CARBOTECH™

ON FARM DEMONSTRATION – 2011/12

NON BEARING CITRUS, ORANGE RIVER SCHEME, N. CAPE, SOUTH AFRICA

TRIAL AIM

CARBOTECH is a liquid carbon product derived from plant extracts. CARBOTECH is useful in improving the efficiency of plant nutrient uptake.

The CARBOTECH mechanisms of action are as follows:

1. CARBOTECH will bind with nutrients and protect it from lock-out in the soil or from leaching and volatilization.
    a. Cat-Ions such as Ammonia, Potassium, Calcium and Magnesium binds with CARBOTECH to form larger molecules, aiding in reducing leaching through the soil.
    b. Anions such as Phosphates binds with CARBOTECH in 'n proses called organic Phosphate clustering protecting it from Calcium / Phosphate lockout.
2. CARBOTECH will improve root growth by stimulating cell division and growth as well as having a positive effect on phosphate availability and mobility
3. The beneficial carbonaceous bacterial food source available in CARBOTECH promotes the bio-life in the soil to thrive and assist in the promotion of nutrient uptake, root development and root health to give natural defence against attacks on plant health

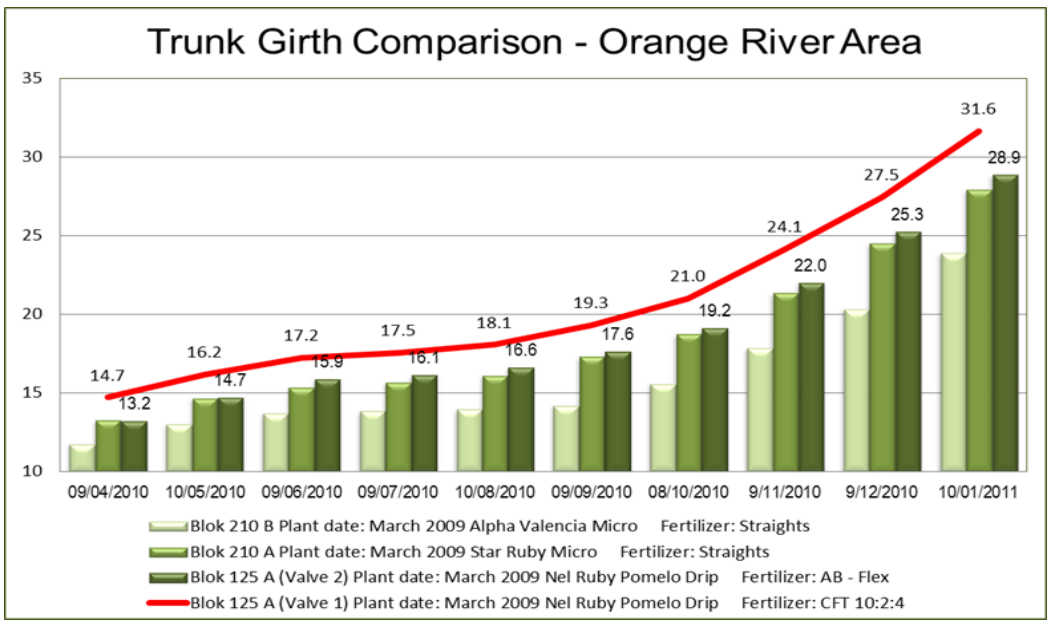
On bearing citrus a strategy of a reduction in the application of fertilizer elements resulting in a financial saving on the fertilizer program cost could theoretically be achieved.

The aim in this case therefore was to see if the addition of CFT 10.2.4 with Carbotech could positively affect growth responses in non-bearing trees, when compared against favoured alternative fertilizer regimes. Cost was also tracked to ensure equitable comparisons.

FIELD TRIAL SETUP

An orchard that was planted to Nel Ruby Pommelo in March 2009, was utilized for the trial as it was an homogenous block divided in two parts enabling two fertilizer regimes. The portion marked Block 125A Valve 1 was fertilized using a CFT 10.2.4 liquid fertiliser with Carbotech at a cost of R2100 per Ha. This block was measured against a chemical fertilizer program (marked Block 125A Valve 2) at a cost of R3400 per Ha. Monthly trunk diameter readings were taken and are represented graphically below.

RESULTS



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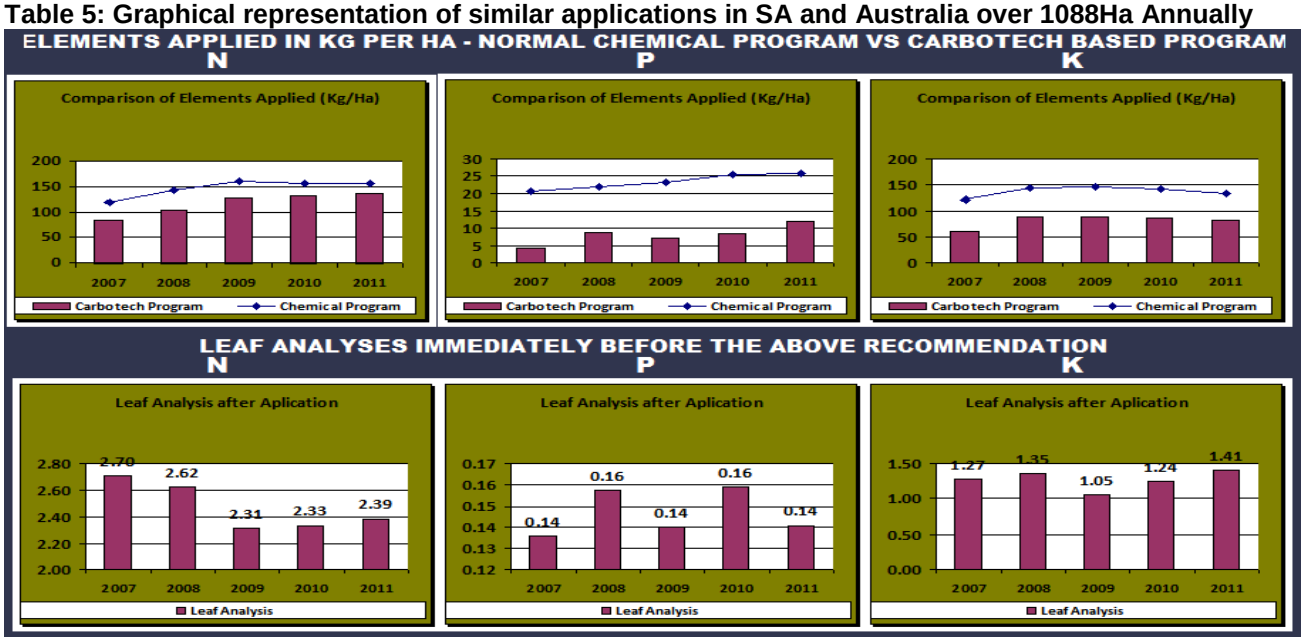
The readings marked Blok 125A Valve 1 and 2 are the focus of this trial. The other blocks on the graph represents different cultivars using a standard “straights” chemical program of unknown cost per Ha.

From the measurements it is evident that the CFT 10.2.4 treatment outperformed a more expensive alternative by about 9%

CONCLUSION

From the results obtained, it is apparent that CT 10.2.4 with Carbotech is useful for an increase growth response in young trees, as well as for the reduction of fertilizer program costs in Citrus production on non-bearing trees. This result corroborates findings on various other farms country wide where similar results were found. The graphs below represent results of more than a 1000 Ha measured annually in various places in South Africa and Australia on bearing trees indicating an increase in the efficiency of nutrient utilization.

Table 5: Graphical representation of similar applications in SA and Australia over 1088Ha Annually



ACKNOWLEDGEMENTS

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