



Public Website

Public Website Demo
March, 2016

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GRIN-Global Development Team -- Documentation & Training Consultant

Abstract

The Germplasm Resources Information Network (GRIN) is an information management system that curates data for the USDA-ARS genetic resource collections. GRIN was developed in the late 1980s and has been incrementally improved over the past 30 years. A major revision was recently deployed to service the U.S. National Plant Germplasm System (NPGS), which curates more than 575,000 active plant germplasm accessions important to both U.S. and global food and agriculture. The new genebank management system is called GRIN-Global. It is being developed with international partners as freely available software that can help harmonize information management and allow more rational maintenance and utilization of collections. Several institutions in countries outside the U.S. are already using GRIN-Global.

The NPGS began using GRIN-Global on November 30, 2015. It consists of two interconnected applications- the Curator Tool (CT) and the Public Website (PW). The CT is a Microsoft Windows desktop application that allows NPGS staff to enter and modify data on accessions and manage daily workflows, especially order request processing. The PW is an internet browser based application that allows clients and customers to search the database for a wide array of information, and request germplasm.

The interfaces for both the CT and PW are significantly different from the prior applications used by the NPGS. Hence, user training and outreach are an important component of making the transition to GRIN-Global. New features and functions have been added, and more will be forthcoming. The evolution of GRIN-Global must occur within the context of significantly increased federal oversight and emphasis on security issues for .gov information management systems.

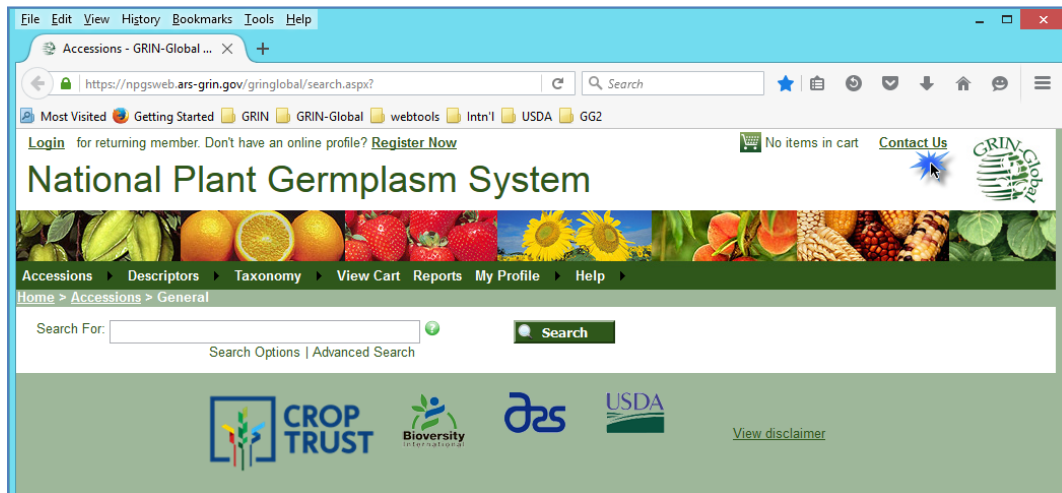
A member of the GRIN-Global Development Team will demonstrate the Public Website. Emphasis will be on strategies for searching the collections and how to request germplasm using the new interface. The PW search page is available at <https://npgsweb.ars-grin.gov/gringlobal/search.aspx?>

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For More Information

- Contact: feedback@ars-grin.gov (or marty.reisinger@ars.usda.gov)
- Click on the Public Website's **Contact Us** link




- The GRIN-Global website is <http://www.ars-grin.gov/npgs/gringlobal/sb/home.html>


GRIN...GRIN-Global

GRIN

(Germplasm Resources Information Network)



1986 - Nov. 30, 2015
continuous development
& enhancements



The Need for GRIN-Global



Many national genebanks lack effective technology for documenting and managing collection information digitally

GRIN-Global Partners

The Global Crop Diversity Trust awarded a grant to USDA/ARS & Bioversity



<http://www.ars-grin.gov/>

GRIN

A screenshot of a Google search interface. The search bar at the top contains the text "grin". Below the search bar, the results show "About 193,000,000 results (0.47 seconds)". The first result is for the word "grin", which is circled in red. Below the word "grin", the pronunciation "/grin/" is shown, followed by the part of speech "verb". The first definition is "1. smile broadly, especially in an unrestrained manner and with the mouth open." with an example sentence "Dennis appeared, grinning cheerfully" and synonyms "smile, smile broadly, beam, smile from ear to ear, grin like a Cheshire cat; More". Below this, the part of speech "noun" is shown, followed by the first definition "1. a broad smile." with an example sentence "'OK,' he said with a grin" and synonyms "smile, broad smile; smirk" and "a silly grin". At the bottom of the search results, there is a link to "GRIN National Genetic Resources Program" with the URL "www.ars-grin.gov/" and a description "Provides germplasm information and links about plants, animals, microbes and invertebrates within the National Genetic Resources Program (NGRP) of the". A red dotted arrow points from the circled word "grin" to the "GRIN National Genetic Resources Program" link.

https://www.google.com/?gws_rd=ssl#q=grin

Most Visited Getting Started GRIN GRIN-Global webtools Intn'l USDA GG2

About 193,000,000 results (0.47 seconds)

grin
/grin/
verb

1. smile broadly, especially in an unrestrained manner and with the mouth open.
"Dennis appeared, grinning cheerfully"
synonyms: **smile**, smile broadly, **beam**, smile from ear to ear, grin like a Cheshire cat; **More**

noun

1. a broad smile.
"'OK," he said with a grin"
synonyms: **smile**, broad smile; **smirk**
"a silly grin"

Translations, word origin, and more definitions

GRIN National Genetic Resources Program
www.ars-grin.gov/ ▼
Provides germplasm information and links about plants, animals, microbes and invertebrates within the National Genetic Resources Program (NGRP) of the

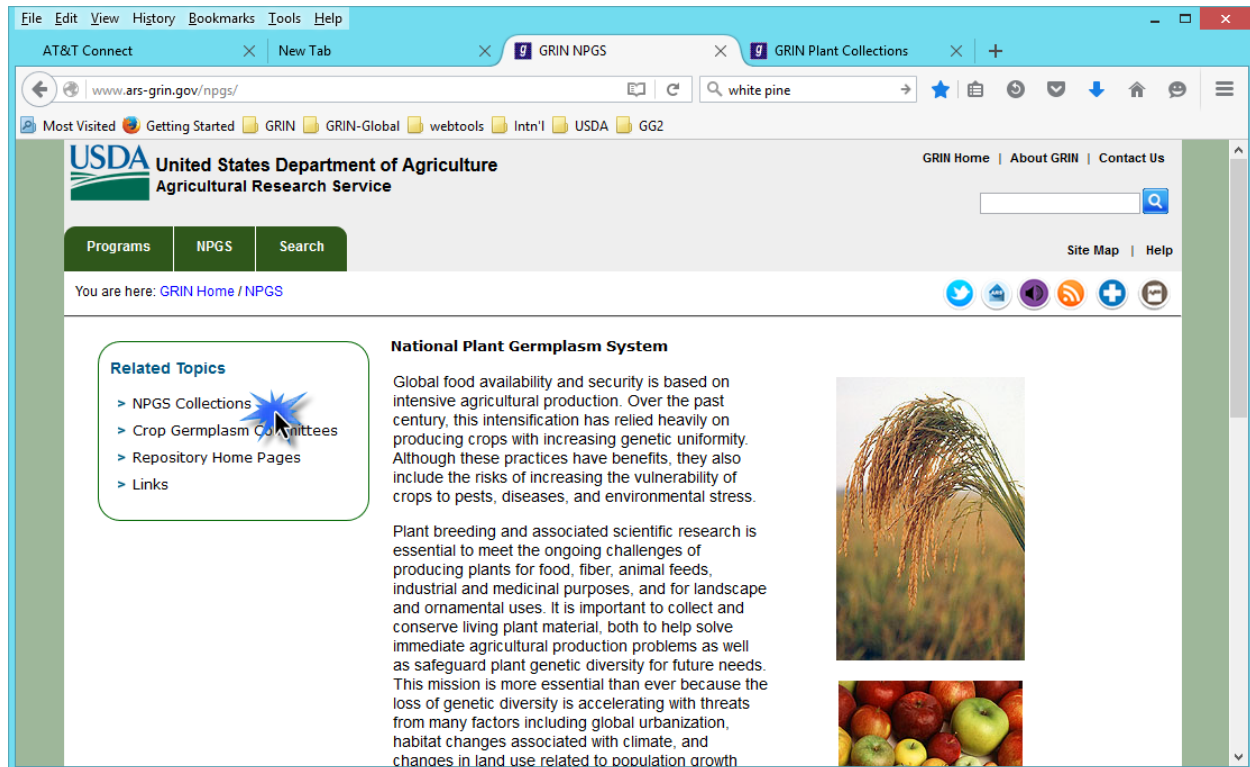
<http://www.ars-grin.gov/>

NPGS Pages



Map of Genebanks (NPGS Sites / Repositories)

<http://www.ars-grin.gov/npgs/>



Genebank Contact Information (NPGS Sites)

<http://www.ars-grin.gov/npgs/sitelist.html>

USDA United States Department of Agriculture
Agricultural Research Service

GRIN Home | About GRIN | Contact Us

Programs NPGS Search

You are here: GRIN Home / NPGS / Collections

NPGS Germplasm Collection Genebanks

Map locations: Pullman, Corvallis, Aberdeen, Ames, Columbus, Sturgeon Bay, Geneva, Urbana, Beltsville, Washington, Davis, Ft. Collins, Stuttgart, Griffin, College Station, Hilo, Miami, Mayaguez, PR.

[List of Genebanks](#)
[Diversity of Species in NPGS](#)
[Summary by Genebank](#)
[Seeds for Our Future \(PDF\)](#)
[USDA Plant Hardiness Zone Map with Genebanks](#)

Affiliated non-ARS collections

- Desert Legume Program
- Forest Service National Seed Lab
- US Nicotiana Germplasm Collection

Last Modified: 02/05/2016

File Edit View History Bookmarks Tools Help

AT&T Connect New Tab GRIN Collection Site List

www.ars-grin.gov/npgs/sitelist.html

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- + Plant Genetic Resources Conservation Unit, Griffin, GA
- + Plant Germplasm Quarantine Program
- + Plant Variety Protection Voucher Collection
- + Potato Germplasm Introduction Station
- Rice Genetic Stock Center
 - USDA, ARS
 - Dale Bumpers National Rice Research Center, 2890 Hwy 130 East
 - Stuttgart, Arkansas 72160
 - Phone: 870-672-9300
 - FAX: 870-673-7581
 - E-Mail: gsor@ars-grin.gov
 - Repository Home Page
- + Soybean Collection

Plant Variety Protection (PVP)

<http://www.ars-grin.gov/npgs/>



The screenshot shows the USDA Agricultural Research Service website. At the top, the USDA logo is on the left, and the text "United States Department of Agriculture" and "Agricultural Research Service" is on the right. Below this is a navigation bar with three tabs: "Programs", "NPGS", and "Search". The "Search" tab is selected, and a blue starburst cursor is pointing at it. Below the navigation bar, there is a breadcrumb trail that says "You are here: GRIN Home / N". To the left of the main content area, there is a "Related Topics" section with a list of links: "> NPGS Collections", "> Crop Germplasm", "> Repository Home", and "> Links". To the right of the breadcrumb trail, there is a vertical list of links: "Accession", "Descriptors", "Taxonomy", "Advanced Query of Species", "Simple Query of Species", "Families and Genera", "World Economic Plants", "Crop Wild Relatives", "About GRIN Plant Taxonomy", "Plant Variety Protection", and "Original Plant Inventory Volumes". A red dashed arrow points down the left side of this list, starting from "Accession" and ending at "Plant Variety Protection".

USDA United States Department of Agriculture
Agricultural Research Service

Programs **NPGS** **Search**

You are here: [GRIN Home](#) / [N](#)

Related Topics

- > NPGS Collections
- > Crop Germplasm
- > Repository Home
- > Links

Accession
Descriptors
Taxonomy
Advanced Query of Species
Simple Query of Species
Families and Genera
World Economic Plants
Crop Wild Relatives
About GRIN Plant Taxonomy
Plant Variety Protection
Original Plant Inventory Volumes

Plant Variety Protection

www.ars-grin.gov/~dbmuqs/cgi-bin/pvp/pvp4.pl?Rice 201100296 201500499					
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PVP No.	Variety/Name	Applicant	Status	Status Date	NPGS status*
201100296	Jazzman-2	Louisiana State University Agricultural Center	Certificate Issued	06/19/2013	Unavailable
201100385	M-105	California Cooperative Rice Research Foundation, Inc.	Certificate Issued	09/14/2012	Unavailable
201100527	CL152	Louisiana State University Agricultural Center	Certificate Issued	09/30/2013	Unavailable
201100528	Caffey	Louisiana State University Agricultural Center	Certificate Issued	03/11/2014	Unavailable
201200104	Mermentau	Louisiana State University Agricultural Center	Certificate Issued	09/30/2013	Unavailable
201200129	Della-2	Louisiana State University Agricultural Center	Certificate Issued	09/30/2013	Unavailable
201200460	Calhikari-202	California Cooperative Rice Research Foundation, Inc.	Certificate Issued	09/30/2013	Not in NPGS
201300087	Antonio	Texas AgriLife Research, State of Texas Research Agency	Certificate Issued	09/11/2014	Unavailable
201300457	Colorado	Texas AgriLife Research, State of Texas Research Agency	Certificate Issued	04/16/2015	Unavailable
201400325	A-202	California Cooperative Rice Research Foundation, Inc.	Certificate Issued	08/14/2015	Unavailable
201400401	CL271	Louisiana State University Agricultural Center	Application Pending		Unavailable
201400402	CL-Jazzman	Louisiana State University Agricultural Center	Application Pending		Unavailable
201400523	CL163	Mississippi State University	Application Pending		Unavailable
201500183	LaKast	The Board of Trustees of the University of Arkansas	Application Pending	01/06/2016	Unavailable
201500184	CL172	The Board of Trustees of the University of Arkansas	Application Pending	01/06/2016	Unavailable
201500310	Frontiere	Louisiana State University Agricultural Center	Application Pending	01/06/2016	Unavailable
201500336	MM14	Missouri Rice Research and Merchandising Council	Application Pending	01/06/2016	Unavailable
201500498	Calmochi-203	California Cooperative Rice Research Foundation, Inc. (CCRRF)	Application Pending	01/06/2016	Unavailable
201500499	M-209	California Cooperative Rice Research Foundation, Inc. (CCRRF)	Application Pending	01/06/2016	Unavailable

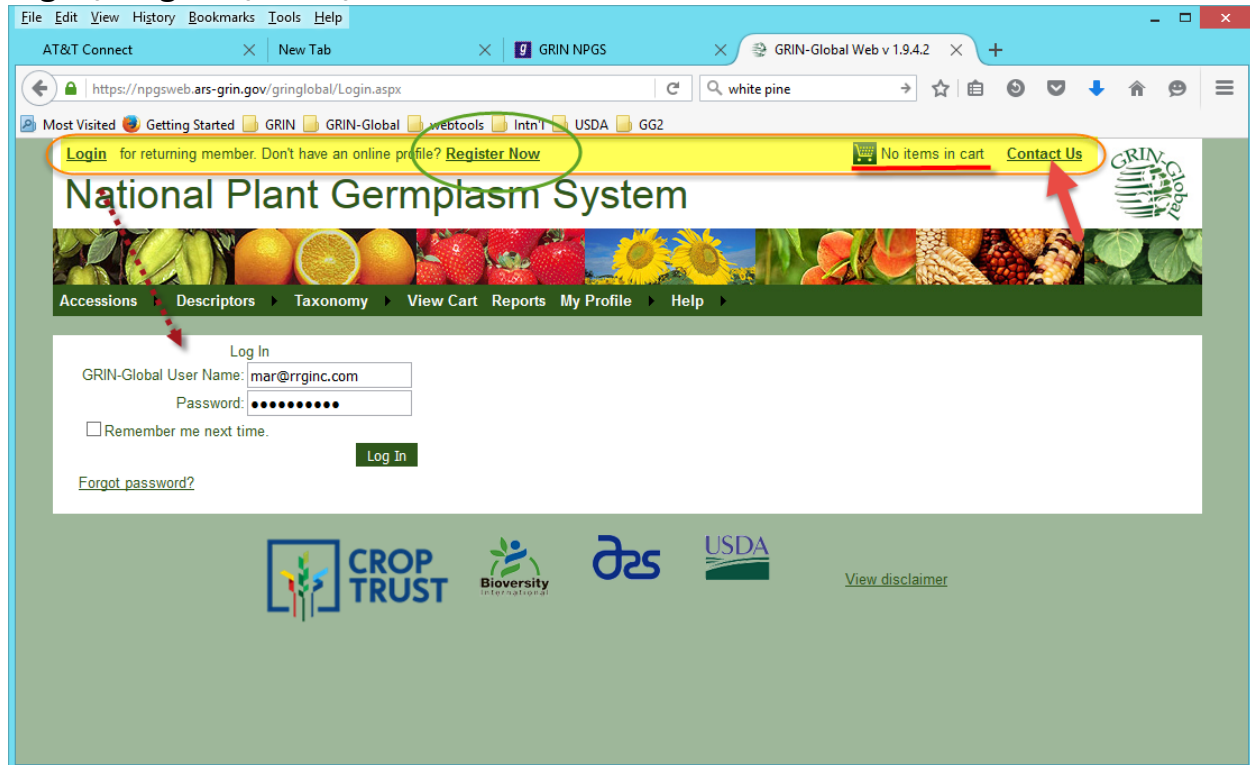
Plant Variety Protection Office
 USDA-AMS-ST-PVPO, Washington, DC
[Home Page](#)
[New Query](#)

Main GRIN-Global Screen (“Public Website”)

<https://npgsweb.ars-grin.gov/gringlobal/search.aspx>

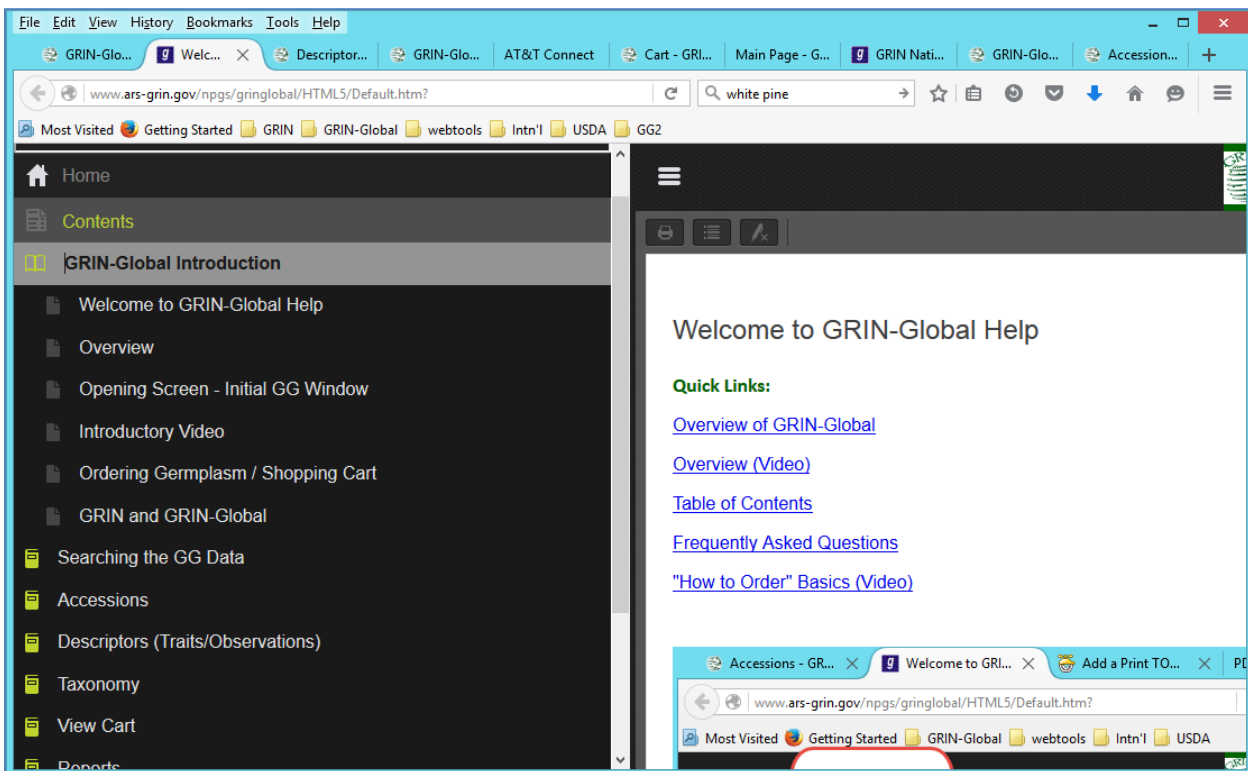
Browser application – tested on Firefox, Chrome, IE, (Opera), Safari (my telephone)

Login / Register/ Cart / Contact Us



Help/Information

Table of Contents / Videos / FAQs



Basic Text Searches

Search For:

[Login](#) for returning member. Don't have an online profile? [Register Now](#)

U.S. National Plant Germplasm System



[Accessions](#) ▶ [Descriptors](#) ▶ [Taxonomy](#) ▶ [View Cart](#) [Reports](#) [My Profile](#) ▶ [Help](#) ▶

[Home Page](#) > [Accessions](#) > [General](#)

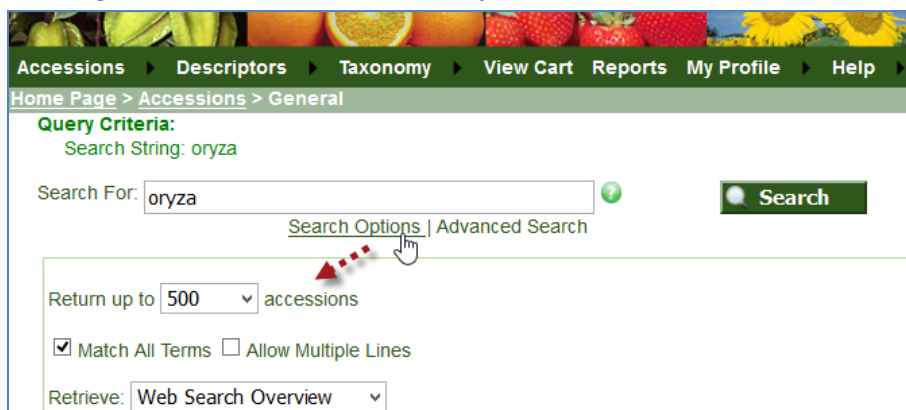
Search For: [?](#) [Search](#)

[Search Options](#) | [Advanced Search](#)

Example: Oryza

Key Points (& Defaults)

- 1) the **Search For:** box only searches 31 database fields; not a true “google” search
- 2) case doesn't matter
- 3) without doing anything yet, there are defaults:
 - maximum number of records displayed: 500
 - when multiple search terms are supplied, act in an AND condition
 - several accession (passport) fields are displayed as the result: plant name, taxonomy, origin...
- 4) to change these defaults, click **Search Options**



[Accessions](#) ▶ [Descriptors](#) ▶ [Taxonomy](#) ▶ [View Cart](#) [Reports](#) [My Profile](#) ▶ [Help](#) ▶

[Home Page](#) > [Accessions](#) > [General](#)

Query Criteria:
Search String: oryza

Search For: [?](#) [Search](#)

[Search Options](#) | [Advanced Search](#)


Return up to accessions

☒ Match All Terms ☐ Allow Multiple Lines

Retrieve:

5) to change other defaults; click **Advanced Search**

Query Criteria:
Search String: oryza

Search For: 

[Search Options](#) | [Advanced Search](#)

Return up to accessions

☒ Match All Terms ☐ Allow Multiple Lines

Retrieve:

Accessions: ☐ Exclude unavailable ☐ With images ☐ With NCBI link ☐ With genomic data

- Exclude unavailable
- With images
- With NCBI link
- With genomic data

Advanced options – change to **Exclude unavailable**

File Edit View History Bookmarks Tools Help

Accessions - GRIN-Global ... x Accessions - GRIN-Global ... x Accessions - GRIN-Global ... x +

https://npgsweb.ars-grin.gov/gringlobal/search.aspx? Search

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National Plant Germplasm System

Accessions Descriptors Taxonomy View Cart Reports My Profile Help

Home > Accessions > General

Search For: 





[Search Options](#) | [Advanced Search](#)

Accessions: ☒ Exclude unavailable ☐ With images ☐ With NCBI link ☐ With genomic data

[Accession Collecting Site Search Criteria](#)

Choose Criterion 1: -- Select One -- - Select - Clear Criterion

Add More Criteria Clear All Criteria


    [View disclaimer](#)

Advanced Options:

Country of Origin: **Philippines**


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[Home](#) > [Accessions](#) > [General](#)

Search For:  [Search](#)

[Search Options](#) | [Advanced Search](#)

Accessions: ☐ Exclude unavailable ☐ With images ☐ With NCBI link ☐ With genomic data

[Accession Collecting Site Search Criteria](#)

Choose Criterion 1:

-- Select One --

-- Select One --

accession group name

accession identifier range

accession life form

accession pedigree

accession plant name

accession restriction type

accession source habitat type

accession source type

country of origin


germplasm form

germplasm repository site

improvement level

[Select -](#) [Clear Criterion](#)

[Add More Criteria](#)



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[Home](#) > [Accessions](#) > [General](#)

Search For:  [Search](#)

[Search Options](#) | [Advanced Search](#)

Accessions: ☐ Exclude unavailable ☐ With images ☐ With NCBI link ☐ With genomic data

[Accession Collecting Site Search Criteria](#)

Choose Criterion 1: [country of origin](#) [Clear Criterion](#)

Accession source country	State
Philippines	

[Add More Criteria](#) [Clear All Criteria](#)



[View disclaimer](#)

Accession Collecting Site Search Criteria

elevation range: 100 – 800

The screenshot shows the NPGS website interface. The search bar contains 'oryza'. Below the search bar, there are checkboxes for 'Exclude unavailable', 'With images', 'With NCBI link', and 'With genomic data'. The 'Accession Collecting Site Search Criteria' section is expanded, showing a form with the following fields:

- Latitude:** From [] ° [] ' [] " N To [] ° [] ' [] " N
- Longitude:** From [] ° [] ' [] " E To [] ° [] ' [] " E
- Elevation (m):** From 100 To 800
- Collecting date:** From [] To []
- Collecting note:** Contains []

Buttons include 'Search', 'Clear Collecting Site Search Criteria', 'Choose Criterion 1: -- Select One --', 'Clear Criterion', 'Add More Criteria', and 'Clear All Criteria'.

Wild cards

- **weedy red rice** vs. **%weedy red rice%** vs. **'%weedy red rice%'**
- -- the * equals %
- -- the _ is a single character wild card
- -- use single quotes to create a single term (text string) as in: **'%weedy red rice%'**
- Rule of thumb – start with a broad search; then narrow your net

Descriptors

Example: Days to Flower & Hull Color

File Edit View History Bookmarks Tools Help

AT&T Connect New Tab GRIN NPGS Descriptors - GRIN-Global ...

https://npgsweb.ars-grin.gov/gringlobal/descriptors.aspx

white pine

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National Plant Germplasm System

Accessions Descriptors Taxonomy View Cart Reports My Profile Help

Home Page > Descriptors

Choose Crop: RICE

RICE New Search

Choose descriptor(s): Clear Descriptor Choices

Select descriptor values: Clear Descriptor Values

Results Match: ☒ All Conditions ☐ Any Condition ☐ Results have observation data for all selected descriptors

Days to Flower (18584)

(Any)

35 36 37 38

Hull Color (20543)

(Any)

1=WHITE 2=STRAW 3=GOLD, LIGHT OR DEEP 4=TAWNEY OR RUSSET

Choose Crop: RICE

RICE New Search

Choose descriptor(s): Clear Descriptor Choices

Select descriptor values: Clear Descriptor Values

Results Match: ☒ All Conditions ☐ Any Condition ☐ Results have observation data for all selected descriptors

Days to Flower (18584)

Less Than or Equal To

44 45 46 47

Hull Color (20543)

Equal To

6=MOTTLED, SPECKLED, OR PIEBALD 7=PURPLE 8=BLACK MIX=MIXED OR INDETERMINATE

Hold Ctrl and click for multiple selections

Export & Excel...

- Selecting; using: **All / None / Inverse / Highlighted**
- Export

Accessions ▶ Descriptors ▶ Taxonomy ▶ View Cart Reports My Profile ▶ Help ▶

Home > Descriptors > Descriptors

Query Criteria:
 Crop: RICE
 Days to Flower Less Than or Equal To 45;
 Hull Color Equal To 1; 6; 7; 8;

Results match all trait conditions.

Choose Crop: RICE

RICE ▼ New Search

Choose descriptor(s): Clear Descriptor Choices

Select descriptor values: Clear Descriptor Values

Results:

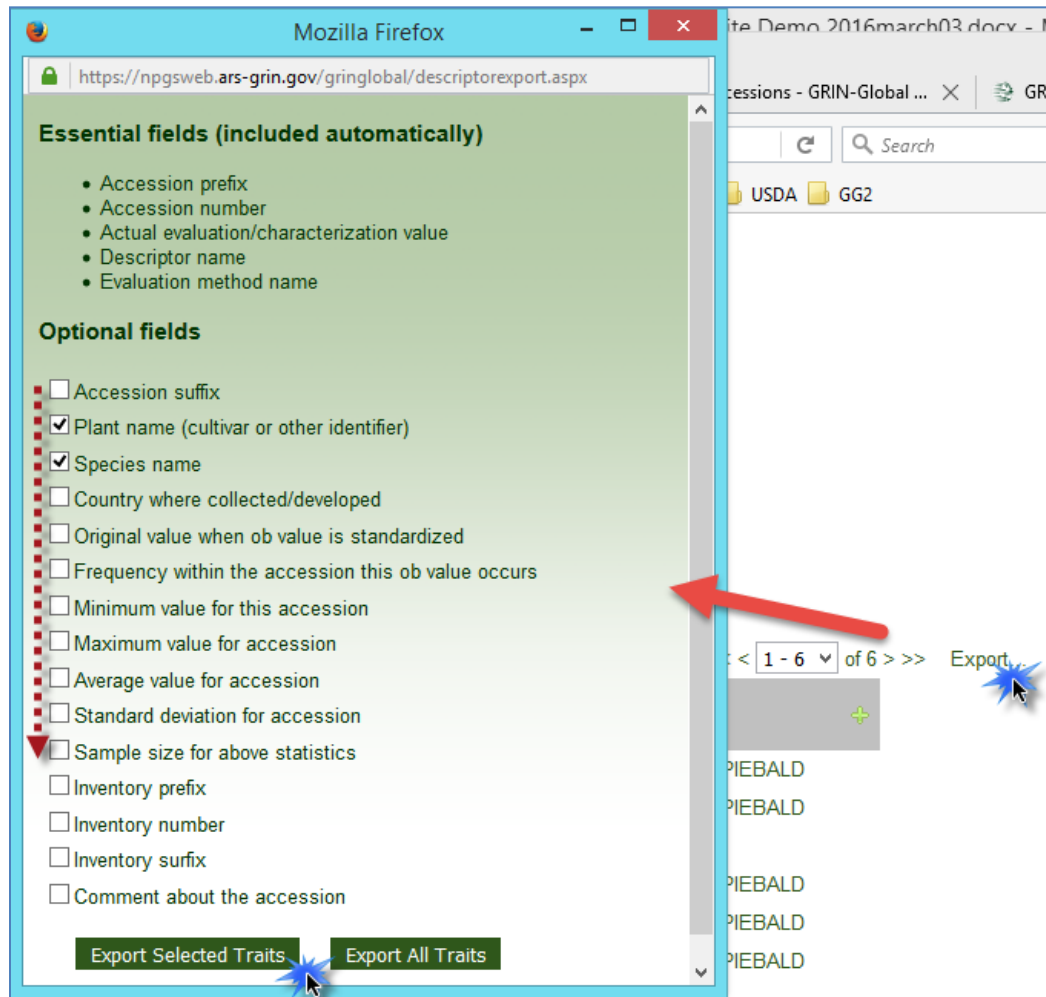
Actions... Export with Options
 Add selected to filter 3 Add
 Remove selected from results

Group By:
 Plant ID ▼ Days to Flower Hull Color +

Plant ID	Days to Flower	Hull Color
PI 30967	37	MOTTLED, SPECKLED, OR PIEBALD
PI 637532	42	MOTTLED, SPECKLED, OR PIEBALD
PI 637574	38	WHITE
GSOR 310208	45	MOTTLED, SPECKLED, OR PIEBALD
GSOR 310226	35	MOTTLED, SPECKLED, OR PIEBALD
GSOR 311685	35	MOTTLED, SPECKLED, OR PIEBALD

Show All ▼ items << 1 - 6 ▼ of 6 >>> Export...

Export with Options




My Profile


If registered...

Shopping Cart

My Favorites

[Logout mar@rrginc.com](#) [Contact Us](#) 






National Plant Germplasm System



[Accessions](#) ▶ [Descriptors](#) ▶ [Taxonomy](#) ▶ [View Cart](#) [Reports](#) [My Profile](#) ▶ [Tools](#) ▶ [Help](#) ▶

Please review your cart items (57 items): [Show All Comments](#) [Hide All Comments](#)

[My Order History](#)
[My Preference](#)
[My Address Book](#)
[My Favorites](#)

ID	Plant Name	Taxonomy	Quantity	Form Distributed	Maintained by	Restrictions	
W6 25	M89-1	Cicer arietinum	30		NSGC		Remove 
Clor 654	Malagquit Minantika	Oryza sativa	5	Seed	NSGC		Remove 
Clor 2697	Dinalugot	Oryza sativa	5	Seed	NSGC		Remove 
Clor 3171	Quinanda Pula	Oryza sativa	5	Seed	NSGC		Remove 
Clor 3182	Buabo	Oryza sativa	5	Seed	NSGC		Remove 

Order Status Management

[Logout mar@rrginc.com](#)

National Plant Germplasm System



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[Home Page](#) > [My Profile](#) > [My Order History](#)

You have submitted 31 germplasm order(s).

[My Order History](#)
[My Preference](#)
[My Address Book](#)
[Order History](#)
[My Favorites](#)

order placed on:
February 25, 2016
[view detail](#) [send now!](#)
Order Request Number: **5383**

order placed on:
February 25, 2016
[view detail](#) [send now!](#)
Order Request Number: **5382**

order placed on:
February 18, 2016
[view detail](#) [asap](#)
Order Request Number: **5378**

Images

Use the browser's viewing capabilities to zoom in and out.

Example:

- Ames 25762 (or PI 653412)
- zoom in/out/normal: **Ctrl + / Ctrl - / Ctrl 0**
- to use the "magnifying glass"
 - Firefox: right-click
 - Chrome: Open image in new tab
 - IE: View...

Geographic Mapping

Accessions with their latitude / longitude location information can be viewed as point in Google Map.

Example:

PI 618012

- google maps

URL LINKS

Linking One Specific Accession

Link to one specific accession - new syntax:

<https://npgsweb.ars-grin.gov/gringlobal/accessiondetail.aspx?accid=PI+345678>

Examples of former GRIN links that are redirected to GRIN-Global

<http://www.ars-grin.gov/cgi-bin/npgs/acc/display.pl?1002483>

<http://www.ars-grin.gov/cgi-bin/npgs/html/achtml.pl?1637698>

<http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?25429>

<http://www.ars-grin.gov/cgi-bin/npgs/html/taxgenform.pl>

<http://www.ars-grin.gov/cgi-bin/npgs/html/taxfam.pl>

<http://www.ars-grin.gov/cgi-bin/npgs/html/queries.pl>

<http://www.ars-grin.gov/npgs/searchgrin.html>

http://www.ars-grin.gov/npgs/acc/acc_queries.html

<http://www.ars-grin.gov/cgi-bin/npgs/html/genus.pl?15203>

<http://www.ars-grin.gov/cgi-bin/npgs/html/family.pl?1111>

<http://www.ars-grin.gov/cgi-bin/npgs/html/splist.pl?13928>