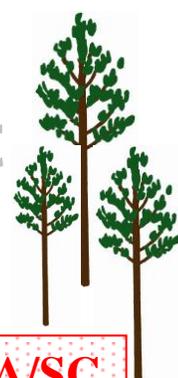


Loblolly Pine *PRS*TM Spec Sheet



Version 2010 V2

Family Code: **P3 Select** Deployment Region: **Piedmont GA/SC**

PRSTM Ratings – Predicted Family Performance (open-pollinated or OP family)

Productivity Rating **101**

Rust Resistance Grade **B**

Stem Form Grade **C**

The **PRS**TM Ratings indicate that compared to the local unimproved loblolly pine checklot for the Piedmont GA/SC Region, open-pollinated (OP) progeny of family **P3 Select** are projected to be:

P = 101 → Approximately 101% more productive (have greater stem volume) at age 6 years as an OP family compared to unimproved local check

R = B → Above Average for resistance to fusiform rust disease

S = C → Average for stem straightness (compared to other improved families)

Family **P3 Select** has been tested by members of the NC State University Cooperative Tree Improvement Program and is adapted to grow in the Piedmont GA/SC Deployment Region*.

* The Deployment Region is based upon adaptability guidelines developed by the USDA Forest Service (Schmidtling 2001), *Southern Pine Seed Sources*, available at:

http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs044.pdf

The gray shaded area on the map indicates the natural range of loblolly pine.



Loblolly Pine *PRS*[™] Spec Sheet - description

Progeny test results (measurements taken at age 6 years) are listed in the box to the right.

Volume Rating and **Height Rating** are predicted progeny performance of open-pollinated (OP) families expressed as percentage deviations from the local unimproved loblolly pine checklot for the Piedmont GA/SC region (e.g. family **P3 Select** is predicted to be 25% taller and have 101% more stem volume at age 6 years compared to the unimproved check trees).

R-50 % of 20 indicates that this family is expected to have 20% of the trees infected with fusiform rust galls at a site where unimproved loblolly pine would have 50% rust infection.

Straight % score of 34 indicates that this family has 34% straighter stems compared to the unimproved check trees.

Forking (F-50 %) of 45 indicates that this family is expected to have 45% of the trees with forked stems or major ramicorn branches at a site where unimproved loblolly pine would have 50% forked stems or ramicorn branches.

*Use of the *PRS*[™] Ratings*

Customers are encouraged to fully understand the *PRS*[™] Ratings. For a detailed description and limitations of the *PRS*[™] Ratings, go to <http://www.TreeImprovement.org/> *Version 2012.1 PRS*[™] Ratings can be used to compare the genetic potential of different families at age 6 years and not the absolute performance of a family at the time of harvest.

These *PRS*[™] Ratings are no guarantee of performance but are indicative of how this family mix is predicted to perform compared to non-improved loblolly pine if grown in the same environment. The actual performance of any loblolly pine family depends upon how the seedlings are grown in the nursery, the quality of the planting site, the silvicultural practices imposed before, during, and after planting, and the climatic / environmental conditions throughout the life of the stand.

Test Data

Each family is tested in one or more Testing Regions that are compatible with the listed Deployment Region. Standard progeny tests in the NC State University Cooperative Tree Improvement Program evaluate each family² in a minimum of 4 test environments with a range of 60 to 144 seedlings total per family. The following traits are measured at 4 to 6 years in the field: total stem height, diameter at breast height (DBH), presence or absence of fusiform rust galls, straightness of each tree relative to the stand average, and presence of forks or major ramicorn branches. Individual tree volume is calculated for each tree using a standard volume equation. The 6-Year Progeny Test Data reported are the means of individual trees and not per acre estimates.

Rotation Age Projections

The ideal productivity rating is a rotation-age per acre volume and value estimate for each family. This can be calculated using growth and yield models where the height and volume gain at 6 years of age are modeled to predict rotation age values. At this time, these projection systems are too variable and are dependent upon which growth and yield model is used. In future *PRS*[™] versions, we hope to have more reliable estimates of rotation age volumes and values.

The Georgia Forestry Commission is a licensed user of the Loblolly Pine *PRS*[™]. **The Georgia Forestry Commission** verifies that the seedlings being sold are of the family mix **P3 Select**. Apart from verification of family identity, Company/Agency makes no representation or warranty of any kind with respect to the rating system or seedlings sold, and expressly disclaims any warranties of merchantability or fitness for a particular purpose and any other implied warranties with respect to the capabilities, safety, utility, or commercial application of the seedlings.

6-Year Progeny Test *PRS*[™] Data Family: **P3 Select**

Volume Rating	101
Height Rating	25
R-50%	20
Straight %	34
Forking (F-50%)	45

² A family refers to progeny from a selected parent or a cross of selected parents that have been established in a loblolly pine seed orchard along with other selected parents from the Atlantic or Lower Gulf Coastal region. A family mix refers to open-pollinated (OP) progeny from selected parents that have been established in a loblolly pine seed orchard located in the Atlantic Coastal or Lower Gulf region along with other selected parents from the Atlantic Coastal or Lower Gulf region. Family mix **P3 Select** is a mix of 5 OP families where the seeds were collected from the same mother trees (**P3 Select 1-5**), but the pollen came from other parents in the orchard as well as from trees outside the orchard.