

Observations

Crops & Traits
“Descriptors”

PW: Descriptor Page

U.S. National Plant Germplasm System

Accessions **Descriptors** Reports GRIN Taxonomy ▾ GRIN ▾ Help Contact Us Tools ▾ Your Prof

Main menu

Search descriptors

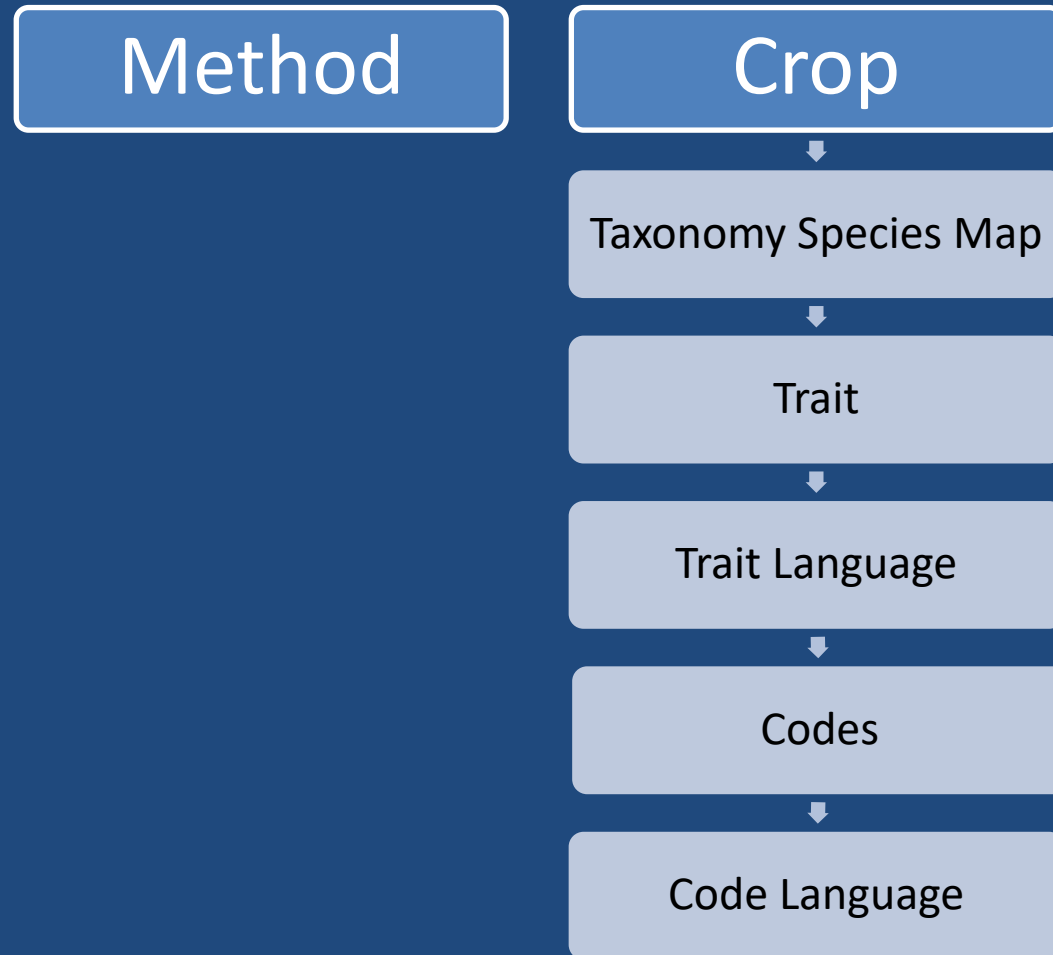
- Step 1: Select crop from dropdown list
- Step 2: Select traits, then click "Select values" button
- Step 3: Choose values for traits, additional criteria (optional), then click "Search" button

Search criteria Results table

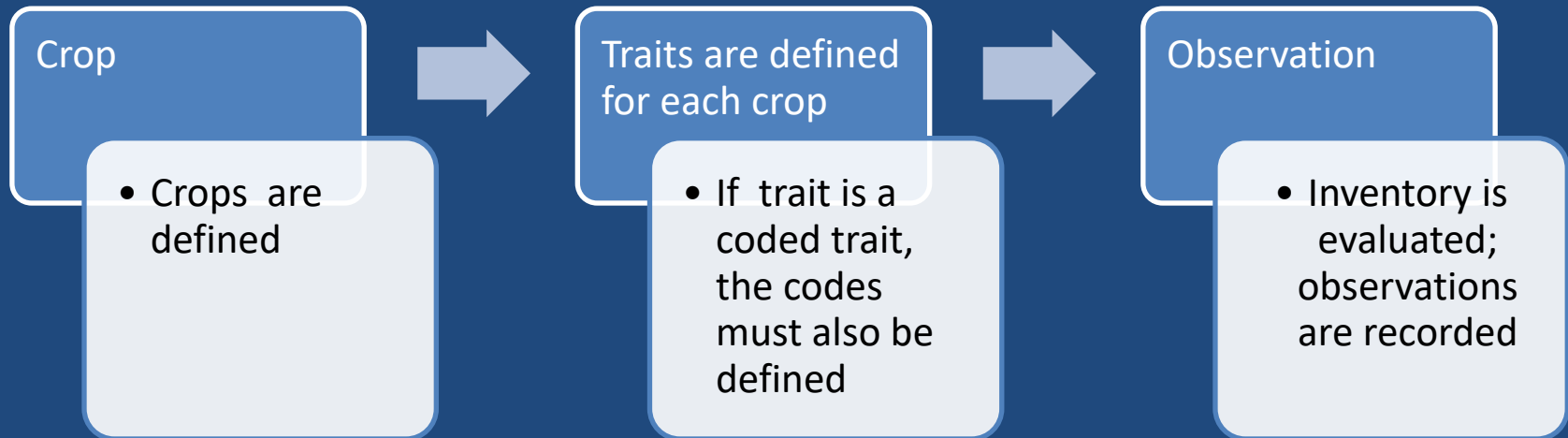
Step 1 – Choose Crop New Search

Demo Crop Page

Before adding any observation



General Workflow



Method

Get Site | Inventory | Accessions | Inv Maintenance Policy | Order Request | Get Cooperator | Get Method

Method ID	Name	Geography	Elevation (meters)	Latitude	Longitude	Uncertainty
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name -- The name describing the method environment and/or procedure

Get Cooperator | **Get Method**

Latitude

Column Chooser

Select/Deselect All

- Method ID
- Name
- Geography
- Elevation (meters)
- Latitude
- Longitude
- Uncertainty
- Formatted Locality
- Georeference Datum
- Georeference Protocol
- Georeference Annotation
- Material or Method Used
- Study Reason
- Created Date

Other Options

Method Examples

Method ID	Name	Geography	Elevation (meters)	Latitude	Longitude	
496676	HILO.LONGAN.FRUIT.2003	United States, Hawaii	201	19.6437...	-155.08	
496677	HILO.LONGAN.FRUIT.2008	United States, Hawaii	201	19.6437...	-155.08	
496678	BRASSICA.INC.AMES.2021					2021 Brassican regenerations
496679	2020.CSSL.CORNELL.OBS...	United States, New...				2020 greenhouse observations made at Cornell.
496683	GRAPE.PHENOLOGY.11	United States, New...				
496684	GRAPE.PHENOLOGY.12	United States, New...				

Morphological data, field observations. Yearly avg temp 71.01 F, high low 57.35 F, annual rainfall 126.7 inches, avg BP(in Hg) 29.39, avg so 75.7 F, avg RH 73.29%

Method Examples

Method ID	Name	Geography
495770	MAIZE INC.AMES.2016.PLANTING2	United States

Environment for inbred accessions grown in Ames during the summer of 2016. Planted 13-May-2016 in NCRPIS field W-2. This field was planted in 30 inch rows. On the average 40 seeds were planted per 25 ft row. First emergence was on 21-May-2016. Thinning was performed on 00-Jun-2016 to 25 plants per row. First pollinations across all Ames environments downy mildews were observed.</p>

Method – What's Required?

Method ID	Name	Geography	Elevation (meters)	Latitude	Longitude	Uncertainty	Formatted Locality	Georeference Datum	Georeference Protocol	Georeference Annotation	Material or Method Used	Study Reason
-1									[Null]			[Null]

- [Null]
- Disease
- Fingerprinting (genotyping)
- Genetic diversity
- Mapping
- Morphological
- Other
- Pests (Insects, etc.)
- Phenology
- Phylogenetics
- Regeneration
- Standard operation proced

Why 2 Crop “obs” Tables?

Data View Properties v1.23.1.26

Dataview Tab Name:

Dataview

Category: Area:

Dataview: Show All

- Crop
- Crop Attach
- Crop Trait
- Crop Trait Attach
- Crop Trait Code
- Crop Trait Code Attach
- Crop Trait Code Lang
- Crop Trait Lang
- Crop Trait Observation
- Crop Trait Observation Data

OK Cancel

Crop Trait Observation *Data*

Crop Trait Observation Data ID	Crop Trait Observation	Accession	Inventory	Individual	Crop	Crop Trait	Coded Value	Trait Code	Numeric Value	Text Value	Method
53	11451506	PI 700945	PI 700945 90ncab01 SD	5	MAIZE	NODES-ABOVE-EAR			6.00000		MAIZE.INC.AMES.2016.PLANTING2
63	11451515	PI 700947	PI 700947 90ncab01 SD	1	MAIZE	NODES-ABOVE-EAR			6.00000		MAIZE.INC.AMES.2016.PLANTING2
73	11451515	PI 700947	PI 700947 90ncab01 SD	2	MAIZE	NODES-ABOVE-EAR			6.00000		MAIZE.INC.AMES.2016.PLANTING2
83	11451515	PI 700947	PI 700947 90ncab01 SD	3	MAIZE	NODES-ABOVE-EAR			6.00000		MAIZE.INC.AMES.2016.PLANTING2
93	11451515	PI 700947	PI 700947 90ncab01 SD	4	MAIZE	NODES-ABOVE-EAR			7.00000		MAIZE.INC.AMES.2016.PLANTING2
103	11451515	PI 700947	PI 700947 90ncab01 SD	5	MAIZE	NODES-ABOVE-EAR			5.00000		MAIZE.INC.AMES.2016.PLANTING2
113	11451524	PI 700951	PI 700951 90ncab01 SD	1	MAIZE	NODES-ABOVE-EAR			5.00000		MAIZE.INC.AMES.2016.PLANTING2

Crop Trait Observation (summary)

The screenshot displays a software interface with a table of crop trait observations and a summary box. The table has columns for Crop Trait Observation ID, Accession, Inventory, Crop, and Crop Trait. A red box highlights the 'Get Crop Trait Observation' button in the top menu. The summary box on the right shows the Mean Value, Standard Deviation, and Sample Size for the selected data.

Crop Trait Observation ID	Accession	Inventory	Crop	Crop Trait
11451515	PI 700947	PI 700947 90ncab01 SD	MAIZE	NODES-ABO

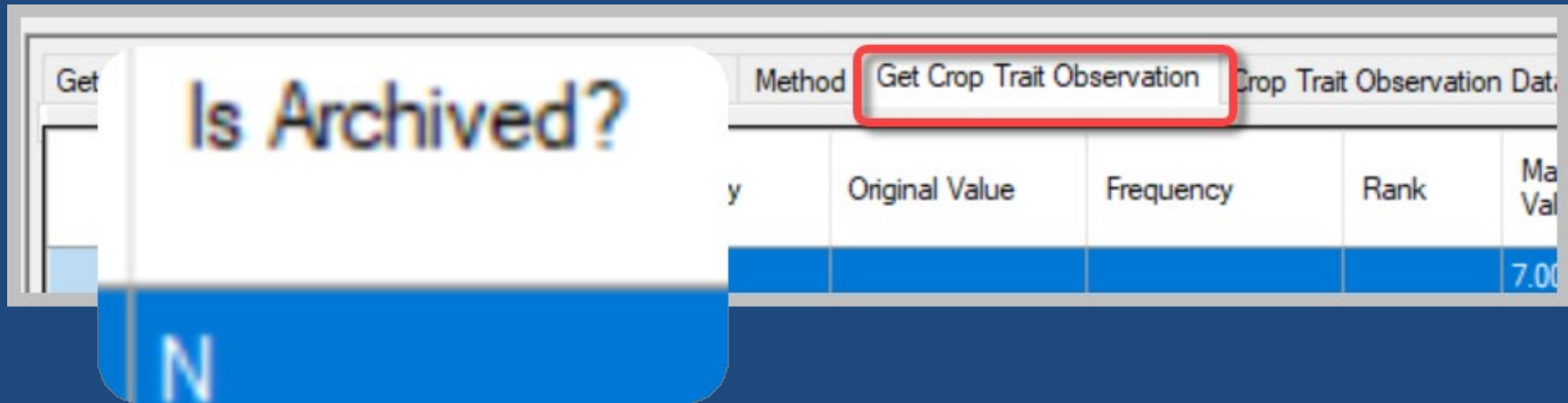
Mean Value	Standard Deviation	Sample Size
6.00000	0.70000	5

Quiz!

- What observation (“obs”) table does the PW use?

Quiz!

- What does the **Is Archived?** field signify?



The screenshot shows a software interface with a table. A red box highlights the text "Get Crop Trait Observation" in the "Method" column. A callout box with the text "Is Archived?" is overlaid on the left side of the table. Below the callout box is a blue bar with the letter "N".

Method	Get Crop Trait Observation	Crop Trait Observation Data		
y	Original Value	Frequency	Rank	Ma Val
				7.00

Learning about Descriptors

PW is a good place to start...

U.S. National Plant Germplasm System

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STRAWBERRY

Contains characteristic data on contact Kim.Hummer@usda.gov

[Descriptors](#) [Species](#)

Corvallis Clonal Repository Home

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STRAWBERRY

Descriptors

Category: CHEMICAL

1. [pH \(pH\)](#) pH READING OF THE FRUIT
2. [Sugar Acid Ratio](#) (Sugar:Acid Ratio (SS:TA)) Ratio of soluble solids to titratable acidity (SS:TA)
3. [TITRATABLE ACIDITY](#) (Titratable Acidity) TITRATABLE ACIDITY MEASURED IN MEQ PER 100 GRAMS OF FRESH WEIGHT.
4. [Total anthocyanin mg/100 ml](#) (Total anthocyanin mg/100 ml) Anthocyanin concentration mg/100ml
5. [TOTAL SOLUBLE SOLIDS](#) (Total Soluble Solids) TOTAL SOLUBLE SOLIDS MEASURED BY REFRACTOMETRY


Category: CYTOLOGIC

1. [DNA Ratio](#) (DNARATIO) Flow cytometry measurement of the ratio of the amount of sample DNA to the amount of DNA
2. [Ploidy](#) (PLOIDY) Number of sets of chromosomes. Example: 2x
3. [Ploidy Equation](#) (PLOIDYEQUA) Equation of the ploidy of the plant. Example $2n = 2x = YY$

Learning about Descriptors

PW is a good place to start...

Descriptor: Ploidy Equation (PLOIDYEQUA)

 Download list of accessions evaluated for this trait

Definition:	Equation of the ploidy of the plant. Example $2n = 2x = YY$
Crop:	STRAWBERRY
Category:	Cytological or cellular descriptors
Status:	
Data Type:	Alpha/numeric descriptor
Maximum Length:	30
Responsible Site:	Natl. Germplasm Repository - Corvallis (COR)

Text values

Example: Strawberries: Ploidy Equation

Text: Strawberries: Ploidy Equation

Search Results

Add To Query Clear Query

Limit: 1000 Page Size: 1000

Get Crop Trait Observation Get Crop Trait Observation Data Get Order Request Phyto Log Get Method Crop Trait ...

Crop Trait Observation ID	Accession	Inventory	Crop	Crop Trait	Coded Value	Trait Code	Numeric Value	Mean Value	Text Value	Method
972503	PI 551406	CFRA 23 .001 PL	STRAWBERRY	PLOIDYEQUA					2n = 8x...	2007.CYTOLOGY
972504	PI 551507	CFRA 479 .001 PL	STRAWBERRY	PLOIDYEQUA					2n = 2x...	2007.CYTOLOGY
972506	PI 551528	CFRA 117 .001 PL	STRAWBERRY	PLOIDYEQUA					2n = 6x...	2007.CYTOLOGY
▶ 972507	PI 551549	CFRA 151 .001 PL	STRAWBERRY	PLOIDYEQUA					2n = 6x...	2007.CYTOLOGY
< 972508	PI 551570	CFRA 202 .001 PL	STRAWBERRY	PLOIDYEQUA					2n = 2x...	2007.CYTOLOGY

Text: Strawberries: Ploidy Equation

Search Results

Add To Query Clear Query

Limit: 1000 Page Size: 1000

Get Crop Trait Observation Get Crop Trait Observation Data Get Order Request Phyto Log Get Method Crop Trait ...

Crop Trait Observation ID	Accession	Coded	Trait	Numeric	Mean Value	Text Value	Method
972503	PI 551406					2n = 8x...	2007.CYTOLOGY
972504	PI 551507					2n = 2x...	2007.CYTOLOGY
972506	PI 551528					2n = 6x...	2007.CYTOLOGY
972507	PI 551549					2n = 6x...	2007.CYTOLOGY
972508	PI 551570					2n = 2x...	2007.CYTOLOGY

Ploidy Equation

Number of accessions (45)

Equal to

$2n = 10x = 70$

$2n = 2x = 14$

$2n = 4x = 28$

$2n = 5x = 35$

Numeric values

- The Data Type must use “*Numeric descriptor*”

	Inventory	Accessions	Crop Trait	Get Code Value	Get Order Request	Get Cooperator	Method	Get Crop Trait Obs
	Trait Title	Trait Description	Is Peer Reviewed?	Category	Data Type	Is Coded		
	COLORING AT T...	Coloring at the base of the	<input checked="" type="checkbox"/>	Morphological de...	Alpha/numeric descriptor	<input type="checkbox"/>		
			<input type="checkbox"/>	[Null]	Alpha/numeric descript	<input type="checkbox"/>		

Alpha/numeric descript

Alpha/numeric descriptor

Lowercase character desc

Numeric descriptor

Uppercase character desc

Coded Traits (example)

FLOWER COLOR

Number of accessions (6)

Equal to

1=White

2=Yellow

3=Orange

POD SHAPE

Number of accessions (6871)

Equal to

1=Vulgaris

2=Fastigiata

3=Peruviana

4=Hypogaea

MATURITY

Number of accessions (4618)

Equal to

... to be continued ...