

SARE

Tests taken in May 2022

Soil versus Gravel – Same Depths and Velocity

Date	Temperature in High Tunnel	Time of Day	12 s	3 g	Δ	35 s	28 g	Δ	21 s	4 g	Δ
5/10	65	M	54	56	-2	55	55	0	55	56	-1
	77	A	55	60	-5	56	60	-4	55	58	-3
	66	E	55	60	-5	57	60	-3	58	57	1
5/11	65	M	55	55	0	55	55	0	55	55	0
	78	A	56	58	-2	57	57	0	57	57	0
	67	E	56	60	-4	58	61	-3	58	58	0
5/12	67	M	55	57	-2	56	56	0	56	55	1
	81	A	56	60	-4	58	60	-2	60	57	3
	80	E	56	60	-4	57	60	-3	59	57	2
5/13	62	M	56	58	-2	57	58	-1	58	57	1
	75	A	58	60	-2	58	60	-2	60	58	2

Average $\Delta =$

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Date	Temperature in High Tunnel	Time of Day	12 s	3 g	Δ	35 s	28 g	Δ	21 s	4 g	Δ
5/13	77	E	60	60	0	60	62	-2	60	60	0
5/14	79	M	58	60	-2	60	60	0	60	60	0
	91	A	60	60	0	60	62	-2	61	60	1
	79	E	60	62	-2	60	62	-2	62	60	2
5/15	67	M	58	59	-1	59	59	0	60	57	3
	82	A	60	61	-1	60	62	-2	62	60	2
	87	E	60	60	0	60	62	-2	60	58	2
5 /16	64	M	58	60	-2	60	60	0	60	58	2
	81	A	59	60	-1	60	60	0	60	60	0
	72	E	58	60	-2	59	60	-1	60	58	2

Average Δ = 7.24

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Soil versus Gravel – Same Depths and Velocity

Date	Temperature in High Tunnel	Time of Day	12 s	3 g	Δ	35 s	28 g	Δ	21 s	4 g	Δ
5/17	71	M	56	60	-4	60	58	2	58	56	2
	75	A	57	60	-3	60	62	-2	60	58	2
	73	E	57	60	-3	60	60	0	60	58	2
5/18	80	M	56	60	-4	58	60	-2	60	58	3
	81	A	58	62	-4	60	64	-4	60	58	2
	73	E	58	62	-4	60	63	-3	60	58	2
5/19	67	M	58	60	-2	60	61	-1	60	58	2
	85	A	60	62	-2	60	64	-4	62	54	3
	72	E	58	62	-4	60	63	-3	61	58	3

Average $\Delta = 0.9^\circ$

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Soil - Different Depths Same Velocity

Date	Temperature in High Tunnel	Time of Day	7 s	27 s	Δ	18 s	28 s	Δ	2 s	39 s	Δ
5/10	65	M	56	54	2	53	54	-1	58	54	4
	77	A	58	57	1	54	56	-2	60	59	1
	66	E	56	58	-2	55	56	-1	60	58	2
5/11	65	M	55	56	-1	54	54	0	57	55	2
	78	A	58	58	0	57	57	0	58	57	1
	67	E	56	58	-2	58	57	1	60	57	3
5/12	67	M	56	56	0	55	56	-1	58	56	2
	81	A	58	60	-2	58	57	1	60	58	2
	80	E	58	59	-1	56	57	-1	60	58	2
5/13	62	M	58	58	0	56	56	0	59	57	2
	75	A	59	60	-1	58	58	0	60	60	0

Avg 57.50

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Soil – Different Depths Same Velocity

Date	Temperature in High Tunnel	Time of Day	7 s	27 s	Δ	18 s	28 s	Δ	2 s	39 s	Δ
5/13	77	E	60	60	0	59	59	0	60	60	0
5/14	79	M	60	60	0	58	59	-1	60	60	0
	91	A	60	60	0	60	60	0	60	60	0
	74	E	60	60	0	60	60	0	60	60	0
5/15	62	M	60	59	1	57	57	0	60	59	1
	82	A	60	60	0	60	60	0	60	60	0
	87	E	60	60	0	60	59	1	60	60	0
5/16	64	M	60	58	2	58	58	0	60	59	1
	81	A	60	58	2	59	58	1	60	59	1
	72	E	60	55	5	56	57	-1	60	58	2

Handwritten notes: 1 = 1

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Soil – Different Depths Same Velocity

Date	Temperature in High Tunnel	Time of Day	7 s	27 s	Δ	18 s	28 s	Δ	2 s	39 s	Δ
5/17	71	M	58	55	3	56	56	0	60	57	3
	75	A	59	57	2	58	58	0	60	60	0
	73	E	59	57	2	57	58	-1	60	60	0
5/18	80	M	57	56	1	57	58	-1	60	58	2
	81	A	60	58	2	60	60	0	60	60	0
	73	E	60	58	2	60	60	0	60	60	0
5/19	67	M	60	57	3	58	58	0	60	60	0
	85	A	60	58	2	60	60	0	60	60	0
	72	E	60	57	3	60	60	0	60	60	0

Average $\Delta = 0.5^{\circ}$

SARE

Tests taken in May 2022

Gravel – Different Depths Same Velocity

Date	Temperature in High Tunnel	Time of Day	12 g	45 g	Δ	8 g	39 g	Δ	17 g	38 g	Δ
5/10	65	M	55	55	0	56	55	1	55	56	1
	77	A	57	58	-1	59	56	3	59	60	1
	66	E	57	60	-3	60	60	0	60	61	1
5/11	65	M	55	55	0	56	55	1	55	56	1
	78	A	58	58	0	58	59	-1	58	59	1
	67	E	57	60	-3	60	60	0	60	61	1
5/12	67	M	55	56	-1	56	58	-2	55	56	1
	81	A	57	60	-3	60	60	0	60	60	0
	80	E	58	60	-2	60	59	1	59	61	2
5/13	62	M	56	57	-1	58	58	0	57	58	1
	75	A	58	59	-1	60	60	0	60	60	0

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Gravel – Different Depths Same Velocity

Data Chart

3C

Date	Temperature in High Tunnel	Time of Day	12 g	45 g	Δ	8 g	39 g	Δ	17 g	38 g	Δ
5/17	71	M	56	55	1	58	59	-1	58	60	2
	75	A	58	58	0	60	62	-2	60	62	-2
	73	E	58	57	1	60	60	0	60	61	-1
5/18	80	M	57	56	1	60	60	0	60	60	0
	81	A	59	60	-1	61	64	-3	62	64	-2
	73	E	58	58	0	61	63	-2	62	63	-1
5/19	67	M	58	57	1	60	61	-1	60	61	-1
	85	A	60	60	0	61	64	-3	63	64	-1
	72	E	58	57	1	61	63	-2	62	63	-1

Average $\Delta = 0.4^\circ$

SARE

Tests taken in cold weather

Gravel versus Soil Same Depth and Velocity

10 g	12 s	Δ	20 g	29 s	Δ	26 g	36 s	Δ	9 g	38 s	Δ	19 g	21 s	Δ
38.0	40.5	-2.5	39.5	39.8	-.3	39.5	40.1	-.6	37.5	40.5	-3	38.8	39.8	-1
36.4	39.5	-3.1	36.1	37.6	-1.5	37.0	37.8	-.8	36.4	38.0	-1.6	36	37.6	-1.8
42.3	42.2	.1	41.5	41.5	0	42.1	41.8	.3	42.3	41.7	.6	41.5	40.9	.6
42.5	42.2	.3	41.4	41.6	-.2	42.2	41.7	.5	42.6	41.6	1.0	41.5	40.7	.8
42.0	41.9	.1	41.3	41.0	.3	41.8	41.4	.4	42.0	41.0	1.0	41.2	40.3	.9

Average $\Delta = 0.38^\circ$