

Joining Widgets



Joining Widgets

Relate data from different Topics

Location	Crop	Source	Year	Yield
Brazil	Corn	USDA	2022	5.5
Brazil	Corn	USDA	2021	4.37
Brazil	Soybeans	USDA	2022	3.06
Brazil	Soybeans	USDA	2021	3.56

Location	Source	Year	Month	Precipitation
Brazil	CHIRPS	2022	Feb	208
Brazil	CHIRPS	2021	Feb	210

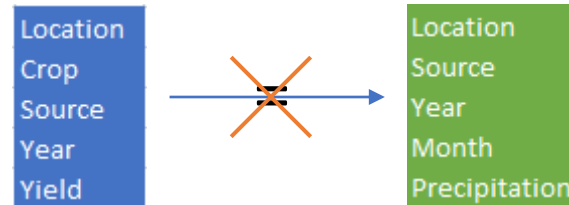
I want to compare Yields with February Precipitation



When Joining; Join Variables determine how Join works

Location	Crop	Source	Year	Yield
Brazil	Corn	USDA	2022	5.5
Brazil	Corn	USDA	2021	4.37
Brazil	Soybeans	USDA	2022	3.06
Brazil	Soybeans	USDA	2021	3.56

Location	Source	Year	Month	Precipitation
Brazil	CHIRPS	2022	Feb	208
Brazil	CHIRPS	2021	Feb	210



If no attributes are selected to Join on, every row from the first table will “join” with every row from the second table – E.g. below

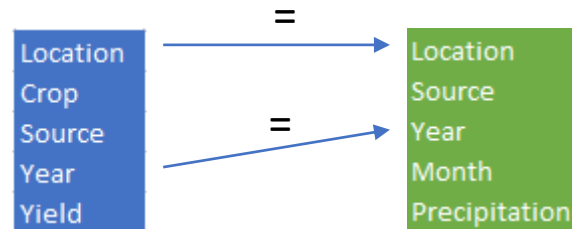
Location	Crop	Source	Year	Yield	Location	Source	Year	Month	Precipitation
Brazil	Corn	USDA	2022	5.5	Brazil	CHIRPS	2022	Feb	208
Brazil	Corn	USDA	2022	5.5	Brazil	CHIRPS	2021	Feb	210
Brazil	Corn	USDA	2021	4.37	Brazil	CHIRPS	2022	Feb	208
Brazil	Corn	USDA	2021	4.37	Brazil	CHIRPS	2021	Feb	210
Brazil	Soybeans	USDA	2022	3.06	Brazil	CHIRPS	2022	Feb	208
Brazil	Soybeans	USDA	2022	3.06	Brazil	CHIRPS	2021	Feb	210
Brazil	Soybeans	USDA	2021	3.56	Brazil	CHIRPS	2022	Feb	208
Brazil	Soybeans	USDA	2021	3.56	Brazil	CHIRPS	2021	Feb	210

This is not helpful because we get redundant columns (e.g. Location from both tables) and irrelevant rows (e.g. compare 2022 yield with 2021 precipitation)

Select attributes to Join on

Location	Crop	Source	Year	Yield
Brazil	Corn	USDA	2022	5.5
Brazil	Corn	USDA	2021	4.37
Brazil	Soybeans	USDA	2022	3.06
Brazil	Soybeans	USDA	2021	3.56

Location	Source	Year	Month	Precipitation
Brazil	CHIRPS	2022	Feb	208
Brazil	CHIRPS	2021	Feb	210



Note: We don't Join on Source because they Don't match

Location	Crop	Source	Year	Yield	Source	Month	Precipitation
Brazil	Corn	USDA	2022	5.5	CHIRPS	Feb	208
Brazil	Corn	USDA	2021	4.37	CHIRPS	Feb	210
Brazil	Soybeans	USDA	2022	3.06	CHIRPS	Feb	208
Brazil	Soybeans	USDA	2021	3.56	CHIRPS	Feb	210

Now we get the rows lined up and I can directly compare Yield and Precipitation

How to Join in CropSignal?

Add widgets you want to join to a dashboard

Then click the Join button on the Dashboard Toolbar

examples



Eligible widgets for Joining will have a checkbox appear in top-left
Check the box

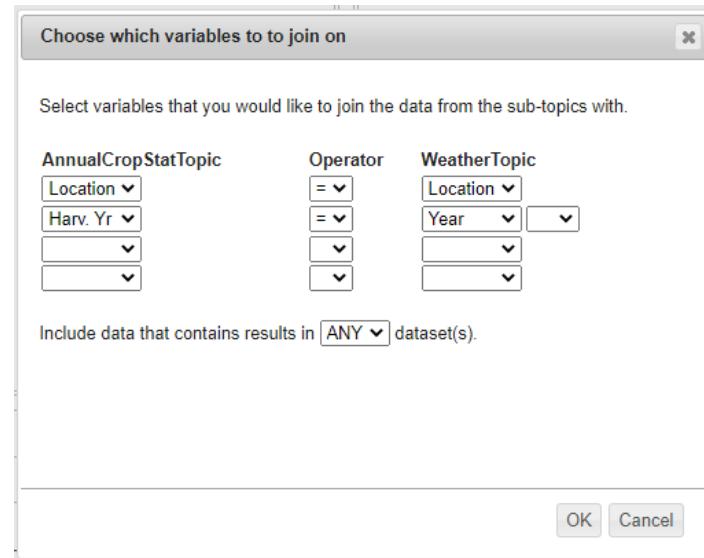
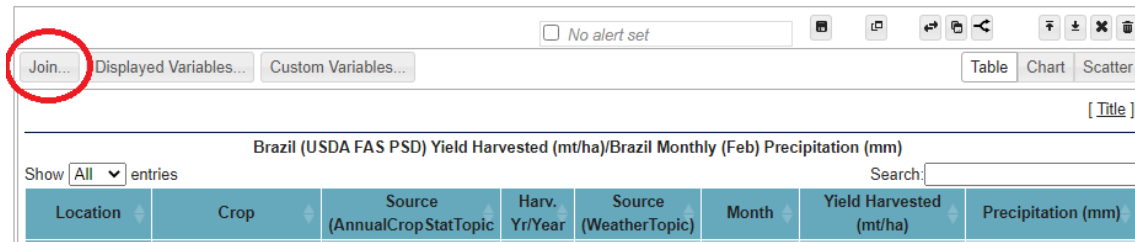
Add to Join Widget

Check this box for two widgets to Join and Dashboard will refresh to new Join widget
System will attempt to select appropriate Join attributes

Once Joined, the source widgets are independent of the Join widget and can be removed without affecting the Join widget

How to edit Join attributes in Join Widget

Join widgets have a Join Dialog box button



What about rows that don't have a match?

Location	Crop	Source	Year	Yield
Brazil	Corn	USDA	2022	5.5
Brazil	Corn	USDA	2021	4.37
Brazil	Soybeans	USDA	2022	3.06
Brazil	Soybeans	USDA	2021	3.56

Does not
have match
in first table

Location	Source	Year	Month	Precipitation
Brazil	CHIRPS	2022	Feb	208
Brazil	CHIRPS	2021	Feb	210
Brazil	CHIRPS	2020	Feb	222

Choose which variables to join on

Select variables that you would like to join the data from the sub-topics with.

AnnualCropStatTopic	Operator	WeatherTopic
Location	=	Location
Harv. Yr	=	Year

Include data that contains results from **ANY** dataset(s).

OK Cancel

ANY or ALL

Include data from ANY datasets

Location	Crop	Source	Year	Yield	Source	Month	Precipitation
Brazil	Corn	USDA	2022	5.5	CHIRPS	Feb	208
Brazil	Corn	USDA	2021	4.37	CHIRPS	Feb	210
Brazil	Soybeans	USDA	2022	3.06	CHIRPS	Feb	208
Brazil	Soybeans	USDA	2021	3.56	CHIRPS	Feb	210
Brazil			2020		CHIRPS	Feb	222

Include data from ALL datasets

Location	Crop	Source	Year	Yield	Source	Month	Precipitation
Brazil	Corn	USDA	2022	5.5	CHIRPS	Feb	208
Brazil	Corn	USDA	2021	4.37	CHIRPS	Feb	210
Brazil	Soybeans	USDA	2022	3.06	CHIRPS	Feb	208
Brazil	Soybeans	USDA	2021	3.56	CHIRPS	Feb	210

What's the catch?

Not all widgets can be Joined

- Some un-joinable widgets can be fixed
- Some probably can't

- Prior to Joining, the input widgets need to be set correctly – at present only limited edits are available after joining
- Only two widgets can be joined
- Widgets must come from: Annual Crop Stats, Monthly Crop Stats, Crop Progress, GDA Crop NDVI or Weather topics

Year and Date formats must match between widgets

Market Split Year (e.g. 2020/21) can't Join
Calendar year (e.g. 2021)

YYYY-MM-DD date can't match an abbreviated format
E.g. (2022-02-01) and 'Feb'

What about mismatched years?

I want 2021 (Sep) precipitation to join with 2022 Harvest Year Yield

Location	Source	Year	Month	Precipitation
Brazil	CHIRPS	2021	Sep	163
Brazil	CHIRPS	2020	Sep	114
Brazil	CHIRPS	2019	Sep	128
Brazil	CHIRPS	2018	Sep	185
Brazil	CHIRPS	2017	Sep	156
Brazil	CHIRPS	2016	Sep	148
Brazil	CHIRPS	2015	Sep	134

Location	Crop	Source	Year	Yield
Brazil	Corn	USDA	2022	5.5
Brazil	Corn	USDA	2021	4.37
Brazil	Corn	USDA	2020	5.51
Brazil	Corn	USDA	2019	5.77
Brazil	Corn	USDA	2018	4.94
Brazil	Corn	USDA	2017	5.6
Brazil	Corn	USDA	2016	4.19
Brazil	Corn	USDA	2015	5.4

Choose which variables to to join on

Select variables that you would like to join the data from the sub-topics with.

WeatherTopic	Operator	AnnualCropStatTopic
Location	=	Location
Year	=	Harv. Yr

Include data that contains results in ALL dataset(s).

OK Cancel

Location	Crop	Source	Year	Yield	Year	Month	Precipitation
Brazil	Corn	USDA	2022	5.5	2021	Sep	163
Brazil	Corn	USDA	2021	4.37	2020	Sep	114
Brazil	Corn	USDA	2020	5.51	2019	Sep	128
Brazil	Corn	USDA	2019	5.77	2018	Sep	185
Brazil	Corn	USDA	2018	4.94	2017	Sep	156
Brazil	Corn	USDA	2017	5.6	2016	Sep	148
Brazil	Corn	USDA	2016	4.19	2015	Sep	134

What about mismatched dates?

Location	Crop	Source	Year	Date	% Planting Complete
Brazil	Soybeans	Safras & Mercado	2022	10/10/2021	4
Brazil	Soybeans	Safras & Mercado	2022	10/17/2021	10
Brazil	Soybeans	Safras & Mercado	2022	10/24/2021	21
Brazil	Soybeans	Safras & Mercado	2022	10/31/2021	36
Brazil	Soybeans	Safras & Mercado	2022	11/7/2021	51
Brazil	Soybeans	Safras & Mercado	2022	11/14/2021	65
Brazil	Soybeans	Safras & Mercado	2022	11/21/2021	78
Brazil	Soybeans	Safras & Mercado	2022	11/28/2021	84
Brazil	Soybeans	Safras & Mercado	2022	12/5/2021	91
Brazil	Soybeans	Safras & Mercado	2022	12/12/2021	94
Brazil	Soybeans	Safras & Mercado	2022	12/19/2021	97
Brazil	Soybeans	Safras & Mercado	2022	12/26/2021	98

Location	Source	Year	Date	Yield
Brazil	CONAB	2022	10/7/2021	3.53
Brazil	CONAB	2022	11/11/2021	3.53
Brazil	CONAB	2022	12/9/2021	3.54

Yields repeat for progress dates

Choose which variables to join on

Select variables that you would like to join the data from the sub-topics with.

CropProgressTopic	Operator	AnnualCropStatTopic
Period Ending	>	Report Date
Location	=	Location
Crop	=	Crop
Year	=	Harv. Yr

Include data that contains results in ANY dataset(s).

Highlighted widget is the primary table. Rows from the secondary table will attempt to be matched to primary table. Sub-annual records from the secondary table that are after the primary table may not appear.

OK Cancel

Location	Crop	Source	Year	Date	% Planting Complete	Date	Yield
Brazil	Soybeans	Safras & Mercado	2022	10/10/2021	4	10/7/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	10/17/2021	10	10/7/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	10/24/2021	21	10/7/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	10/31/2021	36	10/7/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	11/7/2021	51	10/7/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	11/14/2021	65	11/11/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	11/21/2021	78	11/11/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	11/28/2021	84	11/11/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	12/5/2021	91	11/11/2021	3.53
Brazil	Soybeans	Safras & Mercado	2022	12/12/2021	94	12/9/2021	3.54
Brazil	Soybeans	Safras & Mercado	2022	12/19/2021	97	12/9/2021	3.54
Brazil	Soybeans	Safras & Mercado	2022	12/26/2021	98	12/9/2021	3.54

How to change core settings of Join Widget?

At present, core settings of Joined widgets cannot be edited

However, Join widgets can be split back into it's core widgets which CAN be edited, pivoted, etc

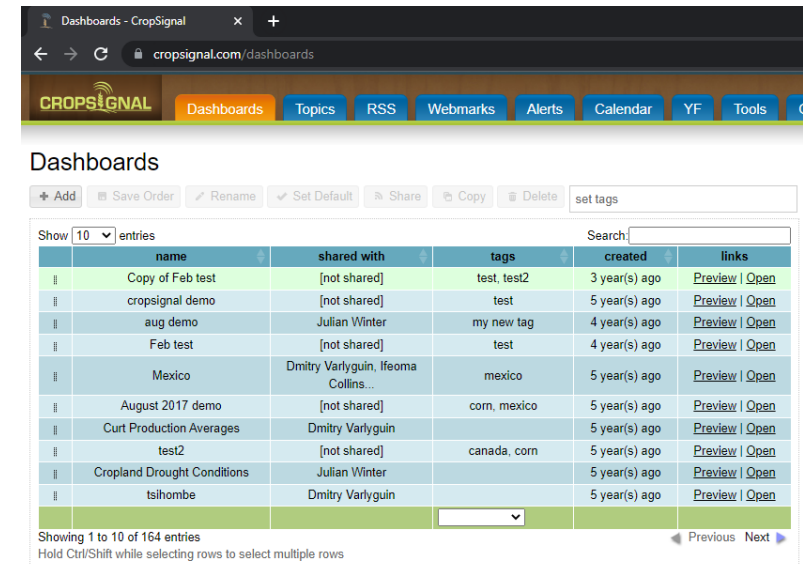


After editing, those widgets can be re-joined into a new Join widget

Example Dashboard of Join Widget candidates

Navigate to Dashboards → Dashboards Shared with Me and find “Join Widgets Examples”

Dashboard has pairs of widgets that can be joined



The screenshot shows the CropSignal Dashboards page. The header includes the CropSignal logo and navigation tabs for Dashboards, Topics, RSS, Webmarks, Alerts, Calendar, YF, Tools, and Geo. Below the header, there are action buttons: + Add, Save Order, Rename, Set Default, Share, Copy, and Delete. A search bar contains the text "set tags". The main content is a table with the following columns: name, shared with, tags, created, and links. The table lists 10 dashboard entries, including "Copy of Feb test", "cropsignal demo", "aug demo", "Feb test", "Mexico", "August 2017 demo", "Curt Production Averages", "test2", "Cropland Drought Conditions", and "tshombe".

name	shared with	tags	created	links
Copy of Feb test	[not shared]	test, test2	3 year(s) ago	Preview Open
cropsignal demo	[not shared]	test	5 year(s) ago	Preview Open
aug demo	Julian Winter	my new tag	4 year(s) ago	Preview Open
Feb test	[not shared]	test	4 year(s) ago	Preview Open
Mexico	Dmitry Varlyguin, Ifeoma Collins...	mexico	5 year(s) ago	Preview Open
August 2017 demo	[not shared]	corn, mexico	5 year(s) ago	Preview Open
Curt Production Averages	Dmitry Varlyguin		5 year(s) ago	Preview Open
test2	[not shared]	canada, corn	5 year(s) ago	Preview Open
Cropland Drought Conditions	Julian Winter		5 year(s) ago	Preview Open
tshombe	Dmitry Varlyguin		5 year(s) ago	Preview Open

Showing 1 to 10 of 164 entries
Hold Ctrl/Shift while selecting rows to select multiple rows

Dashboards shared with me



The screenshot shows the "Dashboards shared with me" page. It features action buttons: Copy to My Dashboards, Reshare dashboard, and Remove shared dashboards. A search bar is present. The main content is a table with the following columns: name, owner, editable, reshareable, shared, and links. The table lists 19 dashboard entries, including "Join Widgets Examples", "USDA AYP Chart examples", "USDA Weather Chart examples", "Malaysia MPOB Example", "February Showcase", "lachstock trade issue", "editable/shareable example", "read-only example", "jim crutchfield examples", and "India Planted Progress". The "Join Widgets Examples" entry is highlighted with a red box.

name	owner	editable	reshareable	shared	links
Join Widgets Examples	Crop Signal			2022-04-12 17:53:43	Preview Open
USDA AYP Chart examples	Crop Signal			2019-08-15 11:30:44	Preview Open
USDA Weather Chart examples	Crop Signal			2019-08-15 11:30:44	Preview Open
Malaysia MPOB Example	Julian Winter		Y	2019-02-11 15:40:19	Preview Open
February Showcase	Julian Winter		Y	2018-12-14 11:00:55	Preview Open
lachstock trade issue	Julian Winter		Y	2018-10-25 13:24:52	Preview Open
editable/shareable example	Julian Winter	Y	Y	2018-10-23 11:28:26	Preview Open
read-only example	Julian Winter			2018-10-23 11:28:07	Preview Open
jim crutchfield examples	Julian Winter	Y	Y	2018-09-27 13:25:15	Preview Open
India Planted Progress	Julian Winter			2018-07-31 10:22:46	Preview Open

Showing 1 to 10 of 19 entries
Hold Ctrl/Shift while selecting rows to select multiple rows