



**RESEARCH
TRIAL
SUMMARY**



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B. C. APPLES - COFERTIGATION

TITLE – Apple Seedlings, Cofertigation of **BLACK EARTH** and N and NPK.

RESEARCH COOPERATOR – G. Neilson, B. Rabie, E. Hogue, D. Neilson, P. Bowen (Agriculture Canada).

TRIAL OBJECTIVE

To test the effectiveness of fertigated liquid humic substance **BLACK EARTH** Liquid under less fertile nutrient conditions.

EXPERIMENTAL DESIGN

CROP	APPLE SEEDLINGS
Variety	Gala M.9 apple rootstock
Location	Ag Canada Summerland Greenhouses
Experimental Design	Randomized complete block with 10 replicate seedlings.
Planting details	Apple seedlings were transplanted at the 2-leaf stage on December 7, 2000
Fertility	NPK applied as 20-20-20 commencing December 11, 2000 and applied twice weekly (100 ml of solution) until Feb. 26, 2001 for a total of 23 applications
Harvest	February 28, 2001

TREATMENTS

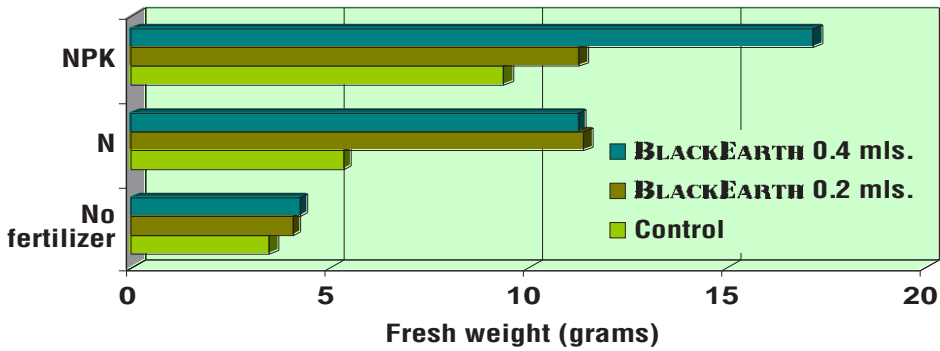
1	Check – no humic fertigant, no fertilizer
2	Check – no humic fertigant, N (8mM)
3	Check – no humic fertigant, NPK (8 mM N)
4	1/500 dilution of BLACK EARTH , (0.2 mls. per watering), no fertilizer
5	1/500 dilution of BLACK EARTH , (0.2 mls. per watering) N(8mM)
6	1/500 dilution of BLACK EARTH , (0.2 mls. per watering), NPK (8 mM N)
7	1/250 dilution of BLACK EARTH , (0.4 mls. per watering), no fertilizer
8	1/250 dilution of BLACK EARTH , (0.4 mls. per watering), N(8mM)
9	1/250 dilution of BLACK EARTH , (0.4 mls. per watering), NPK (8 mM N)

RESULTS AND DISCUSSION

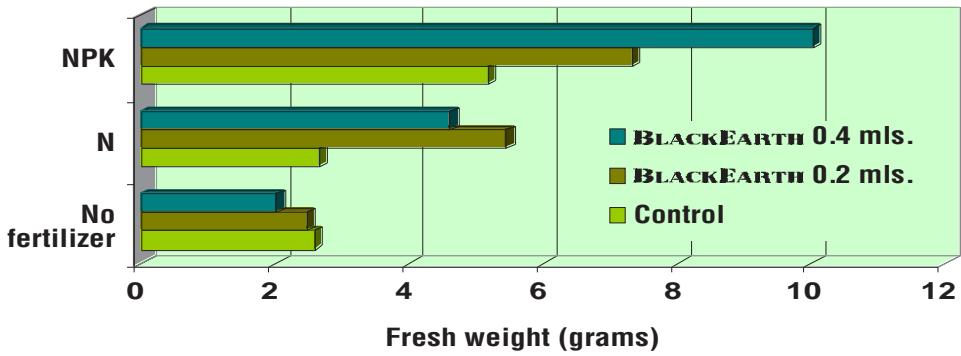
Cofertigation of **BLACK EARTH** Liquid with N or NPK-fertilizer stimulated growth of apple seedlings more than was observed via fertigation alone. The **BLACK EARTH** Liquid appeared to stimulate the uptake of P and K.

BLACK EARTH Rate	Potassium % Dry Weight	Phosphorus % Dry Weight
0	1.59 (c)	0.18 (ab)
0.2 mls./watering	1.87 (b)	0.16 (b)
0.4 mls/watering	2.27 (a)	0.19 (a)

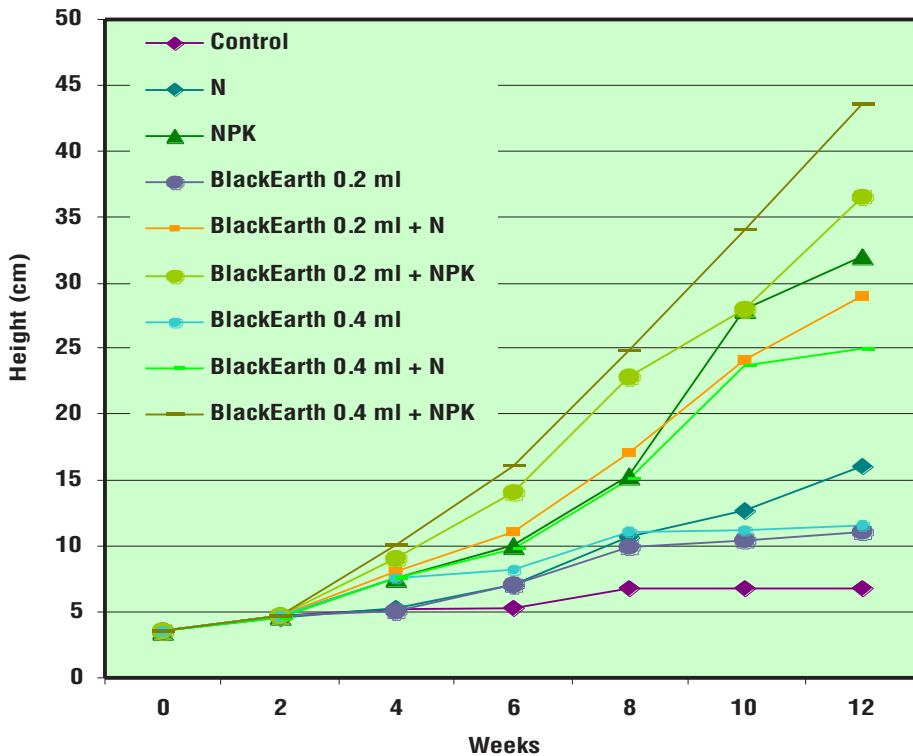
APPLE SEEDLING TOP FRESH WEIGHT



APPLE SEEDLING ROOT FRESH WEIGHT



APPLE SEEDLING HEIGHT



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