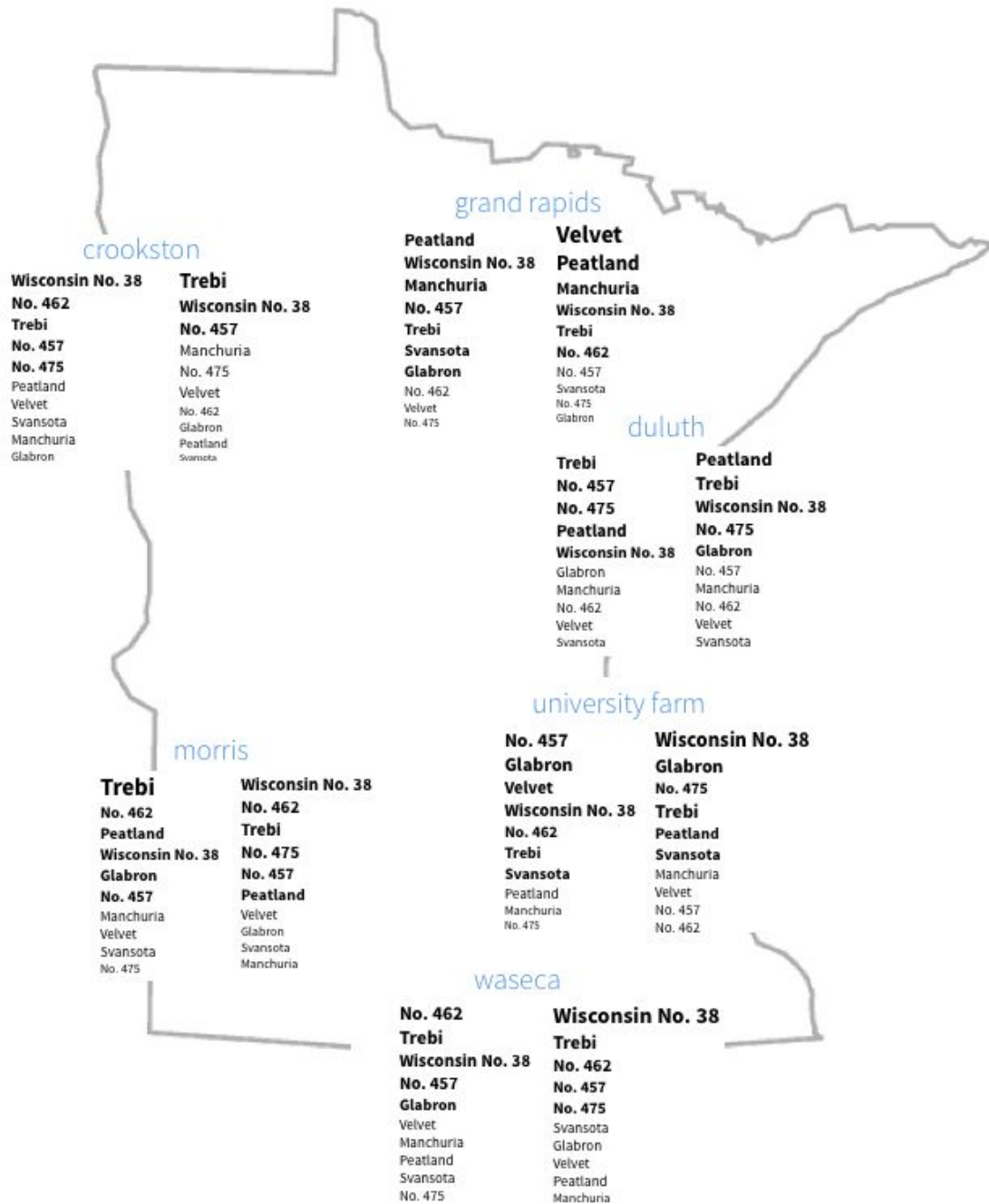


Comparison of Barley Yields on Minnesota Farms, 1931 - 1932



Visualization Rationale

My visualization of the 1931 and 1932 data collected on the yield of several different barley varieties is a map that compares the growth of each of the barley varieties at six different locations in Minnesota. The comparisons are demonstrated through typographical differences in the way barley varieties of different yields are displayed. My visualization was created using Adobe Sketch, and its design is a reflection of my considerations of the people who would be viewing this data and what they would be using for, as well as my recognition of my lack of expertise in the agriculture field.

When brainstorming how I would visualize the study data, I first thought about the purpose behind the study and the individuals who would be most interested in its results. From its setup to compare yields across several different locations, I inferred that the study aims to distinguish which locations have the greatest yield of each of the different types of barley. Using these results, those working as barley farmers in Minnesota would gain insight into which variety of barley they could derive maximal profit from. Also, given that the study has a temporal aspect, I inferred that it aims to demonstrate change in the growth patterns over time. However, the fact that it only provides two data points per location makes it difficult to discern reliable trends from and suggests that trends over time may have been a secondary aim to the study, while comparing growth of different varieties of barley across geographic locations was its primary aim.

In order to show a comparison of growth of different varieties by geographic location, I decided that a map of Minnesota was the most appropriate backdrop for my visualization. Most people's eye is drawn to the place they inhabit when they first view a map, and maps' two-dimensionality make it easy to communicate trends by region rather than just by city. For example, a farmer who works in a town thirty miles from Crookston yet is unfamiliar with Crookston would benefit from viewing this data in the context of a map of Minnesota, because this provides a visual that allows him to connect the data to his own experience without any additional information.

The comparisons of barley varieties for each location is made using typological differentiation. The data from the years 1931 and 1932 are separated into two separate lines to indicate that they are drawn from two different data sets. The side-by-side comparison makes differences between the two lists easy to see. The more significant visual differentiation to show the comparison lies in the font. Barley types are listed in descending order of yield by location, and their names are bolded if their yield is higher than 10% of the total yield at that location for that year. I took 10% to be the expected yield of each variety, because there are 10 varieties grown at each location in equal quantities. All barley types listed in unbolded font are those whose yield did not meet their expected yield. The font sizes of each name in each list reflects their yield. A variety that is 15% of the total yield for the location for a particular year will be shown in 15pt font, while a variety that was only 6% of the total yield would be shown in 6pt font. This size differentiation draws viewers' eyes to the varieties of barley that should be grown in that location while also emphasizing the poor prospects when growing other varieties of barley. Perhaps more importantly, it gives a holistic breakdown of yield percentages so that viewers of the visualization can sense the disparities in yields from one type of barley to another.