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Educational Needs of Southern Forest Landowners

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Abstract: *South-central United States forest landowners were surveyed to determine their forestry-related educational needs and appropriate methods for promoting effective programs covering desired topics. The majority of respondents had not participated in past educational programs because they were unaware of their existence. Therefore, forestry professionals and university Extension personnel should inform and encourage nonindustrial private forest (NIPF) landowners to take advantage of available opportunities. They should also use tax rolls to develop forest landowner databases. Once developed, newsletters, pamphlets, brochures, or letters should be mailed to increase forest landowner knowledge and awareness of forestry-related educational programs and activities.*

Introduction

Forestry and forest products are important economic components for the South. Forest land is one of the major land uses and offers social, environmental, and economic opportunities for landowners. These opportunities are the result of an extensive forest land base, forest ownership dominated by approximately 4.3 million nonindustrial private forest (NIPF) landowners, highly productive forests, diverse timber markets, and opportunities for fee hunting, pine straw production, agroforestry, and other alternative land use enterprises (Birch, 1997; Butler & Leatherberry, 2004; Hubbard, 1999; Jones, Munn, Grado, & Jones, 2001; Powell, Faulkner, Darr, Zhu, & MacCleery, 1994).

Unfortunately, most NIPF landowners are not realizing the full benefit of their forest land (Measells et al., 2005). Landowners with small- to mid-sized tracts of land generally lack forestry knowledge and training, thus making their lands less productive and more often neglected than that of other ownership categories. Landowners are frequently unfamiliar with the maze of federal and state agencies and/or programs available and thus make limited use of their forest land resources.

Fortunately, the factors that prevent landowners from realizing the full potential of their forest land are related to a lack of willingness, capital, knowledge, and consequent passive management strategies more so than unproductive land (Gan & Kolison, 1999). Knowledge can be gained, and NIPF landowners can adopt active management strategies if they so desire by attending educational programs and participating in other related activities.

If forestry professionals and university Extension personnel intend to develop effective educational and outreach efforts, this will require knowing more about NIPF landowners. While Birch (1997) and Butler and Leatherberry (2004) surveyed private forest landowners in the South, little information was collected on their socio-demographics and educational needs. These landowners and their lands are extremely diverse, and represent a wide spectrum of social, environmental, and economic conditions.

Few NIPF landowners have large ownerships, possess considerable forestry expertise, or actively manage their forest land. Many landowners have small acreages of forest land, own land "in common" with other family members, do not realize the economic potential of their forest, and are less likely to implement environmental protection practices. Therefore, information is needed on the perceived needs of NIPF landowners and the most effective ways to encourage them to act on behalf of their forests and the opportunities that will follow.

Because few studies actually research the educational needs of NIPF landowners, our primary study objective was to assess southern NIPF landowners forestry-related educational needs. This required knowledge of their past forestry-related experiences and future educational desires. This knowledge will lead to the development and implementation of more effective educational programming techniques on the part of forestry professionals and university extension personnel. In this way, programs will be designed to meet the needs of this audience. Improving landowners' basic forestry knowledge and coinciding management and business aspects of land ownership will lead to enhanced economic viability of forest landowners and an improved quality of life for individuals and families as well as the communities where they reside.

Methods

The states included in the study were Arkansas, Louisiana, Mississippi, and Tennessee. These states were chosen because they are contiguous, had willing cooperators, and represent the south-central U.S. The project utilized both focus groups and a mail questionnaire.

Twelve moderated focus group sessions (three per state) were held in dispersed geographical locations within each state. A total of 97 landowners participated in these sessions: 24 from Arkansas, 31 from Louisiana, 21 from Mississippi, and 21 from Tennessee. Each focus group session was moderated by the same individual, audio recorded, and transcribed. Responses to each focus group session, coupled with professional judgment from the research team, provided content material for the mail questionnaire. After questionnaire development, 21 landowners from educational workshops across Mississippi were asked to carefully review, complete, and make suggestions for improvement. After reviewing the pilot-tested questionnaires, the instrument was refined. The final questionnaire was four pages and contained 44 questions.

Thirty percent of counties/parishes from each state were randomly selected for sampling. This resulted in the selection of 23 Arkansas counties, 20 Louisiana parishes, 25 Mississippi counties, and 29 Tennessee counties. Forest landowner databases consisting of all landowners owning 10 or more acres of uncultivated agricultural land were obtained from the respective county and parish tax rolls. Landowners were then randomly selected (using a random number generator) from each county for a total of 1,500 landowners per state (6,000 total). This methodology was similar to that used by Kluender and Walkingstick (2000) in their study of Arkansas landowners.

Multiple mailings were used in the questionnaire implementation (Dillman, 2000; Salant & Dillman, 1994). A reminder postcard was sent to non-respondents 1 week after receipt of the initial mailing. One follow-up mailing consisting of a cover letter and questionnaire was sent to those who had not responded after the third week. A business reply return envelope addressed to Mississippi State University was included in all questionnaire mailings. All data was statistically analyzed using the Statistical Package for the Social Sciences (SPSS).

Results and Discussion

A total of 1,689 completed questionnaires were returned. After accounting for undeliverable surveys, deceased landowners, and landowners who did not own forest land, the adjusted rate of return was 30.7%. Individually, the return rate was 28.9% for Arkansas (n=406), 29.9% for Louisiana (n=426), 29.8% for Mississippi (n=375), and 33.9% for Tennessee (n=482). This return rate was comparable to other NIPF landowner studies such as Arano, Cushing, and Munn (2002), Bovee and Holley (2003), Kluender and Walkingstick (2000), and Newsom, Cashore, Auld, and Granskog (2003).

Landowners ranged in age from 22 to 94 years, with an average age of 61.1. Forty-two percent (n=715) of landowners reported a total household income of less than $60,000, while 27% (n=457) reported total household income between $60,000 and $120,000, and 12% (n=198) indicated a total household income greater than $120,000. The remaining 19% (n=319) did not report total income. Forty-nine percent (n=824) of landowners reported having a college degree (Associate or higher). Only 6% (n=97) received less than a high school education, similar to what Kuhns, Brunson, and Roberts (1998) reported for Utah (4%) and Indiana (6%) landowners.

Seventy-nine percent (n=1,337) of respondents were Caucasian, 4% (n=70) African American, 10% (n=165) Native American, and 3% (n=44) reported other. Four percent (n=73) of landowners did not report their ethnic background. The 10% Native American figure was higher than ethnic population statistics for this area. This most likely consists of individuals considering themselves native-born Americans as opposed to descendants of immigrant Americans. Females comprised 22% (n=365) of respondents while males encompassed 75% (n=1,268). Only 3% (n=56) did not reveal their gender.

Respondents reported owning a total of 739,663 acres. Of this amount, 425,735 acres

(58%) were reported as forest land (land at least 10% stocked by forest trees of any size). Forest land acreage was 89,670 in Arkansas, 209,492 in Louisiana, 73,579 in Mississippi, and 52,994 in Tennessee. Overall, 79% (n=1,335) of landowners had a somewhat positive to positive attitude toward forestry. By state, 74% of Arkansas, 81% of Louisiana, 82% of Mississippi, and 80% of Tennessee landowners reported a somewhat positive to positive attitude. Ninety-one percent (n=1,539) felt owning forest land was a good investment.

Only 11% (n=177) reported having a written forest management plan, which is higher than the 5% reported by Birch (1997) and the 3% Butler and Leatherberry (2004) reported for southern forest landowners, but comparable to the 9% Bovee and Holley (2003) reported for Oklahoma landowners and lower than the 16% for Minnesota landowners detailed by Baughman, Cervantes, and Rathke (1998).

As anticipated, 60% (n=1,014) of respondents reported they had not previously received information on forestry. This trend ranged from 50% in Mississippi, 53% in Louisiana, 65% in Arkansas, to 69% in Tennessee. Correspondingly, 86% (n=1,457) had never attended a forestry-related educational program, which is slightly more than 80% of Alabama landowners who had neither formal nor informal forestry training through educational programs or meetings (Zhang, Warren, & Bailey, 1998).

These data indicated that a majority of NIPF landowners in this 4-state region were not taking full advantage of the numerous programs and activities available, which is similar to the data from other states. Landowners' top reasons why they had not attended educational programs were because they were unaware of their existence (61%), lack of time (29%), and lack of interest (15%). These results were consistent across the four states. Because 61% of landowners were unaware of educational programs, it is imperative that these landowners be made aware of future programs.

We were interested in learning what forest landowners desired in educational programs, such as time of day, day of the week, program length, and setting (i.e., location) of program. Downing and Finley (2005) found that 34% of individuals wanted evening meetings.

We found that 46% (n=776) of respondents preferred evening (after 5p.m.) programs, while 22% (n=368) wanted morning programs. As for day of the week, 34% (n=570) preferred Tuesday, 32% (n=533) Thursday, and 27% (n=462) Monday. The top two days were the same for all four states. However, Arkansas landowners slightly preferred Wednesday meetings over Monday, and Mississippi landowners preferred Saturday programs before Wednesday and Monday. Overall, the least preferred days were Friday (19%) and Sunday (6%), which was consistent across all four states. In contrast to our study, Downing and Finley (2005) reported Pennsylvania landowners favored Saturday meetings followed by Monday.

Respondents thought the best length for educational programs to be 2 hours (29%,

n=486), with the second preference being a half-day program (20%, n=342). A majority of landowners (58%, n=982) indicated they would be willing to attend forestry-related educational programs of short duration held during consecutive weeks. Fifty-eight percent (n=973) believed a combination of an indoor and outdoor setting would be best to help educate them about forestry.

Landowners were also asked which topics would be of greatest interest to them at future educational programs or activities. Munn and Rucker (1994) pointed out most landowners lack adequate experience and knowledge in forest management and timber marketing. Likewise, respondents' preferred topics of interest were wildlife management (46%), insects/diseases (43%), marketing (43%), harvesting (38%), and Best Management Practices (BMPs) (38%) (Table 1). Interestingly, the top responses for each state only differed slightly. The top responses were similar to those reported by Baughman, Cervantes, and Rathke (1998), Birch (1997), Downing and Finley (2005), and Grado, Measells, Habig, and Capella (2002).

Table 1.
Top Five Topics Nonindustrial Private Forest Landowners Want to Learn More About During Forestry-Related Educational programs in Arkansas (n=406), Louisiana (n=375), Mississippi (n=426), and Tennessee (n=482)

Topic	Arkansas		Louisiana		Mississippi		Tennessee	
	No.	%	No.	%	No.	%	No.	%
Wildlife management	212	52.2	185	43.4	143	38.1	230	47.7
Insects/ diseases	187	46.1	163	38.3	155	41.3	216	44.8
Marketing timber	167	41.1	185	43.4	165	44.0	202	41.9
Harvesting					143	38.1	187	38.8
Best Management Practices					144	38.4		
Hardwood management	175	43.1					183	38.0
Cost-share programs	165	40.6						
Regeneration			164	38.5				

Prices			159	37.3				

In that 61% (n=888) of respondents had not previously attended educational programs and activities because they were unaware of these programs, it was important to determine their desired methods to be informed about future programs. Top methods for informing landowners were consistent across the four state region and included newsletters (49%), pamphlets/brochures (44%), and letters (31%) (Table 2). Forestry professionals and university Extension personnel should strongly consider these preferred conveyances when attempting to inform and encourage NIPF landowners to take advantage of forestry-related programs, services, and activities. By being notified of programs, landowners can attend, interact with their peers and professionals, and become more knowledgeable on ways to properly manage their forest land, thereby realizing the full range of benefits from owning forest land.

Table 2.
Most Preferred Methods by Which Nonindustrial Private Forest Landowners Would Like to Be Informed About Forestry-Related Educational Programs in Arkansas (n=406), Louisiana (n=375), Mississippi (n=426), and Tennessee (n=482)

Method	Arkansas		Louisiana		Mississippi		Tennessee	
	No.	%	No.	%	No.	%	No.	%
Newsletters	186	45.8	218	51.2	182	48.5	247	51.2
Pamphlets/ brochures	176	43.3	207	48.6	150	40.0	215	44.6
Letters	130	32.0	137	32.2	123	32.8	130	27.0
Magazine	81	20.0	61	14.3	54	14.4	99	20.5
Newspaper	60	14.8	61	14.3	59	15.7	73	15.1
E-mail	60	14.8	64	15.0	50	13.3	67	13.9

Summary

Questionnaire responses provided insights about NIPF landowners, their educational needs and desires, and appropriate methods for promoting effective programs covering desired topics. Given that the majority of respondents had not participated in past

educational programs and activities because they were unaware of their existence, it is clear that forestry professionals and university Extension personnel must be proactive and inform and encourage NIPF landowners to take advantage of these programs, services, and activities.

Forestry professionals and university Extension personnel should develop forest landowner databases based on tax roll data. Once this database is developed, newsletters, pamphlets, brochures, or letters should be mailed to increase forest landowners' knowledge and awareness of forestry-related educational programs and activities. This will possibly lead to better educated forest landowners who will actively manage their forest land.

Of future interest, NIPF landowners can be periodically solicited by mail survey to see if progress has been achieved through this research-based outreach effort. This baseline study will provide an anchor point for such comparisons. Study results may only be applicable to this study area; however, our methods can be applied to other audiences in other regions of the country, each with their own subject matter areas.

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