

It is not automatically possible to create a dot plot using Google Sheets. Instead consider making one by hand or using CODAP. In CODAP, create a new document if you do not have one. Select and copy the data you wish to use from Google Sheets.

	A	C	D	F	G	H
1	CZ_NAME_STR	BEGIN_DATE	BEGIN_TIME	Magnitude	DEATHS_DIRECT	INJURIES_DIRECT
2	ST. LOUIS			3	0	3
3	IRON CO.			2	0	5
4	PULASKI C			1	0	0
5	SHELBY C			1	0	0
6	MORGAN I			1	0	0
7	GREENE C			1	0	0
8	NODAWAY			1	0	0
9	PHELPS C			1	0	0

In CODAP, click “Tables” and choose “new from clipboard.”

codap.concord.org/app/static/dg/en/cert/ind

Untitled Document **UNSAVED**

Tables Graph Map Slider Calc Text Plugins

-- new from clipboard --

-- new --

Now that you have a table of data, click “Graph.”

codap.concord.org/app/static/dg/en/cert/index.html

Tornado Dot Plot **UNSAVED**

Tables Graph Map Slider Calc Text Plugins

Individual Tornadoes

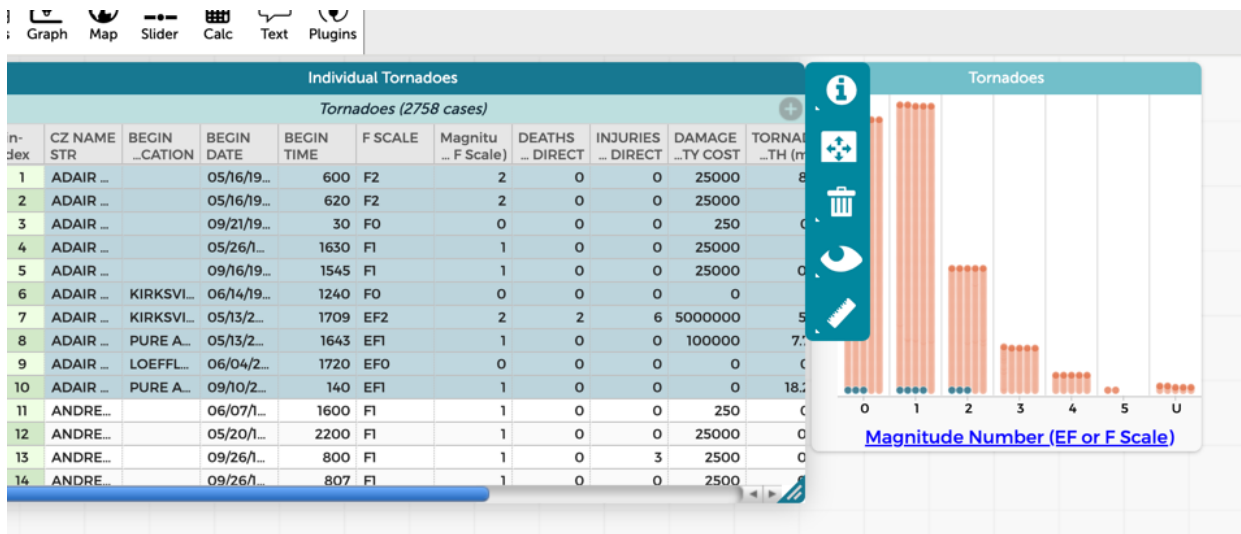
Tornadoes (2758 cases)

in- dex	CZ NAME STR	BEGIN ...CATION	BEGIN DATE	BEGIN TIME	F SCALE	Magnitu ... F Scale)	DEATHS ... DIRECT	INJURIES ... DIRECT	DAMAGE ...TY COST	TORN ...TH
1	ADAIR ...		05/16/19...	600	F2	2	0	0	25000	
2	ADAIR ...		05/16/19...	620	F2	2	0	0	25000	
3	ADAIR ...		09/21/19...	30	F0	0	0	0	250	
4	ADAIR ...		05/26/1...	1630	F1	1	0	0	25000	

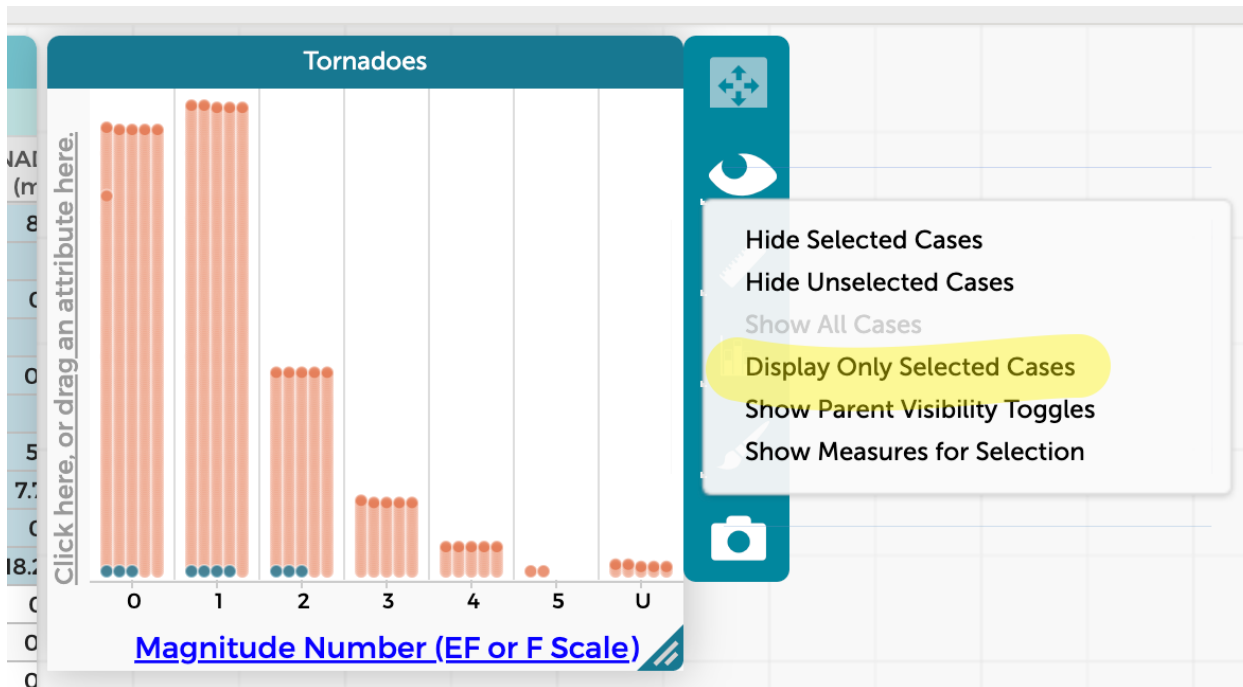
A graph will be inserted. Right now it just looks like a bunch of dots. Click below the x-axis and choose the variable you want to plot.



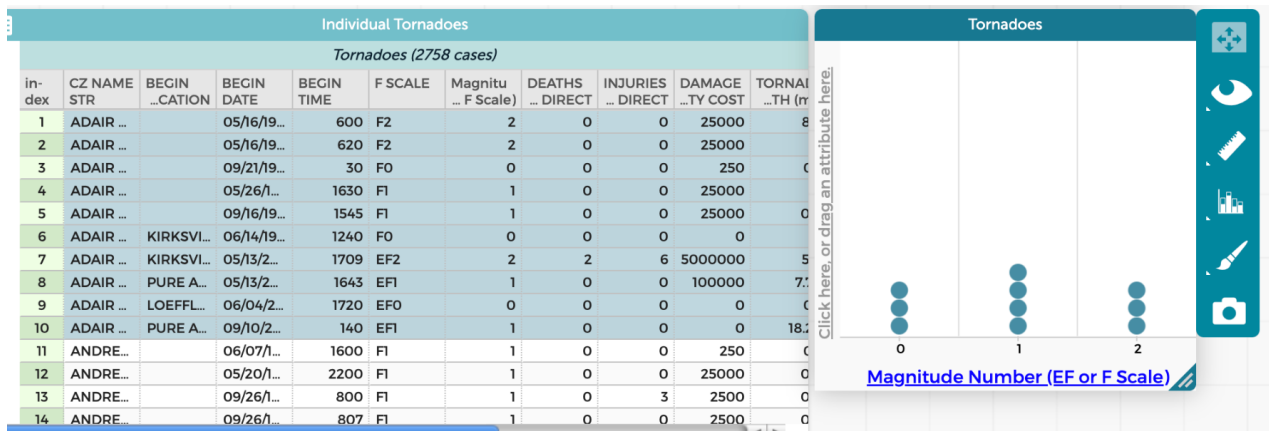
If you want to use a smaller subset of all the data, select the information you are interested in in your table. I am using Adair County.



Then click the graph, and choose the “eye” menu. Choose “Display Only Selected Cases.”



You should now have a reasonable dot plot.



Histograms

Highlight the column of data that you want to turn into a histogram. Choose the insert menu, then pick “Chart.”

Screenshot of Google Sheets showing the 'Insert' menu with 'Chart' highlighted. The spreadsheet data includes columns for TORNADO_WIDTH (ft) and TORNADO_LENGTH (mi).

	DIRECT	INJURIES_DIRECT	DAMAGE_PROPERTY	TORNADO_LENGTH (mi)	TORNADO_WIDTH (ft)
CO.	0	3	2500000	6.2	150
	0	5	250000	2.3	300
	0	0	2500	2.7	220
	0	0	2500	0.2	100
	0	0	250	1.5	440
	0	0	250	2	10
	0	0	2500	0.2	10
	0	0	2500	0	33
	0	1	250000	0.1	100
	0	0	25000	2.3	100
	0	0	250	2	440
RID CO.	0	1	25000	1	27
CO.	0	0	2500	4.5	100

Sheets will automatically insert a chart, but it will not be a histogram. In the chart editor setup, select “Column Chart.”

Screenshot of the Google Sheets Chart Editor showing 'Column chart' selected in the 'Chart type' dropdown.

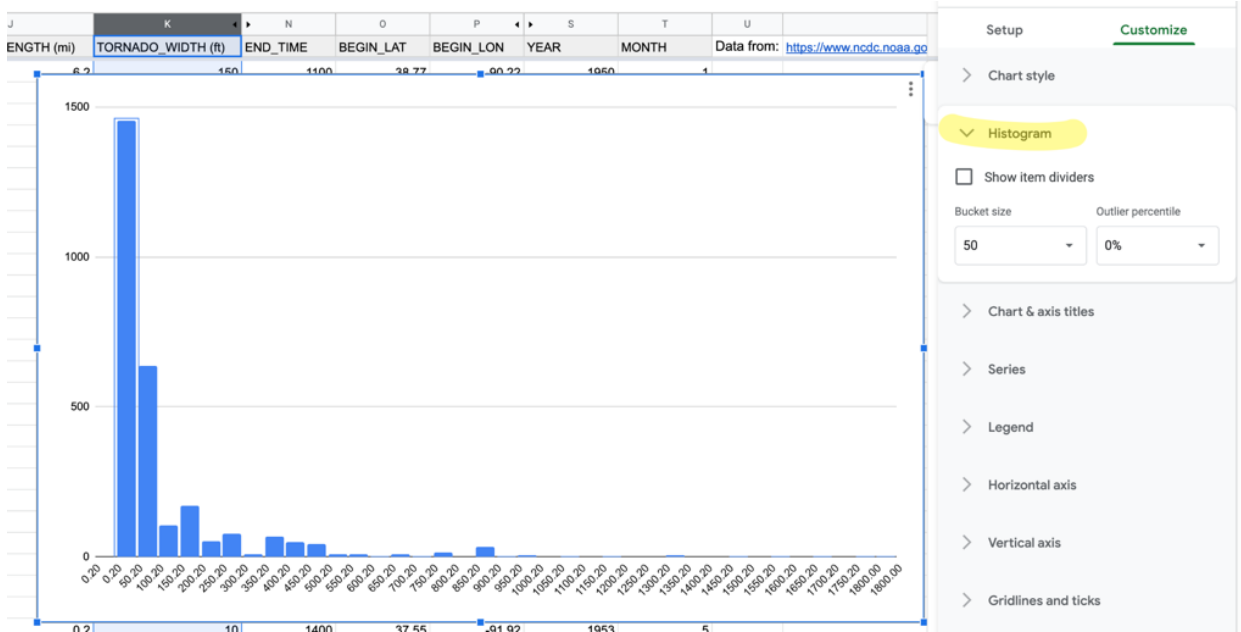
AT	BEGIN_LON	YEAR	MONTH	Data from:
38.77	-90.22	1950	1	https://www.ncdc.noaa.gov
37.6	-90.68	1950	1	
38	-92.22	1950	6	
39.7	-92.07	1950	6	
38.42	-92.77	1950	7	
37.13	-93.38	1950	8	
40.4	-95.17	1951	5	
37.93	-91.88	1951	6	
37.15	-94.47	1951	7	

Scroll down to the “Other” section and choose “Histogram chart.”

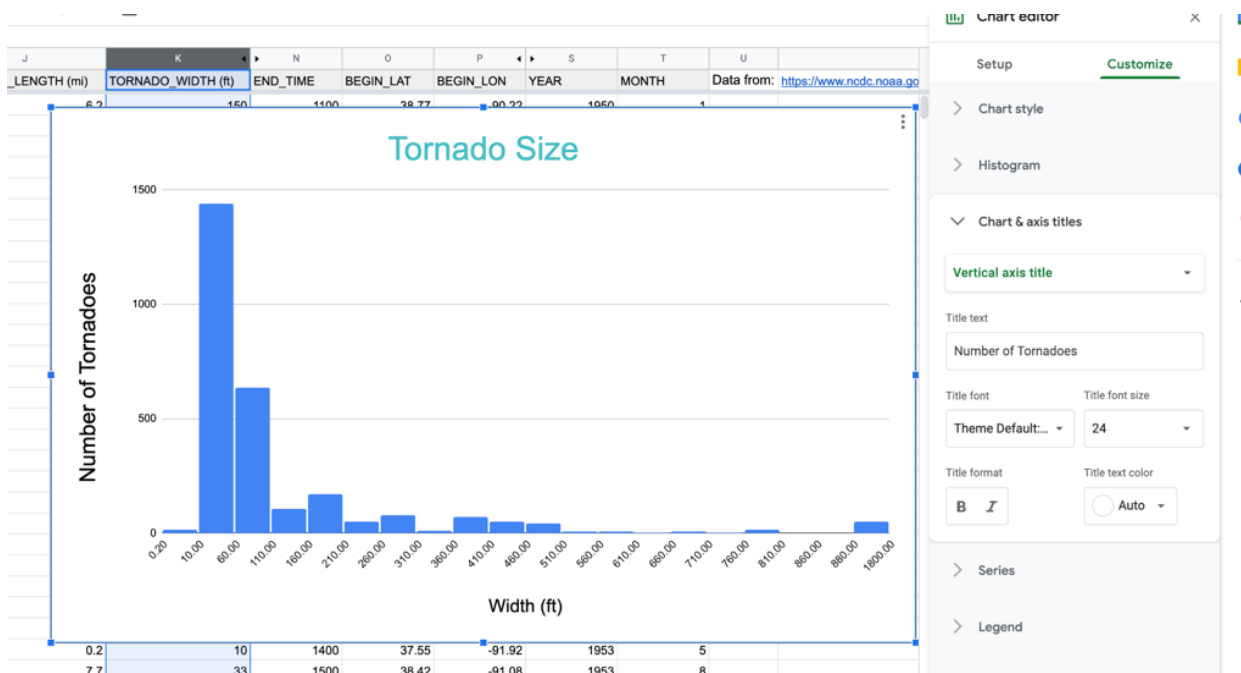
Screenshot of the Google Sheets Chart Editor showing 'Histogram chart' selected in the 'Other' section.

36.72	-94.22	1954	3	
36.57	-94.52	1954	3	
36.55	-93.97	1954	3	
37.12	-94.53	1954	3	
37.45	-94.4	1954	3	
36.82	-93.88	1954	3	
36.82	-94.1	1954	3	
37.17	-92.95	1954	3	
36.97	-93.23	1954	3	

You can now change the width of each section of grouped data values by using the “Customize” menu and setting the “Bucket size” and excluding a percentage of outliers if you wish.



Use the “Chart axis & titles” menu to title your histogram and each axis.

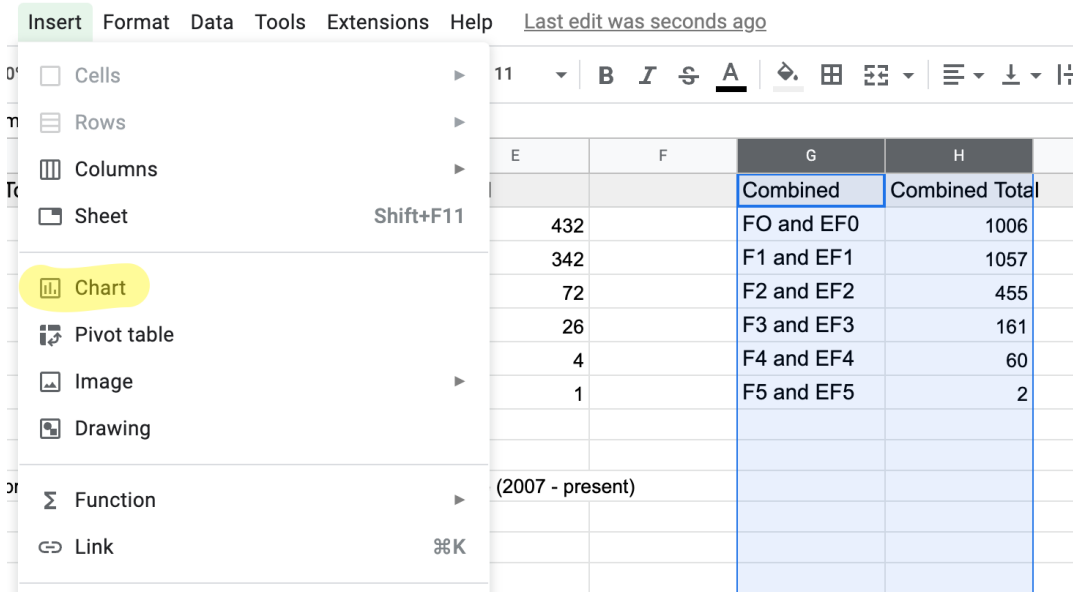


There are various other options that can be used as well, including increasing the number of gridlines, and changing the minimum or maximum value displayed.



Circle graph

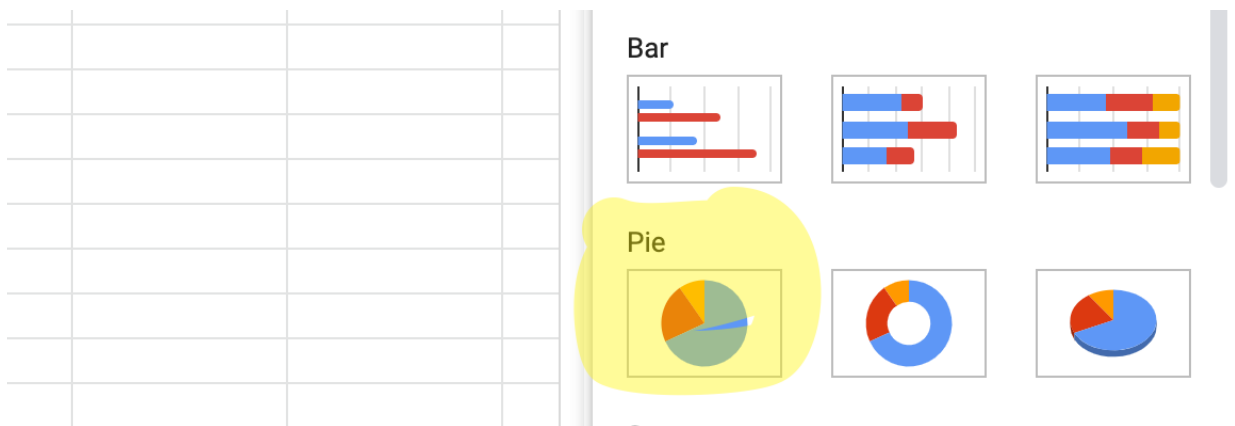
To create a circle graph, select two columns of data, the column that represents the title of each “pie slice” and the corresponding value column. Then choose the insert menu, and pick “Chart.”



The screenshot shows a spreadsheet application interface. The 'Insert' menu is open, and the 'Chart' option is highlighted in yellow. The spreadsheet data is as follows:

	E	F	G	H
			Combined	Combined Total
	432		FO and EF0	1006
	342		F1 and EF1	1057
	72		F2 and EF2	455
	26		F3 and EF3	161
	4		F4 and EF4	60
	1		F5 and EF5	2
	(2007 - present)			

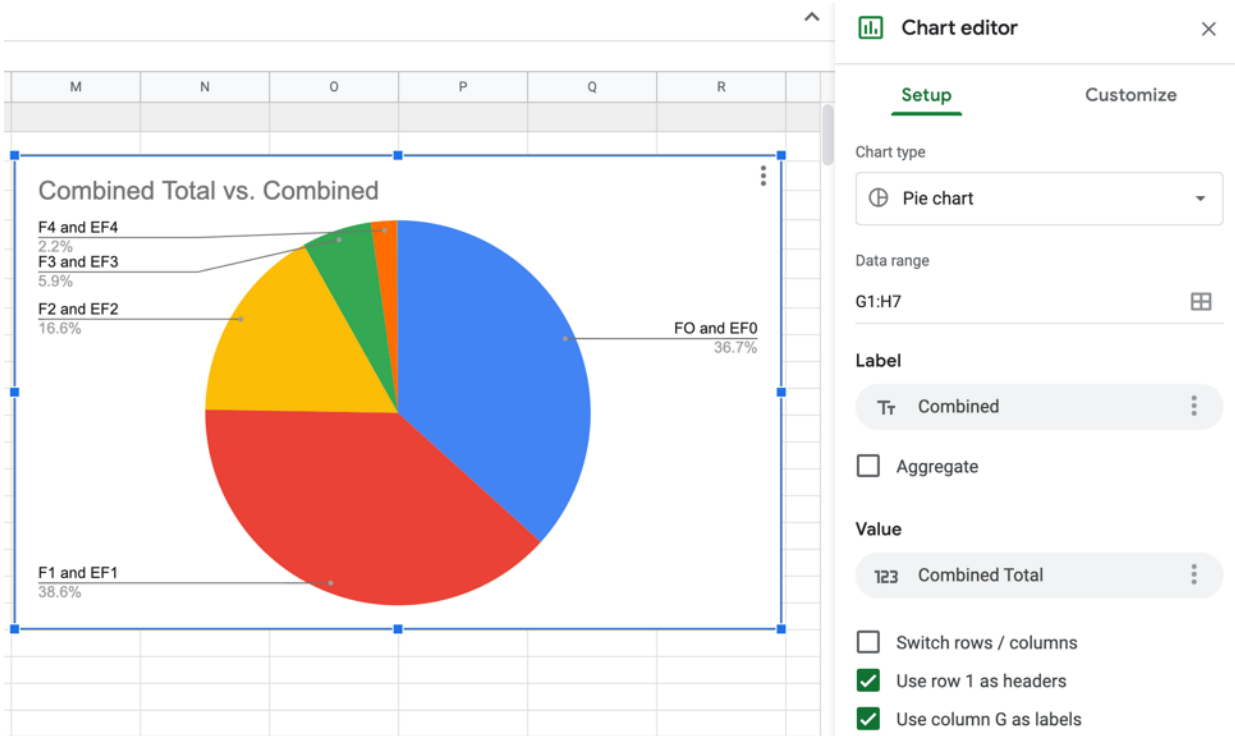
Sheets may automatically create a pie chart. If not, under the Chart editor “setup” menu, scroll down and choose “pie” chart.



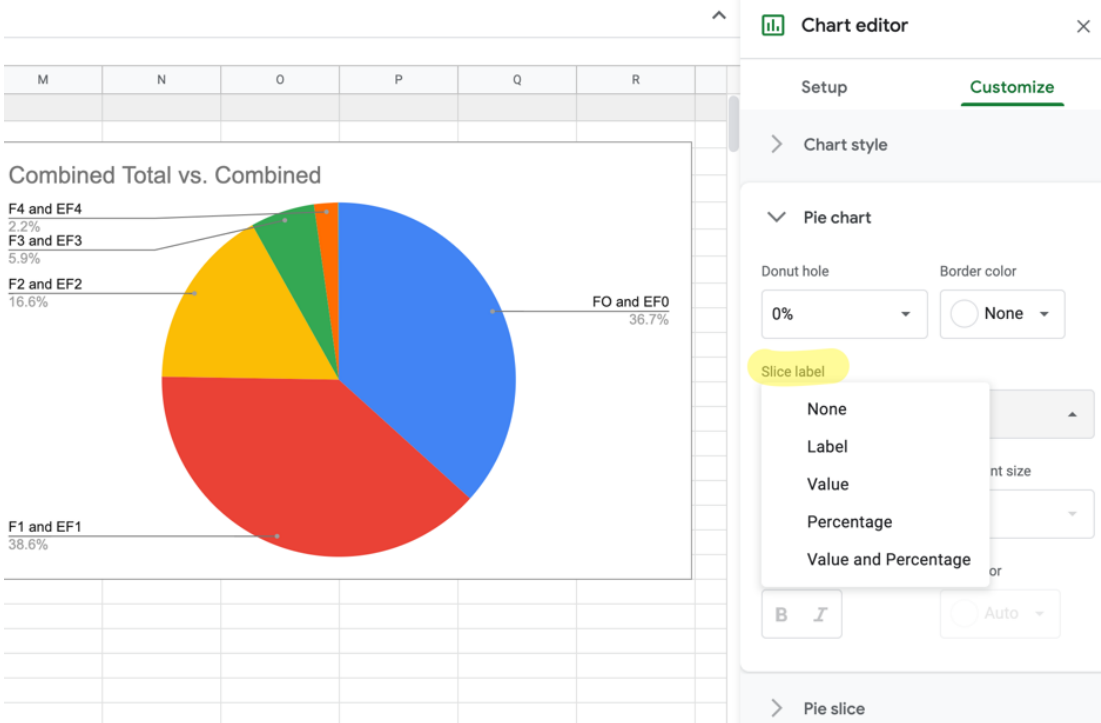
The screenshot shows the Chart editor 'setup' menu. The 'Pie' chart option is highlighted in yellow. The menu includes the following options:

- Bar
- Pie
- Donut
- Table

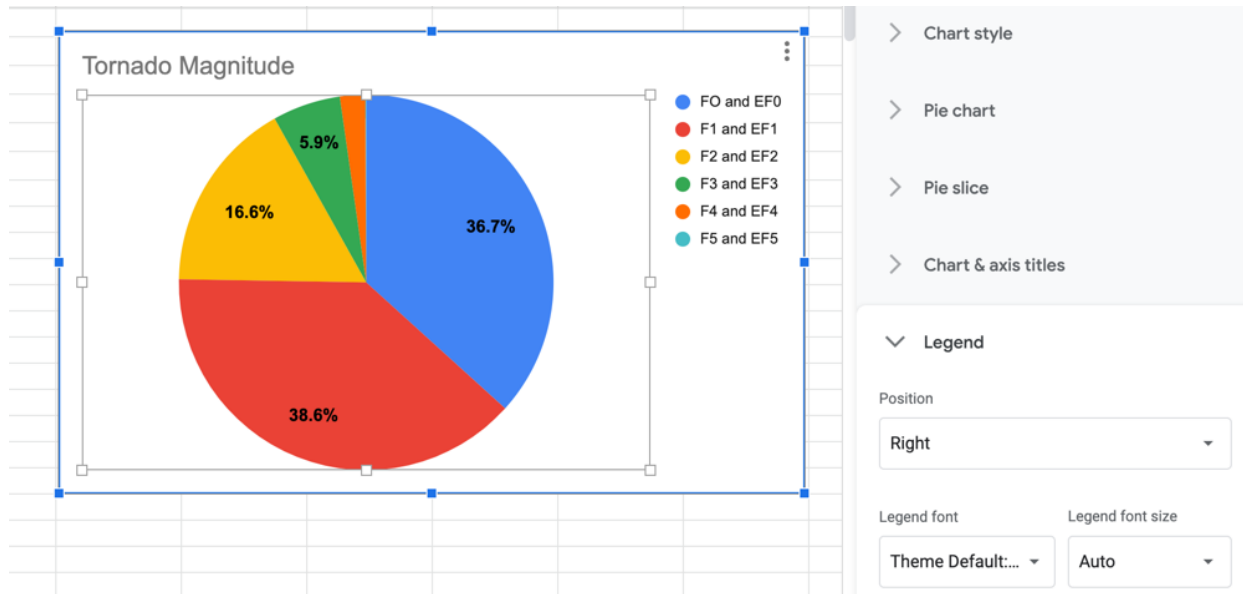
You should now have a circle graph. If needed, you can change which column is being used as the label and which is being used as the value.



If desired, you can display the value or label inside the pie slice itself. In the “Customize” menu, choose “Pie chart” and change the slice label.



The color of each slice can also be changed under the “Pie slice” menu. The “Legend” menu can be used to change the style and position of the legend.



Use the “Chart & axis titles” menu to change the title.

Box plot

To create a box plot, you will first need five columns in Google sheets. The first should be text containing the title of your chart. The other four should contain the minimum, first and third quartiles, and maximum. These values can be found using the formulas shown below. Instead of using Column B, select whichever column of data you want to use.

Title of Chart	=Min(B:B)	=QUARTILE(B:B,1)	=QUARTILE(B:B,3)	=Max(B:B)
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Highlight these five values, use the "Insert" menu, and choose "Chart."

do Data 1950-2021 ☆ 📄 ☁

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	F	G	H	I	J
# Torro	erty Damage				
755500					
805250					
877750		Min	Q1	Q3	Max
87530	Number of Tornadoes	0	20	47.25	143
870560					
863430					
816030					
826120					

To change the inserted chart to a box plot, choose the "Setup" menu and click the "Column chart" under chart type. Then scroll down to "Other" and select "Candlestick" chart.

Chart editor

Setup Customize

Chart type

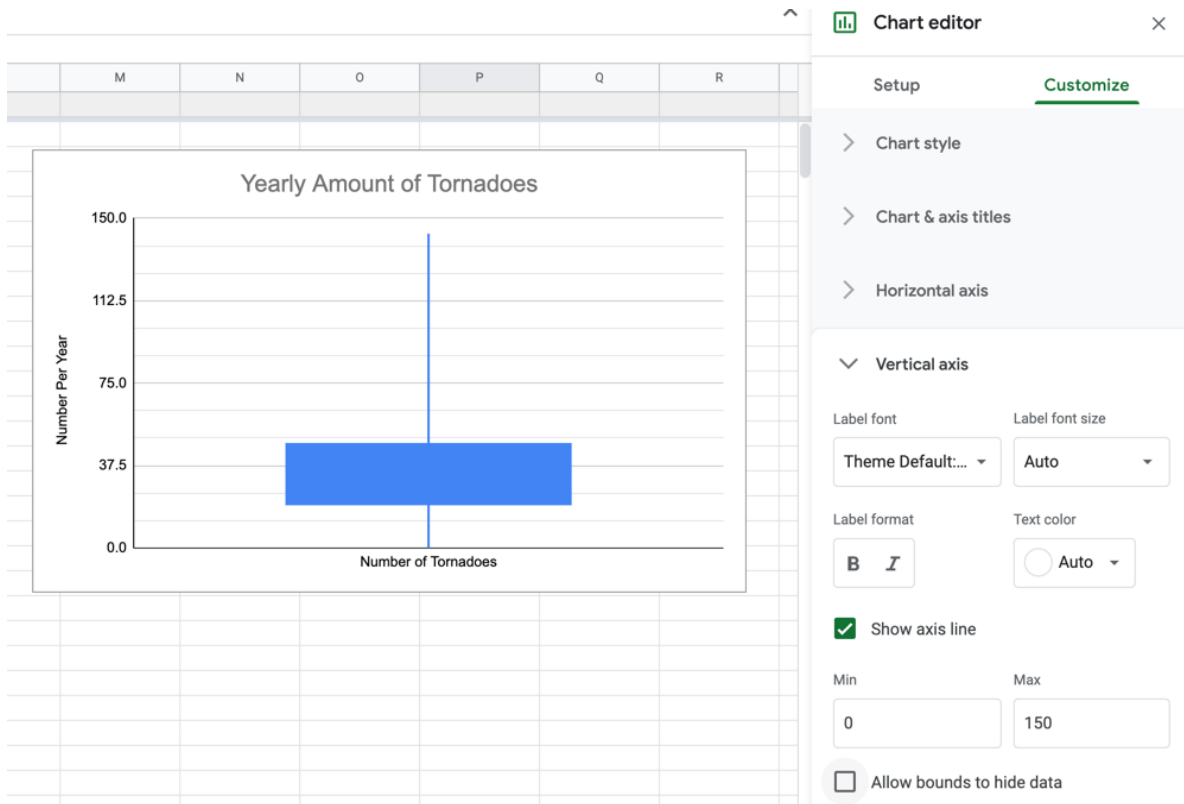
Column chart

Line

Other

Candlestick chart

The minimum and maximum value can also be changed using the “vertical axis” menu.



Also, the chart title and axis labels can be changed if desired.