

# APPLE SEEDLINGS, COFERTIGATION OF BLACK EARTH AND N AND NPK



## RESEARCH COOPERATORS

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## TRIAL OBJECTIVE

To test the effectiveness of fertigated liquid humic substance (Black Earth Liquid) under less fertile nutrient conditions.

## CERTIFICATIONS

Black Earth Humic products are:

- » Listed by OMRI
- » Registered with CFIA
- » Certified for use for NOP
- » Certified by the CDFA



## EXPERIMENTAL – DESIGN

Crop:	Apple seedlings
Variety:	Gala M.9 apple rootstock
Location:	Ag Canada Summerland Greenhouses
Experimental Design:	Apple seedlings were transplanted at the 2-leaf stage on December 7, 2000
Planting Details:	August 9, 2001
Fertility:	NPK applied as 20-20-20 commencing December 11, 2000 and applied twice weekly (100 ml of solution) until February 26, 2001 for a total of 23 applications
Harvest:	February 28, 2001

## EXPERIMENTAL – TREATMENTS

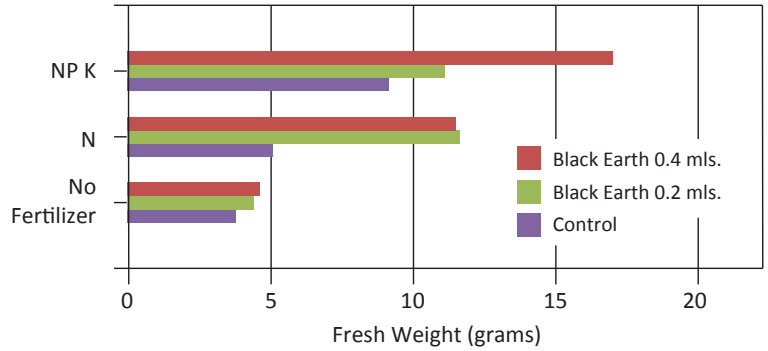
- 1) Check – no humic fertigant, no fertilizer
- 2) Check – no humic fertigant, N (8 mM)
- 3) Check – no humic fertigant, NPK (8 mM N)
- 4) 1/500 dilution of Black Earth Liquid 6% (0.2 mls. per watering), no fertilizer
- 5) 1/500 dilution of Black Earth Liquid 6% (0.2 mls. per watering) N (8 mM)
- 6)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

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)

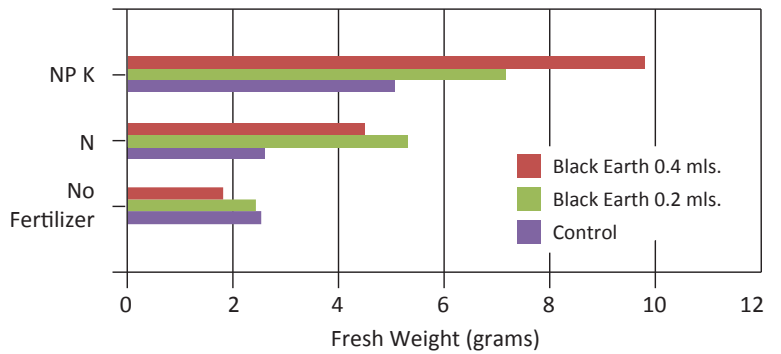
## RESULTS

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

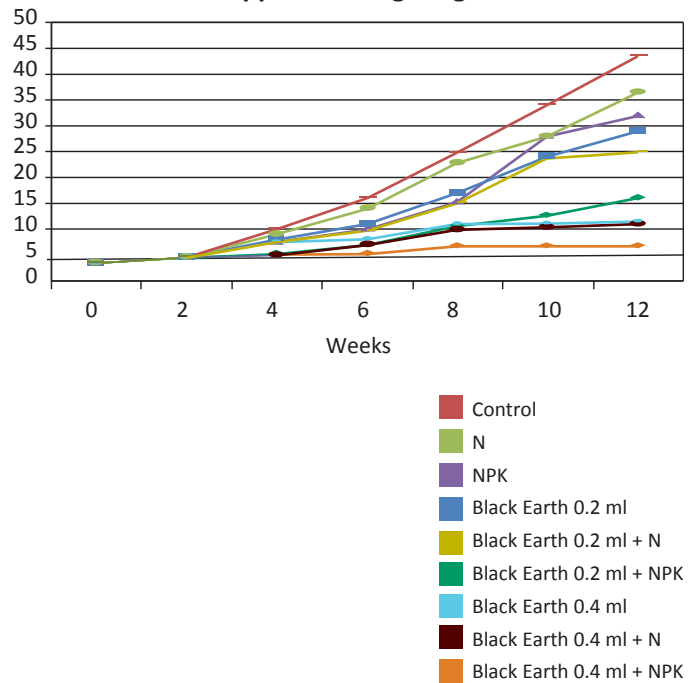
### Apple Seedling Top Fresh Weight



### Apple Seedling Root Fresh Weight




### Apple Seedling Height



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