Improving Forest Productivity Through Biotechnology

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Significant gains have been made with loblolly pine through well-developed tree breeding and testing programs. The technology is now available to build on these successes and provide additional gains through clonal selection within families and through genetic transformation.

Over 6,000 clones of loblolly pine have been delivered to customers for clonal testing through ArborGen. A new clonal testing consortium (the ArborGen Testing Service) was established last year with key industrial players. Hundreds of clones were established in tests with the group in 2004 and over 1,000 clones will be tested in 2005. The successful identification of superior clones must be based on well-replicated tests over many sites within recognized breeding zones.

The application of biotechnology to the further improvement of superior loblolly pine clones is becoming a reality. Early field trials are demonstrating the application of biotechnology to the improvement of growth and pine and cottonwood. Significant reductions in lignin and S/G ratios have been demonstrated in Eucalyptus.

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