

C A M C O R E

ANOVA AND MULTIPLE COMPARISONS FOR PROVENANCE AND FAMILY HEIGHT

THREE YEAR MEASUREMENTS

TEST IDENTIFICATION: 13-15-38A
SPECIES: Pinus tecunumanii - High elevation
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: January 1986
DATE MEASURED: May 1989

ANALYSIS OF VARIANCE

DEPENDENT VARIABLE: Three Year Height (meters)

<u>SOURCE</u>	<u>DF</u>	<u>SUM OF SQUARES</u>	<u>F VALUE</u>
REP	8	61.61016808	4.95 **
PROV	2	93.39316637	30.01 **
REP*PROV	16	24.89406402	1.08 ns
FAM(PROV)	29	70.99948865	1.70 *
REP*FAM(PROV)	230	330.49649737	1.23 *
ERROR	1106	1290.46250000	
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CORRECTED TOTAL	1391	1882.18678161	

ns: Not significant

* Significant at $p < .05$

** Significant at $p < .01$

TEST MEAN
4.6 m

C.V. (%)
23.46

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

WALLER-DUNCAN MULTIPLE COMPARISONS FOR THREE YEAR PROVENANCE HEIGHT
MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

<u>Waller Grouping</u>	<u>Mean</u>	<u>N</u>	<u>Provenance</u>
A	4.9	319	Pachoc
A			
A	4.7	652	Chanal
B	4.2	421	Rancho Nuevo

Provenance code: 4 = Pachoc, Guatemala
10 = Chanal, Mexico
18 = Rancho Nuevo, Mexico

* No control lots were used in this project.

***** 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>
656	10	44	81.48	5.2	26.58	6.9
299	4	51	94.44	5.1	26.52	6.8
303	4	42	77.78	5.1	23.41	6.9
672	10	51	94.44	5.1	22.15	7.1
658	10	43	79.63	5.0	17.67	6.7
676	10	39	72.22	5.0	21.77	6.9
674	10	48	88.89	4.9	17.72	6.3
298	4	39	72.22	4.9	23.68	6.5
306	4	47	87.04	4.9	21.05	6.6
294	4	49	90.74	4.8	19.39	6.6
664	10	46	85.19	4.8	20.75	6.6
288	4	51	94.44	4.8	22.14	6.4
660	10	45	83.33	4.7	19.54	6.5
655	10	46	85.19	4.7	24.93	6.1
654	10	25	46.30	4.7	24.92	6.7
662	10	40	74.07	4.6	21.79	6.3
653	10	43	79.63	4.6	18.42	6.2
699	18	38	70.37	4.5	21.78	6.0
665	10	45	83.33	4.5	24.04	6.0
657	10	46	85.19	4.5	27.45	5.9
663	10	46	85.19	4.5	17.99	6.0
661	10	45	83.33	4.4	23.77	6.2
702	18	39	72.22	4.4	26.52	6.0
701	18	44	81.48	4.4	27.05	6.0
291	4	40	74.07	4.4	31.55	5.6
695	18	30	55.56	4.3	26.65	5.3
694	18	45	83.33	4.2	27.01	5.6
697	18	48	88.89	4.2	20.21	5.5
700	18	47	87.04	4.1	35.04	5.7
696	18	40	74.07	4.1	30.65	5.7
692	18	45	83.33	3.9	33.00	5.0
698	18	45	83.33	3.8	34.40	5.0

OVERALL		1392	80.56	4.6	25.26	6.2
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The overall values do not include control lots.