Increasing Yields of crops without using Fertilizers and Pesticides
Shuwaib, Al Ain UAE

Shuwaib Farms Brief
Located in Shuwib near Madam in Al Ain Shuwib farms is the only organic farm certified by ICEA of Italy in the UAE. Their customers include RipeME, Carrefour, Spinneys Etc. The farm grows vegetables, Dates and some fruits in their 60 Air cooled Green houses and adjoining 40 acres of land.

Farm Location
Click here for Google location. http://wikimapia.org/#lang=en&lat=24.771083&lon=55.777443&z=18&m=b

Challenges in farming.
Mortality of the crop is the biggest risk for a farmer which makes them over dose pesticides or PKN (Phosphorus Potassium Nitrogen) based fertilizers in their crops. The irrigation system of a typical Green house in the desert is a drip irrigation system so the roots also curl up in a bunch around the plant making the foundation of the plant weak.

Solution:
Using Phyto-Cat™ the above challenges were eradicated and the Yield of the plant was doubled. The next few slides will showcase the Progress of crops with their control subjects. The test was Started at infancy stage of the crop and went on for 6 months for the tomatoes. No fertilizer or urea was used in this experiment. Cow manure was applied, and the growing medium was 40% Sand and 60% organic compost.

Plum Tomatoes
First Dosing Height
100mm
Month 1, Dosed Crop
One month after the first dose

Month 1, Non dosed crop
Notice the inconsistency in height
Month 2, Dosed Crop

Month 2, Non dosed crop
Month 3, Dosed Crop

Month 3, Non dosed crop
Month 4, Dosed Crop

Month 4, Non dosed crop
Month 5, Dosed Crop

Month 5, Non dosed crop
Month 5, Dosed Crop

Month 5, Non dosed crop
Month 6, Dosed Crop

Month 6, Non dosed crop
Month 7, Dosed Crop

Month 7, Non dosed crop
Final Results
- The Final Yield of the crop was 2 times over than the control. Lab test report is attached at the end.
- The Plants were still flowering and bearing fruit but due to the High temperatures in July (50c) they were turning red at a very young age. But they were still flowering off season.
- The plants were stronger and more robust than the control which ended its cycle when the season ended.
- As of 3rd August the crop is still flowering and bearing fruit, and monthly dosing will continue to see if it can survive another two months.
- September the crop had to be pulled out to make way for new plantation but was still flowering and bearing fruit. Although not of very large size.
- The control had a 30% mortality while the Treated had a 100% survivability rate
- No Urea or PKN was used in either of the subjects.

Final Tomato Yields:
Control non dosed crop Yield 720.00Kg (Seven Hundred Twenty Kilograms)
Treated BOC crop Yield: 1,715.5Kg (One Thousand Seven Hundred Fifteen and a Half Kilograms)

Case Study Performed By:
Gautam Dandona

Additional Experiments:
Parsley was harvested 5 times before the left side could grow to its full height
Cucumbers

Non treated, less leafy

Treated more dense leaves

Cucumber Result

The test was inconclusive as it was hit by Aphids.
# Microbiological Analysis of Tomato (Treated)

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<thead>
<tr>
<th>Report No.</th>
<th>R2/DX13-6829</th>
<th>Date</th>
<th>09/06/2013</th>
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<tbody>
<tr>
<td>Client Name</td>
<td>1 ml</td>
<td>Sampling Method</td>
<td>APHA</td>
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<td>Project Name</td>
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<td>Receiving Date / Time</td>
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<td>Address</td>
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<td>Sampling Location</td>
<td>Dubai</td>
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<td>Contact Person</td>
<td>Mr. Siraj</td>
<td>Sampling Source</td>
<td>Farm</td>
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<td>Telephone &amp; Mob No.</td>
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<td>Sample Container</td>
<td>Sterile Bag</td>
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<td>Sample Description</td>
<td>Tomato (Treated)</td>
<td>On-Site Treatment</td>
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<td>Sample Production Date</td>
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<td>Sample Batch Code</td>
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<td>Request No.</td>
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<td>Sample Expiry Date</td>
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<td>Sample No</td>
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<td>Sample Received By</td>
<td>GTL's Rep.</td>
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<td>Sampling Date / Time</td>
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<td>Sample Receipt Temp.</td>
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<td>Sample Collection Temp.</td>
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<td>Tested By</td>
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<td>Sampled By</td>
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<td>Tests Dates</td>
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## Parameters

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<thead>
<tr>
<th>Parameter</th>
<th>Methods</th>
<th>Units</th>
<th>Results</th>
<th>GS 1016/2000* Specification</th>
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<tbody>
<tr>
<td>Aerobic plate count</td>
<td>BAM Chapter 3</td>
<td>CFU/g</td>
<td>&lt; 10</td>
<td>4.0 x 10^1</td>
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<tr>
<td>E. coli</td>
<td>CMMEF 8.91</td>
<td>MPN/g</td>
<td>&lt;3**</td>
<td>8.0 x 10^1</td>
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<tr>
<td>Salmonella spp.</td>
<td>CCFRA 3.1.2:2007</td>
<td>Per 25 gm</td>
<td>Absent</td>
<td>Absent</td>
</tr>
</tbody>
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**< 3 Considered as absent**

**Test Method Variation**: None

**Remarks**: The tested sample complies with the requirements of GS 1016/2000 Specification* for the microbiological criteria for foodstuffs - part 1 with respect to the tested parameters.

*These tests were conducted in Abu Dhabi Branch.

GTL certifies that above tests were carried out in accordance with:


These tests are within ISO/IEC 17025 Accreditation scope of Abu Dhabi Branch

- Result relates only to the item tested
- Report shall not be reproduced (except in full) without written approval of the laboratory.

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**Issue**: 02 / 28.08.2008
**Rev.**: 02 / 04.01.2012

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# TEST REPORT

**MICROBIOLOGICAL ANALYSIS OF TOMATO (UNTREATED)**

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For GEOSCIENCE TESTING LABORATORY

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