, 226	5, 2246, 2247, 2248, 6, 2257, 2258, 2259, 7, 2268, 2269, 2270,	↓ y Ge	et Taxo	• •	Show All Colur	mns
2238, 2 2249, 2 2260, 2 Ac	2239, 22 2250, 22 2261, 22 dd To Q ssions	240, 2241, 251, 2252, 262, 2263, luery	2242, 22 2253, 22 2264, 22 Orders	43, 2244, 224 54, 2255, 225 65, 2266, 226 lear Query Cooperators	5, 2246, 2247, 2248, 6, 2257, 2258, 2259, 7, 2268, 2269, 2270,		ession	4		mns
2238, 2 2249, 2 2260, 2 Ac	2239, 22 2250, 22 2261, 22 dd To Q ssions	240, 2241, 251, 2252, 262, 2263, uery Inventory ession ID	2242, 22 2253, 22 2264, 22 Orders	43, 2244, 224 54, 2255, 225 65, 2266, 226 lear Query Cooperators	5, 2246, 2247, 2248, 6, 2257, 2258, 2259, 7, 2268, 2269, 2270, Get Taxonomy Family Accession	Acc	ession	4	Allium%	mns
2238, 2 2249, 2 2260, 2 Ac	2239, 22 2250, 22 2261, 22 dd To Q ssions	240, 2241, 251, 2252, 262, 2263, uery Inventory ession ID	2242, 22 2253, 22 2264, 22 Orders Acce Pret	43, 2244, 224 54, 2255, 225 65, 2266, 226 lear Query Cooperators	5. 2246, 2247, 2248, 6. 2257, 2258, 2259, 7. 2268, 2269, 2270, Get Taxonomy Family Accession Number	Acc	ession	4	Allium% Taxon	mns

having the genus **Allium** as the genus component of their taxonomic name:

Adding Tabs in the Search Tool

Each tab in the Search Tool is a dataview tab. To display additional tabs, either right-click on an existing tab, or click on the **New Tab** icon (at the right of the existing tabs).

L	GRIN-Glo	bal Search v1.9.6.41		
asic Query				
Search Now!		Limit: 500)	
Find: Default	O accession		~	
Matching Any Word	All Words	List of Items		
Search Criteria				
				Clear Text
				Ciedi Text
				Ciedi Text
\sim				
\sim				
Search Results				
Search Results Add To Query	Clear Query			
Add To Query		Observation Data		Show All Column
Add To Query	rder Request Crop Trait	Observation Data		
	rder Request Crop Trait	Observation Data		
Add To Query Order Request	rder Request Crop Trait			Show All Column
Add To Query Order Request	rder Request Crop Trait	Observation Data (Last Name	< ► ♥ Title	

Deleting Tabs in the Search Tool

To delete dataview tabs, right-click on the tab and select the Delete Tab option.

Editing or Saving the Results of a Search

You can read the search results, but you cannot edit the data directly in the Search Tool's grid. To edit the database records, or to review the same data later, you need to drag the data from the Search Tool grid to somewhere else – either to the Curator Tool, or to a spreadsheet.

In the Curator Tool, you typically build *lists* to point to these records for future reference. See the <u>Using</u> <u>Lists to Organize Data</u> section for details. Alternatively, you can drag the generated code to the CT to create a Dynamic Folder. See the <u>Dynamic Folders</u> section.



The data found by a search may also be copied into other applications, such as a spreadsheet. In the Search Tool, click in the upper left corner to select all of the found records:

Access	sions Inventory 0	rders Cooperators			🗹 Sł	iow All Columns
					Prunus*	
Â	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Accession ^ Name
·	296	PI	502568		Prunus cerasifera var. divaricata	
•	297	PI	502569		Prunus cerasifera	
	298	PI	502570		Prunus persica var. persica	
	462	PI	506389		Prunus armeniaca	
	463	PI	506392		Prunus armeniaca	
	464	PI	506395		Prunus domestica subsp. domestica	

You can select multiple records, using the mouse and **Ctrl** and/or the **Shift** keys, just as you can select multiple rows in a spreadsheet.

Search Criteria (QBE)

QBE Search Code

When executing a QBE search, before displaying the found records, the search produces a "coded" text version of your QBE search in the text box. This code can give you an idea of what the QBE search is doing—it will specify the actual database field names, and depending on the fields selected, will sometimes list the primary keys of the records that fit the search criteria.

The following two search examples are similar. The user in both cases inputted a Genus name with a wildcard (**Capsicum***). Why is their resulting code so different?

Example 1

@taxonomy_species.current_taxonomy_species_id IN (8904, 8905, 8906, 8907, 8908, 8909, 8910, 8911, 8912, 8913, 8914, 8915, 8916, 8917, 8918, 8919, 8920, 8921, 70148, 102341, 102342, 102345, 300104, 300105, 310092, 310093, 311784, 406443, 409562, 411157, 411204, 412457, 412458, 412458, 412481, 412482, 412485, 412487, 412489, 412490, 412491, 412492, 412495, 412497, 412498, 412490, 412491, 412492, 412495, 412497, 412498, 412490, 412500, 412502, 412503, 412505, 412507, 412509, 412512, 412516, 412518, 415380, 415381, 415382, 415383, 415384, 415385, 415386, 415387, 415388, 415389, 415390, 415380, 415380, 415381, 415385, 415386, 415387, 415388, 415389, 415390, 415380, 415480, 415480, 415480, 415480, 415480, 415480	<
Add To Query Clear Query	
Inventory Action Cooperators Orders Taxonomy Species Acc Name CropTrait Obs. Su	immary
Capsicum*	

Example 2

@taxonomy_genus.genus_name LIKE 'Capsicum%'

@taxond	omy_genus.genus_na	ame LIKE 'Capsicum%	21 6				
Ado	d To Query	Clear Query]				
Invento	ory Action Cooperat	ors Orders Taxon	omy Species Acc	Name CropTrait Obs.	Summary Rpt: 🔨	🛌 🗹 Show All Co	Jum
•						Capsicum*	
	Taxonomy Species ID	Nomen Number	Current Taxon	Is Interspecific Hybrid?	Extended Genus Name	Genus	A C

In the first example, the search is looking at key values. The search first uses a related lookup table, in this case taxonomy.species.lookup, and does a comparison for Capsicum%. It then returns all of the corresponding keys that match: "...IN (8904, 8905...)" (This all happens even before the user hits the **OK** button to proceed.)

In the second case, where genus.name is being looked at in the taxonomy.genus table, genus_name is a text field, hence the "LIKE" operator.

Case Sensitivity

Generally, all characters entered in a guery are used. The case sensitivity of your search will depend on how the GRIN-Global database is set up:

- If the database is installed as case-sensitive (this is the default for the Oracle and PostgreSQL • database engines), the queries will be case-sensitive.
- If the database is installed with settings to make the database case-*in*sensitive (this is the • default for Microsoft SQL Server and MySQL database engines), then the queries will be caseinsensitive too. (For example, the U.S. National Plant Germplasm System uses MS SQL Server.)

Special Characters

Special characters and letters with diacritical marks and accents (such as á) can be entered in the Search text box.

Taxonomy Species	Accession	Inventory	Inventory Action	Taxonomy	Crop M	ap Order Request	Web Order Reque	est Cr
			Đậu tương nếp đ	įa phương				
Accession Suffix	Taxon	()	Name			Origin	Maintenance Site	Is Co
REI	Prunus	americana	Đậu tương nếp đ	įa phương	L. L	United States, M	DBMU	Y



You can copy special characters from the Windows clipboard. Another method is to enter the character using the Windows "Alt key – numeric codes" method. Refer to the following webpage for the common codes:

http://tlt.its.psu.edu/suggestions/international/accents/codealt.html

This website also contains directions for loading and using international keyboards which provide the special characters directly on the keyboard, using specific key combinations.

Wildcards

The QBE cells accept wild card characters. (See wildcard table.)

General guidelines:

- do not use quotes in QBE cells
- use the % or * to broaden a search; preferably the %. Date fields require the %. They can be used to substitute for any character and any number of characters.
- The underscore character (_) is a single-character wild card. If you need to specifically search for an underscore character, enclose the underscore within brackets [_] Example: @inventory_action.action.name_code LIKE 'INS[_]%'

Example: **Prunus%** is appropriate when searching by **Prunus** in the QBE Taxon cell since the Taxon includes the genus and species:

Ad	d To Query		Clear Query	6 ·					
Crop	Crop Trait	Crop	Trait Observation	Taxonomy Genus	Taxonomy Species	Ac	cession Inventory	Inventory Action	Taxonomy Cr
							Prunus%		
	Accession I	D	Accession Prefix	Accession Number	Accession Suffix		Taxon	Name	Origin
	1001395		DPRU	41			Prunus angustifolia	DPRU 41	
	1003494		DPRU	144		j	Prunus angustifolia	DPRU 144	
	1004193		DPRU	193			Prunus argentea	F8 15-25	United Sta
	1004205		DPRU	194			Prunus argentea	F8 15-25	United Sta
	1004213		DPRU	195			Prunus argentea	F8 15-28	United Sta
	1005415		DPRU	338			Prunus armeniaca	Mandarin	United Sta
	1005467		DPRU	346			Prunus armeniaca	DPRU 346	China, Xinj
	1006338		DPRU	439			Prupus andersonii	176-2	United Sta

Date Fields

Date fields physically store the date *and the time of day*. The search also uses *Greenwich Mean Time*. When searching, your search string in the QBE box needs to mimic the internally-stored version, which is based on the database engine on which GRIN-Global is running. (GG can run on any one of four database engines – each organization decides which to use.

For example, in the U.S., the NPGS is using Microsoft SQL Server.

Microsoft SQL Server

Internally a date is stored in the **yyyy-mm-dd time...** format, although in the U.S. English version the user sees the date displayed in the mm/dd/yyyy format. Searching for dates can be tricky because the date field includes the time of day as well.

In the following example, the results may not be what you would have expected:

Search Crite	ria						
@order_requ	est.ordered	_date = '2013'					
Search Res Add To		Clear Qu	ery				
Accession	Inventory	Inventory Action	Taxonomy Crop Map	Order Request	Web C	order Request	Crop Tra
Orc	ler quest ID	Ordered Date	e Web Order Request	Original Or	der	Local Numb	er O
240	493	1/1/2013		240493 - R	oot, S	2013003	CC
240	497	1/1/2013		240497 - Kr	aan,	2013004	CC
240	499	1/1/2013		240499 - Er	nglish,	2013006	CC
240	500	1/1/2013		240500 - Tr	an Vu	2013007	0

When reviewing the results, you will see that all of the found records had the date January 1, 2013. Just specifying the year was not sufficient.

Date Ranges

For date range, there is no BETWEEN option, but you can specify a beginning and ending date. The search works when you use the complete year, day, month, and year, such as: (@order_request.ordered_date >= '14-Jan-2011' AND @order_request.ordered_date <= '17-Jan-2011')

Specifying **<=2014** includes all of 2013.

Example:

(@order_request.ordered_date > '2012-12-31' AND @order_request.ordered_date <= '2014')

2nd Example:

(@order_request.ordered_date > '31-Dec-2014' AND @order_request.ordered_date <= '31-Jan-2015') returns January 2015 records.

Note: when using the QBE cell to generate the code, you can use the slash date format:

Any Word	 All Words 	◯ List of Items			
Search Criteria					
@order_request.ordere	ed_date > '31-Dec-2014' A	ND @order_request.order	red_date <= '31	-Jan-2015')	
Search Results					
Add To Query	Clear Query				
Accession Crop I	nventory Order Request	Code Value Cooperate	or Inventory N	Maintenance Policy	•
•	<=1/31/2015				
Order Request ID	Urdered Date	Web Order Ori	ginal Order	Local Number	0

The Wildcard (%) is permitted

If a wildcard is used anywhere, also be sure to use a trailing % wildcard on the end of the string to pick up the time component. NOTE: using wildcard for just day or year, the month must be uppercase or the query will fail. Most other useful formats: **MM/DD/YYYY** or **MM/DD/YY** or **YYYY-MM-DD** are supported, but they do not accept wildcards. Use the % - not the *

Exa	m	n	I۰
гла		U	IC.

		GRIN-Global Search v1.9.6.4	1
ic Query			
Search Now!		Limit: 50000 🖨	
ind: Default	O accession	~	
Matching Any Word	All Words	O List of Items	
Search Criteria			
Paccession.created_dz	ate like '2015-10-%'		
⊇accession.created_da	ate like '2015-10-%'		
Paccession.created_da Paccession.created_da	ate like '2015-10-%'		

Returns the records for October 2015 (the 10th month)

Best query is in the format: **YYYY-MM-DD** (Trailing wildcard is required or the query will fail.) No other date formats are supported. So the following are valid searches:

@accession.created_date like '2015%'
@accession.created_date like '2015-09-%'
@accession.created_date like '2015-09-05%'
@accession.created_date like '2015-%-05%'



For consistency, time is converted to Greenwich Mean Time (GMT). For example, records added on the East Coast at 10 pm may be found showing the next day's date.

Manually Modifying the Search Text

The coded search text can be manually modified. For example:

Run this query first:

asic Query										
Search	Now!				L	imit:	5000	-		
Find: Default		0	accession	n				~		
Matching Any Wor	d	۲	All Words	() List of I	tems				
Search Crite	ria									
Caccession	accession_	number_	part1 = 'Pl	' AND @acces	sion.acces	sion_n	umber_p	oart2 = (4100	
@accession Search Resi Add To	ults	number_	part1 = 'Pl Clear Que		sion acces	ision_n	umber_p	oart2 = (4100	
Search Res	ults		Clear Qu							Crop Trai
Search Resi Add To	ults Query		Clear Qu	ery						Crop Trai
Search Resu Add To Accession	ults Query	Invento PI Ac	Clear Qu	ery Taxonomy Cro	op Map C	Drder R	equest			Crop Trai

Then use the **Clear All** to empty the QBE cells:

ſ	Search	Resu	ults									
	Ad	dd To	Query	Clear Qu	ery							
	Acces	ssion	Inventory	Inventory Action	Taxonor	my Crop Map	Ord	ler Request	Web O	rder Request	Crop	Trait
	•			PI	1 4	100						
		Acc	cession ID	Acco		Accession Number	_	Clear Clear All		Taxon		Nar
		163	1908	PI	4	100				Cylindropuntia	a spi	

... and manually edit the text as shown below. (The Accession Number field is numeric, but by using the word **LIKE**, the data and the wildcard in quotes (**'4100%'**), records were found:

@access	ion.accession_	number_part1 = 'PI'	AND @accession.access	sion_number_part2	LIKE '4100%'	
Search F Add	Results To Query	Clear Que	ity	Result	s:	
Accessi	on Inventory	Inventory Action	Taxonomy Crop Map 0	rder it	Request Crop	Trait
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	N
	1105091	PI	41009		Triticum aestivum	Ha
	1309093	PI	410000		Eragrostis curvula	UN
1	1309094	PI	410001		Eragrostis curvula	30
1	1309095	PI	410002		Eragrostis curvula	30
-	1200000	DI	410002		Emonatia augusta	20

Any Word vs. All Words ("OR" and "AND" in the QBE Search Method)

Use the Matching radio buttons to specify how the text in the search criteria text box should be treated:

9	GRIN-Global Search v1.9.6.17	- 🗆 🗡
Basic Query ** Under C	onstruction **	
Search Now!	Limit: 50000 🖨	
Find: Default	O accession ∨	
Matching Any Word	All Words List of Items	

When inputting search criteria in two or more cells, the search condition that is created depends on whether you have selected the radio button **All Words** or **Any Word**:

- **Any Word** less restrictive, records are returned whenever any word in the search box is matched; the criteria in multiple QBE cells work together as an "OR" ...when any one of the search criteria are met, records will be found
- **All Words** more restrictive, *all* of the words used in the search text must match (see the first example below); this creates an "AND" condition

Example:

In a test database, using the search string **Rubus glaucus***, with "*All Words*" -- only four records were found. With "*Any Word*," selected, 48 records were found – 4 of the 48 are the **Rubus glacus**. So the other 44 records found had either **Rubus** or **glaucus** in their name. (42 happened to be **Rubus**, including the four **Rubus glaucus**, and six were **Elymus glaucus**.)

No records were found in the following query. The succeeding query illustrates what happens when "AND" is edited to an "OR." (The key value 859 in this lookup is the key value for the species **Prunus persica**.)

Search	lowl			Limit: 50000	:		
Find Accessio	ns O	Inventory	O Orders	 Cooperators 	1		
Matching O Any Wor	4	All Words	01	ist of Items			
			¥	name.plant_name = Pior			
					***	M	
Add To I	luery	Clear Query			Sec. 10	×	[
	luery	Clear Query		AccessionName Taxor	Sec. 10	Pioneer	

In this case, one record was found:

asic Query	** Under Co	onstruction **					
Search	Now!			Limit: 50000 😂			
Find: Accession	ins (Inventory	Orders	Cooperators			
Matching Any Wor	d	 All Words 	OL	ist of Items	Ĩ		
@accession.	taxonomy_s	species_id IN (859) <mark>0</mark>	I <mark>R</mark> @accession_na	ime.plant_name = 'Pione	er'	<u>^</u>	
			IR @accession_na	me.plant_name = 'Pione	er'	<u>(</u>)	
Add To I	Query	Cleat Query				< ×	5
	Query	Cleat Query		me.plant_name = 'Pione AccessionName Taxon		Pioneer	Ŀ
Add To I	Query	Cleat Query			omySpecies	Pioneer Accession Name	G

Adding Criteria

Add criteria to your search with the **Add To Query** button. When doing so, pay attention to the construction of your search statement in the text box. "AND" is generated when the All Words radio button is selected and you have selected items from different QBE cells. But when you add items one at time from the same QBE cell, the ST correctly inserts an "OR." If you think about this, it is logical to do so, since if you were to supply first Prunus* in the Taxon cell and then Rubus* - it would only be sensible that this is an "OR situation.

Remember that you can use the **Clear** or **Clear All** options to empty one or all of the QBE cells:

Search Res	ults							
Add To Query		Clear Que	ery					
Accession	Inventory	Inventory Action	Taxonomy Cro	р Мар	Order Request	Web 0	Order Request	Crop Tra
•		PI	4100	_		_		
Accession ID		Acco	Access Numbe		Clear Clear All		Taxon	N
163	1908	PI	4100	4			Cylindropuntia	a spi

Criteria Code Explained

Read the following section if you are interested in the technical details of a QBE search. We include this section in the User Guide primarily because some users will be creating dynamic folders in the Curator Tool, and having a basic understanding of QBE code is helpful.

In creating your QBE searches, you will notice code being generated in the text box as we have seen in the search examples above.

Let's look at two QBE examples that on the surface seem to be similar searches. In this first example, the user will open the Taxonomy Species dataview and look for records whose Genus is **Capsicum**. As recommended, the user will include a wildcard (%) in the QBE text to broaden the search. After the user clicks the **Search Now** button, the Search Tool generates the code (illustrated below). The result of the successful query is shown here. A Capsicum (Taxonomy Species) record was found:

ic Query								
Search Now!	1	Limit: 50	000					
nd:		Limit.	•					
Default	O accession		\sim					
atching Any Word	All Words	O List of Items						
arch Criteria								
							Clear Text	t
xonomy_genus.ge	nus_name LIKE 'Capsicu	um%'						
arch Results								
arch Results								
arch Results Add To Query	Clear Query							
Add To Query		Tayonomy Sharias	Accession Investor	and any law and any A	tion Truster C	me Man Octor E	Show All C	olum
Add To Query		ny Genus Taxonomy Species	Accession Inve	entory Inventory Ad	_	rop Map Order F	► ✔ Show All C	olun
Add To Query		ny Genus Taxonomy Species	Accession Inve	entory Inventory Ad	ction Taxonomy C Capsicum%	rop Map Order F	Show All C	olum
Add To Query op Trait Crop Trai	t Observation Taxonom				Capsicum%			olur
Add To Query		ny Genus Taxonomy Species	ls Interspecific	entory Inventory A/ Extended Genus Name		Accession	Species	olum
Add To Query op Trait Crop Trai Taxonomy Species ID	Nomen Number	Current Taxon	Is Interspecific Hybrid?	Extended Genus Name	Capsicum%	Accession Count		olun
Add To Query op Trait Crop Trai	t Observation Taxonon		ls Interspecific	Extended	Capsicum%	Accession		olun
Add To Query op Trait Crop Trai Taxonomy Species ID	Nomen Number	Current Taxon	Is Interspecific Hybrid?	Extended Genus Name	Capsicum%	Accession Count	Species	olum
Add To Query op Trait Crop Trai Taxonomy Species ID 8904	t Observation Taxonom Nomen Number 8904	Current Taxon	ls Interspecific Hybrid? N N	Extended Genus Name Capsicum	Capsicum% Genus Capsicum	Accession Count 3966	Species annuum	olur
Add To Query op Trait Crop Trait Taxonomy Species ID 8904 8905	Nomen Number 8904 8905	Current Taxon Capsicum annuum Capsicum annuum var	ls Interspecific Hybrid? N N	Extended Genus Name Capsicum Capsicum	Capsicum% Genus Capsicum Capsicum	Accession Count 3966 0	Species annuum annuum	olum

@ taxonomy_genus.genus_name LIKE 'CAPSICUM%' Let's break out this code into three components:

Code	Indicates
@taxonomy_genus	the table; the taxonomy_genus in the database will be searched
genus.name	the field name in the table
LIKE 'CAPSICUM%'	The LIKE operator is used to search for a specified pattern; in this case the QBE is saying find any text that begins with "capsicum." The trailing asterisk indicates that any records with any text after "capsicum" should be included if found.

In this next example, the user has the Accession dataview open. Again , the user is looking for Capsicum:

					~		
Ad	d To Query	Clear Query est Accession Ta) xonomy Species	_		🔲 Show All Coli	umns
J					Capsicum*		
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Plant Name	Origi

The resulting code generate by the QBE is shown on the following page. The code is quite different and does not resemble the code we just saw in the previous example.

@accession.taxonomy_species_id IN (8904, 8905, 8906, 8907, 8908, ...

Code	Description
@accession	the table; the accession table in the database will be searched
taxonomy_species_id	the field name in the table
IN (8904, 8905, 8906, 8907, 8908,	Since the taxonomy_species_id field is a key field, the search will use the related lookup table, taxonomy.species.lookup, to do a comparison and return all of the corresponding keys that match (8904, 8905, 8906,)

The illustration below is showing that records were found, as should be expected since the QBE had generated code with key values in the large text box:

 Accessions 	 Inventory 	🔘 Orders	 Cooperators 			
Matching O Any Word	All Words	🔿 List	of Items			
8913, 8914, 8915, 8 800104, 300105, 31 112481, 412482, 41 112500, 412502, 41	my_species_id IN (8904, f 916, 8917, 8918, 8919, 8 0092, 310093, 311784, 4 2485, 412487, 412489, 4 2503, 412505, 412507, 4 5384, 415385, 415386, 4 Clear Query	920, 8921, 70148, 10 06443, 409562, 411 12490, 412491, 412 12509, 412512, 412	02341, 102342, 10234 157, 411204, 412457, 492, 412495, 412497, 516, 412518, 415380,	5, 412458, 412498, 415381,		
Inventory Get Ord	der Request Accession	Taxonomy Species			📃 Show All	Column
Inventory Get Ord	der Request Accession	Taxonomy Species		Capsicum*	🔲 Show All	Column
Inventory Get Ord	Accession	Taxonomy Species Accession Number	 Accession Suffix	Capsicum* Taxon	Show All	Column
	ID Accession	Accession	Accession			Column (
Accession	ID Accession Prefix	Accession Number	Accession	Taxon	Plant Name	(
Accession 1010454	ID Accession Prefix Grif	Accession Number 972	Accession	Taxon Capsicum annuum	Plant Name Grif 972	((

So you may be asking the question "Why *is* the code so different?" In both examples the user had typed the string "Capsicum*" –but the resulting code was not similar. In the first example, the Genus field is a text field – so the search was for any text similar to (**LIKE**) "Capsicum." In the second example, in the accession dataview, the search is using a field in a lookup table to find the numeric matches that correspond to Capsicum (IN 8904, 8905, 8906, 8907, 8908, ...)

Fortunately, as a Curator Tool user, you will not need to be too concerned about the actual code generated when you do a QBE search, but this overview should provide enough background for you to understand at a basic level the construct of these search statements.

Text Box Searches

In text box searches, the Search Engine only searches certain database fields. (This is one reason why a text box search is not the preferred type of search. That said, you can do text searches. The "typical" searchable fields are listed in the table below the screen example. These are the fields used for text box searches:*

SRIN-Global Search v1.0.7.0	_ 🗆 🗙
Basic Query ** Under Construction **	
Search Now!	
Find: Accessions Inventory Orders Cooperators	
Any Word All Words List of Items	
text box	

Table Name	Field Name
accession	accession_number_part1, accession_number_part2, accession_number_part3, note
accession_ipr	ipr_number, ipr_crop_name, ipr_full_name, note
accession_inv_name	plant_name
accession_pedigree	description
cooperator	last_name, first_name
crop	name
geography	adm1, adm2, adm3, adm4, country_code
inventory	inventory_number_part1, inventory_number_part2, inventory_number_part3,
taxonomy_common_name	name, simplified_name
taxonomy_family	family_name, alternate_name

Table Name	Field Name
taxonomy_genus	genus_name
taxonomy_species	nomen_number, species_name, name, alternate_name
code_value_lang	title

* these fields are configured by the GG DBA administrator to met the institute's unique needs. The fields are maintained by the DBA in the sys_search_autofield table.

The text search behaves *similar* to Google searches ("similar," but not "exactly"). For information on Google searches, see: <u>http://www.google.com/support/websearch/bin/answer.py?answer=134479</u>

Case Sensitivity

Generally, all characters entered in a textbox query are used.

The case sensitivity of your search depends on how the GRIN-Global database is set up:

- If the database is installed as *case-sensitive* (this is the default for the Oracle and PostgreSQL database engines), the queries will be case-sensitive.
- If the database is installed with settings to make the database *case-insensitive* (this is the default for SQL Server and MySQL database engines), then the queries will be case-insensitive too. For example, the U.S. NPGS GRIN-Global system will be using SQL Server, so the searches will be case-insensitive.

Filtering the Search Results

You can filter the search grid in order to display a subset of the records. Use any cell's contents as the basis for your filtering criteria. **Right-click** in the data cell; select the desired filtering choice from the menu ("Show only..." or "Hide rows...").

Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxonomy		ccession ame	Origin	Is Core?
383396	PI	501267		Arachis hypogaea var. hypogaea	US	6 1251		N
383397	PI	501268		Arachis hypogaea var. hypogaea	US	5 1252		N
383398	PI	501269		Arachis hypogaea var. fastigiata	US	6 1256		N
383399	PI	501270		Arachis hypogaea var. fastigiata	Ц	1259		N
383400	PI	501271		Arachis hypogaea var. hypogaea		Show only rows		ata
383401	PI	501272		Arachis hypogaea var. hypogaea	n	Hide rows with t	this data	
383402	PI	501273		Arachis hypogaea		Reset row filter		
 					_	Reset row filte	r	r

Record Counter

Notice that the record counter in the lower left corner indicates the number of records being displayed and the total number that were retrieved.

1	sł	howing :	167 rows (of 650 r		1	Connected to: I	http://localhost/v
			418184	PI	536055	Arachis hvoogaea var. fastigiata 😽	US 880
			418182	PI	536053		US 878
			384162	PI	502033	Arachis hypogaea var. fastigiata	SPZ 466-2

Displaying all Rows in the Grid (Turn off Filtering) **Right-click** in *any* cell in the grid. Select **Reset row filter**.

Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxonomy	Accession Name	Origin	ls
383413	PI	501284		Arachis hypogaea var. fastigiata	US 1262-1		N
383421	PI	501292		Arachis hypogaea var. fastigiata	US 1283-1		N
383422	PI	501293		Arachis hypogaea var. fastigiata	US 1283-2		N
384149	PI	502020		Arachis hypogaea var. fastigiata	SPZ 456-1		Y
383399	PI	501270		Arachis hypogaea var. fastigiata		at the tax	N
383398	PI	501269		Arachis hypogaea var. fastigiata	Show only rows		N
384114	PI	501985		Arachis hypogaea var. fastigiata	Hide rows with t	this data	N
384162	PI	502033		Arachis hypogaea var. fastigiata	Reset row filter		N
418182	PI	536053		Arachis hyponaea var fastiniata	115 878	13	N

Searching a List of Items

This option is used typically when a list, such as a list of accessions, is copied from a spreadsheet into the search text box.

When using this "List of Items" search, the Search Engine is restricted to finding matches in these columns:

accession_number_part1 accession_number_part2 accession_number_part3 inventory_number_part1 inventory_number_part2 inventory_number_part3 form_type_code plant_name order_request_id

Example: List of Items: (example) PI 500501 PI 612346 PI 612347

In the following example, accession identifiers were pasted into the text box and after the user clicked the Search Now button, she had 14 records displayed in the grid:

k			GRIN-Global	Search v1.9.6.19		_ (
sic Query	** Under Cons	struction **					
Search N	Now!			Limit: 100 🜲			
Find: Default		O accession		~			
Matching Any Word	d	O All Words	 List of 	Items			
I 345 V6 203 V6 189 V6 182 V6 180	147 259				~		
Add To G	Query	Clear Query					
			lame Group Accessio	on Inventory Name On	ders Cooperato 4	Show All	Column
Accessions			Accession Accession Number	Accession Suffix	ders Cooperato 1	Show All	
Accessions	Inventory I ession ID	Method Citation N	Accession	Accession			Column
Accessions Acce	Inventory I ession ID 485	Method Citation N Accession Prefix	Accession Number	Accession	Taxon	Name	¢
Accessions Acce 1521	Inventory I ession ID 485 958	Method Citation N Accession Prefix W6	Accession Number 18012	Accession	Taxon Allium altaicum	Name E94050	C N
Accessions Acc 1521	Inventory 1 ession ID 485 958 7494	Method Citation N Accession Prefix W6 W6	Accession Number 18012 18259	Accession	Taxon Allium altaicum Allium altaicum	Name E94050 W94114	
Accessions Acce 1521 1521 1537	Inventory 1 ession ID 485 958 7494 2806	Method Citation N Accession Prefix W6 W6 W6 W6	Accession Number 18012 18259 18947	Accession	Taxon Allium altaicum Allium altaicum Allium altaicum	Name E94050 W94114 96S-64	(N N



Currently, when producing the list, the drag and drop method doesn't work – you must copy and paste the list of accessions or inventory into the text box. Also, remember to click on one of the other radio buttons after doing a "List of Items" search; otherwise, your search will not work as you expect.

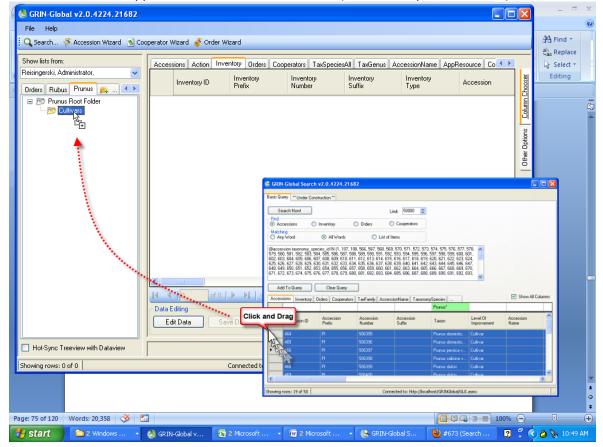
9			GRIN	I-Glo	bal :	Sear	ch v1	.9.6.	19			-		×
Basic Query	** Under Constru	iction **												
Search	Now!				I	Limit:	100	-						
Find: Default		O accession	1					V						
Matching Any Wo	ord	O All Words		۲	List of	ltems								
2220, 2221, 2235, 2236, 2250, 2251, 2265, 2266,	taxonomy_specie 2222, 2223, 222 2237, 2238, 223 2252, 2253, 225 2267, 2268, 226 2283, 2284, 228	4, 2225, 2226, 1 9, 2240, 2241, 1 4, 2255, 2256, 1 9, 2270, 2271, 1	2227, 2228, 2242, 2243, 2257, 2258, 2272, 2273,	2229 2244 2259 2274	2230, 2245, 2260, 2275,	2231, 2246, 2261, 2276,	2232, 2247, 2262, 2277,	2233, 2248, 2263, 2278,	2234, 2249, 2264, 2279,	^				
Add To	Query	Clear Query								~				
Accession	🖳 GRI	N-Global	v1.9.6.19		-		x	e	Orders	Coc	operato 1	 Show 	v All Colu	mns
A	No matches i	n the database	were found				^	ľ		axon		Name		Orig

Moving Records from the Search Grid to the Curator Tool Data Grid

After using the Search tool to locate and filter records in the database, you can copy those records into the Curator Tool. Why do this? CT users build lists to manage or track specific records. (Beginning with the Curator Tool version1.8.3, users have an alternative method for managing records, using the <u>dynamic folders</u>.)

To Move Records from the Search Tool to the Curator Tool

- 1. In the Curator Tool, create a new list name or ensure that an existing list name is visible.
- 2. Confirm that you are not in Edit mode the Save Data button is gray (disabled).
- 3. In the Search Tool, perform your search.
- 4. Select the records found that are to be copied. It could be all of the records found, or you could select a subset of the records by highlighting specific records in the Search Tool's grid. (See "Selecting Records in a Grid" for details.) To select all the records in the Search grid, use Ctrl-A (in English keyboards).
- 5. In the next example, 50 records were found, but only 19 "Cultivars" will be selected. The user clicked in the selected area; held the mouse button and dragged the selected records into the Curator Tool, and dropped the records on the list name (in this example, "Cultivars").



The Cultivar list now points to 19 Prunus cultivar records.

w lists from:	Acce	ssions Action	Inventory	Orders Coop	perators TaxSpeciesAll TaxGenus A	ccessionName Ap	pResource Codes					
ers Rubus Prunus		Accession ID	Accession Prefix	Accession Number	Taxon	Level Of Improvement	Initial Material Type	1				
🕅 Prunus Root Folder 🔺	•	464	PI	506395	Prunus domestica subsp. domestica	Cultivar	CT					
Cultivars		465	PI	506396	Prunus domestica subsp. domestica	Cultivar	CT	1				
PI 536691		466	PI	506397	Prunus persica var. persica	Cultivar	CT					
🗃 🍄 PI 536690		467	PI	506398	Prunus salicina vat. salicina	Cultivar	CT					
PI 536689		468	PI	506399	Prunus dulcis	Cultivar	CT					
🛞 🌳 PI 536687		469	PI	506400	Prunus dulcis	Cultivar	CT					
PI 536686 PI 536685		1035	PI	536675	Prunus avium	Cultivar	BD					
PI 536683		-				1038	PI	536680	Prunus ameniaca	Cultivar	BD	
PI 536682					1039	P1	536681	Prunus persica var. persica	Cultivar	BD		
		1040	PI	536682	Prunus persica var. persica	Cultivar	BD					
@ 🍄 PI 536675	<	1041	PI	536683	Prime et annaniae a	Cultivae	RD	~				
 ⇒ ⇒ PI 506400 ⇒ ⇒ PI 506399 ⇒ ⇒ PI 506398 	14	1	of 19 🕨	$H \mid \oplus \times$	2		Refresh D	ata				
	Data	Editing										

Creating, Updating, and Deleting Records

You create new records, update data, and delete records when working in Edit mode. For example, to create new inventory records, you display the Inventory dataview and then click the **Edit** button to enter edit mode.

Besides the many Curator Tool dataviews, currently there are a few wizards that have been designed to facilitate the editing of Accessions, Orders, and Cooperator records. See <u>Wizards</u> for details. The wizards use forms. They also facilitate the inputting of data into parent and child tables – for example, in the accession wizard you can input a new accession and at the same time and add source and name data which are stored in separate tables.



Before adding a record, we recommend first <u>searching</u> the database to determine if the record already exists. However, if you do attempt to add a record when the record is already in the database, you will receive a warning and will be prevented from duplicating the record.

(A duplicate is based on the key identifier field(s) – for example, each accession must have a unique prefix, number, suffix combination.)

Overview

Required Fields

In order for data to be saved, the data must meet certain rules. Some fields may be required – that is, required fields must be filled, in order for the record to be saved. When inputting a new record, the color violet indicates a required field.

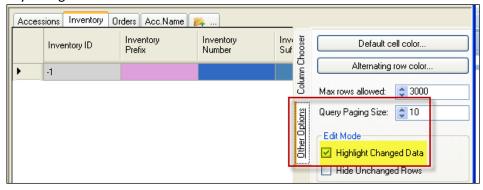
A message window will display if you attempt to save a new record that doesn't have all of the required fields completed.

n Wizar	d 🂣	Order W	/izard						
		Acces	sions Inventory ()	rders Acc.Name	*				
	~		Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inventory Type	Inve Mair Nar	Chooser
		•	-1				BD 😽		Column (
									ő
								X	<u>io</u>
	INS	ERT fails		. –	orefix', table 'gringlob	al.dbo.inventory'; co	olumn does not allow r	nulls.	Other Options
				(ОК				

Cell Colors



Other colors can be used to assist with data inputting. You can set up your Curator Tool options to use colors to indicate when a field's contents have been changed during your current editing session. On the **Other Options** tab, select the **Highlight Changed Data** so that you visually see any changed fields in Edit mode.



The following table summarizes the significance of the cell's color when In Edit mode (assuming you had selected the **Highlight Changed Data** option):

Cell Color	Meaning
gray	cell cannot be edited
violet	field is required; a record cannot be saved until all required fields are filled
orange	when doing an add, these cells have new data

yellow	when a record is being edited, fields that have been changed display in yellow
white	data hasn't changed in the cell when a record is being edited
dark blue	dark blue cells display when a record is being added and data in the cell is the same as the cell's default value
light blue	light blue cells display when a record is being added and data in the cell differs from the cell's default value
blue	current cell

Creating New Records



The Curator Tool has <u>wizards</u> which facilitate creating new records as well as editing existing ones. The directions below are generic directions for manually creating and editing any record type.

To Create a New Record

- 1. In the left (List) panel, either select an existing list or create a new list.
- 2. In the right **Datagrid** panel, click on the appropriate dataview tab
- 3. Click the **Edit** button to switch to Edit Mode.
- 4. Click the **Add New** button on the Navigator Bar.

Acces	Accessions Inventory Orders 🔭								
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxo				
	384217	PI	502088		Aracł				
Þ	384225	PI	502096		Aracł				
	422959	PI	540833		Aracł				
	422961	PI	540835		Aracł				
Conta R		e Data		_					

or...

click on the row indicator and press **Ctrl-N** to insert a new row in the dataset, *after the selected row*. Data is automatically copied from the selected row into the new row, except for restricted fields (fields in gray). In the example below, the Name data is not copied into the new record.)

Get Sit	e Accessions	Get Accession Invent	ory Name Get Acc	ession Action Inventory	Get Inventory Ma	intenance Policy	Orders Cooperators
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name	Origin
•	1919883	MAR	8151401	REI	Malus fusca	MAR 8151401 R	EI
	-3	MAR	8151401	REI	Malus fusca		
	1919893	MAR	8151402	REI	Malus domestica	MAR 8151402 R	El

The colors indicate whether the cell blocks data input (gray), requires data (violet), or accepts data (blue). Light blue cells indicate the data was copied from the cell above; dark blue cells await your input.

Note

Beginning with GG server Release 1.10.1, a trigger was modified to facilitate automatic assigning of new "PI" identifier numbers to accessions. The trigger works when adding new accessions and non-PI series as well, but the main goal was to convert existing local identifiers to the PI series. [To be determined – this applies to USDA NPGS only]

Assuming you have the proper permission, to use the trigger you edit the Prefix and set to PI. The accession numbers are set to -1. (Use CTRL-D to copy down when modifying multiple records.) When saved, the accessions receive the next available PI numbers. After the save, another trigger modifies the system inventory record to match the newly-assigned PI identifier (rather than the former identifier).

(Note to GG Admins: the trigger is AccessionDataTrigger.cs)

- 5. Input data in the cells. (Some cells are restricted. That is, when you input data in a restricted field, the Curator Tool does not allow you to just *type* an entry. See <u>Restricted Fields</u> for details.)
- 6. Click Save Data.

<	
4	of 9 🕨 🕅 🕂 🗙
Data Editing	
Edit Data	Save Data Cancel



Whenever an accession record is created, a system default Inventory record is created as well. This system inventory record is required due to schema requirements to enforce database integrity. *It does not represent any physical inventory.*

🖩 GRIN-Global v1.0.3626.6779 Show lists from: Accessions Inventory Taxonomy Citations Orders Names 📂 O'Connell O ¥ Inventory Inventory Inventory Inventory Inventory Inventory ID Maintenance Site Prefix Number Suffix Distributable? Туре Arachis536312 Vicuna_Beans Name 🖃 🕅 Arachis53612 cpnt ⊟--⊛ <u>PI 536312</u> 831610 NSSL 269350 COLD NSSL 01 SD N PI 536312 01 SD 1403586 PI 536312 02 SD S9 Y 0 NSSL_269350_01_SD cont PI_536312_02_SD 1694098 ΡI 536312 Ν PI_536312_*

All system inventory records use the code ****** for their Inventory Type field.

Keyboard Shortcuts in Edit Mode

Remember that there are many keyboards available and each have their own Windows keyboard combinations. However, the keyboard shortcut combinations written for GRIN-Global will work on all keyboards. (See <u>Keyboard Shortcuts</u>.)

Copying from the Cell Above

When inputting data in Edit mode, the **Ctrl-'** combination copies the contents of the cell that is *directly above* the current cell.

Accessions Inventory Orders Annotation 🚒								
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon			
	384290	PI	502161		Malus			
	384291	PI	502162		Malus			
	384292	PI	502163	mar	Malus			
۶.	384293	PI	502164	mar	Malus			
	384377	PI	502248		Malus			



The Curator Tool has an ALT feature to facilitate copying. Press the ALT key once; use the mouse to drag the mouse over any cell range which you intend to copy; use the Ctrl-C keyboard combination to copy the highlighted data.

Duplicate Data (Ctrl-D)

The **Ctrl-D** combination duplicates data from the top cell to the cells *directly below* it within a column.

1. Click in the top cell of a range of cells. Input the data that will be duplicated.

Action	AccName	10
--------	---------	----

	Initial Received Date Format	Taxonomy	PI Volume	Created Date	Cre
)	Year and month	Prunus salicina v	196	8/9/1994 1:00 AM	SYS
)	Year and month	Prunus dulcis	196	8/9/1994 1:00 AM	SYS
)	Year and month	Prunus dulcis	196	8/9/1994 1:00 AM	SYS
	Year and month	4	196	6/17/2009 2:50	Pos
	Year and month		196	6/17/2009 2:50	Pos
	Year and month		196	6/17/2009 2:50	Pos
	Year and month		196	6/17/2009 2:50	Pos
	Year and month		196	6/17/2009 2:50	Pos
	[Null]			6/17/2009 1:43	Pos
					-

2. Select *the cell with the data* and *the cells directly below* which will be populated; press **Ctrl-D.** The data is duplicated in all of the selected (highlighted) cells.

Actic	action AccName 📴									
	Initial Received Date Format	Taxonomy	PI Volume	Created Date	Cre					
	Year and month	Prunus salicina v	196	8/9/1994 1:00 AM	SYS					
	Year and month	Prunus dulcis	196	8/9/1994 1:00 AM	SYS					
	Year and month	Prunus dulcis	196	8/9/1994 1:00 AM	SYS					
	Year and month	Prunus dulcis	196	6/17/2009 2:50	Posl					
	Year and month	Prunus dulcis	196	6/17/2009 2:50	Posl					
	Year and month	Prunus dulcis	196	6/17/2009 2:50	Posl					
	Year and month	Prunus dulcis	196	6/17/2009 2:50	Posl					
	Year and month	Prunus dulcis	196	6/17/2009 2:50	Posl					
	[Null]	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		6/17/2009 1:43	Posl					

Restricted Fields (Lookup Picker)

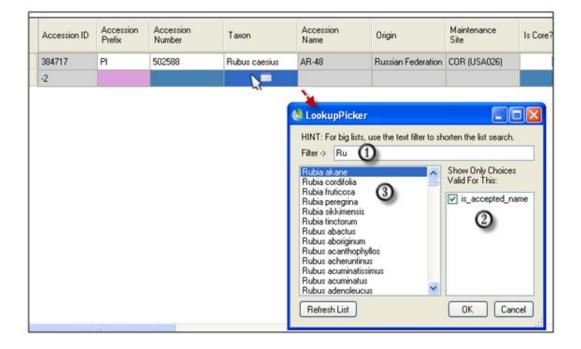
Almost all dataviews have some fields that are "restricted." In any restricted field, you cannot input the data, you must select the data from a list of possible items. A "LookupPicker" window pops up.



When in read-only mode, a restricted field will look similar to any other text field. However, in edit mode, when you move the cursor over the field, the cursor changes to a different style,

similar to the following: When you input the first character, the LookupPicker window will display. (Clicking in the cell also opens the LookupPicker window.)

The following example illustrates using the **LookupPicker** for the Taxonomy field. In this example, the user typed "Ru" – the entries were filtered to those items in the table beginning with "Ru."



Using the Lookup Picker

 Click in a cell where data is required; start typing. As you type more letters in the Filter→box (#1 in the screen image), the filtering becomes more specific. Use the mouse to click on the desired entry in the list box #3; click OK to select that item.

You can also use wildcards when inputting in the filter box. In the following example, the user was looking for accessions having "rei" somewhere within the prefix-number-suffix fields, so the user typed a "%" wildcard before typing the "rei"

	Inventory ID	Inven Prefix	tory	Inventory Number	Inventory Suffix	Inventory Type	Accession	Inventory Maintenance Policy
	2619208	PI		639092	TR02WA	SD	PI 639092	WHEAT
	2733636	Ames		19293	07ncai01	SD	Ames 19293	NC7-maize.in
	2886073	PI	🛃 Lookuj	Picker v1.9.5.	D		PI 435094	cucu_parl
	2944582	PI			filter to shorten the lis	t t	PI 639092	WHEAT
	2949861	PI		%rei	rilter to shorten the lis	st search.	PI 435094	cucu_parl
	3031550	PI					PI 435094	cucu_parl
	3179878	PI	Mar 1112 mar 1114			<u> </u>	PI 435094	cucu_parl
	4016461	PI	mar 1218 mar 2130	1 rei IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			PI 650346	SYSTEM
	4016476	PI	mar 2211-				PI 650347	SYSTEM
	4021562	PI	mar 2241 mar 2270	1 rei		PI 597890	SYSTEM	
	4021563	PI	mar 2270; mar 2280;				PI 597891	SYSTEM
	4021569	PI	mar 2280.	2 rei			PI 597892	SYSTEM
	4021570	PI	mar 2280: mar 2280-	4 rei			PI 597893	SYSTEM
	4082719	Ames	mar 2280	5 rei			Ames 19293	SYSTEM
	4330030	PI	Refresh	List	OK	Cancel	PI 435094	SYSTEM
	4674746	PI		00002	1		PI 639092	SYSTEM
,	-64					[Null]		

Lookups can have different options for restricting (filtering) what choices are valid. These items are listed in the box on the right side of the window. In the example below, one is displayed: is_accepted_name. You can constrict or expand the search by selecting or deselecting the check boxes. Keeping this box selected in this example will limit the Taxons to those considered

Access	ions	Inver	ntory	Orders	Order	Request Item	Coop	perators	Invento	ory Maintenance Po	olicy Inver
Accessi	ion ID)	Acc Pre	cession fix		Accession Number		Access Suffix	sion	Taxon	Name
1829287	7		GM/	AL.		4835				Malus baccata	JPN-200
1829288	3		GM/	AL		4836				Malus baccata	JPN-200
-3			Lo	okup P	icker	v1.9.6.41		_ □	×		
		Filter -> +Crata +Labu +Pyroc +Pyroc Abarer Abarer Abarer Abarer Abarer Abarer Abarer	egom mocy cydon cydon na ad na ba na ba na ba na ba na ba na ba na ba	espilus d tisus ada ia danielii ia spp. enophora riculata rbouriana rbouriana achystacl mpestris chleata	ardani mii a a var. ar a var. ar a var. ba		how C alid Fo	Only Choi or This: accepted	ces		

to be the accepted names.

Updating (Editing) Data

GRIN-Global uses ownership and permissions to regulate who can add, update, or delete records. If you have the proper <u>security</u> rights to edit data, you can edit the data. To do so, click the **Edit** button.

11, USDA, ARS 😿 🕇						
11, USDA, ARS V	Accession (D	Accession Prefa	Accession Number	Accession Suffix	Taxonony	Name
Territe	304144	FI	\$4526115		Anothin hypergam.	9724642
	384172	PI .	512143		Anchia hypogae	972.4701
	304174	PI	502046		Arachia hypogae	SP2 471-1
	384182	PI	\$10053		Anothin hypogen	SP2 476-1
	304154	P1	902065		Anchia hypogae	SF2 480-1
	384217	P1	541221888		Anchia hypogee	572.487.1
	384225	P1	5020196		Anachia hypogae	SP2 491-1
	422953	P1	540833		Anothis hypergae	Janide Sutichi (7
	422961	PI	540835		Andhia hypogae	Tabe (fleninghu
	ata Editing -			_	_	
	Edit Data		Save Data		Cancel	

While in Edit mode, you can make changes to the data. In Edit mode the **Edit Data** button is inactive (grayed out). If at some point you need to disregard the changes and revert to the original Browse (display only) mode, click **Cancel**; otherwise, to save the changed data, click the **Save Data** button.

- Data Editing		
Edit Data	Save Data	Cancel

	Access	sions Inventory Or	rders 📂				
		Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxonomy	Ac Na
		384144	PI	502015		Arachis hypogae	SF
		384172	PI	502043		Arachis hypogae	SF
	•	384 ⁻ 74	PI	502045		Arachis hypogae	SF
ч		384 82	PI	502053		Arachis hypogae	SF
		001101	-	500005			00

When in Edit mode, all records in the Data Grid can be edited. A ">"indicates the current record:

Highlight Changed Data Option

In Edit mode, click to select the **Highlight Changed Data** option. Another handy option is the **Hide Unchanged Rows** option.

Accessi	ions	Inventory	Orders	Cooperators	Inventory Mai	ntenance Policy	Get Inventory V	iability	Source Descriptor	Sou
	Core	?	ls Bac Up?	ked	Backup Location 1	Backup Location 2	Status		Life Form	
•							Active		Perennial	
				~	COR		Active		Perennial	
							Inactive		Perennial	
<				_						
4 4	1	of	3 🕨	N + X						
Data Edi	<mark>diting</mark> t Data		Save Dat	. (Cancel	Edit Mode	or Rows			
						Hide Unchan	iged Rows	Highligh	t Changed Data	



If you are in Edit mode and select the **Hide Unchanged Rows** option, and haven't made changes to any records, all of the existing records will be hidden. This behavior is logical when you think about it, but it could be a bit alarming if you don't see any records when you expected many!

Warning Indicators

The following screen example illustrates a warning indicator. When these indicators are present, move the mouse over the Θ and a message tooltip will display.

WILD		N	
Wild mater 🛛 🗬	∡alue exceeds maxim	v um length - truncated	Meei to 10 characters
Wild mater 🛛 🤨		Y	NSSL
Wild mater 💦 🔒		Y	NSSI

Deleting Records

In Edit mode, you can select one or multiple records to delete.



If a record has any dependent children records, you cannot delete the parent without first deleting the child records. For example, if an Accession record has related Accession Inventory Name records, the Name records must be deleted first.

Another important consideration is whether you have authority to delete a record. Only record owners and those users with permission granted to delete a record can do so. (See <u>permissions</u>.)

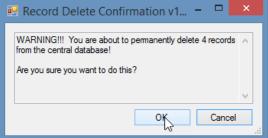
Delete One record <u>at a</u> time

The red-x deletes \bowtie only one record at time. You do not receive a warning that the record is to be deleted. In this example, the 5th record only will be deleted.

	Accession ID	Accession Prefix	Accession Number	Accession Name	Accession Suffix	Taxonomy	Life Form		Origin
	508357	VICUÑA_ID	95045	Vicuna Special		Phaseolus vulgaris	[Nul]	~	
	508358	VICUÑA_ID	95032			Phaseolus vulgaris	[Nul]	~	
	508359	VICUÑA_ID	95033			Phaseolus vulgaris	[Nul]	~	
	508360	VICUÑA_ID	95034			Phaseolus vulgaris	[Nul]	~	
1	508361	VICUÑA_ID	95035			Phaseolus vulgaris	[Null]	~	
	508362	VICUÑA_ID	95036			Phaseolus vulgaris	[Nul]	~	
	508363	VICUÑA_ID	95037			Phaseolus vulgaris	[Nul]	~	
	508364	VICUÑA_ID	95038			Phaseolus vulgaris	[Nul]	~	
	508365	VICUÑA_ID	95039			Phaseolus vulgaris	[Nul]	~	
	508366	VICUÑA_ID	95040			Phaseolus vulgaris	[Null]	~	
	508367	VICUÑA_ID	95041			Phaseolus vulgaris	[Nul]	~	
ata	i 5 of Editing	11 🕨 🕅	Delete	1				6	Refresh Da

Delete one or more records

Select the records in the data grid; press the Delete key. You will be prompted:





Deleting items in the left List Panel is not the same thing as deleting the database records (in the right datagrid panel); the list simply provides pointers to records in the database. If you delete a list or items on a list, you are only removing the pointers to the database records.

Security (Ownership & Permissions)

Organizations typically have very unique security needs; GRIN-Global is flexible enough to accommodate these needs. When speaking of security, there are two concepts that intersect: ownership, and permissions.

Owner Concept

Every record in GG has an owner – and only one owner. *Generally*, when you create a record in the Curator Tool, you own the record and will be able to read, update, and delete the record which you have created. But that is not always the case. In some cases, the record ownership may be determined by programming logic (or a "trigger") – and then the creator of the record may not necessarily be the owner.

In the following example, the **Created By**, the **Modified By**, and the **Owned By** fields all have the same user:

	Access	ions Get Acces	s Get Accession Source		Accession	n Inventory Name	Orders Order Request Item		Get Citation		Cooperators	Inventory	۰ ۱
Γ	eated Date		Created By		Modified Date	Modified Date Modified By			Owned By			Ow	
Þ	•	/5/2015 2:52	Reisinger, M	lartin, USDA	, ARS					Reisinge	er, Martin, USD	A, ARS	10/
		7/2015 2:20	Reisinger, M	artin, USDA	, ARS	10/13/2015 2:43.	Reisin	iger, Martin, USDA, Al	RS	Reisinge	er, Martin, USD	A, ARS	10/

To Transfer Ownership to a Different User

In the Curator Tool, record owners can transfer ownership rights of the records, and optionally the records' children records, to another user.

In a dataview, select the rows (records) that you intend to transfer ownership; right-click and select **Change Owner...**

Acce:	ssions	Inventory 0	rders Cooperator	CodeValue	CodeValueLanguge	Crop	CropTrait	CropTra	itLang CropTrai
	Acc	ession ID	Accession Prefix	Accession Number	Accession Suffix		Taxon		Accession Name
	3842	290	PI	502161				stica	FO-59-4
	3842	291	PI	502162			Malus dome	stica	FO-80-10
	3884	189	PI	506360			Malus dome	stica	Hordapfel
	3884	190	PI	506361			Malus dome	stica	Thorgauer Weir
	4191	129	PI	537000			Malus dome	stica	Drakenstein
	5086	691	mar 090810-1		rei		Malus dome	stica	
	5086	693	mar 090810-3		rei	4	now only row:	r with th	ic data
•	5086	695	mar 090810-2		rei		ide rows with		
						-			
						R	eset row filter	r	
						S	ecurity Wizard	±	
						C	hange Owner		Ν
						Reports			N5

In the **Change Ownership** box, select the appropriate button and click **OK**:



In this example, the ownership of the highlighted records and any children records are impacted by this change in ownership.

Parent and Owner Relationships Between Dataviews

In the Admin Tool, relationships are mapped between dataviews. For instance, there is a relationship from accession to accession_inventory_name with the Relationship Type defined as "Parent and owner."



When relationships are mapped between dataviews, the children tables inherit the security settings of the parent. This means if someone creates a record in accession_inventory_name, the owner is the same as the owner of the parent record, in this case the accession record. When no relationship of "Parent and owner" has been defined, then the creator is the owner. When doing ownership calculation, relationships *are* taken into consideration.

Permissions

You can use the security wizard to establish permission levels to protect specific record types from accidental (or intentional) deletion. For example, you can establish security permissions so that employees will be able to update specific accession_quarantine records but not delete them.

A permission restricts or grants access to a resource in GRIN-Global; for a Curator Tool user, a resource is typically a row (a record) displayed within a dataview.

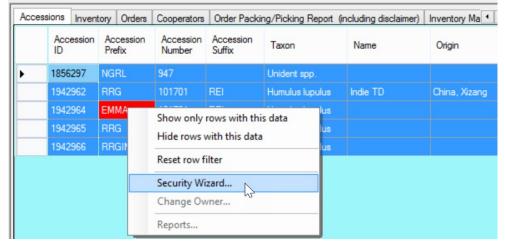
Even if you create a record, it is possible that you might not have permission to update or delete it. You could have the situation where a student technician will be uploading (creating) observation information or creating action records on an accession or inventory, but the student should not be altering the accession or inventory data. Hence he can create new observation or action data, but not update or delete accessions or inventory records. A permission policy can be established to ensure that this happens.



Currently the inheritance only cascades one level. This implies that it may be necessary for you to establish certain permissions at the accession level, and then again at the inventory level.

Assigning Permissions to Other Users

Typically you will first open a dataview, such as Accessions, and then right-click, selecting the **Security Wizard** option:



The Security wizard displays a screen in which you can grant permissions to specific users. initially the permissions are shown as "Inherit."

🎒 Security Wizard v1.	8.3.0				
Policies	Permissions Read Inherit	Update Inherit	Create Inherit	Delete Inherit	

When working in the **Security Wizard**, it is helpful to work from left to right. Create a name for this Policy; click the **Add Policy** button (right-click to edit the name). Edit the Permissions in the dropdowns.

<u>^</u>	1942962 RRG	101701 F	REI Hu	imulus lupulus	Indie TD	China. Xi	zano N
4		Security \	Wizard v1.9.	6.43		_ 0	X
Policies DBMII-Main-Pol	Permissions Read Inherit	Update V Allow		Create		Delete Deny	~
	Scope Tables accession_ac - accession_pr - accession_pp - accession_qu - accession_so	tion digree arantine	Restrictions M My Rows Selected Rows:		Users Endress, Kurt, Gu, Laura, US Sinnott, Quinn Kittell, Karen,		
Add Policy	Include Child	Tables			E	Edit User List	
	•				6 Sav	re Cano	el "i



In the **Row Restrictions** option (labeled #4), select **All My Rows** to guarantee that records created in the future will also be governed by this policy.

The permission definitions are defined in the tables below. To simplify all of this, remember that most special permission situations involve allowing or denying users to do certain things – reading, deleting, or updating records. Example: may want certain users to be able to update "my" inventory records, but never delete them.

Permission Defined

A permission restricts or grants access to a resource in GRIN-Global. A resource is defined as a specific table, dataview, or row. A permission defines four kinds of rights:

A permission of type:	Has the ability to:
Read	Read existing data
Update	Update existing data
Delete	Delete existing data
Create*	Insert new data

* ignore this option – it really doesn't apply; typically you will set the Update and Delete options since usually withinb an organization everyone internally should be able to read the records

Each right can have one of three values:

Value	Description
Allow	Allows access
Deny	Denies access
Inherit	Neither allows nor denies access; access is situational; it is inherited from a previous definition (typically the permission value of the parent table)

Image Handling (Attachments)

Images can be associated with ("attached to") accession and inventory records.



The accession_inv_attach dataview was first implemented in GG version 1.5. In the Curator Tool Release 1.9.8.14 (initially released in the USDA in Dec, 2017), an Inventory Attachment Wizard was introduced. Refer to the online documentation at https://www.grin-global.org/docs/gg inventory attachment wizard.docx

Reports

Report Overview

GRIN-Global has several types of reports. Since this is the Curator Tool User Guide, we are primarily describing reports designed to run in the Curator Tool. However, genebank CT users should be aware that two other kinds of GG "reports" may be available:

- Public Website Reports
- SQL Query Reports

A separate document focused on reports is online at https://www.grin-global.org/docs/gg_reports.docx

Wizards

General Notes about Curator Tool Wizards

Wizards

When installed, the Curator Tool is bundled with several wizards:

🂐 GRI	N-Global	v1.21.3.29				
File	Tools	Help				
		K Accession Wizard	K Cooperator Wizard	K Inventory Attachment Wizard	炎 Order Wizard	Viability Wizard

Wizards have some common characteristics:

- wizards can be used to create a new record or to find and edit existing records; use wizards
 rather than the straight dataviews whenever possible since wizards generally have been
 programmed with more features and functionality than the dataviews. For example, the wizards
 will have embedded triggers to validate data or make specific calculations. One example is the
 Order Wizard's ability to deduct from existing inventory any amounts shipped within the order.
- as you work in the wizard's forms, periodically save your work (click on the Save icon)

4 4 2 of 8	N 4 X	PI 502569 Prunus cerasifera	Save Save and Ex
Accession Names Source	e Pedigree IPR Quara	ntine Annotation Citation Voucher Action	Save

• use the window's close button to cancel when necessary. *However, any data not yet saved will be dropped, not just for the current tab screen, but for any of the tabs.* (This is why the previous point is so important.)

🔻 Accession Wi	zard	
∥ ◀ ◀ 1	of 1 📔 🕨 🕌 🐥 🔰 👘 PI 541972 🛛 Pyrus communis 🗍 South Africa, 📔 🤗 Save	💾 Save and Exit 💂
Accession Names	Source Pedigree Narrative IPR Quarantine Annotation Citation Voucher	

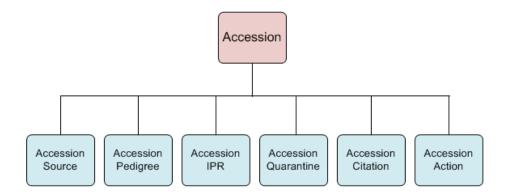
• when reviewing the wizard's screens, notice that the screen's header displays certain important fields that indicate what record you are working with

🐔 Accession Wizard		
📢 🖣 📔 of 1 🕨 🕅 🕂 🗙	PI 502165 Pyrus communis	🛛 🤗 Save 🛛 🎴 Save and Exit
Accession Names Source Pedigree Narrative	IPR Quarantine Annotation	Citation Voucher

Accession Wizard Overview

The Accession Wizard facilitates the inputting of new accession data across the parent accession and its related child records.

Remember that accession data is stored in multiple related tables (not all are shown here):



The wizard can also be used to modify the children records as well as the data stored in the parent accession table.

For information about fields used in the accession dataviews, refer to the online data dictionary.

In GRIN-Global, accession data, including the multicrop passport descriptors (MCPD) data, is distributed across multiple tables that are linked to each other. (Inventory tables contain information about the physical germplasm such as quantities available for distribution, whereas the accession tables contain, among other items, the passport information.)

In the Curator Tool, many related dataviews have been designed for inputting and editing accession data in these tables. In fact, there are at least 10 accession-related dataviews. However, many of the tables' fields are optional and may never be used by some organizations. (GRIN-Global was designed to be flexible and accommodate different organizations and genebanks with unique requirements.)

Please refer to two separate documents that pertain to accession and passport data: <u>https://www.grin-global.org/docs/gg_accessions_and_passport_data.docx</u> <u>https://www.grin-global.org/docs/gg_multi_crop_passport_descriptors_MCPD.docx</u>

General Accession wizard concepts

When you invoke the Accession Wizard, the **Accession** dataview displays:

💐 GRIN-Global v1.0.7.0						
File Help						
🕴 🔍 Search 🤻 Accession Wizard 🔄 Coope	erator Wizard 🛛 🂣 Order	Wizard				
Show lists from:	Accessions Get Acc	ession Name Invento	ry Orders Coop	perators Get Taxonomy 9	Species 🚒]
Reisinger, Martin, USDA, ARS	Accession ID	Accession 🔺	Accession 🔺	Taxon	Accession Suffix	Aci Na
Vicuna Helianthus DemoListof3	1021717	Ames	2745	Helianthus tuberosus		TU
i with the suberosus Ames 22227	1023831	Ames	3244	Helianthus tuberosus		Am
	1023839	Ames	3245	Helianthus tuberosus		Am
🗉 👻 🎋 Ames 3244 🛛 📻 📻						
📄 🍟 Ames 3245 🛛 🌾 Acces	sion Wizard v1.0.7	.0				
Ames 6303	1 of 1 🕨 🖡	<mark>⊕ </mark> ×	Ames 2745 He	elianthus tuberosus		- Sav
Ames 6504		r 10 100 0				
Ames 6706	Names Source P	digrež IPB Quara	antine Annotatio	n Citation Voucher A	ction	
🗄 🁙 Ames 6915					_	
🖬 🌵 Ames 7139 🔹 🗛 Acc	ession Prefix	Accession Number	Acces	sion Suffix	Status	
🕀 🌪 Ames 7140 🛛 🖉 Ame	es	2745			[Null]	*
🗈 🏆 Ames 7141 🛛 🛛 🗛	on					
Ames 7151	anthus tuberosus					
Ames 7161	Beceived Date Init	ial Received Date Form	nat			

The accession wizard consists of 10 dataviews tabs; the tabs shown below illustrate this:

Image: Constraint of the series o	Accession Wizard v2	.0.3994.23426			
Prefix Number Suffix Status PI 548933 [Null] Taxonomy Rubus urticifolius Received Date Date Precision 12/10/1990 Complete date Initial Material Type Life Form	(▶ ▶ 🕂 🕂 PI 9	548933 Rubus urticifolius (Soldenbloom	🔜 💾 Save 🛛 💾 Save and Exit
PI 548933 [Null] Taxonomy Rubus urticifolius Received Date Date Precision 12/10/1990 Complete date Initial Material Type Life Form Improvement Status Reproductive Uniformity	ccession Names Source	Pedigree IPR Quara	antine Annotation Citation V	oucher Action	
Received Date Date Precision 12/10/1990 Complete date Initial Material Type Life Form Improvement Status Reproductive Uniformity	Pl Taxonomy		Suffix		~
	Received Date				
					-

While using the wizard, the user can click on any of the tabs to display that tab's corresponding dataview. In this example, the **Names** tab has been selected.

🐔 A.	cession Wizard	v2.0.3994.23426					
M	(0 of {0	} ▶ ▶ ⊕ ╳	PI 548933 Ru	ubus urticifolius 📗 Go	oldenbloom	💾 Save	💾 Save and Exit
Acce	ssion Names Sou	urce Pedigree IPR	Quarantine Anno	tation Citation Vo	ucher Action		
	New Name						
	Name	Category	Name Rank	Name Group	Cooperator	Note	
▶	Goldenbloom	Cultivar name	1		Babadoost, Mary,		

Saving the Data

In any window in which you enter data, in order to save the record, you must input data in the *required* fields' data. You do not need to complete each window, since they are dataviews to different tables.



When completing (or partially completing) a dataview, before proceeding to the next tab, click the **Save** button as you continue inputting in the wizard.

Use the **Save and Exit** button when you are finished using the wizard. (Since you can use the wizard to edit existing data, you can always return later and edit the data.)

The **Save and Exit** button will close the accession wizard and return to the Curator Tool, but first it will indicate that you were successful and also prompt you to add an item to the current list folder (if it is a new item). If you select **Cancel**, the record will be created, but no item will be generated in the current list folder.



Deleting Accession Records

In a relational database where there are parent and children tables, the general principle is that a parent record cannot be deleted if it has any children records. In order to delete an Accession record, (which should be a rare occurrence), you must ensure that all of its children records are first deleted.

The Accession Wizard is useful for helping you to do this. First, select the Accession record in the Curator Tool Accession dataview that you intend to delete; click the Accession Wizard button:

. 🚿 Accession Wizard 🧕	Cooperato	or Wizard 🎸 🤇	Order Wizard				
	Acc.N	ame Inv. Attac	ch Inv.Name Ir	nv.Group Inv. Gr	oup Map Oro	ders Order Req.Item Tax.S	ipecies Ca
artin, USDA, ARG 🛛 🖌		Accession ID	Accession Prefix	Accession 🚽	Accession Suffix	Taxon	Maintenar Site
una Root Folder		1902908	PHV	95008	lol	Phaseolus vulgaris	DBMU
) NR6 Solanum 1452 una Root Folder rei New List	L L	3					

In the Accession Wizard, review for children rows. If the Accession has a child record, you can delete that record by selecting it and then clicking the keyboard's **Delete** key. In the example here, the Accession has a Name record; the user selected the row by clicking on the left margin; then the user presses the **Delete** key. Before exiting this tab, the user needs to click the window's **Save** button:

4 4	1	of 1 >	利中	X	PHV 9	5008 Iol Ph	aseolus vu	ılgaris V	licuna-x	🗎 Save	Save and
Access	ior Names	Source	Pedigree	IPR	Quarantine	Annotation	Citation	Voucher	Action		
_	w Name										
_	- <u>L</u>		Category		Name Rank	Nam	e Group	Coop	erator	Note	

Subordinate Accession Dataviews

The subordinate (or "child") dataviews have their respective tabs. On each of these windows, there is a **New dataview** button. When clicked, the Curator Tool displays a new row on the dataview grid for inputting data. Shown here is the **New Name** button on the wizard's **Names** form.

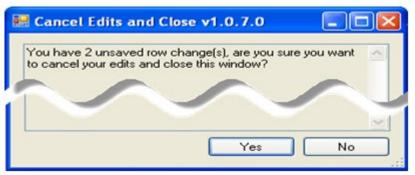
14 4	1	of 1 🕨	M + X	PI 543	956 Prunus dom	estica subsp.	domestica 📗 👔	A Save 🛛 🎮 Save and Exit
Access	ion Names w Name	Source	Pedigree IPR	Quarantine	Annotation Citat	ion Voucher	Action	
	Name	}	Category	Name Ra	nk Name	Group	Cooperator	Note
							Reisingerski, Ad	



In moving through the various subordinate Accession wizard windows, you may have clicked a **New** button without intending to do so. When you click on **Save and Exit**, you will be prompted with an error message, in which you should click **No**:

	Accession Wizard Data Save Results 🔳 🗖 🔀
1	The data being saved has errors that should be reviewed. Would you like to review them now? Click Yes to review the errors now. (Click No to abandon the errors and exit the Accession Wizard).
	Error Count: 2

On the next window, click Yes:



There are several fields in the Accession wizard dataviews which are unique and will be explained in detail here.



Remember to save each view as you move from one window to another.

Cooperator Wizard

Use the Curator Tool's Cooperator Wizard whenever you wish to add a new cooperator to the GRIN-Global database or edit an existing cooperator record. One advantage of using the wizard, rather than using the cooperator dataview, is that you can search the database before inputting a new cooperator.

Background Information

Note that there are two kinds of cooperator records:

- web cooperators
- "ordinary" GRIN-Global(GG) cooperators

We will always distinguish between the two types of cooperator records by including "web" when referring to "web cooperator records" and by stating only "cooperator records" when speaking of GRIN-Global cooperator records.

Web Cooperators

A user on the GRIN-Global public website has an opportunity to self-register – during this registration process the user's contact information is stored in a *web* cooperator record. This web cooperator record is not the same thing as the GG cooperator record.

GRIN-Global Cooperator Records

In addition to the web cooperator records, GRIN-Global maintains cooperator records that are records containing data on individuals and organizations involved with germplasm activities (donors, collectors, breeders, requestors, etc.) Besides storing active address and organization data, cooperator records can be used to store historic data containing the previous addresses of a person or institution.

Also, all users of the GRIN-Global Curator Tool have a cooperator record. When the administrator adds them as Curator Tool users, a GRIN-Global cooperator record is also generated.



Whenever working with or searching cooperators or web cooperators, it is recommended that you update the cooperator lookup tables. Specifically, the three lookup tables are:

- Cooperator
- Cooperator (Big)
- Web Cooperator

Why three cooperator lookup tables? (Cooperator), Cooperator ("Big"), and "Web."? The Cooperator lookup has a display field formed by cooperator last name, first name, and organization. It is a simple string used as a lookup on the GG records' audit fields such as owned_by. It doesn't need to be too defined because it is used for displaying which curator owns a record.

The "Big" lookup includes many more fields in the display string so that curators can distinguish public cooperators with similar names. That lookup is used when the cooperator is used in a field such as original requestor or donator. You need more detail there, hence the two lookups are used for different needs.

The "Web" Cooperator lookup organizes the Public Website users. When a PW user makes an order, his Web ID is associated with the web order.

Using the Curator Tool Cooperator Wizard

The Cooperator Wizard id detailed in the online document: https://www.grin-global.org/docs/gg_order_and_cooperator_wizard_v1.9.9.4.docx



Refer to this document for more details on Cooperators in general or if using a CT version earlier than 1.9.9.4: <u>https://www.grin-global.org/docs/gg_cooperators.docx</u>

Use the Cooperator Wizard to add new cooperators or edit existing ones. If you intend to edit an existing cooperator record, use the Cooperator Wizard to quickly locate the desired cooperator record.

Appendix A: Document Revision Notes

– April 20, 2021

- removed redundant material detailed in other focused documents
- added / updated links to the documents

- September 21, 2020

- removed the Lookups table section and saved this information under a stand-alone document; included link to the new document
- edited first 40 pages to reflect current version

- July 12, 2018

• edited the login window section

– May 9, 2018

- minor editing pertaining to searches
- minor wording changes throughout

– March 13, 2018

- added notes pertaining to IIS
- added diagram with indicating important GG tables
- extensive edit changes throughout to improve clarity

– December 27, 2017

- added many notes to the Search section to include search features now possible in the release CT 1.9.8.14
- extensive edit changes throughout to improve clarity

- December 1, 2017

- added a note pertaining to the inventory attachment wizard that was released with CT 1.9.8.14
- corrected links to external documents whose URLs changed due to the USDA's HTTP over SSL requirements

– October 25, 2017

 added text and examples related to search engine changes implemented in released in server release 1.9.9.2

– March 24, 2017

• for clarity regarding the updating of lookup tables, rearranged the subsections under the Lookup Table section

- October 31, 2016

- edited the security section;
- replaced several images there

– July 25, 2016

- images in document that were missing were added back in
- release notes removed; now appendix contains the link to the online release notes

- May 11, 2016

• tip regarding Refresh List enhanced

– March 14, 2016

• tip regarding Refresh List added to lookup section

- March 11, 2016

• extensive rewrite of the Lookup Table section based on recent findings

- January 14, 2016

• edited text and included a new screen related to the Include Sub-folders option in the List Panel

– January 13, 2016

• corrected link to online Frequently Asked Questions (FAQ) document

– December 29, 2015

• added summary note regarding drag and drop

– November 30, 2015

• moved Appendix of GG documentation resources to the front of this document

– November 5, 2015

• edited text regarding ownership & permissions

- October 5, 2015

• edited text for dates when searching with the % wild card

– June 10, 2015

• added an example for a text search

– April 30, 2015

• minor edit added to the Reports section regarding the link to the online list of current reports

– April 8, 2015

• edited the Reports section

– March 9, 2015

• extensive editing of the Search section – especially the table of valid search parameters

– January 14, 2015

• edited Lookup table information

– January 6, 2015

• edited the Reports Mapping section

– November 18, 2014

• added the version notes for 1.9.6.38, ...39. 41

- October 21, 2014

• added more details for IS NULL / NOT NULL and IN / NOT IN in the Search section

- June 23, 2014

- rearranging the content of the entire User Guide to emphasize "How To..." with the background and release information moved to the Appendices
- edited references to the CT installation to reflect that the CT is now installed via InstallShield (and not the GG Updater)

– June 17, 2014

• extensive editing of the Reports section

– May 6, 2014

• added developer notes for versions 1.9.6.x

– April 8, 2014

• added an example for manually modifying the search text in order to use a wildcard with a numeric field (such as Accession Number)

– April 4, 2014

- inclusion of Appendix with links to GG supporting documents Wizard
- general updating of several revised windows and inclusion of 1.9.4 and 1.9.5 notes

– November 11, 2013

• included new text regarding the revised Order Wizard

- August 14, 2013

- multiple edits including adding information on dynamic folders, source dataviews, and other features added since version 1.5
- substantial edit of the introductory explanation of GRIN-Global components
- minor edits to the lookup and permissions sections

– April 2, 2013

• initial document for the Curator Tool 1.8.3 release.

Appendix: Database and GRIN-Global Basic Concepts

GRIN-Global Overview

GRIN-Global is a Relational Database

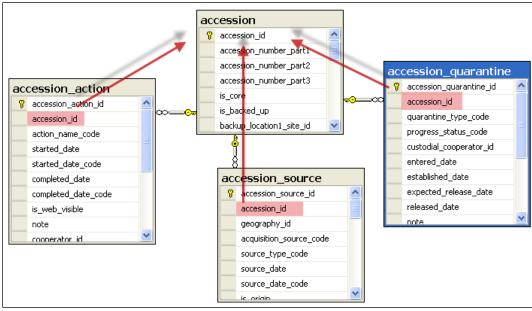
The GRIN-Global data is stored in many tables; this type of database is referred to as a <u>relational</u> database. Each table relates to other tables by key fields. A single spreadsheet, on the other hand, may be considered a database, but because the spreadsheet stands alone, it is not relational and is sometimes referred to as a <u>flat file</u> database. Generally, relational databases:

- are easy to use
- reduce redundant data
- consist of many tables that are used together to quickly find desired information
- are easier to expand when data needs change

In GRIN-Global the accession data is stored across more than 103 related tables. The illustration below lists the tables by their actual table names. (This is not a Curator Tool screen shot, but was taken from the database tool in which the developers designed the tables. As a Curator Tool user, you will not typically see the names shown here.)

□ Tables
 I Tables
 <liI Tables
 I Tables<

Each record in the accession table has a unique accession_id. (The accession_id field is the table's primary key.)The subordinate tables that relate to the main accession table do this by pointing to the main accession table's **accession_id**.



(Not all of the accession tables are shown in this illustration.)

Fortunately, as a GRIN-Global Curator Tool user, these relationships are managed for you in "dataviews" – dataviews mask these raw data descriptions and relationships.

Relational Database Example: Accessions and Inventory

The following example illustrates how combined Accession and Inventory data would look in a nonrelational database, such as a spreadsheet:

Accession Prefix	Accession Number	Accession Suffix	Taxon	Life Form	Additional Acc. Fields	Inventory ID	Inventory Prefix		Inventory Suffix	Inventor y Type	Inventory Maintenance Name
PI	537023	mar	Phaseolus vulgaris	SD		49051	WRF1	3175	01	SD	BEAN_HYBRID_SEED
PI	537023	mar	Phaseolus vulgaris	SD		49042	PI	537023	1995	HE	BEAN_HERBARIUM
PI	537023	mar	Phaseolus vulgaris	SD		49033	NSSL	3175	1996	SD	BEAN_HYBRID_SEED
PI	537023	mar	Phaseolus vulgaris	SD		49024	WRF1	335162	01	SD	BEAN_HYBRID_SEED
PI	537023	mar	Phaseolus vulgaris	SD		49015	NSSL	3175	1995	SD	BEAN_HYBRID_SEED

The data highlighted in yellow is redundant Accession data; for every inventory record, the Accession data is duplicated. By splitting out the data into relational tables as shown below, the data is not duplicated. Besides saving storage space, there are other advantages including less chance of data entry errors and preventing accidental deletion of records having related data.

Accession Prefix	Accession Number	Accession Suffix	Taxon	Life Form	Additional Acc. Fields							
PI	537023	mar	Phaseolus	SD								
and a second second	and the second se		and the second	******			Inventory	Inventory	Inventory	Inventory	Inventory	Inventory Maintenance
				and the second se	and the second se	Accession	ID	Prefix		Suffix	Туре	Name
			-		and the second sec	PI 537023 mar	49051	WRF1	3175	01	SD	BEAN_HYBRID_SEED
			and the second s			PI 537023 mar	49042	PI	537023	1995	HE	BEAN_HERBARIUM
				No. of Concession, Name		PI 537023 mar	49033	NSSL	3175	1996	SD	BEAN_HYBRID_SEED
						PI 537023 mar	49024	WRF1	335162	01	SD	BEAN_HYBRID_SEED
						PI 537023 mar	49015	NSSL	3175	1995	SD	BEAN HYBRID SEED

(In GRIN-Global, the Inventory records relate to the Accession records by the combined Prefix, Number, and Suffix fields. Every accession record must have a unique combination of those three fields.)

The following graphic illustrates how an accession record relates to inventory records. These are Curator Tool accession and inventory dataview images. In this example, the five inventory records are considered to be children of the accession record because the inventory records are linked to a prerequisite accession record.

Acces	sions Inventory	Orders 尨	₱							
	Accession ID Accession Prefix		Accession Number	Accession Suffix	Accession Name	Site				
	419152	PI	537023		TRHRG 165	i NRI				
	_	Acces	sion: Inventory 0	Irders						
			Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Invent Type	Inventory Maintenance Name	Accession ID	S
		•	49051	WRF1	3175	1990	SD	POTATO_HYB_SEED	PI 537023	N
			49052	PI	537023	01	HE	POTATO_HERBARIUM	PI 537023	N
			970314	WRF1	3175	1995	SD	POIATO_HYB_SEED	PI 537023	N
			1008678	NSSL	335162	01	SD	COLD	PI 537023	N
			1023824	WRF1	3175	1996	SD	POTATO_HYB_SEED	PI 537023	N

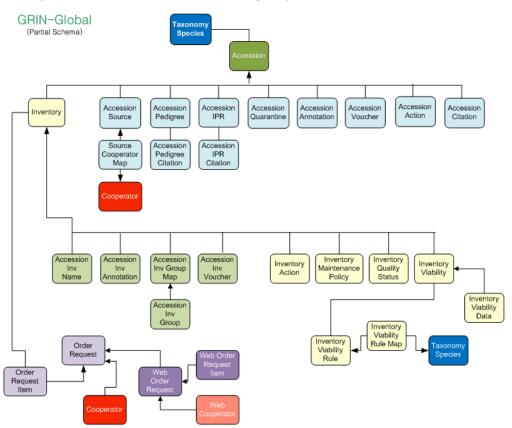
For more background information on relational databases, see http://en.wikipedia.org/wiki/Relational_database.

Schema

When GRIN-Global is installed, most organizations typically choose to use the schema as defined by the GRIN-Global developers. The term "schema" is basically the definition of the tables, the fields, the relationships, the dataviews, the indexes, and other components that comprise the complete database system. An organization can modify the schema if desired; for example, sometimes an organization may add an additional table because of its unique needs. The organization can also modify the headings displayed in dataviews to meet their specific usage, including their primary language.

GRIN-Global Tables

All data for GRIN-Global is stored in its many tables. The following diagram is only showing some of the more important tables used to store the GG germplasm curatorial data.



Dataviews

GRIN-Global consists of many dataviews which are used to display data – some were designed to work specifically within the Curator Tool (and others for the Public Website). The dataviews are used to display data in the database – they have been coded so that you as the end user do not need to write SQL code to access the data in the database.

Within the Curator Tool, dataviews are grouped into Areas; each area may hold multiple dataviews. To the end user, having the dataviews organized by Area makes it easier to locate a dataview – the areas simply subdivide the full set of dataviews into smaller subsets.

The dataview areas are shown in this screen capture:



In the process of selecting a dataview to display in the CT, after you select an area, only the dataviews categorized in that area will be listed. Two examples:

Dataview		Dataview Tab Name: Dataview		
Category: Client	Area:	Category: Client	Area:	
Dataview:		Dataview:		~
Get Accession Inver Get Accession Inver Get Accession Inver Get Accession Inver Get Accession Inver Get Accession Inver	ntory Attach ntory Group ntory Group Map ntory Name	Get Cooperator Get Cooperator Grou Get Cooperator Map (Get Site		
Form:		Form:		

The GG Administrator can produce a list of all the dataviews currently in your GG installation by previewing the get_dataview_list dataview. Use this link to display a <u>generic list representative</u> <u>of many dataviews</u> used within the Curator Tool.

A dataview essentially retrieves data from tables via a programmed query. Fortunately, these dataviews have been created for you. You can display many dataviews and switch back and forth by clicking on their tabs. Shown below are nine dataview tabs – the **Accessions** dataview is currently selected,

Note

Acces	ssions nventory	Orders Ord	lerRequestItems	PackingSlip	Cooperators Acc	essionName Taxon	omyFamily Taxonom	nyGenus T. 🔨	>
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Accession Name	Level Of Improvement	Is Core?	
	312	PI	502588		Rubus caesius	Отменить	Wild material	N	
	313	PI	502589		Rubus sp.		Wild material	N	
	2715	PI	548888		Rubus acanthop		Wild material	Y	
	2716	PI	548889		Rubus adenotric		Wild material	Y	≡ .

therefore the datagrid is displaying Accessions-related data:

When the programmer created the Accessions dataview, she selected specific fields to be displayed. Note that a dataview's fields are not restricted to one table in the database. For example, in the Accessions dataview, the **Taxon** data originates in the **dbo_taxonomy_species** table and the **Accession Name** data comes from the **dbo_accession_inv_name** table.

Technical Overview of a Dataview

The following explanation is intended for those readers interested in a brief explanation of the technology behind the dataviews: A dataview is a SQL SELECT statement embedded within the Curator Tool. The programmed logic uses some pre-defined criteria to select related records from the database's many tables. The dataview fields correspond to fields in one or more database tables. Language-specific "friendly" names are assigned to each dataview field, which in turn are displayed as the field column titles in the Curator Tool. Although the data displayed in the Curator Tool appears as a single table of rows and columns, it most likely originated from several related tables.)

Many dataviews are included when the Curator Tool is installed. For example, the three main dataviews, **Accessions**, **Inventory**, and **Orders**, are displayed by default. Other dataviews are not initially displayed, but are available and can be easily selected. Over time, your organization may develop additional dataviews for specific purposes. Eventually you will become familiar with certain dataviews and have a basic understanding of what data is displayed in each one. Some you may use frequently, and others perhaps rarely (if ever), depending on your position and interests.

Some Dataviews Show All Records and Some Do Not

The data displayed in a dataview may transcend multiple tables. As a Curator Tool user, you should be aware that some dataviews show all records in a table, whereas most of the dataviews do not because they filter the data based on certain programmed criteria. (The dataview programmer codes the dataview so that each time the dataview is invoked by the Curator Tool user, program parameters are applied, thus filtering the records. The programmer would say that the parameters were "resolved.")

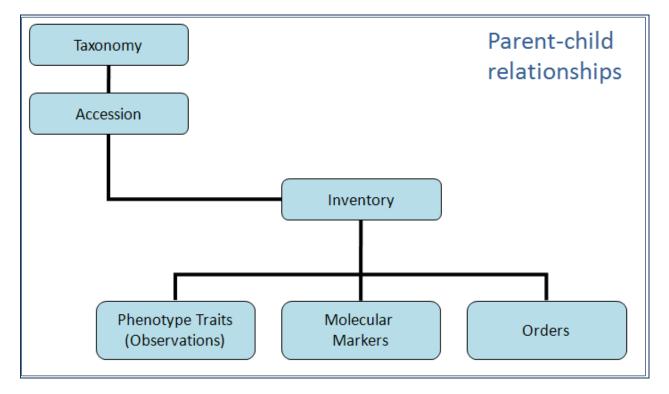
Although most dataviews are designed to work with parameters and display just a subset of the entire database, a few dataviews show *all* of the records for a given table and do not use any parameters.

This illustration is showing a snapshot of the Curator Tool, with its List Panel on the left and the dataviews on the right. The **get_site** dataview is a dataview that displays all of the site records in the GRIN-Global database and is independent of the lists in the List Panel.

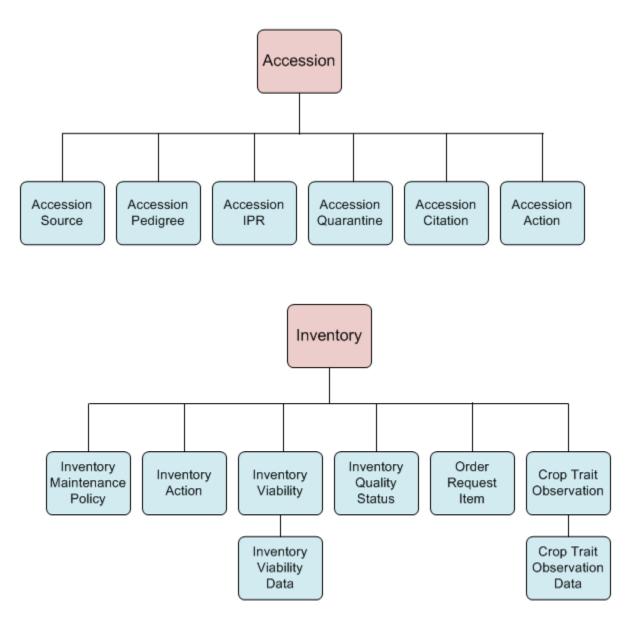
The GRIN-Global developers have created a data dictionary which describes what type of data is accessed by the many dataviews. (See: <u>GRIN-Global data dictionary</u>.) Complete step-by-step directions for working with dataviews begin on page 29.

GRIN-Global's Table Relationships

The following diagram illustrates the relationships between the primary GRIN-Global tables:

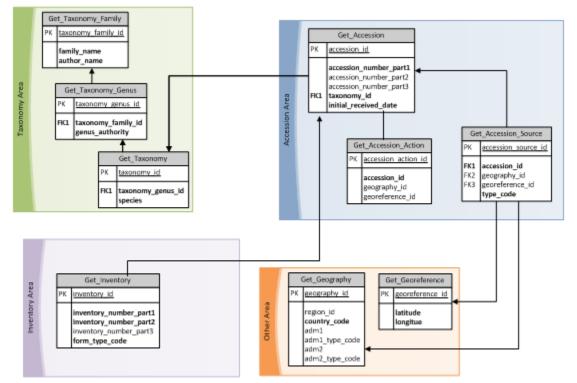


There are many other tables in GRIN-Global which are not represented in the previous illustration. Data such as geography, cooperators, crops and descriptors, codes, etc. are stored in ancillary tables. For example, there are many accession-related child tables. These tables support the main accession table. Customized dataviews, accessible from the Curator Tool, obtain their data from these tables.



Keys: Primary and Foreign

The partial schema GRIN-Global diagram below illustrates the relationship between some of the main GRIN-Global tables. (The primary key (PK) and foreign key (FKn) are used by the GRIN-Global program designers to indicate key fields. The relationships have also been established by the program designers.



Primary Keys

A primary key is system generated. In the Curator Tool, every dataview by default displays the primary key in the left column:

Site	Orders Order R	equest Item Acc	essions Invento	ory Inventory Acti	ion Inventory Quality Status Coope	erators Crop Cro	p Trait Obser 🔨
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name	Origin
►	1910275	Grif	1	mar	Capsicum annuum	Marty's demo	United States,
	1910276	Grif	2	mar	Capsicum annuum		
	1910277	Grif	3	mar	Capsicum annuum	Marzii2	
	1910278	Grif	4	mar	Capsicum annuum	Mar4	
	1910279	Grif	5	mar	Capsicum annuum		
	1910280	Grif	6	mar	Cansicum annuum		

Notice that the **Accession ID** field is gray – the gray color indicates that this is a read only field. When you add a new record to the GRIN-Global database, the system will generate the next available number.

Site	Orders Order Re	quest Item Acce	ssions Invento	ry Inventory Acti	on Inventory Quality Status Coope	rators Crop
	Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name
	1910275	Grif	1	mar	Capsicum annuum	Marty's dem
	2276	-	2		Capsicum ann	
1	1945134	PI	70	marty	hoarinuus	
	1945135	PI	700002	marty	Helianthus annuus	
	1945136	PI	700003	marty	Helianthus annuus	
	1945137	PI	700004	marty	Helianthus annuus	
•	-16	N				
		3				

In the process of creating a new record, you will notice a temporary primary key (the Accession ID):

After the data is saved, the temporary number changes to a permanent number.

Secondary (or "Alternate") Keys and Foreign Keys

Most users will not remember data by the record's primary key, since the primary key is system generated and is not actual curatorial data. Instead, most genebank users will know their data by the records' secondary keys. For example, in the U.S. NPGS, every permanent accession in the system has an identifier that is commonly referred to by the users as the accession's "PI Number." In GRIN-Global, the permanent PI number is stored in two fields: **Accession Prefix** and **Accession Number**. (PI is an acronym for "Plant Introduction" – the USDA starting assigning PI numbers to the accessions in their collection many years before the advent of computers.)

Many sites will first add their accession data into the GRIN-Global database, but use a temporary number – in many cases these sites will use three fields: **Accession Prefix, Accession Number,** and **Accession Suffix.** These three fields collectively comprise the accession secondary key. The combination of these three fields must be unique – no two accession records can have that same combination. (In cases where an accession record only uses two of the three fields, that combination must be unique.)

A **foreign key** is one field (or a collection of fields) in one table that uniquely identifies a row of another table. In other words, a foreign key is a column or a combination of columns that is used to establish and enforce a link between the data in the parent and child tables. When creating a new child record, the child's foreign key must match the parent's secondary key.

Refer to the GRIN-Global <u>Data Dictionary</u> which contains detailed information on the GRIN-Global dataviews, tables, and fields.

Getting Started with the Curator Tool

Because GRIN-Global will be adapted by diverse organizations, diverse approaches may be taken for getting started. As mentioned previously, some organizations may run GRIN-Global on a single PC, whereas the more typical configuration will be in a networked environment with one server and multiple user PCs.

The organization will need to determine how existing data will be populated into GRIN-Global. Will the data be manually entered, or assuming the organization has substantial data already, will an GRIN-Global administrator import the data into the GRIN-Global database? Organizations may have stored their data in spreadsheets or other database formats and will need to convert that data into the GRIN-Global schema. On the other hand, some organizations may need to input data stored in paper format into the GRIN-Global database.

To work with the GRIN-Global database, you will need to learn the mechanics of the Curator Tool which is explained in detail in the remainder of this document.

Appendix: Updating the Curator Tool

Starting with Curator Tool 1.9.x, the CT uses its own separate installer; the GRIN-Global Updater program should not be invoked to update the Curator Tool.



Users only need to install the Curator Tool on their PCs. Typically an organization will have a remote server, to which the CT connects. A GRIN-Global administrator with full admin privileges will install the server.

In some organizations, such as the USDA (NPGS), a PC user cannot install software on his PC, so someone with network administrative rights must install the CT. Installation directions for installing the CT in the **NPGS** are available online under the **Documentation** link – see <u>https://www.grin-global.org/</u>. General installation directions for other organizations can be found there as well.