

Soil compaction analysis

User: CROPMAN – Inovação Agrícola, Brazil

Cropman, founded in 2018, operates out of Campinas (Sao Paulo). The company specializes in mapping the spatial variability of agricultural soils and creating high-precision management zones. Using cutting edge technologies, Cropman is an innovative AG service provider, that combines state of the art soil mapping tools and the principles of sustainable farming operations to bring revolutionary solutions to Brazilian crops.

The Cropman team of agronomic experts makes use of their technical knowledge to bring enhanced profitability to their customers.

THE CHALLENGE

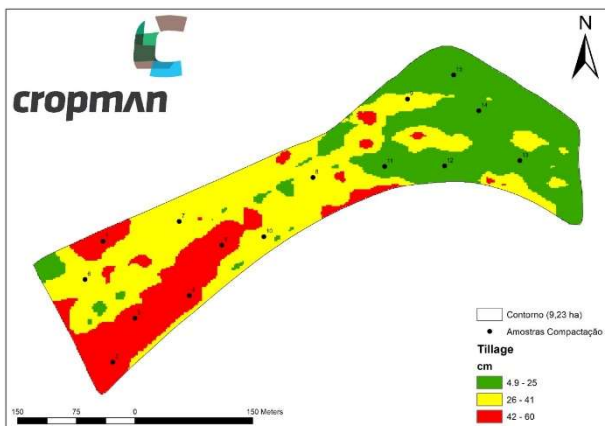
Sugar cane fields are typically re-planted every 5-7 years. The use of heavy machinery, overtime, causes compaction and creates difficulties for water infiltration, root growth and ultimately nutrient absorption.

Therefore, deep ripping is required to prepare the fields for future plantations and to ensure high yields. Even though the deep ripping operations consume high amounts of energy due to the highly compacted soils in Brazil, the opportunity for high yields is enormous here.



THE SOLUTION

Cropman understood very early that the Topsoil Mapper offers not only the possibility of horizontal soil mapping, but also a vertical analysis of the scanned soils. Depth to



interface maps are used to determine compacted zones in the sugar cane fields. Some areas are confirmed to require deep-ripping, and some do not require any subsoiling operations at all. A third group is checked to see if the soils must be treated mechanically or not and down to which depth.

Cropman then creates variable depth ripping maps. Those maps can be used as simple guidelines or converted into maps that are read by the tractors' ISOBUS system.

Savings can represent around \$ 20/ha (\$ 8/acre), most of which is fuel. The operation more than pays for itself, a typical win-win deal for everyone involved.

QUOTES

"We have been operating the Topsoil Mapper since 2019. The system enables us to understand complex soil structures and translates them into data maps. We then use our agronomic knowledge to build customized consulting services such as the deep ripping plans for the sugar cane industry." – says Henrique C. Junqueira Franco, Co-founder & owner of Cropman

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