MONITORING FUNGAL LEAF AND STEM DISEASES IN BIRDSFOOT TREFOIL AND RED CLOVER SEED FIELDS

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Four regions from the major forage legume seed production area in Uruguay were monitored for fungal leaf and stem diseases from November 1994 to January 1995. Within each region, three birdsfoot trefoil and three red clover seed fields were sampled three times from closing date to harvest, at regular intervals of 3-4 weeks. One hundred sampling units (stems) were taken from each field, following a W sampling pattern. Incidence and severity were assessed separately for leaf and stem diseases, and causal organisms were isolated and identified. Incidence was expressed as percent diseased units relative to the total units assessed. Severity was rated using an 8-class visual scale for leaf spots (0 = without symptoms; 7 > 50% diseased area) and a 5- class visual scale for stem spots (0 = without symptoms; 4 > 50% diseased area). For birdsfoot trefoil, leaf spot incidence varied from 28 to 100% and severity from 0.31 to 4.42; stem spot incidence varied from 2 to 78% and severity from 0.02 to 1.37. *Stemphylium* and *Colletotrichum* were the most frequently isolated fungi (94% and 72%) from leaves and stems, respectively. For red clover, leaf spot incidence varied from 7 to 100% and severity from 0.07 to 5.29; stem spot incidence varied from 3 to 100% and severity from 0.03 to 3.48. *Stemphylium* and *Colletotrichum* were again the most frequently isolated fungi (87% and 64%) from leaves and stems, respectively. The widespread occurrence of leaf and stem fungal diseases in seed fields of both legumes over different regions supports the potential role of them limiting seed production. Despite differences among regions and fields, incidence and severity showed a trend to gradually increase over successive sampling dates, indicating an association between days after closing date and disease levels, which should be studied in more detail. The simultaneous occurrence of several pathogenic fungi on leaves and stems of both legumes (referred to as a "disease complex") has important epidemiological implications, which should be considered when implementing disease control strategies.

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