

Trial Data and Fact Sheet - Aqua-Sil™ Soil Conditioner

Romano Farms, Ingham, QLD (Sugar Cane) – 2018

Replicated trials were conducted in Ingham, QLD with Liquaforce, a liquid fertiliser company to incorporate Aqua-Sil™ Soil Conditioner into their fertiliser blend to determine if the effects of both products were synergistic. Moreover, this specific grower wanted to improve the soil structure and infiltration of water through the soil with Aqua-Sil™ Soil Conditioner. The field has a soil with high exchangeable aluminium, and that enhanced water infiltration may have contributed to the treatment reducing the deleterious effect of exchangeable aluminium in the crop root zone.

Each strip was approximately 240m long and each treatment contained 6 rows that were replicated 3 times.



Figure 1: Trial strips at initial stages of crop growth.



Figure 2: Liquaforce applicator that allows for precise application of product in a narrow band at the stool.

Results and discussion:

Normalised difference vegetation index (NDVI) Image:

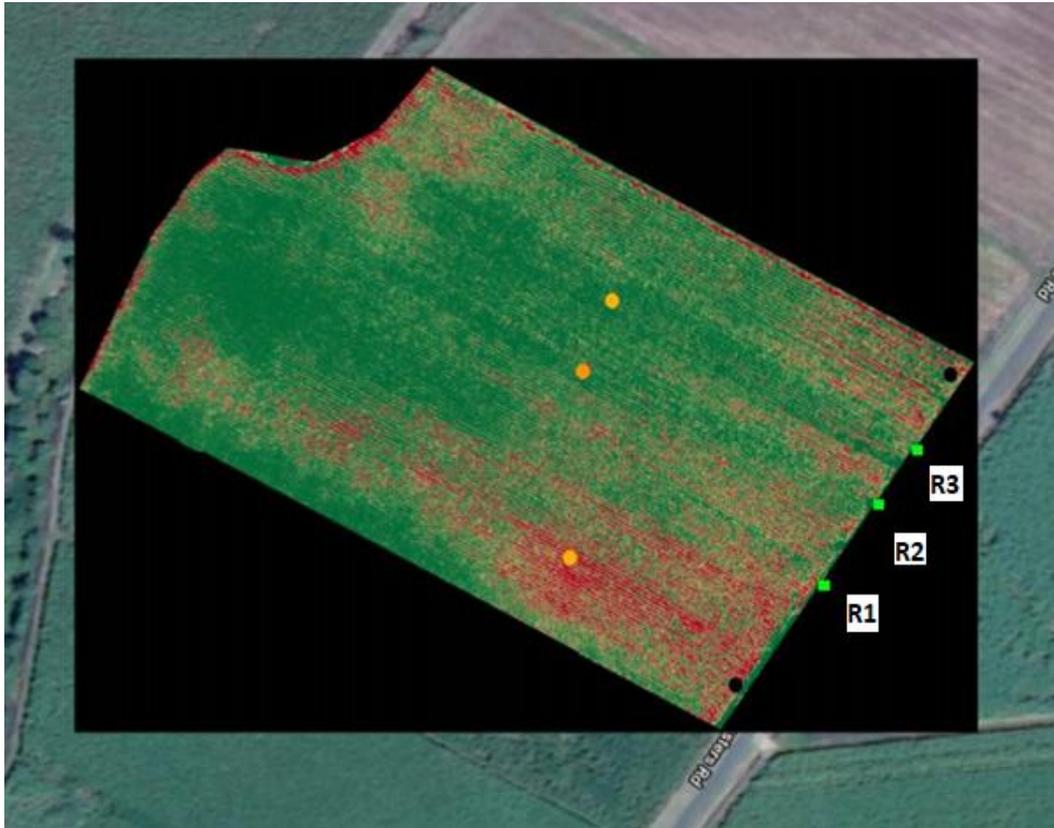


Figure 3: Orange dots inside paddock show soil sample sites.. Green squares mark western side of each 6-row CHT treatments, with the first green dot on the left bottom side being R1. Background image is resultant NDVI from drone flight taken 23rd April 2019.

- The large selection of dark green from the NDVI indicates the positive difference in 'crop health' perhaps a higher level of photosynthesis in the foliage. The coincidence of the higher NDVI value with the CHT treatment strip is conspicuous especially in replicated R2 and R3.
- Following treatment application, the farm received heavy rainfall two weeks after treatment. The lower end of the field (north boundary, on right hand side and upper right Figure 13) was subjected to flood. Treatment was stool-split, below ground, which was expected to result in minimal product movement across field with flood water.

Yield Data:

Treatment	Replicate Number	Bin Identification	CCS* (Sugar Content)	Yield (tonnes)
Aqua-Sil™	2	9	15.5	58.65
Control	4	8	15.4	55.76

Table 1: Yield and sugar content data for CHT Aqua-Sil™ Soil Conditioner trial.