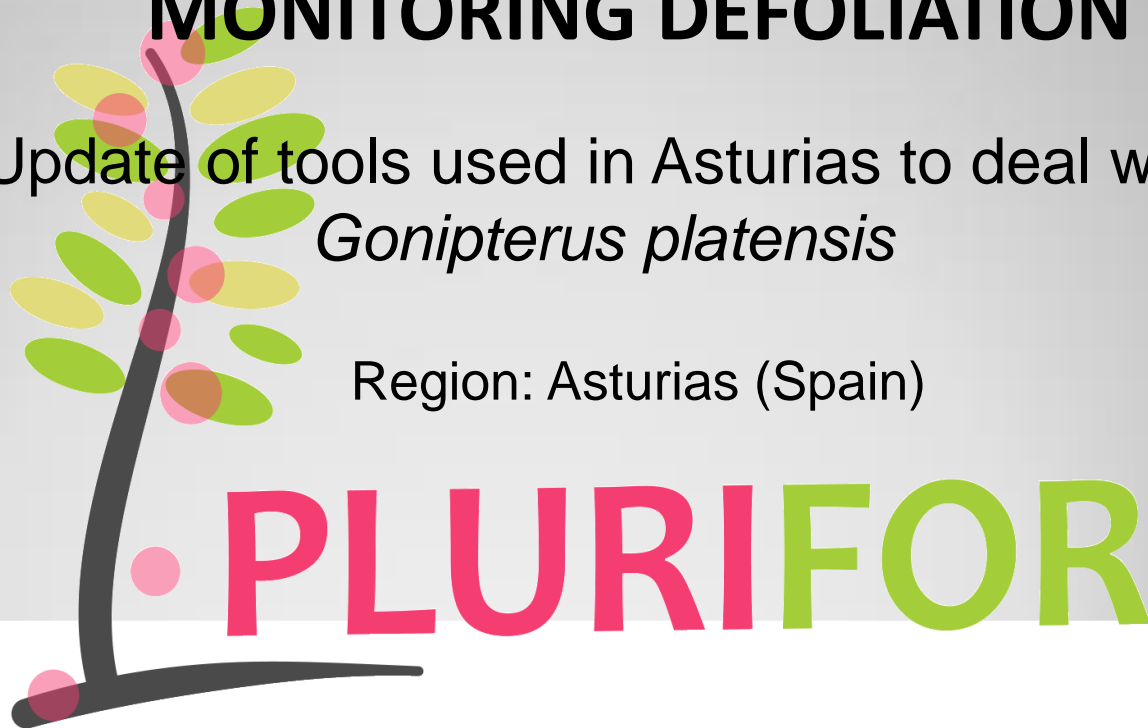


# PLURIFOR PROJECT. EUCALYPTUS WEEVIL RISK WORKSHOP: TOOLS FOR MONITORING DEFOLIATION

Update of tools used in Asturias to deal with  
*Gonipterus platensis*

Region: Asturias (Spain)



**Covadonga Prendes Pérez**

CETEMAS. Forest and Wood Technology Research Centre

(<http://www.cetemas.es>)

**Interreg**  
**Sudoe**  
European Regional Development Fund



CETEMAS





## CETEMAS. Forest and Wood Technology Centre

Private, not-for-profit organization (2009)  
Formed by a group of forest and timber companies  
and the Regional Government of Asturias

**Objective:** to promote research, development and innovation in the different sectors involved in the forest - industry value chain-.



### What has CETEMAS done until now in the frame of PLURIFOR project?

- We have installed 6 study plots in 2 eucalyptus stands attacked by *Gonipterus platensis*
- We have captured data in the study plots using a UAV with different cameras



## PLOTS INSTALATION

The areas to be selected had to meet the following requirements

- *Eucaliptus globulus* young stands coming from PLANTATIONS (4-6 years old)
- Continous stands, at least 5 ha
- To install the plots in two areas with different degree of attack (Strong and weak)
- Differences in orography to install the plots along the study area (high, low and middle slope)



2 study areas

## PLOTS MEASUREMENTS

Damage inventory  
Height and diameter

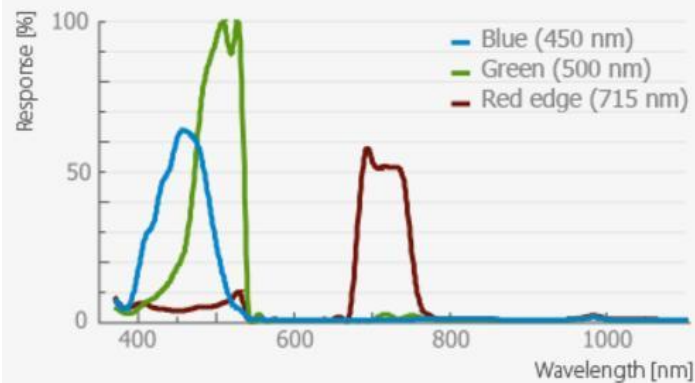
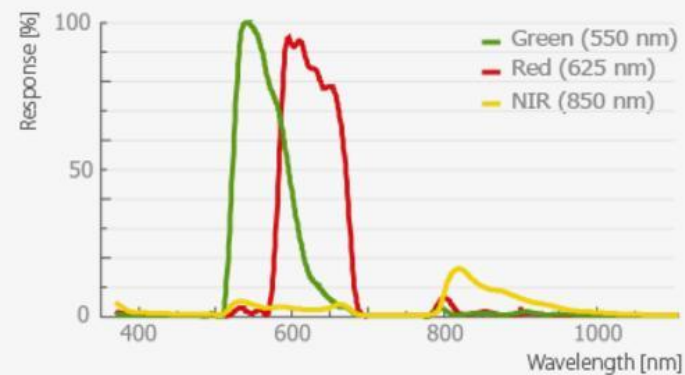
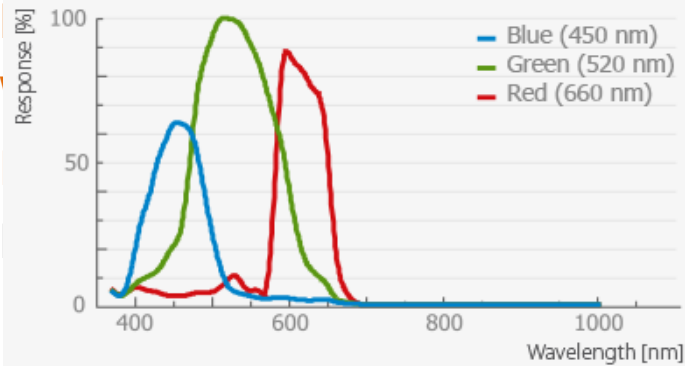
Tree positioning

3 circular plots in each area (16 m radius)



# THE MAIN TOOL FOR DATA CAPTURING : EBEE RTK

## TOOLS FOR MONITORING DEFOLIATION



Example of Sestelo's Flight plan for S110NIR

# THE MAIN TOOL FOR DATA CAPTURING : EBEE RTK

Flights Calendar carried out in the 2 study sites

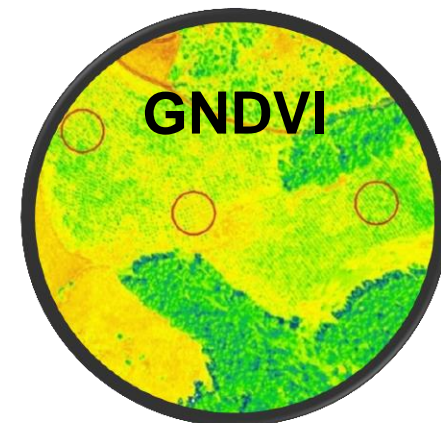
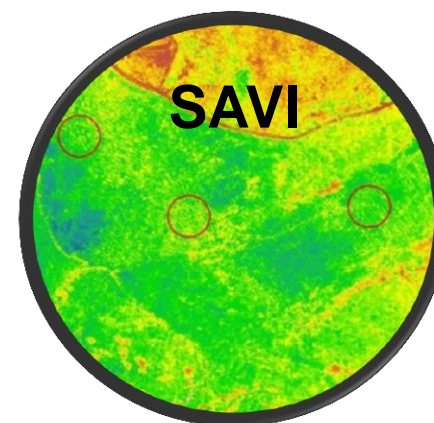
FLIGHT	COBERTORIA	SESTELO	CAMERA
1	APRIL	APRIL	RGB/NIR/RE
2	MAY	MAY	RGB/NIR/RE
3	JULY	JUNE	RGB/NIR/RE

27 FLIGHTS IN TOTAL

TOOLS FOR MONITORING DEFOLIATION



The radiometric calibration target allows the user to calibrate and correct the images reflectance, taking into consideration the illumination and some of the characteristics of the sensor



# THANK YOU FOR YOUR ATTENTION

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