

C A M C O R E

ANOVA AND MULTIPLE COMPARISONS FOR PROVENANCE AND FAMILY HEIGHT

THREE YEAR MEASUREMENTS

TEST IDENTIFICATION: 05-04-05A
SPECIES: Pinus caribaea
COMPANY: CONARE
SITE NAME: Chaguaramas
LONGITUDE: 62° 45' W
LATITUDE: 8° 42' N
ELEVATION: 40m
ANNUAL PRECIPITATION: 900 - 1100mm

DATE PLANTED: November 1984
DATE MEASURED: February 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	7	223.94572578	
PROV	9	24.27044662	1.10 ns
REP*PROV	63	154.66805514	
FAM(PROV)	38	166.46159535	5.78 **
REP*FAM(PROV)	263	199.40410722	
ERROR	1812	1348.29165152	
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CORRECTED TOTAL	2192	2364.84963065	

** Significant at $p > .01$ ns: not significant

TEST MEAN C.V. (%)
4.4702 9.2969

The analysis of variance shows no significant differences among the provenances.

	<u>PROVENANCE</u>	<u>MEAN</u>	<u>N</u>
	San Esteban	4.85532	47
	La Mosquitia	4.82553	47
	Los Limones	4.48656	387
	Cachipo	4.48000	45
	San Nicolas	4.57292	48
	Poptun	4.50775	748
	Gualjoco	4.44134	329
(81)	Los Limones	4.38750	48
	Santa Cruz	4.36295	224
	El Porvenir	4.33259	270

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	5.1625	48	55	4
	A				
	B A	5.0042	48	279	2
	B A				
	B A C	4.9437	48	37	4
	B A C				
	B D A C	4.9298	47	49	4
	B D A C				
E	B D A C	4.8553	47	80	*
E	B D A C				
E	B D A C F	4.8357	42	206	5
E	B D A C F				
E	B D A G C F	4.8255	47	78	*
E	B D A G C F				
E	B D H A G C F	4.7711	45	27	4
E	B D H A G C F				
E	B D H A G C F	4.7646	48	239	3
E	B D H A G C F				
E	B I D H A G C F	4.7562	48	250	3
E	B I D H G C F				
E	B I D H J G C F	4.7043	46	255	3
E	B I D H J G C F				
E	B I D H J G C F	4.6958	48	242	3
E	B I D H J G C F				
E	K B I D H J G C F	4.6604	48	161	1
E	K B I D H J G C F				
L	E K B I D H J G C F	4.6426	47	132	1
L	E K B I D H J G C F				
L	E K B I D H J G C FM	4.6196	46	45	4
L	E K B I D H J G C FM				
L	E K B I D H J G C FM	4.6187	48	23	4
L	E K B I D H J G C FM				
L	E K B I D H J G CNFM	4.5729	48	79	*
L	E K B I D H J G CNFM				
L	E' K B I D H J GOCNFM	4.5638	47	35	4
L	E K I D H J GOCNFM				
L	E K P I D H J GOCNFM	4.5229	48	230	3
L	E K P I D H J GOCNFM				
L	E K P I D H J GOCNFM	4.5187	48	298	2

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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 P I D H J	GOCNFM				
L E K P I D H J	GOQNFM	4.4814	43	71	4
L E K P I H J	GOQNFM				
L E K P I H J	GOQNFM	4.4800	45	CAC	*
L E K P I H J	GOQNFM				
L E K P I H J	GOQNFM	4.4583	48	28	4
L E K P I H J	GOQNFM				
L E K P I H J	GOQNFM	4.4542	48	31	4
L E K P I H J	GOQNFM				
L E K P I H J	GOQNFM	4.4521	48	41	4
L K P I H J	GOQNFM				
L K P I R H J	GOQNFM	4.3875	48	81	*
L K P I R H J	GOQN M				
L K P I R H J	GOQN M	4.3804	46	179	5
L K P I R H J	OQN M				
L K P I R H J	OQN M	4.3687	48	177	5
L K P I R H J	OQN M				
L K P I R H J	OQN M	4.3576	33	294	2
L K P I R H J	OQN M				
L K P I R H J	OQN M	4.3565	46	140	1
L K P I R H J	OQN M				
L K P I R H J	OQN M	4.3489	47	280	2
L K P I R H J	OQN M				
L K P I R H J	OQN M	4.3467	45	30	4
L K P I R H J	OQN M				
L S K P I R H J	OQN M	4.3326	43	320	2
L S K P I R J	OQN M				
L S K P I R J	OQN M	4.3088	34	164	1
L S K P I R J	OQN M				
L S K P R J	OQN M	4.2971	35	289	2
L S K P R J	OQN M				
L S K P R J	OQN M	4.2806	31	278	2
L S K P R J	OQN M				
L S K P R J	OQN M	4.2604	48	258	3
L S K P R	OQN M				
L S K P R	OQN M	4.2386	44	282	2
L S P R	OQN M				
L S P R	OQN M	4.2021	48	241	3
S P R	OQN M				
S P R	OQN M	4.1833	48	69	4
S P R	OQN				
S P R	OQN	4.1317	41	271	5
S P R	OQN				
S P R	OQN	4.1311	45	34	4
S P R	OQN				
S P R	OQ	4.1191	47	223	5

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<u>WALLER</u>	<u>GROUPING</u>	<u>MEAN</u>	<u>N</u>	<u>FAMILY</u>	<u>PROVENANCE</u>
S	P R Q				
S	P R Q	4.0812	48	75	4
S	P R Q				
S	P R Q	4.0750	48	142	1
S	R Q				
S	R Q	4.0415	53	244	3
S	R				
S	R	3.9447	47	173	1
S					
S		3.8957	46	46	4

Provenance code: 1 = El Porvenir, Honduras
 2 = Gualjoco, Honduras
 3 = Los Limones, Honduras
 4 = Poptun, Guatemala
 5 = Santa Cruz, Honduras

* Commercial Control P. caribaea: 78 = La Mosquitia, Honduras
 79 = San Nicolas, Honduras
 80 = San Esteban, Honduras
 81 = Los Limones, Honduras
 CAC = Cachipo, Venezuela