

# C A M C O R E

## ANOVA AND MULTIPLE COMPARISONS FOR PROVENANCE AND FAMILY HEIGHT

### THREE YEAR MEASUREMENTS

TEST IDENTIFICATION: 05-04-06A  
 SPECIES: Pinus caribaea  
 COMPANY: CONARE  
 SITE NAME: Coloradito  
 LATITUDE: 8° 50' N  
 LONGITUDE: 63° 15' W  
 ELEVATION: 70m  
 ANNUAL PRECIPITATION: 920 - 1250mm

DATE PLANTED: November 1984  
 DATE MEASURED: December 1987

### 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	65.95089692	
PROV	7	59.62934343	1.76 ns
REP*PROV	56	270.66700037	
FAM(PROV)	36	256.36239148	8.21 **
REP*FAM(PROV)	288	249.86660423	
ERROR	1958	1237.75508334	
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CORRECTED TOTAL	2353	2283.78666525	

\*\* Significant at  $p < .01$       ns: not significant

TEST MEAN                      C.V. (%)  
 4.6043                        17.2682

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	4.9222	54	Cachipo	(CAC)
	A				
B	A	4.7455	852	Poptun	
B	A				
B	A	4.5900	432	Gualjoco	
B	A				
B	A	4.5740	431	Los Limones	
B	A				
B	A	4.4809	425	Santa Cruz	
B	A				
B	A	4.3685	54	San Esteban	(80)
B	A				
B	A	4.1698	53	Los Limones	(81)
B					
B		4.0358	53	San Nicolas	(79)

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	5.6038	53	21	4
		A				
	B	A	5.2870	54	261	3
	B	A				
	B	A C	5.2111	54	297	2
	B	C				
	B	D C	5.1327	52	36	4
	B	D C				
	B E	D C	5.0654	52	6	4
	B E	D C				
F	B E	D C	5.0407	54	44	4
F	B E	D C				
F	B E	D C G	5.0167	54	4	4
F	B E	D C G				
F	B E	D H C G	4.9278	54	304	2
F	B E	D H C G				
F	B E	D H C G	4.9222	54	CAC	*
F	B E	D H C G				
F	B E I	D H C G	4.9038	53	29	4
F	B E I	D H C G				
F	B E I	D H C G	4.8830	53	58	4
F	B E I	D H C G				
F	B J E I	D H C G	4.8302	53	38	4
F	B J E I	D H C G				
F	B J E I	D H C G	4.8226	53	189	5
F	J E I	D H C G				
F	K J E I	D H C G	4.7962	53	64	4
F	K J E I	D H C G				
F	K J E I	D H C G	4.7926	54	227	3
F	K J E I	D H C G				
F L	K J E I	D H C G	4.7741	54	273	3
F L	K J E I	D H G				
F L	K J E I	D H M G	4.7333	54	207	5
F L	K J E I	D H M G				
F L	K J E I	D H M G	4.7278	54	11	4
F L	K J E I	D H M G				
N F L	K J E I	D H M G	4.6981	54	290	2
N F L	K J E I	D H M G				
N F L	K J E I	D H M GO	4.6796	54	198	5

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<u>WALLER</u>	<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>FAMILY</u>	<u>PROVENANCE</u>
N F L K J E I P H M GO		4.6358	53	26	4
N F L K J E I P H M GO					
N F L K J E I P H M GO		4.6222	54	292	2
N F L K J I P H M GO					
N F L K J Q I P H M GO		4.5759	54	61	4
N L K J Q I P H M GO					
N L K J Q I P H M GO		4.5556	54	284	2
N L K J Q I P H M O					
N L K J Q I P H M O		4.5259	54	248	3
N L K J Q I P H M O					
N R L K J Q I P H M O		4.4962	53	212	5
N R L K J Q I P M O					
N R L K J Q I P M O		4.4472	53	235	3
N R L K J Q P M O					
N R L K J Q P M SO		4.3962	53	60	4
N R L K J Q P M SO					
N R L K J Q P M SO		4.3685	54	80	*
N R L K Q P M SO					
N R L K Q P M SO		4.3352	54	247	3
N R L K Q P M SO					
N R L K Q P M SO		4.3333	54	322	2
N R L Q P M SO					
N R L Q P M SO		4.3208	53	190	5
N R Q P M SO					
N R Q P M SO		4.2843	51	211	5
N R Q P M SO					
N R Q P M SO		4.2792	53	192	5
N R Q P SO					
N R Q P SO		4.2481	54	285	2
N R Q P SO					
N R Q P SO		4.2396	53	52	4
R Q P SO					
R Q P SO		4.2204	54	217	5
R Q P SO					
R Q P SO		4.2204	54	231	3
R Q P S					
R Q P S		4.2074	54	243	3
R Q P S					
R Q P S		4.1698	53	81	*
R Q S					
R Q S		4.1426	54	53	4
R Q S					
R Q S		4.1241	54	315	2
R S					
R S		4.0358	53	79	*
S					
S		3.9704	54	65	4

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Provenance code: 2 = Gualjoco, Honduras  
3 = Los Limones, Honduras  
4 = Poptun, Guatemala  
5 = Santa Cruz, Honduras

\*Commercial control P. caribaea: 79 = San Nicolas, Honduras  
80 = San Esteban, Honduras  
81 = Los Limones, Honduras  
CAC = Cachipo, Venezuela