

# C A M C O R E

## ANOVA AND FAMILY MEANS

### EIGHT YEAR MEASUREMENTS

TEST IDENTIFICATION: 03-02-02A  
SPECIES: Pinus tecunumanii - Low elevation  
COMPANY: Carton de Colombia  
SITE NAME: Finca La Arcadia, Cauca  
LATITUDE: 2° 30' N  
LONGITUDE: 76° 35' W  
ELEVATION: 1750 m  
ANNUAL PRECIPITATION: 2112 mm

DATE PLANTED: September 1982  
DATE MEASURED: February 1990

### ANALYSIS OF VARIANCE

DEPENDENT VARIABLE: Eight Year Volume (cubic meters)

<u>SOURCE</u>	<u>DF</u>	<u>SUM OF SQUARES</u>	<u>F VALUE</u>
REP	5	0.30164564	5.90 **
FAM	41	1.55527895	3.71 **
REP*FAM	195	1.99493476	0.99 ns
ERROR	973	10.09077255	
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CORRECTED TOTAL	1214	13.97629781	

ns: Not significant

\* Significant at  $p < .05$   
\*\* Significant at  $p < .01$

TEST MEAN  
0.23573 m<sup>3</sup>

C.V. (%)  
43.20

## \*\*\*\*\* MEANS BY FAMILY \*\*\*\*\*

<u>Fam</u>	<u># Trees</u>	<u>% Surv</u>	<u>Mean Height (m)</u>	<u>C.V. (%)</u>	<u>Mean D.B.H. (cm)</u>	<u>Tree Volume (cubic m)</u>
* 203	31	86.11	16.6	14.42	25.6	0.33791
55	30	83.33	15.0	15.01	25.3	0.29973
46	27	75.00	16.6	9.43	23.8	0.29638
50	28	77.78	16.1	15.34	23.8	0.28628
44	28	77.78	16.4	10.49	24.0	0.28620
82	27	75.00	16.5	14.32	23.2	0.27751
85	30	83.33	17.1	8.98	22.8	0.27093
81	31	86.11	16.3	14.88	22.6	0.26193
60	30	83.33	16.1	13.37	22.4	0.25052
69	28	77.78	15.5	18.01	22.3	0.25045
91	32	88.89	15.0	18.40	22.6	0.24919
51	33	91.67	15.6	12.74	22.5	0.24914
68	32	88.89	16.0	13.31	22.3	0.24681
101	31	86.11	16.4	14.53	22.3	0.24664
* 202	32	88.89	16.3	12.66	21.9	0.24624
83	32	88.89	15.9	17.78	21.7	0.24146
64	32	88.89	15.7	16.66	22.2	0.24112
117	30	83.33	15.5	17.97	22.0	0.24010
45	33	91.67	16.0	10.87	21.9	0.23903
72	30	83.33	15.9	16.41	22.0	0.23752
42	31	86.11	15.1	18.61	21.7	0.23207
52	30	83.33	15.2	14.08	22.2	0.23186
79	30	83.33	15.5	12.25	21.6	0.22879
61	31	86.11	14.5	16.44	21.8	0.22424
18	30	83.33	15.4	18.49	21.1	0.22379
73	34	94.44	15.8	16.08	21.0	0.22231
76	28	77.78	14.5	21.03	21.6	0.22186
66	30	83.33	14.5	24.14	21.3	0.22156
84	30	83.33	15.1	18.42	21.2	0.22090
29	30	100.00	14.6	18.77	21.6	0.22018
47	34	94.44	15.2	11.68	21.3	0.21621
48	31	86.11	15.2	11.61	21.3	0.21196
57	15	62.50	15.1	19.24	20.4	0.20786
21	19	79.17	14.5	15.65	20.7	0.20749
78	31	86.11	15.2	16.03	20.7	0.20638
77	34	94.44	14.3	21.16	20.6	0.20377
37	28	77.78	15.5	21.05	20.1	0.20362
38	29	80.56	14.6	22.84	19.6	0.20019
96	9	37.50	13.9	22.24	18.6	0.17308
86	29	80.56	14.5	21.65	18.6	0.17286
75	21	87.50	12.6	24.88	20.0	0.16775
* 201	24	19.05	14.2	19.36	16.5	0.13054

## \*\*\*\*\* MEANS BY FAMILY \*\*\*\*\*

	<u># Trees</u>	<u>% Surv</u>	<u>Mean Height (m)</u>	<u>C.V. (%)</u>	<u>Mean D.B.H. (cm)</u>	<u>Tree Volume (cubic m)</u>
OVERALL	1215	78.49	15.4	16.97	21.8	0.23573

Note: Tree volume with bark was calculated using a formula for juvenile trees: Volume (cubic meters) =  $0.0003 \cdot D^2 \cdot H$ , where D=DBH in centimeters and H = total height in meters.

The overall values do not include control lots.

All families are from the provenance of Mt. Pine Ridge, Belize

- \* Comm. Control lots: 201 = Pinus oocarpa, Chiquimula, Guatemala  
 202 = Pinus tecunumanii, Mt. Pine Ridge, Belize  
 203 = Pinus oocarpa, Mal Paso, Guatemala