

## USE CASE PRECISION AGRICULTURE

Rémy Martin, founded in 1724, is a world-renowned French cognac producer – one of the most prestigious in existence. The company produces approximately 80% of all fine champagne cognac in the world.



7  
FLIGHTS

3  
DAYS OF FLIGHT

100  
PLOTS COVERED

4  
CM LOWEST GSD  
(RGB)

2  
WEEKS FOR FULL  
REPORT

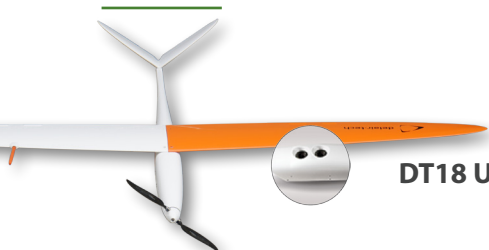
### THE NEED

The Rémy Martin Group operates one hundred vineyard parcels for producing their cognac. These plots are situated in a 10 km radius surrounding the French city, Cognac. Rémy Martin needed to assess the expected return on investment (ROI) on its various plots as well as any particular farming input requirements.

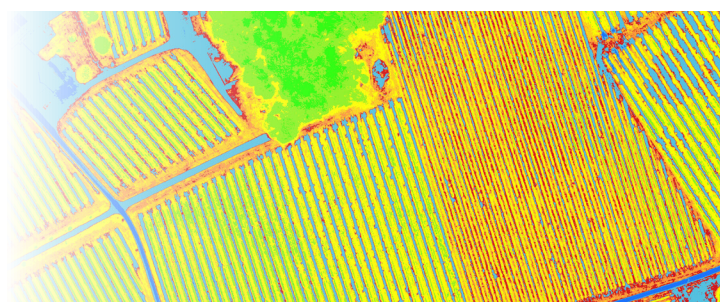
Currently, the common method for these assessments is accomplished by sending ground-based staff on-site. The use of aerial or satellite imagery is currently not a common practice for them. Rémy Martin needed multispectral image acquisitions on all parcels within 3 days to maintain consistency in the obtained data.



### THE SOLUTION



DT18 UAV - DT-4Bands Sensors



To address the needs of Rémy Martin, Delair-Tech deployed the DT18 Mapper long range UAV package with its additional NIR sensor. The high endurance of the DT18 Mapper package allows operators to execute large swaths of multispectral image acquisitions in a single flight. After the initial acquisition over Rémy Martin's vineyards, Delair-Tech uploaded the data to its Delair-Analytics platform to extract the most useful pieces of information for this agricultural operation: NDVI information, orthophotos, and high-resolution maps of the entire property.



## THE OPERATION

Delair-Tech's DT18 Mapper with its additional NIR sensor flew missions for consecutive 3 days to create a map of the entire area in the RGB-NIR (red, green blue – near infrared) bands with a GSD between 4 and 10 cm (depending on the spectral band). The size was approximately 10,000 hectares and one hundred plots were flown in 7 flights.

## DATA ANALYSIS

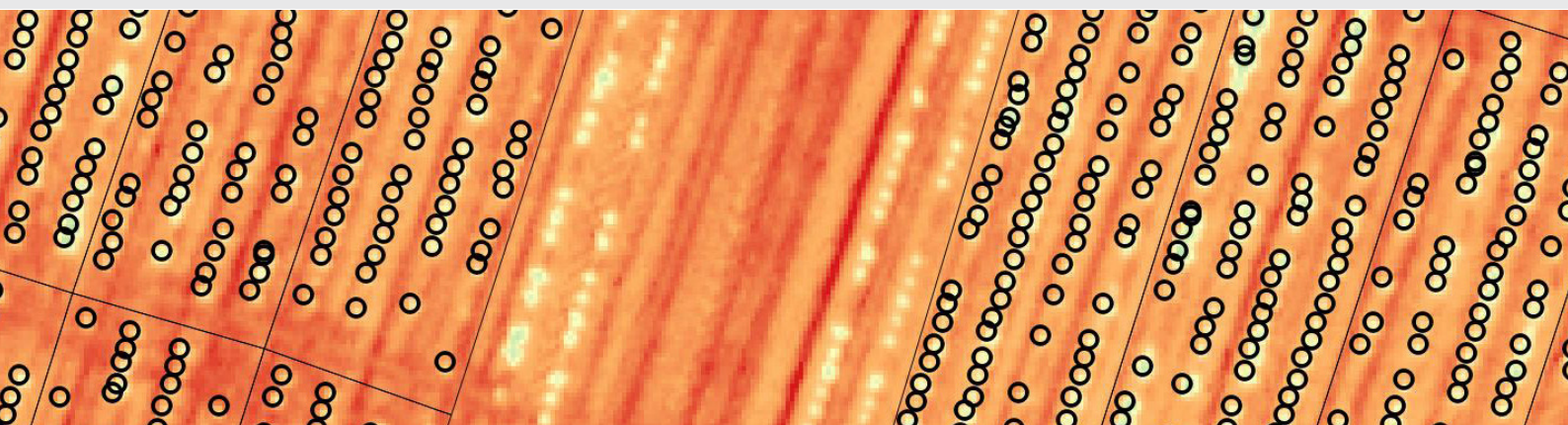
Putting the data to work. After the 3 days of flight, the data was uploaded to the Delair-Analytics servers where post-processing of the data took place to extract the most useful pieces of information for management of the plots:

- Creating a 2D orthophoto of the entire domain at 4cm GSD
- Creating a NDVI crop health map of the fields
- The combination of RGB + NIR bands for the NDVI map resulted in a 10 cm GSD



## DELIVERABLES

A report that identifies areas of crop stress, malnourishment, or disease was created. A single, aerial orthomosaic map of the entire domain was generated. All results are available on Delair-Analytics' plateforme visualization tool for viewing and archiving past results



## WHY DID THEY CHOOSE DELAIR-TECH

✈ **DT18's superior range** allows high coverage of multiple plots of land in just one single flight

✓ **Final results** of the flights were obtained in just a few **days later**

✈ **Responsiveness and ease of deployment** of DT18-based systems allow freedom to adapt to **surrounding weather conditions**