AZOMITE® International

A Natural Source of Minerals and Trace Elements

AZOMITE® and Peppers

Habanero Chili Peppers

An Examination of Pepper Production in the Presence and Absence of *AZOMITE®*
Study conducted by D.Fodge, PhD
DF International, LLC

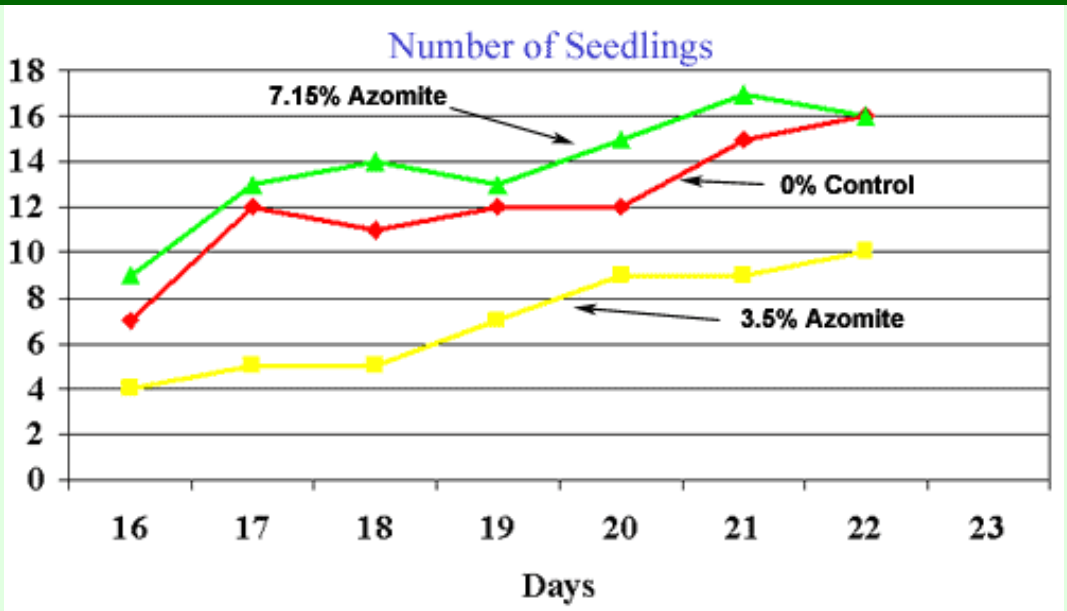
Overall Plan

- AZOMITE impact on Seed Germination
- AZOMITE impact on Height, Canopy Circumference and Fruit Yield of Mature Plants

Experimental (Germination Phase)

- Seeds of Habanero chili peppers were purchased and planted in pots.
  - Capsicum Chinese Jacquin
  - Three (3) test groups were established:
    - Control (7% builders sand)
    - AZO-1 (@ 3.5% weight of soil),
    - AZO-2 (@ 7% weight of soil)
- 9 pots/Group, each was seeded with 4 seeds/pot
  - Each pot was filled with 2/3 Miracle Grow Enriched Potting Mix (www.miracle-gro.com) and 1/3 Vermiculite. Potting Mix (0.21-0.07-0.14, NPK) is a slow-release fertilizer derived from ammonium nitrate, ammonium phosphate, calcium phosphate and potassium sulfate.
- Placed 24 inches beneath GroLux lights and next to large southwest facing window at avg. temp. = 72 oF. Light/Dark cycle = 12 each.

Habanero Seedlings, 22 days				
Parameter	**0% Azo**	**3.6% Azo**	**7.15% Azo**	**Totals**
# Pots with seedlings	8 of 9	7 of 9	7 of 9	22/27, 81.5% have seedlings
# seedlings	16 of 27	10 of 27	16 of 28	42/82, 51% germinated



Seed Germination, Conclusion

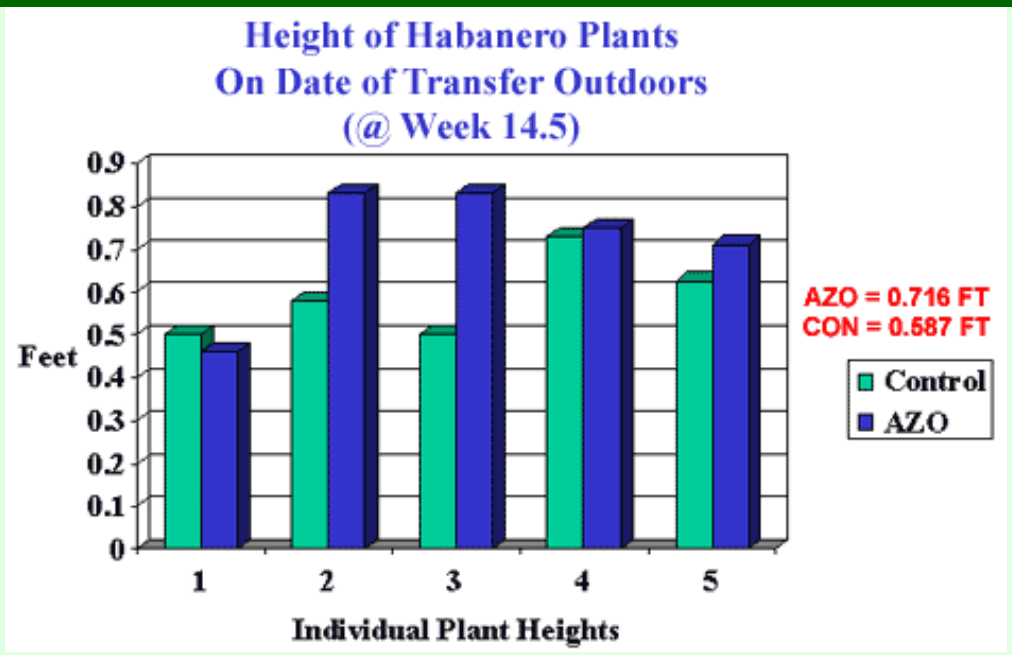
- Control pots yielded more seedlings than lowest dose of ***AZOMITE®*** and as many seedlings as the highest dose of ***AZOMITE®***.
- Were the experiment to be repeated, we would initiate the test differently: we would:
  - Roll Test seeds in ***AZOMITE®*** and then plant them.
  - Roll Control seeds in builders sand and then plant them (Controls).

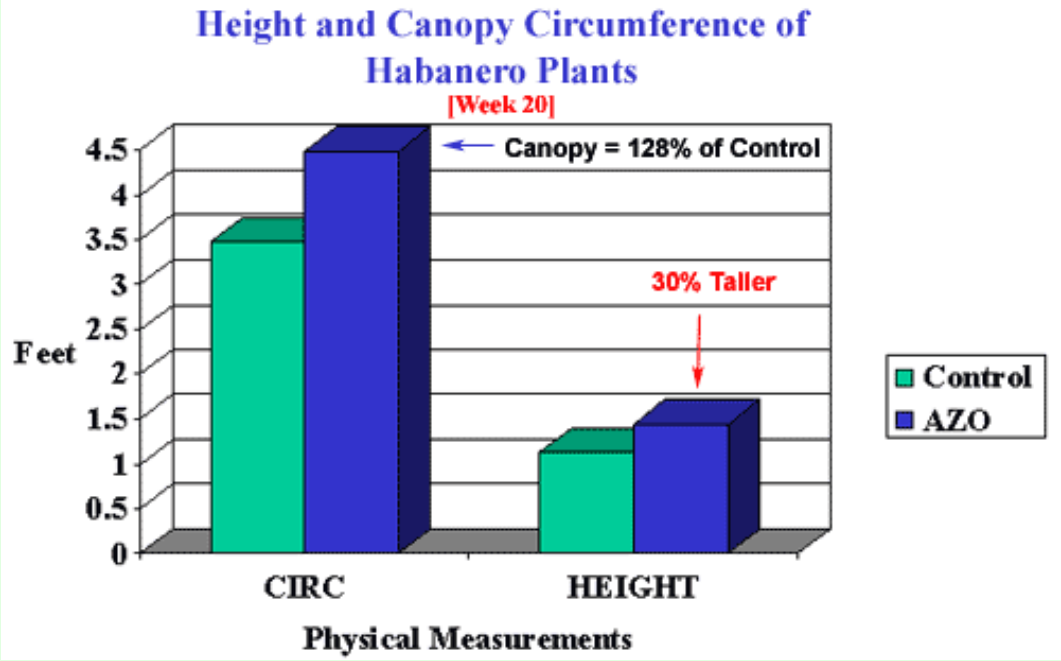
Growth Phase Portion of Experimental Plan

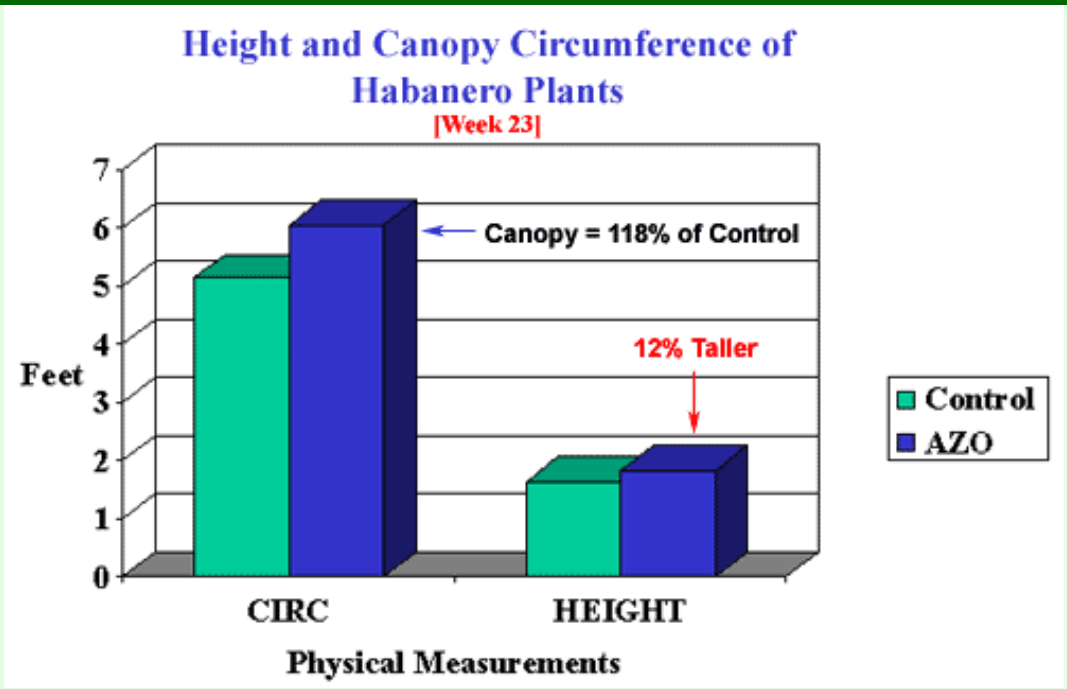
Seedling plants were allowed to grow undisturbed for a few weeks, and then they were planted in the garden when the outside temperature was consistently in the 80s of

Experimental Plan for Growth Test

- At the 14th week, plants were assessed for growth characteristics and the largest and healthiest plants were identified for the planting phase of the test. 5 ***AZOMITE®*** (AZO-2) and 5 Control plants were planted in a sunny flower bed. A random scheme was used in the arrangement.
- Heights of the individual plants were recorded just before they were transferred from the individual pots to the soil garden site.
- Throughout the 10 weeks that the plants were in the garden, they were watered about every 3rd day, if it did not rain. Each plant received approximately ½ gallon of water each time.


Height of Habanero Plants
On Date of Transfer Outdoors
(@ Week 14.5)
Feet
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1
2
3
4
5
Individual Plant Heights
AZO = 0.716 FT
CON = 0.587 FT
Control
AZO

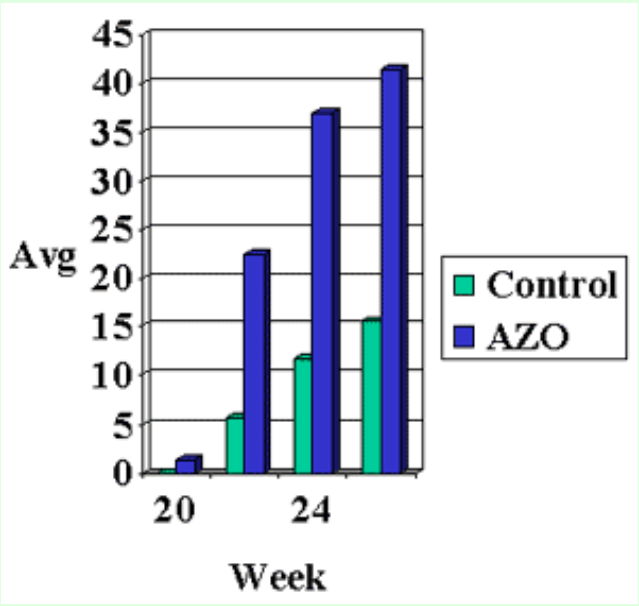

Height and Canopy Circumference of
Habanero Plants
[Week 20]
Canopy = 128% of Control
30% Taller
Feet
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
CIRC
HEIGHT
Physical Measurements
Control
AZO



Average Number of Chili Peppers: Control vs. *AZOMITE®*				
	Wk 20	**Wk 23**	**Wk 24**	**Wk 25.5**
Control	0	5.6	11.8	15.6
AZOMITE®	1.4	22.4	37 Picked 1st ripe chili	41.4

Timing of Pepper Appearance

- It is clear that the plants on the ***AZOMITE®*** group set fruit much earlier and at larger numbers/plant than plants in the Control group.
- At week 24, there are 3.13-fold more peppers/ plant in the ***AZOMITE®*** than Control group.



Conclusions of Study

- ***AZOMITE®*** stimulated both heights and canopy circumferences in the test group, and they were greater, 12% and 17% respectively, than the Control (untreated) group. However, the standard deviations overlapped, and thus the differences were not statistically difference.

- While fruit production varied considerably from plant-to-plant, pepper production in the ***AZOMITE®*** group was 3- to 4-fold greater than in the Control group. Moreover, the peppers appeared as much as 2 weeks earlier on the plants in the ***AZOMITE®*** group than the Controls.

- The number of replications were small but statistical differences were detected for fruit production, and the numerical differences were substantial. An inexperienced observer could see the differences.

- The economic consequences of using ***AZOMITE®*** as a soil remineralizer for chili pepper production would appear to be substantial. Thus, it is recommended that further testing be conducted.

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