Fruit Rot of Pumpkin in Arkansas Caused by *Fusarium equiseti*. J. C. Correll and J. K. Mitchell, Department of Plant Pathology, and C. R. Andersen, Department of Forestry and Horticulture, University of Arkansas, Fayetteville 72701. Plant Dis. 75:751, 1991. Accepted for publication 21 February 1991.

A fruit rot of pumpkin (*Cucurbita pepo* L.) has been observed periodically in Arkansas. In 1990, a 1-ha field of pumpkin cv. Halloween had a high incidence of fruit rot; losses were estimated to be 30%. Initial symptoms included soft, sunken areas on the fruit. Lesions often became water-soaked, and mycelium was observed frequently on the fruit surface. Lesions did not always occur on the part of the pumpkin in contact with the soil and were not associated with obvious wounds. Extensively colonized fruit collapsed completely. Symptoms did not develop in some fruit until after harvest. *Fusarium equiseti* (Corda) Sacc. was consistently isolated from symptomatic fruit. Koch's postulates were completed with two pumpkin isolates of *F. equiseti* on detached mature fruit of cv. Small Sugar in a growth chamber at 32 C. Wounds were necessary for invasion and colonization of the fruit. Soft, sunken, water-soaked lesions, similar to field symptoms, developed within 30 days. Symptom development of individual fruit varied considerably. Although all inoculated wounds resulted in extensive colonization (as determined by visible mycelium and/or reisolation), not all inoculated wounds resulted in soft, sunken, water-soaked lesions. This is the first report of *F. equiseti* causing fruit rot of pumpkin.

A Parasitic Storage Rot of Sugar Beets Caused by *Aspergillus fumigatus*. J. M. Halloin, USDA-ARS, and D. L. Roberts, Department of Botany and Plant Pathology, Michigan State University, East Lansing 48824. Plant Dis. 75:751, 1991. Accepted for publication 28 February 1991.

Aspergillus fumigatus Fresen. was associated with a rot occurring on nearly one-half of a group of sugar beet (*Beta vulgaris* L.) roots stored longer than 1 wk at 35 C. Koch's postulates were satisfied with the fungus and live beets at 35 C. Disease progressed rapidly, with as little as 1 wk between first appearance of the fungus on the surface and complete rotting of a 4-kg root. *A. fumigatus* (frequently mistaken for *Penicillium* sp. because of similar gross appearance) is a common saprophyte in beet storage but is not known to be a pathogen. Because sugar beets with resistance to *Rhizoctonia solani* Kühn show resistance to some parasitic storage rots (1), roots of a commercial *Rhizoctonia*-susceptible hybrid and two breeding lines resistant to *R. solani* were inoculated with *A. fumigatus* and incubated at 30, 35, or 40 C for up to 16 days. The commercial hybrid was highly susceptible to *A. fumigatus* at 40 C, intermediate at 35 C, and resistant at 30 C. The breeding lines were susceptible to *A. fumigatus* at 40 C, slightly susceptible (infrequent, slow-developing rot) at 35 C, and resistant at 30 C. The slime-producing bacterium *Leuconostoc mesenterioides* (Tsenkovskii) van Tieghem often was found in association with *A. fumigatus* but appeared to occur as a secondary invader. Parasitic rot caused by *A. fumigatus* is a potential problem in hot spots (>30 C) within stored beets.

Reference: (1) W. M. Bugbee and L. G. Campbell. Plant Dis. 74:353, 1990.

Infection of Pepper and Tomato by *Phytophthora capsici*. G. L. Hartman, Y. H. Huang, and T. C. Wang, Asian Vegetable Research and Development Center, Shanhua, Tainan, Taiwan 74199, Republic of China. Plant Dis. 75:751, 1991. Accepted for publication 5 March 1991.

Phytophthora blight, caused by *Phytophthora capsici* Leonian, of pepper (*Capsicum annuum* L.) and late blight, caused by *P. infestans* (Mont.) de Bary, of tomato (*Lycopersicon esculentum* Miller) occur annually in Taiwan. Ho (1) recently questioned the extent of late blight occurrence and in his review of *Phytophthora* spp. occurring in Taiwan found no evidence of the fungus on tomato or any confirmed reports of late blight since 1919. We isolated *P. capsici* from blighted tomato leaves in the Hsinyi highlands of central Taiwan. Our objective was to determine the pathogenecity of *P. capsici* isolated from tomato and pepper. Thirty-day-old tomato (14 lines) and pepper (cv. Blue Star) plants were inoculated with 10^3 and 10^5 zoospores per milliliter by either atomizing foliage or drenching soil; isolate Pc 9 from blighted tomato leaves and isolates Pc 1–5 from blighted pepper stems were used. Plants were incubated in a growth room under 100% relative humidity at 28 C. Upper leaves, petioles, and stems of pepper and tomato plants were blighted 7 days after inoculation with Pc 2, Pc 4, Pc 5, and Pc 9, whereas Pc 1 and Pc 3 caused only slight necrosis of newly formed leaflets at 10^5 zoospores per milliliter. All isolates caused typical Phytophthora blight symptoms on pepper stems, but no isolate caused symptoms on tomato when soil was drenched with inoculum. Both *P. capsici* and *P. parasitica* Dast. are known to cause root and crown rot of tomato (2). Our data indicate, however, that some *P. capsici* isolates cause foliar blight of pepper and tomato but not crown rot of tomato. This apparently is the first report of *P. capsici* causing blight of tomato foliage.

References: (1) H. H. Ho. Bot. Bull. Acad. Sin. 31:89, 1990. (2) M. M. Satour and E. E. Butler. Phytopathology 57:510, 1967.

Occurrence of the Beet Leafhopper-Transmitted Virescence Agent in Red and Daikon Radish Seed Plants in Washington State. T. R. Schultz, Department of Agronomy and Soils, Washington State University, Pullman 99164-6420, and M. E. Shaw, Department of Plant Pathology, University of California, Davis 95616. Plant Dis. 75:751, 1991. Accepted for publication 15 January 1991.

Red radish (*Raphanus sativus* L.) and daikon radish (*R. sativus* cv. 'longipinnatus') seed plants showing symptoms of late proliferation of virescent flowers with elongation and fusion of sepals were observed during early July 1990 before harvest throughout much of the Columbia Basin of Washington State. Reduced pod development, seed number, and seed size were associated with these phyllody symptoms. DNA extracted from symptomatic tissue and Southern blotted to nylon membranes hybridized with a cloned fragment of the beet leafhopper-transmitted virescence agent–mycoplasmalike organism (BLTVA-MLO) plasmid DNA obtained from the type strain FC-83-13. The BLTVA-MLO has a wide host range and is transmitted by the beet leafhopper (*Circulifer tenellus* (Baker)). Healthy leafhoppers transmitted the viresence agent from naturally infected radish to periwinkle (*Catharanthus roseus* (L.) G. Don) and daikon. Transmission to daikon caused a premature induction of flowering, virescence, and phyllody, characteristic of BLTVA-MLO (1). This pathogen has been detected previously in California and southern Idaho (2), but this is the first report of its occurrence in Washington State.

References: (1) D. A. Golino et al. Plant Dis. 73:850, 1989. (2) M. E. Shaw et al. Plant Dis. 74:252, 1990.

Freeway Daisy (*Osteospermum fruticosum*) as Host for Lettuce Mosaic Virus. D. C. Opgenorth and J. B. White, California Department of Food and Agriculture, Sacramento; B. Oliver, Monterey County Agricultural Commissioner's Office, Salinas; and A. S. Greathead, University of California Cooperative Extension, Monterey County. Plant Dis. 75:751, 1991. Accepted for publication 8 March 1991.

In September 1990, mild mosaic symptoms were observed on trailing African, or freeway, daisy (*Osteospermum fruticosum* (L.) Norl.) obtained from a nursery and from plantings of the ground cover in Monterey County, California. Examination of plant samples by electron microscopy revealed a flexuous, rod-shaped virus approximately 13 × 740 nm long. The virus was easily transmitted mechanically to *Chenopodium quinoa* Willd. and to lettuce, producing symptoms similar to lettuce mosaic. Original *O. fruticosum* samples, as well as *C. quinoa* and lettuce indicator plants, tested strongly positive for lettuce mosaic virus (LMV) by an ELISA method. The virus was transmitted from infected *Osteospermum* plants by placing virus-free, healthy container-grown lettuce in areas with LMV-infected *Osteospermum* ground cover for 7 days. After a greenhouse incubation for 7 days, the lettuce plants showed symptoms of lettuce mosaic, and ELISA tests were positive for the virus. Observations and extensive mapping of patterns of LMV incidence in a field adjacent to an infected *O. fruticosum* planting strongly suggest that this plant can pose a significant threat to commercial lettuce plantings. In addition, *O. fruticosum* may serve as an alternate host that allows LMV to persist through the lettuce-free period, now used as a control measure.