MAIZE TRAIL_2

Researcher:	NutriCo SA	Year:	2007
Variety:	Pioneer	Location:	Gauteng
Planting Date:	November	Irrigation:	Irrigated

Experimental design: Various foliar feeds and growth stimulants were tested in a greenhouse study to evaluate plant height and dry weight influences with and without nutrient application. A random comparison with various commercial foliar feeds and growth stimulants were done. A random complete block design was used with ten replicates per pot for each of the treatments listed.

Fertilization: No fertilizers where applied. The soil used contained in itself moderate fertility.

Application: All the products tested were applied at 100ml/pot. Treatment 1 was applied to the soil after planting of the seed, treatments 2, and 3 where applied over the plants and onto the soil surface in the pots, starting at day 5 and last application at day 15 after germination.

Trail 1A: 400ml Amino Gluconate Zn°, 500ml Amino Gluconate Mg°, 100ml Amino Gluconate K° in 100Lt water.

Trail 1B: 200ml Amino Gluconate Zn, 250ml Amino Gluconate Mg, 50ml Amino Gluconate K, 10ml Cyflo in 100Lt water.

Trail 2: 600ml Zinc Max *, 800ml Mag Max*, 200ml K Max* in 100Lt water

Trail 3: 600ml Zinc Charge**, 800ml Mag Charge**, 200ml K Charge** in 100Lt Water

Trail 4: 1000ml Ascophyllum nodosum Kelp*** extract in 100Lt Water

Trail 5: 1000ml Ecklonia maxima Kelp*** extract in 100Lt Water

Harvest: 36 days after seed germination. All plants were measured for plant height. After measurements were taken, all plants were washed and cleaned from any soil or dirt. All roots were removed and stalks + leaves were dried separate from the roots at 60°C for 48 hours and weighed.

° A product of NutriCo SA

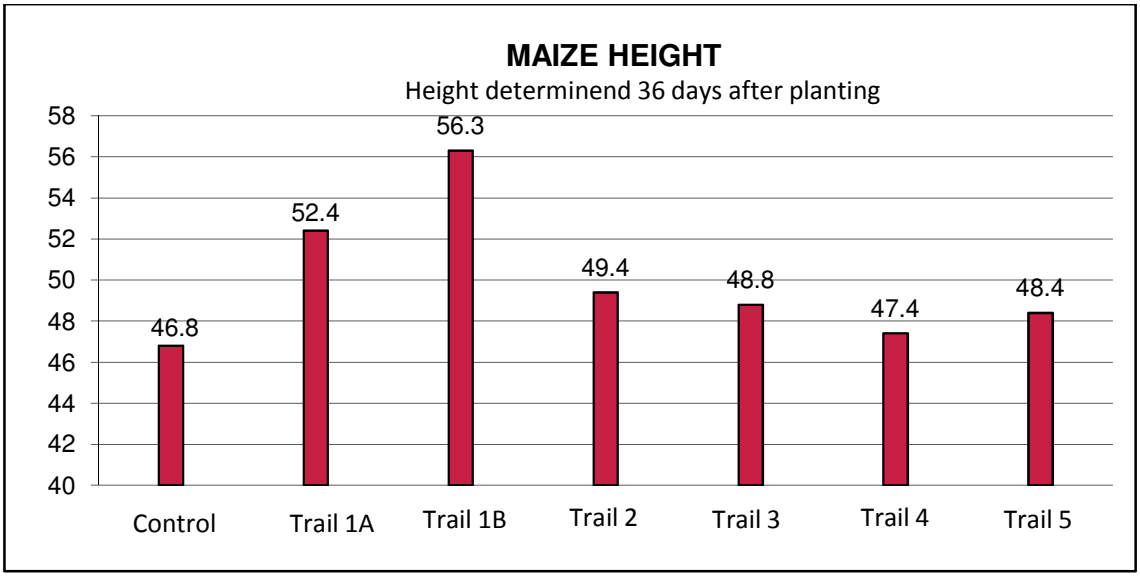
* A product of Plaaskem (Pty) Ltd, purchased from UAP

** A product of Villa Crop Protect, purchased from Villa Crop Protect depot, Kempton Park

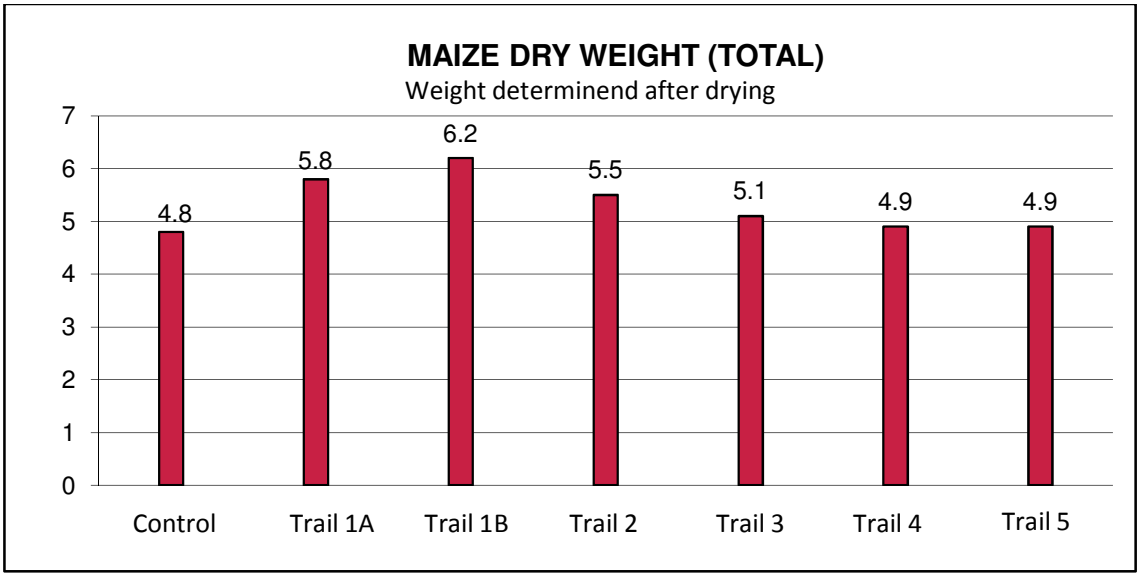
*** Both Kelp products purchased from a commercial retail outlet

Results:

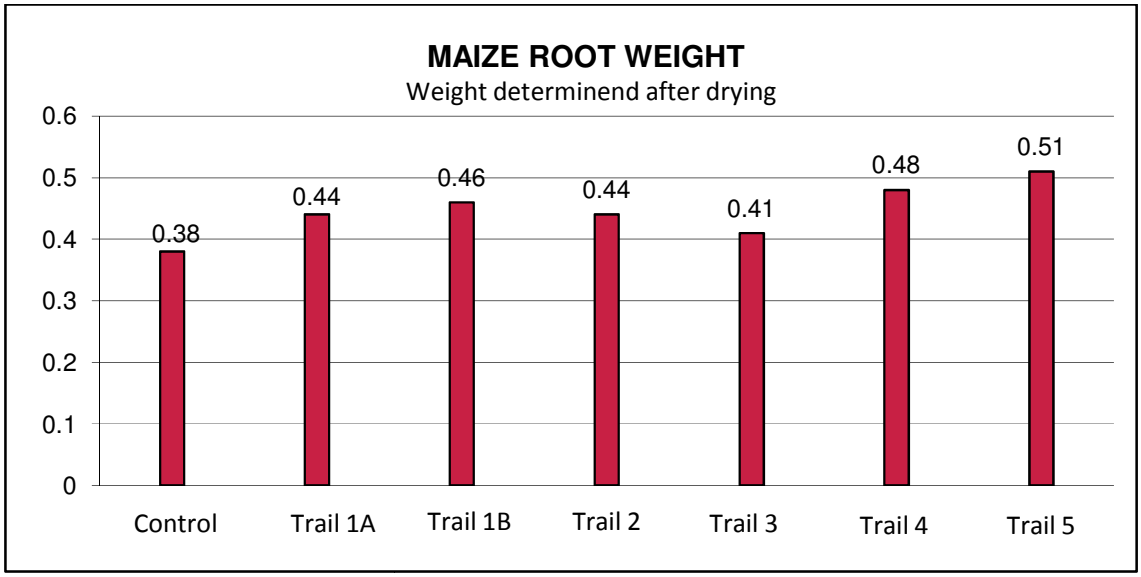
Plant Height:



Plant Weight (Total):



Root Weight:



TRAIL 2 **TRIAL 1B** **TRAIL 3**

Conclusion:

Height as indicator of growth stimulation (Growth Comparison Trails compared to Control plants):

Trail 1A ……. +10.7%	Trail 1B ……. +16.9%	Trail 2 ……. +5.3%
Trail 3 ……. +4.1%	Trail 4 ……. +1.3%	Trail 5 ……. +3.3%

A conclusion can be made out of the growth of the maize that the increased transport and translocation of nutrients with the aid of the Cyflo molecule aided the plants in trail 1B to attain a far superior growth rate than any of the plants in the other trails. It is however also notable that at reduced nutrient application rates both the Amino Gluconate applications in Trail 1A and 1B was far superior to any of the other nutrient trails conducted.

Dry weight as indicator of growth stimulation (Trails compared to Control plants):

Total dry weight:

Trail 1A ……. +17.2%	Trail 1B ……. +22.6%	Trail 2 ……. +12.7%
Trail 3 ……. +5.9%	Trail 4 ……. +2.0%	Trail 5 ……. +2.0%

Root dry weight:

Trail 1A ……. +13.6%	Trail 1B ……. +17.4%	Trail 2 ……. +13.6%
Trail 3 ……. +7.3%	Trail 4 ……. +20.8%	Trail 5 ……. +25.5%

As result of the increased plant height it is a basic certainty that more nutrients would be stored or retained in the plant stem and foliage, as was observed in Trail 1A and 1B. It is however remarkable that larger rootstock was observed in plants when kelp extracts were applied. The assumption would be that the larger root mass can be ascribed to cytokinin and auxin activity of the kelp extracts. Total dry weight was however dominated in the maize where nutrients were assisted by Cyflo.