

Importing Custom Data



CSV

Why Import New Data?

- This function is a useful tool when analyzing your data because you can add new parameters to your data set after you have finished taking MultispeQ measurements.
- For example; you can add yield or disease data, or concentration of a chemical of interest in a leaf.
- By using this function, you can directly compare PhotosynQ data to other data through the online platform.

How to add data

- Go to the homepage of your project that you want to add data to on [PhotosynQ.org](https://photosynq.org)
- Select **options** on the left side of the page and then click on **Import Data** from the drop down menu.

The screenshot displays the PhotosynQ.org interface for a project titled 'MSU Tree sampling Greg vs Dan'. On the left sidebar, the 'Options' button is circled in red. A red arrow points from this button to a dropdown menu on the right. This menu contains several options: 'Protocols', 'Questions', 'Locations', 'Description', 'Review', 'Settings', and 'Import Data'. The 'Import Data' option is also circled in red. Below the menu, a 'Research' button is visible. The main content area shows the 'Overview' section with a 'Summary' of the 'Leaf Photosynthesis MultispeQ V1.0' protocol, listing various measured parameters like chlorophyll fluorescence, relative chlorophyll, and environmental conditions. The 'Description' section provides a link to a YouTube video for more information.

Options

- Protocols
- Questions
- Locations
- Description
- Review
- Settings
- Import Data**

Research

Overview

MSU Tree sampling Greg vs Dan

Protocols

Leaf Photosynthesis MultispeQ V1.0

Summary

Measures many photosynthesis-related parameters in <15 seconds, including:

- Chlorophyll Fluorescence: Phi2, PhiNPQ, PhiNO, NPQt, qL, LEF
- Relative Chlorophyll: SPAD
- Proton Motive Force: ECSt, vH+, gH+
- Absorbance at: 450, 535, 605, 650, 730, 850, 880, and 940nm.
- Leaf Thickness (in mm), angle, and cardinal direction
- Leaf Temperature and differential from ambient temperature
- Environmental conditions: PAR and ambient temperature/pressure/humidity

Description

It's not practical to fully describe what all of these measurements mean here. If you want to learn more, a good place to start is this video: <https://www.youtube.com/watch?v=pU5vOtE1wE8> . Check the PhotosynQ youtube channel for other videos explaining photosynthesis and related parameters.

Questions

How to add data

You will be taken to a page that looks like the photo below.
Follow these three steps...

1) Click **Download Spreadsheet**

This will automatically download the current .csv file for the project

Import Additional Data

Step 1

Download the spreadsheet to enter your additional data.

Download Spreadsheet

Step 2

Add additional columns into the spreadsheet for your data. The header will be the parameter name on PhotosynQ later on.

D	E	F
Crop	Plot	Yield [tons/ha]
Wheat	A1	1.5
Wheat	A2	
Maize	A3	
Maize	A4	

Do not remove or modify the **id** or **time** column!

Step 3

Upload the spreadsheet once you are done with adding your data.

Upload Spreadsheet

Adding New Information to a Project CSV

	A	B	C	D	E	F	G
1	id	time	Tree #	Species	Leaf Position	fruit number	season
2	272768	2016-05-16 16:	1	Cherry	Exposed	193	summer
3	273702	2016-05-19 18:	20	Apple	Shade	70	spring
4	273703	2016-05-19 18:	20	Apple	Exposed	69	spring
5	273704	2016-05-19 18:	20	Apple	Shade	68	summer
6	273705	2016-05-19 18:	19	Apple	Shade	67	summer
7	273706	2016-05-19 18:	19	Apple	Shade	66	summer
8	273707	2016-05-19 18:	19	Apple	Exposed	65	summer
9	273708	2016-05-19 18:	19	Apple	Exposed	64	spring
10	273709	2016-05-19 18:	18	Apple	Shade	218	summer
11	273710	2016-05-19 18:	18	Apple	Shade	195	autumn
12	273711	2016-05-19 18:	18	Apple	Exposed	63	spring
13	273712	2016-05-19 18:	18	Apple	Exposed	62	spring
14	273713	2016-05-19 18:	17	Apple	Exposed	61	spring
15	273714	2016-05-19 18:	17	Apple	Exposed	60	autumn
16	273715	2016-05-19 18:	17	Apple	Shade	59	autumn
17	273716	2016-05-19 18:	17	Apple	Shade	58	autumn
18	273717	2016-05-19 18:	16	Apple	Exposed	57	autumn
19	273718	2016-05-19 18:	16	Apple	Exposed	56	autumn
20	273719	2016-05-19 18:	16	Apple	Shade	217	spring
21	273720	2016-05-19 18:	16	Apple	Shade	55	autumn
22	273721	2016-05-19 18:	15	Apple	Exposed	54	autumn
23	273722	2016-05-19 18:	15	Apple	Exposed	53	autumn
24	273723	2016-05-19 18:	15	Apple	Shade	52	spring
25	273724	2016-05-19 18:	15	Apple	Shade	51	spring
26	273725	2016-05-19 18:	14	Apple	Exposed	50	spring
27	273726	2016-05-19 18:	14	Apple	Shade	192	spring
28	273727	2016-05-19 18:	14	Apple	Shade	216	autumn
29	273728	2016-05-19 18:	14	Apple	Shade	49	spring
30	273729	2016-05-19 18:	13	Apple	Exposed	48	summer
31	273730	2016-05-19 18:	13	Apple	Shade	47	summer
32	273731	2016-05-19 18:	13	Apple	Exposed	46	summer

2)

You can add new columns of information you wish to add to the data set.

In this example, we added two new columns. One that is expressed in numbers, and one that is expressed in words.

It can contain any information pertinent to your project. It can reflect disease rating, yield (e.g. tons/ha), season, etc.

DO NOT remove the ID or the Time columns that are already present in the .csv

Step 3

Upload the spreadsheet once you are done with adding your data.

Upload Spreadsheet

Import Completed!

We have imported 2 new columns. Below is a preview of the first 10 rows.

#	fruit number	season
1	193	summer
2	70	spring
3	69	spring
4	68	summer
5	67	summer
6	66	summer
7	65	summer
8	64	spring
9	218	summer
10	195	autumn

Back to Data Import

Project Home

Explore Data

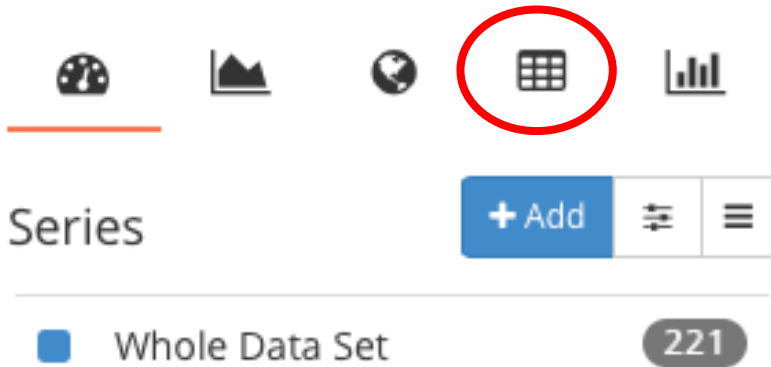
3)

When your .csv file is ready, save it to your computer and then select the **Upload Spreadsheet** button under Step 3.

When your file has finished uploading a preview of the columns that you have added should appear.

Now select **Explore Data** so you can view all of the data points.

Viewing Imported Data

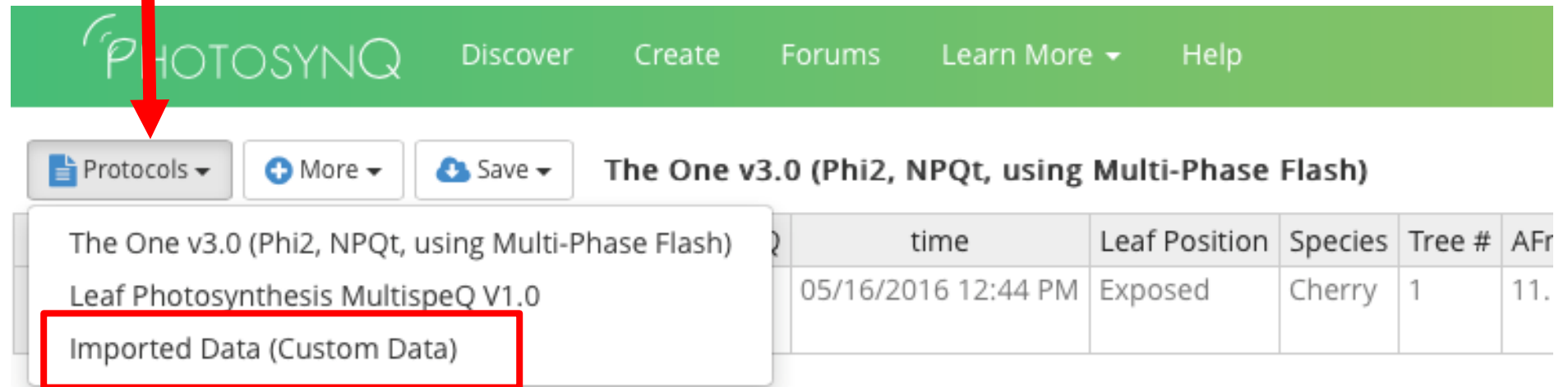


After clicking **Explore Data**, select the spreadsheet icon in the upper right corner in the tool bar, above the series selection. (see left photo).

Selecting the icon will load your whole data set.

i Series are filtered subsets of the *project's* dataset

Next, select **Protocols** in the upper left hand corner, and then select **Imported Data** in the drop down box.



You will now be able to see all of the data from your PhotosynQ protocol and custom data in the spreadsheet view.

You can click on individual header bars to sort by the ID or other variables.

Protocols

More

Save

Imported Data (Custom Data)

	ID	Series	Repeat	Leaf Position	Species	fruit number	season
1	272768	Whole Data Set	1	Exposed	Cherry	193	summer
2	273702	Whole Data Set	1	Shade	Apple	70	spring
3	273703	Whole Data Set	1	Exposed	Apple	69	spring
4	273704	Whole Data Set	1	Shade	Apple	68	summer
5	273705	Whole Data Set	1	Shade	Apple	67	summer
6	273706	Whole Data Set	1	Shade	Apple	66	summer
7	273707	Whole Data Set	1	Exposed	Apple	65	summer
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12	273712	Whole Data Set	1	Exposed	Apple	62	spring
13	273713	Whole Data Set	1	Exposed	Apple	61	spring
14	273714	Whole Data Set	1	Exposed	Apple	60	autumn
15	273715	Whole Data Set	1	Shade	Apple	59	autumn
16	273716	Whole Data Set	1	Shade	Apple	58	autumn
17	273717	Whole Data Set	1	Exposed	Apple	57	autumn
18	273718	Whole Data Set	1	Exposed	Apple	56	autumn
19	273719	Whole Data Set	1	Shade	Apple	217	spring
20	273720	Whole Data Set	1	Shade	Apple	55	autumn
21	273721	Whole Data Set	1	Exposed	Apple	54	autumn
22	273722	Whole Data Set	1	Exposed	Apple	53	autumn

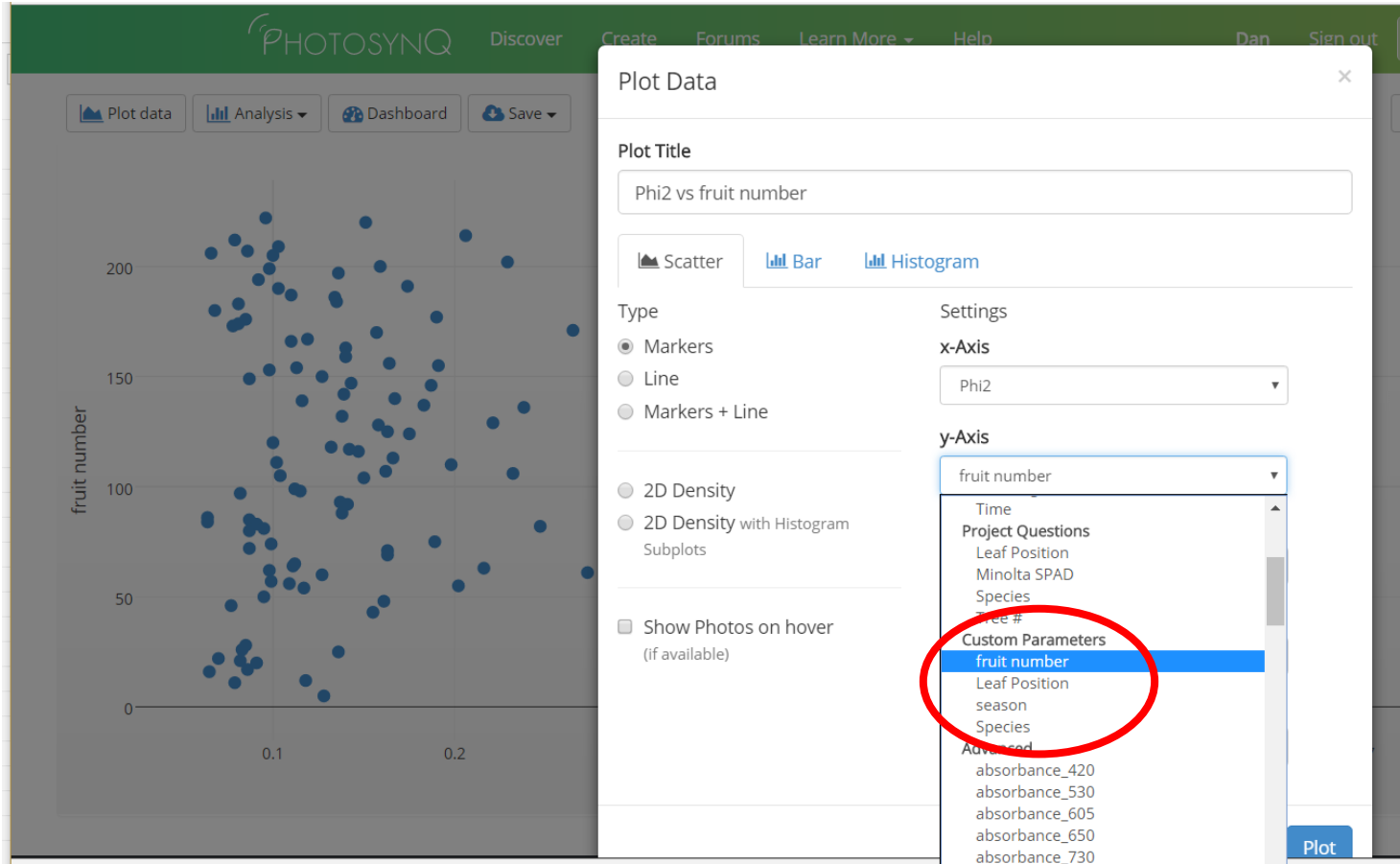
Graphing your Data

In the tool bar on the upper right corner, select the graphing tool.

When the graphing page opens, select the **Plot Data** in the upper left hand corner.



i Series are filtered subsets of the
project's dataset



Your new parameters will be available under the **Custom Parameters** heading in the dropdown menu

Note: You can only graph custom parameters that are numerical

In this example, we were able to graph the MultispeQ parameter Phi2 against fruit number, which was collected later in the season and added has custom data

