

A PRACTICAL APPLICATION OF PA TOOLS IN THE BARRON RIVER DELTA

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ELECTRICAL conductivity (EC) mapping, in conjunction with soil surveys and satellite imagery, can be used to map soil changes.

This information is useful for identifying crop/soil constraints, for irrigation design and scheduling, for planning an appropriate farm layout and for determining an optimum soil sampling strategy to establish a suitable fertiliser application rate.

In this example on a 16 ha sugar cane block in the Barron Delta near Cairns North Queensland, we used an EM38 to map soil electrical conductivity.

The EC strongly matched high and low yielding areas, aerial photography and satellite imagery.

A subsequent soil survey found that the major yield constraints in this paddock were a hard pan inhibiting root and water penetration at 50 cm, low pH and low water holding capacity.

The grower is now investigating ways to ameliorate these soil constraints.