

Molecular variability and pathogenesis of *Phoma medicaginis* var.  
*medicaginis* isolates from Minnesota

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*Phoma medicaginis* var. *medicaginis*, the causal agent of spring black stem and leaf spot on alfalfa, causes serious losses in yield and quality worldwide. Alfalfa varieties usually exhibit low to moderate levels of resistance. This study was undertaken to determine the molecular and pathogenic variability of *P. m.* var. *medicaginis* isolates from different environments and plant organs. A collection of 71 single spore isolates from northern and southern areas of Minnesota was used. Amplified Fragment Length Polymorphism (AFLP) analysis allowed separation of the majority of the isolates into two groups, which correlated with the northern and southern locations. Currently, additional isolates and primer-pair combinations are being evaluated in order to detect if there is organ specialization. In addition, isolates from different locations and organs are being tested to determine if there are differences in pathogenicity. This research will provide information on the population structure *Phoma medicaginis* var. *medicaginis*.