

Fertilizer Comparison in Cantaloupes in Sodic Soil

Felicity, CA

Experiment Info:

Planted:
Harvest:
Yield Goal:
Target Fert.:
Variety:
Population:
Row Width:
Prev. Crop:
Plot Size: 12 acres
Replications:

Soil Test Values (ppm):

pH:	8.1
CEC:	23.8
%OM:	0.6
Bray P1:	
Bicarb P:	19
K:	121
S:	852
%K:	1.3
%Mg:	13.8
%Ca:	63.7
%H:	21.2 Na
Zn:	2.9
Mn:	5
B:	3.2

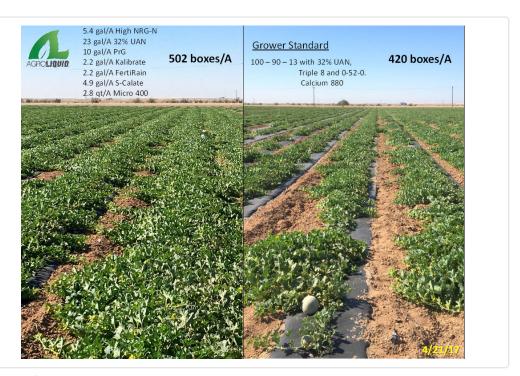
Objective:

Compare conventional and high technology fertilizer programs for cantaloupe production in a sodic soil.

An experiment was established in a commercial cantaloupe field operation to evaluate different fertilizer programs for cantaloupes growing in a sodic (exchangeable Na >15%). In fact, this soil had 21.2% base saturation! The conventional program was not provided by the grower prior to planting, but rather a soil test and estimated nutrient needs, from which the AgroLiquid program was developed. Fertilizers were applied through drip irrigation weekly from mid-February through early April. (Note: the fertiRain was to be foliar applied, but was mistakenly included in the regular drip blend.)

A visit to the site on April 21 showed how the plants appeared a couple weeks before harvest.

(note: the very high soil test sulfur is from application of elemental sulfur in an attempt to lower the pH.)



Conclusions:

- The vine growth with AgroLiquid was considerably greater than that with the grower standard fertilizers at the field visit in April. The carbon encapsulation of of the phosphorus in PrG (Pro-Germinator in California) protects against tie-up loss. Additionally the feeding of the nutrients, including micronutrients, through the growing season enabled a steady supply of nutrients with the irrigation water, which appeared to be superior to dry broadcast which was part of the standard fertilizer program.
- It is impressive that such good growth can occur on either side with the high soil sodium. The carbon-based AgroLiquid can provide plant-usable nutrition without additional growth restriction from fertilizer salts.
- With a box weight of 30 pounds, there was almost one and a quarter more tons of cantaloupes per acre with AgroLiquid (+19.5%). The farm manager reported less mildew and higher sugar content with AgroLiquid,