

C A M C O R E

FIVE YEAR MEASUREMENTS

TEST IDENTIFICATION: 06-06-22A
SPECIES: Pinus oocarpa
COMPANY: EMBRAPA/PNPF
SITE NAME: CPAC
LATITUDE: 15° 32' S
LONGITUDE: 47° 39' W
ELEVATION: 1190 m
ANNUAL PRECIPITATION: 1546 mm

DATE PLANTED: December 1983
DATE MEASURED: December 1988

ANALYSIS OF VARIANCE

DEPENDENT VARIABLE: Five Year Volume (cubic meters)

<u>SOURCE</u>	<u>DF</u>	<u>SUM OF SQUARES</u>	<u>F</u> <u>VALUE</u>
REP	8	0.03277143	4.98 **
PROV	8	0.10827863	16.45 **
REP*PROV	63	0.05184920	4.25 **
FAM(PROV)	55	0.05538106	5.20 **
REP*FAM(PROV)	360	0.06977414	1.02 ns
ERROR	2437	0.46257106	
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CORRECTED TOTAL	2931	0.78922602	

ns: Not significant

** Significant at $p < .01$

TEST MEAN C.V. (%)
0.03326 m³ 41.4195

06-06-22A

***** 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		0.05082	54	Mt. Pine Ridge (202)
A				
A		0.04617	375	Mt. Pine Ridge
B		0.03723	53	Agudos (999)
B				
B		0.03682	473	El Castaño
C		0.03019	425	San Marcos
C				
C		0.02959	427	Tablazon
C				
C		0.02935	424	San Luis
C				
C		0.02932	366	Camotan
C				
C		0.02817	335	La Lagunilla

***** 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>
452	10	54	100	9.24	10.13	13.6	0.05323
202	*	54	100	8.91	19.01	13.2	0.05082
482	10	53	98	8.77	13.32	13.2	0.04737
461	10	54	100	9.13	10.58	13.0	0.04724
487	10	54	100	9.08	11.13	12.9	0.04662
137	2	53	98	8.13	12.05	13.2	0.04557
462	10	54	100	8.79	11.29	12.9	0.04516
159	2	54	100	8.43	10.52	13.0	0.04384
444	10	54	100	8.99	11.02	12.2	0.04207
233	8	53	98	8.56	10.67	12.6	0.04186
448	10	52	96	8.70	12.93	12.2	0.04137
102	4	54	100	8.44	11.44	12.4	0.03979
140	2	52	96	7.87	13.81	12.4	0.03891
157	2	54	100	8.03	14.40	12.3	0.03790
999	*	53	98	8.25	13.52	11.8	0.03723
244	8	52	96	8.10	12.60	11.9	0.03697
396	9	54	100	8.02	14.99	11.7	0.03527
91	4	54	100	7.82	16.38	11.7	0.03366
84	1	54	100	7.67	14.77	11.7	0.03329
148	2	54	100	7.79	12.44	11.5	0.03310
146	2	54	100	7.34	14.27	11.9	0.03269
167	9	53	98	7.86	14.21	11.5	0.03263
104	4	53	98	7.73	19.64	11.2	0.03246
150	2	50	93	7.53	17.84	11.4	0.03244
173	9	52	96	7.58	18.08	11.1	0.03154
126	3	54	100	8.26	11.47	11.0	0.03151
261	8	53	98	7.92	14.41	11.2	0.03143
193	9	54	100	7.96	12.95	11.3	0.03127
239	8	54	100	8.18	15.76	10.8	0.03121
3	3	54	100	7.97	11.18	11.0	0.03110
93	4	51	94	7.79	10.18	11.3	0.03076
171	9	53	98	7.67	15.58	11.2	0.03069
114	4	53	98	7.11	20.98	11.1	0.03042
8	3	54	100	7.86	19.99	10.7	0.03041
75	1	54	100	7.61	13.74	11.1	0.03029
155	2	54	100	7.78	11.36	11.1	0.02993
92	1	54	100	7.48	11.84	11.2	0.02960
177	9	54	100	7.66	10.63	10.8	0.02842
79	1	52	96	7.44	13.67	10.9	0.02837
97	4	54	100	7.47	13.58	10.9	0.02820
120	3	54	100	7.64	14.72	10.5	0.02801

<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>
254	8	52	96	7.62	15.53	10.5	0.02788
130	3	54	100	7.69	13.12	10.6	0.02762
133	3	53	98	7.62	12.16	10.7	0.02756
162	3	54	100	7.85	15.53	10.3	0.02716
110	4	52	96	7.22	16.79	10.6	0.02677
257	8	54	100	7.54	13.42	10.3	0.02576
101	4	54	100	6.85	15.37	10.8	0.02574
88	1	52	96	7.18	15.39	10.6	0.02567
90	1	52	96	7.47	13.09	10.2	0.02446
189	9	54	100	7.16	18.60	10.0	0.02395
259	8	54	100	7.07	16.08	10.0	0.02394
185	9	53	98	7.11	16.45	9.9	0.02296
235	8	53	98	7.11	21.34	9.7	0.02275
107	4	53	98	6.48	19.56	9.9	0.02159

OVERALL		2825	99	7.84	16.00	11.4	0.03285
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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 mean does not include control lots.

Provenance code: 1 = Camotan, Guatemala
2 = El Castaño, Guatemala
3 = La Lagunilla, Guatemala
4 = San Luis, Guatemala
8 = San Marcos, Honduras
9 = Tablazon, Honduras
10 = Mt. Pine Ridge, Belize

* Control lots: 202 = Pinus tecunumanii, Mt. Pine Ridge, Belize
999 = Pinus oocarpa, Agudos, Brasil