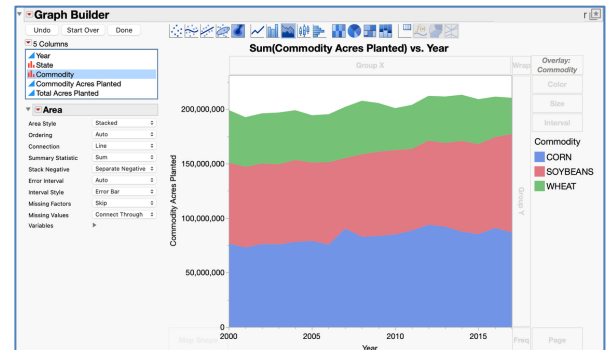# Area Graph

Use to show values or summary statistics of a continuous variable across various levels of other variables as individual contributions to a total.

Area Plot

Corn Wheat Soybean Production.jmp (Help > Sample Folder)

1. Select **Graph > Graph Builder**.
2. Place a continuous variable on the **Y axis**.
   Here we used 'Commodity Acres Planted'.
3. Place a desired variable on the **X axis**. Here we used 'Year'
4. Choose the Area Graph icon from the graph palette.
5. Place a categorical variable in the Overlay zone.
   Here we chose 'Commodity'.
6. Select the **Summary Statistic** to plot in the controls on the left. Here we chose Sum.

- The graph displays a set of solid area – one for each value in the categorial variable used in the **Overlay zone**. The values for each category are stacked on top of each so that the height of all three areas is the total sum. The size of each solid region displays the amount each of the categories contributes to the total. The value order for the categorical column determines the order in which they are plotted. To make a change to the order, right-click on the categorical column and choose **Column Properties > Value Order**.

Incorporating Additional Variables

- Additional variables can be incorporated into the graph by placing them on the **Group X, Group Y,** and/or **Wrap zone**.
- An alternative method is to set up a **Local Data Filter** providing the means to select subsets of the data to base the graph on. Here we created a **Local Data Filter** using 'State'.
  See the **Filtering Data for Analysis** guide to learn how to set up a **Local Data Filter**.
  The graph on the left uses only the data from Kansas. The graph on the right is displaying the sum of each commodity across six chosen states in the Midwest.
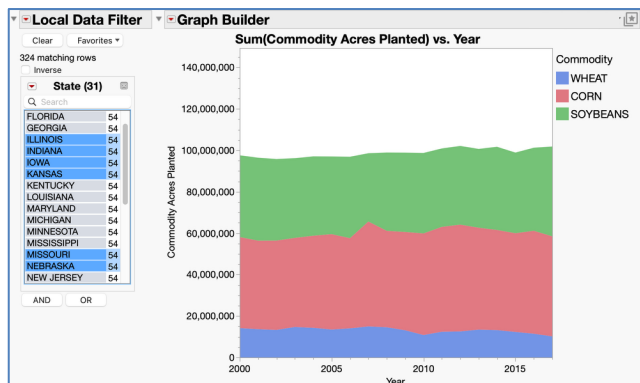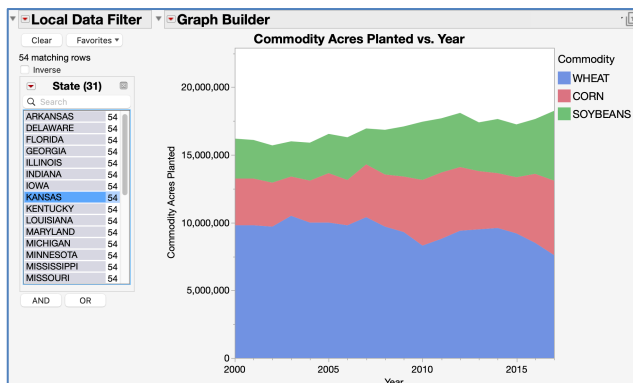
Visit **Discovering JMP > Visualize Your Data** and **Essential Graphing** in **JMP Help** to learn more about methods of graphically exploring data.