

# GRIN-Global Project

the global plant genebank  
information management system



# “What is GRIN-Global?”

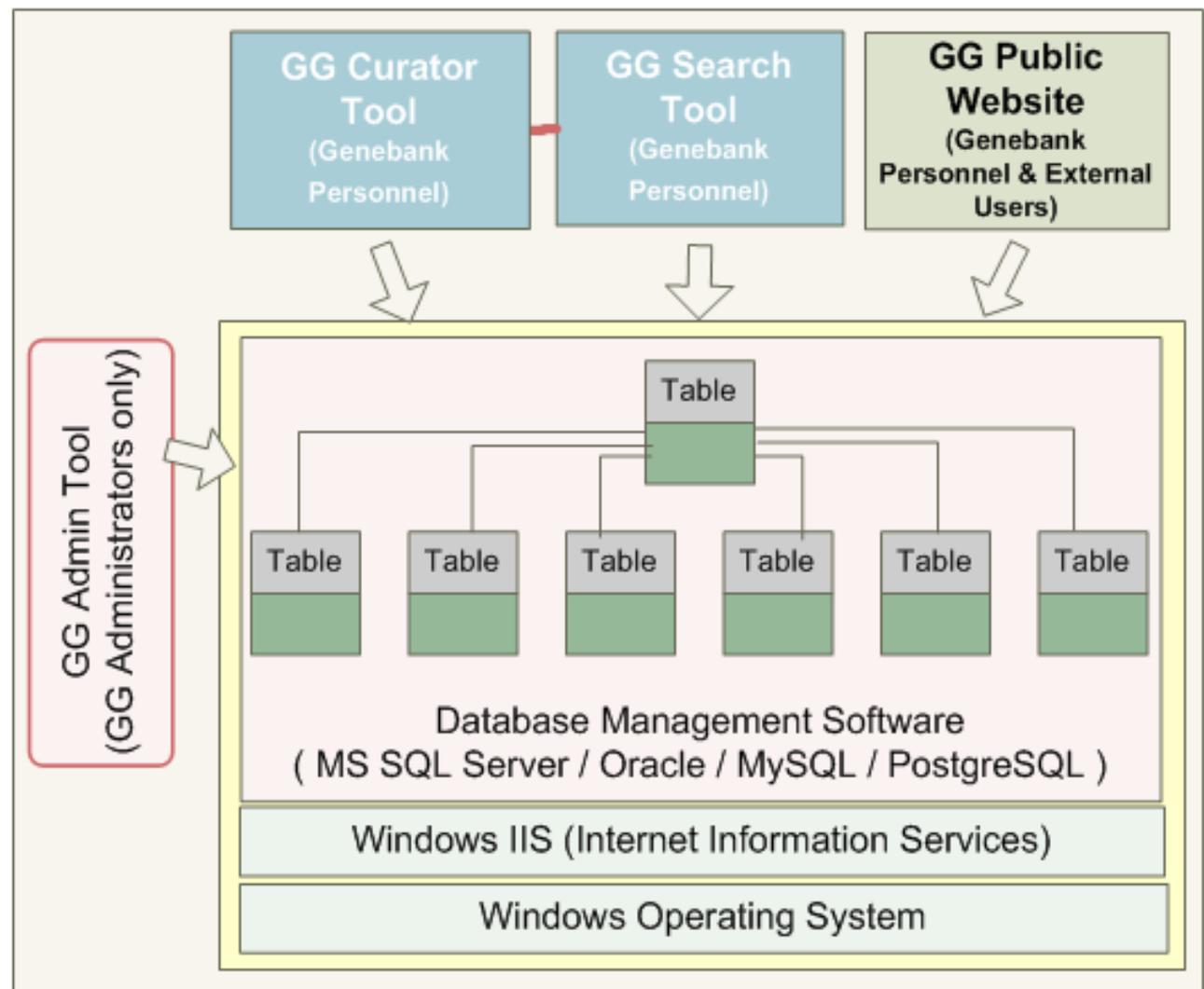
GRIN-Global (GG) is a database application that enables genebanks to store and manage information associated with plant genetic resources (germplasm) and deliver that information globally.



Accessions	Get Accession IPR	Inventory	Orders	Get Genetic Marker	Get Order Request Item	Get Inventory Viability	Taxonomy Crop Map	Crop	Crop Trait	
Accession ID	Accession Prefix	Accession Number	Accession Suffix	Taxon	Name	Origin	Maintenance Site			
1094260	Q	27154		Ipomoea batatas ...	CN 1517-139	Taiwan	S9			
1094261	MIA	27155		Ipomoea batatas ...		Brazil	S9			
1094262	Q	27155		Ipomoea batatas ...	CN 1216-10	Taiwan	S9			
1094265	Q	27156		Ipomoea batatas ...	CN 1219-1	Taiwan	S9			
1094266	Q	27157		Ipomoea batatas ...	CN 1232-9	Taiwan	S9			
1094272	Q	27159		Ipomoea batatas ...	CN 1367-2	Taiwan	S9			
1094279	Q	27163		Ipomoea batatas ...	CN 1448-59	Taiwan	S9			
1094285	Q	27166		Ipomoea batatas ...	CN 1510-25	Taiwan	S9			
1094302	PI	585101		Ipomoea batatas ...	C 20169	Mexico	S9			
1094421	PI	595866		Ipomoea batatas ...	SPV-52	Puerto Rico	S9			
1094424	Q	27223		Ipomoea batatas ...	SPV-60	Puerto Rico	S9			
1094427	Q	27224		Ipomoea batatas ...	SPV-7	Puerto Rico	S9			
1094429	Q	27225		Ipomoea batatas ...	SPV-83	Puerto Rico	S9			
1094432	Q	27226		Ipomoea batatas ...	SPV-87	Puerto Rico	S9			
1094433	PI	595867		Ipomoea batatas ...	SPV-95	Puerto Rico	S9			
1095417	Q	27754		Ipomoea batatas ...	SATSUMAHIKARI	Japan	S9			
1095418	PI	585087		Ipomoea batatas ...	KYUKEI 97	Japan	S9			
1095459	PI	585088		Ipomoea batatas ...	TAINUNG 66	Taiwan	S9			
1095460	Q	27700		Ipomoea batatas ...	CN 1245-9	Taiwan	S9			

# GRIN- Global Environment

The GG database consists of many inter-related tables



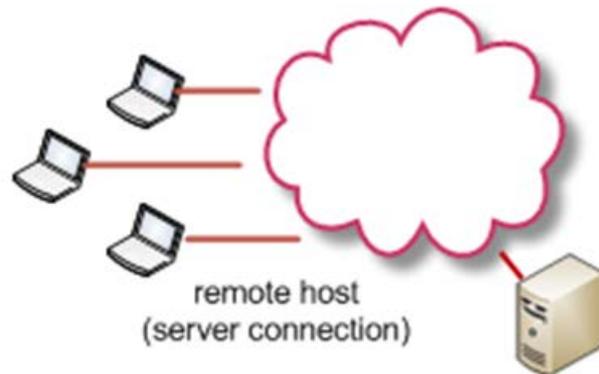
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# Alternative GG Configurations

Typically set up in a networked environment, GG can also run stand-alone on a single PC

## Alternative 1: Networked

**Client apps installed on each PC;  
server apps on the remote server**



## Alternative 2: Stand-alone PC

**The entire GG suite of apps  
installed on one PC**



# GRIN-Global – Open Source

Because GRIN-Global has been developed with open source software and its source code is available, Genebanks can tailor GRIN-Global to meet their specific requirements.



# “What is GRIN-Global?”

GRIN-Global (GG) is comprised of a suite of programs:



# Curator Tool

GRIN-Global application designed primarily for curators and genebank workers who will create and manage their genebank's data

GRIN-Global v2.0.3994.23426

File Help

Search... Accession Wizard Order Wizard

Show lists from:  
SYSTEM\_Administrator

Vicuna Blank ...

Vicuna Root Folder  
Transferred in  
VICUÑA\_ID mar 95001 m  
VICUÑA\_ID mar 95005 m  
VICUÑA\_ID mar 95006 m  
VICUÑA\_ID mar 95008 m  
VICUÑA\_ID mar 95009 m  
VICUÑA\_ID mar 95010 m  
VICUÑA\_ID mar 95011 m  
VICUÑA\_ID mar 95012 m  
VICUÑA\_ID mar 95017 m  
VICUÑA\_ID mar 95020 m  
VICUÑA\_ID mar 95021 m  
VICUÑA\_ID mar 95023 m

Accession ID	Accession Prefix	Accession Number	Taxon	Is Core?	Is Backed Up?	Backup Location
2797	VICUÑA_ID mar	95001	Phaseolus vulgaris	N	N	
2798	VICUÑA_ID mar	95005	Phaseolus vulgaris	N	N	
2799	VICUÑA_ID mar	95006	Phaseolus vulgaris	N	N	
2800	VICUÑA_ID mar	95008	Phaseolus vulgaris	N	N	
2801	VICUÑA_ID mar	95009	Phaseolus vulgaris	N	N	
2802	VICUÑA_ID mar	95010	Phaseolus vulgaris	N	N	
2803	VICUÑA_ID mar	95011	Phaseolus vulgaris	N	N	
2804	VICUÑA_ID mar	95012	Phaseolus vulgaris	N	N	
2805	VICUÑA_ID mar	95017	Phaseolus vulgaris	N	N	
2806	VICUÑA_ID mar	95020	Phaseolus vulgaris	N	N	
2807	VICUÑA_ID mar	95021	Phaseolus vulgaris	N	N	
2808	VICUÑA_ID mar	95023	Phaseolus vulgaris	N	N	

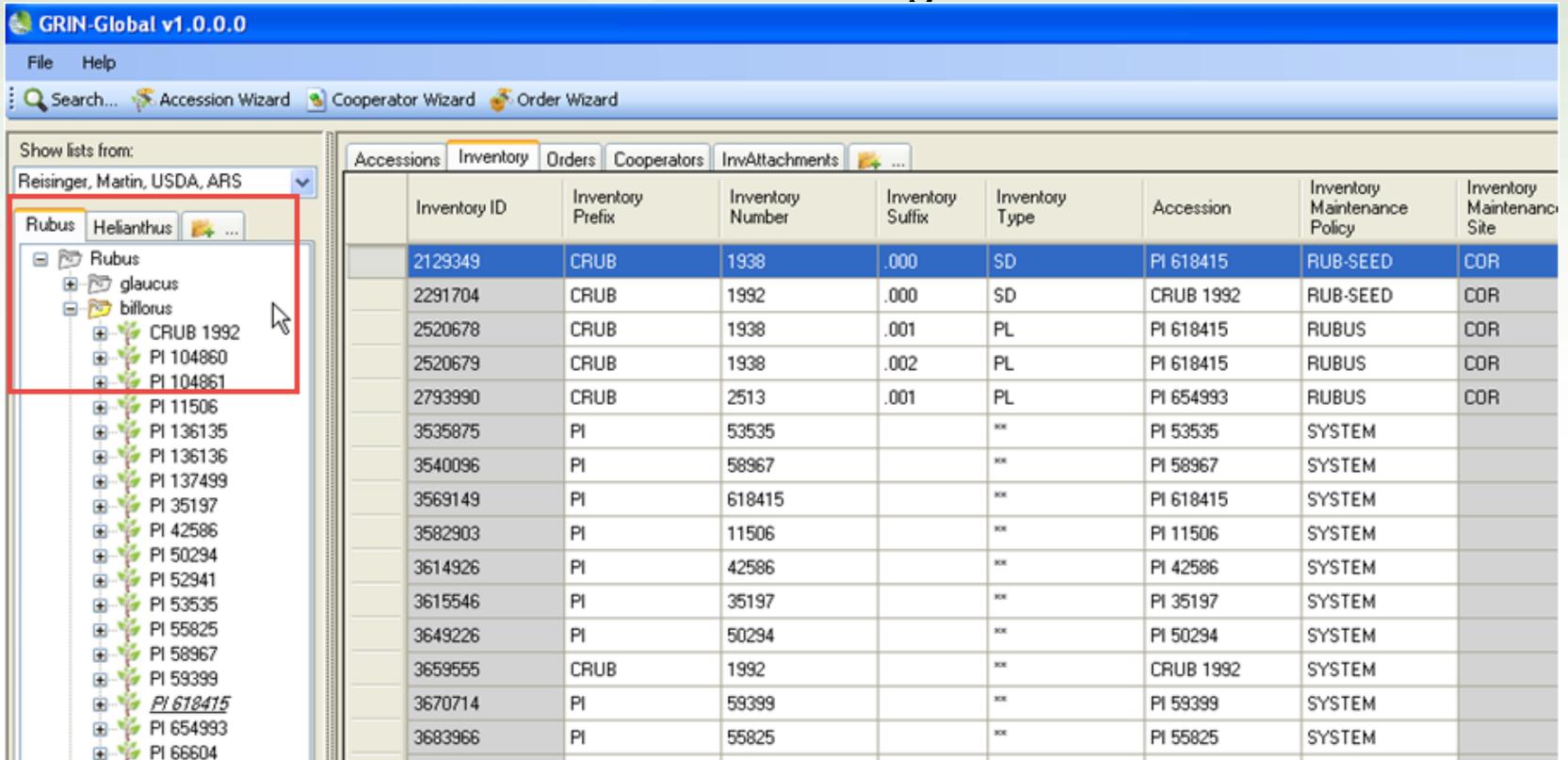
1 of 12 Refresh Data

Data Editing  
Edit Data Save Data Cancel

Showing rows: 12 of 12 | Connected to: http://localhost/GRINGlobal/GUI.asmx

# Lists for Managing Your Work

Users create lists as desired to organize database records



The screenshot displays the GRIN-Global v1.0.0.0 application window. The title bar shows the application name. Below the title bar is a menu bar with 'File' and 'Help'. A toolbar contains a search icon, 'Accession Wizard', 'Cooperator Wizard', and 'Order Wizard'. The main area is divided into two panes. The left pane, titled 'Show lists from:', shows a tree view of folders under 'Reisinger, Martin, USDA, ARS'. The 'Rubus' folder is selected, and its contents are listed: 'glaucus', 'billorus', 'CRUB 1932', 'PI 104860', 'PI 104861', 'PI 11506', 'PI 136135', 'PI 136136', 'PI 137499', 'PI 35197', 'PI 42586', 'PI 50294', 'PI 52941', 'PI 53535', 'PI 55825', 'PI 58967', 'PI 59399', 'PI 618415', 'PI 654993', and 'PI 66604'. The right pane shows a table of inventory records with columns: Inventory ID, Inventory Prefix, Inventory Number, Inventory Suffix, Inventory Type, Accession, Inventory Maintenance Policy, and Inventory Maintenance Site. The table contains 20 rows of data.

Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inventory Type	Accession	Inventory Maintenance Policy	Inventory Maintenance Site
2129349	CRUB	1938	.000	SD	PI 618415	RUB-SEED	COR
2291704	CRUB	1992	.000	SD	CRUB 1992	RUB-SEED	COR
2520678	CRUB	1938	.001	PL	PI 618415	RUBUS	COR
2520679	CRUB	1938	.002	PL	PI 618415	RUBUS	COR
2793990	CRUB	2513	.001	PL	PI 654993	RUBUS	COR
3535875	PI	53535		**	PI 53535	SYSTEM	
3540096	PI	58967		**	PI 58967	SYSTEM	
3569149	PI	618415		**	PI 618415	SYSTEM	
3582903	PI	11506		**	PI 11506	SYSTEM	
3614926	PI	42586		**	PI 42586	SYSTEM	
3615546	PI	35197		**	PI 35197	SYSTEM	
3649226	PI	50294		**	PI 50294	SYSTEM	
3659555	CRUB	1992		**	CRUB 1992	SYSTEM	
3670714	PI	59399		**	PI 59399	SYSTEM	
3683966	PI	55825		**	PI 55825	SYSTEM	

# Search Tool

The Search Tool (which can be launched from the Curator Tool) locates & lists the GG database records

The screenshot displays the GRIN-Global v1.0.0.0 application window. The interface includes a menu bar (File, Help), a toolbar with icons for Search, Accession Wizard, Cooperator Wizard, and Order Wizard, and a main workspace. On the left, a tree view shows a search filter for 'Reisinger, Martin, USDA, ARS' and a list of plant accessions under the 'Rubus' genus. A red box highlights the 'Rubus' folder and its sub-items. The main workspace shows a table of search results with columns for Inventory ID, Inventory Prefix, Inventory Number, Inventory Suffix, Inventory Type, Accession, Inventory Maintenance Policy, and Inventory Maintenance Site.

Inventory ID	Inventory Prefix	Inventory Number	Inventory Suffix	Inventory Type	Accession	Inventory Maintenance Policy	Inventory Maintenance Site
2129349	CRUB	1938	.000	SD	PI 618415	RUB-SEED	COR
2291704	CRUB	1992	.000	SD	CRUB 1992	RUB-SEED	COR
2520678	CRUB	1938	.001	PL	PI 618415	RUBUS	COR
2520679	CRUB	1938	.002	PL	PI 618415	RUBUS	COR
2793990	CRUB	2513	.001	PL	PI 654993	RUBUS	COR
3535875	PI	53535		**	PI 53535	SYSTEM	
3540096	PI	58967		**	PI 58967	SYSTEM	
3569149	PI	618415		**	PI 618415	SYSTEM	
3582903	PI	11506		**	PI 11506	SYSTEM	
3614926	PI	42586		**	PI 42586	SYSTEM	
3615546	PI	35197		**	PI 35197	SYSTEM	
3649226	PI	50294		**	PI 50294	SYSTEM	
3659555	CRUB	1992		**	CRUB 1992	SYSTEM	
3670714	PI	59399		**	PI 59399	SYSTEM	
3683966	PI	55825		**	PI 55825	SYSTEM	

# Order Fulfillment & Processing

The CT has an Order Wizard to fulfill & manage germplasm orders

Order Wizard v1.9.6.41

Order Number: 266385 | Items: 2

Order Filters:  Selection  My Orders  My Site's Orders  All Sites' Orders

Find: 266385

Printing: [Dropdown] [Print]

Orders | Actions | Attachments | Web Orders

Ordered Date: 6/9/2015 | Owner Site: DBMU | Order Type: Replenishment/reg | Original Order: 266385 - Reisinger, Mart | Final Recipient: Reisinger, Martin, USDA, ARS, N [Edit]

Local Number: [Empty] | Completed Date: 6/9/2015 | Order Obtained Via: [Empty] | Requestor: Reisinger, Martin, USDA, ARS, N [Edit]

Intended Use: [Null] | Intended Use Note: [Empty] | Ship To: Reisinger, Martin, USDA, ARS, N [Edit]

Total Cost: \$0.00

Web Order Request Data: Web Order Request [Empty] | Web Cooperator [Empty] | Email [Empty] | Primary Phone [Empty] | Note: [Empty]

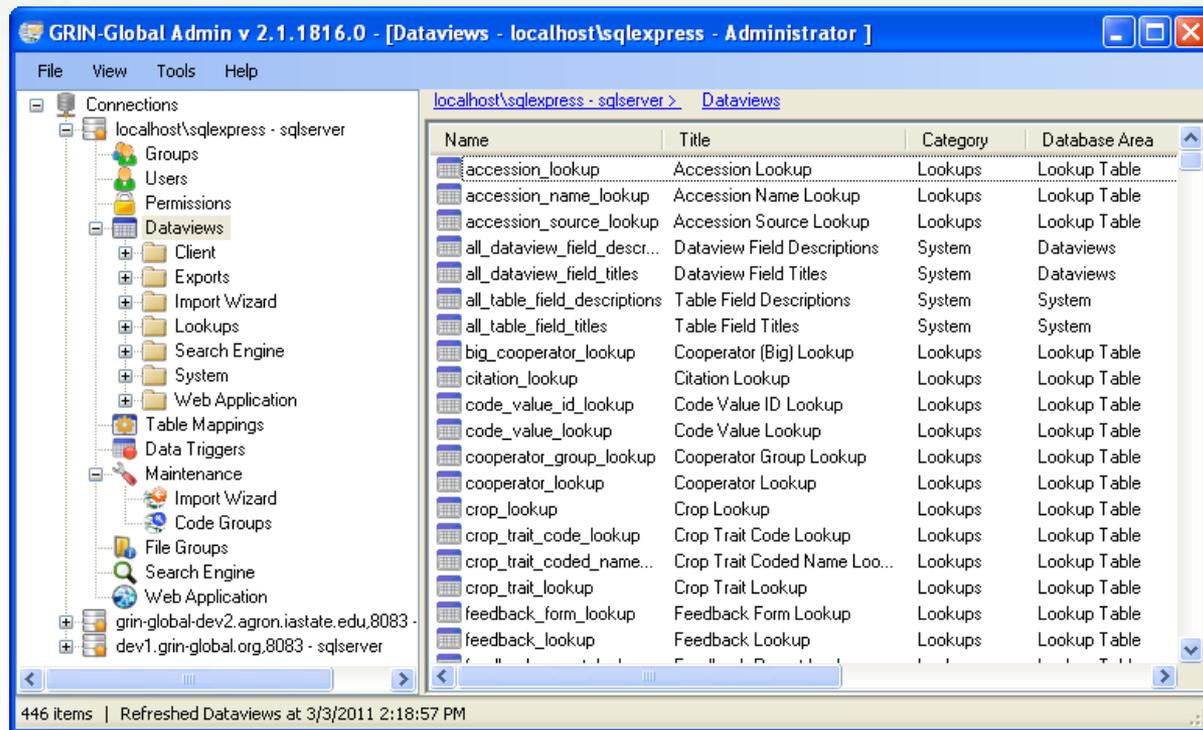
Special Instructions: [Empty]

New Row | Renumber Items | \*\*\* Order Contains Items with Alerts \*\*\* | Ship All Remaining Items

	Order Request Item ID	Order Number	Item Number	Accession	Inventory	Site	Requested Name
▶	8258835	266385 - Reising...	2	MR 201502 REI	MR 201502 REI ...	DBMU	
	8258834	266385 - Reising...	1	MR 201531 REI	MR 201531 REI ...	DBMU	PlainV

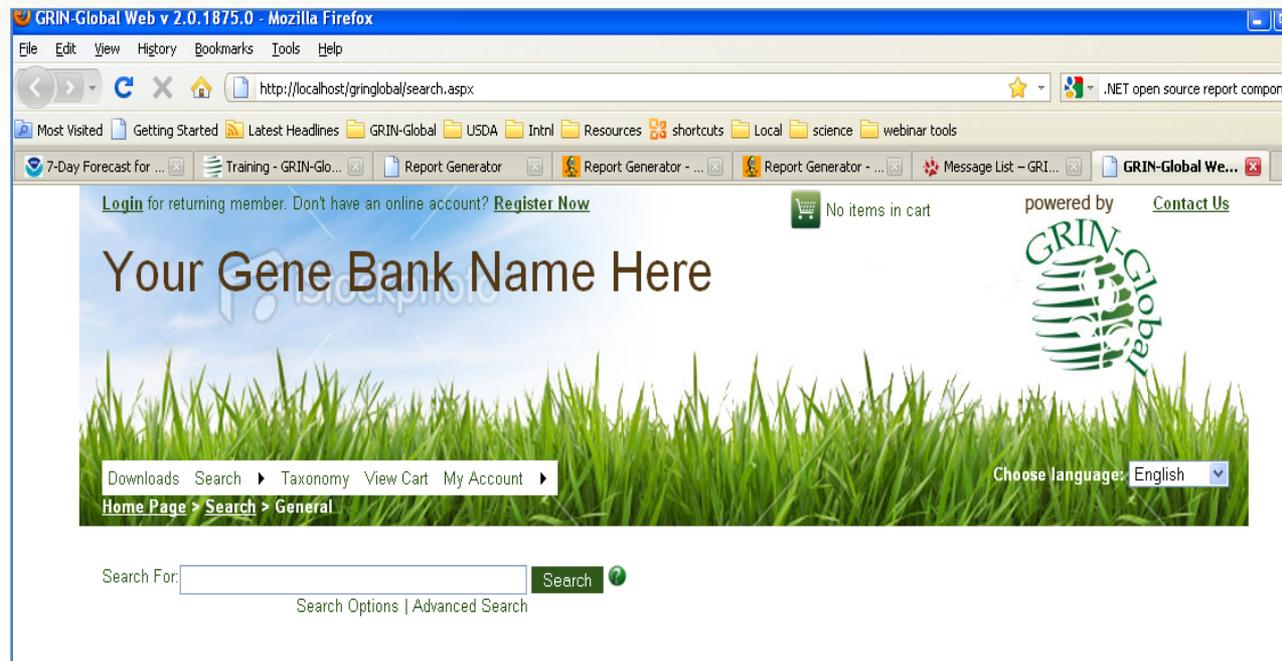
# Admin Tool

... handles diverse functions including managing user accounts and permissions; importing data; and creating and editing dataviews used by the Curator Tool and the GG Public Website



# Public Website

Through the Public Website, researchers can access germplasm information; search the entire GG database; and order germplasm from the genebank through a “shopping cart facility”



# Public Website Accession Details Page

PI 547243

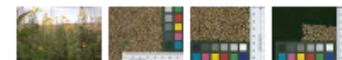
## Helianthus tuberosus L.

Collected from:	Indiana United States
Maintained by:	North Central Regional PI Station
NPGS received:	25-Sep-1989
PI assigned:	1989
Inventory volume:	4055
Backup location:	National Center for Genetic Resources Preservation
Life form:	PERENNIAL
Pedigree:	
Improvement status:	WILD
Reproductive uniformity:	
Form received:	Seed

Status: Available  
Amt Distributed: 100

 Remove from Favorites

 Add to Order



## Accession names and identifiers

TUB-2069

Type: COLLECTOR

Ames 13071

Type: SITE

Group: AMES

Comment: NC-7

Cooperator: USDA ARS NCRPIS

# Tracks Accession Observations

[Logout marty.reisinger@ars.usda.gov](#)

## GRIN-Global Release 1.0



[Search](#) ▶ [Taxonomy](#) [View Cart](#) [My Account](#) ▶

### Observations for accession PI 547243

Characterization and Evaluation Data:

Descriptor	Value	Study/Environment
<b>CHEMICAL Descriptors</b>		
<a href="#">LINOLEIC</a>	67	SUNFLOWER.SUN.FATTYACID.WLD.89
<a href="#">OLEIC</a>	19	SUNFLOWER.SUN.FATTYACID.WLD.89
<a href="#">PALMITIC</a>	6	SUNFLOWER.SUN.FATTYACID.WLD.89
<a href="#">PEROIL</a>	22	SUNFLOWER.SUN.OIL.WLD.89
<a href="#">STEARIC</a>	3	SUNFLOWER.SUN.FATTYACID.WLD.89
<b>MORPHOLOGY Descriptors</b>		
<a href="#">SDMOTTLING</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.05P
<a href="#">SDMOTTLING</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.08H
<a href="#">SDMOTTLING</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.09H
<a href="#">SDMOTTLING</a>	9 - PRESENT	SUNFLOWER.AMES.SUN.INC.05P
<a href="#">SDMOTTLING</a>	9 - PRESENT	SUNFLOWER.AMES.SUN.INC.07P
<a href="#">SDMOTTLING</a>	9 - PRESENT	SUNFLOWER.AMES.SUN.INC.08H
<a href="#">SDMOTTLING</a>	9 - PRESENT	SUNFLOWER.AMES.SUN.INC.09H
<a href="#">SDMOTTLING</a>	9 - PRESENT	SUNFLOWER.AMES.SUN.INC.10H
<a href="#">SDPIGANTH</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.05P
<a href="#">SDPIGANTH</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.07P
<a href="#">SDPIGANTH</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.08H
<a href="#">SDPIGANTH</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.09H
<a href="#">SDPIGANTH</a>	1 - ABSENT	SUNFLOWER.AMES.SUN.INC.10H
<a href="#">SDSTRPCOL</a>	3 - BROWN	SUNFLOWER.AMES.SUN.INC.08H

# Manages Stored Images

Logout [marty.reisinger@ars.usda.gov](mailto:marty.reisinger@ars.usda.gov)

5 items in cart

[Contact Us](#)



## GRIN-Global Release 1.0



Firefox

199.133.55.98/gringlobal/imagdisplay.aspx?imgPath=http://www.ars-grin.gov/npgs/images/hc7/accvoucher/Helianthus/PI\_50000

[Search](#) [Taxonomy](#) [View Cart](#)

PI 547243

**Helianthus tuberosus L.**

Collected from:	Ind
Maintained by:	No
NPGS received:	25-
PI assigned:	198
Inventory volume:	405
Backup location:	Na
Life form:	PE
Pedigree:	
Improvement status:	WI
Reproductive uniformity:	
Form received:	Se



lable  
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es



# Export Feature

Users can search for records from the Public Website and then easily download the information

[Login](#) for returning member. Don't have an online account? [Register Now](#) 4 items in cart [Contact Us](#)

## GRIN-Global Release 1.0

Search Taxonomy View Cart My Account Choose language English

Home Page > Search > General

Search For:  [Search](#)

Search option | Advanced Search

Actions...

Select: All, None, Inverse, Highlighted Options: Show  items <<  of 26 >> Export...

Group By:	Plant Name	Taxonomy	Material	Maintained By	Availability
<input type="checkbox"/> Plant ID					
<input type="checkbox"/> <a href="#">PI 597912</a>	ANN x ARG-409	<a href="#">Helianthus hybr</a>	d	NC7	<a href="#">Add to Cart</a>
<input type="checkbox"/> <a href="#">Ames 6361</a>	ARG x ANN-402	<a href="#">Helianthus hybr</a>	d	NC7	<a href="#">Add to Cart</a>
<input type="checkbox"/> <a href="#">PI 613755</a>	ANN x PAR-456	<a href="#">Helianthus hybr</a>	d	NC7	<a href="#">Add to Cart</a>
<input type="checkbox"/> <a href="#">PI 649903</a>	ANN x PET-504	<a href="#">Helianthus hybr</a>	nt	NC7	<a href="#">Add to Cart</a> Not Available
<input type="checkbox"/> <a href="#">PI 649904</a>	ARG x ANN-1318	<a href="#">Helianthus hybr</a>	nt	NC7	<a href="#">Add to Cart</a> Not Available
<input type="checkbox"/> <a href="#">PI 597913</a>	PRA x ANN-1326	<a href="#">Helianthus hybrid</a>	Seed	NC7	<a href="#">Add to Cart</a>
<input type="checkbox"/> <a href="#">PI 613756</a>	ANN x PET-1378	<a href="#">Helianthus hybrid</a>	Seed	NC7	<a href="#">Add to Cart</a>
<input type="checkbox"/> <a href="#">Ames 7152</a>	PET x ANN-1068	<a href="#">Helianthus hybrid</a>	Seed	SYS	Not Available
<input type="checkbox"/> <a href="#">Ames 7157</a>	PET x ANN-1074	<a href="#">Helianthus hybrid</a>	Seed	SYS	Not Available
<input type="checkbox"/> <a href="#">Ames 22007</a>	Ames 22007	<a href="#">Helianthus hybrid</a>	Plant	SYS	Not Available
<input type="checkbox"/> <a href="#">Ames 22008</a>	Ames 22008	<a href="#">Helianthus hybrid</a>	Plant	SYS	Not Available
<input type="checkbox"/> <a href="#">Ames 22009</a>	Ames 22009	<a href="#">Helianthus hybrid</a>	Plant	SYS	Not Available
<input type="checkbox"/> <a href="#">PI 274517</a>		<a href="#">Helianthus hybrid</a>	Plant Seed	SYS	Not Available



# Shopping Cart Feature

Logout [marty.reisinger@ars.usda.gov](mailto:marty.reisinger@ars.usda.gov)

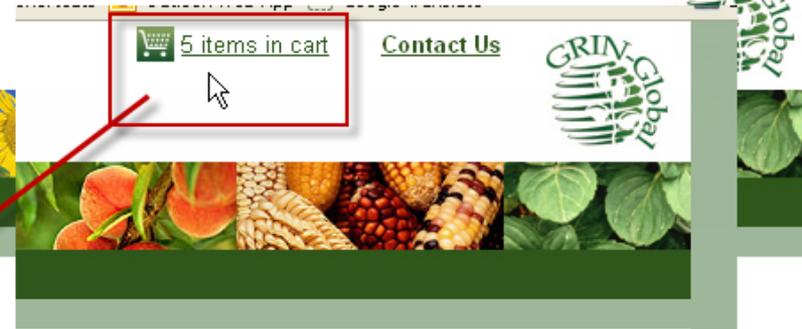
[Contact Us](#)

## GRIN-Global Release 1.0



[Search](#) > [Taxonomy](#) [View Cart](#) [My Account](#) >

[Home Page](#) > [View Cart](#)



### Shopping Cart

Select	ID	Plant Name	Taxonomy	Distribution Amt				
<input type="checkbox"/>	<a href="#">PI 107298</a>		<a href="#">Medicago sativa subsp. sativa</a>	200				
<input type="checkbox"/>	<a href="#">PI 162459</a>	SALADINA-SELECTION	<a href="#">Medicago sativa subsp. sativa</a>	200				
<input type="checkbox"/>	<a href="#">PI 170534</a>	No. 1602	<a href="#">Medicago sativa subsp. sativa</a>	200				
<input type="checkbox"/>	<a href="#">PI 170543</a>	No. 2623	<a href="#">Medicago sativa subsp. sativa</a>	200				
<input type="checkbox"/>	<a href="#">PI 547243</a>	TUB-2069	<a href="#">Helianthus tuberosus</a>	100	count	Seed	NC7	<a href="#">Remove</a>
								<a href="#">Remove Selected</a>
								<a href="#">Remove All</a>

Status: Available  
 Amt Distributed: 100

Remove from Favorites

Add to Order



Search for more accessions

[← Back to previous page](#)

[Checkout →](#)

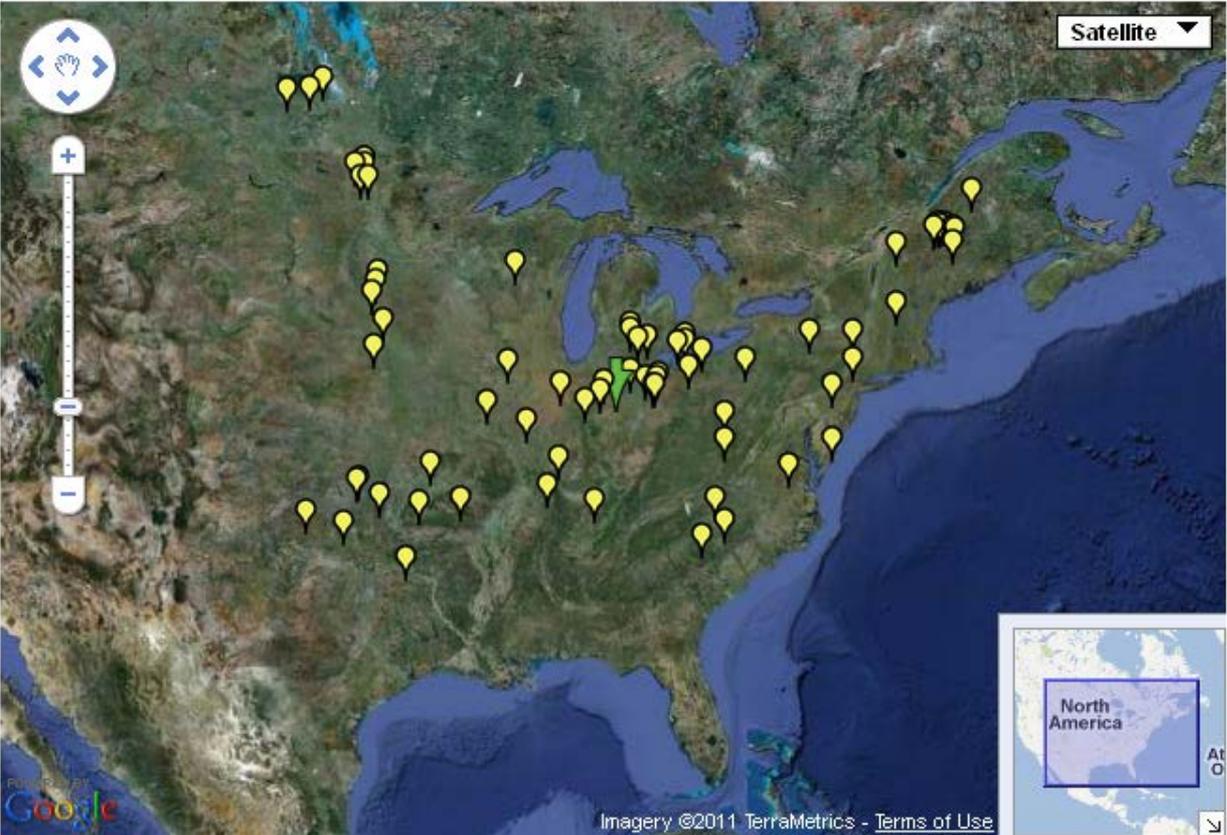


# Associates Data w/ Google Maps

Search ▶ Taxonomy View Cart My Account ▶

Accession for *Helianthus tuberosus* L.

PI 547243 ( Mapped accessions = 185)



The image shows a satellite view of North America with 185 yellow location pins indicating the mapped accessions of *Helianthus tuberosus* L. The pins are distributed across the continent, with a higher density in the eastern and central regions. The map interface includes a search bar at the top, navigation controls on the left, and an inset map of North America in the bottom right corner. The text "Imagery ©2011 TerraMetrics - Terms of Use" is visible at the bottom of the map.

# For additional information, please visit:

- [www.grin-global.org](http://www.grin-global.org) (project background)
- <http://www.ars-grin.gov/npgs/gringlobal/ggwiki/sb/home.html>
- (training and documentation references including user guides, videos, exercises, and presentations)