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Evaluation of *Aposphaeria amaranthi* as a Potential Bioherbicide for *Amaranthus*

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Laboratory and field studies were conducted to determine the potential of *Aposphaeria amaranthi* as a bioherbicide for *Amaranthus*. Experiments conducted to establish the environmental parameters necessary for control of *Amaranthus albus* demonstrated effective control at temperatures ranging from 20-28°C with a minimal dew period of 8 h. The onset of free moisture could be delayed up to 72 h if followed by a dew period of 12 h. Seedling plants with up to 8 leaves were readily killed by the fungus but older plants became increasingly resistant. Host range tests demonstrated that disease susceptibility was limited to the Amaranthaceae. Field studies conducted in 1989 and 1990 resulted in 99% control of *A. albus* and 73% control of *A. retroflexus* at the highest application rate within three wk of application.