

# The Warnell Continuing Education Program

Daniel B. Warnell School of Forestry and Natural Resources

## Pine Straw Production - Stand Management and Economics

Instructors: Dr. David Dickens & Dr. David Clabo  
Tift County Ag Center – Conference Room  
1468 Carpenter Rd, Tifton, GA  
October 22 - 23, 2019



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

### Purpose

Revenues for pine straw paid to forest landowners in Georgia have increased from an estimated \$15.5 million in 1999, to \$25 million in 2003, \$50 million in 2007, \$80 million in 2008 –2011, to \$60 million in 2012-2017. During the period from 1999 through 2017 pine chip-n-saw and sawtimber stumpage revenues in Georgia have declined by roughly 25% - 35%. Many forest landowners and land managers are interested in managing their loblolly, longleaf, or slash pine stands for pine straw. This course will provide information necessary to effectively manage pine stands for pine straw.

### Participants will:

- Learn about pine straw yields by species, site quality, land-use history, and basal area.
- Review cut-over and old-field pine straw studies, as well as other factors that affect pine straw yields.
- Learn how the effect of pine straw raking (semiannual, annual, periodic and raking method) relates to soil moisture status, nutrient cycling, stand growth,.
- Learn the effect of fertilization on pine straw yields on cut-over and old-field sites.
- Learn how to use diagnostic tools and soils information to determine fertilizer needs and recommendations.
- Learn herbicides that can be used in pine stands to control unwanted vegetation and herbicides that are grass friendly
- Learn how to control invasive exotic species.
- Learn management alternatives to moving a cut-over pine stand into pine straw production, hear about sequencing fertilizer and herbicide use, and discuss the economics of pine straw in overall pine stand management.

### 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, pine straw contractors, and others interested in effectively managing their pine stand for pine straw.

### Instructors

Dr. David Dickens – Professor of Forest Productivity UGA-WSF&NR  
Dr. David Clabo – Assistant Professor of Silviculture UGA-WSF&NR

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### Registration Fee

The fee for this course is \$225 which includes lunch, refreshment breaks, and instructional materials. There is a \$25 discount for fees paid and postmarked by 9 Oct 2019.

### Continuing Education Credits (applied for)

- 13 Continuing For. Ed. (CFE) hours - Cat 1 (approved)
- 12.5 Continuing Logger Ed. hours - Category B (approved)
- 1.0 hr Cat 23 Pesticide Applicator credit for GA (approved)

*Full Attendance is Mandatory to Receive Credit*

Tuesday, October 22, 2019

Time	Event
8:00 a.m.	Registration
8:30	Introduction Pine Straw Revenues vs. Stumpage Factors Affecting Pine Straw Yields-Dickens
9:30	Cut-Over and Old-Field Pine Straw Studies (Loblolly, Longleaf, and Slash Pine)-Dickens
10:15	Break
10:30	Magnitude and Duration of Fertilization Benefits — Case Studies; Fertilization Payoffs; Weed Re-growth with Fertilization-Dickens
11:20	Using Diagnostic Tools (Leaf Area Index Estimations, Soil, and Foliar Sampling), Soils, and Yield Information for Determining Effective Recommendations-Dickens
Noon	Lunch
1:00	Forest Floor Nutrient Release Rates-Dickens
1:30	Raking Regimes (Semi-annual, Annual, Periodic) and Pine Straw Production, Stand Growth, and Soil Moisture- Dickens
2:15	Break
2:30	Possible Stand Stressors Imparted by Pine Straw Raking- Clabo
3:15	Herbicides and Herbicide Use-Clabo
3:45	Identification and Control of Invasive Exotic Species-Clabo
4:30	Forest Management Alternatives for Moving a Cut-Over Pine Stand into Pine Straw Production-Dickens
5:15	Adjourn

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Wednesday, October 23, 2019

Time	Event
8:15 a.m.	Sequencing Fertilization and Herbicide Use to Reduce Overall Costs-Dickens
8:45	Economics of Pine Straw at Various Returns per Acre in Overall Pine Stand Management -Case study reviews – old-field and cut-over sites-Dickens
10:15	Break – depart for study area visit in Tift County
10:45	Travel to a thinned old-field longleaf stand (planted in December 1986) where pine straw production was a management objective prior to thinning.
11:00	Old-field longleaf pine stand discussion points: pine straw management, stand management pre- and post-thin, prescribe fire use, planting spacing, thinning, % defect, longleaf growth rate through age 32-yrs, growing poles, herbicide use, fertilization, and economics-Dickens, Clabo
12:00	Lunch
1:00	Continue with above discussion points while in the field.
3:00	Adjourn

### Directions

For directions we suggest using [googlemaps.com](http://googlemaps.com). You may also contact David Clabo @ 229-386-3672 or e-mail him @ [david.clabo@uga.edu](mailto:david.clabo@uga.edu).

### Special Needs

For special services or dietary considerations contact David Clabo (contact info above) prior to October 11, 2019.

### Hotels in the Area Include:

Comfort Inn & Suites (229-382-8250)  
Days Inn & Suites (229-382-8505)  
Hampton Inn (229-382-8800)  
Holiday Inn Express (229-382-3300)  
Quality Inn (229-382-4410)

### Minimum Number of 25 required

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

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

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

Position Organization/employer

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

### **Pine Straw Production - Stand Management and Economics**

October 22 - 23, 2019

Early registration through Oct 9, 2019.....\$200.00

Regular registration:.....\$225.00

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  
(ielle@warnell.uga.edu) by 5:00 p.m. Oct 8, 2019 to receive a refund.

Mail payment to: Attn:

Anuj Sinha  
Warnell School of Forestry & Natural Resources  
University of Georgia  
180 East Green Street  
Athens, Georgia 30602