

2003 Watermelon Foliar Fertilization Trial II

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This trial compared three fertilization programs for Watermelon production.

METHODS:

Seeds were planted on May 21st into 50 cell trays containing a peat-vermiculite soilless mix. Cells were thinned as needed to 1 plant/cell. Transplants were set into raised beds (covered with black plastic mulch with trickle irrigation under the plastic) 36" apart in the row on June 19, 2003. Plots were 15 feet long and rows were 5 feet apart. Experimental design was randomized complete block with 4 replications. The field is located in southern Ohio, Highland County and the soil is a Haubstadt Silt loam. Different levels of fertilizer were incorporated into each replication prior to planting. Weed control was accomplished using Dual II (s-metolachlor). A standard commercial fungicide and insecticide program was followed on a 7-10 day schedule. Fruit was harvested three times starting on 8/20 with the last harvest on 9/15

RESULTS:

When analyzed at the 0.05 level of significance there were no statistically significant differences across treatments marketable fruit number or average fruit weight,

<u>Treatment</u>	<u>Marketable Ton per Acre</u>	<u>Marketable Fruit per Acre</u>	<u>Average Fruit Weight</u>
100 units N	73	10000	14
120 units N	47	6136	15
120 Units N + Foliar*	77	10682	13

***Foliar Fertilizer program**

- 1 gal 3-18-18 3 weeks after emergence
- 2 gal 3-18-18 @ 1st bloom
- 2 gal 3-18-18 @ fruit set
- 2 gal 3-18-18 2-3 weeks later

DISCUSSION

While statistically there is no difference, the results are interesting in that the lowest level of fertilizer was most similar to the higher level of pre-plant fertilizer + foliar treatment. It is possible that the higher level of pre-plant fertilizer without the foliar treatment produced excessive vegetation at the expense of fruit production. It would be interesting to measure vegetative biomass at the end of the season to see if this was the case.