

DISEASE NOTE

**FIRST REPORT OF OCCURRENCE
OF AERIAL BLIGHT (*RHIZOCTONIA
SOLANI*) OF SOYBEAN IN IRAN**

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Aerial blight is an important disease of soybean (*Glycine max* L.) in some countries. In the summer of 1998, blight symptoms were noticed in a soybean field in the suburb of Babol in Mazandaran Province (northern Iran) and a widespread outbreak was observed in the same area in 1999. Symptoms initially appeared as round, water-soaked lesions on the leaves that later turned brown and necrotic, and were surrounded by a reddish brown border. The blight often began at the base of the petioles and progressed in a fan-shaped pattern to the trifoliate leaves. Abundant, large, dark brown sclerotia formed on blighted tissues. In some fields, almost complete blighting of the foliage occurred, and the disease progressed through direct contact between healthy and diseased plants. A multinucleate *Rhizoctonia* spp. was consistently isolated from blighted tissue. The fungus produced large [1.4 (0.5 to 3.5) × 1.6 (0.5 to 4) µm] brown sclerotia after a week on potato dextrose agar (PDA). Minimum, optimum, and maximum temperatures for growth were 10, 28, and 35°C, respectively. The growth rate at optimum temperature averaged 35 mm per day. On the basis of colonial and mycelial characteristics, the fungus was identified as *Rhizoctonia solani* Kühn and its anastomosis group was determined as AG 1-IA, based on anastomosis tests with standard AG tester isolates (Ogoshi, 1987; Kim, 1996) and cultural characteristics. Pathogenicity of representative isolates was tested by placing mycelial disks from the margin of a fungal colony on the leaves of soybean plants grown at 25-28°C and more than 90% relative humidity for one week. Inoculated leaves showed symptoms of aerial blight within a week, and the fungus was reisolated from the infected leaves. This is the first report from Iran of the occurrence of aerial blight of soybean caused by *Rhizoctonia solani* AG 1-IA.

Kim W.G., 1996. Pathogenicity of anastomosis groups and cultural types of *Rhizoctonia solani* on crops. *Korean Journal of Plant Pathology* 12: 21-32.

Ogoshi A., 1987. Ecology and pathogenicity of anastomosis and intraspecific groups of *Rhizoctonia solani*. *Annual Review of Phytopathology* 25: 125-143.

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**FIRST REPORT OF *AGERATUM
YELLOW VEIN VIRUS* INFECTING
*SONCHUS OLERACEUS***

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Sonchus oleraceus is a common weed in the south of China. In a field survey, yellow vein disease was found commonly in *S. oleraceus* plants. To investigate what pathogen caused the disease, two virus isolates (G129 and G130) were collected from *S. oleraceus* plants showing yellow vein symptom in Baise (Guangxi Province) in December 2005. Total DNA was extracted from symptomatic leaves (Xie *et al.*, 2002) and by using PCR with degenerate primers PA and PB, designed to amplify part of the intergenic region and AV2 gene of begomovirus DNA-A (Zhou *et al.*, 2003). A 500 bp amplicon was obtained from total plant DNA extracted from plants infected with G129 or G130. The amplicons were cloned and sequenced. The sequences (AM940137-38) differed by only 6 nucleotides (98.9% nucleotide sequence identity), suggesting the plants had been infected by a single virus. Primers G129F (5'-ATCGCAAGCCCAGACTC-TAC-3') and G129R (5'-CGATACATGGGCCTGTTGGT-3') were then used to amplify the full length DNA-A of G129. The complete DNA-A sequence was 2747 nucleotides (AM940137) and comparison with DNA-A of other begomoviruses showed that G129 DNA-A had the highest sequence identity (92.6%) with that of *Ageratum yellow vein virus* isolate G68 (AJ849916). These results confirm that the *S. oleraceus* plants were infected by AYVV. To the best of our knowledge this is the first report of AYVV infecting *S. oleraceus*.

Xie Y., Zhou X.P., Li Z.H., Zhang Z.K., Li G.X., 2002. Identification of a novel DNA molecule associated with tobacco leaf curl virus. *Chinese Science Bulletin* 47: 1273-1276.

Zhou X.P., Xie Y., Peng Y., Zhang Z.K., 2003. Malvastrum yellow vein virus, a new *Begomovirus* species associated with satellite DNA molecule. *Chinese Science Bulletin* 48: 2205-2209.

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