Using high resolution NDVI to understand and address intra field variability

High resolution NDVI (Normalised Differentiation Vegetation Index) allows farmers and agronomists to make detailed assessments on intra field variability down to 4cm resolution.

NDVI is used to assess the varying levels of green vegetation in a canopy. Comparisons over time allow a farmer or an agronomist to determine differences in rates of growth - and explore the reasons behind them.

Hummingbird generates high resolution data using 4 spectral bands, (near-infrared, red edge, red and green) to create tailored vegetation indices such as NDVI, NDRE and GNDVI.

“The high resolution and detail of the NDVI maps show areas of compaction in my fields, which simply cannot be seen using satellite data.”

Farm Manager, Wiltshire
Decision Making

Our customer was worried that severe flooding in parts of his farm had devastated much of his crop. Hummingbird’s NDVI imagery confirmed his suspicions and he planned a higher Nitrogen application over the worst affected parts of his fields.

However, as the season progressed, Hummingbird’s analysis showed him that these damaged areas had improved faster than he was expecting. This meant that he was able to apply a much lower nitrogen application, saving money on his inputs and producing a more even crop.

Nutrient Deficiencies

“I have been able to use the NDVI maps from Hummingbird together with recent soil sampling surveys, to help quantify and monitor the impact of nutrient deficiencies in my soils in real detail. The maps highlight areas of stress in the fields before they become visible in the canopy itself, and the high resolution of the maps enables me to target field walking specifically where it’s required.”

Farm Manager, Dorset
“With Hummingbird we are farming to potential, not hope.”
Farm Manager, Suffolk

DISEASE DETECTION...

“During routine flights over our Winter Wheat, Hummingbird’s NDVI analysis showed a significant area of stress towards the bottom of one of his fields. Two weeks later, this strip of stressed crop had succumb to rust.

Hummingbird’s analysis gives farmers the ability to inspect issues before they become problems, and to clearly diagnose the cause. In this case clear lines in the canopy suggest a missed area in spray path, which was confirmed as rust during ground truthing.”

Farm Manager, Dorset