Geoimage was approached by the research team at The Applied Agricultural Remote Sensing Centre (AARSC) from The University of New England, to help in their mobile application, Crop Count.

Dr Moshiur Rahman is a research scientist from the AARSC with over 10 years of experience in remote sensing and has been working on this research project since 2019. Dr Rahman’s expertise resides in the use of proximal, airborne and satellite remote sensors for a number of agricultural and horticultural crops.

Crop Count is a mobile application has been designed and developed by the AARSC research team from The University of New England, along with award winning creative agency Circul8 to put research into the hands of farmers. It is part of a wider project for Avocados Australia Limited, funded by Hort Innovation. Crop Count aims to provide avocado growers with up to date, high resolution satellite imagery that can be calibrated for seasonal yield estimation.
WorldView-3 multispectral (1.24m) satellite imagery was purchased and pansharpened by Geoimage to 30cm. The pansharpened imagery allowed a more accurate application of the developed methodology to deliver accurate yield forecasting at the orchard level as well as providing yield, fruit size and tree health maps to avocado growers all via the mobile app.

Using the above high resolution imagery captured by WorldView-3, the team at AARSC have been able to provide those growers who are part of the current trial with a more accurate estimation of their yield forecast (compared to current manual methods).
As indicated by Dr Rahman the benefits of having an accurate yield forecast include major cost and time savings, where farmers can forward sell and better plan labour and storage requirements for harvest.

“When using satellite imagery for analysis on tree crops we require high resolution imagery to enable us to identify individual trees, WorldView-3 has more bands than other sensors, the more bands we have to work with, the more sophisticated our analysis can be at the individual tree level.” - Dr Rahman.

Crop Count is currently being commercialised as a tool for growers, with the opportunity to work with other industries including mango and citrus on the horizon. This product will support the use of high res imagery such as that provided by Geoimage.

Geoimage thanks Dr Moshiur Rahman, Prof. Andrew Robson and the team at AARSC for their contribution to this case study.

Benefits of Satellite Imagery for Agriculture:

• Predict crop disease outbreaks and act accordingly
• Access interactive maps that incorporate satellite imagery and real time data
• Analyse the health of crops
• Develop and shift farming strategies
• Submit detailed reports to industry stakeholders from anywhere on the farm
• Regional forecast
• Convert imagery into yield maps

Image: Pictured in the Bundaberg growing regions undertaking fieldwork are Dr Rahman and Prof. Robson (AARSC Director) along with the Circul8 team.

Contact Geoimage on our details below:

Geoimage  
E: sales@geoimage.com.au  
T: +617 3319 4990  
www.geoimage.com.au