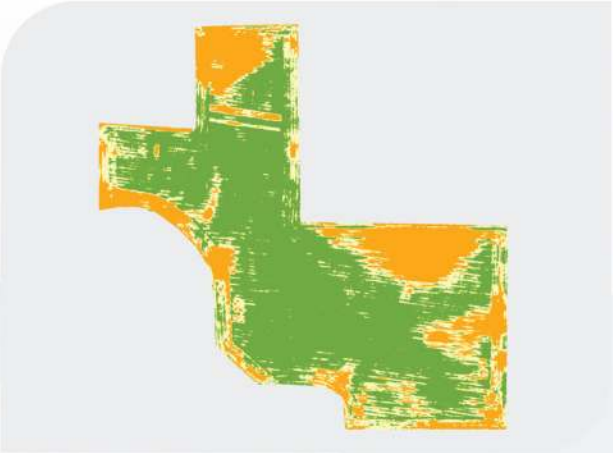
Agriculture Use Cases

Agronomist Viewpoint

COTTONWOOD CO-OP OIL COMPANY; AN AGRONOMIST VIEWPOINT

In-season Verification Using Aerial Drone Imagery Data Analytics

In Minnesota, the **Minnesota Department of Agriculture (MDA)** has begun implementation of the **Groundwater Protection Rule (GPR)**, a revision to the Nitrogen Fertilizer Rule. The **GPR** seeks to **minimize potential fertilize sources of nitrate pollution into the state's groundwater.** To comply, each fertilizer application must be justified. To the growers, correct fertilizer placement is not just important in satisfying MDA's regulations, but providing a return on investment(ROI). As part of the growers' scouting regimen, Draganfly's Quantix was used by **Ashley Runholt, an Agronomist with Cottonwood Co-op Oil Company** to survey fields during critical growing periods in order to monitor developments and verify in-season applications. Quantix mapped **140 acres in only 18 minutes,** and in **less than 24 hours, a pattern anomaly was confirmed.** The imagery collected by the UAV also picked up a pump error on an anhydrous application that previously went undetected. The use of Dragnfly's Quantix & AeroVironment Decision Support System (AV DSS) enabled the grower and Agronomist to **gather and analyze drone aerial imagery, incorporate ground truthing pictures, and collaborate through one integrated platform.** Based on critical data collected from the UAV survey and analysis, a solution was established and implemented. At harvest, the application was validated by showing **increase yield** over the field average.