

## **Software for irrigation scheduling using the neutron probe**

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Critical real time and current neutron probe soil water data has proved to be of great value to farmers. As farmers gain confidence through experience and realise how easy the data is to use there is a tendency to increase the frequency of soil water measurement.

Due to the demand by increasing number of client, consultants are finding it necessary to use a data handling system. This can be appreciated on realisation that 45% of the national cotton crop was irrigated on schedules based on neutron probe data. The irrigation scheduling software, for the neutron probe, has been developed to meet this demand. The probe and software is used to obtain, process, present and store soil water data for quick and efficient use by consultants and farmers. The aim is to: provide a means by which past neutron probe data can be accessed for use in making better irrigation scheduling decisions, provide up to date summaries on field by field soil water status, provide measurement of the whole farm water useage.

The software enables fields to be treated more individually for irrigation scheduling which is becoming increasingly necessary to obtain high yields. Examples of fine tuning irrigation schedules of individual fields according to their refill point, due to variables such as dry subsoil and soil compaction are discussed.

The irrigation scheduling software for use with the neutron probe provides the opportunity for farmers and consultants to make better irrigation decisions due to better utilization of both current and historical neutron probe data.