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Texas Forestry Paper No. 19

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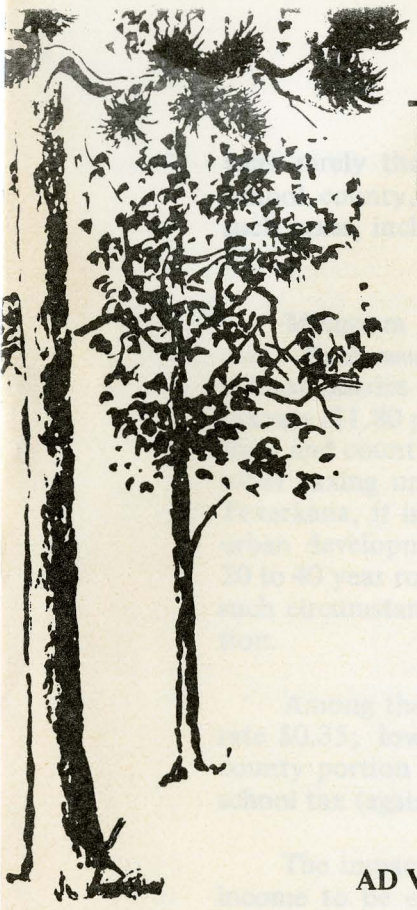

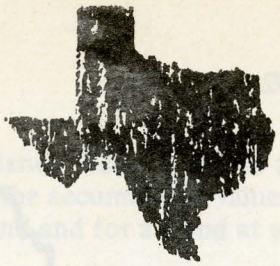

TEXAS FORESTRY PAPER

NO. 19 – FEBRUARY 1973

SCHOOL OF FORESTRY

STEPHEN F. AUSTIN STATE UNIVERSITY

Nacogdoches, Texas

AD VALOREM TAXES ON TIMBERLAND IN NORTHEAST TEXAS

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Real estate taxes, as applied in Texas are potential deterrents to timber production, because assessments for taxes technically include timber as well as the land upon which it stands. A timber crop thus can be taxed at its current value each year during a rotation, which could be from 20 to 40 years or longer.

To investigate the actual impact of the ad valorem tax system on the growing of timber, the 1969 tax rolls of 8 counties and 38 independent school districts in Northeast Texas (Fig. 1) were reviewed. Omitted from this study were consolidated school districts from which adequate data were not available.

While assessment procedures varied among the taxing units, all agencies attempted to group lands of comparable character and value, and to apply uniform values to such groups. In each taxing unit there was a minimum value at which most forest land was assessed. Variations above this "standard" minimum were more likely to reflect the potential value for development than a recognition of differences in values of standing timber. For each taxing unit, therefore the "standard" minimum forest land assessment was recorded and the basic tax per acre computed by applying the 1969 tax rate to this assessment. It is of interest that the basic values applied by the school districts

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Based in part on a thesis submitted by the first named author in partial fulfillment of the requirements for a degree of Master of Forestry.

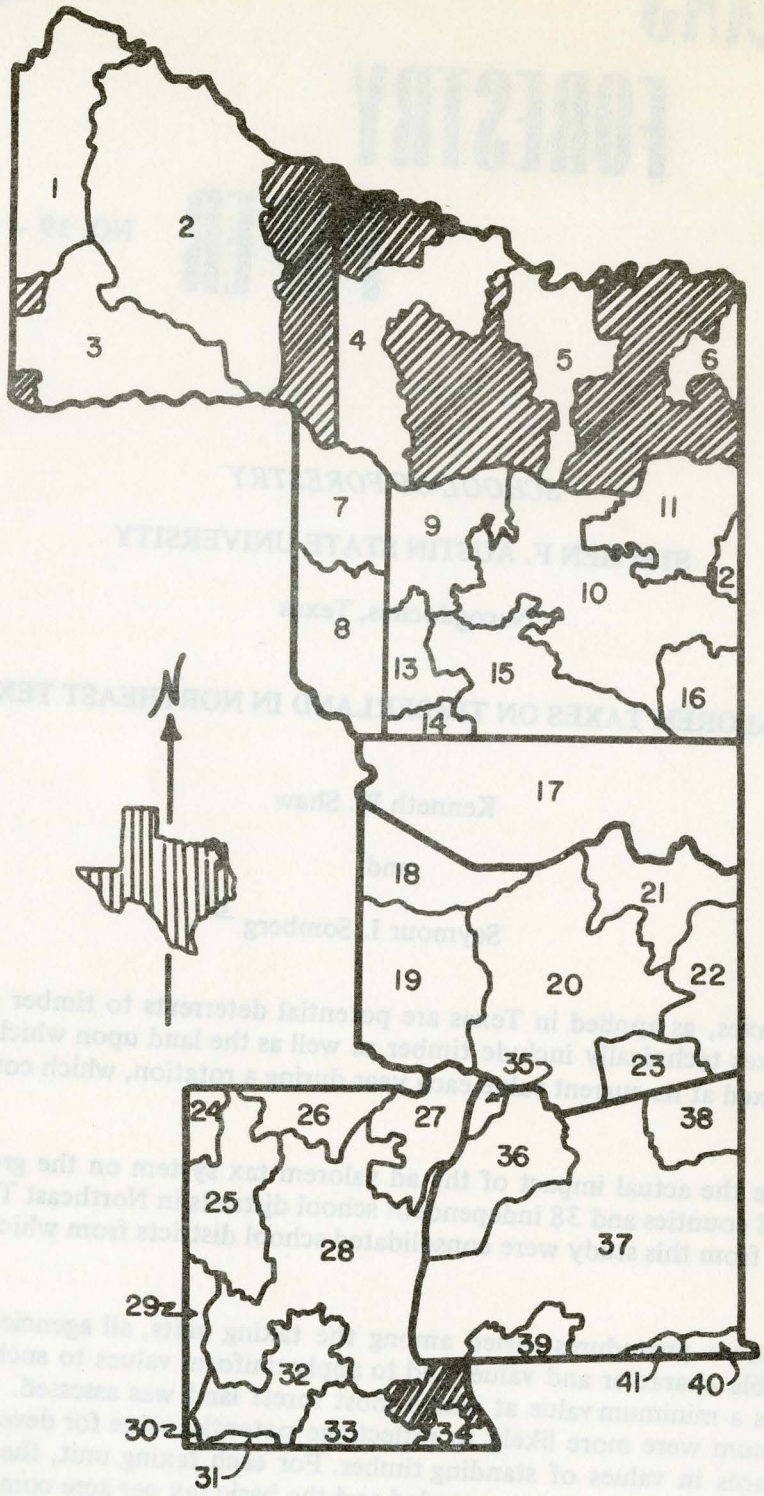

Figure 1. Location of the independent school districts in eight northeast Texas counties where tax rates were investigated. Districts are identified in Column 2, Table 1.

were rarely the same as those used by the county for the same class of land. Table 1 shows the school, county, and state tax per acre in each school district, together with the accumulated value of such taxes, including interest at 6 percent, for a 20-year old pulpwood stand and for a stand at age 35.

Minimum 1969 ad valorem taxes on timber land in the 41 taxing districts averaged $0.416 per acre. Rates were close to this average, except for one unit. The exception, Texarkana Consolidated School District assessed a minimum tax of $1.98 per acre. This was done by applying a moderate tax rate ($1.80 per hundred) to an assessed value of $110.00 per acre. This school tax, together with state and county taxes totaled $2.13 per acre. The evaluation is much higher than those assessed by other taxing units. Since this district is largely in and near the suburbs of the growing city of Texarkana, it is obvious that assessments applied to forest land reflect its high potential value for urban development. The accumulated value of the Texarkana District taxes with interest over a 20 to 40 year rotation would approach the total expected value of timber growth. Obviously, under such circumstances it would not be economic to hold and manage land primarily for wood production.

Among the other 40 taxing units the mean minimum tax per acre was $0.37 and the median rate $0.35; lowest rate was $0.19 and the highest (Texarkana excepted) was $0.61. The state and county portion of the total tax ranged from $0.10 to $0.23 per acre and averaged $0.172, while the school tax (again exclusive of Texarkana) averaged $0.22 with a range from $0.09 to $0.42.

The impact of taxes on the economics of timber growing must be considered in relation to the income to be expected from timber produced. Table 1 includes calculations of cumulative tax costs, with interest at 6 percent for two rather widely accepted rotation ages. While production would vary widely with site and other factors, yields of 20 cords of pulpwood per acre at 20 years and 8,000 board feet of sawtimber at age 35, worth perhaps $100 and $400, respectively, are not unreasonable. Thus the median tax per acre ($0.35), equivalent (at 6 percent) to $12.80 at 20 years and $39.00 at 35 years would amount to 10 to 13 percent of expected income. At the same rate of interest, the lowest tax ($0.19 per acre) would be only 5 to 7 percent, and the highest ($0.61) would be 17 to 23 percent of potential income. Thus at the range of rates assessed in these 40 taxing districts, ad valorem taxes constitute a substantial, but not necessarily limiting element of cost in timber production.

The impact of annual taxes also increases considerably as the applicable rates of interest increase. For any given annual tax, the accumulated investment at 20 years with a 4 percent interest rate is 81 percent of the value at 6 percent; at 8 and 10 percent respectively, the respective investment amounts to 155 and 243 percent of the 6 percent value. Thus when interest rates exceed 6 percent, accumulated investment in taxes, even at moderate tax rates, can approach or exceed expected income from timber.

Ad valorem taxes constitute only one of the several costs of growing timber. Others include costs for fire and other protection, cultural operations, management, and interest on investment. Except for unusual situations like the Texarkana Independent School District, these other costs are likely to exceed the cost of land taxes. Current rates of real estate taxes as assessed in the other 40 taxing units would be critical to forestry investments only where the sum of such other costs approached the expected value of timber income, or where applicable interest rates were considerably above 6 percent.

Table 1. Ad valorem taxes in eight Northeast Texas counties, 1969 and corresponding cost over two rotation periods.

County and School District	Map Number (Fig. 1)	1969 Tax			Accumulated Tax, with 6% interest	
		School	State and County	Total	20-year rotation	35-year rotation[1]
		Dollars per acre				
Bowie						
DeKalb	4	0.12	0.15	0.27	9.93	30.09
New Boston	5	0.18	0.15	0.33	12.14	36.77
Texarkana	6	1.98	0.15	2.13	168.39	264.19
Cass						
Atlanta	10	0.11	0.10	0.21	7.73	23.40
Avinger	14	0.31	0.10	0.41	15.08	45.69
Bloomburg	12	0.30	0.10	0.40	14.71	44.57
Hughes Springs	13	0.22	0.10	0.32	11.77	35.66
Linden-Kildare	15	0.25	0.10	0.35	12.88	39.00
McLeod	16	0.17	0.10	0.27	9.93	30.09
Pewitt[2]	9	0.23	0.10	0.33	12.14	36.77
Queen City	11	0.09	0.10	0.19	6.99	21.17
Harrison						
Elysian Fields[2]	23	0.38	0.14	0.52	19.13	57.95
Hallsville	19	0.30	0.14	0.44	16.19	49.03
Harleton	18	0.22	0.14	0.36	13.24	40.12
Karnack	21	0.15	0.14	0.29	10.67	32.32
Marshall	20	0.27	0.14	0.41	15.08	45.69
Waskom	22	0.42	0.14	0.56	20.60	62.40
Marion						
Jefferson	17	0.14	0.18	0.32	11.77	35.66
Morris						
Daingerfield	8	0.18	0.07	0.25	9.20	27.86
Pewitt[2]	7	0.23	0.07	0.30	11.04	33.43
Panola						
Beckville	36	0.31	0.23	0.54	19.86	60.17
Carthage	37	0.11	0.23	0.34	12.51	37.89
Elysian Fields[2]	38	0.38	0.23	0.61	22.44	67.98
Gary	39	0.12	0.23	0.35	12.88	39.00
Joaquin	40	0.18	0.23	0.41	15.08	45.69
Tatum[2]	35	0.23	0.23	0.46	16.92	51.26
Teneha[2]	41	0.27	0.23	0.50	18.39	55.72
Red River						
Clarksville	2	0.21	0.16	0.37	13.61	41.23
Detroit	1	0.24	0.16	0.40	14.71	44.57
Talco-Bogata	3	0.15	0.16	0.31	11.40	34.54
Rusk						
Carlisle	29	0.06	0.18	0.24	8.83	26.74
Cushing	31	0.15	0.18	0.33	12.14	36.77
Henderson	28	0.27	0.18	0.45	16.55	50.15
Garrison	34	0.11	0.18	0.29	10.67	32.32
Kilgore	26	0.32	0.18	0.50	18.39	55.72
Laneville	32	0.11	0.18	0.29	10.67	32.32
Mt. Enterprise	33	0.30	0.18	0.48	17.66	53.49
Overton	24	0.23	0.18	0.41	15.08	45.69
Rusk	30	0.23	0.18	0.41	15.08	45.69
Tatum[2]	27	0.23	0.18	0.41	15.08	45.69

Table 1. (continued)

County and School District	Map Number (Fig. 1)	1969 Tax			Accumulated Tax, with 6% interest	
		School	State and County	Total	20-year rotation	35-year rotation[1]
		Dollars per acre				
West Rusk	25	0.12	0.18	0.30	11.04	33.43
Mean		0.22	0.17	0.37[3]	14.24	43.14

[1/] Assuming no change in taxes during the entire period.

[2/] Districts which include parts of 2 counties.

[3/] With the exception of the Texarkana Consolidated School District.