

ENVI® PRECISION AG TOOLKIT

TAKE THE GUESS WORK OUT OF AGRICULTURE

BENEFITS

Quickly assess crop health for small or large scale farming operations

Efficiently identify areas of crop stress or insect infestation

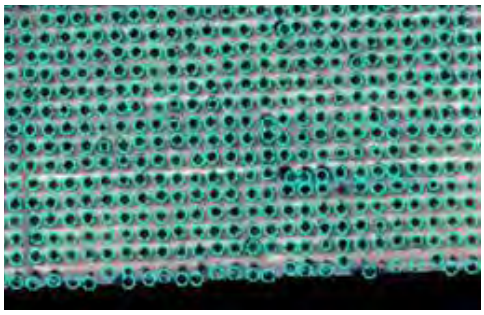
Effectively apply fertilizer, pesticides and water to maximize yield

Agricultural operations work on razor thin margins. One key to profitability is being able to use the minimum amount of crop inputs while simultaneously maximizing yields. This is often easier said than done since conventional field inspection methods are time consuming and inefficient. Missing a small area of pest or insect infestation can result in a big loss come harvest, and over fertilizing can be just as costly as using too little fertilizer over the long term.

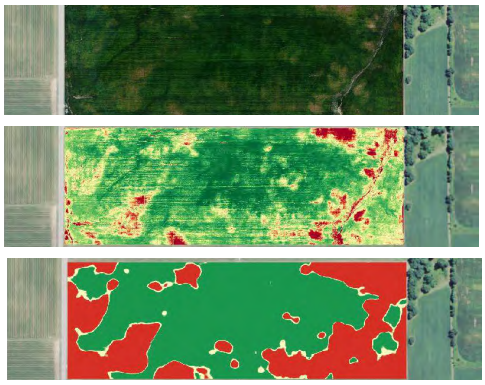
Satellite and UAV imagery offers an efficient and effective way to survey small to large scale farming operations to assess overall crop health. Remote sensing techniques can then be used to analyze aerial imagery to pinpoint areas of crop stress and determine exactly what is needed to remedy the situation. This type of analysis provides the information needed to determine when, where, and how much water, pesticide, and fertilizer is needed to produce a healthy crop.

MINIMIZE LOSSES TO MAXIMIZE YIELDS

The ENVI Precision Ag Toolkit analyzes multispectral data to provide extensive crop health information, even to users who have little to no experience with remote sensing techniques. This toolkit puts industry-changing algorithms into the hands of growers so they can maximize yield and minimize losses.



Crop counter tool results for a grape vineyard. Image data: PLEIADES © CNES 2016, Distribution Airbus DS.



Starting from the top image, this progression shows the field outline, the Normalized Difference Vegetation Index, and the Hotspot analysis for the same field.

SCIENTIFIC RESULTS IN THE PUSH OF A BUTTON

HOTSPOT ANALYSIS

Using proven geospatial statistical analytics, our Hotspot Analysis tool can determine regions of a field that require more attention than others. The results from hotspot analysis deliver information needed to apply prescriptive farming techniques and not waste fertilizer or pesticides on regions where the field is vigorous.

CROP COUNTER

With the Crop Counter tool, users can accurately extract the number, position, and size of the individual plants in a field to predict yield. This tool also can be used to access the health of individual plants and visualize that relative to other plants or as absolute values.

ENABLED FOR DESKTOP AND CLOUD ENVIRONMENTS, THE ENVI PRECISION AG TOOLKIT ALLOWS A USER TO INGEST SATELLITE AND UAV IMAGERY TO PERFORM:

- Hotspot Analysis
  - › Use proven, scientific methods to identify regions in a field that fall above/below global averages
  - › Provide actionable information on areas that require more attention than others
- Crop Counting
  - › Get accurate estimates for crop yield
  - › With the click of a button, get information to help determine go-to-market prices
- Crop Health Analysis
  - › Take crop counting to a new level with the ability to extract the health of individual plants
  - › Visually represent regions where groups of plants are more/less vigorous
  - › Track crop health over time with temporal analysis tools

About Harris Corporation
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