

## **SOIL MOISTURE MANAGEMENT, CROP MONITORING AND ISO 9000: AGRICULTURE'S FUTURE**

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*Summary.* In response to consumer demand, food and fibre merchants are increasingly demanding ISO 9000 specification from suppliers of agricultural produce. ISO 9000 is now identified as a specification starting in the field with routine monitoring of soil moisture, crop growth and insect activity to ensure production of food and fibre of a consistent high quality.

Databases of soil moisture and crop response highlight the importance of soil moisture as it affects crop growth, yield, quality, and shelf life. For example, Russett Burbank potato response to irrigation was recently compared across Europe, North America and Australasia. The intellectual property value of this data is great as it can be quickly moved and manipulated in the hands of trained agronomists and horticulturalists. Crops can then be grown which when harvested will conform to the goals as specified by the nominated ISO 9000 procedures of the producer and merchant.

These databases can combine soil moisture, crop growth, weather and nutrient information which can be analysed in real time. They can be used to co-ordinate field management across corporate organisations, thus maintaining intellectual property, even in an environment where staff turnover is common, hence enable corporate entities to confidently contract production ahead of time.

The technology of objective soil and crop monitoring, the electronic transfer and processing of this information to enable real time crop management is a reality. Australian farmers are leading the world in crops such as cotton, grapes, citrus, potato and sugar. Examples are given.