

# Crops, Descriptors, & Observations

NordGen Webinar Series  
Session 4 – March 6, 2024

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# Sessions

Session	Topic	Lecture/Demo	QA
1	Introduction / Overview	05 Dec. 2023	12 Dec. 2023
2	Creating Ancillary (Related) Records and Standards	10 Jan. 2024	17 Jan. 2024
3	GG requirements for Establishing Crops, Traits, and Coded Values in GG	24 Jan. 2024	31 Jan. 2024
<b>4</b>	<b>How GG crop tables interrelate</b>	<b>06 Mar. 2024</b>	13 Mar. 2024
5	Recording Observation records in GG	20 Mar. 2024	27 Mar. 2024
6	Using GG's features to search on and report on the data	17 Apr. 2024	24 Apr. 2024
7	Review of Crops and Descriptors	01 May. 2024	08 May. 2024
8	NordGen's Crop Methods and Projects Mapping and Start-Up (Taught by NordGen)	15 May. 2024	

# Today

## How GG crop tables interrelate – Session 4

- Create *Crop* Descriptors for each type and examine the pros and cons:
  - Text values
  - Numeric values
  - Coded values
- Descriptor Subsets: Core / Images / Other
- Setting up Traits for languages other than English ( --> Session 5)

- Method
- Crop
- Crop Mapping – Taxonomy Species Map
- Trait
- Code
- Language table:  
Trait Language and Code Language
- Attachments tables: Crop, Trait

GG  
Terminology

5 main dataviews to be defined:

Crop...

Crop Trait...

Crop Trait Language...

Crop Trait Code...

Crop Trait Code Language...

# CROP Table Records

	Crop ID	Crop	Note	Created Date	Created By
▶	86	PEANUTS	Contains characteristic/evaluation data on Peanut (Arachis) accessions as proposed by the Peanut Crop Germplasm Committee. For additional information, contact Shyam Tallury at the Plant Genetic Resources Conservation Unit, Griffin, GA 30223. Phone: (770) 229-3255. Email: Shyam.Tallury@ars.usda.gov.	8/4/1994 8:09 AM	Sinnott, Quinn

Get Site | Accessions | Inventory | Orders | Cooperators | Get Crop Trait Observation | **Get Crop** | Get Crop Attach | Get Crop Trait | Crop Trait Lang | Get Crop Trait Code

Column Chooser

- Select/Deselect
- Crop ID
- Crop
- Note
- Created Date
- Created By
- Modified Date
- Modified By
- Owned Date
- Owned By

Other Options

# CROP Trait Records

4 required fields

Title & Description defined later (in Lang)

Get Accession	Get Inventory	Crop	Get Crop Trait Observation	Get Crop Trait	Crop Trait Lang	Crop Trait Code	Crop Trait Code Lang	Crop Attach	Crop T
Crop Trait ID	Crop	Trait Name	Trait Title	Trait Description	Is Peer Reviewed?	Category	Data Type	Is Coded?	Maximum Length
-1	ELDERBERRY	LEAFCOLOR			<input checked="" type="checkbox"/>	Morphologi...	Alpha/numeric ...	<input checked="" type="checkbox"/>	1
-2					<input type="checkbox"/>	[Null]	[Null]	<input type="checkbox"/>	

field_title	max_length	field_type
Trait Name	30	STRING

# Crop Descriptors - Categories

Group Name	Value	Language	Title	Description
DESCRIPTOR_CATEGORY	CHEMICAL	English	Chemical composition descriptors	Chemical composition descriptors
DESCRIPTOR_CATEGORY	COMMENT	English	General information	General information
DESCRIPTOR_CATEGORY	CYTOLOGIC	English	Cytological or cellular descriptors	Including chromosome no., etc.
DESCRIPTOR_CATEGORY	DISEASE	English	Disease descriptors	Including bacteria, fungi, mycoplasmas, viruses, etc.
DESCRIPTOR_CATEGORY	FLWR-FRUIT	English	Inflorescence and fruit descriptors	Inflorescence and fruit descriptors
DESCRIPTOR_CATEGORY	GENSTOCK	English	Genetic stock descriptors	Genetic stock descriptors
DESCRIPTOR_CATEGORY	GROWTH	English	Growth descriptors	(Heights, Habits, Vigor, etc.
DESCRIPTOR_CATEGORY	INSECT	English	Insect descriptors	Insect descriptors
DESCRIPTOR_CATEGORY	MOLECULAR	English	Molecular descriptors	Including Isozyme, RFLP, RAPD, etc.
DESCRIPTOR_CATEGORY	MORPHOLOGY	English	Morphological descriptors	Including flower, fruit, leaf, seed and other morphological characteristics
DESCRIPTOR_CATEGORY	NEMATODE	English	Nematode descriptors	Nematode descriptors
DESCRIPTOR_CATEGORY	OTHER	English	Uncategorized descriptors	Uncategorized descriptors
DESCRIPTOR_CATEGORY	PHENOLOGY	English	Phenological descriptors	Phenological descriptors
DESCRIPTOR_CATEGORY	PHYSIOLOGY	English	Physiology descriptors	Physiology descriptors
DESCRIPTOR_CATEGORY	PRODUCTION	English	Production descriptors	Including yield, 100 seed weight and other descriptors related to production
DESCRIPTOR_CATEGORY	QUALITY	English	Quality descriptors	Including Beta Glucan content, etc.
DESCRIPTOR_CATEGORY	ROOT	English	Root Descriptors	Root Descriptors
DESCRIPTOR_CATEGORY	ROOTSTOCK	English	Rootstock descriptors	Rootstock descriptors
DESCRIPTOR_CATEGORY	STRESS	English	Environmental stress descriptors	Including drought, salt, heat, cold, etc.
DESCRIPTOR_CATEGORY	TAXONOMIC	English	Taxonomic descriptors (e.g. race)	Taxonomic descriptors (e.g. race)
DESCRIPTOR_CATEGORY	SUBSET	English	A subset of a collection	A subset of a collection



🔵 Step 2 – Choose descriptor(s)

Clear All

Select Values

+ Choose all      ✕ Remove all

## Chemical composition descriptors

- |   |   |
|---|---|
| <input type="checkbox"/> Arachidate (20:0)  | <input type="checkbox"/> Linoleate (18:2) |
| <input type="checkbox"/> Behenate (22:0)    | <input type="checkbox"/> Oil Percentage   |
| <input type="checkbox"/> Eicosenoate (20:1) | <input type="checkbox"/> Oleate (18:1)    |
| <input type="checkbox"/> Epoxy esters       | <input type="checkbox"/> Palmitate (16:0) |
| <input type="checkbox"/> Lignocerate (24:0) | <input type="checkbox"/> Stearate (18:0)  |

+ Choose all      ✕ Remove all

## Disease descriptors

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> LEAFSPOT | <input type="checkbox"/> TOMATO SPOTTED WILT |
|-----------------------------------|--|

+ Choose all      ✕ Remove all

## Growth descriptors

- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| <input type="checkbox"/> GROWTH HABIT | <input type="checkbox"/> PLANT SIZE |
|---------------------------------------|-------------------------------------|

PW Crop  
Descriptors  
page  
(partial)

Category	Data Type	Is Coded?	Maximum Length
Categorized d...	Alpha/numeric descriptor	<input type="checkbox"/>	
Phological de...	Numeric descriptor	<input type="checkbox"/>	
Phological de...	Numeric descriptor	<input checked="" type="checkbox"/>	
Phological de...	Numeric descriptor	<input checked="" type="checkbox"/>	
Phological de...	Numeric descriptor	<input type="checkbox"/>	
Phological de...	Numeric descriptor	<input type="checkbox"/>	
ase descript...	Alpha/numeric descriptor	<input type="checkbox"/>	
]	Alpha/numeric descriptor	<input type="checkbox"/>	
	Alpha/numeric descriptor		
	Lowercase character descriptor		
	Numeric descriptor		
	Uppercase character descriptor		

## Data Type

Select from the lookup

Observations can be ...

- Text
- Numeric
- Coded

But the 3  
types are...

***mutually  
exclusive***

<b>Value type</b>	<b>Field: Data Type</b>	<b>Field: Is Coded?</b>
text ("string")	Alpha/numeric descriptor	- no -
numeric	Numeric descriptor	- no -
coded	Can be any <b>Data Type</b> , but Numeric is recommended	- yes -

When defining the trait,  
two fields determine the  
data type:



# The trait's Data Type and Code fields determine observation type

Crop Trait ID	Crop	Trait Name	Trait Title	Trait Description	Is Peer Reviewed	Category	Data Type	Is Coded?	Maximum Length	Number of Observations
375965	ELDERB...	ELDERNOTATI...	Notes	Field notes	<input type="checkbox"/>	General information	Alpha/numeric descriptor	<input type="checkbox"/>		
375966	ELDERB...	ELHEIGHT	Height (m)	Ht measured at center stem	<input type="checkbox"/>	Morphological descriptors	Numeric descriptor	<input type="checkbox"/>	5	#.#
375967	ELDERB...	BERRYCOLOR	Bery color	Dominant color of the berries	<input type="checkbox"/>	Morphological descriptors	Alpha/numeric descriptor	<input checked="" type="checkbox"/>	1	
-4					<input type="checkbox"/>	[Null]	[Null]	<input type="checkbox"/>		

Data Type	Is Coded?
Alpha/numeric descriptor	<input type="checkbox"/>
Numeric descriptor	<input type="checkbox"/>
Alpha/numeric descriptor	<input checked="" type="checkbox"/>

Request Action	Order Request Item	Order Request	Crop Trait	Crop Trait Lang	Crop Trait Observation	Taxonomy Species	Web Order Request	Sys Dataview Field Lang	Web Cooperator
sweet-clover	comment								
Crop	Trait Name	Trait Title	Trait Description			Is Peer Reviewed?	Category	Data Type	Is Coded?
SWEET-CLOVER	COMMENT					Y	General information	Alpha/numeric descriptor	N

ator	Order Request Action	Order Request Item	Order Request	Crop Trait	Crop Trait Lang	Crop Trait Observation	Taxonomy Species	Web Order Request	Sys Data
Crop Trait Lang ID	Crop	Crop Trait	Language	Trait Title	Trait Description				
4127	SWEET-CLOVER	COMMENT	English	COMMENT	Casual observations made by cooperators or curators while evaluating or regenerating gemplasm. Usually these observations are not published and need verification.				

## Text Example

Trait Title	Trait Description
COMMENT	Casual observations made by cooperators or curators while evaluating or regenerating gemplasm. Usually these observations are not published and need verification.

## COMMENT

Number of accessions (6)

Equal to

Distinctive growth form

Erect

Low coumarin (but un-verified)

Seeds oval and purple

Sweet  
Clover  
example

Text  
Example

Request Action	Order Request Item	Order Request	Crop Trait	Crop Trait Lang	Crop Trait Observation	Taxonomy Species	Web Order Request	Sys Dataview Field Lang	Web Cooperator	Coop
		sweet-clover	comment							
Accession	Inventory	Crop	Crop Trait	Coded Value	Trait Code	Numeric Value	Is Archived	Text Value	Method	Data Q
PI 172434	PI 172434 4...	SWEET-CLOVER	COMMENT				N	Distinctive growth form	AMA.MEL.1994.BIENNIALS.FIELD	
PI 698359	PI 698359 9...	SWEET-CLOVER	COMMENT				N	TAX M. dentatus	AMA.MEL.2011.TRANSPLANTED.TO...	
Ames 26342	Ames 26342...	SWEET-CLOVER	COMMENT				N	Erect	AMA.MEL.2011.TRANSPLANTED.TO...	
PI 662296	PI 662296 0...	SWEET-CLOVER	COMMENT				N	Sunken spots on seeds	AMARANTH.AMES.2006.FIELD	
PI 698362	PI 698362 0...	SWEET-CLOVER	COMMENT				N	Seeds oval and purple	AMA.MEL.2008.BIENNIALS.FIELD	
PI 662298	PI 662298 **	SWEET-CLOVER	COMMENT				N	Low coumarin (but un-verified)	AMA.INFORMATION	



## CURD WIDTH

Number of accessions (244)

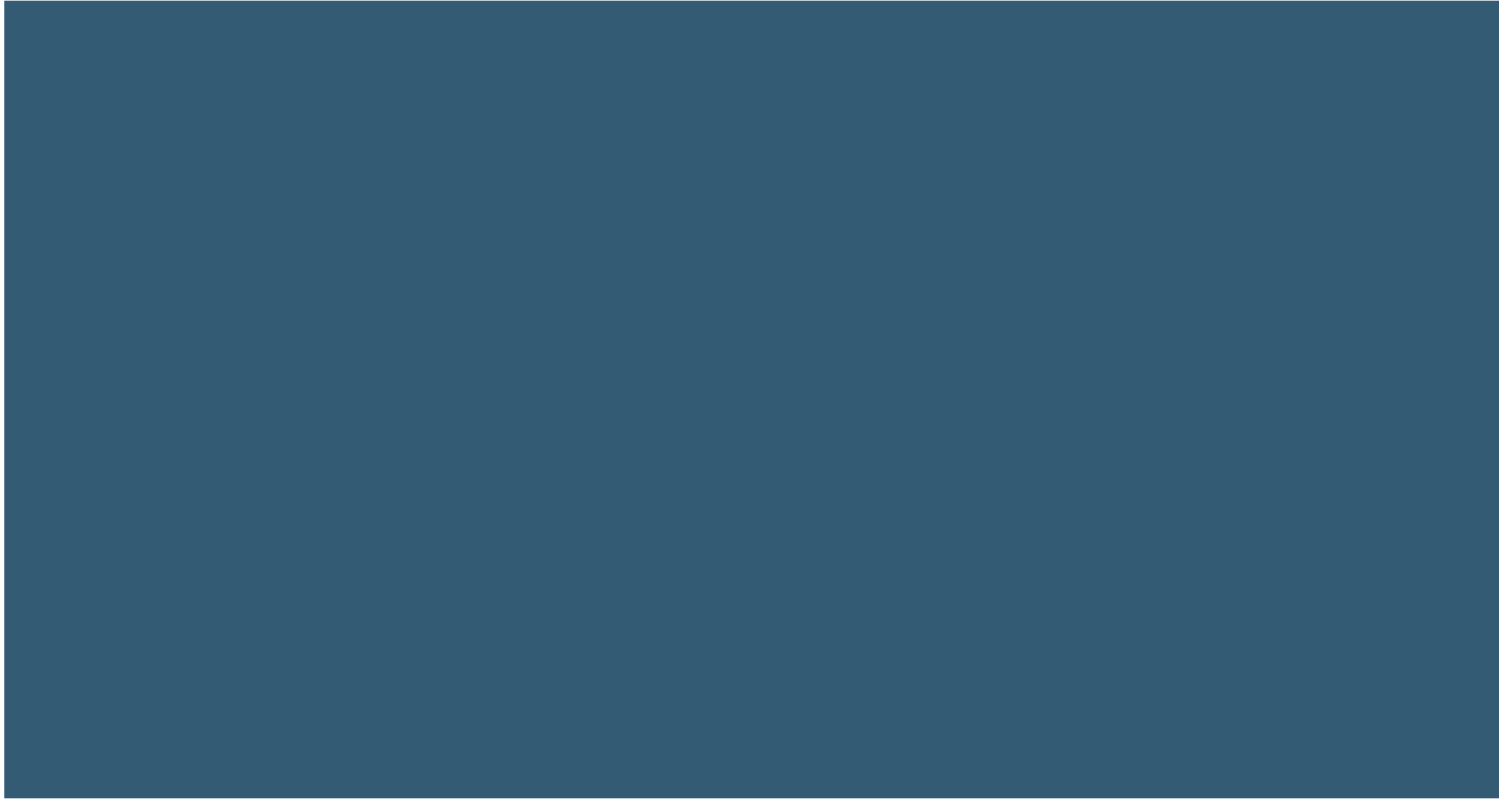
Equal to

9  
10  
10.1  
10.2

Brassica  
example

Numeric  
Example

Crop	Crop Trait Code	Crop Trait Code Lang	Crop Trait Observation	Crop Trait	Crop Trait Lang	Taxonomy	Crop Map	Method	Method Attach	Accession Citation	Accession ID
Crop Trait Observation ID	Accession	Inventory	Crop	Crop Trait	Coded Value	Trait Code	Numeric Value	Text Value	Method	Is Archived?	
1615454	PI 462213	PI 462213 **	BRASSICA	CURD WIDTH			10.00000		NE9.BRASSICA.82	N	
1615455	PI 462214	PI 462214 **	BRASSICA	CURD WIDTH			10.00000		NE9.BRASSICA.82	N	
1615395	G 26086	G 26086 **	BRASSICA	CURD WIDTH			10.10000		NE9.BRASSICA.81	N	
1615396	G 26092	G 26092 **	BRASSICA	CURD WIDTH			10.20000		NE9.BRASSICA.81	N	
1615295	G 22283	G 22283 **	BRASSICA	CURD WIDTH			11.00000		NE9.BRASSICA.72	N	
1615296	G 22284	G 22284 **	BRASSICA	CURD WIDTH			11.00000		NE9.BRASSICA.72	N	



+ Choose all    × Remove all

## Morphological descriptors

- Beak Length in Millimeters
- CURD DEPTH
- CURD PROTECTION
- CURD QUALITY
- CURD WIDTH
- DEFOLIATION
- DELIA\_FIRST\_CRACK
- Flower Color
- LEAF HAIR
- LEAF SHAPE-NE9
- MIDVEIN LEAF COLOR
- Seed Color
- Silique Attitude
- Silique Length in Centim
- Locules Per Silique
- Seeds Per Silique

CURD WIDTH MEASURED IN CENTIMETERS

### Distribution of Values for CURD WIDTH (CURDWIDTH)

Range	Number of Accessions
1.3 - 4.8	8
4.8 - 8.2	26
8.2 - 11.7	31
11.7 - 15.2	64
15.2 - 18.7	55
18.7 - 22.1	34
22.1 - 25.6	20
25.6 - 29.1	4
29.1 - 32.5	1
32.5 - 36	1

# Numeric Example

When the entire set is selected by the descriptor name

- We will discuss in a bit!
- ...remind me!

## Numeric Formats

Crop	Crop Trait Code	Crop Trait Code Lang	Crop Trait Observation	Crop Trait	Crop Trait Lang	Taxonomy	Crop Map	Method	Method Attach	Accession Citation	Accession IPR	
Crop Trait ID	Crop	Trait Name	Is Peer Reviewed	Category	Data Type	Is Coded?	Maximum Length	Numeric Format	Numeric Maximum	Numeric Minimum	Original Value Type	
▶ 138008	BRASSICA	CURDWIDTH	Y	Morphological descriptors	Numeric descriptor	N	6	##0.#				

## Ear Shape

Number of accessions (8248)

Equal to

1=CYLINDRICAL

2=CYLINDRICAL - CONICAL

3=CONICAL

4=ROUND

## Coded Example

Use a scale of codes –  
designed *specifically* for  
the trait

## Harvest Maturity

Number of accessions (11)

Harvest maturity- Season of maturity for picking

Equal to

5=Intermediate (Redhaven, Maria Aurelia)

6=Intermediate/Late (Cresthaven, Nectared 4)

7=Late (Fillette, Nectared 6)

8=Very late (Summerqueen, Golden State)

Coded Trait  
example

Crop **Crop Trait Code** Crop Trait Code Lang Crop Trait Observation Crop Trait Crop Trait Lang Taxonomy Crop Map

	Crop Trait Code ID	Crop	Trait Name	Crop Trait	Trait Description	Trait Code
▶	26628	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	1
	26629	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	2
	26630	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	3
	26631	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	4
	26632	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	5
	26633	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	6
	26634	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	7
	26635	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	8
	26636	PEACH	FRTMATURITY	Harvest Maturity	Harvest maturity- Season of maturity for picking	9

Trait Code
1
2
3
4
5
6
7
8
9

Crop Crop Trait Code Crop Trait Code Lang Crop Trait Observation Crop Trait Crop Trait Lang Taxonomy Crop Map Method Method Attach Accession Citation Accession IPR

Crop Trait Code Lang ID	Crop	Crop Trait	Trait Name	Code Definition	Trait Title	Trait Descriptio	Language	Code Title	Co De
▶ 27121	PEACH	Harvest Maturity	FRTMATURITY	Extremely early (Maravilha, Sunred)	Harvest ...	Harvest	English	Extremely early (Maravilha, Sunred)	Extr
27122	PEACH	Harvest Maturity	FRTMATURITY	Very early (Tejon, Sunlight)	Harvest ...	Harvest	English	Very early (Tejon, Sunlight)	Very
27123	PEACH	Harvest Maturity	FRTMATURITY	Early (Springtime, Amking)	Harvest ...	Harvest	English	Early (Springtime, Amking)	Earl
27124	PEACH	Harvest Maturity	FRTMATURITY	Early/Intermediate (Flavorcrest, Maria Laura)	Harvest ...	Harvest	English	Early/Intermediate (Flavorcrest, Maria Laura)	Earl
27125	PEACH	Harvest Maturity	FRTMATURITY	Intermediate (Redhaven, Maria Aurelia)	Harvest ...	Harvest	English	Intermediate (Redhaven, Maria Aurelia)	Inter
27126	PEACH	Harvest Maturity	FRTMATURITY	Intermediate/Late (Cresthaven, Nectared 4)	Harvest ...	Harvest	English	Intermediate/Late (Cresthaven, Nectared 4)	Inter
27127	PEACH	Harvest Maturity	FRTMATURITY	Late (Fillette, Nectared 6)	Harvest ...	Harvest	English	Late (Fillette, Nectared 6)	Late
27128	PEACH	Harvest Maturity	FRTMATURITY	Very late (Summerqueen, Golden State)	Harvest ...	Harvest	English	Very late (Summerqueen, Golden State)	Very
27129	PEACH	Harvest Maturity	FRTMATURITY	Extremely late (Buttercup)	Harvest ...	Harvest	English	Extremely late (Buttercup)	Extr



# Coded values

Crop	Trait Name	Trait Title	Trait Description	Is Peer Reviewed?	Category	Data Type	Is Coded?	Maximum Length
MAIZE	EAR-SHAPE	Ear Shape	SHAPE OF THE UPPERMOST EAR	Y	Morphological descriptors	Alpha/numeric descriptor	Y	1

Crop Trait Code ID	Crop	Trait Name	Crop Trait	Trait Description	Trait Code	Code Title	Code Description
3956	MAIZE	EAR-SHAPE	Ear Shape	SHAPE OF THE UPPERMOST EAR	1	CYLINDRICAL	CYLINDRICAL
3957	MAIZE	EAR-SHAPE	Ear Shape	SHAPE OF THE UPPERMOST EAR	2	CYLINDRICAL - CONICAL	CYLINDRICAL - CONICAL
3958	MAIZE	EAR-SHAPE	Ear Shape	SHAPE OF THE UPPERMOST EAR	3	CONICAL	CONICAL
3959	MAIZE	EAR-SHAPE	Ear Shape	SHAPE OF THE UPPERMOST EAR	4	ROUND	ROUND
3960	MAIZE	EAR-SHAPE	Ear Shape	SHAPE OF THE UPPERMOST EAR	5	FASCIATED	FASCIATED

# Observations: 3 value types

Crop Trait Observation ID	Accession	Inventory	Crop	Crop Trait	Coded Value	Trait Code	Numeric Value	Text Value	Method	Sample Size
-1		1	2	3	5				4	

a data entry hurdle



# ...review the Crop Trait

Crop Trait ID	Crop	Trait Name	Trait Title	Is Peer Reviewed?	Category	Data Type	Is Coded?	Maximum Length
86058	PEANUTS	ARACHIDATE	Arachidate (20:0)	N	Chemical composition de...	Numeric descriptor	N	6
86059	PEANUTS	BEHENATE	Behenate (22:0)	N	Chemical composition de...	Numeric descriptor	N	6
86033	PEANUTS	CLUSTERNO	CORE CLUSTER NU...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	2
86038	PEANUTS	COUNTRYDES	CORE COUNTRY DE...	N	Uncategorized descriptors	Alpha/numenc descri...	Y	3
86039	PEANUTS	CORENO	CORE NUMBER	N	Uncategorized descriptors	Alpha/numeric descri...	N	6
86040	PEANUTS	CORESET	CORE SET PROCED...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	1
86041	PEANUTS	CORE	CORE SUBSET	Y	A subset of a collection	Alpha/numeric descri...	Y	1
86060	PEANUTS	ICOSENOATE	icosenoate (20:1)	N	Chemical composition de	Numeric descriptor	N	6

## CORE NUMBER

Number of accessions (831)

Equal to



CC001

CC002

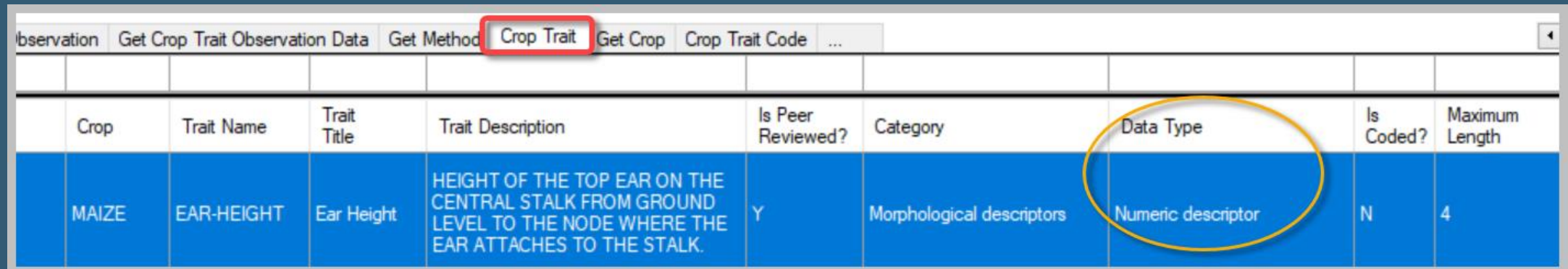
CC003

CC004

Text

# Defining a trait: *Numeric* values

The Data Type must use “*Numeric descriptor*”



Crop	Trait Name	Trait Title	Trait Description	Is Peer Reviewed?	Category	Data Type	Is Coded?	Maximum Length
MAIZE	EAR-HEIGHT	Ear Height	HEIGHT OF THE TOP EAR ON THE CENTRAL STALK FROM GROUND LEVEL TO THE NODE WHERE THE EAR ATTACHES TO THE STALK.	Y	Morphological descriptors	Numeric descriptor	N	4

Behenate (22:0)

Number of accessions (727)

Equal to



1.83

1.97

2

2.17

Numeric

Get Site | Accessions | Inventory | Orders | Cooperators | Get Crop Trait | **Get Crop Trait** | Crop Trait Lang | Get Crop Trait Code | Crop Trait Code Lang

Crop Trait ID	Crop	Trait Name	Trait Title	Is Peer Reviewed?	Category	Data Type	Is Coded?	Maximum Length
86058	PEANUTS	ARACHIDATE	Arachidate (20:0)	N	Chemical composition de...	Numeric descriptor	N	6
86059	PEANUTS	BEHENATE	Behenate (22:0)	N	Chemical composition de...	Numeric descriptor	N	6
86032	PEANUTS	CLUSTERNO	CORE CLUSTER NU...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	2
86038	PEANUTS	COUNTRYDES	CORE COUNTRY DE...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	3
86039	PEANUTS	CORENO	CORE NUMBER	N	Uncategorized descriptors	Alpha/numeric descri...	N	6
86040	PEANUTS	CORESET	CORE SET PROCED...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	1
86041	PEANUTS	CORE	CORE SUBSET	Y	A subset of a collection	Alpha/numeric descri...	Y	1
86060	PEANUTS	FICOSENOATE	Ficosenoate (20:1)	N	Chemical composition de	Numeric descriptor	N	6



# Coded values

## Ear Shape

Number of accessions (8248)

Equal to

1=CYLINDRICAL

2=CYLINDRICAL - CONICAL

3=CONICAL

4=ROUND

Use a scale of codes –  
designed *specifically* for the trait

Get Site | Accessions | Inventory | Orders | Cooperators | Get Crop Trait Obrop Attach | **Get Crop Trait** | Crop Trait Lang | Get Crop Trait Code | Crop Trait Code Lang

Crop Trait ID	Crop	Trait Name	Trait Title	Is Peer Reviewed?	Category	Data Type	Is Coded?	Maximum Length
▶ 86058	PEANUTS	ARACHIDATE	Arachidate (20:0)	N	Chemical composition de...	Numeric descriptor	N	6
86059	PEANUTS	BEHENATE	Behenate (22:0)	N	Chemical composition de...	Numeric descriptor	N	6
86033	PEANUTS	CLUSTERNO	CORE CLUSTER NU...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	2
86038	PEANUTS	COUNTRYDES	CORE COUNTRY DE...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	3
86039	PEANUTS	CORENO	CORE NUMBER	N	Uncategorized descriptors	Alpha/numeric descri...	N	6
86040	PEANUTS	CORESET	CORE SET PROCED...	N	Uncategorized descriptors	Alpha/numeric descri...	Y	1
86041	PEANUTS	CORE	CORE SUBSET	Y	A subset of a collection	Alpha/numeric descri...	Y	1
86060	PEANUTS	FICOSENOATE	Eicosenoate (20:1)	N	Chemical composition de...	Numeric descriptor	N	6

# Collection Subsets

## CORE SUBSET

Number of accessions (831)

Equal to



Y=YES, ACCESSION IS PART OF THE CORE

## CORE SUBSET

Number of accessions (831)

Equal to



Y=YES, ACCESSION IS PART OF THE CORE

## MINI\_CORE SUBSET

Number of accessions (112)

Equal to



Y=Yes, accession is part of the mini core

Peanuts  
2 collection  
subsets

# Codes

Crop Trait Code ID	Crop	Trait Name	Crop Trait	Trait Description	Trait Code	Code Title	Code Description	Created Date
11730	PEANUTS	PODTYPE	POD TYPE	U.S. pod market type	1			
11731	PEANUTS	PODTYPE	POD TYPE	U.S. pod market type	2			
11732	PEANUTS	PODTYPE	POD TYPE	U.S. pod market type	3			
11733	PEANUTS	PODTYPE	POD TYPE	U.S. pod market type	4			
11734	PEANUTS	PODTYPE	POD TYPE	U.S. pod market type	5			

# Crop Trait Code Lang

	Crop Trait Code Lang ID	Crop	Crop Trait	Trait Name	Code Definition	Trait Title	Trait Description	Language	Code Title	Code Description	Created
	11730	PEANUTS	POD TYPE	PODTYPE	Spanish	POD TYPE	U.S. pod market type	English	Spanish	Spanish	3/22/
	11731	PEANUTS	POD TYPE	PODTYPE	Valencia	POD TYPE	U.S. pod market type	English	Valencia	Valencia	3/22/
	11732	PEANUTS	POD TYPE	PODTYPE	Runner	POD TYPE	U.S. pod market type	English	Runner	Runner	3/22/
	11733	PEANUTS	POD TYPE	PODTYPE	Virginia	POD TYPE	U.S. pod market type	English	Virginia	Virginia	3/22/
▶	11734	PEANUTS	POD TYPE	PODTYPE	Mixed	POD TYPE	U.S. pod market type	English	Mixed	Mixed	3/22/

# Numeric Formats

4 fields control numeric format

Category	Data Type	Is Coded?	Maximum Length	Numeric Format	Numeric Maximum	Numeric Minimum	Original Value Type
Morphological descr...	Numeric descriptor	N	4	##0			

# Maximums and minimums

- ... exactly what you think they are



**FORMAT SPECIFIER****NAME****DESCRIPTION****EXAMPLES****"0"**

Zero placeholder

Each zero placeholder is replaced with the corresponding digit when present; otherwise, zero displays

1234.5678 ("00000") ->  
012350.45678 ("0.00")  
-> 0.46**"#"**

Digit placeholder

Replaces the "#" symbol with the corresponding digit when present; otherwise, no digit displays.

1234.5678 ("#####")  
-> 1235

0003 ("#####") -&gt; 3

No digit displays if the corresponding digit in the input string is a non-significant 0.

0.45678 ("#.###")  
-> .46**"."**

Decimal point

Determines the location of the decimal separator in the result string.

0.45678 ("0.00", en-US)  
-> 0.46

# Numeric Format

More information:  
[The "0" Custom Specifier.](#)

# Monarda

## FIRST FLOWER DATE

Number of accessions (19)

Equal to



5/20/2021

5/27/2021

6/1/2021

6/14/2021

## LAST FLOWER DATE

Number of accessions (19)

Equal to



6/16/2021

6/17/2021

6/19/2021

6/23/2021

# Walnut example

Harvest date

Number of accessions (20)

Equal to



10/03/88

10/04/88

10/06/88

10/08/88

**Walnut  
example**

# Hazelnut

## INCOMPATIBILITY ALLELES

Number of accessions (42)

Equal to



1D ?R

1D 2R

1D 11R

1D 14D

**Hazelnut  
example**

# Cucurbita example

IMAGE/PICTURE1

Number of accessions (15)

Equal to



FRUIT

SEED

**Cucurbita  
example**

# Work together...

	A	B	C	D	E	F	G	H	I
1	Crop Trait	Crop	Trait Name	Trait Title	Trait Description	Is Peer Reviewer	Category	Data Type	Is Code
32	246099	POTENTILLA	100SEEDWGT	100 SEED WEIGHT	Weight of 100 seeds in grams	Y	Morphological descriptors	Numeric descrip	N
33	249028	CALENDULA	100SEEDWGT	100 SEED WEIGHT	Weight of 100 seeds measured in grams.	Y	Production descriptors	Numeric descrip	N
34	258001	PRUNELLA	100SEEDWGT	100 Seed Weight	Weight of 100 seeds measured in grams	Y	Production descriptors	Numeric descrip	N
35	259001	MEDICINALS-NC7	100SEEDWGT	100 Seed Weight	Weight of 100 seeds measured in grams	Y	Production descriptors	Numeric descrip	N
36	291003	PORTULACA	100SEEDWGT	HUNDRED SEED WEIGHT	The weight in grams of 100 seeds.	N	Production descriptors	Numeric descrip	N
37	306001	BRASSICACEAE-NC7MISC	100SEEDWGT	100 Seed Weight	Weight in grams of 100 seeds	N	Production descriptors	Numeric descrip	N
38	308067	MONARDA	100SEEDWGT	100 Seed Weight	Weight of 100 seeds measured in grams	Y	Production descriptors	Numeric descrip	N
39	310001	ORIGANUM	100SEEDWGT	100 Seed Weight	Weight of 50 seeds measured in grams	Y	Production descriptors	Numeric descrip	N
40	375415	ASTERS-NC7MISC	100SEEDWGT	100 Seed Weight	Weight in grams of 100 seeds	N	Production descriptors	Numeric descrip	N
41	375416	EUPHORBIA	100SEEDWGT	100 Seed Weight	Weight in grams of 100 seeds	N	Production descriptors	Numeric descrip	N
42	310340	WOODY-LANDSCAPE	100SEEDWT	HUNDRED SEED WEIGHT	The weight in grams of 100 seeds	N	Production descriptors	Numeric descrip	N

# Homework

Prepare an Excel workbook w/ several spreadsheet tabs:

- Traits (Descriptors)
- Codes for some traits

# Other References

- USDA's Descriptors on GG:  
<https://npgsweb.ars-grin.gov/gringlobal/descriptors>
- Refer to [http://rrginc.com/gg\\_training/](http://rrginc.com/gg_training/) for links to the webinar's presentations (PDFs) and other links



