BLACK EARTH COMPOST

Plant Vigor Growth Trial Spring 2024 Report

Summary

This report details the Spring 2024 Black Earth Compost Plant Vigor Growth Trial. This trial tested three composite samples, one from each of our production sites. The vigor test measures emergence, germination, and overall vigor of plant growth. All three batch samples performed very well. Data collected and photo timeline are below.

Methodology:

Our batch testing begins with collecting a composite sample from the batch windrow. Solvita tests are performed on each sample to establish compost maturity. Samples are placed in grow trays and seeded with pea, radish, and clover. Trays are monitored in a climate controlled grow chamber for 14-18 days. Trays are watered as needed. Photos and measurements are taken. Plant performance is compared to the control tray and reported in the data sheet.

Solvita test results:

Manchester Batch: CO2 score = 6 (good) NH3 score = 5 (excellent)

Framingham Batch: CO2 score = 7 (good) NH3 score = 5 (excellent)

Groton Batch: CO2 score = 7 (good) NH3 score = 5 (excellent)

Data Table:

Start date/ end date for trial	**Batch Name**	Plant Type	Germination % at 9 days	Germination % at 18 days	Seedling height at 18 days	Rate vigor of growth at 18 days:
Start Date:	2/26/2024					
	Groton July 23	Clover	100	100		**vigorous**
End date:	3/11/2024	Radish	100	100	3 inches	**vigorous**
		Pea	10/10	10/10		**vigorous**
Start Date:	2/26/2024					
	Fram July 23	Clover	100	100		**vigorous**
End date:	.3/11/2024	Radish	100	100	3.5 inches	**vigorous**
		Pea	10/10	10/10		**vigorous**
Start Date:	2/26/2024					
	Manch July 23	Clover	50	60		**average**
End date:	3/11/24	Radish	75	100	3.75 inches	**vigorous**
		Pea	8/10	9/10		**vigorous**
Start Date:	2/26/2024					
	Control	Clover	75	80		**average**
End date:	3/11/24	Radish	90	100	2 inches	**average**
		Pea	9/10	9/10		**average**

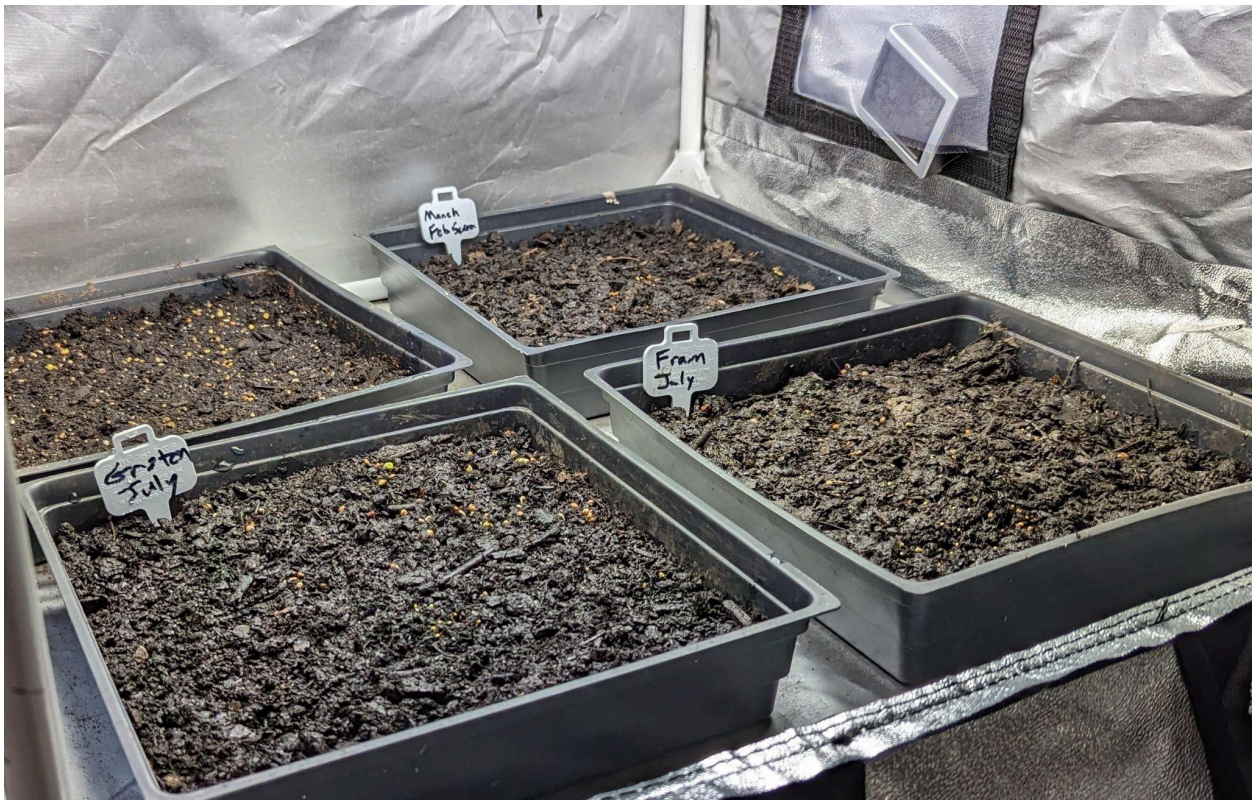
Findings:

All batches were found to be ready for normal use and sale. Compost is consistently mature across all sites. Growth in all three batches was vigorous.

Differences were noted between the batches. The Manchester batch was slow to germinate but once plants were established grew the most vigorously. The Groton batch had the best emergence and germination of the trial but did not show as vigorous growth as the other two batches. The Framingham batch had both excellent germination and very vigorous growth and ranked as the best of the three batches in this trial.

Photo Timeline:

Trays seeded, 2/26/24: Groton sample in bottom left, Framingham sample in bottom right, Manchester sample in top right, and the control tray in the top left.



First measurements taken, 3/3/24:

Update, 3/7/24:

Final measurements taken, 3/11/24:

Manchester batch at 14 days:

Framingham Batch at 14 days:

Groton Batch at 14 days: