Biological Analysis
Soil

Report prepared for:

Roots to Fruits
Mark Angelini
8150 Knot Rd
Clarkstin, MI 48348 USA

design@rootstofruits.biz

Report Sent: 8/8/2013
Sample#: 01-117054 | Submission:01-023277
Unique ID: RNAO
Plant: Apple
Invoice Number: 10270
Sample Received: 8/1/2013

For interpretation of this report please contact:
Earthfort Labs
info@earthfort.com
(541) 257-2612

Consulting fees may apply

Organism Biomass Data	Dry Weight	Active Bacteria (µg/g)	Total Bacteria (µg/g)	Active Fungi (µg/g)	Total Fungi (µg/g)	Hyphal Diameter (µm)
Results	0.820	50.2	713	14.3	511	2.85
Comments	In Good Range	In range	Above range	Below range	Below range	
Expected Range Low	0.45	30	300	150	1500	
Expected Range High	0.85	60	600	300	3000	

	Protozoa (Numbers/g)			Total Nematodes #/g	Mycorrhizal Colonization (%)	
	Flagellates	Amoebae	Ciliates		ENDO	ECTO
Results	**7054**	33992	563	**3.30**	Not Ordered	Not Ordered
Comments	Low	Good	High	Low		
Expected Range Low	20000	20000	0	10	40%	40%
Expected Range High	200000	200000	400	20	80%	80%

Organism Biomass Ratios	Total Fungi to Tot.Bacteria	Active to Total Fungi	Active to Total Bacteria	Active Fungi to Act.Bacteria	Nitrogen Cycling Potential (lbs/ac)
Results	**0.72**	**0.03**	**0.07**	**0.28**	100-150
Comments	Low	Low	Low	Low	
Expected Range Low	5	0.1	0.1	5	
Expected Range High	10	0.15	0.15	10	

Nematode detail (# per gram or # per mL)
Classified by type and identified to genus.
(If section is blank, no nematodes identified.)

Bacterial Feeders	2.69	
Acrobeles		0.17
Butlerius		0.09
Cephalobus		0.35
Diploscapter		0.17
Eucephalobus		0.17
Panagrolaimus		0.09
Plectus		0.09
Prismatolaimus		0.35
Prodesmodora		0.17
Rhabditidae		0.87
Rhabdolaimus		0.09
Wilsonema		0.09
Fungal Feeders	0.09	
Eudorylaimus		0.09
Fungal/Root Feeders	0.35	
Aphelenchus		0.17
Ditylenchus	Stem & Bulb nematode	0.09
Filenchus		0.09
Predatory	0.09	
Clarkus		0.09
Root Feeders	0.09	
Pratylenchus	Lesion nematode	0.09

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Dry Weight:	Within normal moisture levels.
Active Bacteria:	Bacterial activity within normal levels.
Total Bacteria:	Excellent bacterial biomass.
Active Fungi:	Fungal activity low, foods may be required.
Total Fungi:	Low fungal biomass, foods and biology may be required.
Hyphal Diameter:	Good balance of fungi.
Protozoa:	Lacking species diversity.
Total Nematodes:	Low numbers, excellent diversity, just a few root feeders.
Mycorrhizal Col.:	Endo: | Ecto:
TF/TB:	Too bacterial for apple trees
AF/TF:	Low fungal activity, foods may be required.
AB/TB:	Low bacterial activity relative to total biomass
AF/AB:	Bacterial dominated, becoming more bacterial.

Interpretation Comments:

Fairly good fungal diversity, hyphal diameter: 1.5 to 5.5 um. Actinobacteria Biomass = 4.68 ug/g