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Occurrence of *Aletrnaria alternata* as causal agent of seed rot of *Matthiola longipetala* in Serbia

Maja IGNJATOV ^{1*}, Dragana MILOŠEVIĆ ¹, Zorica NIKOLIĆ ¹, Vera POPOVIĆ ¹,
Gordana TAMINDŽIĆ ¹ and Žarko IVANOVIĆ ²

¹ Institute of Field and Vegetable Crops, Maksima Gorkog 30, 21000 Novi Sad, Serbia; maja.ignjatov@nsseme.com

² Institute for Plant Protection and Environment, Teodora Drajzera 9, 11000 Belgrade, Serbia; zarko.ivanovic@yahoo.com

Correspondence: maja.ignjatov@nsseme.com; Tel.: +381648706085

INTRODUCTION

Night-scented stock (*Matthiola longipetala* L.) is the ornamental grown worldwide and in Serbia, it is mostly used for gardening. *Alternaria alternata* (Fr.) Keissl. is the most common pathogen infecting numerous crop plants and occurring in various climatic zones, rarely kill plants and seeds, but reduce their aesthetic quality and commercial value. *A. alternata* is known to be a common saprotroph, however, there are several reports of the pathogen causing disease on different hosts. The aim of the work was to determine the *A. alternata* species associated with *M. longipetala* seed in the Republic of Serbia.

MATERIAL AND METHOD

During a routine quality control of *M. longipetala* seeds, in 2018, fungal infection followed by seed rot, was noticed on an average of 17%. Seeds were covered by dark brown mycelium with brown to black conidia cohering in long chains. In order to isolate the pathogen, the infected seed was transferred onto potato dextrose agar (PDA) and incubated for 7 days at 20°C. For morphological identification, 22 isolates were single-spored and subcultured using PDA.

RESULTS AND DISCUSSION

Pathogenicity was confirmed using the *in vitro* agar slant method in the test tube. The pathogen was successfully re-isolated and found to be morphologically identical to the original isolates, fulfilling Koch's postulates. Molecular identification was confirmed by PCR and sequencing of the transcribed spacer (ITS) region using ITS1/ITS4 primers. BLAST analysis of the obtained sequence of sample 4089/1 (GenBank Acc. No. MK061539) showed 100% nucleotide similarity to sequences of three *Alternaria alternata* isolates Acc. No. MF380728 and MH820121.

CONCLUSION

Based on morphological characteristics, all isolates were identified as *Alternaria alternata*. To our knowledge, this is the first report of *A. alternata* as the causal agent of seed rot of *Matthiola longipetala* in Serbia.

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