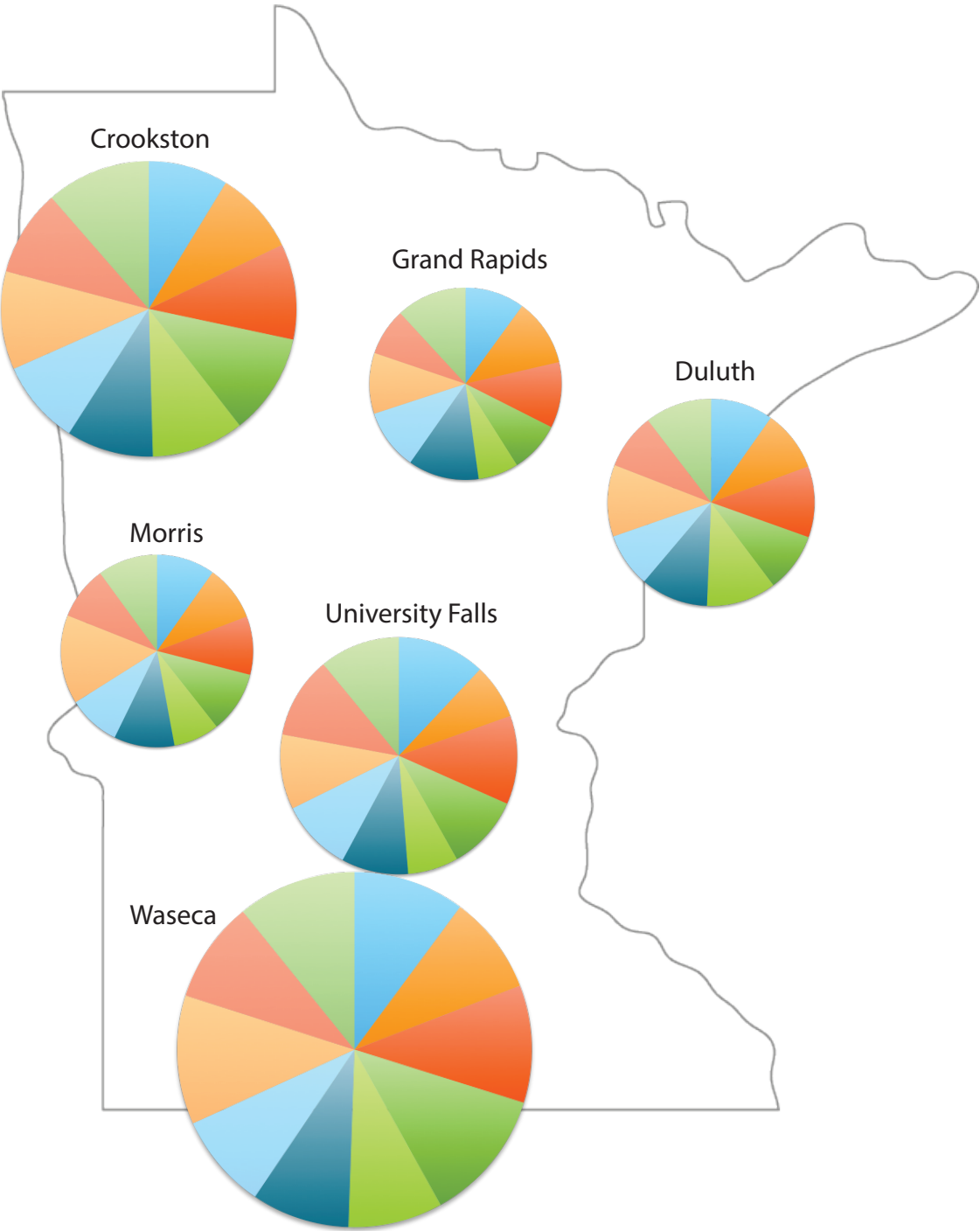
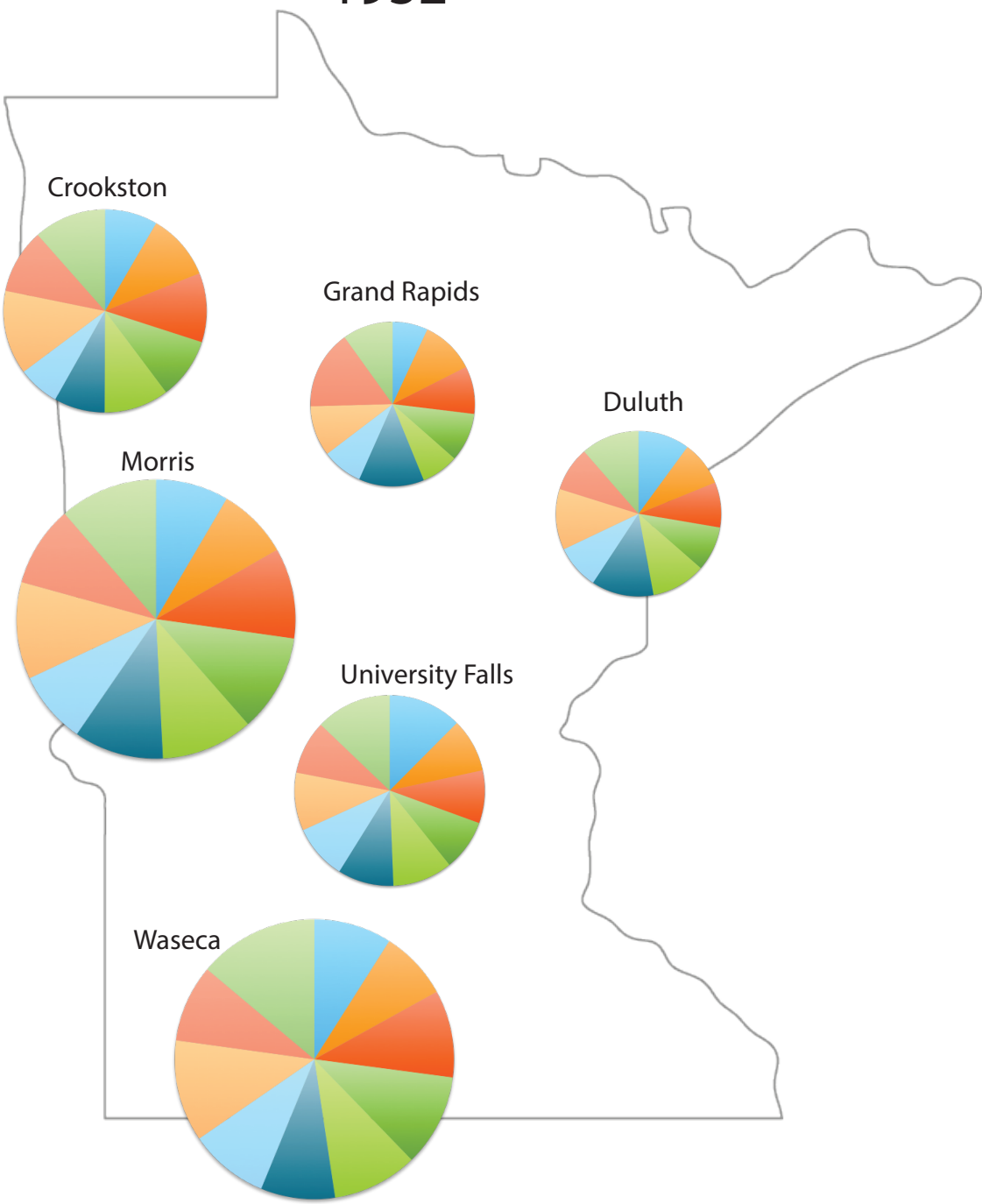


Barley Yield in Minnesota

1931



1932



- Glabron
- Manchuria
- No. 457
- No. 462
- No. 475
- Peatland
- Svansota
- Trebi
- Velvet
- Wisconsin No. 38

This visualization communicates a macro perspective of barley yield from 10 varieties of barley grown in each of 6 sites in the state of Minnesota. This macro take on the barley yield falls on three orders: geographic location of the 6 sites across the state, the total barley yield from each site, and the percentage of total yield that each of the 10 varieties of barley takes up. Visualizing the data in this way provides good insight into how the 6 locations are spatially arranged relative to each other, and allows for quick comparison of total barley output between locations in the same year, as well as total output between years in the same location.

The design decisions made for this visualization likewise fall into three main categories, aligning with the three main ideas that the visualization is communicating. First, to showcase the geographic location of the 6 sites, each of the 6 sites are plotted on a simple map of the state of Minnesota that is simply the outline of the state. The marker of each site is a pie chart, the size of which is dependent on total crop yield from that location, thus visually representing total barley output at each site. For example, in 1931, Crookston yielded 436.599 total bushels/acre of barley, while Grand Rapids yielded 290.53, and so it follows that the diameter of the pie chart at Crookston is larger than that of the pie chart at Grand Rapids, in direct proportion to the numerical difference in total output. Here it is important to note that the given data was augmented by summing up the output from each type of barley for each location in a given year. A pie chart is used to communicate how much each barley variety contributed to the total output relative to the other varieties, with each color on the wheel of the pie corresponding to barley type. A legend that associates color to barley type is on the right-side of the visualization. Lastly, the concept of small multiples is leveraged in this visualization: the outline of the state of Minnesota is shown twice with the same locations plotted on each map, so that the viewer can more readily compare total output at each location between 1931 and 1932, and observe changes in each barley type's slice of the pie between the two years.

This visualization was created first in Excel, where the pie charts were generated and total output of barley from each site was calculated. The rest of the work was done in Adobe Illustrator, where the pies were arranged on outlines of Minnesota, the sizes of each pie fitted to the data, and a legend and title attached to the visualization.

In aiming for a macro perspective for the visualization of this data, several tradeoffs were made, especially in the realm of communicating finer details of the data. For one, the specific crop yield in bushels/acre of each barley type in each location, and comparisons of specific crop yields, are not disclosed in the graphic. In addition, while attention is paid to the geographic locations of the sites, the finer description of how the barley was actually grown in 3 randomized blocks at each site is omitted.