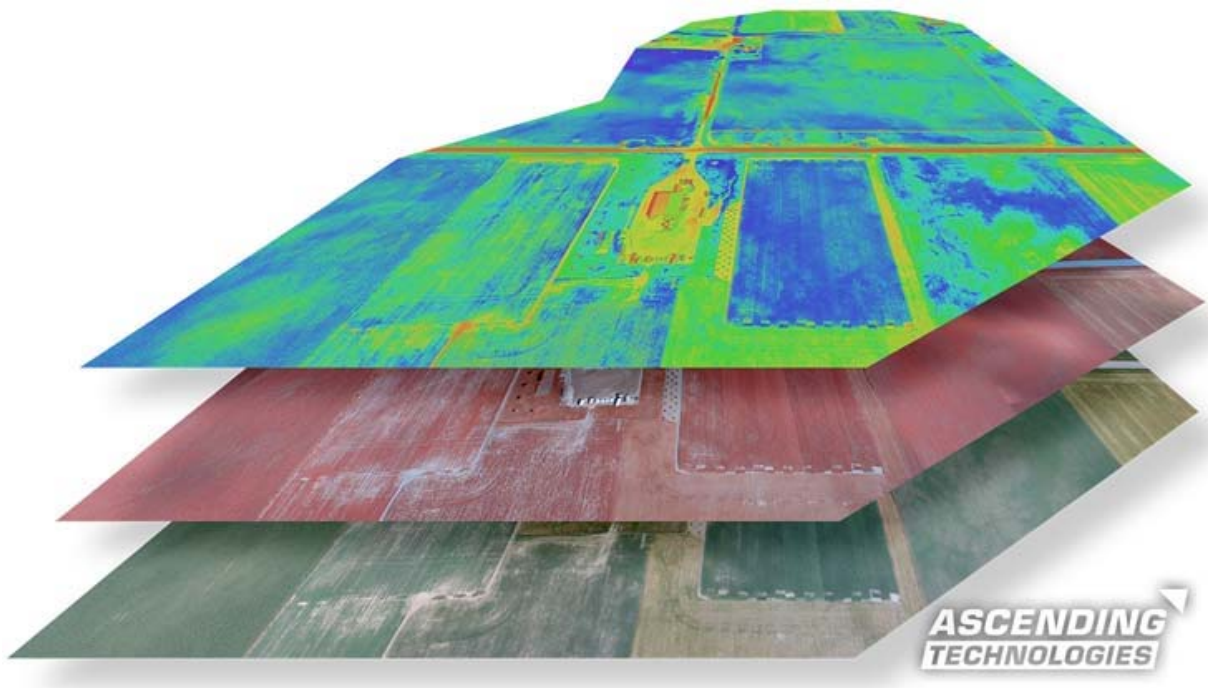


UAS Precision Farming in Spain

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UAS precision farming is an important topic in Spain. To receive site-specific and accurately calculated application rates you need more detailed information of agricultural land. Good to know: Using the AscTec Falcon 8 for remote sensing in precision farming works quite successfully.

UAS + multispectral & thermal sensors

Spain is well known as the European vegetables and fruits garden. To optimize complete cultivation regions ecologically and economically highly precise application cards on the basis of ultra-high-resolution aerial images and accurate geo data are required. Further goals: Raising productivity by frequent field monitoring as well as reducing operation expenses by adjusted site-specific application rates of seed, fertilizers and pesticides.

Capturing reliable, site-specific NDVI you can use the AscTec Falcon 8 mounted with an integrated [MicaSense RedEdge](#) multispectral camera (available from Q2 2016). The **multi-spectral imaging camera** with MicaSense 5-band enables the farmer to determine the

biomass and vigor of his or her crops. In cooperation with the agricultural trading, farming and retailing company [Casaamettler The Drone Institute](#) performed various field monitoring flights near Barcelona, Spain. Have a look here ...

Showcase: UAS precision farming in Spain

Including:

- UAV- / drone-based aerial inspection for precision farming.
- UAV- / drone-supported aerial imaging of salad fields producing thermals, multispectral and stills.
- UAV- / drone-based monitoring of potato fields for crop condition measurements.
- UAV- / drone-based remote sensing of citrus plantations & vineyards.

Automated, precise & consistent

Diverse market gardens, citrus groves and vineyards can be monitored and the captured information analyzed. It is possible to exchange payload depending on your application, so that a MicaSense RedEdge, an Inspection Payload TZ71 including Flir Tau 640 and a Sony Alpha 7r could be mounted quickly to generate multispectral and thermal images as well as stills of complete fields. The Flir Tau 640 **thermal imaging camera** enables the farmer to monitor irrigation of the fields. Due to unique flight performance abilities of the unmanned aircraft system, you can produce ultra-high-resolution images in low-level flights and easily stitch it for exact georeferencing. The UAS moved in constant velocity and smooth paths to trigger at each predefined position, while flying through. Operators profit from exactly reproducible waypoint missions, where you can save proven missions for frequent reproduction if required.

An important benefit for farmers is: Determining the right moment of harvest – and the AscTec Falcon 8 thanks to AscTec Trinity provides precise, repeatable flight patterns and data sets.

Exact measurements for OPEX reduction

Consumers demand eco-friendly and sustainable food production without harmful residues of pesticides or fertilizers in food or ground. Besides that European countries set tighter limits and rules as binding standards regarding the concentration of noxious substances of ground. But how can you reliably control all substances and required parameter to meet the demands? And how can the farmer find the right measure to precisely adjust the application rates and safe operation expenses? Indeed small, lightweight drones like the AscTec Falcon 8 help solving the problem. The high-tech drone can easily be operated and automated. You can plan and perform precise survey flights and monitor with a proper sensors. For instance: By performing highly precise and consistent UAV inspection flights operating with multispectral

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sensors and near-infrared cameras you can measure nitrate concentration, crop condition and state of irrigation.

Thanks to AUREA. All multi-spectral & thermal Big Data processed by AUREA with proprietary algorithms: [Aurea Imaging – geospatial solutions](#)



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Tags: [UAV for Precision Farming and Land Management](#)

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