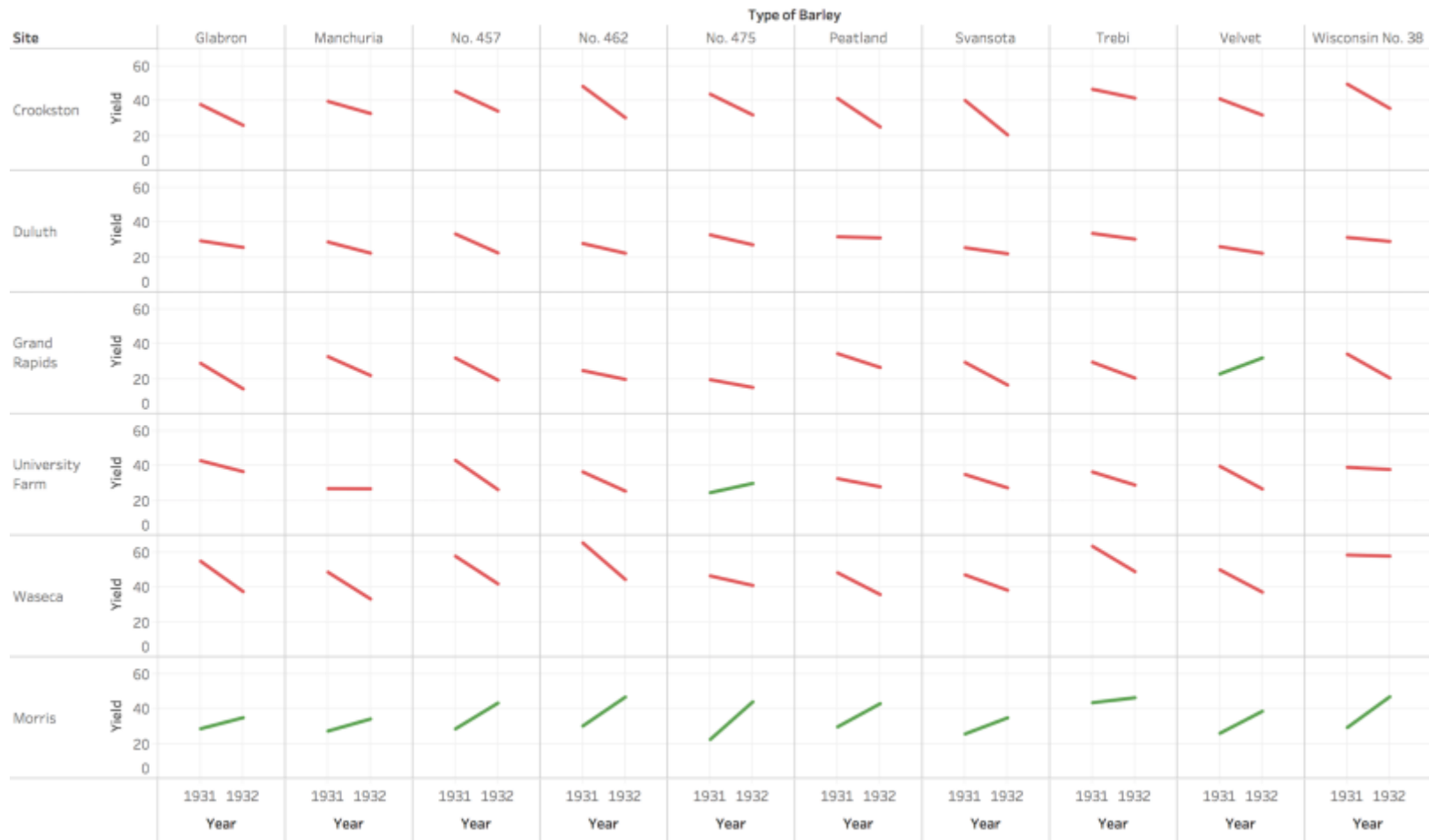


Change in total yields in bushels per acre from 1931 to 1932 at 6 sites



For better image quality, please visit <https://goo.gl/J2jsNR>

## CS448B: Data Visualization

### General Aspect:

This graph clearly demonstrates the change in yields of bushels per acre from 1931 to 1932 at six different sites for ten types of barley. From this graph, we see that all types of barley increase their yield at Morris while mostly decreases at other sites. The disadvantage of this graph is that we have a sparse portion of data. When we attempt to magnify the change by portraying as a sloped line, it's possible that the readers could misinterpret the information as continuous variation. Another disadvantage is that this graph contains a large amount of information and does not give the precise data (i.e. exact yield) which could be hard for some audience to quickly understand.

### Design Aspect:

From the given data, I decide to portray the change in yields of bushels per acre from 1931 to 1932 and efficiently minimize the loss of dimensional reduction. I believe that a linear line is the best way to represent such change because it's easy to understand and very packed in itself. The red line and declined slope both represent the decrease in yields while the green line and inclined slope both represent the increase as most readers could intuitively see. I have a light grey line inside each block so that it can easier to estimate and compare the yield of each barley across different types, sites and years. Then, I sort the data so that the reader can clearly see the difference between the site with decrease in yield and the site with increase in yield. Overall, I use position to represent four dimensions – sites, types of barley, yield, year – and slope along with color to emphasize the change in yield which is the main focus of this graph.

### Design Tool and Thought Process:

First, I try to understand the trend of the data by visualizing it through Tableau software. When I see the trend of the data, I draft what I think it should look like on a whiteboard and then use Tableau software, customize the interface and add calculated fields to improve visualization.