



Deep South National Science Challenge

Lincoln Agritech has been assisting the University of Canterbury with a subcontract delivering to the Deep South National Science Challenge. Using 4D drones to monitor cloud and snow formation, the project aims to enhance our understanding of weather systems and processes underlying climate change.

Working alongside the University of Canterbury, our scientists and engineers designed and built three sets of microwave sensors to measure snow depth over sea ice in Antarctica.

Lincoln Agritech Research Scientist, Dr Adrian Tan, travelled to Antarctica to equip the University of Canterbury drone with the snow depth radar and assist in field trials.

The trials were successful; the team deployed the snow radar and conducted snow mapping from a height of 15 m with a cruising speed of 2 m/s, and snow depth measurement closely matched manual methods.

The method of assessing snow depth is considerably cheaper and faster than traditional probing – a 2 km transect can be flown in 30 minutes. Most importantly, it will greatly increase the amount of data that can be generated from measuring the changing depth of snow, aiding our understanding of climate change.

