

SR

TIMBER CRUISING FOR CORD VOLUME

Score _____

Rank _____

Name Oconee 2016

School _____

Use volume table below to determine total volume to the nearest .001 cord for the trees tagged for this event. To determine total height, round down to the nearest 5-ft. length.

DBH	TOTAL HEIGHT OF STEM												
	40	45	50	55	60	65	70	75	80	85	90	95	
6	.039	.044	.048	.053	.058	.063	.068	.073	.077				
7	.057	.064	.071	.078	.085	.092	.099	.106	.113				
8	.074	.084	.093	.102	.111	.120	.129	.139	.148	.158			
9	.093	.105	.116	.128	.140	.152	.163	.174	.186	.192	.209		
10	.112	.127	.141	.155	.169	.183	.197	.211	.225	.239	.253		
11	.131	.159	.168	.184	.201	.218	.235	.251	.268	.284	.302	.311	
12	.150	.167	.185	.210	.235	.255	.275	.295	.314	.332	.351	.372	
13			.202	.217	.272	.295	.318	.340	.363	.390	.408	.430	
14					.312	.338	.363	.389	.415	.441	.467	.493	
15					.353	.383	.412	.442	.471	.501	.530	.559	
16					.397	.430	.463	.496	.529	.562	.595	.628	
17					.444	.481	.518	.555	.592	.629	.666	.703	
18					.493	.534	.575	.616	.657	.698	.739	.780	
19					.544	.590	.635	.680	.726	.771	.816	.861	
20					.598	.648	.698	.748	.798	.848	.897	.947	
21					.655	.710	.764	.818	.873	.927	.982	1.036	
22					.714	.774	.833	.893	.952	1.016	1.071	1.130	

Tree	Dia.	Pts.	Height	Pts.	Vol.
1	17		85		.629
2	10		75		.211
3	10		75		.211
4	9		80		.186
5	10		70		.197
6	21		85		.927
7	17		85		.629
8	11		75		.251
9	16		75		.496
10	18		85		.698

3 points for each correct diameter
35 points for correct volume in cords
Minus 1 point for each +/- 1% volume

3 points for each correct height
5 points for correct tonnage
Minus 1 point for each +/- 5% tonnage

4.435
Total Volume in Cords

4.435 cords x 5500 (wt. factor) = 24392.5 lbs. = 2.196 tons

SCORING SPACE

Student's Volume (cords) _____	Student's Tonnage _____
Correct Volume (cords) _____	Correct Tonnage _____
Deviation (+ or - %) _____	Deviation (+ or - %) _____
Conversion to points _____	Conversion to points _____
(1% = 1 point)	(5% = 1 point)
Total Wt. Points (35)	Total Wt. Points (5)
minus _____ deduction = _____ add	minus _____ deduction _____ add
Points for diameter _____ add	
Points for height _____ add	
Total Points _____	

Green Flagging

Revised 2010

SR

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Timber Stand Improvement

Score _____ Rank _____

Name Oconee 2016 School _____

Management Objective Manage for a disease free stand primary consideration is saw timber and wildlife

Participants will decide whether to (Harvest, Leave or Deadened) each marked tree by writing the appropriate action in the blanks. Participants will also give a reason why each tree was harvested, left or deadened from the following list. Should two reasons be applicable, give both.

- A. Future Crop Tree
- B. Non-merchantable
- C. Wildlife / aesthetics
- D. Insect Infestation
- E. Disease
- F. Lack of vigor or growth, suppressed or restricted crown or spacing
- G. Crooked, forked, malformed or leaning
- H. Other

Tree #	Harvest / Leave or Deadened	Reason
1.	Harvest	G E
2.	Leave	C
3.	Harvest	G
4.	Leave	C
5.	Harvest	E
6.	Harvest	G E
7.	Harvest	G
8.	Harvest	E
9.	Harvest	G
10.	Leave	A
11.	Harvest	F
- 12.	Leave	A
13.	Leave	A
14.	Harvest	F
15.	Harvest	G
16.	Leave	C
- 17.	Leave	A
- 18.	Leave	A
19.	Harvest	G
20.	Harvest	D

Judges Scoring Space

Incorrect Harvest / Leave or Deadened Trees X 3 points = _____

Incorrect Reasons X .5 points = _____

Total Deductions = _____

Total Score = 100 pts.
Minus Deductions = _____

Seed, Crop or Wildlife/aesthetics trees will be used for tie breakers.

17 12 18

SR

Ocular Estimation

Score _____

Rank _____

Name Oconee 2016

School _____

Round Diameters to nearest inch.

List products: Pulpwood (PW)

Chip-N-Saw (CNS)

Sawtimber (ST)

Tree #	Diameter	Correct Diameter	Product	Correct Product
1	13		75	PW
2	15		75	ST
3	14		75	ST
4	14		85	PW
5	13		75	PW
6	13		85	ST
7	9		85	CNS
8	15		80	ST
9	14		80	ST
10	14		80	PW

JUDGES SCORING SPACE

Number of Correct Diameters	_____ x 5 = _____
Number of Diameters +/- 1"	_____ x 2 = _____
Number of Correct Products	_____ x 5 = _____
Total	_____

Scoring

5 Points Correct Diameter

2 Points Diameter +/- 1"

5 Points Correct Product

Pulpwood Minimum 6" dbh

Chip-N-Saw Minimum 9" dbh to 12" dbh maximum with at least 1½ clear logs (24 feet)

Sawtimber Minimum 13" dbh with at least 1½ clear logs (24 feet)

Any tree from which 1½ clear logs or 24 feet of clear logs cannot be cut from any portion of the tree will be classified as pulpwood.

"Clear" is defined as being free of deforming limbs, forks, major sweeps and cankers.

JR

JR

FOREST MANAGEMENT

Name O'lovee 2016 School _____

Score _____

Rank _____

Consider only the area within the radius measured from the sampling point to the most distant tally tree.

Weight factor 5,500

- List the species of tally trees (pines). Loblolly Pine

2. Basal area per acre

Limiting distance = Diameter (inches & tenths) x 2.75

50
Sq. ft./acre

3. Volume

Cords per acre = $\frac{(\# \text{ of tally trees}) \times (\text{average total height})}{20 \times (\# \text{ of sampling points})}$ = 19 Cords/acre

52.25
Tons/acre

Tons per acre = $\frac{(\# \text{ of cords}) \times (\text{weight factor})}{2000}$

1 - 70
 2 - 78
 3 - 76 76 Avg.
 4 - 78
 5 - 80

Judges Scoring Space	
1. 20 points Species	_____
3. 50 points BA	_____
4. 30 points Volume	_____
<u>Total Points</u>	

FOREST MANAGEMENT

SR

Score _____ Rank _____

Name Oconee 2016 School _____

Consider only the area within the radius measured from the sampling point to the most distant tally tree.

Management Objective: Manage for wildlife & aesthetics. Desired Basal Area 70-90.

1. Classify the stand according to type. B 5,500
 Stand type Weight factor

- A. Pine pulpwood B. Pine sawtimber

2. List the species of tally trees (pines). Loblolly Pine & Shortleaf Pine

3. Basal area per acre 80
 Sq. ft. /acre

Limiting distance = Diameter (inches & tenths) x 2.75

4. Volume 81.4
 Tons/acre

Cords per acre = $\frac{(\# \text{ of tally trees}) \times (\text{average total height})}{20 \times (\# \text{ of sampling points})} = \frac{29.6}{\text{Cords/acre}}$

Tons per acre = $\frac{(\# \text{ of cords}) \times (\text{weight factor})}{2000} =$

5. Identify the greatest problem(s) in the stand. E
 Problem(s)

- A. Understocked D. Insect infestation F. No problem
 B. Overstocked E. Disease G. Other problem
 C. Hardwood encroachment

6. Which of the following cultural operation(s) would you prescribe for the stand?

A, E
 Cultural operations

- A. Prescribed burning D. Prescribed burning and hardwood control F. Other
 B. Hardwood control E. Smoke Management G. Do Nothing
 C. Intermediate cutting

7. To reach the pre-stated management objective, which of the following cuts would be appropriate?

D
 Reproduction method

- A. Seed tree C. Clearcut
 B. Selection D. No cut

Judges Scoring Space	
1. 10 points Stand type	_____
2. 10 points Species	_____
3. 30 points BA	_____
4. 10 points Volume	_____
5. 15 points Problem(s)	_____
6. 15 points Cultural operation(s)	_____
7. 10 points Reproduction method	_____
Total Points	_____

SR

TIMBER CRUISING FOR BOARD FOOT VOLUME

Score _____
Rank _____

Name Oconee 2016

School _____

Use volume table below to determine total volume of trees tagged in this event. Stump height 6" above ground – Merchantable height 8" top.

VOLUME (BOARD FEET) BY NUMBER OF USABLE 16-FT. LOGS

Tree Dia. Inches	Number of 16-ft. logs								
	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
10	28	36	44	48	52	56	60		
11	38	49	60	67	74	82	91		
12	47	61	75	85	95	100	106	111	
13	58	76	94	107	120	128	136	144	
14	69	92	114	130	146	156	166	175	
15	82	109	136	157	178	192	206	220	
16	95	127	159	185	211	229	247	276	
17	109	146	184	215	246	268	289	311	332
18	123	166	209	244	280	306	331	355	379
19	140	190	240	281	322	352	382	412	442
20	157	214	270	317	364	398	432	459	486
21	176	240	304	358	411	450	490	523	556
22	194	266	338	398	458	504	549	588	626
23	214	294	374	441	508	558	607	652	698
24	234	322	409	484	558	611	665	718	770
25	258	355	452	534	617	678	740	799	858
26	281	388	494	585	676	745	814	880	945
27	304	420	536	636	736	811	886	959	1032
28	327	452	578	686	795	877	959	1040	1120
29	354	491	628	746	864	953	1042	1132	1222
30	382	530	678	806	933	1028	1124	1224	1325

Tree	Dia.	Pts.	Height	Pts.	Vol.
1	11		3		74
2	16		4		247
3	19		4 1/2		412
4	17		4		289
5	16		4		247
6	21		4 1/2		523
7	17		4		289
8	17		4		289
9	12		4		106
10	15		4		206

3 points for each correct diameter
5 points for correct form class
30 points for correct board ft volume/acre
Minus 1 pt. for each +/- 1% BF volume/ac.

3 points for each correct height
5 points for correct tonnage/acre
Minus 1 pt. for each +/- 5% tonnage/ac.

114
Acres Cruised

2682
Total BF

SCORING SPACE	
Student's BF Volume/Acre	_____
Correct BF Volume/Acre	_____
Deviation (+ or - %)	_____
Conversion to points (1%=1pt)	_____
30 points minus deduction	_____ add for total
Student's Tonnage/Acre	_____
Correct Tonnage/Acre	_____
Deviation (+ or - %)	_____
Conversion to points (5%=1pt)	_____
5 points minus deduction	_____ add for total
Points for diameter	_____ add for total
Points for height	_____ add for total
Points for form class	_____ add for total
Total Points	_____

2682 Total BF / 1000 = 2.682 MBF

2.682 MBF x 4 (mult. factor) = 10,728 MBF/acre

10,728 MBF/acre x 15500 (wt. factor) = 166,284 lbs./acre

166,284 lbs./acre = 83,142 tons/acre

dib at top of 1st 16' log 11 / 12 dbh = Form Class

Tree #: 9 Form Class: 92

Revised 2010