

A Research Work (TdR) carried out at the DMACS awarded with the Youth Research Award of the Generalitat de Catalunya 2017

A **Research Work** of carried out at the Department of Environment and Soil Science of the University of Lleida (Treball de Recerca de Batxillerat, TdR) has been awarded with the **Youth Research Award of the Generalitat de Catalunya 2017**. The research work, entitled "Application of satellite images to precision agriculture", was carried out by Natalia Badia Carrera, of the Institut d'Almenar (Lleida). The research was supervised by Prof. José A. Martínez Casasnovas, of the Departament of Environment and Soil Sciences and member of the Research Group in AgrolCT and Precision Agriculture (University of Lleida - Agrotecnio). The research was carried out in the frame of the ITINERA program, which promotes that students of 1st Baccalaureate initiate in research. The main objective of

the work was to check if satellite images can be used to predict crop yield sometime before harvest. In this case, images could be a useful tool for differential crop management, so that they can act in a different way in the parts of the plots with different crop development (e.g. fertilisation, irrigation, drainage, etc.). The work consisted in a theoretical part, with review of concepts about the research subject, and a practical part. This practical part consisted of the acquisition and processing of satellite images, calculation of crop vigour maps and yield maps, and the analysis of the relationships between these variables.

