First report of *Rhizoctonia solani* AG 4 HG-III causing root rot of pepper in Kyrgyzstan

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Pepper (*Capsicum annuum* L.) is one of the important vegetable species grown in Kyrgyzstan. In 2019, approximately 4% of mature pepper plants showed root rot symptoms in three fields located in Bishkek city. Symptomatic segments excised from necrotic lesions on root were surface sterilized with 1% NaOCl, washed twice in sterilized water, blotted on sterile filter paper, and plated on Potato Dextrose Agar (PDA) amended with streptomycin sulfate. Hyphal tips were transferred to new plates containing PDA to obtain pure cultures, after two-day incubation period at 25 °C. Three isolates were selected to identify from morphologically similar fungal colonies. The young hyphae exhibited characteristics of *Rhizoctonia* spp.; the presence of relatively broad septate hyphae, acute angular branching near the distal septum, and multinucleated cells (4 to 8 nuclei for per cell). These morphological features were consistent with those of *Rhizoctonia solani* Kühn. The internal transcribed spacer (ITS) region of rDNA of three isolates was amplified and sequenced using ITS1/ITS4 primers to determine anastomosis group (AG) of the isolates. BLASTn analysis of the 724 bp products

(accession Nos. MT460102-460104) were identical and showed 100% nucleotide similarity with those of the sequence of *R. solani* AG 4 HG-III (AF354076). To confirm pathogenicity, the roots of six-week-old seedlings of pepper cv. Dila were inoculated with isolate “4 A-4” infested wheat kernels, and the trials carried out in six replications (Türkkan et al. 2018). Typical symptoms appeared on all inoculated seedlings, similar to those observed originally in the field, two weeks after inoculation. No symptoms were observed on control seedlings treated with sterile wheat kernels. The pathogen was consistently isolated from the inoculated seedlings onto PDA, thereby confirming Koch’s postulates. To our knowledge, this is the first report of *Rhizoctonia solani* AG 4 HG-III causing root rot of pepper in Kyrgyzstan (Farr and Rossman 2020).

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Research involving human participants and/or animals The authors declare that no human participants and animals were involved in this study.

Informed consent This manuscript is new and not being considered elsewhere. All authors have approved the submission of this manuscript.

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