

# C A M C O R E

## ANOVA AND MULTIPLE COMPARISONS FOR PROVENANCE AND FAMILY HEIGHT

### THREE YEAR MEASUREMENTS

TEST IDENTIFICATION: 06-04-17A  
 SPECIES: Pinus oocarpa  
 COMPANY: CONARE  
 SITE NAME: Coloradito  
 LATITUDE: 8° 50' N  
 LONGITUDE: 63° 15' W  
 ELEVATION: 70m  
 ANNUAL PRECIPITATION: 1060mm

DATE PLANTED: September 1984  
 DATE MEASURED: June 1988

### 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	196.95023886	
PROV	9	222.36718521	2.25 *
REP*PROV	71	781.15907289	
FAM(PROV)	48	148.44753144	3.36 **
REP*FAM(PROV)	383	352.01566427	
ERROR	2154	1562.89400001	
CORRECTED TOTAL	2673	3359.88258789	

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

TEST MEAN                      C.V. (%)  
 4.2301                          20.1370

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

<u>WALLER</u>	<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>PROVENANCE</u>	
	A	5.2737	38	M. P. R.	(202)
	A				
B	A	4.9500	44	Nirgua	(FUD)
B	A				
B	A	4.6749	378	San Marcos	
B	A				
B	A	4.3719	356	San Luis	
B	A				
B	A	4.2511	45	Las Crucitas	(H/5/77)
B	A				
B	A	4.2439	376	Las Crucitas	
B	A				
B	A	4.2318	365	Guaimaca	
B					
B		4.0397	343	La Lagunilla	
B					
B		3.9729	376	La Campa	
B					
		3.8484	353	Camotan	

WALLER-DUNCAN MULTIPLE COMPARISONS FOR THREE YEAR FAMILY HEIGHTMEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

<u>WALLER</u>	<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>FAMILY</u>	<u>PROVENANCE</u>
	A	5.2737	38	202	*
	A				
B	A	5.0320	50	243	8
B	A				
B	A C	4.9500	44	H/5/77	*
B	A C				
B	A C	4.9400	40	224	8
B	A C				
B D	A C	4.8159	44	239	8
B D	A C				
E B D	A C	4.8120	50	96	4
E B D	A C				
E B D	A C	4.8050	40	339	7
E B D	A C				
E B D	A C F	4.7157	51	102	4
E B D	A C F				
E B D	A G C F	4.6978	46	253	8
E B D	A G C F				
E B D	A G C F	4.6917	48	293	6
E B D	A G C F				
E B D H	A G C F	4.6540	50	231	8
E B D H	A G C F				
E B D H	A G C F	4.6373	51	248	8
E B D H	A G C F				
E B I D H	A G C F	4.5939	49	104	4
E B I D H	G C F				
E B I D H J	G C F	4.4937	48	335	7
E B I D H J	G C F				
E K B I D H J	G C F	4.4702	47	265	6
E K B I D H J	G C F				
E K B I D H J	G C F	4.4256	43	348	7
E K B I D H J	G C F				
E K B I D H J	G C F	4.3941	51	237	8
E K B I D H J	G C F				
L E K B I D H J	G C F	4.3528	53	97	4
L E K B I D H J	G C F				
L E K B I D H J	G C F	4.3417	48	269	6
L E K B I D H J	G C F				
L E K B I D H J	G C F	4.3115	52	110	4
L E K B I D H J	G C F				
L E K B I D H J G C F M		4.2739	46	235	8

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<u>WALLER</u>	<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>FAMILY</u>	<u>PROVENANCE</u>
L E K B I D H J G C F M		4.2739	46	359	7
L E K I D H J G C F M					
L E K I D H J G C F M		4.2511	45	FUD	*
L E K I D H J G C F M					
L E K I D H J G C F M		4.2479	48	365	5
L E K I D H J G C F M					
L E K I D H J G C F M		4.2239	46	8	3
L E K I D H J G C F M					
L E K I D H J G C F M		4.2108	37	3	3
L E K I D H J G C F M					
L E K I D H J G C F M		4.1944	54	304	6
L E K I D H J G C F M					
L E K I D H J G C F M		4.1941	51	94	4
L E K I D H J G C F M					
L E K I D H J G C F M		4.1937	48	330	7
L E K I D H J G F M					
L E K I D H J G F M		4.1696	46	267	6
L E K I D H J G F M					
L E K I D H J G F M		4.1347	49	361	7
L E K I D H J G F M					
L E K I D H J G F M		4.1229	35	130	3
L E K I D H J G F M					
L E K I D H J G F M		4.1133	45	372	5
L E K I D H J G F M					
L E K I D H J G F M		4.0957	47	127	3
L E K I D H J G F M					
L E K I D H J G F M		4.0936	47	84	1
L E K I D H J G F M					
L E K I D H J G F M		4.0609	46	296	6
L E K I H J G F M					
L E K I H J G F M		4.0538	52	162	3
L K I H J G F M					
L K I H J G F M		4.0283	46	308	6
L K I H J G F M					
L K I H J G F M		4.0192	52	377	5
L K I H J G F M					
L K I H J G F M		4.0158	38	131	3
L K I H J G F M					
L K I H J G F M		4.0091	44	79	1
L K I H J G F M					
L K I H J G F M		3.9700	40	374	5
L K I H J G M					
L K I H J G M		3.9415	41	282	6
L K I H J M					
L K I H J M		3.9295	44	394	5

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<u>WALLER</u> <u>GROUPING</u>					<u>MEAN</u>	<u>N</u>	<u>FAMILY</u>	<u>PROVENANCE</u>
L	K	I	H J	M	3.9190	42	75	1
L	K	I	H J	M				
L	K	I	H J	M	3.9102	49	369	5
L	K	I	H J	M				
L	K	I	H J	M	3.9026	38	90	1
L	K	I	H J	M				
L	K	I	H J	M	3.8977	44	120	3
L	K	I	J	M				
L	K	I	J	M	3.8667	51	381	5
L	K	I	J	M				
L	K	I	J	M	3.8386	44	315	7
L	K		J	M				
L	K		J	M	3.8022	45	86	1
L	K		J	M				
L	K		J	M	3.7696	46	82	1
L	K		J	M				
L	K		J	M	3.7660	47	363	7
L	K		J	M				
L	K		J	M	3.7511	47	72	1
L	K			M				
L	K			M	3.7298	47	384	5
L	K			M				
L	K			M	3.7227	44	133	3
L				M				
L				M	3.6280	50	107	4
				M				
				M	3.5455	44	92	1

Provenance code: 1 = Camotan, Guatemala  
 3 = La Lagunilla, Guatemala  
 4 = San Luis, Guatemala  
 5 = La Campa, Honduras  
 6 = Las Crucitas, Honduras  
 7 = Guaimaca, Honduras  
 8 = San Marcos, Honduras

\* Commercial Control: 202 = P. tecunumanii, Mt. Pine Ridge, Belize  
 FUDECO = P. oocarpa, Nirgua, Venezuela  
 H/5/77 = P. oocarpa, Las Crucitas, Honduras