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# **Sustaining Pecan Productivity Into the 21st Century**

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## DISTRIBUTION AND SPORULATION OF OVERWINTERED SCAB LESIONS ON PECAN SHOOTS

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Overwintered lesions on pecan shoots are a major source of initial inoculum for epidemics of pecan scab, caused *Cladosporium caryigenum*, the most economically important disease of pecans in the southeastern U.S. Experiments were conducted to determine the distribution of lesions within the pecan tree canopy and the duration of spore production from shoot lesions. Samples of 1-year-old shoots from trees that had been treated with fungicide during the previous seasons were compared with shoots from trees that had been treated with fungicide during the previous season were compared with shoots from trees that received no fungicide. Samples were collected prior to budbreak in 1992 and 1993 from the upper, middle and lower thirds of the canopy of unsprayed trees. In both years, there were significantly more lesions per meter of shoot in the upper third of the canopy than in the lower two thirds, regardless of whether trees received fungicide treatment the previous year. Shoots in the upper third were also significantly longer and more vigorous than shoots in the lower third of the canopy. The duration of inoculum production from overwintered lesions was determined by quantifying production of conidia from lesions on samples of 1-yr-old shoots collected at regular intervals during the spring of 1992 and 1993. In both years, production of conidia declined steadily from June to August. In 1992, production of conidia from shoot segments was greatest from late March through mid-April. Spore production declined rapidly during the last two weeks in April. Although sporulation was greatly reduced during the summer, lesions continued to produce small numbers of conidia even as late as August.

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