



# Foodweb Analysis

## Report prepared for:

Western Soil Conservation Dist  
 Toby Stroh  
 2493 4th Ave W STE C  
 Dickinson, ND 58601-2623 U  
 (701) 225-1353  
 toby.stroh@dickinsonstate.edu

Report Sent: 10/17/2008  
 Sample#: 01-106342 | Submission:01-019144  
 Unique ID: 2-08  
 Plant: Wheat  
 Invoice Number: 103957  
 Sample Received: 10/9/2008

For interpretation of this report please contact:  
 Local Advisor: or regional lab  
 Soil Foodweb Oregon  
 info@oregonfoodweb.  
 (541) 752-5066  
**Consulting fees may apply**

Organism Biomass Data	Dry Weight	Active Bacterial (µg/g)	Total Bacterial (µg/g)	Active Fungal (µg/g)	Total Fungal (µg/g)	Hyphal Diameter (µm)
<b>Results</b>	<b>0.880</b>	32.7	548	4.73	269	2.95
<b>Comments</b>	Too Dry	Above range	Above range	In range	In range	
<b>Expected Range</b>	Low	1	175	1	175	
	High	0.85	5	300	5	300

	Protozoa (Numbers/g)			Total Nematodes #/g	Mycorrhizal Colonization (%)	
	Flagellates	Amoebae	Ciliates		ENDO	ECTO
<b>Results</b>	15788	15788	87	<b>9.74</b>	Not Ordered	Not Ordered
<b>Comments</b>	High	High	Good	Low		
<b>Expected Range</b>	Low	5000	5000	10	40%	40%
	High		100	20	80%	80%

Organism Biomass Ratios	Total Fungal to Tot.Bacterial	Active to Total Fungal	Active to Total Bacterial	Active Fungal to Act.Bacterial	Plant Available N Supply (lbs/ac)
<b>Results</b>	<b>0.49</b>	<b>0.02</b>	<b>0.06</b>	<b>0.14</b>	100-150
<b>Comments</b>	Low	Low	Low	Low	
<b>Expected Range</b>	Low	0.15	0.15	0.75	
	High	1.5	0.2	1.5	

<b>Nematode detail (# per gram or # per mL)</b> Classified by type and identified to genus. (If section is blank, no nematodes identified.)		
Bacterial Feeders		
Acrobeles		0.35
Cephalobus		0.69
Cervidellus		0.12
Chiloplacus		0.12
Eucephalobus		0.81
Panagrolaimus		4.39
Fungal/Root Feeders		
Aphelenchus		0.12
Ditylenchus	Stem & Bulb nematode	0.23
Filenchus		0.58
Root Feeders		
Helicotylenchus	Spiral nematode	1.04
Paratylenchus	Pin nematode	0.12

Western Soil Conservation Dist  
Toby Stroh  
2493 4th Ave W STE C  
Dickinson, ND 58601-2623 U  
(701) 225-1353  
[toby.stroh@dickinsonstate.edu](mailto:toby.stroh@dickinsonstate.edu)

Report Sent: 10/17/2008  
Sample#: 01-106342 | Submission:01-019144  
Unique ID: 2-08  
Plant: Wheat  
Invoice Number: 103957  
Sample Received: 10/9/2008

For interpretation of this report please contact:  
Local Advisor: or regional lab  
Soil Foodweb Oregon  
[info@oregonfoodweb.com](mailto:info@oregonfoodweb.com)  
(541) 752-5066  
**Consulting fees may apply**

Dry Weight: Add organic matter to improve soil biology, build soil structure, increase water holding capacity.

Active Bacteria: Bacterial activity above expected levels; Bacterial biomass will increase as long as nutrients are available

Total Bacteria: Higher than normal bacterial biomass suggests high bacterial species diversity

Active Fungi: Filamentous fungal activity and diversity in normal range

Total Fungi: Aerobic fungal biomass in desired range

Hyphal Diameter: Good balance of disease suppressive and normal soil fungi

Protozoa: Nutrients are being cycled and made available to plants in good rates.

Total Nematodes: Low numbers, low diversity, root feeders present. 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; add bacterial foods.

AF/AB: Soil is bacterial dominated, and becoming more bacterial; addition of fungal foods might improve balance

Nitrogen Supply: 3.3 tons of yield possible if all biology is functioning

Interpretation Comments:

Actinobacteria Biomass = 1.88 ug/g  
Good fungal diversity; hyphae diameter from 2.0 to 6.0 um.