Foodweb Analysis
Soil

Report prepared for:

None
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Report Sent: 8/27/2009
Sample#: 01-107741 | Submission:01-019757
Unique ID: Field 2
Plant: Wheat
Invoice Number: 4227
Sample Received: 8/19/2009

For interpretation of this report please contact:
Soil Foodweb Oregon
info@oregonfoodweb.com
(541) 752-5066

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	**0.890**	18.5	861	3.64	559	3
Comments	Above Range	In range	Above range	Below range	Above range	
Expected Range Low	0.45	10	150	10	150	
Expected Range High	0.85	25	300	25	300	

	Protozoa (Numbers/g)			Total Nematodes #/g	Mycorrhizal Colonization (%)	
	Flagellates	Amoebae	Ciliates		ENDO	ECTO
Results	**2418**	31319	**36**	**8.12**	Not Ordered	Not Ordered
Comments	Low	High	Low	Low		
Expected Range Low	10000	10000	50	20	40%	40%
Expected Range High			100	30	80%	80%

Organism Biomass Ratios	Total Fungi to Tot.Bacteria	Active to Total Fungi	Active to Total Bacteria	Active Fungi to Act.Bacteria	Plant Available N Supply (lbs/ac)	Actino Bacteria (µg/g)
Results	**0.65**	**0.007**	**0.02**	**0.20**	100-150	12.1
Comments	Low	Low	Low	Low		
Expected Range Low	0.8	0.1	0.1	0.75		
Expected Range High	1.5	0.15	0.15	1.5		

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

Bacterial Feeders	1.48	
Acrobeles		0.63
Cephalobus		0.21
Cervidellus		0.11
Heterocephalobus		0.42
Panagrolaimus		0.11
Fungal Feeders	0.85	
Microdorylaimus		0.74
Thonus		0.11
Fungal/Root Feeders	4.86	
Aphelenchoides	Foliar nematode	1.37
Aphelenchus		1.06
Ditylenchus	Stem & Bulb nematode	2.33
Filenchus		0.11

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Dry Weight:	Add organic matter to improve soil biology, build soil structure, increase water holding capacity.
Active Bacteria:	Aerobic bacterial activity in normal range for this plant, in this soil type
Total Bacteria:	Higher than normal bacterial biomass suggests high bacterial species diversity
Active Fungi:	Need to improve active biomass; Add 2 to 4 gal/ ac of liquid humic acids, or 5 to 10 tons/ ac fungal compost or woody mulch, or 20 gal/ ac fungal compost tea
Total Fungi:	Fungal biomass and diversity above typical range for this plant group, in this soil
Hyphal Diameter:	Good balance of disease suppressive and normal soil fungi
Protozoa:	Low flagellate numbers suggest lack of species diversity. Nutrient cycling will be limited. Need inoculum of protozoa to build populations, restore missing species.
Total Nematodes:	Low numbers, low diversity. Need to add beneficial nematodes, improve conditions to allow their survival.
Mycorrhizal Col.:	
TF/TB:	Too bacterial- dominated for wheat. Will lack disease suppression, nutrient retention, ability to build soil structure. Need to improve beneficial fungi to balance bacterial biomass.
AF/TF:	Low activity; need to add fungal foods to encourage fungi
AB/TB:	Low activity relative to total biomass
AF/AB:	Soil is bacterial dominated, and becoming more bacterial; addition of fungal foods might help maintain balance

Interpretation Comments:

Plant: Wheat, Notes: These two samples are for an ongoing soil health demonstration through my high school years. I have four years left in this project.
Actinobacteria Biomass = 12.1 ug/g
Good fungal diversity, hyphal diameters 2 to 5 um.