Disease Notes

First Report of Plectosporium Blight on Pumpkin Caused by *Plectosporium tabacinum* in Alabama. J. M. Mullen and E. J. Sikora, Department of Entomology and Plant Pathology, Auburn University, Auburn, AL 36849. Plant Dis. 87:749, 2003; published on-line as D-2003-0416-01N, 2003. Accepted for publication 6 April 2003.

In October of 2001, *Plectosporium tabacinum* (van Beyma) M.E. Palm, W. Gams, & H.I. Nirenberg (formerly known as *Microdochium tabacinum* (von Arx, 1984) and *Fusarium tabacinum* (Gams & Gerlagh, 1968)) was observed in field plantings of pumpkin (*Cucurbita pepo* L.) in Cullman and Jackson counties in north Alabama. Symptoms were white or tan, spindle-shaped lesions on the stems and leaf petioles and slightly raised, corky, white or light brown lesions on pumpkin fruit and fruit stems. Pumpkin symptoms were identical to a previous description of *P. tabacinum* (published as *M. tabacinum*) on pumpkin, zucchini, and yellow summer squash (1). Disease severity ranged from less than 10% stem tissue damage on pumpkins in Cullman County to 40 to 45% stem tissue damage on pumpkins in Jackson County. A field section of pumpkins in Jackson County sprayed with azoxystrobin (Quadris 2.08F, 0.20 kg a.i./ha) alternated weekly with chlorothalonil (Bravo Ultrex, 2.44 kg a.i./ha) beginning at vine-run had stem damage of approximately 5% compared to approximately 45% stem damage on pumpkins in an unsprayed field section. A 50% reduction in marketable fruit due to *P. tabacinum* was observed in the unsprayed field section compared to the section sprayed weekly with fungicides. When thin slices of lesions were taken from stem and fruit surfaces using a scalpel and examined microscopically, one- or two-celled, hyaline, bilaterally symmetric spores, 7.0 to 8.5 × 2.8 to 3.0 µm were observed. The ends of the spores were slightly narrowed and rounded. Spore characteristics were identical to previous descriptions of *P. tabacinum* produced in culture and on diseased pumpkins and squash (2,3). Surface-sterilized tissue from fruit lesion margins was plated on potato dextrose agar and incubated under light (Sylvania Gro-Lux, 40w) with a light/dark cycle of 12 h at 23°C. After 10 days, spores were observed that were similar to those from fruit except they were multiguttulate and had a phialide arrangement. The fungal mycelium was pale pink to pale orange and closely appressed to the agar. Fungal characteristics in culture agree with a previous description of *P. tabacinum* in culture (2). To our knowledge, this is the first report of *P. tabacinum* in Alabama.

References: (1) S. C. Bost and C. A. Mullins. Plant Dis. 76:861, 1992. (2) M. E. Palm et al. Mycologia 87(3):397, 1995; (3) T. A. Zitter. Microdochium blight. Page 28 in: Compendium of Cucurbit Diseases. T. A. Zitter, D. L. Hopkins, and C. E. Thomas, eds. The American Phytopathological Society, St. Paul, MN, 1996.

First Report of a Leaf Blight of Onion Caused by *Xanthomonas* spp. in Georgia. F. H. Sanders, D. B. Langston Jr., J. H. Brock, and R. D. Gitaitis, Department of Plant Pathology, University of Georgia, Coastal Plain Experiment Station, Tifton 31793; D. E. Curry, University of Georgia Cooperative Extension Service, Lyons 30436; and R. L. Torrance, University of Georgia Cooperative Extension Service, Reidsville 30453. Plant Dis. 87:749, 2003; published on-line as D-2003-0409-02N, 2003. Accepted for publication 16 March 2003.

In October of 2001 and 2002, a leaf blight was reported affecting Vidalia onion (*Allium cepa*) cvs. Pegasus and Sweet Vidalia, respectively, in one field each. Lesions on onion seedlings began as a water-soaked, tip dieback that gradually blighted the entire leaf. Symptoms on onion transplants appeared as elongated, water-soaked lesions that typically collapsed at the point of initial infection. In both cases, disease was very severe on seedlings, and disease incidence was 50% or more in both fields. Warm temperatures combined with overhead irrigation and above average rainfall likely enhanced the severity and spread of disease. Disease was not detected on more mature onions once cool, dry conditions occurred later in the season, and no significant economic loss occurred. Seed was tested from seed lots of the aforementioned cultivars and *Xanthomonas* spp. were not found. Diseased tissue was macerated in sterile, phosphate-buffered saline, and 10 µl of the resulting suspension was streaked on nutrient agar plates. Yellow-pigmented, gram-negative, rod-shaped bacteria were isolated routinely from diseased tissue. Bacteria were catalase-positive, cellulolytic, oxidase-negative, amylolytic, proteolytic, and utilized glucose in an oxidative manner. Analysis of whole cell, fatty acid methyl esters (FAME) using the Microbial Identification System (MIS, Sherlock version 3.1; MIDI, Inc., Newark, DE) identified four representative strains of the bacterium as a pathovar of *Xanthomonas axonopodis* (similarity indices 0.75 to 0.83). Known *Xanthomonas* spp. from onion from Colorado and Texas (1,2) had similar FAME profiles when analyzed by the MIDI system. Onion plants were grown under greenhouse conditions for 2 months and inoculated by injecting the base of a quill with 1.0 ml of bacterial suspensions (1×10^7 CFU ml^{-1}) of the *Xanthomonas* sp. isolated from Georgia, and negative controls were inoculated with 1 ml of sterile water. Disease symptoms developed on plants inoculated with bacterial suspensions in 4 to 7 days and *Xanthomonas* sp. was isolated from the lesions produced. Disease symptoms occurred when the same suspension was sprayed on onion foliage. No symptoms occurred on plants inoculated with 1 ml of sterile water. To our knowledge, this is the first report of *Xanthomonas* spp. affecting Vidalia onions.

References: (1) T. Isakeit et al. Plant Dis. 84:201, 2000. (2) H. F. Schwartz and K. Otto. Plant Dis. 84:922, 2000.

First Report of Resistance to Metalaxyl in Downy Mildew of Sunflower Caused by *Plasmopara halstedii* in Spain. M. L. Molinero-Ruiz and J. M. Melero-Vara, Department of Crop Protection, IAS–CSIC, Apdo. 4084, Cordoba, Spain; T. J. Gulya, USDA–ARS Northern Crop Science Laboratory, Fargo ND 58105-5677; and J. Dominguez, Department of Breeding and Agronomy, CIFA–"Alameda del Obispo", Apdo. 3092, Cordoba, Spain. Plant Dis. 87:749, 2003; published on-line as D-2003-0403-01N, 2003. Accepted for publication 18 March 2003.

Fifty-two isolates of *Plasmopara halstedii* Farl. Berl. & de Toni (causal agent of sunflower downy mildew) collected from sunflower (*Helianthus annuus* L.) in Spain from 1994 to 2000 were evaluated for metalaxyl resistance. The pathogen was identified on the basis of the morphology of the sporangiophores and zoosporangia recovered on the underside of the leaves (2). Metalaxyl (Apron 20% LS) at 2.0 g a.i./kg of seed (labeled European rate) was applied as seed dressing to the susceptible sunflower 'Peredovik'. There were two replications of 40 plants, and the test was repeated three times. Inoculum (sporangia bearing zoospores) was produced on artificially inoculated plants. Seed were germinated in a humidity chamber at 28°C for 24 to 48 h. When the radicle was 0.5 to 1.0 cm long, untreated and treated seedlings were inoculated by dipping the entire plant in an aqueous suspension of 6.0 × 104 sporangia per ml for 4 h, planted in a sand/perlite mixture (2:3 vol/vol), and grown at 16 to 21°C with a 12-h photoperiod. Plants were incubated for 24 to 48 h at 100% relative humidity and 15°C in the dark to enhance sporulation. After 12 days, disease incidence (DI) of inoculated plants was determined as a percentage of plants displaying sporulation of the fungus on the cotyledons and/or true leaves (3). DI was 95 to 100% for the untreated seedlings, but mildew did not develop on seedlings treated with metalaxyl for 51 of the isolates. The remaining isolate caused symptoms on 67% of the treated plants. This isolate was tested in another experiment in which 'Peredovik' seed was treated with metalaxyl at 0, 0.5, 2.0, 3.5, and 5 g a.i./kg of seed. There were four replications of 12 seedlings per treatment, and seedlings were inoculated as described previously. DI in the untreated control was 77%, which was not significantly different from the DI for seed treated with metalaxyl at 0.5, 2.0, and 3.5 g a.i./kg of seed (97, 73, and 96%, respectively). DI for seed treated with metalaxyl at 5.0 g a.i./kg of seed was 37%, which was significantly lower than the other treatments. Although resistance of *P. halstedii* to metalaxyl has been reported in France (1), to our knowledge, this is the first report of resistance of sunflower downy mildew to metalaxyl in Spain.

References: (1) J. M. Albourie et al. Eur. J. Plant Pathol. 104:235, 1998. (2) G. Hall, Mycopathologia 106:205, 1989. (3) M.L. Molinero-Ruiz et al. Plant Disease 86:736, 2002.

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