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ABSTRACTS - Oral Presentations

A sustainable approach to *Phytophthora*-infested landscape beds: the search for tolerant or resistant annuals and herbaceous perennials

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Many ornamental nursery crops are susceptible to diseases caused by species of *Phytophthora*, a genus of fungal-like organisms that can persist in soil for many years. Since chemical applications are not economical or practical for managing *Phytophthora*-infested landscape beds, knowledge of *Phytophthora*-resistant or tolerant plant species would provide a sustainable approach. In 2018, one or two cultivars of 15 annuals and 12 herbaceous perennials were evaluated based on desirability and anecdotal evidence of tolerance or resistance to *Phytophthora*. Six plant cultivars served as susceptible controls. Three landscape beds were established in North Carolina and infested with three species of *Phytophthora*: *P. nicotianae*, *P. tropicalis*, and *P. drechsleri*. Plants were regularly rated for disease incidence and appearance and symptomatic plants were assayed to determine the presence of *Phytophthora*. Ten cultivars of annuals and seven cultivars of herbaceous perennials appeared excellent throughout the season. *Phytophthora* spp. were recovered from six and five cultivars of the evaluated annuals and herbaceous perennials, respectively. *Phytophthora nicotianae, P. drechsleri*, or *P. cryptogea* were recovered from each susceptible host. *Phytophthora tropicalis* was recovered from one evaluated plant cultivar. *Phytophthora cryptogea* was recovered from three cultivars, although this species was not intentionally introduced in the landscape beds. This study identifies 17 plant cultivars that can be used as alternatives in landscape beds infested with *Phytophthora*.