

## Race variability of *Colletotrichum trifolii* in Australia

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Anthracnose and crown rot, caused by *Colletotrichum trifolii* are serious diseases of lucerne (*Medicago sativa* L.) in humid regions of the world. A race survey was conducted by inoculating individual lucerne clones (genotypes) with *C. trifolii* isolates collected from a range of *Medicago* hosts, locations and years in Southeast Queensland. This survey revealed for the first time in Australia the presence of race 2 (virulence on anthracnose resistance gene An<sub>1</sub>) and the first world report of race 4 (new) (virulence on An<sub>2</sub>). A RAPD analysis was conducted on 9 Australian *C. trifolii* isolates including races 1, 2 and 4; two *C. destructivum* and one *C. gloeosporioides* isolate were included as known outliers. For the *C. trifolii* isolates, 94.6% similarity was found regardless of host origin or race, compared to 2.2% similarity between this group and the *C. gloeosporioides* and *C. destructivum* isolates, confirming that the new races belong to *C. trifolii*. Currently, it is hypothesised that only plants carrying genes An<sub>1</sub> and An<sub>2</sub> are resistant to the three races. Of 22 cultivars screened against the three races, only UQL-1, Hallmark and Pioneer 54Q53 had >30% of plants resistant to the three races in separate screenings. The research highlights the need to find new sources of resistance to *C. trifolii* in lucerne.