

C A M C O R E

ANOVA AND MULTIPLE COMPARISONS FOR PROVENANCE AND FAMILY HEIGHT

THREE YEAR MEASUREMENTS

TEST IDENTIFICATION: 15-15-02D
SPECIES: Pinus maximinoi
COMPANY: CENIBRA Florestal
SITE NAME: Fazenda Primavera
LATITUDE: 18° 38' 03" S
LONGITUDE: 42° 51' 18" W
ELEVATION: 850 m
ANNUAL PRECIPITATION: 1300 - 1500 mm

DATE PLANTED: December 1986
DATE MEASURED: March 1990

ANALYSIS OF VARIANCE

DEPENDENT VARIABLE: Three Year Height (meters)

<u>SOURCE</u>	<u>DF</u>	<u>SUM OF SQUARES</u>	<u>F</u> <u>VALUE</u>
REP	8	337.45180365	10.83 **
PROV	4	4.30544841	0.28 ns
REP*PROV	32	124.64217186	1.98 **
FAM(PROV)	19	85.47691322	2.29 **
REP*FAM(PROV)	152	299.18881346	1.46 **
ERROR	904	1219.78083333	
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CORRECTED TOTAL	1119	2149.44606250	

ns: Not significant

** Significant at $p < .01$

TEST MEAN C.V. (%)
4.96 m 23.43

***** MEANS BY PROVENANCE *****

The Waller-Duncan multiple comparison procedure shows no significant differences among the mean provenance heights.

<u>Provenance</u>	<u># Trees</u>	<u>% Survival</u>	<u>Mean Height (m)</u>	<u>C.V. (%)</u>	<u>Mean D.B.H. (cm)</u>
* Control 999	54	100.00	5.2	27.49	7.7
San Jeronimo	362	83.80	5.0	28.37	5.8
Tatumbula	231	85.56	4.9	27.14	5.8
San Juan	424	87.24	4.9	27.85	5.8
Coban	49	90.74	4.8	30.39	5.7

* Control lot: 999 = P. caribaea var. hondurensis, seed orchards, Aracruz

***** MEANS BY FAMILY *****

<u>Family</u>	<u>Prov</u>	<u># Trees</u>	<u>% Survival</u>	<u>Mean Height (m)</u>	<u>C.V. (%)</u>	<u>Mean D.B.H. (cm)</u>
62	2	45	83.33	5.57	31.91	6.29
75	2	42	77.78	5.49	26.82	6.07
43	3	47	87.04	5.35	27.55	5.85
162	7	49	90.74	5.28	24.55	6.28
49	3	44	81.48	5.25	27.67	6.25
89	2	47	87.04	5.20	23.08	6.01
999	*	54	100.00	5.19	27.49	7.66
39	3	46	85.19	5.12	20.85	5.89
54	3	50	92.59	5.09	24.68	6.29
64	2	48	88.89	4.97	27.49	5.88
85	2	35	64.81	4.97	26.89	6.04
142	7	44	81.48	4.95	28.19	5.72
165	7	47	87.04	4.91	25.57	5.73
40	3	39	72.22	4.90	26.83	6.14
53	3	50	92.59	4.86	28.04	5.78
91	1	49	90.74	4.83	30.39	5.69
134	7	47	87.04	4.82	26.53	5.76
51	3	48	88.89	4.80	25.66	5.72
78	2	48	88.89	4.78	30.19	5.49
35	3	51	94.44	4.70	34.80	5.68
158	7	44	81.48	4.68	31.08	5.43
67	2	47	87.04	4.57	29.10	5.72
72	2	50	92.59	4.57	24.01	5.34
57	3	49	90.74	4.28	28.75	5.02

OVERALL	1066	85.83	4.95	27.97	5.82
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The overall mean does not include control lots.

Provenance code: 1 = Coban, Guatemala
 2 = San Jeronimo, Guatemala
 3 = San Juan Sacatepequez, Guatemala
 7 = Tatumbla, Honduras