

NEW DISEASE REPORT

First report of *Rhizoctonia cerealis* causing sharp eyespot in *Panicum virgatum* in the UK

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Panicum virgatum (switchgrass) is an important American range grass that has been shown to have potential as a bioenergy crop in Britain (Christian & Riche, 1999). Sharp eyespot symptoms were first observed on stems of *P. virgatum* in July 2000 in a field experiment at Rothamsted Farm, Harpenden, Hertfordshire, UK. Lesions with a pale centre and sharply defined brown edges, characteristic of those observed on winter wheat, were present at the stem base and upwards to approximately 20 cm. The severity of disease increased throughout the summer; lesions enlarged and coalesced, eventually girdling the stem.

Sections (2 cm long) cut from infected stems were surface-sterilized and plated on potato dextrose agar (PDA). *Rhizoctonia cerealis*, identified by colony morphology (Boerema & Verhoeven, 1977), was recovered consistently from infected plant material.

Pathogenicity tests of hyphal-tip isolates were carried out in a controlled-environment cabinet (15°C, 16 h day; 10°C, 8 h night cycle) on 8-week-old seedlings of three cultivars of *P. virgatum* (Blackwell, Cave-in-Rock, Kanlow) and 8-day-old seedlings of winter wheat (*Triticum aestivum*) cv. Hereward. Seedlings were inoculated at the stem base with one of three isolates of *R. cerealis* from *P. virgatum*, grown on PDA. The compost surface was covered with a thin layer of sand to retain moisture. Control plants were inoculated with a plug of uncolonized PDA.

Characteristic lesions of sharp eyespot were observed on *P. virgatum* and winter wheat plants 3 weeks after inoculation. *R. cerealis* was re-isolated from inoculated plants. Control plants did not develop symptoms.

Rhizoctonia solani has been reported to infect leaves and stems of *Panicum* species, including *P. maximum*, in Japan (Takashi & Yoshinori, 1999) and to infect *P. miliaceum* in India (Rajagopalan *et al.*, 1992). This is the first report of *R. cerealis* infecting *P. virgatum*.

References

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