

PRECISION FARMING E-LEARNING PROGRAM

PRECISION FARMING - E-LEARNING

Drones Imaging offers a theoretical and practical training in the production of NDVI maps. With tutorials and associated aerial imagery, follow the step by step process that will help you to discover infrared applications in agriculture and crop management.

In this context, Drones Imaging offers the following E-learning modules:

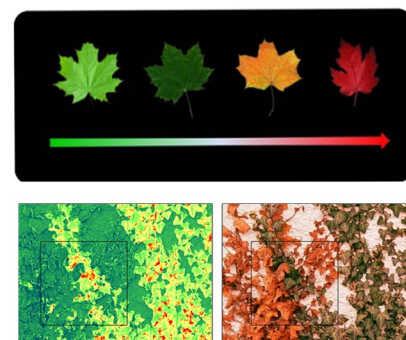
- 📁 01-module DIGITAL IMAGERY & NEAR INFRARED
- 📁 02-module SENSORS
- 📁 03-module NDVI
- 📁 04-module restitution: SPECIFIC CASE

DETAILED MODULES

01-Module DIGITAL IMAGERY & NEAR INFRARED

Objective: To understand the principles of remote sensing related to vegetation.
Achieve a first NDVI picture.

- Introduction to the NIR images and multispectral management.
- Introduction to the spectral properties of vegetation through multispectral images.
- Introduction to NDVI through the digital image.
- **Tutorial #1:** Calculation of NDVI with terrestrial images.
- **Tutorial #2:** Calculation of NDVI with aerial images.

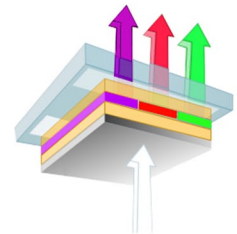


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02-Module SENSORS

Objective: understand the operation of a sensor on board and its various configurations.
Discover the different solutions marketed (high-tech & lowcost).

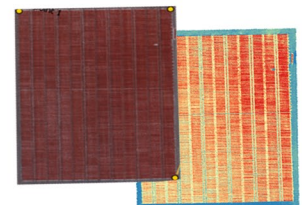
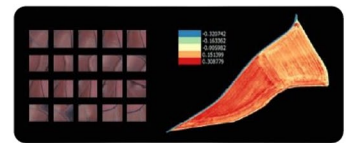
- Introduction to the operation of a conventional RGB camera.
- Introduction to infrared camera operation and its embedded configuration on a drone.
- Introduction to multispectral camera operation and its embedded configuration on a drone.
- Introduction to hyperspectral camera operation its embedded configuration on a drone.



03-Module NDVI

Objective: create a NDVI map from aerial imagery taken by drone.

- **Tutorial #1:** Generate a NDVI map for crop management from 21 aerial images taken by drone (plot of cereals).
- **Tutorial #2:** Generate a NDVI map for crop management from 14 aerial images taken by drone (other plot of cereals).
- **Restitution:** Produce a NDVI map on an experimental agricultural plot.



04-Module restitution: SPECIFIC CASE

Objective: know how to respond to a customer need.

- As part of an experiment on a vegetable plot led by INRA (National Institute for Agricultural Research), the R&D department contacted you in order to carry out an aerial survey intended to study two varieties of salad (named Batavia & Oak Leaf). He wants to study the impact of pollution (runoff containing heavy metals) on vegetables before marketing.

