



John Barilaro
Deputy Premier
Minister for Regional NSW
Minister for Skills
Minister for Small Business

MEDIA RELEASE

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DRONE CROP ANALYSIS BOOST FOR AG SECTOR

Deputy Premier and Minister for Regional NSW John Barilaro today announced a collaboration between a private business and the University of NSW, together with the support of the NSW Government has led to the development of new drone technology that helps farmers analyse the health of their crops.

Mr Barilaro made the announcement today while visiting a farm near Griffith.

Mr Barilaro said the new drone technology developed by start-up company Agronomeye, could save farmers big dollars.

“This is a fantastic technological boost for our agriculture sector,” Mr Barilaro said.

“A product like this has the potential to revolutionise crop management by allowing farmers and agronomists to efficiently target crop problems using drone technology.

“It means rather than treating an entire crop with expensive products, isolated problems can be quickly pin-pointed and fixed. This means major cost savings on fertilisers, pesticides, soil management and other works.

“On top of the productivity gains, there’s also enormous environmental benefits,” he said.

Start-up company Agronomeye is building the custom drones fitted with multi-spectral sensors to unlock new advances in precision agriculture.

Agronomeye was founded by Stu Adam, who worked in television production, Tim Howell who was a commercial airline pilot, and Rouley Ragg who worked as a construction project manager before building custom drones.

Their drone technology though, needed the right software to make it even more useful for farmers by converting the high-resolution data captured by the drone, into manageable maps that enable precision agriculture.

The technology was developed as part of the TechConnect program at the University of UNSW. TechConnect was established through the NSW Government’s \$18 million Boosting Business Innovation Program, which brings great business and academic minds together to create new products. Agronomeye received a TechVoucher of \$14,976 to collaborate with UNSW researchers to develop their product.

“We build custom composite drones fitted with multi-spectral sensors and supported

by the software we developed with UNSW under the TechVoucher project to accurately capture data,” Mr Adam said.

“Our drones can analyse large areas - up to 600 hectares a day - and generate high resolution maps to identify crop problems for treatment like nutrient deficiency, pest and weed infestation, dehydration, as well as expected yield,” he said.

UNSW researcher Dr Simit Raval led the TechVoucher project with his PhD student Bikram Banerjee bringing together cross-disciplinary skills from mining engineering, TV production and aviation to meet the new industry need.

“We have been involved in developing smart techniques and sensors to assess and monitor sensitive ecosystems, such as looking at vegetation for its species composition, structure, bio-physio-chemical content, and more,” Mr Raval said.

“We get the information by putting sensors on a UAV or drone to fly over the nominated site. It’s a new way to monitor and protect our environment,” Dr Raval said.

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HOW AGRONOMEYE'S DRONE TECHNOLOGY WORKS

1. An agronomist, consultant or farmer puts in an order to Agronomeye for imagery on a crop.
2. Agronomeye's drone scans the crop and makes high resolution maps, identifying variability.
3. The client uses the maps to do targeted testing to understand what is causing the crop variability.
4. The test results then allow the client to make a recommendation on how to fix the problem.
5. Agronomeye converts the high resolution map to a 'custom variable rate file' (the software technology developed through UNSW) to treat the crop as needed in tune with precision agricultural hardware (e.g. a variable rate fertiliser spreader).