

Precision Agriculture and Drone Technology The Perfect Combination

More and more agricultural enterprises are investing in drones on farm. So many of these enterprises, buy the drone and then fly it for a bit of fun. Some take photos for fun, others may use drones to get a better look at crop emergence, weed populations or pest damage. There is however so much more that can be done with the aid of drones.

What are they currently being used for and how can these agricultural operations get more value out of drones as a tool to enhance precision agriculture?

How do farmers then use the information collected to add value to their farming operations in the long term.

To gain some insight into drones, their fit in precision agriculture and how to use them for maximum gain we spoke with Dr Catherine Ball from Remote Research Ranges, a company working with the application of Remotely Piloted Aircraft Systems into industry. Dr Ball is a strong supporter of Australia as a world leader in non-military application of drone technology and has a keen interest in the future of data management needs in the geospatial industry.

The most significant thing that precision agriculture and drones have in common is data. Lots and lots of data. Some call it 'Big Data'. The trick, it seems, with any large and diverse sources of input is to make sure the right questions are being asked, and to plan surveys so that one doesn't drown in data and starve for information. With new and emerging technologies promising to save us all, how can we find the most appropriate use to test our assumptions and apply to trial projects?

Many farmers and horticulturalists have asked me about the possible use of drone technology on their farms and orchards, and I have never been able to write a prescriptive solution with the technology alone. Drones are effectively a platform technology, but they can be in many shapes and sizes, and carry sensors and payloads that range from a few grams to a few kilograms. The question to ask when planning drone operations is: what question are you asking? This can lead you to the best type, size, and cost of aircraft.

There are rules and regulations around where they can be used. Recent CASA legislation has removed some restrictions for land owners for drone usage, e.g. the ability to fly up to 25kg aircraft on their property (with some restrictions remaining). More information is available from CASA; <https://www.casa.gov.au/aircraft/landing-page/flying-drones-australia>

There are also increasing questions about the ethics and responsibilities of Drone/Remotely Piloted Aircraft Systems (RPAS) operators.

The time is now to have these conversations, so we have created a forum for conversation across the new drone ecosystem, and we are holding that conversation in Queensland, in August 2017. The World of Drones Congress is being held at Brisbane Convention and Exhibition Centre from Aug 31st-Sept 2nd. We are looking at holding a field trip to Toowoomba, so delegates can see RPAS technology from an agricultural perspective. For further information by visiting www.worldofdrones.com.au

