

# The Warnell Continuing Education Program

Daniel B. Warnell School of Forestry and Natural Resources

## Growth Responses and Financial Returns from Silvicultural Treatments in Southern Pine Plantations

Instructors: Dr. Barry Shiver

July 28-29, 2020

This course will be presented as a Zoom Webinar.



**WARNELL**  
SCHOOL OF FORESTRY AND NATURAL RESOURCES  
THE UNIVERSITY OF GEORGIA

### Purpose

With the persistent low stumpage prices for southern pine products since the Great Recession, many landowners and managers question the wisdom of spending money on silvicultural treatments. If we evaluate the cost of treatments required to get an expected response along with the timing of resulting cash flows we can objectively decide whether the treatment is worth the cost. Budgets, markets, site quality and personal objectives are important determinants of the best mix of treatments for a particular property. This course will discuss available silvicultural treatments and their responses and evaluate the trade-offs between the costs and benefits for different mixes of silvicultural treatments. The course will emphasize quantifying responses for objective decision making.

### How One Will Benefit

Upon completion of this course, a forest landowner or land manager will be able to make effective silvicultural and economical management decisions on managing loblolly, slash, and longleaf stands for pine straw.

### Who Should Attend?

Foresters, land managers, forest landowners, and others interested in effectively managing their pine stands with an emphasis on growth, yields, and maximizing financial returns.

### Instructor

Dr. Barry D. Shiver – CEO Smarter Forestry  
former Professor and Plantation Management Research Coop Director  
UGA-WSF&NR

### Minimum Number Required

A minimum of 25 needs to be registered by the early registration deadline (October 9, 2019) to hold the workshop.

### Registration Fee

The fee for this course is \$300 which includes instructional materials. There is a \$50 discount for fees paid and postmarked by July 14, 2020.

### Continuing Education Credits

- 14 Continuing For. Ed. (CFE) hours - Cat 1 (approved)
- 14 Continuing Logger Ed. hours - Category B (approved)
- 4.0 hours Georgia commercial forestry pesticide credit and 1 hour private (approved)

*Full Attendance is Mandatory to Receive Credit*

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Tuesday, July 28, 2020

Time	Event
8:30 a.m.	Registration
8:50	<b>Welcome—Dr. David Dickens—Forest Productivity</b>
9:00	<b>Course Introduction and Overview</b> <ul style="list-style-type: none"> <li>• Biological growth potential of Southern pines</li> <li>• Increase in production over last 50 years</li> <li>• Limiting factors for growth</li> <li>• Contributions of different treatments to productivity</li> <li>• Types of Treatment Responses</li> </ul>
10:15	Break
10:30	<b>We can increase production – should we?</b> <ul style="list-style-type: none"> <li>• Extra production required to break even</li> <li>• Estimating production using growth and yield models</li> <li>• Optimum biological and financial rotations</li> <li>• Effects of site quality, treatment costs, prices, investment length</li> <li>• Why increased production is worth the cost even with low prices</li> </ul>
Noon	Lunch
1:00	<b>Regeneration Decisions</b> <ul style="list-style-type: none"> <li>• Species - comparison of slash, loblolly, and longleaf</li> <li>• Genetics - choices, growth response, stem quality, response type, investment returns</li> <li>• Planting density - effects on average height &amp; dbh; concept of limiting density, impact of markets on planting density decisions</li> </ul>
2:30	Break
2:45	<ul style="list-style-type: none"> <li>• Site preparation - objectives of chemical &amp; mechanical site prep; competition thresholds; growth responses; impacts on investment returns</li> <li>• Herbaceous Weed Control (HWC) – potential impacts including timing, magnitude and duration of response; interaction with hardwood levels; impacts on investment returns</li> <li>• Results of 4 yr loblolly and 11 yr longleaf HWC trials - Dr. Dickens</li> </ul>
5:00 PM	Adjourn

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Wednesday, July 29, 2020

Time	Event
8:00 a.m.	<b>Established Stand Silvicultural Treatments</b> <ul style="list-style-type: none"> <li>Comparing management alternatives for existing stands; concept of marginal rate of return and typical rates of return for woody release; trends in woody release costs and impacts on investment returns</li> <li>Woody Release age 1 to late teens; type, length and magnitude of response; impacts on dbh distribution;</li> <li>Additional benefits of woody release beyond growth (fire danger, harvesting costs, inventory costs, expensing costs rather than capitalizing, quicker turnaround after clearcut)</li> </ul>
10:00	<b>Break</b>
10:15	<b>Established Stand Silvicultural Treatments—Fertilization</b> <ul style="list-style-type: none"> <li>P deficient sites; threshold levels and sampling for nutrient levels; ratios needed</li> <li>Concept of leaf area; efficient ways to fertilize; type, duration, and magnitude of response; N alone vs N+P fertilization</li> <li>Piedmont vs coastal plain native nutrient levels; impacts on dbh distribution; trends in fertilization costs and impacts on investment returns</li> </ul>
Noon	<b>Lunch</b>
1:00	<b>Established Stand Silvicultural Treatments -Thinning</b> <ul style="list-style-type: none"> <li>Development of thinned vs unthinned stands; importance of intermediate cash flows on financial returns; change in optimal financial rotation from thinning</li> <li>Reasons to thin (or not to thin) - the importance of markets</li> <li>Timing, frequency, intensity of thins and which trees to thin; thinning loblolly vs slash</li> <li>Importance of inventory data and what detail is needed; concept of TQI; difference in investment returns for different thinning strategies;</li> <li>Impact of early thinning on financial returns; cost of a delay in thinning</li> </ul>
2:30	<b>Break</b>
2:45	<b>Other Opportunities and Considerations</b> <ul style="list-style-type: none"> <li>Impact of annual cash flows on financial returns</li> <li>Pine straw raking- opportunities, realistic sites, impacts on nutrients; impact of straw raking on species choice and thinning decisions</li> <li>Wood Quality as impacted by silvicultural treatments; what are realistic tons/acre goals;</li> <li>Using operability and inventory information to maximize stumpage prices (and returns)</li> <li>Course summary and questions</li> </ul>
5:00	<b>Adjourn</b>

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Register online at  
<http://conted.warnell.uga.edu>

### Registration by Regular Mail

Name - please print

Preferred name for badge

Business mailing address or  Home address (please check one)

City

State

Zip

County, if Georgia

Home phone

Work phone

Fax

Email address  
Education

Please send me e-mails about other Warnell Continuing programs.

Position

Organization/employer

*By registering for this event I agree to comply with all event and lodging cancellation policies.*

### **Growth Responses and Financial Returns from Silvicultural Treatments in Southern Pine Plantations**

July 28-29, 2020

Early registration through July 14, 2020.....\$250.00

Regular registration:.....\$300.00

Enclosed is a check #\_\_\_\_ (payable to Warnell School of Forestry and Natural Resources). Fee must be received to process payment.

**Cancellations:** Notify Ingvar Elle at 706-583-0566 (ingvar@uga.edu) by 5:00 p.m. July 14, 2020 to receive a refund.

Mail payment to: Attn:

Anuj Sinha

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