

H-37

Plantation H-37

Shortleaf Pine Provenance Test

Copy 1

OHIO AGRICULTURAL EXPERIMENT STATION

WOOSTER, OHIO

Planted on May 11, 1961
 Spacing: 10' x 10'
 Design: none; standard
 arboretum plots
 Location: Secrest Arboretum



Shortleaf Pine Provenance Test Plantation H-37

Column	04				08				12				16				
Row	4	4	4	4	2	2	2	2	1	1	1	1	3	3	3	3	
	4	4	4	4	2	2	2	2	1	1	1	1	3	3	3	3	
	4	4	4	4	2	2	2	2	1	1	1	1	3	3	3	3	
04	4	4	4	4	2	2	2	2	1	1	1	1	3	3	3	3	04
									6	6	6	6	5	5	5	5	
									6	6	6	6	5	5	5	5	
									6	6	6	6	5	5	5	5	
08									6	6	6	6	5	5	5	5	08

KEY

Map No.	Accession No.	Source
1	293	Batsto, Burlington Co., New Jersey
2	297	Mont Alto, Franklin Co., Penna.
3	470	Ratcliffburg, Vinton Co., Ohio
4	320	London, Laurel Co., Kentucky
5	321	T10S, R3W, S35(center), Jackson Co., Ill.
6	298	Willow Springs, Douglas Co., Missouri

H-37 Shortleaf Pine Provenance Test

Row	Column	Source		
			4	5
1	1	4	87 20 136	- -
2		4		- -
3		4		- -
4		4		- -
4	2	4		- -
3		4		- -
2		4		- -
1		4	89 35 156	18 160
1	3	4	101 29 173	15 -
2		4		- -
3		4		- -
4		4		- -
4	4	4		- -
3		4		- -
2		4	87 28 159	13 85
1		4	130 40 202	- -
1	5	2	115 43 217	18 120
2		2	137 54 196	21 110
3		2	139 47 212	22 110
4		2	73 35 167	20 95
4	6	2	102 46 187	21 90
3		2	109 37 168	16 90
2		2	116 39 168	- -
1		2	145 57 217	22 115
1	7	2	110 38 182	18 110
2		2	121 43 201	16 115
3		2	139 53 203	21 60
4		2		- -
4	8	2	120 42 188	- -
3		2	139 52 205	21 105
2		2	122 41 208	19 115
1		2	103 38 185	16 110
1	4	1	137 48 208	24 120
2		1	129 43 218	17 115
3		1	96 37 185	16 110
4		1	140 51 210	18 95
5		6	87 44 129	- -
6		6	98 32 168	16 90
7		6		- -

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Row	Column	Source		
			1	4 5
8	6	94 30 151	-	-
8	6		-	-
7	6	110 28 168	-	-
6	6	115 41 189	-	-
5	6	134 53 206	22	100
4	1	88 41 159	-	-
3	1	140 45 228	18	105
2	1	151 55 232	22	120
1	1		-	-
1	1		-	-
2	1		-	-
3	1		-	-
4	1		-	-
5	6		-	-
6	6		-	-
7	6	132 43 210	16	95
8	6	86 31 135	16	75
8	12			
7	6			
6	6			
5	6			
4	1			
3	1			
2	1			
1	1			
1	13		-	-
2	3		-	-
3	3		-	-
4	3		-	-
5	5		-	-
6	5	60 26 124	90	13
7	5	123 41 187	-	-
8	5		-	-
8	14			
7	5	65 27 142	95	13
6	5	89 27 129	85	10
5	5	92 39 156	85	18
4	3	66 34 116	-	-
3	3		-	-

H-37 Shortleaf Pine Provenance Test

Row
Column
Source

1

2	3			—	—
1	3			—	—
1	15	3		—	—
2	3			—	—
3	3			—	—
4	3	100	33	99	—
5	5	81	24	131	—
6	5	100	30	140	—
7	5				—
8	5	110	34	192	—
8	16	5	123	21	143
7	5	140	48	207	—
6	5	120	35	196	—
5	5	117	40	196	—
4	3	108	37	196	—
3	3	111	36	182	—
2	3	116	36	188	11517
1	3				—

H-37 - Shortleaf Pine

Chronological Notes

1. Height (tenths of feet) 9/29/67
- 2.
- 3.
4. DBH (centimeters), July, 1980
5. Height (0.5 meter x 10) July, 1980

H1-37 SUMMARY OF JULY 1980 MEASUREMENTS

Age 22
from seed

MAP NO.	ACC. NO.	SOURCE	NO. TREES	MEAN HEIGHT m	MEAN DBH cm	MEAN $D^2 H$	% SURVIVAL	$D^2 H$ no of \bar{x}
1	293	NJ	6	11.08	19.2	4084	38	133
2	297	PA	13	10.35	19.3	3855	81	126
3	470	OH	1	11.5?	17.0?	3323	6	108
4	320	KY	2	9.25	15.5	2222	12	72
5	321	IL	5	9.40	14.0	1842	31	60
6	298	MO	3	9.50	18.0	3078	19	100
						$\bar{x} = 3067$		

H-37 Shortleaf Pine

Height - feet x 10 - 9/29/67

Source	1	7	881	126
	2	15	1725	119
	3	5	501	100
	4	5	494	99
	5	12	1210	101
	6	8	856	107
		No. of trees	Sum	MEAN

Height (H-37)

Source

1	2	3	4	5	6
137	115	66	87	60	87
129	137	100	89	123	98
96	139	108	101	65	94
140	73	111	87	89	110
88	102	116	130	92	115
140	109			10	134
151	116			81	132
	145			100	86
	110			110	
	121			123	
	139			140	
	120			120	
	139			117	
	122				
	103				

881 1790 501 494 1220 856

7 15 5 5 12 8

$$T_1 = 5742$$

$$\frac{T_1^2}{n_1} = 634049.31$$

$$\sum_i x_i^2 = 659942.00$$

$$\sum_i \frac{T_i^2}{n_i} = 639119.54$$

ANOVA - H-37

HEIGHT

Source	SS	df	MS	F
Source	5070.23	5	1014.05	2.240 n.s.
Error	20822.46	46	452.66	
Total	25892.69	51		

Source #	n_i	\bar{X}_i	Rank	$\frac{T_i^2}{n_i} = 343443.38$
1	7	125.9	1	
2	15	119.3	2	$\sum X^2 = 659942.00$
3	5	100.2	5	
4	5	98.8	6	$\sum \frac{T_i^2}{n_i} = 418527.12$
5	12	101.7	4	$n_i = 96$
6	8	107.0	3	$n_i = 16 \text{ for } i$

ANOVA - All Cells Filled

Source	SS	df	MS	F
Source	75083.74	5	15016.75	5.598 **
Error	241414.88	90	2682.39	
Total	316498.62	95		

Source #	\bar{X}_i	Rank
1	55.0	3
2	111.9	1
3	31.3	5
4	98.8 30.9	6
5	101.7 76.2	2
6	53.5	4

OHIO AGRICULTURAL EXPERIMENT STATION
WOOSTER, OHIO

4/23/64

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arboretum plots
Location: Secrest Arboretum



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04	4	4	4	4	2	2	2	2	1	1	1	1	3	3	3	3
									6	6	6	6	5	5	5	5
									6	6	6	6	5	5	5	5
									6	6	6	6	5	5	5	5
08									6	6	6	6	5	5	5	5

WINTER BURN

— Moderate
— Severe
— Dead

Map No.	Accession No.	Source
B 1	293	Batsto, Burlington Co., New Jersey
A 2	297	Mont Alto, Franklin Co., Penna.
C 3	470	Ratcliffburg, Vinton Co., Ohio
F 4	320	London, Laurel Co., Kentucky
D 5	321	TIOS, R3W, S35(center), Jackson Co., Ill.
E 6	298	Willow Springs, Douglas Co., Missouri

(in order of
superiority)

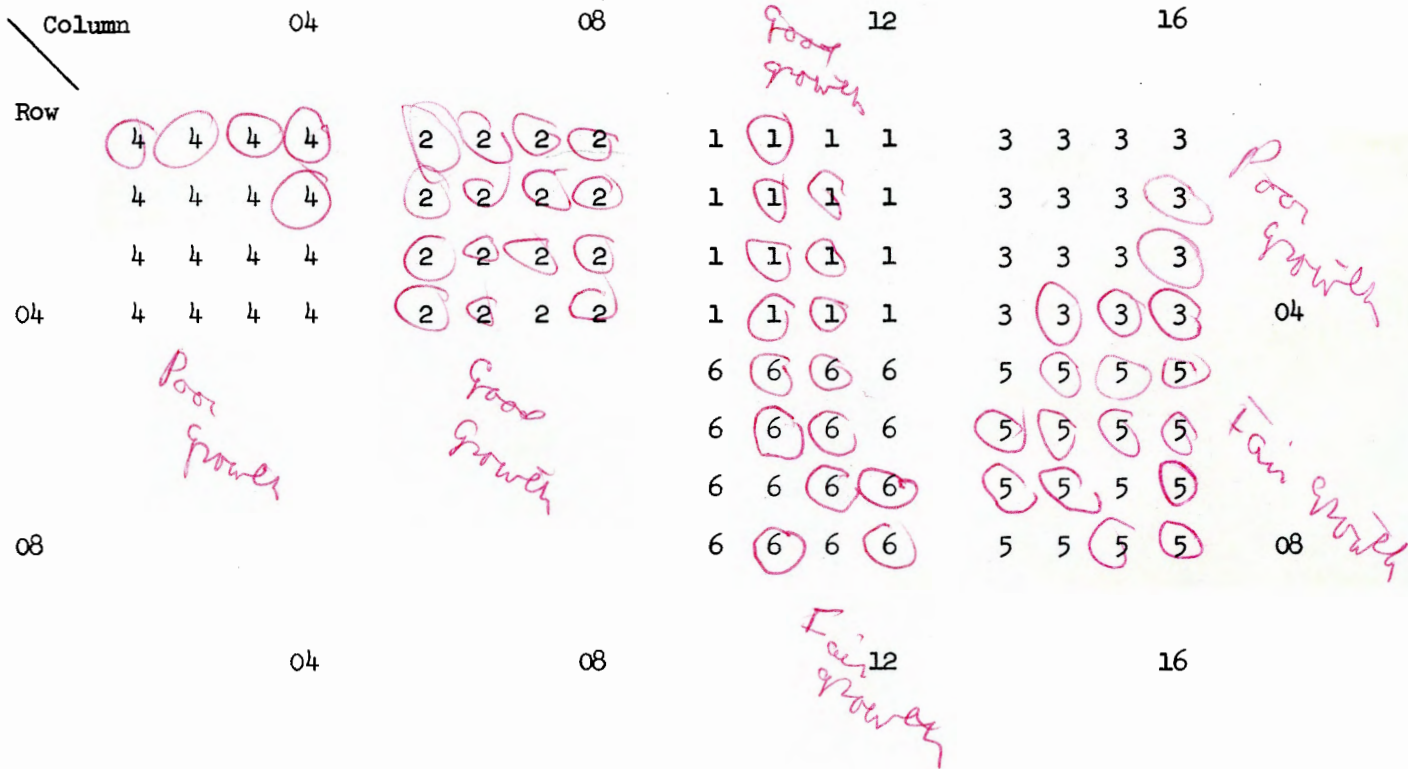
OHIO AGRICULTURAL EXPERIMENT STATION
WOOSTER, OHIO

~~Sept~~
October 3,
1966

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Spacing: 10' x 10'
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arboretum plots
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<i>alive</i>	Map No.	Accession No.	Source
7	1	293	Batsto, Burlington Co., New Jersey
15	2	297	Mont Alto, Franklin Co., Penna.
5	3	470	Ratcliffburg, Vinton Co., Ohio
5 5	4	320	London, Laurel Co., Kentucky
12	5	321	T10S, R3W, S35(center), Jackson Co., Ill.
8	6	298	Willow Springs, Douglas Co., Missouri

O = alive

