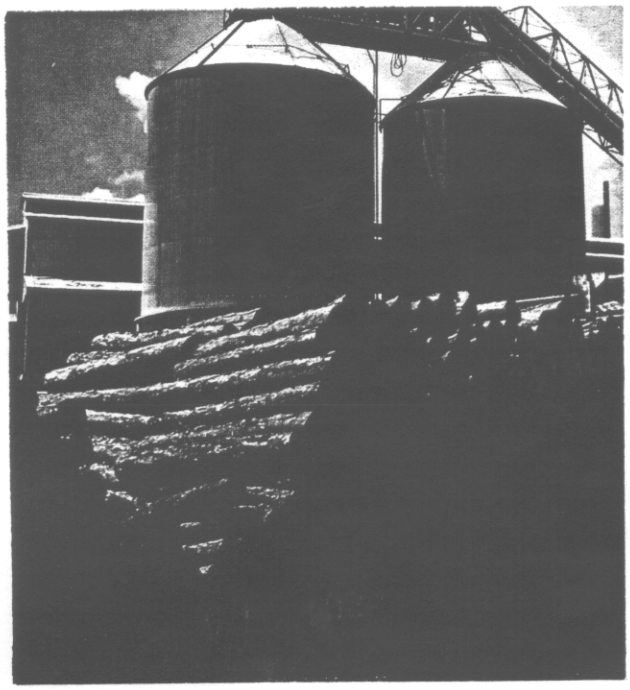
# GEORGIA FOREST RESEARCH PAPER

43

April, 1983



# THE EXPANDING TIMBER DEMAND AND LANDOWNER ATTITUDES TOWARD FORESTRY INVESTMENT

BY

ALBERT A. MONTGOMERY, Ph.D.

RESEARCH DIVISION

GEORGIA FORESTRY COMMISSION

# AUTHOR

**Albert A. Montgomery,** Ph.D.
Senior Research Associate
Contract Research Division
Office of Services
School of Business Administration
Georgia State University.

# ACKNOWLEDGMENT

The author is indebted to Dr. James E. Morrow, Mr. James D. Strange and Mr. Robert L. Chaffin who helped design the survey and the many staff members of the Georgia Forestry Commission who did the field work and interviews.

# THE EXPANDING TIMBER DEMAND AND LANDOWNER ATTITUDES TOWARD FORESTRY INVESTMENT

BY

ALBERT A. MONTGOMERY, Ph.D.

## INTRODUCTION

Forestry and its related economic activities comprise a $6.6 billion Georgia industry that employs an estimated 74 thousand Georgians. Supplying timber to meet the needs of this forest economy requires the removal of timber from more than a half million acres annually. Approximately two thirds of the harvested pine acreage is owned by private nonindustrial landowners, of which the majority is permitted to revert after harvest to stands dominated by hardwoods. The result is a net loss of pine growth needed to supply the state's expanding pulp, paper, plywood, and lumber making capacity. Nonindustrial landowners must significantly increase their investments in productivity improving forest management practices if Georgia's forest economy is to continue its growth. Favorable revision of the capital gains tax, enactment of the Reforestation Incentives Act H.R. 430, which permits the amortization of tree planting costs over seven years, the Forestry Incentives Program, and the anticipation of continued increases in timber values have enhanced the opportunities for timberland owners to benefit from investments in improved forest management. A major purpose of this study is to ascertain how well the nonindustrial landowner understands and appreciates these opportunities to gain from investments in improved forest management. Also, it is a major purpose to learn more about the nonindustrial landowner's current attitudes toward forestry and his plans for his timberland.

# SUMMARY OF FINDINGS

The typical Georgia nonindustrial landowner owns but a few acres of timberland. A majority of timber tracts are 100 acres or smaller. But these small landowners, as a group, control only a tiny fraction of the total forest acreage in nonindustrial ownership. In contrast, less than 1 in 10 nonindustrial landowners have timber tracts larger than 400 acres. But these landowners, as a group, control half of the nonindustrial forestland. More than half of the landowners with timber tracts larger than 400 acres either were participants in the American Tree System or were clients of professional foresters, implying that a significant fraction of the nonindustrial forest has been benefited by forest management advice and assistance.

The typical landowner profile implies firsthand familiarity with his timberland, if not necessarily proper forest management. A majority of the landowners were either farmers, businessmen, or professionals who were male, sole owners and managers, and local residents, living either in the same county or an adjacent county as their land.

Reflecting the study's orientation toward areas of the state with high levels of forestry activity, more than half of all landowners surveyed made one or more timber sales over the past decade, of whom 1 in 3 reported cumulative sales of more than 100 acres. This high frequency of past timber sales apparently will not be sustained over the near future. Only a very small percentage of the landowners expect to sell any timber over the next 5 years and even among large landowners, expected sales lag far behind past sales. Dissatisfaction with past sales would not appear to be an important reason for the expected reduction in future timber sales. Less than 1 in 5 landowners selling timber in the past voiced any complaints about their timber sales. Rather, when asked to give their reasons for not expecting timber sales over the near future 81 percent of the landowners responded either that they did not have enough timber to sell or that their timber would not be ready for sale. Thus, in those areas of the state supplying much of the recent timber harvests, it would appear that a tight stumpage market and high, if not rising, stumpage prices is a definite possibility for the near future. By the same token, as the demand for timber grows there should be rising stumpage prices in areas where the forest industry has been relatively inactive in the past, such as the upper piedmont and mountains.

Over the past decade, many fewer landowners made woodland improvements than sold timber. Only 1 in 4 landowners statewide reported any improvements and most of these were located in the coastal plain, where slightly more than 1 in 3 landowners invested in forestry. Among landowners with timber tracts 400 acres or larger, two thirds reported one or more forestland improvements over the past decade. Because of the large fraction of the forest in these larger holdings, it would be projected that 40 percent of the pine forest in nonindustrial ownership has been benefited by improved forest management practices. But 97 percent of these improvements were located in the coastal plain, where more than half of the pine forest in nonindustrial ownership received some management practices. More than 75 percent of the improved acreage was prescribed burned, all of which was located in the coastal plain. Of the nonindustrial pine forest in the piedmont and mountain regions, only 5.9 percent and 3.8 percent respectively was benefited by planting and timber stand improvement.

A slight improvement in this record of forest practices is indicated for the near future. As in the past, a significant majority of large landowners plan improvements over the foreseeable future. Smaller landowners planning improvements are in the minority but a larger percentage plan improvements than executed them in the past. By type of improvement, the pattern of intended forest management is similar to that of the past decade with prescribed burning the most frequently planned practice followed by planting and timber stand improvement.

Among the majority of landowners not planning woodland improvements, the most frequently cited reasons were that the improvements were not needed or that there weren't enough young trees to warrant making them.

A large majority of landowners considered a forestland improvement to be a good investment. However, when asked to rank the desirability of various uses of income from a timber sale, most landowners gave a low priority to tree planting or other improvement of the cutover timberland. The highest priority was for use of these funds in the landowner's farm or business operation followed by personal uses. An investment of the timber sale proceeds in forestry was ranked as low as investments in land, real estate, stocks, and bonds. It would appear that an urgent need of cash for immediate personal business, or farm use is a major, if unspoken, reason for landowners not making what they consider to be a good investment in forestland improvement.

## PROCEDURE

In the summer of 1982, personnel of the Georgia Forestry Commission undertook personal interviews with 600 nonindustrial landowners in 38 rural counties throughout Georgia. A total of 502 personal interviews were completed with the owners of 227,000 acres of rural land, of which 109,360 acres were reported to be forested. Only 17 percent of the intended interviews were not completed and there is no indication that the nonresponses will seriously bias the survey findings. By its design, however, there are survey biases, the nature of which will become apparent in describing the sample drawing procedure.

The survey's sample represents rural landowners throughout Georgia, except for those in counties comprising Georgia's standard metropolitan statistical areas, where taxes, real estate speculation, and other factors combine to inhibit the practice of forestry. A sample of 38 counties was randomly selected from the remaining 123 counties, with each of Georgia's 5 forest survey units represented by 5 to 10 counties or approximately in proportion to its share of the state's rural area, Chart 1.

The statewide sample of 600 personal interviews, amounting to about 2 percent of the rural landholdings in the selected counties, was then allocated among the 38 counties on the basis of importance of forestry in each county. Larger samples were allocated to counties with large acreages of commercial forest, large volumes of recent timber production, and numerous large farms, the last variable being highly related to the practice of forestry on nonindustrial land. Thus, although all of nonmetropolitan Georgia is represented, the sample is biased toward areas with a high level of forestry activity, especially the coastal plain with its concentration of forest product manufacturing.

The last step in the sample drawing procedure entailed the selection of the assigned number of interviews in each county. This selection was accomplished randomly from a comprehensive list of rural addresses. All farms or landholdings of less than 100 acres as well as the landholdings of forest product manufacturers were excluded from the sample. By dropping the numerous small farms below 100 acres from the sample, larger landowners were given a much greater probability of being selected. This bias toward larger landowners is a means of conforming the sample more closely to the economic realities of Georgia's forested landscape, which is dominated by larger landholdings.

## FINDINGS

### Selected Landowner Characteristics

Of the 502 completed interviews, 292 (58.2 percent) orginated in the coastal plain (southeast and southwest forest survey units), 166 (33.1 percent) in the piedmont (central and north central units), and 44 (8.8 percent) in the mountain region (north unit), Table 1. The sample's statewide total of 109,360 acres is similarly distributed among the three geographic regions, with 68.8 percent in the coastal plain, 25.7 percent in the piedmont, and 5.5 percent in the mountain region. By either measure, the statewide findings are dominated by the coastal plain, which is represented in the sample to a greater degree than would be indicated by its share of the state's land area or even by its share of the state's commercial forest.

Table 1 also distributes the responding landowners and their forest acreages according to the size of their timberland holding. Although the sample includes no farms smaller than 100 acres and thus underestimates somewhat the actual percentage of small timberland owners, it is seen that virtually half of the landowners reported owning forestland of 100 acres or less. Landowners with timberland holdings ranging in size from 101 to 400 acres as part of their total landholding comprised 41.2 percent of all landowners statewide. Only 9.2 percent of the landowners reported owning more than 400 acres of timberland.

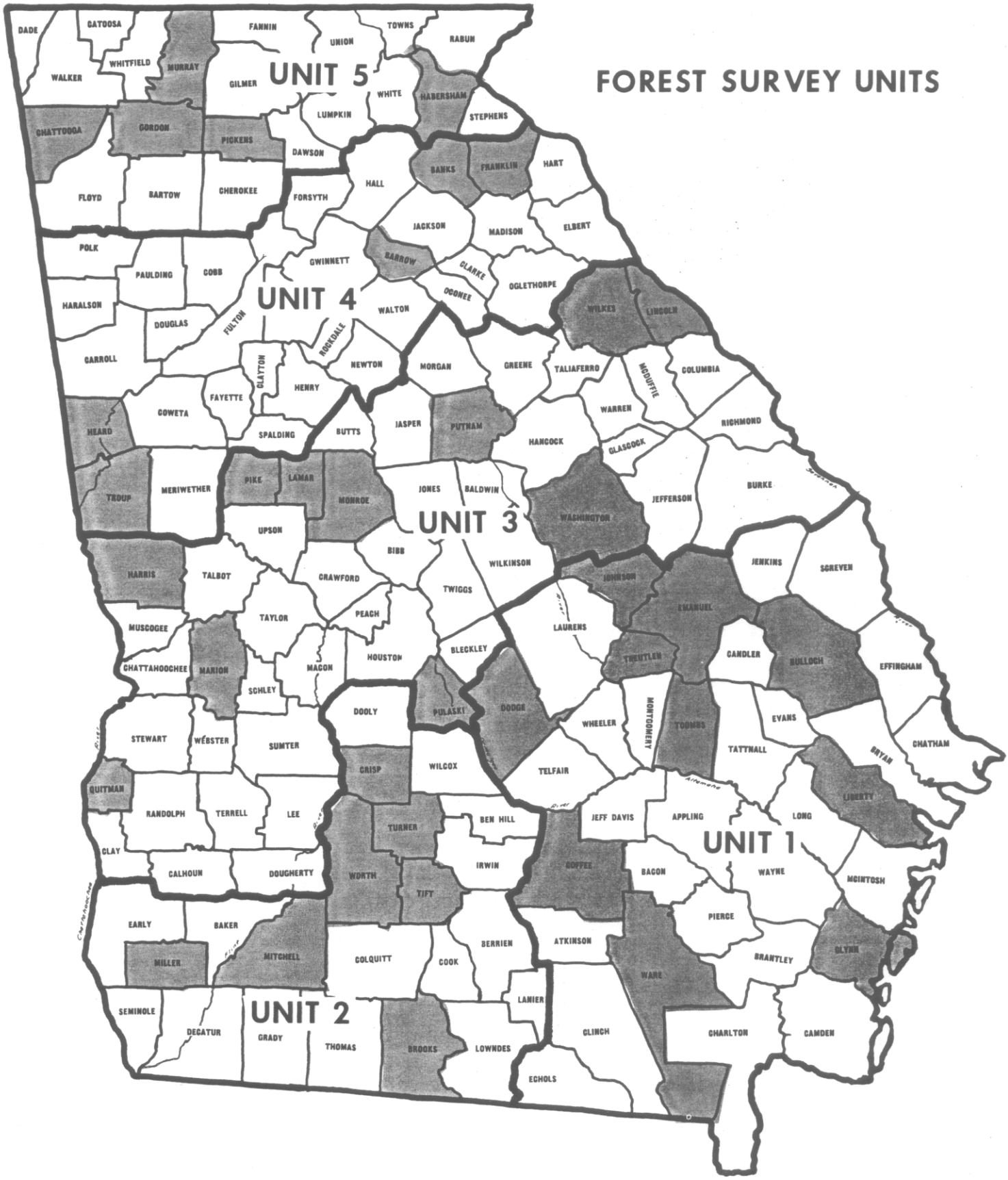
It is seen that the near majority of landowners who owned 100 acres or less of timberland jointly controlled only 11.9 percent of the statewide total of forested acres. The combined acreage of forest tracts ranging from 101 to 400 acres accounted for 37.2 percent of the total forest acreage, a share almost as large as its share of landowners. But the relatively few large landowners are seen to jointly control a 50.4 percent share of the total forest acreage in the state. Thus, the typical Georgia timberland owner may hold only a few acres, but the majority of Georgia's nonindustrial timberland is held by a relatively small number of large landowners.

Note, however, the regional variation in these findings. The percentage of small timber landowners increases from 45.5 percent in the coastal plain to 50.6 percent in the piedmont and 68.2 percent in the mountain region. Consequently, the share of the total forest held jointly in small ownerships increases from 9.0 percent in the coastal plain to 24.4 percent in the mountain region. Conversely, landowners with timber tracts exceeding 400 acres comprise 10.6 percent of the owners in the coastal plain and jointly control 57.1 percent of the total forest there but comprise only 4.5 percent of the owners and control but 39.3 percent of the forest in the mountain region.

TABLE 1 PERCENTAGE OF LANDOWNERS AND FOREST ACREAGE BY SIZE OF TIMBER TRACTS AND GEOGRAPHIC REGIONS

| FOREST SIZE IN ACRES | GEORGIA | | COASTAL | | PIEDMONT | | MOUNTAIN | |
|---|---|---|---|---|---|---|---|---|
| | OWNERS | ACRES | OWNERS | ACRES | OWNERS | ACRES | OWNERS | ACRES |
| | PERCENT | | | | | | | |
| 100 OR LESS | 49.6 | 11.9 | 45.5 | 9.0 | 50.6 | 16.9 | 68.2 | 24.4 |
| 101 TO 400 | 41.2 | 37.7 | 43.9 | 33.9 | 41.6 | 48.2 | 27.3 | 36.3 |
| OVER 400 | 9.2 | 50.4 | 10.6 | 57.1 | 7.8 | 34.9 | 4.5 | 39.3 |
| TOTALS | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| OWNERS & ACRES | 502 | 109,360 | 292 | 75,286 | 166 | 28,091 | 44 | 5,983 |
| PERCENT | 100.0 | 100.0 | 58.2 | 68.8 | 33.1 | 25.7 | 8.8 | 5.5 |

# CHART - 1


FOREST SURVEY UNITS
UNIT 5
UNIT 4
UNIT 3
UNIT 2
UNIT 1
DADE
CATOOSA
WHITFIELD
MURRAY
WALKER
FANNIN
UNION
TOWNS
RABUN
GILMER
WHITE
HABERSHAM
STEPHENS
LUMPKIN
CHATTOOGA
GORDON
PICKENS
DAWSON
BANKS
FRANKLIN
HART
FLOYD
BARTOW
CHEROKEE
FORSYTH
HALL
JACKSON
MADISON
ELBERT
POLK
PAULDING
COBB
GWINNETT
BARROW
CLARKE
OGLETHORPE
HARALSON
FULTON
WALTON
OCONEE
WILKES
LINCOLN
DOUGLAS
CARROLL
ROCKDALE
NEWTON
MORGAN
GREENE
TALIAFERRO
MCDUFFIE
COLUMBIA
CLAYTON
HENRY
FAYETTE
COWETA
WARREN
HEARD
SPALDING
BUTTS
JASPER
PUTNAM
HANCOCK
GLASCOCK
RICHMOND
TROUP
MERIWETHER
PIKE
LAMAR
MONROE
JONES
BALDWIN
WASHINGTON
JEFFERSON
BURKE
UPSON
HARRIS
TALBOT
CRAWFORD
BIBB
WILKINSON
TWIGGS
JOHNSON
JENKINS
SCREVEN
MUSCOGEE
TAYLOR
PEACH
EMANUEL
LAURENS
CHATTAHOOCHEE
MARION
MACON
HOUSTON
BLECKLEY
TREUTLEN
CANDLER
BULLOCH
EFFINGHAM
SCHLEY
PULASKI
DODGE
DOOLY
WHEELER
MONTGOMERY
TOOMBS
EVANS
STEWART
WEBSTER
SUMTER
WILCOX
TATTNALL
CHATHAM
BRYAN
CRISP
TELFAIR
QUITMAN
RANDOLPH
TERRELL
LEE
TURNER
BEN HILL
JEFF DAVIS
APPLING
LONG
LIBERTY
CLAY
CALHOUN
DOUGHERTY
WORTH
IRWIN
COFFEE
BACON
WAYNE
MCINTOSH
TIFT
PIERCE
EARLY
BAKER
BERRIEN
ATKINSON
BRANTLEY
GLYNN
MILLER
MITCHELL
COLQUITT
COOK
WARE
SEMINOLE
DECATUR
GRADY
THOMAS
BROOKS
LOWNDES
LANIER
CLINCH
CHARLTON
CAMDEN
ECHOLS

Almost 1 in 3 farms reported pine plantations among their timberland holdings and slightly more than 1 in 3 reported clearing woodland for agricultural use over the past 10 years, Table 2. The 13,631 acres of pine plantations reported by the sample landowners comprised 12.2 percent of the total timberland. The 8,432 acres of timberland cleared for pasture and row crops represented a 7.2 percent loss of timberland over the past decade. Among landowners with plantations, the largest were found in the coastal plain, averaging 104.6 acres per ownership as compared with 59.5 and 56.5 acres respectively in the piedmont and mountain regions. Coastal plain landowners also cleared the largest forest acreage on average, 57.6 acres.

Farming was the principal occupation of landowners, Table 3. Virtually half of the landowners in the coastal plain reported themselves to be farmers. Farmers were less frequent in the piedmont and mountain regions but this occupation still ranked first. Retirement was the second most frequently cited occupation and business was the third most frequently mentioned in all three regions. Finally, there were several noteworthy aspects of the Georgia landowner profile that showed little variation from region to region. Typically, the Georgia timberland owner is male, the sole owner of the tract, manages the land himself, and is a local resident, either living in the same or adjacent county as his land.

Of landowners responding to the survey, 15.7 percent reported that they either participated in the American Tree Farm System, had a management plan prepared by a professional forester, or both, Table 4. Only 6.0 percent of the landowners with 100 acres or less of timber benefited from this forest management planning and advice. But almost 1 in 5 of the landowners with tracts of 101 to 400 acres and more than half of those with tracts larger than 400 acres had received some professional assistance. Considering the exceptional share of the forest owned by the larger landowners, it follows that a significant fraction of Georgia's nonindustrial timberland acreage has benefited from the fact that its owners were participants in the American Tree Farm System or were clients of professional foresters.

## Timber Sales

More than half of all landowners (57.5 percent) reported making one or more timber sales over the past 10 years, Table 5. This high percentage of landowner selling timber reflects in part the study's orientation toward the areas of the state which are important sources of the timber supply. But an equally high percentage of landowners in the piedmont as in the coastal plain reported sales, and more than 1 in 3 in the mountain region had at least one timber sale. Timber sales were most frequent among landowners owning more than 400 acres of timber (75.6 percent). Almost two thirds of the landowners owning tracts ranging from 101 to 400 acres had timber sales.

Among landowners selling timber, about 1 in 3 reported cumulative sales of more than 100 acres over the past 10 years, Table 6. These landowners were concentrated in the coastal plain, where 33.5 percent had cumulative sales of 101 to 400 acres and 6.4 percent had sales in excess of 400 acres. The large majority of timber selling landowners in both the piedmont and mountains had cumulative sales of less than 100 acres.

In contrast with this high frequency of timber sales in the past, relatively few landowners expect to sell timber over the next 5 years, Table 7. Only 15.4 percent of the landowners statewide indicated that they expect to sell timber over the near future. Significantly, coastal plain landowners exhibited the lowest percentage of expected timber sales among the three geographic regions. It is seen that landowners with timber tracts in excess of 400 acres evidence a relatively high percentage of expected timber sales as compared with the smaller landowners, 44.4 percent versus 14.9 and 10.4 percent. But the percentage of large landowners expecting timber sales lags far behind the percentage of their actual sales over the past decade.

Dissatisfaction with the results of past timber sales would not appear to be a significant motive for the relatively high percentage of landowners not expecting to sell timber in the future. Less than 1 in 5 landowners selling timber voiced any complaints about their timber sales. These landowner complaints divided evenly between physical and economic damages purportedly inflicted on the landowner by the timber harvester. Examples of the former include torn up road, excessive slash left on the ground, and damage to remaining pines. Scale ticket mixups, high grading, and other misunderstandings about price and volume exemplify the economic damages done to landowners by their reckoning. But the large majority of those selling timber reported no complaints about their timber sales.

When asked to give reasons why they expected no timber sales over the next 5 years, 81 percent of the landowners responded either that their timber would not be ready for sale within this period or that they did not have enough timber to sell. Viewed in relation to the above find-

TABLE 2

PERCENT OF FARMS WITH PLANTED PINES AND CLEARED WOODLAND BY SIZE AND GEOGRAPHIC REGIONS

| PLANTED OR CLEARED LAND IN ACRES | GEORGIA | | COASTAL | | PIEDMONT | | MOUNTAIN | |
|---|---|---|---|---|---|---|---|---|
| | PLANTED | CLEARED | PLANTED | CLEARED | PLANTED | CLEARED | PLANTED | CLEARED |
| | PERCENT | | | | | | | |
| NONE | 68.7 | 64.3 | 67.1 | 65.7 | 71.1 | 60.9 | 70.4 | 68.1 |
| 1 TO 20 | 11.6 | 17.5 | 8.9 | 13.4 | 13.9 | 26.5 | 20.5 | 11.4 |
| 21 TO 100 | 14.1 | 14.8 | 17.1 | 17.1 | 10.8 | 9.6 | 6.8 | 18.2 |
| OVER 100 | 5.6 | 3.4 | 6.9 | 3.8 | 4.2 | 3.0 | 2.3 | 2.3 |
| ALL FARMS | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | |
| TOTAL(ACRES) | 13,631 | 8,432 | 10,042 | 5,765 | 2,854 | 2,179 | 735 | 488 |
| AVERAGE(ACRES | 86.8 | 47.1 | 104.6 | 57.6 | 59.5 | 33.5 | 56.5 | 34.9 |

TABLE 3 LANDOWNER OCCUPATION BY GEOGRAPHIC REGIONS

| | GEOGRAPHIC REGIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | GEORGIA | | COASTAL | | PIEDMONT | | MOUNTAIN | |
| OCCUPATION | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT |
| RETIRED | 111 | 22.5 | 68 | 23.5 | 32 | 19.5 | 11 | 25.6 |
| FARMERS | 206 | 41.7 | 142 | 49.1 | 50 | 30.9 | 14 | 32.6 |
| BUSINESSMEN | 64 | 13.0 | 29 | 10.0 | 29 | 17.9 | 6 | 14.0 |
| MANAGERS AND PROFESSIONALS | 32 | 6.5 | 18 | 6.2 | 11 | 6.8 | 3 | 7.0 |
| LABORERS | 34 | 6.9 | 9 | 3.1 | 19 | 11.7 | 6 | 14.0 |
| OTHERS | 47 | 9.5 | 23 | 8.0 | 21 | 13.0 | 3 | 7.0 |
| TOTAL | 494 | 100.0 | 289 | 100.0 | 162 | 100.0 | 43 | 100.0 |

TABLE 4 PERCENTAGE OF LANDOWNERS EITHER PARTICIPATING IN AMERICAN TREE FARM SYSTEM OR WITH MANAGEMENT PLAN PREPARED BY A FORESTER BY SIZE OF TIMBER TRACTS AND GEOGRAPHIC REGIONS

| | GEOGRAPHIC REGIONS | | | |
|---|---|---|---|---|
| TRACT SIZE IN ACRES | GEORGIA | COASTAL | PIEDMONT | MOUNTAIN |
| | PERCENT | | | |
| 100 OR LESS | 6.0 | 6.8 | 4.8 | 6.7 |
| 101 TO 400 | 19.3 | 20.3 | 13.0 | 31.2 |
| OVER 400 | 52.2 | 54.8 | 46.2 | 50.0 |
| TOTAL | 79 | 52 | 19 | 8 |
| PERCENT | 15.7 | 17.8 | 11.4 | 18.2 |

TABLE 5 PERCENT OF FARMS SELLING TIMBER IN PAST 10 YEARS BY GEOGRAPHIC REGIONS AND TIMBER TRACT SIZE

| | GEOGRAPHIC REGIONS | | | |
|---|---|---|---|---|
| TRACT SIZE IN ACRES | GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
| 100 OR LESS | 48.4 | 50.4 | 50.6 | 33.3 |
| 101 TO 400 | 64.6 | 63.5 | 70.6 | 41.6 |
| OVER 400 | 75.6 | 80.6 | 58.3 | 100.0 |
| ALL FARMS | 57.5 | 59.3 | 59.4 | 38.6 |

TABLE 6 PERCENT OF 10 YEAR TIMBER SALES BY GEOGRAPHIC REGIONS AND CUMULATIVE ACRES

| | GEOGRAPHIC REGIONS | | | |
|---|---|---|---|---|
| CUMULATIVE SALES IN ACRES | GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
| 50 OR LESS | 42.4 | 32.4 | 57.1 | 58.8 |
| 51 TO 100 | 22.9 | 27.7 | 15.3 | 17.7 |
| 101 TO 400 | 29.1 | 33.5 | 22.4 | 23.5 |
| OVER 400 | 5.6 | 6.4 | 5.1 | 0.0 |
| ALL FARMS WITH SALES | 288 | 173 | 98 | 17 |

ings, this would seem to suggest a tight timber supply and high, if not rising, stumpage prices over the near future, at least in those localities which have supplied much of the state's recent timber harvest.

## Forestland Improvements

In comparison to those selling timber, relatively few landowners reported spending money to improve their woodlands over the past decade, Table 8. Only 1 in 4 landowners statewide reported any improvements and the bulk of these were located in the coastal plain, where 34.8 percent of landowners made improvements as compared with 11.7 and 11.6 percent of the landowners in the piedmont and mountain regions. Note, however, that 2 out of 3 landowners with timber holdings in excess of 400 acres reported making 1 or more improvements over the past decade. Considering the large fraction of the nonindustrial forest held in large tracts, it follows that a potentially large fraction of the forest was benefited by improved management.

Indeed, this appears to have been the case. Reflecting multiple improvements over the 10 year period, a total of 264 improvements were made on 31,441 acres, Table 9. From this sample finding it might be projected that more than 40 percent of the pine forest in non industrial ownership had been benefited from forest management practices over the past decade. However, 30,400 acres of the improvements (96.7 percent) were concentrated in the coastal plain, where more than half the pine forest in nonindustrial ownership was benefited by improved management practices. In contrast, only 5.9 percent of the nonindustrial pine forest in the piedmont and 3.8 percent of that in the mountain region received any management. Moreover it is seen that 75.5 percent of the treated acreage statewide consisted of prescribed burning, all of which was located in the coastal plain. Planting and timber stand improvement practices accounted for but 18.4 percent and 6.1 percent respectively of the treated acreage statewide.

Less than 1 in 5 landowners making improvements voiced any complaints about them. Among those who did complain, about half were unhappy either about the cost of the practices or the insufficiency of funds from the ASCS Forest Incentive Program (FIP), Table 10.

Among landowners making improvements over the past decade, slightly more than 1 in 4 received financial support from FIP, Table 11. About 1 in 3 financed at least part of the improvement cost with funds from timber sales. The owners of farms larger than 500 acres relied to a greater extent upon funds from timber sales and FIP than did smaller landowners.

Slightly more landowners plan to improve their woodlands in the foreseeable future than those actually making improvements over the past decade. Statewide, 31.2 percent of the landowners plan future woodland improvements, Table 12. As in the instance of improvements made in the past, a significant majority of landowners with large timber tracts plan future improvements. Similarly, it is seen that only as minority of landowners with smaller timber tracts plan future improvements, although the percentage of small landowners with such plans is greater than of those actually making improvements in the past, especially in the piedmont and mountain regions.

Among those planning woodland improvements in the foreseeable future, the pattern of intended improvements by type and geographic region is similar to that of past improvements, Table 13. In a majority of instances the practice of prescribed burning is the intended improvement, followed by planting and timber stand improvement practices.

Among Georgia landowners not intending to invest in woodland improvements, the most frequently cited reasons were that the improvements were not needed or that there wasn't a sufficient stand to warrant making them, Table 14. Competing landowner interests, especially agricultural pursuits, was the most frequently cited reason in the piedmont region and ranked third statewide. Except

TABLE 7 PERCENT OF FARMS PLANNING TIMBER SALES IN NEXT 5 YEARS BY GEOGRAPHIC REGIONS AND TIMBER TRACT SIZE

| TRACT SIZE IN ACRES | GEOGRAPHIC REGIONS GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
|---|---|---|---|---|
| 100 OR LESS | 10.4 | 7.1 | 12.9 | 17.2 |
| 101 TO 400 | 14.9 | 11.7 | 23.5 | 0.0 |
| OVER 400 | 44.4 | 45.2 | 41.7 | 50.0 |
| ALL FARMS | 15.4 | 13.3 | 19.4 | 14.0 |

TABLE 8 PERCENT OF FARMS MAKING FOREST IMPROVEMENTS IN PAST 10 YEARS BY GEOGRAPHIC REGIONS AND TIMBER TRACT SIZE

| TRACT SIZE IN ACRES | GEOGRAPHIC REGIONS GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
|---|---|---|---|---|
| 100 OR LESS | 17.4 | 21.9 | 8.3 | 10.3 |
| 101 TO 400 | 26.6 | 38.3 | 9.0 | 0.0 |
| OVER 400 | 68.9 | 74.2 | 50.0 | 100.0 |
| ALL FARMS | 25.2 | 34.8 | 11.7 | 11.6 |

in the mountain region, where almost 1 in 5 landowners mentioned it, a lack of money was not ranked high as a reason for not planning woodland improvements. The noneconomic reasons that the landowner was too old or that the landholding was part of an unsettled estate were advanced by about 1 in 5 landowners. Finally, only about 1 in 12 of the noninvesting landowners justified their intentions by citing the unprofitability of the investments.

## Landowner Attitudes

A woodland improvement is considered generally to be a good investment by large and small landowners in all three geographic regions of Georgia, Tables 15 and 16. Statewide, 2 out of 3 landowners consider it a good investment while less than 1 in 10 consider it a bad investment. About 1 in 5 landowners voiced uncertainty about the investment merits of a woodland improvement. A variety of reasons were advanced by landowners to explain positive or negative.

While a large majority of landowners considered a woodland improvement to be a good investment, it will be recalled that only a minority of landowners intended to make improvements over the foreseeable future. Moreover, when asked to rank the desirability of various uses of funds from a timber sale, most landowners gave a low priority to the planting or other improvement of the cutover timberland, Table 19. Statewide, 2 out of 3 landowners gave a high priority to a farm or business use (including debt payoff) of the funds from a timber sale. Home improvement, car, child's education, or other personal use of the funds was ranked 1st or 2nd in desirability by almost half of the landowners. An investment of the timber sale proceeds in forestry was about on par with investments in land, real estate, stocks, and bonds. Only among landowners with farms larger than 500 acres did these long-term investment uses of funds from a timber sale rank as high as personal use of the funds, Table 20. And current use of the funds in the farm business was considered to be much more important by large and small landowners alike.

Finally, although the survey was undertaken in the summer of 1982 only 1 in 3 landowners was yet aware of federal tax incentives for reforestation signed into law on October 14, 1980, Table 21. The incentive of a 10 percent tax credit for tree planting costs in the year of the investment plus the amortization of the costs as a tax deducation over a 7 year period could prove to be a decisive influence, especially for large landowners.

TABLE 9 FREQUENCY OF FOREST IMPROVEMENTS OVER PAST 10 YEARS BY TYPE AND GEOGRAPHIC REGIONS

| IMPROVEMENT TYPE | GEORGIA | | GEOGRAPHIC REGIONS COASTAL | | PIEDMONT | | MOUNTAIN | |
|---|---|---|---|---|---|---|---|---|
| | NUMBER | ACRES | NUMBER | ACRES | NUMBER | ACRES | NUMBER | ACRES |
| | | | | PERCENT | | | | |
| TREE PLANTING | 34.5 | 18.4 | 30.3 | 15.7 | 61.3 | 97.4 | 60.0 | 98.3 |
| TIMBER STAND IMPROVEMENT | 15.0 | 6.1 | 13.6 | 6.2 | 25.8 | 2.6 | 40.0 | 1.7 |
| PRESCRIBED BURNING | 50.0 | 75.5 | 56.1 | 78.1 | 12.9 | --- | --- | --- |
| TOTAL | 264 | 31,441 | 228 | 30,400 | 31 | 922 | 5 | 119 |

TABLE 10 COMPLAINTS ABOUT FOREST AND IMPROVEMENTS BY FARM SIZE

| FARMS RESP. COMPLAINTS | FARM SIZE IN ACRES 500 OR LESS | OVER 500 | TOTAL |
|---|---|---|---|
| | PERCENT | | |
| COST TOO MUCH | 41.7 | 27.3 | 34.7 |
| NOT ENOUGH FIP | 16.7 | 18.3 | 17.4 |
| POOR SEEDLING SURVIVAL | 16.7 | 9.1 | 13.0 |
| POOR LAND CLEARING | 8.3 | 9.1 | 8.7 |
| PLANTING PROBLEMS | 0.0 | 18.2 | 8.7 |
| OTHER | 16.7 | 18.2 | 17.4 |
| TOTAL FARMS | 12 | 11 | 23 |

TABLE 11 SOURCE OF FINANCE FOR FOREST IMPROVEMENTS BY FARM SIZE

| FARMS RESP. SOURCE | FARM SIZE IN ACRES: 500 OR LESS | OVER 500 | TOTAL |
|---|---|---|---|
| | PERCENT | | |
| TIMBER SALE | 22.6 | 52.3 | 32.8 |
| FIP COST-SHARE | 22.6 | 38.6 | 28.1 |
| OTHER INCOME | 60.7 | 50.0 | 57.0 |
| TOTAL FARMS | 84 | 44 | 128 |

TABLE 12 PERCENT OF FARMS PLANNING FORESTLAND IMPROVEMENTS BY GEOGRAPHIC REGIONS AND TIMBER TRACT SIZE

| TRACT SIZE IN ACRES | GEOGRAPHIC REGIONS: GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
|---|---|---|---|---|
| 100 OR LESS | 21.2 | 19.7 | 20.2 | 28.6 |
| 101 TO 400 | 35.6 | 39.1 | 30.9 | 25.0 |
| OVER 400 | 64.4 | 61.3 | 75.0 | 50.0 |
| ALL FARMS | 31.2 | 32.9 | 28.9 | 28.6 |

TABLE 13 PERCENT OF PLANNED WOODLAND IMPROVEMENTS BY TYPE AND GEOGRAPHIC REGIONS

| IMPROVEMENT TYPE | GEOGRAPHIC REGIONS: GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
|---|---|---|---|---|
| TREE PLANTING | 27.0 | 22.4 | 67.7 | 60.0 |
| TIMBER STAND IMPROVEMENT | 15.0 | 14.0 | 20.5 | 40.0 |
| PRESCRIBED BURNING | 58.0 | 63.6 | 11.8 | 0.0 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 14 REASONS FOR NO PLANNED WOODLAND IMPROVEMENTS BY GEOGRAPHIC REGIONS

| FARMS RESPONDING REASON | GEOGRAPHIC REGIONS: GEORGIA | COASTAL | PIEDMONT | MOUNTAIN |
|---|---|---|---|---|
| | PERCENT | | | |
| NOT NEEDED | 21.6 | 24.0 | 17.9 | 18.2 |
| STAND NOT SUFFICIENT | 18.4 | 21.3 | 10.3 | 27.3 |
| OTHER INTERESTS | 17.6 | 9.3 | 35.9 | 9.1 |
| DON'T HAVE MONEY | 12.0 | 13.3 | 7.7 | 18.2 |
| TOO OLD | 11.2 | 9.3 | 15.4 | 9.1 |
| UNSETTLED OWNERSHIP | 9.6 | 12.0 | 5.1 | 9.1 |
| UNPROFITABLE | 8.0 | 5.3 | 12.8 | 9.1 |
| OTHER REASONS | 8.0 | 5.3 | 7.7 | 9.1 |
| TOTAL FARMS | 125 | 75 | 39 | 11 |

TABLE 15 WOODLAND IMPROVEMENT IS A GOOD INVESTMENT BY FARM SIZE

FARM SIZE IN ACRES

| FARMS RESPONDING | 500 OR LESS | OVER 500 | GEORGIA |
|---|---|---|---|
| | PERCENT | | |
| YES | 66.5 | 80.8 | 69.5 |
| NO | 9.0 | 6.1 | 8.4 |
| UNCERTAIN | 24.5 | 13.1 | 22.1 |
| TOTAL | 376 | 99 | 475 |

TABLE 16 WOODLAND IMPROVEMENT IS A GOOD INVESTMENT BY GEOGRAPHIC REGIONS

GEOGRAPHIC REGIONS

| FARMS RESPONDING | GEORGIA | COASTAL | PIEDMONT | MOUNTAIN |
|---|---|---|---|---|
| | PERCENT | | | |
| YES | 69.5 | 71.5 | 65.2 | 72.1 |
| NO | 8.4 | 8.8 | 7.0 | 11.6 |
| UNCERTAIN | 22.1 | 19.7 | 27.8 | 16.3 |
| TOTAL FARMS | 475 | 274 | 158 | 43 |

TABLE 17 REASONS GIVEN FOR YES RESPONSES TO GOOD INVESTMENT BY FARM SIZE

| FARMS RESP. REASON | 500 OR LESS | OVER 500 | GEORGIA |
|---|---|---|---|
| | PERCENT | | |
| MAKES MONEY | 12.3 | 5.6 | 10.5 |
| INCREASES RETURN | 17.6 | 28.2 | 20.4 |
| GOOD FOR LONG TERM | 21.1 | 15.5 | 19.6 |
| GROWING TIMBER DEMAND | 8.3 | 15.5 | 10.2 |
| BETTER TIMBER RESULTS | 13.7 | 12.7 | 13.5 |
| KEEPS LAND IN TOP PRODUCTION | 8.8 | 12.7 | 9.8 |
| INCREASES LAND VALUE | 4.9 | 2.8 | 4.4 |
| OTHER REASONS | 20.1 | 23.9 | 21.5 |
| TOTAL FARMS | 204 | 71 | 275 |

TABLE 18 REASONS GIVEN FOR NO RESPONSES TO GOOD INVESTMENT BY FARM SIZE

| FARMS RESP. REASON | 500 OR LESS | OVER 500 | GEORGIA |
|---|---|---|---|
| | PERCENT | | |
| RETURN TOO LOW | 17.2 | 33.3 | 20.0 |
| TOO OLD | 17.2 | 0.0 | 14.3 |
| INVESTMENT TOO LONG | 10.3 | 16.7 | 11.4 |
| FARMING PRIMARY INTEREST | 10.3 | 33.3 | 14.3 |
| LAND NOT SUITABLE | 17.2 | 16.7 | 17.2 |
| HIGH TAXES | 3.4 | 16.7 | 5.7 |
| COSTS TOO HIGH | 10.3 | 0.0 | 8.6 |
| RISK OF BEETLES | 3.4 | 16.7 | 5.7 |
| HIGH INTEREST RATES | 3.4 | 0.0 | 2.9 |
| OTHER | 17.2 | 0.0 | 14.3 |
| TOTAL FARMS | 29 | 6 | 35 |

TABLE 19 PREFERRED USE OF FUNDS FROM A TIMBER SALE BY GEOGRAPHIC REGIONS

| PREFERRED USES | GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
|---|---|---|---|---|
| | GEOGRAPHIC REGIONS | | | |
| FARM OR BUSINESS | 67.9 | 71.9 | 62.0 | 67.9 |
| LAND OR REAL ESTATE | 18.7 | 19.2 | 18.7 | 18.7 |
| FOREST IMPROVEMENT | 23.3 | 25.0 | 21.1 | 23.3 |
| HOME OR PERSONAL | 45.2 | 44.2 | 44.6 | 45.2 |
| STOCKS OR BONDS | 27.5 | 23.3 | 36.1 | 27.5 |
| TOTAL | 502 | 292 | 166 | 44 |

TABLE 20 PREFERRED USE OF FUNDS FROM A TIMBER SALE BY FARM SIZE

| PREFERRED USES | 500 OR LESS PERCENT | OVER 500 PERCENT | GEORGIA PERCENT |
|---|---|---|---|
| | FARM SIZE IN ACRES | | |
| FARM OR BUSINESS | 66.9 | 71.8 | 67.9 |
| LAND OR REAL ESTATE | 17.0 | 25.2 | 18.7 |
| FOREST IMPROVEMENT | 21.3 | 31.1 | 23.3 |
| HOME OR PERSONAL | 48.9 | 31.1 | 45.2 |
| STOCKS OR BONDS | 27.3 | 28.2 | 27.5 |
| TOTAL FARMS | 399 | 103 | 502 |

TABLE 21 PERCENT OF LANDOWNERS AWARE OF FEDERAL REFORESTATION TAX INCENTIVE BY GEOGRAPHIC REGIONS

| FARMS RESPONDING | GEORGIA PERCENT | COASTAL PERCENT | PIEDMONT PERCENT | MOUNTAIN PERCENT |
|---|---|---|---|---|
| | GEOGRAPHIC REGIONS | | | |
| YES | 34.9 | 44.9 | 21.1 | 21.4 |
| NO | 65.1 | 55.1 | 78.9 | 78.6 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 |

# LITERATURE CITED


1. Holemo, Fred J. and Peter J. Dyson. 1971. Landowner Attitudes and Practices Concerning Timber Production and Marketing in the Piedmont Region of Georgia. Georgia Forest Research Paper 66, 12pp.
2. Holemo, Fred J. and E. Evan Brown. 1975. A Profile of the Private Non-industrial Forest Landowner in Georgia's Coastal Plain. Georgia Forest Research Paper 82, 16pp.
3. Montgomery, Albert A. and Robert L. Chaffin. 1982. The Economic Importance of Georgia's Forest Industry. Georgia Forest Research Paper 27, 27pp.
4. Montgomery, Albert A. 1982. A Survey of Forest Practice Vendors and Services in Georgia. Georgia Forest Research Paper 36, 19pp.
5. Mullaney, Gary E. and Vernon L. Robinson. 1980. Forest Investment by Non-industrial Private Landowners in Georgia. Georgia Forest Research Paper 12, 5pp.

**John W. Mixon, Director**

**J. Fred Allen, Chief of Forest Research**