

Assignment 1: Visualization Design

Identifying Key Features

Before I started working on the design of data visualization, I set out the key parts of the data that I determined was most important. I knew that the key features that I initially identified would likely change as I spent more time working with the data. These initial key features were:

- The difference between the yields of each type of barley within a location
- The differences between the yields between 1931 and 1932
- The differences between the overall barley yields between locations

Later I added:

- The possible effect of the location on the yields of barley
- The differences between the overall barley yields within locations for both years

I also decided on which features were the least necessary for me to include in the visualization, and this included:

- The comparison between individual barley yields between locations

Story Telling

The yields of barley from almost 90 years ago in a cold, faraway state is clearly not the most interesting piece of data, but that gave me an opportunity to challenge myself to portray a story and express this in my visualization. I wanted the viewer to look at my visualization and immediately point out that:

- This is a location/spatial based data
- This is historical, old data
- There is some comparison to be made between different locations

Design

I am a strong believer that the best designed products are those where almost every piece of the design is closely linked to the product itself. I've tried to do this with everything I've designed in the past, and I don't see why a data visualization is any different. And so, I used the backdrop of a historical map of Minnesota to immediately give the user the feeling that they are looking at historical data. I used yellow-gold colored bar charts to draw further into the sense of yellow barley plants lined up in a field. I stripped away most of the color from the map background (and pushed up the state itself from its surroundings) to bring out the sharp yellow colors and keep the attention on the main feature of the data – that being the comparison of overall barley yields across different locations. I used stacked bar charts with both years in the same bar because I believed that this was the most effective way of both presenting two year's worth of data separately but also jointly, but more importantly because I wanted the overall 2-year yield across all the different barley types to be the main focus, but the viewer can still see the changes between the 2 years. I avoided using any unnecessary

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labels on the charts, eg. The names of the barley types, as this information is already in the key and I didn't want to give too much attention to the distinction between the individual barley types as it doesn't seem crucial from my perspective. Similarly, I joined the 2 years instead of separating them to avoid most of the attention being drawn into the difference between the 2 years rather than the difference between the overall sum. I also simplified the yield axis label to keep the focus on the overall difference rather than the numbers themselves – surely for data this old, the minute numerical differences are not relevant to us today?

Improvements

- Find a better way of showing more information (like barley names) without cluttering
- Make the text more readable
- Allow for more clear side-by-side comparisons of the charts across different locations
- Have a more well defined yield axis
- I wanted to curve each bar chart around the darkened location circle but I don't have the skills for that (yet!)

Tools

I used Microsoft Excel to make the charts, and Pixelmator (illustrator alternative) to make the designs and modify the map.