

C A M C O R E

FIVE YEAR MEASUREMENTS

TEST IDENTIFICATION: 13-02-16B
 SPECIES: Pinus tecunumanii
 COMPANY: Carton de Colombia
 SITE NAME: Finca San Jose
 ELEVATION: 1750 m
 ANNUAL PRECIPITATION: 1949 - 2060 mm

 DATE PLANTED: October 1984
 DATE MEASURED: July 1989

ANALYSIS OF VARIANCE

DEPENDENT VARIABLE: Five Year Volume (cubic meters)

<u>SOURCE</u>	<u>DF</u>	<u>SUM OF SQUARES</u>	<u>F VALUE</u>
REP	8	0.03126186	2.38 *
PROV	7	0.07771672	6.75 **
REP*PROV	54	0.08882753	1.42 *
FAM(PROV)	44	0.19230751	3.76 **
REP*FAM(PROV)	273	0.31725418	1.19 *
ERROR	1753	1.71578516	
CORRECTED TOTAL	2139	2.41448485	

ns: Not significant * Significant at $p < .05$
 ** Significant at $p < .01$

TEST MEAN C.V. (%)
 0.07873 m³ 39.7356

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

WALLER-DUNCAN MULTIPLE COMPARISONS FOR FIVE YEAR PROVENANCE VOLUME

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

<u>WALLER</u>	<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PROVENANCE</u>
	A	0.096740	51	Comm. control (200)
	A			
B	A	0.088248	308	San Jeronimo
B				
B	C	0.079413	304	San Lorenzo
B	C			
B	C	0.078787	388	KM47
B	C			
B	C	0.078769	347	San Vicente
	C			
	C	0.075570	41	Agudos (206)
	C			
	C	0.074121	391	Celaque
	C			
	C	0.071782	310	Las Trancas

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

<u>FAM</u>	<u>PROV</u>	<u># TREES</u>	<u>% SURV</u>	<u>MEAN HEIGHT (m)</u>	<u>C.V. (%)</u>	<u>MEAN DIAMETER (cm)</u>	<u>TREE VOLUME (cubic m)</u>
32	5	52	96.30	10.40	15.94	17.1	0.09705
200	*	51	94.44	9.83	21.81	17.4	0.09674
111	7	47	87.04	9.82	16.22	17.3	0.09379
105	7	50	92.59	9.74	19.38	17.4	0.09236
36	5	50	92.59	10.15	15.20	16.8	0.09086
271	8	50	92.59	10.10	18.07	16.9	0.09082
22	5	53	98.15	9.70	17.97	17.0	0.08823
72	6	49	90.74	9.91	13.24	16.9	0.08767
242	9	53	98.15	10.38	13.49	16.5	0.08728
187	7	48	88.89	9.71	17.71	16.7	0.08711
30	5	51	94.44	10.40	15.10	16.1	0.08623
231	9	48	88.89	9.75	13.89	16.8	0.08601
175	2	52	96.30	10.11	17.14	16.1	0.08456
2	6	53	98.15	10.14	13.96	16.3	0.08435
35	5	50	92.59	10.28	13.80	16.2	0.08399
172	2	53	98.15	9.69	13.58	16.5	0.08396
173	2	50	92.59	9.75	18.05	16.1	0.08375
26	5	52	96.30	9.88	15.93	16.4	0.08303
186	7	51	94.44	9.76	13.33	16.5	0.08276
171	2	52	96.30	10.11	10.93	16.2	0.08160
78	6	48	88.89	9.52	14.09	16.5	0.08101
277	8	45	83.33	10.02	15.15	16.0	0.07985
76	6	50	92.59	9.96	15.55	15.8	0.07956
206	*	47	87.04	9.20	14.31	16.4	0.07809
273	8	49	90.74	9.36	21.98	15.4	0.07760
275	8	50	92.59	9.46	17.82	15.8	0.07630
180	2	53	98.15	9.14	18.76	16.2	0.07573
276	8	45	83.33	9.68	19.86	15.5	0.07553
181	2	49	90.74	9.62	18.55	15.4	0.07458
188	7	47	87.04	9.39	19.13	15.5	0.07409
239	9	51	94.44	9.63	14.64	15.5	0.07353
135	6	51	94.44	8.98	19.29	16.0	0.07269
284	8	53	98.15	9.37	18.58	15.8	0.07258
233	9	50	92.59	9.72	18.49	15.1	0.07107
7	6	50	92.59	9.46	15.78	15.3	0.07083
281	8	52	96.30	9.16	24.41	15.1	0.06970
244	9	49	90.74	9.04	22.88	14.9	0.06500
237	9	45	83.33	8.69	20.08	15.2	0.06364
106	7	51	94.44	8.99	16.08	14.6	0.06359
235	9	48	88.89	8.94	19.41	14.5	0.06117
82	7	53	98.15	8.95	23.33	14.4	0.05998
178	6	44	81.48	8.33	25.46	14.0	0.05845
268	8	47	87.04	8.46	26.47	13.1	0.05019

13-02-16B

	<u># TREES</u>	<u>% SURV</u>	<u>MEAN HEIGHT (m)</u>	<u>C.V. (%)</u>	<u>MEAN DIAMETER (cm)</u>	<u>TREE VOLUME (cubic m)</u>
OVERALL	2050	92.34	9.61	18.15	15.9	0.07830

Note: Tree volume with bark was calculated using a formula for juvenile trees: $\text{Volume (cubic meters)} = 0.0003 \cdot D^2 \cdot H$, where D=DBH in centimeters and H = total height in meters.
The overall mean does not include control lots.

Provenance code: 2 = KM47, Guatemala
5 = San Jeronimo, Guatemala
6 = San Lorenzo, Guatemala
7 = San Vicente, Guatemala
8 = Celaque, Honduras
9 = Las Trancas, Honduras

* Control lots: 200 = Pinus tecunumanii, Commercial control
206 = Pinus oocarpa, Agudos, Brasil