



Southern Pine Beetle Predictions for 2010

The Mississippi Forestry Commission participates annually in a south-wide southern pine beetle (SPB) survey. The Texas Forest Service has developed a reliable system for predicting SPB infestation trends (increasing, static, declining) and levels (low, moderate, high, outbreak) that has been implemented across the South since 1986. This information provides forest managers with valuable insight for better anticipating SPB outbreaks and more lead-time for scheduling detection flights and preparing suppression programs.

During the spring (April – May) of 2010 surveys were conducted by the Mississippi Forestry Commission (MFC) in the following counties: Carroll, Claiborne, Forrest, Itawamba, Lamar, Lincoln, Lowndes, Kemper, Madison, Marion, Panola, Scott, Smith, and Tishomingo.

Very few if any SPB infestations are expected during 2010 in Mississippi. Of the counties surveyed by the MFC SPB was trapped in only eight counties. Less than 20 SPB's were trapped

in six of the eight counties. In Tishomingo County, 170 SPB's were trapped and in Claiborne County 89 were trapped. These numbers are extremely low but indicate that there still remains a low residual population in the state. However, trap results suggest that we will continue to experience declining low-level populations in Mississippi during 2010

Surveys utilize baited Lindgren funnel traps with the SPB attractant (frontalin) and host compounds (alpha-pinene and beta-pinene) set out in pine forests when dogwoods begin to bloom and pine pollen begins to fly. These events mark the primary dispersal season for the SPB as well as certain beneficial insects. The traps are monitored weekly for a four-week period. Of particular value for forecasting purposes are catches of clerids (also referred to as checkered beetles), known predators of SPB. Using data on the average number of SPB captured per trap per day and the relative proportion of SPB to checkered beetles, infestation trends for the current year can be forecast.

Annual predictions of infestation trends have proven to be 75-85% accurate. Collectively, trend predictions from numerous specific locations provide insight into SPB population shifts within a given state as well as across the South. Also, comparison of trapping results for the current year with those from the previous year for the same localities provides additional insight into SPB population changes. All of which suggest very low levels of SPB activity can be expected in Mississippi during 2010. However, it is always good management practices to walk over your property or have it surveyed to detect any signs of early build up of damaging agents.

In general, average trap catches that exceed 30 SPB per day, especially those in which SPB make up more than 35% of the total catch (of SPB and clerids), are indicative of increasing or continued high SPB infestation levels in the current year. Conversely, when catches of predators far outnumber those of SPB and fewer than 20 SPB adults are caught per day, infestation trends are likely

to decline or remain at low levels. It is uncertain whether the predator population is directly responsible for declines in SPB outbreaks. Most likely, predators are just one of many contributing factors.

Landowners with pine stands throughout the range of SPB are encouraged to take advantage of these low SPB population levels to thin overly-dense pine stands as a preventive measure before the next SPB outbreak occurs. Federal cost shares for pre-commercial thinning of natural or planted pine stands and first thinning of pulpwood stands are available in many states as part of the SPB Prevention Program. Contact your state forest pest specialist for details. Also check out the link on the MFC home page concerning the SOUTHERN PINE BEETLE PREVENTION PROGRAM.

Appreciation is expressed to Dr. Ronald Billings, Texas Forest Service, at (979) 458-6650 or rbillings@tfs.tamu.edu for development of the system and for providing south-wide summaries and predictions of which portions have been included here. The results for the entire south-wide survey are posted on the Texas Forest Website.

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