

Reber Rock - SARE Waste to resource - generating a high quality soil amendment from animal mortality and butcher waste

Compost testing protocols and tracking

Drafted by Jennifer Perry 4/22/25

Budget

Quantitative Microscopy	1 sample x 4 farms per year, \$50 per sample	sample	12	50	\$ 600.00
Qualitative Microscopy	1 sample x 4 farms per year, \$90 per sample	sample	12	90	\$ 1,080.00
Chemical composition and structural features testing	1 sample x 4 farms per year, \$360 per sample (e.g. Compost Test 2B)	sample	12	360	\$ 4,320.00
Testing for PFAS	1 sample x 4 farms in Y2, \$300 per sample.	sample	4	300	\$ 1,200.00
Compost readiness	6 samples (RRF) each year, 18 total, \$209 per box of tests. RRF compost from 2024 will be tested for readiness to establish a baseline.	Box	3	209	\$ 627.00

Summary/timeline

Test name	Testing criteria	Notes/schedule/frequency
Solvita - home kit	Compost readiness/completeness	Once a year for 3 years: April/May 2025, April/May 2026, April/May 2027
Microscopy qualitative - John Culpepper *	Compost readiness; presence of biologically robust organisms indicating quality of composting process.	Once a year for 3 years: April/May 2025, April/May 2026, April/May 2027
Microscopy quantitative - John Culpepper **	As above, but also assessing presence of	Once a year for 3 years: April/May 2025, April/May

	pathogenic and assigning whole numbers rather than relative abundance.	2026, April/May 2027
Chemical composition and structural features - Dairy One	Percent solids, organic matter, pH, soluble salts, total nitrogen, total carbon, Carbon:Nitrogen ratio	Once a year for 3 years: April/May 2025, April/May 2026, April/May 2027

*Each collected, representative sample of compost will be assessed by adding one ml of compost sample to 4 ml of water. (Water to be treated with a small amount of humic acid to bind free chlorine and potentially chloramine.) The water and compost sample is placed in a test tube, and gently rocked back and forth 30 times (at approximately one rock/second. After 15 seconds a sample is pulled up in a pipette in such a way that the liquid between anything that has settled, and anything floating is collected. One drop of this liquid is then added to a microscope slide and covered with an 18mm coverslip. The slide will be observed for beneficial nematodes at 40X, then 10 representative fields of view (FOV) will be observed, at 400X for bacteria, fungi, actinobacteria, protozoa, and microarthropods. All microbes, with the exception of bacteria will be enumerated in each of those 10 FOVs. The bacteria will be generally described in narrative form. The filamentous organisms (with the exception of any observed actinobacteria, will be described by approximate length, width, and color. Lastly comments on particle aggregation, encysted protozoa, and fungal spores will be made, along with general comments on the physical condition of each farm's compost sample as received.

**For the qualitative part, three videos will be taken from three representative sections of the entire glass slide, and five representative still images will be taken for each sample. Each video will be approximately 50 seconds in length.

Sampling Protocol

Sampling technique summary:

3-5 representative samples are taken 1-2” beneath the surface and 8-10” down inside of the pile. A core sample is approximately one inch in diameter by 4” in depth. All samples are mixed and placed in a zip lock bag that is carefully labelled.

Record keeping:

1. RRF will keep detailed logs of compost pile management (temperature, ingredients added (volume and frequency), methods, environmental considerations
2. CfG will keep a database of compost analysis results to compare recipes, farms and results year on year
3. CfG will keep a database of feedback from farmers receiving and using the compost
4. Reber Rock will keep a log of process adjustments as learning progresses.

Compost Sample Tracking

[Link to folder archiving results](#)

[Link to testing/sampling tracker](#)

Site #1: Reber Rock - RR

Site #2: Essex Farm - EF

Site #3: Sand River Community Farm - SRCF

Site #4: Full and By Farm - FAB

Site #4: Sticky's Weed Farm - SWF

Site #5: Mountain Town Garden - MTG