

Appendix B

Dairy Compost Quality Assessment Results

TxDOT specification listed by parameter.

Parameter	TxDOT Specification
pH	between 5.5 and 8.5
EC (Soluble Salts)	less than 5.0
Organic matter	between 25 and 65
Arsenic	less than 75
Cadmium	less than 85
Copper	less than 4,300
Lead	less than 840
Mercury	less than 57
Molybdenum	less than 75
Nickel	less than 420
Selenium	less than 100
Zinc	less than 7,500
Fecal Coliform	less than 1000
Respiration	less than 8
Biological Avail. Carbon	less than 8
Emergence	greater than 80
Relative Seedling Vigor 0.38" to 0.64"	greater than 80 less than 30

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Respiration	mg CO ₂ -C/g OM/day	1.6	1.5	1.2	1.7	2.3	2.1
Biological Avail. Carbon	mg CO ₂ -C/g OM/day	8.3	5.5	7.5	4.7	4.2	4.5
Emergence	%	100	80	100	100	70	100
Relative Seedling Vigor	%	53	75	100	100	57	100
Description of plants	NA	fungus	stunted	healthy	healthy	fungus	stunted
0.38" to 0.64"	% by weight	3.7	0.0	0.0	0	7.7	0.9
	% by volume	3.4	0.0	0.0	0	9.9	0.8
	Bulk Density (g/cc)	0.95	0.00	0.00	0	0.67	1.1
0.25" to 0.38"	% by weight	9.5	0.0	0.0	6.8	12.6	9.3
	% by volume	10.7	0.0	0.0	8.6	14.8	9.1
	Bulk Density (g/cc)	0.77	0.00	0.00	0.67	0.73	0.96
0.16" to 0.25"	% by weight	15.6	4.7	0.0	9.1	13.3	9.6
	% by volume	16.9	7.1	0.0	10	14.8	11.1
	Bulk Density (g/cc)	0.8	0.68	0.00	0.77	0.77	0.81
0.08" to 0.16"	% by weight	20.7	13.6	11.7	18	18.9	17.8
	% by volume	23	17.9	19.6	19.5	20.2	19.8
	Bulk Density (g/cc)	0.78	0.78	0.59	0.78	0.8	0.84
<0.08"	% by weight	50.5	81.7	88.3	66.1	47.5	62.4
	% by volume	46.1	75.0	80.4	61.9	40.4	59.3
	Bulk Density (g/cc)	0.95	1.12	1.08	0.9	1	0.98

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Respiration	mg CO ₂ -C/g OM/day	1.4	2	2.3	6.4	5.8	5.9	1.6
Biological Avail. Carbon	mg CO ₂ -C/g OM/day	5.8	5.4	4.9	9	7.5	10	5.7
Emergence	%	100	100	100	100	100	100	100
Relative Seedling Vigor	%	100	100	100	100	100	100	70
Description of plants	NA	stunted	healthy	stunted	healthy	healthy	healthy	stunted
0.38" to 0.64"	% by weight	0	14.1	15.7	9.4	3.6	0.0	0.0
	% by volume	0	14	13.9	7.8	2.5	0.0	0.0
	Bulk Density (g/cc)	0	0.86	0.85	0.79	0.91	0.00	0.00
0.25" to 0.38"	% by weight	8.7	13.2	9.8	11.9	8.9	0.0	0.0
	% by volume	12.3	14	10.9	11.9	9.1	0.0	0.0
	Bulk Density (g/cc)	0.71	0.81	0.68	0.66	0.63	0.00	0.00
0.16" to 0.25"	% by weight	10.1	17.8	11.3	11.2	14.3	4.2	0.0
	% by volume	11	19.1	12.2	11.5	14.2	6.5	0.0
	Bulk Density (g/cc)	0.92	0.8	0.7	0.64	0.65	0.25	0.00
0.08" to 0.16"	% by weight	16.6	22	17.1	17.9	19.6	19.1	2.0
	% by volume	19.4	23.3	19.6	19.3	19.6	21.7	2.0
	Bulk Density (g/cc)	0.85	0.81	0.66	0.61	0.64	0.35	0.95
<0.08"	% by weight	64.6	33	46.2	49.6	53.6	76.7	98.0
	% by volume	57.3	29.8	43.5	49.4	54.5	71.7	98.0
	Bulk Density (g/cc)	1.13	0.95	0.8	0.66	0.63	0.42	0.96