

EDUCATING LANDOWNERS FOR SOUTHERN PINE BEETLE PREVENTION IN MISSISSIPPI: A COLLABORATIVE PROJECT WITH THE FOREST SERVICE AND MISSISSIPPI STATE UNIVERSITY

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Abstract—The southern pine beetle (SPB) is the most destructive pest in southern pine forests, accounting for millions of dollars of damage annually across the region. Since most of the forest land in the South is owned by Non-Industrial Private Forest landowners (NIPF) and they are the likely to sustain the largest losses during beetle outbreaks. This group is the target group for performing SPB prevention activities as they are likely to sustain the largest losses during beetle outbreaks. This project was initiated to provide educational programs relating to the SPB and pine plantation thinning to NIPF landowners and professional foresters in Mississippi. Funds provided by the Forest Service were used to conduct 37 educational programs statewide for 1,245 participants. Follow up surveys will be conducted with these participants to determine if they have implemented any SPB prevention activities on their property as a result of the programs. Additional follow-ups will be conducted with those who have performed prevention activities so their information can be added to the overall project database. Future plans for this project will also be discussed.

INTRODUCTION

The southern pine beetle (SPB) is the most damaging of all pests in southern pine forests. The SPB and its associates (ips engraver beetles and the black turpentine beetle) cause millions of dollars of timber damage every year in high-hazard condition stands (Mayfield and others 2006). As SPB spots grow, the potential to cause widespread timber damage to all pine stands, regardless of stand condition or ownership boundaries increases.

Most of the forestland in the South is owned by private non-industrial forest landowners (NIPF) (Birch 1996). It is with these landowners that the SPB and its associates pose the greatest threat. Targeting these NIPF landowners for SPB prevention has gained a lot of interest in recent years across the southern region (Mayfield and others 2006).

The Forest Service, Southern Region, Forest Health Protection has joined in collaborative efforts with all the southern states to conduct SPB prevention activities on NIPF forest lands. The overall goal is to reduce the overwhelming negative impacts the SPB can have on NIPF timberlands.

The 2006 Mississippi SPB prevention project is among the SPB pine prevention programs in that the Forest Service is working directly with the Mississippi State University Extension Service and the Departments of Forestry and Entomology and Plant Pathology, rather than the state forestry agency. This project is based entirely on the education of NIPF landowners across the state, rather than cost share programs employed by many other southern states.

This paper will describe the activities being conducted as part of the 2006 Mississippi Southern Pine Beetle Prevention project. In addition, future activities for this project for 2007 and beyond will be discussed.

METHODS

The education program is being conducted primarily by the extension forestry group in the Department of Forestry, with support from the Department of Entomology and Plant Pathology at Mississippi State University (MSU). MSU Extension forestry has a long record of conducting educational programs for NIPF landowners, as well as professional foresters across Mississippi and the southern region (Londo and Monaghan 2002). The SPB educational program consists of county forestry association (CFA) meetings, workshops, publications, and mass media.

County Forestry Associations (CFAs)

CFAs are county based landowner groups, affiliated with the Mississippi Forestry Association. These groups have provided ready made audiences for extension forestry programs for years. For the SPB prevention project, individual CFAs were contacted to determine their interest level for such a program. Funds provided by the Forest Service were used to sponsor the meal at these programs. This encouraged 100 percent participation by those CFAs contacted.

The hour-long program given at these meetings was comprised of a comprehensive review of the biology,

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identification, and management activities for the SPB and its associates. Proactive management activities (namely pine plantation thinnings, and planting the right species on the right site) were emphasized during these meetings as being the best way to reduce the overall threat of the SPB. In most cases, 4-6 weeks following the CFA program, a pine plantation thinning workshop was conducted in the same county, as a follow up for the CFA meeting.

Pine Thinning Workshop

Forest landowner workshops were designed to provide more intensive, hands on training in specific subject areas (Londo 2004). The most popular of the workshops taught by MSU Extension Forestry is "Are My Pine Trees Ready to Thin"? This workshop begins with an hour long indoor "lecture" covering the basics of pine ecology, growth, thinning techniques, and the southern pine beetle. Following the indoor lecture period, is an outdoor laboratory session where participants are taught to collect some basic forest measurements information. Information collected includes average DBH, total heights, heights to natural pruning, and stems per acre (Traugott 2000, Londo and others 2002). The equipment needed to conduct the workshop (clinometer, D-tape, loggers tape, height pole, and increment borer) is provided by project funds. The equipment is made available to CFA members through their County Extension Office. Data on how often this equipment is being used will be collected in late 2006.

Although the overall goal of the region wide project is to get actual acres thinned on the ground, a survey will be sent to all CFA meeting and Pine thinning workshop participants to determine if they have undertaken any SPB prevention activities (namely thinning) on their property. Site visits will be held with those who indicated that they have thinned their stands as a result of the program they attended. Acreages thinned, as well as GPS point data will be collected for addition to the overall southern region database.

Publications

The preferred method for Mississippi NIPF landowners to obtain information is through publications (Gunter and others 2001). At all programs, a folder with publications on the SPB along with pine plantation thinning are provided. In addition, these publications are also made available on the MSUCares.com/forestry web page. To date, approximately 9,000 publications have been distributed statewide.

Radio

The MSU Extension Service has a daily radio program called Farm and Family. This program is available on a number of radio stations statewide, as well as on the internet at MSUCares.com. Friday has been called forestry Friday for over two decades. Many of these forestry Friday radio

shows in 2006 have discussed the SPB and pine plantation thinning. While the actual impact of these programs is difficult to determine, they do help improve the awareness of the SPB and its implications for forest management in Mississippi.

RESULTS

To date, a total of 37 SPB prevention programs have been conducted for 1, 247 participants. These programs can be broken down as follows: 18 CFA meetings, 16 workshops, 1 short course, 1 Society of American Foresters chapter meeting, and one extension service in-service training program. There are 6 remaining programs to be conducted for the remainder of FY 2006, and early FY 2007.

We have directly distributed approximately 9,000 publications through these programs. In addition, 1,300 SPB landowner packets are being sent to select counties throughout the state for a total publication distribution of approximately 10,300.

Program participants will be surveyed during the fall of 2006 to determine if they have implemented any SPB prevention activities since attending the educational programs. Participants, who indicate that they have done some prevention activities, will be contacted for a follow up site visit. The site visit is needed so that acreages and GPS locations for those properties will be collected for incorporation in the region wide data base.

FUTURE DIRECTIONS

For 2007 and beyond, Mississippi will follow the lead of many other southern states by implementing a cost share program for NIPF landowners. This cost share program will encourage landowners to conduct pre-commercial and first commercial thinnings on high hazard pine stands. This will be done again in conjunction with the Forest Service, as well as the Mississippi Forestry Commission. While the guidelines for this have yet to be developed, the Mississippi guidelines will be modeled closely after the Texas Forest Service program (Billings 2005).

CONCLUSION

The 2006 Mississippi SPB prevention project is a collaborative effort between the Forest Service and the Departments of Forestry and Plant Pathology and Entomology at Mississippi State University. The project is designed to provide educational programs in SPB biology and management and pine plantation thinning for NIPF landowners across Mississippi. To date, 36 programs have

been conducted for 1,245 participants statewide. In addition, over 9,000 publications have been distributed.

Surveys will be sent to program participants to determine if they have implemented any prevention activities on their property as a result of the programs. These surveys will be sent out in the fall for 2006.

2007 will see a continuance of the educational program, as well as the addition of a cost share program for pre-commercial and first thinnings for pine stands and plantations. We will be collaborating with the Forest Service as well as the Mississippi Forestry Commission.

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