

Eye in the sky checks soil moisture across Kyeamba Valley

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If you see a low flying plane above the Kyeamba Valley near Wagga Wagga in late October and November it will most probably be part of a revolutionary experiment to collect data to check soil moisture, Primary Industries Minister Ian Macdonald, said today.

The Minister said the National Airborne Field Experiment was being conducted by the University of Melbourne in preparation for the launch of satellites in 2007 and 2010, which would measure the amount of moisture in soil worldwide to improve weather forecasting.

Flights are scheduled for Kyeamba and Livingstone Creek catchments on 30 October, 6, 13 and 20 November.

"The satellite instruments used to measure soil moisture are attached to a light plane, which will pass over the Kyeamba Valley for four to six hours each day along grid patterns at heights of 150 to 3050 metres (500 to 10 000 feet), depending upon the weather," the Minister said.

"The instruments measure the natural emissions from the earth's surface to give a soil moisture reading for the top five centimetres, which provides 'footprints' of soil moisture every 50 to 1000 metres."

NSW DPI technical officer Vic Shoemark said NSW DPI was conducting a long-term study of eight high priority dryland salinity sites across NSW as part of the Key Sites project, with the Livingstone Creek Catchment being one of these key salinity sites, and also a sub catchment of Kyeamba Valley.

He said the Livingstone Creek site would provide Melbourne University with continuous data from its network of soil moisture monitoring stations.

"Staff from both NSW DPI and Department of Natural Resources will be collecting ground measurements concurrently with the plane as it flies over the Livingstone Creek Catchment, which will help validate the aircrafts measurements," Mr Shoemark said.

He said the field experiment had the potential to value add to NSW DPI Key Sites project by providing soil moisture data from throughout the whole catchment.

"This will allow point measurements from existing key site monitoring stations to be extrapolated to the entire catchment and so address 'scaling issues'," Mr Shoemark said.

"Knowing their soil moisture and its distribution across their farm could greatly help farming operations by allowing farmers to predict such things as vegetative growth, crop rotations and stocking rates during an era of climate uncertainty."

Photo of plane available.

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