

Crops, Descriptors, & Observations

NordGen Webinar Series
Session 6 – April 17, 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
4	How GG crop tables interrelate	06 Mar. 2024	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 (Teached by NordGen)	15 May. 2024	

Today

Using GG to search on and report the data – Session 6

- Review / Questions?
- Searching in the CT / ST
- Trait Wizard
- Searching in the PW
 - Descriptors
 - Observations
- PW Reports
- Writing SQL queries

CT: Set up (Crop or Trait) Lists

StNick Crops

Crops Root Folder

- _00_empty
- 00_class_crops
 - Apple
 - Banana
 - Clematis
 - ELDERBERRY
 - Hemerocallis
 - IRIS
 - MAR-ELDER
 - Phlox
 - Primula
 - Rosa
 - Syringa
 - Tulip

Crop ID	Crop	Note	Create
286	IRIS	Collected in Kalmar län.	4/8/2
285	Primula	Old cultivars	4/7/2
284	Hemerocallis	H. fulva, H.	4/7/2
283	Phlox	Phlox paniculata	4/7/2
281	Rosa		3/20/
282	Syringa		3/20/
280	Clematis		3/20/
279	Banana	dainis test	3/13/
277	MAR-ELDER	Native S. nigra	3/11/
276	Tulip	Tulip in Swedish National Gene Bank.	3/7/2
275	Apple	Contains characteristic data on Apple	3/5/2
274	ELDERBERRY	Contains characteristic data on Elderb...	2/6/2

Trait Titles (review)

All trait should have corresponding English Titles and Descriptions

Crop Trait ID	Crop	Trait Name	Trait Title	Trait Description
1641	Primula	PLT HEIGHT		

Visual clue that Title is missing

Trait Wizard

- Optional to CT – must be installed on PC
- Good for *adding/editing* traits, codes and their respective titles and descriptions
- Attachments – not recommended (yet)
- Not fully documented

Searching on the PW

- Descriptors section
- But also Observations on Results

Reports (on PW)

Must be logged in
(only staff accounts can access this report)

Select a report using either the list of all reports, or find by category.

All Reports

Reports by Category

Reset Reports

List of all reports

Crop Traits and Codes

Information in the crop trait and crop trait code dataviews related to crop descriptors.

Name	Value
Crop_Name	ELDERBERRY

SQL

List Traits for a Crop

```
SELECT crop.name AS Crop, ct.coded_name  
FROM crop  
    JOIN crop_trait ct  
        ON crop.crop_id = ct.crop_id
```

/* remove the following two lines to see all traits; as is,
there must be observations recorded for the trait */

```
    JOIN crop_trait_observation cto  
        ON ct.crop_trait_id = cto.crop_trait_id
```

/* Remove comments and edit red text for a specific crop:

```
WHERE crop.name = 'Alfalfa'
```

```
*/
```

```
GROUP BY crop.name, ct.coded_name  
ORDER BY crop.name, ct.coded_name
```

```
SELECT crop.name AS Crop, ct.coded_name  
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        ON crop.crop_id = ct.crop_id
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```

```
/* Remove comments and edit red text for a specific crop:
```

```
WHERE crop.name = 'Alfalfa'
```

```
*/
```

```
GROUP BY crop.name, ct.coded_name
```

```
ORDER BY crop.name, ct.coded_name
```

SQL Tips

- Use the Search Tool to start
- Add a line in the beginning of the search text:
`--dumpsql`
- Use the online SQL references

--dumpsql example

The screenshot shows a search engine interface with a query window and a search results table. The query window contains the following text:

```
--dumpsql  
@crop.name = 'elderberry' AND @crop_trait.coded_name LIKE '%'
```

Below the query window is a section labeled "Search Results" with an "Add To Query" button. Underneath is a "Get Sys Dataview Field List" button and a table with the following structure:

	Crop Trait ID

An error dialog box titled "Search Engine Error v1.23.1.26" is overlaid on the interface. The error message reads:

There was an unexpected error searching for data.

Full error message:
The Search Engine prepared this SQL statement:

```
SELECT DISTINCT crop_trait.crop_trait_id FROM crop_trait  
INNER JOIN crop ON crop.crop_id = crop_trait.crop_id  
WHERE  
crop.name = :param1 AND crop_trait.coded_name LIKE  
:param2
```

An "OK" button is located at the bottom right of the error dialog.

SQL tip

SQL Is picky

'inventory'

Only select queries are allowed

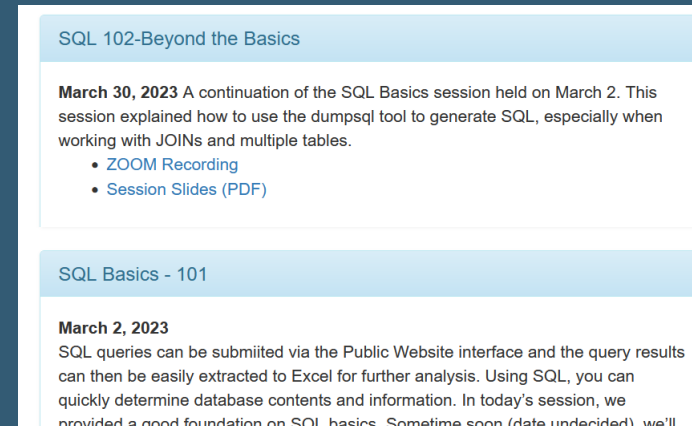
SQL Error: Unclosed quotation mark after the character string 'inventory' order by table_name, ordinal_position'. Incorrect syntax near 'inventory' order by table_name, ordinal_position'.

```
Information_schema
SELECT table_name, column_name, data_type,
character_maximum_length
FROM information_schema.columns
/* to see all tables, omit the WHERE clause */
WHERE table_name = 'inventory'
```

Save SQL

References On GG Project Site

- Two online Q &A's on SQL on GG Training page
- Guides and Excel maps online at https://www.grin-global.org/sql_examples.htm



SQL 102-Beyond the Basics

March 30, 2023 A continuation of the SQL Basics session held on March 2. This session explained how to use the dumpsql tool to generate SQL, especially when working with JOINS and multiple tables.

- [ZOOM Recording](#)
- [Session Slides \(PDF\)](#)

SQL Basics - 101

March 2, 2023

SQL queries can be submitted via the Public Website interface and the query results can then be easily extracted to Excel for further analysis. Using SQL, you can quickly determine database contents and information. In today's session, we provided a good foundation on SQL basics. Sometime soon (date undecided) we'll



https://www.grin-global.org/sql_examples.htm

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 Library: SQL for the Public Website

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/ for links to the webinar's presentations (PDFs) and other links