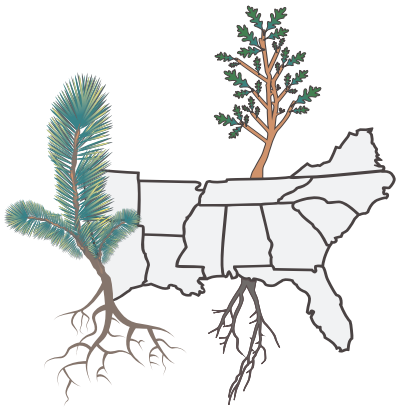

Auburn University Southern Forest Nursery Management Cooperative

TECHNICAL NOTE 18-01

FOREST TREE SEEDLING PRODUCTION IN THE SOUTHERN UNITED STATES FOR THE 2017 – 2018 PLANTING SEASON

by
Scott Enebak

INTRODUCTION

To obtain information on the current seedling production in the southern United States, the Auburn University Southern Forest Nursery Management Cooperative conducted a survey of nursery managers in the region to determine seedling production numbers for the December 2017 to March 2018 planting season.

Data was obtained through a mailed questionnaire sent in June 2018 to 58 forest-tree nurseries in 13 southern states: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia. The questionnaire was two pages in length and asked for production (not sales) for the 2017-2018 nursery season for major pine and hardwood species. We contacted all nurseries, regardless of affiliation or ownership, including those not associated with the Southern Forest Nursery Management Cooperative. The mail survey was followed up by phone and email contact until all nurseries were accounted for. Of the 58 surveys mailed, responses were received from 46 nurseries which had reportable seedling production data. Despite repeated attempts, 12 nurseries did not respond to the survey in 2018, yet 6 of those nurseries had responded in previous years' production. So as to not underestimate seedling production, the numbers reported from those 6 nurseries were included in the 2017-2018 anayslsis. The 52 usable surveys (89% response) was an increase of 1 nursery from the 51 nurseries reported in the 2016-2017 production season.

SURVEY RESULTS

Conifer Seedling Production: There was a total of 824,245,000 bareroot (Table 1) and 215,480,000 container-grown (Table 2) conifer seedlings produced during the 2017-2018 planting season, for a total conifer production of 1,039,725,000 seedlings (Table 3). This was an overall decrease of 0.1% in total conifer seedlings; that breaks down to a 0.5% decrease in bareroot seedling and a 1.7% increase in container-grown seedlings over the previous growing season (2016-2017). The overall 0.1% decrease resulted in just over 1.034 MM fewer conifer seedlings than the 1,040,802,000 conifers produced last growing season. Loblolly pine was the most commonly grown species (820,705,000 in the region), accounting for 79% of all conifer production, followed by slash pine pine (104.2 MM) at 10% and longleaf pine (92.0 MM) at 9% (Table 3). The production of longleaf pine in 2017-2018 was similar to the 92.2 MM produced in 2016-2017. After a three-year decrease in longleaf production, from a peak at 112 MM in 2014-2015, it appears that longleaf production has stabilized.

Like previous years, loblolly, longleaf and slash pine accounted for 98% of all conifers produced in 2017-2018. Shortleaf pine was the 4th most important species in terms of production at 8.2 MM (1%) which is up from the 5.6 MM seedlings produced last year. The majority of shortleaf pine production is in containers at 82%. The 5th most commonly produced conifer seedling was sand pine, 7.2 MM, (Table 3) which is down just slightly from the 7.5 MM produced in 2016-2017. (Enebak 2017). White pine (2.5 MM) and baldcypress (2.5 MM) bring up the lower tier of conifer production with the "others" (pitch pine, Atlantic white cedar and pitch x loblolly) comprising 618 M of the remainder of the conifers grown in 2017-2018.

The greatest increase in seedling numbers produced was slash pine with 10.5 MM more seedlings produced in 2017-2018 than in the 2016-2017 growing season. This increase in slash pine production occurred primarily in the private nursery sector over the other two areas. Of the conifer species produced in containers, loblolly and longleaf pine were the primary species grown, 116.2 MM and 78.5 MM, respectively. This is the second growing season in a row that the number of loblolly container seedlings was greater than the number longleaf container seedlings. As in previous years the majority (85%) of longleaf seedling production was in containers with 13.5 MM grown bareroot. However, this is down from the 96% of longleaf seedlings grown in containers last year (2016-2017). Of the 215.5 MM container seedlings, loblolly and slash pine comprised 54% and 6% of the container-grown conifers, respectively. Longleaf was 36% of the 215.5 MM seedlings produced. Georgia was by far the Number 1 producer of container-grown conifers at 127.8 MM (59%) (Table 2) which was a decrease of 13.0 MM from 141.0 MM produced in the 2016-2017 growing season.

All states surveyed produced some level of conifer nursery stock. The amount ranged from 327,818,000 in Georgia to 3.4 MM seedlings in Oklahoma. Georgia forest-tree nurseries produced 32% of all conifer planting stock in the southern United States. In terms of total conifer production, the order was: 1. Georgia (327.8 MM), 2. South Carolina (142.0 MM), 3. Arkansas (98.4 MM), 4. Alabama (90.9 MM), 5. Mississippi (88.0 MM), 6. Texas (87.4 MM), 7. North Carolina (67.7 MM), 8. Florida (56.8 MM), 9. Louisiana (46.6 MM) 10. Virginia (30.2 MM), 11. Oklahoma (3.4 MM) and 12. Tennessee (3.1 MM) (Table 3). The production of conifer seedlings in containers has increased dramatically since 2000 and continues to increase annually. Container seedling production was estimated at perhaps 0.4 million in 1973, 3.5 million seedlings in 1980, and exceeds 215.5 MM seedlings annually today (Table 2). Currently, container-grown conifers are approximately 21% of the total seedling production, up from less than 3% in 2004 (Figure 1).

Hardwood Seedling Production: There was a total of 22,467,000 MM bareroot (Table 4) and 323,000 container-grown hardwood seedlings produced (Table 5); for a total hardwood seedling production of 22,790,000 seedlings in the 2017-2018 planting season (Table 6). This is a slight decrease (1.4 MM) over the 24,131,000 seedings produced in the 2016-2017 season and continues the 4-yr decrease in hardwood production since the 2012-2013 growing season. This years' production is well below the peak of 52 MM hardwood seedlings producted in 2006-2007 and 40.0 MM produced in the 2012-2013 growing season (Figure 2). The majority of the hardwood seedling production occurred in Arkansas (9.1 MM) and Georgia (3.3 MM). All other states had minimal hardwood seedling production changes. Since seedling production data collection started in 2000, it has not been unusal for hardwood seedling production to fluctuate considerably as the markets for these forest tree species varies year to year due to demand, cost share programs and seed availability.

Of the hardwood tree species produced, *Quercus* spp. was by far the most important genera with 61% of all hardwood production (13.9 MM) (Table 6). This is followed by "others" (4.6 MM; 21%), sweetgum (1.2 MM; 5%), sycamore (868 M; 4%), yellow poplar (648 M; 3%), green ash (552 M; 2%), pecan (381 M; 2%), flowering dogwood (407 M; 2%) and black walnut (114 M; 1%). Hardwoods were grown in all states surveyed except Lousiana with seedling production ranging from from 9.0 MM in Arkansas (40%) to 34,000 in Texas (Table 6). Tree species in the "other" category include species such as persimmon, sugarberry, black gum, elm, maple, birch, hickory, cherry and redbud.

Production by Ownership Category: In this survey, a "private" nursery means private ownership that is not part of an organization or company that operates a wood processing facility; therefor, "non-industrial." A state nursery is part of a state's reforestation program and an "industrial" nursery would be a nursery that owns and/or operates a wood processing facility. With the merger of Weyerhaeuser and Plum Creek and the sales of nurseries to IFCO, the transistion from Industry to Private seedling production systems continues. For the 2017-2018 growing season, privately run nurseries (those organizations without a wood processing facility) produced 713,664,000 (67%) followed by industrial nurseriers at 254,486,000 (24%) and state-run nurseries with 94,368,000 (9%). The ownership shift is apparent when you compare those number to the 2016-2017 growing season, privately run nurseries produced 562,747,000 (53%) followed by industrial nurseries at 406,943,000 (38%) and state-run nurseries at 95,238,000 seedlings (9%) (Enebak 2017).

Among the two seedling stock types (bareroot or container), private nurseries supplied 89% of container-grown conifer planting stock (191.0 MM), followed by industry (17.0 MM; 8%), and state nurseries (7.7 MM; 4%). In the 2017-18 growing season, private-run nurseries produced more bareroot hardwood seedlings (14.1 MM; 63%) over either state (8.3 MM; 37%) and industrial nurseries (34 M; 0%) (Table 7).

Georgia maintains its' dominance in the conifer seedling market with 327.8 MM seedlings grown in 2017-2018 (Table 8). This is actually a decrease from the 347.7 MM seedlings grown in 2016-2017 (Enebak 2017). Similar to previous years' (2008-2016) production, Arkansas gets the distinction of the largest hardwood producer in 2017-2018 with 9.1 MM hardwood seedlings grown (Table 9). The 2017-2018 production is down slightly from the 11.1 MM produced in 2016-2017. Collectively, South Carolina gets the distinction of the second most productive state when it comes to nursery seedling production with 142.1 MM conifers and 340,000 hardwood seedlings produced (Tables 8 and 9).

Seedling production for all stock types (container, bareroot) and tree type (conifer, hardwood) by forest agency (State, Private, Industry) by state is detailed in Table 10. The discontinuation of state tree improvement programs in Alabama, Louisiana, Mississippi and Texas has resulted in zeroes in their contribution to seedling production. Overall, Private forest-tree nurseries produced 713,663,000 (67%) of all the seedlings grown in the southern United States. This was followed by Industrial nurseries 254,487,000 (24%) and State Nurseriers 94,366,000 (9%) (Table 10). Last year, private forest-tree nurseries produced 562.7 MM (53%) of all seedlings grown. This was followed by Industrial 406.9 MM (38%) nurseries and then State nurseries at 95.2 MM (9%) seedlings (Enebak 2017).

State Ranking and Changes from 2016-2017: A comparison of state-by-state ranking is provided in Table 11. For the most part, state by state production rankings remained the same with a few states switching positions The 0.2% overall decrease in total seedling production in the southern US from last

year was not distributed evenly across the southern region. While some states had an increase in seedling production, a number of states had reductions from last year's growing season. These were Georgia (21.5 MM -6%), Alabama (13.0 MM; -12%), North Carolina (5.5 MM -8%), Virginia (4.2 MM -12%) and Oklahoma (1 MM -21%) (Table 11). Despite the changes in seedling production within an individual state, it does not necessarily indicate a large change in regional production as seedling production region-wide is virtually unchanged from the previous years and continues an trend that started in 2010 after 10 years of decreasing seedling production (Figure 3).

Southern Forest Nursery Management Cooperative Seedling Production: Members of the Southern Forest Nursery Management Cooperative continue to lead in bareroot seedling production. Nearly 88% of all bareroot production in the southern United States is associated with Nursery Cooperative membership; 742.6 MM seedlings (Table 12). The percentage of container-grown seedlings is not as strong with Nursery Cooperative members accounting for 66% of container production 143.5 MM which is up from the 128.2 MM in 2016-2017 growing season. The amount of container-grown seedlings within the Nursery Cooperative has been steadly increasing from since 2009. Members of the Nursery Cooperative produce 83% of all forest-tree seedlings in the region which has held at 80-85% for years.

Total Seedling Production: Collectively, the forest-tree nurseries surveyed in the southern United States produced 824,245,000 bareroot conifers, 215,480,000 container conifers, 22,467,000 bareroot hardwoods and 323,000 container hardwoods during the 2017-2018 growing season. For conifers, this is slight decrease (5 MM) from the 829,033,000 bareroot conifers, an increase from the 211,769,000 container conifers and slight increase from the 23,596,000 bareroot hardwoods during the 2016-17 growing season. The total forest-tree seedlings produced during the 2017-2018 planting season was 1,062,516,000 seedlings and is the fifth year in a row above the billion seedling mark. The overall trend of seedling production for all species and stock type in the southern United States is shown in Figure 3.

Management Implications: This seedling production data is for the 2017-2018 planting season, not what is **currently** being produced and planted this season (2018-2019) in the southern United States. Therefore, the seedling production numbers discussed in this report lag 1-year behind. Another shortcoming of this particular survey tool is that the number of seedlings produced reported do not necessarily translate into acres planted within each state surveyed or by land-ownership category. It is not uncommon for seedlings produced in Alabama to be shipped into Mississippi or vice versa. The data is collected as production, so any information on actual seedling sales or seedlings planted by state, or land-ownership category is simply not available. What these numbers do provide is a good estimate of seedlings (species, planting stock, etc.) that were planted by non-industrial land-owners, forest industry, REITs or TIMOs during the 2017–2018 planting season. A simple estimate of the acres planted across the region could be made by dividing the number of seedlings produced (1,064,934,000) by 600 seedlings per acre for a minimum of 1,770,860 acres planted in 2017-2018.

ACKNOWLEDGEMENTS

The author thanks member and non-member nurseries for sharing their seedling production information with the Nursery Cooperative and Elizabeth Bowersock and Will Harges for their efforts in conducting and compiling the survey data.

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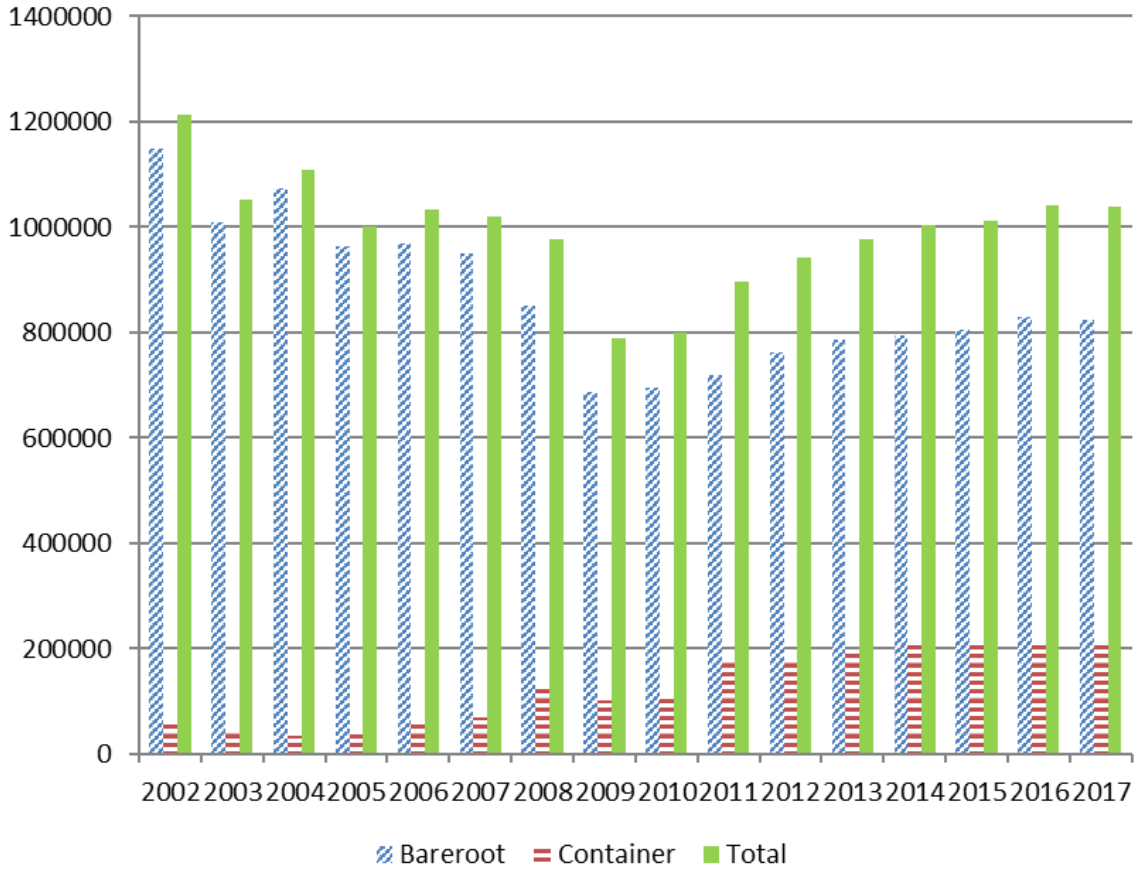

Figure 1. Conifer seedling production (x 1000) by stock type in the southern United States; 2002-2017.

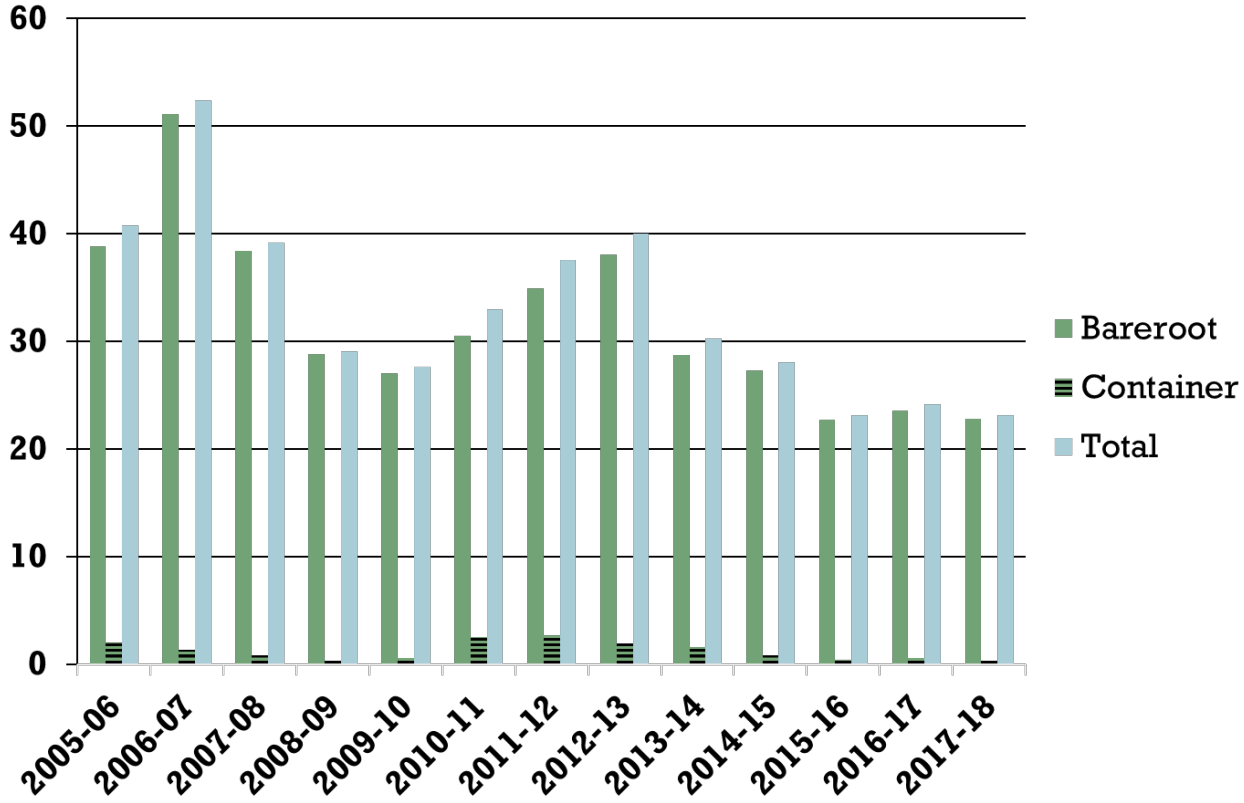

Figure 2. Hardwood seedling production (x MM) by stock type in the southern United States; 2005-2017.

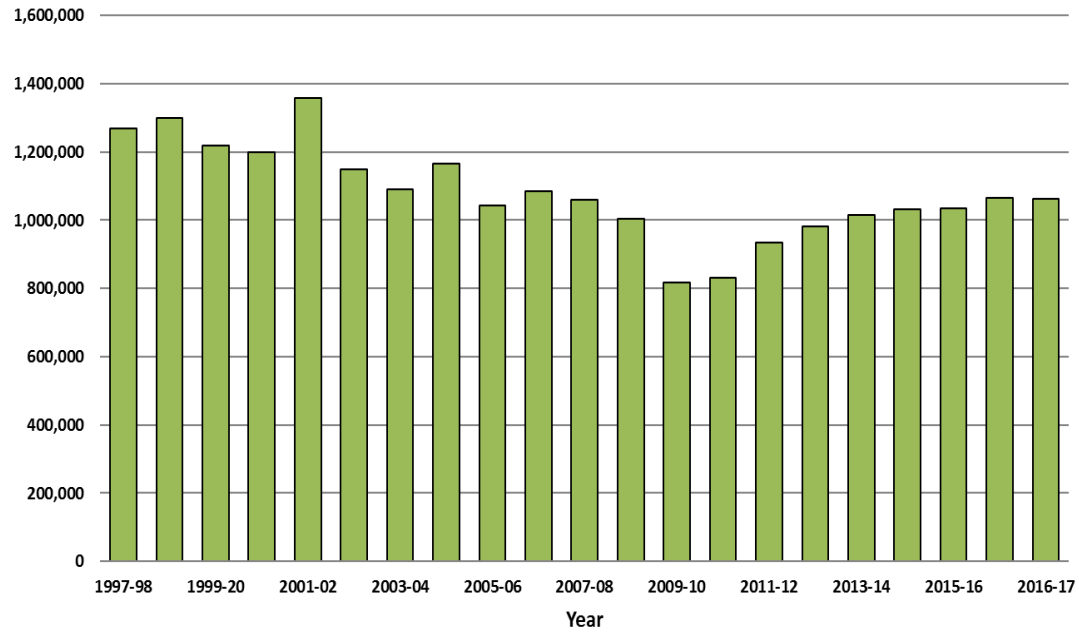

Figure 3. Seedling production (x 1000) for all species and stock types in the southern United States; 1997-2017.

Table 1. Bareroot conifer seedling production by state for the 2017-2018 planting season across the South for various species. (X 1000)

STATE	BALDCYPRESS		FRASER FIR		LOBLOLLY		LONGLEAF		OTHERS		SAND		SHORTLEAF		SLASH		VIRGINIA		WHITE		TOTAL	
		%*		%*		%*		%*				%*		%*		%*		%*		%*		%**
AL	20	0	0	0	73,797	91	0	0	0	0	165	0	0	0	6,892	9	42	0	0	0	80,916	10
AR	1,735	2	0	0	93,558	98	0	0	0	0	0	0	150	0	0	0	0	0	0	0	95,443	12
FL	368	1	0	0	3,982	8	12,397	24	32	0	5,205	10	20	0	29,654	57	43	0	0	0	51,701	6
GA	50	0	0	0	150,890	75	935	0	15	0	2,000	1	225	0	45,579	23	145	0	91	0	199,930	24
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MS	0	0	0	0	77,569	99	0	0	0	0	0	0	0	0	450	1	0	0	0	0	78,019	9
NC	200	0	0	0	51,000	96	0	0	100	0	0	0	200	0	0	0	60	0	1,501	3	53,061	6
OK	11	0	0	0	2,989	90	0	0	112	3	0	0	161	5	0	0	36	1	0	0	3,309	0
SC	5	0	0	0	139,927	99	145	0	143	0	0	0	25	0	820	1	7	0	8	0	141,080	17
TN	62	2	0	0	2,374	76	0	0	26	1	0	0	427	14	0	0	90	3	163	5	3,142	0
TX	12	0	0	0	79,472	91	0	0	0	0	0	0	0	0	7,880	9	99	0	0	0	87,463	11
VA	35	0	0	0	28,951	96	3	0	42	0	0	0	250	1	0	0	100	0	800	3	30,181	4
REGION	**2,498**	**0**	**0**	**0**	**704,509**	**85**	**13,480**	**2**	**470**	**0**	**7,370**	**1**	**1,458**	**0**	**91,275**	**11**	**622**	**0**	**2,563**	**0**	**824,245**	

*Percent of state production **Percent of regional production

Table 2. Container-grown conifer seedling production by state for the 2017-2018 planting season across the South for various species. (X 1000)

STATE	BALDCYPRESS		FRASER FIR		LOBLOLLY		LONGLEAF		OTHERS		SAND		SHORTLEAF		SLASH		VIRGINIA		WHITE		TOTAL	
		%*		%*		%*		%*				%*		%*		%*		%*		%*		%**
AL	0	0	0	0	6,716	67	3,306	33	0	0	0	0	0	0	0	0	0	0	0	0	10,022	5
AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	70	1	0	0	20	0	4,499	88	0	0	0	0	0	0	520	10	0	0	0	0	5,109	2
GA	0	0	0	0	59,598	47	53,700	42	40	0	250	0	2,500	2	11,800	9	0	0	0	0	127,888	59
LA	0	0	0	0	36,400	78	6,200	13	0	0	0	0	3,400	7	599	1	0	0	0	0	46,599	22
MS	0	0	0	0	10,000	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,000	5
NC	0	0	600	4	3,300	22	9,840	67	100	1	0	0	857	6	0	0	0	0	0	0	14,697	7
OK	0	0	0	0	150	97	0	0	1	1	0	0	1	1	0	0	2	1	0	0	154	0
SC	0	0	0	0	12	1	992	98	7	1	0	0	0	0	0	0	0	0	0	0	1,011	0
TN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGION	**70**	**0**	**600**	**0**	**116,196**	**54**	**78,537**	**36**	**148**	**0**	**250**	**0**	**6,758**	**3**	**12,919**	**6**	**2**	**0**	**0**	**0**	**215,480**	

*Percent of state production **Percent of regional production

Table 3. Conifer seedling production by state for the 2017-2018 planting season across the South for various species. (X 1000)

STATE	BALDCYPRESS		FRASER FIR		LOBLOLLY		LONGLEAF		OTHERS		SAND		SHORTLEAF		SLASH		VIRGINIA		WHITE		TOTAL	
		%*		%*		%*		%*		%*		%*		%*		%*		%*		%*		%**
AL	20	0	0	0	80,513	89	3,306	4	0	0	165	0	0	0	6,892	8	42	0	0	0	90,938	9
AR	1,735	2	0	0	93,558	98	0	0	0	0	0	0	150	0	0	0	0	0	0	0	95,443	9
FL	438	1	0	0	4,002	7	16,896	30	32	0	5,205	9	20	0	30,174	53	43	0	0	0	56,810	5
GA	50	0	0	0	210,488	64	54,635	17	55	0	2,250	1	2,725	1	57,379	18	145	0	91	0	327,818	32
LA	0	0	0	0	36,400	78	6,200	13	0	0	0	0	3,400	7	599	1	0	0	0	0	46,599	4
MS	0	0	0	0	87,569	99	0	0	0	0	0	0	0	0	450	1	0	0	0	0	88,019	8
NC	200	0	600	1	54,300	80	9,840	15	200	0	0	0	1,057	2	0	0	60	0	1,501	2	67,758	7
OK	11	0	0	0	3,139	91	0	0	113	3	0	0	162	5	0	0	38	1	0	0	3,463	0
SC	5	0	0	0	139,939	98	1,137	1	150	0	0	0	25	0	820	1	7	0	8	0	142,091	14
TN	62	2	0	0	2,374	76	0	0	26	1	0	0	427	14	0	0	90	3	163	5	3,142	0
TX	12	0	0	0	79,472	91	0	0	0	0	0	0	0	0	7,880	9	99	0	0	0	87,463	8
VA	35	0	0	0	28,951	96	3	0	42	0	0	0	250	1	0	0	100	0	800	3	30,181	3
REGION	**2,568**	**0**	**600**	**0**	**820,705**	**79**	**92,017**	**9**	**618**	**0**	**7,620**	**1**	**8,216**	**1**	**104,194**	**10**	**624**	**0**	**2563**	**0**	**1,039,725**	

*Percent of state production **Percent of regional production

Table 4. Bareroot hardwood seedling production by state for the 2017-2018 planting season across the South for various species. (X 1000)

STATE	DOGWOOD		EUCALYPTUS		GREEN ASH		OAK		OTHERS		PECAN		SWEETGUM		SYCAMORE		WALNUT		YEL. POPLAR		TOTAL	
		%		%		%		%		%		%		%		%		%		%		%
AL	0	0	0	0	80	3	1,851	78	389	16	0	0	0	0	64	3	0	0	0	0	2,384	11
AR	25	0	0	0	0	0	6,277	69	2,002	22	308	3	327	4	58	1	29	0	66	1	9,092	40
FL	125	5	0	0	138	5	1,628	62	96	4	21	1	280	11	110	4	4	0	234	9	2,636	12
GA	123	4	0	0	139	4	1,464	47	1,042	33	11	0	145	5	108	3	0	0	81	3	3,113	14
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MS	0	0	0	0	100	10	100	10	500	50	0	0	100	10	100	10	0	0	100	10	1,000	4
NC	15	3	0	0	50	10	200	40	65	13	0	0	15	3	75	15	40	8	40	8	500	2
OK	4	1	0	0	0	0	142	37	190	49	12	3	0	0	26	7	10	3	0	0	384	2
SC	4	7	0	0	0	0	26	47	19	35	0	0	0	0	0	0	1	2	5	9	55	0
TN	55	2	0	0	10	0	1,658	72	210	9	23	1	125	5	117	5	10	0	101	4	2,309	10
TX	0	0	0	0	0	0	34	100	0	0	0	0	0	0	0	0	0	0	0	0	34	0
VA	50	5	0	0	25	3	500	52	150	16	0	0	0	0	200	21	20	2	15	2	960	4
REGION	**401**	**2**	**0**	**0**	**542**	**2**	**13,880**	**62**	**4,663**	**21**	**375**	**2**	**992**	**4**	**858**	**4**	**114**	**1**	**642**	**3**	**22,467**	

*Percent of state production **Percent of regional production

Table 5. Container-grown hardwood seedling production by state for the 2017-2018 planting season across the South for various species. (X 1000)

STATE	DOGWOOD		EUCALYPTUS		GREEN ASH		OAK		OTHERS		PECAN		SWEETGUM		SYCAMORE		WALNUT		YEL. POPLAR		TOTAL	
		%		%		%		%		%		%		%		%		%		%		%
AL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	6	4	0	0	10	6	69	45	23	15	6	4	25	16	10	6	0	0	6	4	155	48
GA	0	0	0	0	0	0	0	0	0	0	0	0	166	100	0	0	0	0	0	0	166	51
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OK	0	0	0	0	0	0	2	100	0	0	0	0	0	0	0	0	0	0	0	0	2	1
SC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGION	**6**	2	**0**	0	**10**	3	**71**	22	**23**	7	**6**	2	**191**	59	**10**	3	**0**	0	**6**	2	**323**	

*Percent of state production **Percent of regional production

Table 6. Hardwood seedling production by state for the 2017-2018 planting season across the South for various species. (X 1000)

STATE	DOGWOOD		EUCALYPTUS		GREEN ASH		OAK		OTHERS		PECAN		SWEETGUM		SYCAMORE		WALNUT		YEL. POPLAR		TOTAL	
		%		%		%		%		%		%		%		%		%		%		%
AL	0	0	0	0	80	3	1,851	78	389	16	0	0	0	0	64	3	0	0	0	0	2,384	10
AR	25	0	0	0	0	0	6,277	69	2,002	22	308	3	327	4	58	1	29	0	66	1	9,092	40
FL	131	5	0	0	148	5	1,697	61	119	4	27	1	305	11	120	4	4	0	240	9	2,791	12
GA	123	4	0	0	139	4	1,464	45	1,042	32	11	0	311	9	108	3	0	0	81	2	3,279	14
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MS	0	0	0	0	100	10	100	10	500	50	0	0	100	10	100	10	0	0	100	10	1,000	4
NC	15	3	0	0	50	10	200	40	65	13	0	0	15	3	75	15	40	8	40	8	500	2
OK	4	1	0	0	0	0	144	37	190	49	12	3	0	0	26	7	10	3	0	0	386	2
SC	4	7	0	0	0	0	26	47	19	35	0	0	0	0	0	0	1	2	5	9	55	0
TN	55	2	0	0	10	0	1,658	72	210	9	23	1	125	5	117	5	10	0	101	4	2,309	10
TX	0	0	0	0	0	0	34	100	0	0	0	0	0	0	0	0	0	0	0	0	34	0
VA	50	5	0	0	25	3	500	52	150	16	0	0	0	0	200	21	20	2	15	2	960	4
REGION	**407**	**2**	**0**	**0**	**552**	**2**	**13,951**	**61**	**4,686**	**21**	**381**	**2**	**1,183**	**5**	**868**	**4**	**114**	**1**	**648**	**3**	**22,790**	

*Percent of state production **Percent of regional production

Table 7. Species production for the 2017-2018 planting season across the South by ownership category. (X 1000) (BR = bareroot, C= container)

TYPE	SPECIES	STATE		PRIVATE		INDUSTRY		TOTAL	TOTAL
			%*		%*		%*		%*
BR	BALDCYPRESS	1,730	69	756	30	12	0	**2,498**	0.3
	FRASER FIR	0	0	0	0	0	0	**0**	0.0
	LOBLOLLY	62,396	9	418,875	59	223,238	32	**704,509**	85.5
	LONGLEAF	1,982	15	11,497	85	0	0	**13,479**	1.6
	OTHERS	298	63	172	37	0	0	**470**	0.1
	SAND	500	7	6,705	91	165	2	**7,370**	0.9
	SHORTLEAF	1,298	89	160	11	0	0	**1,458**	0.2
	SLASH	7,301	8	69,972	77	14,003	15	**91,276**	11.1
	VIRGINIA	343	55	268	43	12	2	**623**	0.1
	WHITE	2,472	96	91	4	0	0	**2,563**	0.3
	TOTAL	**78,320**	**10**	**508,496**	**62**	**237,430**	**29**	**824,246**	**77.57**
C	BALDCYPRESS	20	29	50	71	0	0	**70**	0.0
	FRASER FIR	600	100	0	0	0	0	**600**	0.3
	LOBLOLLY	662	1	98,818	85	16,716	14	**116,196**	53.9
	LONGLEAF	5,650	7	72,581	92	306	0	**78,537**	36.4
	OTHERS	109	73	40	27	0	0	**149**	0.1
	SAND	0	0	250	100	0	0	**250**	0.1
	SHORTLEAF	201	3	6,557	97	0	0	**6,758**	3.1
	SLASH	500	4	12,419	96	0	0	**12,919**	6.0
	VIRGINIA	2	100	0	0	0	0	**2**	0.0
	WHITE	0	0	0	0	0	0	**0**	0.0
	TOTAL	**7,744**	**4**	**190,715**	**89**	**17,022**	**8**	**215,481**	**20.28**
BR	DOGWOOD	117	29	284	71	0	0	**401**	1.8
	EUCALYPTUS	0	0	0	0	0	0	**0**	0.0
	GREEN ASH	75	14	467	86	0	0	**542**	2.4
	OAK	5,908	43	7,939	57	34	0	**13,881**	61.8
	OTHERS	1,308	28	3,355	72	0	0	**4,663**	20.8
	PECAN	156	42	219	58	0	0	**375**	1.7
	SWEETGUM	148	15	843	85	0	0	**991**	4.4
	SYCAMORE	391	46	468	54	0	0	**859**	3.8
	WALNUT	100	88	14	12	0	0	**114**	0.5
	YEL. POPLAR	99	15	543	85	0	0	**642**	2.9
	TOTAL	**8,302**	**37**	**14,132**	**63**	**34**	**0**	**22,468**	**2.11**
C	DOGWOOD	0	0	6	100	0	0	**6**	1.9
	EUCALYPTUS	0	0	0	0	0	0	**0**	0.0
	GREEN ASH	0	0	10	100	0	0	**10**	3.1
	OAK	2	3	69	97	0	0	**71**	22.0
	OTHERS	0	0	23	100	0	0	**23**	7.1
	PECAN	0	0	6	100	0	0	**6**	1.9
	SWEETGUM	0	0	191	100	0	0	**191**	59.1
	SYCAMORE	0	0	10	100	0	0	**10**	3.1
	WALNUT	0	0	0	0	0	0	**0**	0.0
	YEL. POPLAR	0	0	6	100	0	0	**6**	1.9
	TOTAL	**2**	**1**	**321**	**99**	**0**	**0**	**323**	**0.0**
ALL	**TOTAL BAREROOT**	**86,622**	**10**	**522,628**	**62**	**237,464**	**28**	**846,714**	**80**
	TOTAL CONTAINER	**7,746**	**4**	**191,036**	**89**	**17,022**	**8**	**215,804**	**20**
	REGION	**94,368**	**9**	**713,664**	**67**	**254,486**	**24**	**1,062,518**	

*Percent of species production for that ownership class

Table 8. Conifer seedling production for the 2017-2018 planting season across the South by ownership category. (X 1000) Private – nurseries owned by companies or individuals that do not own wood processing facilities, Industry – nurseries owned by companies that have wood processing facilities. Percents are calculated for each stock type within a state.

	BAREROOT CONIFER						CONTAINER CONIFER						CONIFER SEEDLING PRODUCTION						
STATE	**STATE**	**%**	**PRIVATE**	**%**	**INDUSTRY**	**%**	**STATE**	**%**	**PRIVATE**	**%**	**INDUSTRY**	**%**	**STATE**	**%**	**PRIVATE**	**%**	**INDUSTRY**	**%**	**TOTAL**
AL	0	0	50,050	55	30,866	34	0	0	3,000	3	7,023	8	0	0	53,050	58	37,889	42	**90,939**
AR	6,131	6	36,312	38	53,000	56	0	0	0	0	0	0	6,131	6	36,312	38	53,000	56	**95,443**
FL	3,401	6	48,300	85	0	0	3,178	6	1,931	3	0	0	6,579	12	50,231	88	0	0	**56,810**
GA	14,409	4	185,522	57	0	0	0	0	127,889	39	0	0	14,409	4	313,411	96	0	0	**327,820**
LA	0	0	0	0	0	0	0	0	46,599	100	0	0	0	0	46,599	100	0	0	**46,599**
MS	0	0	24,919	28	53,100	60	0	0	0	0	10,000	11	0	0	24,919	28	63,100	72	**88,019**
NC	15,061	22	38,000	56	0	0	3,400	5	11,297	17	0	0	18,461	27	49,297	73	0	0	**67,758**
OK	3,308	96	0	0	0	0	154	4	0	0	0	0	3,462	100	0	0	0	0	**3,462**
SC	2,728	2	68,032	48	70,320	49	1,011	1	0	0	0	0	3,739	3	68,032	48	70,320	49	**142,091**
TN	3,102	99	40	1	0	0	0	0	0	0	0	0	3,102	99	40	1	0	0	**3,142**
TX	0	0	57,320	66	30,144	34	0	0	0	0	0	0	0	0	57,320	66	30,144	34	**87,464**
VA	30,180	100	0	0	0	0	0	0	0	0	0	0	30,180	100	0	0	0	0	**30,180**
REGION	**78,320**	**8**	**508,495**	**49**	**237,430**	**23**	**7,743**	**1**	**190,716**	**18**	**17,023**	**2**	**86,063**	**8**	**699,211**	**67**	**254,453**	**24**	**1,039,727**

Table 9. Hardwood seedling production for the 2017-2018 planting season across the South by ownership category. (X 1000) Private – nurseries owned by companies or individuals that do not own wood processing facilities, Industry – nurseries owned by companies that have wood processing facilities. Percents are calculated for each stock type within a state.

	BAREROOT HARDWOOD						CONTAINER HARDWOOD						HARDWOOD SEEDLING PRODUCTION						
STATE	**STATE**	**%**	**PRIVATE**	**%**	**INDUSTRY**	**%**	**STATE**	**%**	**PRIVATE**	**%**	**INDUSTRY**	**%**	**STATE**	**%**	**PRIVATE**	**%**	**INDUSTRY**	**%**	**TOTAL**
AL	0	0	2,384	100	0	0	0	0	0	0	0	0	0	0	2,384	100	0	0	**2,384**
AR	4,698	52	4,394	48	0	0	0	0	0	0	0	0	4,698	52	4,394	48	0	0	**9,092**
FL	0	0	2,636	94	0	0	0	0	155	6	0	0	0	0	2,791	100	0	0	**2,791**
GA	111	3	3,002	92	0	0	0	0	166	5	0	0	111	3	3,168	97	0	0	**3,279**
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
MS	0	0	1,000	100	0	0	0	0	0	0	0	0	0	0	1,000	100	0	0	**1,000**
NC	500	100	0	0	0	0	0	0	0	0	0	0	500	100	0	0	0	0	**500**
OK	383	99	0	0	0	0	2	1	0	0	0	0	385	100	0	0	0	0	**385**
SC	55	100	0	0	0	0	0	0	0	0	0	0	55	100	0	0	0	0	**55**
TN	1,594	69	715	31	0	0	0	0	0	0	0	0	1,594	69	715	31	0	0	**2,309**
TX	0	0	0	0	34	100	0	0	0	0	0	0	0	0	0	0	34	100	**34**
VA	960	100	0	0	0	0	0	0	0	0	0	0	960	100	0	0	0	0	**960**
REGION	**8,301**	**36**	**14,131**	**62**	**34**	**0**	**2**	**0**	**321**	**1**	**0**	**0**	**8,303**	**36**	**14,452**	**63**	**34**	**0**	**22,789**

Table 10. Seedling production for the 2017-2018 planting season across the South by ownership category. (X 1000) Private – nurseries owned by companies or individuals that do not own wood processing facilities, Industry – nurseries owned by companies that have wood processing facilities.

	TOTAL SEEDLING PRODUCTION							
STATE	**STATE**	**%***	**PRIVATE**	**%***	**INDUSTRY**	**%***	**TOTAL**	**%****
AL	0	0	55,434	59	37,889	41	93,323	9
AR	10,829	10	40,706	39	53,000	51	104,535	10
FL	6,579	11	53,022	89	0	0	59,601	6
GA	14,520	4	316,579	96	0	0	331,099	31
LA	0	0	46,599	100	0	0	46,599	4
MS	0	0	25,919	29	63,100	71	89,019	8
NC	18,961	28	49,297	72	0	0	68,258	6
OK	3,847	100	0	0	0	0	3,847	0
SC	3,794	3	68,032	48	70,320	49	142,146	13
TN	4,696	86	755	14	0	0	5,451	1
TX	0	0	57,320	66	30,178	34	87,498	8
VA	31,140	100	0	0	0	0	31,140	3
REGION	**94,366**	**9**	**713,663**	**67**	**254,487**	**24**	**1,062,516**	

*Percent of state production **Percent of regional production

Table 11. Change in seedling production from the 2015 to the 2018 nursery season.

STATE	2017-2018 Production (thousands)	RANK	% Change from Previous Yr
AL	93,323	4	-12
AR	104,535	3	6
FL	59,601	8	1
GA	331,099	1	-6
LA	46,599	9	38
MS	89,019	5	3
NC	68,258	7	-8
OK	3,847	12	-21
SC	142,146	2	9
TN	5,451	11	-7
TX	87,498	6	12
VA	31,140	10	-12
Total	**1,062,516**		-0.2

STATE	2016-2017 Production (thousands)	RANK	% Change from Previous Yr
AL	106,116	3	-9
AR	98,277	4	-1
FL	59,056	8	-2
GA	352,661	1	5
LA	33,707	10	42
MS	86,455	5	3
NC	73,852	7	12
OK	4,845	12	269
SC	130,289	2	-6
TN	5,887	11	-21
TX	78,420	6	9
VA	35,369	9	14
Total	**1,064,934**		2.9

STATE	2015 - 2016 Production (thousands)	RANK	% Change from Previous Yr
AL	116,002	3	-6
AR	98,819	4	-8
FL	60,438	8	65
GA	334,834	1	-2
LA	23,735	10	7
MS	84,048	5	3
NC	65,838	7	-1
OK	1,313	12	-54
SC	139,304	2	7
TN	7,438	11	4
TX	71,728	6	-12
VA	31,040	9	2
Total	**1,034,537**		0.3

Table 12. Auburn University's Southern Forest Nursery Management Cooperative representation in regional seedling production. (X 1000)

Source of Seedling Production	Total Production (thousands)	Percent of source	Percent of total
Bareroot – Nursery Coop Members	742,585	88	70
Bareroot – Non Coop Members	104,126	12	10
	846,711		
Container – Nursery Coop Members	143,495	66	14
Container - Non-Coop Members	72,310	34	7
	215,805		
Total – Nursery Coop Members	886,080		83
Total - Non-Coop Members	176,436		17
	1,062,516		