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— Program and Abstracts



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IDENTIFICATION AND CHARACTERIZATION OF FUNGICIDE RESISTANCE IN *BOTRYTIS CINEREA* FROM STRAWBERRY

Resistance to multiple chemical classes of fungicides is well documented in *Botrytis cinerea* from small fruits in Germany and France but little is known about the resistance situation in the United States. We investigated 216 *B. cinerea* isolates from strawberry fields from North and South Carolina using a germination assay and over 800 isolates from a total of 11 states using a mycelial growth assay for sensitivity to seven different classes of fungicides currently used for gray mold control in the United States. The two datasets were very similar and indicated widespread resistance to thiophanate-methyl, pyraclostrobin, and boscalid. Resistance to fenhexamid and cyprodinil was also found in many states but few isolates were detected with resistance to iprodione and fludioxonil. Some isolates were resistant to five fungicides, each from a different chemical class. An investigation into the molecular mechanisms revealed that resistance to thiophanate methyl, pyraclostrobin, boscalid, and fenhexamid was always associated with point mutations in respective target genes. A regional resistance monitoring program was implemented to help growers determine location-specific resistance profiles.