



TreeLines

August 2021 - 1st Edition



Loblolly Genetics: Performance & Value in a 20-Year-Old Plantation

Advanced Genetics Delivers Added Value to Forest Landowners

Southern pine landowners now have it all. In the past, forest products corporations had the best genetics, the best genetic data and financial analyses to grow high productivity tree plantations. Now, however, private landowners and consultants have access to all three. This article will share the long-term results of an MCP[®] hybrid field trial that demonstrates the substantial value increase over Open Pollinated seedlings. ArborGen is the only seedling producer with such long-term data and publishing it reflects our goal of transparency as a reforestation partner with our customers.

Since 2009 the amount of control pollinated hybrid loblolly pine genetics has steadily increased in the U.S. seedling market and has grown almost 25% per year since 2016 (Figure 1.). ArborGen's MCP seedlings represent 80% of the open market sales of these hybrids.

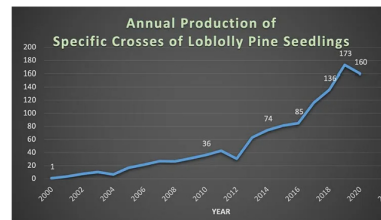


Figure 1. Annual production of full-sibling crosses of loblolly pine seedlings (Unpublished data from NCSU-CTIP).

Observing and verifying financial value produced in a forest plantation takes a long time, but there are few documented examples that demonstrate how the genetics of seedlings has impacted stand value over a rotation. A long-term field trial initially established by MeadWestvaco in the South Carolina Lowcountry in 1998 compared a widely planted open-pollinated family, 7-56, to ArborGen's MCP family AGM-22. ArborGen previously published the growth data at 12 years that showed the value of planting elite loblolly MCP pine hybrids. The 20-year results were even more impressive and confirmed the projected growth from the 12 year study.

A look at age 20 results

With a trend that began at age 4 (Figure 2), MCP family AGM-22 had the most significant growth rate in the trial and a significantly higher proportion of sawtimber quality trees both before and after thinning. AGM-22 is exhibiting a growth rate of 8.3 green tons/acre/year compared to 7-56 that is growing at 6.7 tons/acre/year. The combination of superior growth rate and high-quality logs is the basis of the significantly higher financial returns that are possible with MCP families such as AGM-22 demonstrated with this trial. The data also show that early data, as seen in Figure 2, is predictive of long-term results.



At age 12, we also observed that 7-56 was left with only 48 ft²/ac of basal area compared to 70 ft²/ac in AGM-22. This means the 7-56 stand was severely understocked after removing all the defective trees in the thinning.

At age 20, eight years after thinning, AGM-22 has maintained a 7-foot height advantage and a 19% tons per tree advantage compared to 7-56. Combining the per tree growth gains with the higher number of sawtimber logs after thinning, AGM-22 has 46% more tons of wood (116 tons) per acre compared to 7-56 (80 tons) and virtually all of these are sawtimber tons.

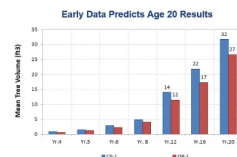


Figure 2. Volume per tree for AGM 22 (CP-1) vs. 7-56 (OP-1) from Age 4 to 20 years. In Table 1, The MCP family, AGM-22, demonstrates the value of advanced genetics that comes from genetic testing and development with a 61 percent increase in Net Present Value (NPV) and a 60 percent increase in Revenue at final harvest over the OP family, 7-56.

Genotype	Thin: Yr. 12 tons/ac			Clearcut: Yr. 25 tons/ac			NPV \$/ac	Total IRR (%)	Revenue (\$/ac)		
	PW	CNS	Cull*	PW	CNS	ST+P			Thinning	Clearcut	Total
7-56 OP	12	20	25	26	43	42	462	10.5%	678	2,431	3,109
AGM-22 MCP-1	5	37	8	28	38	91	745	11.2%	726	3,885	4,611

Table 1. Summary of Product Yields* (tons/ac) and Financial Metrics (\$/ac, %) for a projected harvest at age 25.

Landowners now have access to the best genetics, field trial data, and financial performance information to allow them to be confident in their seedling genetic investment. Advanced genetic products such as control-pollinated seedlings (MCP) offer additional value over traditional OP seedlings even using today's log prices. This 20-year-old trial in the lower coastal plain of South Carolina provides insight into the performance of this hybrid, control pollinated genetics demonstrating the growth and financial gains that are possible in loblolly pine plantations

The exciting news is that these elite hybrid seedlings with these same pedigrees are available today for private landowners and consultants across the southeastern United States.

Find Your Reforestation Advisor

Pine Tip Moth: What You Need To Know



During our "Making Sense of Reforestation: Your Questions Answered Live" webinar on September 12th, we had lots of great questions covering a wide range of forestry topics. We thought we would share some of these in the coming editions of TreeLines.

Learn More

Hardwoods in High Demand



Hardwoods are witnessing a surge in demand. The carbon credit markets are now active in afforestation, with carbon companies actively seeking opportunities to expand their plantings. The key to establishing a flourishing forest habitat ahead of these expansions? Early planning! Don't wait; start planning your hardwood wildlife habitat now.

Learn More

Client Results



OP at 24 years
Columbia, MS



OP Elite at 2 years
McCormick County, SC

See More Client Results

[Click here for the previous editions of TreeLines.](#)



Download a Copy of this TreeLines Edition

Need a trusted partner to guide the way? Get in touch with a Reforestation Advisor to explore your options!



Paul Jeffreys, Ph.D.
Alabama & Northern Mississippi
Manager Special Projects & Sustainability
205-712-9582

See More About Paul



Austin Heine
North Carolina & Virginia
910-660-3209

See More About Austin



Blake Sherry
Florida, Southern Georgia, & Southern Alabama
912-433-5407

See More About Blake



Drew Fasano
South Carolina & Northern Georgia
843-520-6865

See More About Drew



Jeff Slaga
Arkansas, Louisiana, Oklahoma & Texas
936-212-1029

See More About Jeff



Kylie Burdette
U.S. Sales Manager
864-650-4454

See More About Kylie



Jason Watson
Director, U.S. Sales
404-840-7489

[See More About Jason](#)

FIND AN ADVISOR OR NURSERY



- Blenheim, SC Nursery
- Belville, GA Nursery
- Shellman, GA Nursery
- Selma, AL Nursery
- Bluff City, AR Nursery
- Bullard, TX Nursery
- Livingston, TX Distribution Point
- Jasper, TX Nursery

GET IN TOUCH

2011 Broadbank Court
Ridgeville, S.C. 29472

888.888.7158

info@arborgen.com



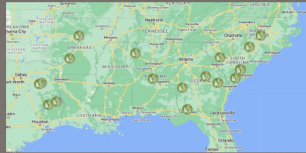
[Request Catalog](#)

QUICK LINKS

- Find a Reforestation Advisor
- ArborGen TreeLines – News & Updates
- Join Our Team
- Helpful Resources
- About ArborGen
- In the News
- Press Releases
- Search Website

[Get Treelines](#)

FIND AN ADVISOR OR NURSERY



- Blenheim, SC Nursery
- Belville, GA Nursery
- Shellman, GA Nursery
- Selma, AL Nursery
- Bluff City, AR Nursery
- Bullard, TX Nursery
- Livingston, TX Distribution Point
- Jasper, TX Nursery
- Florida
- Louisiana
- Mississippi
- North Carolina
- Oklahoma
- Virginia

GET IN TOUCH

408 Brighton Park Blvd, Ste 101
Summerville, SC 29486

888.888.7158

info@arborgen.com



[REQUEST CATALOG](#)

QUICK LINKS

[Find a Reforestation Advisor](#)
[TreeLines – News & Updates](#)
[TreeLines Podcast](#)
[Join Our Team](#)
[Helpful Resources](#)
[About ArborGen](#)
[ArborGen Brazil](#)
[ArborGen Holdings](#)
[Press Releases](#)
[Client Payment Portal](#)
[Privacy Policy](#)
[Search Website](#)

[GET TREELINES](#)

