

***** QUARTILE MEANS *****

THREE YEAR MEASUREMENT

TEST IDENTIFICATION: 03-01-04A

SPECIES: Pinus tecunumanii (Belize)

COMPANY: Aracruz Florestal

SITE NAME: Pontal, Brasil

ELEVATION (m): 40

LATITUDE: 19°48'S

LONGITUDE: 40°17'W

ANNUAL PRECIPITATION (mm): 1360

DESCRIPTION: There are a total of 47 families represented in this test plus four control lots. The four quartiles, FIRST, SECOND, THIRD and FOURTH, represent the 47 families divided into four groups according to their ordered rank by individual tree volume. Each quartile contains 25% of the families. Values for control lots have also been calculated.

| QUARTILE | PERCENT SURVIVAL | MEAN HEIGHT METERS | MEAN DIAMETER CENTIMETERS | MEAN STEM STRAIGHTNESS | **INDIVIDUAL TREE VOLUME CUBIC METERS |
|-------------------|---------------------|--------------------------|---------------------------------|------------------------------|---|
| CONTROL LOT 205 | 98 | 5.16 | 9.5 | 3.1 | 0.01507 |
| FIRST QUARTILE | 98 | 5.47 | 8.0 | 2.5 | 0.01215 |
| SECOND QUARTILE | 98 | 5.15 | 7.4 | 2.3 | 0.00991 |
| CONTROL LOT 202 | 96 | 4.51 | 7.1 | 2.2 | 0.00856 |
| THIRD QUARTILE | 98 | 4.86 | 6.8 | 2.4 | 0.00828 |
| FOURTH QUARTILE | 98 | 4.43 | 5.9 | 2.6 | 0.00613 |
| CONTROL LOT 206 | 98 | 4.19 | 5.6 | 3.2 | 0.00498 |
| CONTROL LOT 201 | 91 | 3.65 | 4.9 | 2.1 | 0.00349 |
| ----- | | | | | |
| TREATMENT MEANS | 98 | 4.98 | 7.0 | 2.5 | 0.00911 |
| CONTROL LOT MEANS | 96 | 4.39 | 6.8 | 2.7 | 0.00809 |
| ----- | | | | | |

CONTROL LOTS: 201=Pinus oocarpa Chiquimula, Guatemala
 202=Pinus tecunumanii Mt. Pine Ridge, Belize
 205=Pinus caribaea var hondurensis Agudos, Brasil
 206=Pinus oocarpa Agudos, Brasil

** Tree volume with bark was calculated using a formula for juvenile trees: Volume(cubic meters) = .00003 D²H, where D = D.B.H. in centimeters and H = total height in meters.

FAMILIES IN QUARTILES: FIRST: 72 44 22 50 86 60 39 36 75 51 48 21
 SECOND: 59 46 77 91 73 83 61 29 87 18 64
 THIRD: 54 57 49 81 69 97 42 85 27 79 68 52
 FOURTH: 26 45 82 78 66 55 43 101 38 96 80 117

NOTE: Stem straightness ranked from 1 to 6. 1=poorest to 6=best

***** MEANS BY FAMILY *****

THREE YEAR MEASUREMENT

TEST IDENTIFICATION: 03-01-04A

SPECIES: Pinus tecunumanii (Belize)

COMPANY: Aracruz Florestal

| <u>FAMILY</u> | <u>PERCENT SURVIVAL</u> | <u>MEAN HEIGHT METERS</u> | <u>MEAN DIAMETER CENTIMETERS</u> | <u>MEAN STEM STRAIGHTNESS</u> | <u>**INDIVIDUAL TREE VOLUME CUBIC METERS</u> |
|---------------|-----------------------------|-----------------------------------|--|---------------------------------------|--|
| 72 | 98 | 6.15 | 8.9 | 2.3 | 0.01597 |
| *205 | 98 | 5.16 | 9.5 | 3.1 | 0.01507 |
| 44 | 100 | 5.68 | 8.4 | 3.0 | 0.01308 |
| 22 | 98 | 5.60 | 8.2 | 2.5 | 0.01288 |
| 50 | 93 | 5.43 | 8.4 | 2.7 | 0.01248 |
| 86 | 96 | 5.51 | 7.8 | 2.6 | 0.01246 |
| 60 | 100 | 5.46 | 8.1 | 2.6 | 0.01226 |
| 39 | 100 | 5.46 | 8.2 | 2.4 | 0.01199 |
| 36 | 98 | 5.42 | 7.9 | 2.2 | 0.01162 |
| 75 | 100 | 5.39 | 8.0 | 1.9 | 0.01109 |
| 51 | 100 | 5.12 | 7.5 | 2.6 | 0.01074 |
| 48 | 98 | 5.21 | 7.7 | 2.7 | 0.01062 |
| 21 | 98 | 5.25 | 7.5 | 2.5 | 0.01058 |
| 59 | 100 | 5.29 | 7.7 | 2.2 | 0.01051 |
| 46 | 100 | 5.06 | 7.4 | 2.6 | 0.01037 |
| 77 | 98 | 5.28 | 7.4 | 2.1 | 0.01015 |
| 91 | 93 | 5.28 | 7.6 | 2.3 | 0.01001 |
| 73 | 98 | 4.96 | 7.7 | 2.6 | 0.00983 |
| 83 | 100 | 5.36 | 7.3 | 2.2 | 0.00982 |
| 61 | 96 | 5.16 | 7.2 | 2.3 | 0.00977 |
| 29 | 94 | 4.94 | 7.4 | 2.0 | 0.00975 |
| 87 | 100 | 5.24 | 7.2 | 2.5 | 0.00967 |
| 18 | 98 | 4.93 | 7.5 | 2.3 | 0.00965 |
| 64 | 100 | 5.21 | 7.4 | 2.7 | 0.00950 |
| 54 | 100 | 5.17 | 7.2 | 2.7 | 0.00919 |
| 57 | 98 | 4.94 | 7.3 | 2.5 | 0.00909 |
| 49 | 100 | 5.02 | 6.9 | 2.4 | 0.00866 |
| 81 | 98 | 4.99 | 6.8 | 2.2 | 0.00857 |
| *202 | 96 | 4.51 | 7.1 | 2.2 | 0.00856 |
| 69 | 100 | 4.78 | 6.9 | 2.3 | 0.00844 |
| 97 | 96 | 4.73 | 6.8 | 1.8 | 0.00841 |
| 42 | 100 | 4.77 | 6.7 | 2.2 | 0.00825 |
| 85 | 100 | 5.01 | 6.8 | 2.8 | 0.00820 |
| 27 | 93 | 4.66 | 6.6 | 2.0 | 0.00792 |
| 79 | 93 | 4.88 | 6.6 | 2.4 | 0.00758 |
| 68 | 96 | 4.59 | 6.5 | 2.8 | 0.00748 |

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03-01-04A THREE YEAR MEASUREMENT CONTINUED

| <u>FAMILY</u> | <u>PERCENT SURVIVAL</u> | <u>MEAN HEIGHT METERS</u> | <u>MEAN DIAMETER CENTIMETERS</u> | <u>MEAN STEM STRAIGHTNESS</u> | <u>**INDIVIDUAL TREE VOLUME CUBIC METERS</u> |
|---------------|-----------------------------|-----------------------------------|--|---------------------------------------|--|
| 52 | 98 | 4.75 | 6.6 | 2.9 | 0.00741 |
| 26 | 100 | 4.56 | 6.2 | 2.0 | 0.00738 |
| 45 | 100 | 4.74 | 6.5 | 2.9 | 0.00726 |
| 82 | 100 | 4.79 | 6.5 | 2.2 | 0.00716 |
| 78 | 100 | 4.69 | 6.3 | 3.0 | 0.00681 |
| 66 | 96 | 4.33 | 6.1 | 2.9 | 0.00617 |
| 55 | 98 | 4.28 | 5.8 | 2.0 | 0.00603 |
| 43 | 98 | 4.25 | 5.6 | 2.7 | 0.00586 |
| 101 | 96 | 4.29 | 5.6 | 2.3 | 0.00570 |
| 38 | 98 | 4.35 | 5.8 | 2.7 | 0.00566 |
| 96 | 98 | 4.36 | 5.5 | 3.0 | 0.00531 |
| 80 | 98 | 4.26 | 5.7 | 2.6 | 0.00530 |
| *206 | 98 | 4.19 | 5.6 | 3.2 | 0.00498 |
| 117 | 98 | 4.23 | 5.3 | 2.5 | 0.00485 |
| *201 | 91 | 3.65 | 4.9 | 2.1 | 0.00349 |

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