



Press release.

James Cook University student is working with HCPSSL to try identifying RSD using satellite technology.

Ethan's story:

My name is Ethan Waters, I am in my 4th year for a double bachelor's in electrical engineering and data science. I am currently conducting my honours thesis with the goal of detecting RSD with the satellite sentinel-2. I am in the process of developing a free prototype program that will inform farmers which of their blocks likely contain RSD. This will allow them to make more informed decisions to prevent the spread of RSD, increasing yield and profits for farmers. The benefit of using large scale imaging with a satellite is the ability to analyse an entire farm for RSD at the same time, rather than relying on a limited number of samples. Therefore, this will provide a more accurate indication of whether a block contains RSD than sample testing.

Brief Methodology Explanation:

Sentinel-2 is a multispectral satellite which captures the reflectance of different waves, including those that cannot be seen with the human eye. A number of different vegetation indices will be calculated for each satellite image and used as an input to an algorithm I develop. I am specifically interested in vegetation indices that look at moisture and water retention of plant matter, given that RSD reduces water retention.

Future Plans:

Demonstrating a successful prototype would provide strong grounds to apply for a number of grants and investments into sugarcane research to identify and prevent disease. This will help growers in the industry increase yield and profits.

We need your help!

HCPSSL staff will be contacting growers over the next few days asking for permission for Ethan (JCU student) and HCPSSL staff to access your farm data to undertake this study. Any assistance would be greatly appreciated.

If Ethan is successful in identifying RSD using satellite imagery, it will greatly assist growers better understand and manage the disease.



For more information on the project contact Ethan Waters on 0435 626 685.