

## DISEASE NOTE

**FIRST REPORT OF LEEK YELLOW STRIPE VIRUS IN GARLIC FROM INDIA****N. Gupta<sup>1</sup>, K. Prabha<sup>1</sup>, S. Islam<sup>2</sup> and V.K. Baranwal<sup>1</sup>**<sup>1</sup>Plant Virology Unit, Division of Plant Pathology, Indian Agricultural Research Institute, New Delhi 110012, India<sup>2</sup>Division of Vegetable Science, Indian Agricultural Research Institute, New Delhi 110012, India

Light yellow striping of the leaves and stunting were observed in different garlic cultivars in an experimental field at the Indian Agricultural Research Institute (Delhi, India) in December 2011. Cloves and leaves from 3-month-old plants of 21 different cultivars were collected and tested by DAS-ELISA with antisera to *Onion yellow dwarf virus* (OYDV) and *Leek yellow stripe virus* (LYSV) (Bioreba, Switzerland). Four out of the 21 cultivars were positive for LYSV, whereas all of them were positive for OYDV. To confirm the presence of LYSV, total RNA was extracted from 100 mg of LYSV-positive leaves with the RNeasy plant mini kit (Qiagen, USA) and used in RT-PCR with specific primers 5'-CAGGRACWTTTAGTGTDCACG-3' and 5'-ACCATCRAGATGGTGCATCCG-3' designed on conserved regions of the coat protein (CP) gene. Sequencing of the ca. 656 bp amplicon from cultivar AC-50 confirmed the presence of LYSV. To further characterize LYSV in AC-50, the full length CP gene was amplified with primers 5'-GCTGGTGAGGAGATTGATG-3' and 5'-CTGCATATGCGCACCATC-3'. The 864 bp nucleotide sequence obtained from the cloned PCR product showed 83% identity with LYSV isolate VN/L3 from Vietnam (GenBank accession No. DQ925453) and 90% amino acid sequence identity with a LYSV isolate from Myanmar (GenBank accession No. BAJ04729). Several viruses are known to occur in garlic in India (Baranwal *et al.*, 2011) but, to our knowledge, this is the first report of LYSV. This finding prompts the need for evaluating the impact of LYSV on Indian garlic cultivars and for producing virus-free plants.

Baranwal V.K., Singh P., Jain R.K., Joshi S., 2011. First Report of *Garlic virus X* Infecting Garlic in India. *Plant Disease* 95: 1197.

Corresponding author: Dr. V. K. Baranwal

Fax: +91.11.25843113

E-mail: vbaranwal2001@yahoo.com

Received October 6, 2013

Accepted October 15, 2013

## DISEASE NOTE

**FIRST REPORT OF WEB BLIGHT ON NIGELLA DAMASCENA CAUSED BY RHIZOCTONIA SOLANI AG 1-B IN ITALY****A. Garibaldi, D. Bertetti, G. Ortu and M.L. Gullino**

Centre for Agro-Environmental Innovation (AGROINNOVA), University of Turin, Via Leonardo da Vinci 44, 10095 Grugliasco (TO), Italy

In spring 2013, a blight was observed on plants of *Nigella damascena* growing in a nursery on the Agroinnova premises (Grugliasco, northern Italy). Semi-circular, water-soaked lesions were visible on leaves and stems. Blighted leaves turned brown, withered, and matted on the surrounding foliage. Eventually, infected plants died. *Rhizoctonia solani* was consistently recovered from infected tissues. Three isolates were successfully anastomosed with *R. solani* isolate AG 1 (ATCC 58946) (Carling, 1996). Mycelium and micro-sclerotia observed *in vitro* were typical for Type 1-B. The internal transcribed spacer (ITS) region of rDNA was amplified using the primers ITS1/ITS4 and sequenced (GenBank Accession No. KF719317). BLASTn analysis (Altschul *et al.*, 1997) of the 498 bp amplicon showed 98% homology with the sequence of *R. solani* HF678125. For pathogenicity tests, 60 healthy plants of *N. damascena* were inoculated with wheat kernel cultures (3 g/l) of a single isolate of *R. solani*. The first symptoms developed 3 days post inoculation. *R. solani* was constantly reisolated from affected plants. This is the first report of *R. solani* on *N. damascena* in Italy.

Altschul S.F., Madden T.L., Schaffer A.A., Zhang Z., Miller W., Lipman D.J., 1997. Gapped BLAST and PSI-BLAST: a new generation of protein database search programme. *Nucleic Acids Research* 25: 3389-3402.

Carling D.E., 1996. Grouping in *Rhizoctonia solani* by hyphal anastomosis reactions. In: Sneh B., Jabaji-Hare S., Neate S., Dijkstra G. (eds). *Rhizoctonia* Species: Taxonomy, Molecular Biology, Ecology, Pathology and Disease Control, pp. 37-47. Kluwer Academic Publishers, Dordrecht, The Netherlands.

Corresponding author: M.L. Gullino

Fax: +39.011.6709307

E-mail: marialodovica.gullino@unito.it

Received October 21, 2013

Accepted October 25, 2013