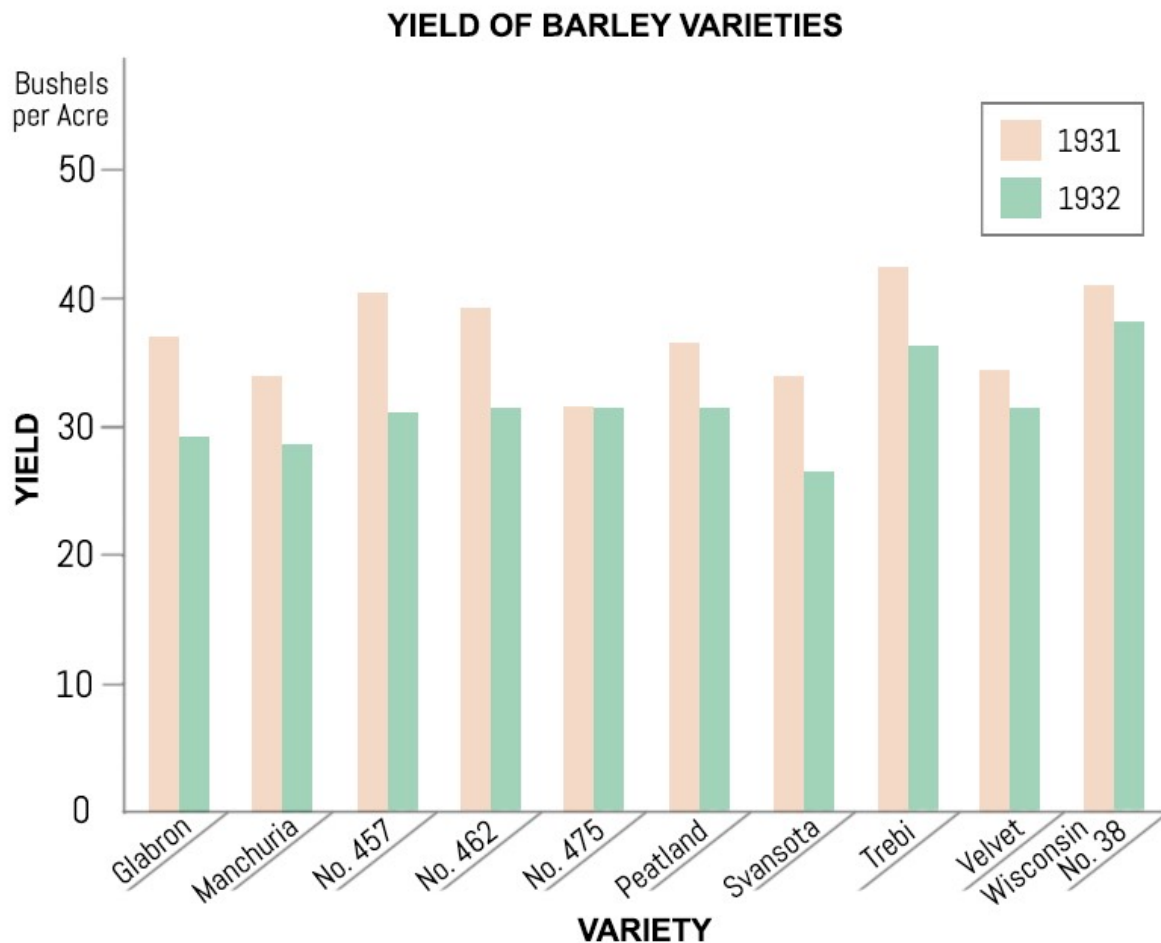




Adobe Photoshop CC 2017 was used to create this visualization. Bars, boxes, and lines were manually created using Photoshop's line, rectangular marquee, and fill tools, while each text was written using a type tool. More than thirty layers were used, most of which were conveniently grouped with layers of the same function.

From the data set, the visualization emphasizes the comparison different barley varieties' yields. Based on the problem statement, I assumed that the purpose of this experiment was to compare the yield of each barley variety, and the multiple locations were to provide multiple data points to judge the productivity of a particular variety on. Therefore, I aggregated the data points across different locations and plotted the average yield of each variety. As a result, the existence of different locations where the barley was experimented, and the differences in yields across different locations are obscured.

However, the yield data across the two years were not aggregated. Rather, I displayed the different data points for each year for each variety. This was because the two data sets were different enough that I judged blindly combining them into an average loses the information about the difference. Also, displaying the two different years give the impression that the viewer is provided with more raw data to draw conclusions from. It is true that making separate bars for each location would have made the same effect, but I judged that two bars per variety are enough, when six or twelve bars may be too many for the viewer to distinguish a pattern or make a meaningful conclusion from the visualization.

I thought a bar graph would be the most ideal, because the visualization merely needs to compare one dimensional quantitative information, and length is deemed by Mackinlay as second most accurate in

conveying such information. I used a very narrow font for writing out each variety, because the names were long yet were needed to squeeze into a small space. I decided also to rotate them, in order to fit more data in a narrow space. Helper lines were drawn to make it clear which bar belonged to which variety. Since there are so many text and lines in the plot, I toned down the lines to gray, so the viewer's eye is less busy. Also, the largest yield was a little over forty, and I needed to fit the legend box for 1931 and 1932 in the chart, so I created the y-axis to be a range from 0 to 50, and inserted the unit (Bushels per Acre) at the top of the y-axis. Each axis was labeled as "Yield" and "Variety" in the same bold capitalized font as the title, in order to create visual unity among elements that need to be seen quickly, because they are crucial in communicating what the visualization is about.