



EM Mapping Initiative

With the support of Project CaNE, funded by the partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation, HCPSL is offering Herbert growers the opportunity to receive free EM mapping. The Project CaNE EM mapping initiative is open to all Herbert sugarcane growers and will run until January 2025.

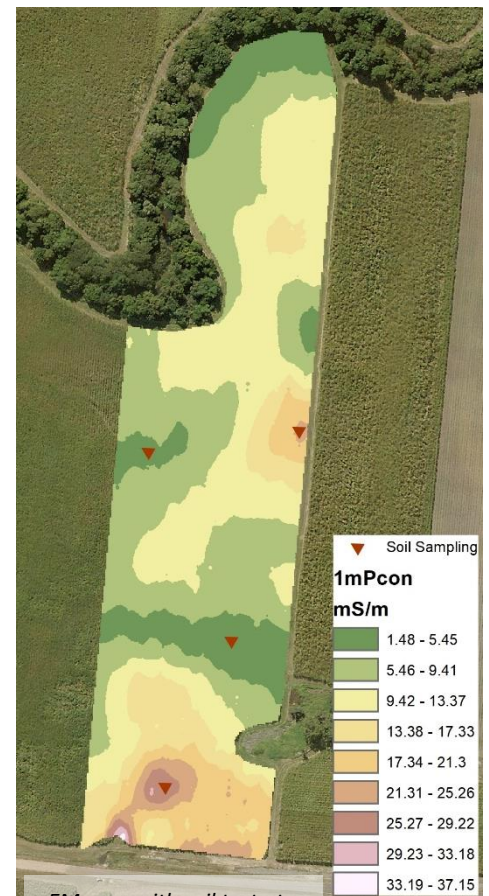
The initiative includes access to agronomic advice from Project CaNE Extension Agronomists and drone technology that will assist with the investigation and validation of crop management decisions based on EM mapping, soil testing and crop productivity constraints.

Growers seeking more information or wanting to register their interest in being involved in the EM mapping initiative should contact our HCPSL GIS officer Rod Neilson by calling the HCPSL office on 47761808.

About

Soils change across the landscape, across a farm and even across a paddock. At a paddock scale, changes in soils can be identified by, plant health and vigour, and productivity or crop yield. EM mapping (electromagnetic induction) is a method which identifies differences in soil types by measuring the change in the electrical conductivity of the soil.

Electrical conductivity is influenced primarily salinity, soil moisture or by soil structure, particularly clay content, and to a lesser extent by soil bulk density, organic matter, cation exchange capacity (CEC), mineralogy, and temperature. Where salinity is not an issue and soil moisture is uniform, changes in ECa are influenced more by soil structure and composition e.g. the amount of sand, clay, and organic matter, etc.



EM map with soil test pts.

Why

One of the primary uses of EM data is targeted soil sampling, i.e. taking samples at points of known difference in EM values, and then using the results of the laboratory testing to understand the changes in the soil that is driving the difference in conductivity values. An EM map can show whether change across a block is gradual, or whether a more defined change in soil types exists, such as a sand ridge.

Where there is known to be two or more soil types in a paddock, soil sampling in the traditional way does not account for the gradual changes between the soil types across the block. EM mapping can show whether a block is more or less the same or whether there are which change quickly and significantly.

Targeting specific areas for soil sampling can better identify factors limiting productivity and help with the prescription of remediation efforts. EM mapping also provides the basis for variable rate amendment application when only certain parts of a block require high rated of amendments.

When

The best time for mapping is soon after harvest, but at least before a ratoon is 30cm tall. Having a drill to follow makes driving and data collection easier. Fallow blocks are also suitable, but either before discing, or after hilling up. While there is technically no minimum area required, larger areas such as adjacent blocks produce a better understanding of soil variability across the farm.

Check out our quick video guide to EM Mapping here: [Guide to EM Mapping](#)



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FOR FURTHER INFORMATION & ADVICE CONTACT HCPSL

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