

# Focus

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Crop losses in eastern Washington from ash erupted from Mount St. Helens were about \$100 million in 1980, but effects of ash on plant disease incidence were minimal, according to R. J. Cook, J. C. Barron, R. I. Papendick, and G. J. Williams III of Washington State University, Pullman. Ash deposits up to 30 kg/m<sup>2</sup> were recorded, and abrasiveness adversely affected some insects. Ash altered plant photosynthesis and soil temperature and moisture relations. (Science Vol. 211, No. 4477, 1981)

Soybean fleck is a newly recognized virus on soybean caused by a strain of tobacco rattle virus in Japan, according to K. T. Natsuaki, S. Yamashita, Y. Doi, and K. Yora of the University of Tokyo. The strain was transmitted by sap inoculation to French bean, asparagus bean, tobacco, New Zealand spinach, Chenopodium, and Gomphrena. (Ann. Phytopathol. Soc. Jpn. Vol. 46, No. 3, 1980)

Plant susceptibility to sulfur dioxide and ozone is strongly related to relative humidity, report S. B. McLaughlin and G. E. Taylor of Oak Ridge National Laboratory. Foliar uptake in red kidney beans was enhanced two- to threefold for sulfur dioxide and three- to fourfold for ozone by an increase in relative humidity from 35 to 75%. (Science Vol. 211, No. 4478, 1981)

Southern corn rust (Puccinia polysora) can cause severe yield losses, especially in late-planted corn in the South, according to R. Rodriguez-Ardon, G. E. Scott, and S. B. King of the USDA and Mississippi State University. Losses varied from 4% in early-planted corn to 45% in late-planted corn. Reduced kernel weight accounted for some but not all yield loss. (Crop Sci. Vol. 20, No. 6, 1980)

A coryneform bacterium was identified as the causal agent of ratoon stunting disease of sugarcane by M. J. Davis of Rutgers University and A. G. Gillaspie, Jr., R. W. Harris, and R. H. Lawson of the USDA, Beltsville. The bacterium was subsequently isolated from infected sugarcane in Louisiana, Brazil, South Africa, and Japan. The only known host in nature is sugarcane, but a similar isolate was found in bermudagrass. (Science Vol. 210, No. 4476, 1980)

Thirty-five genes for low reaction (Lr genes) of wheat to leaf rust (Puccinia recondita) have been named in a sequential number series and compiled by L. E. Browder of Kansas State University. The genes occur in 13 different chromosomes in all three common wheat genomes. (Crop Sci. Vol. 20, No. 6, 1980)

Velvetleaf (Abutilon theophrasti) in soybean fields significantly reduced the total number of soybean pods and the number of pods per stem through its allelopathic effect, according to C. E. Colton and F. A. Einhellig of the University of South Dakota. Interference with water balance and chlorophyll content may be an inhibitory action of toxins in velvetleaf leaves. (Am. J. Bot. Vol. 67, No. 10, 1980)

A new reservoir host for alfalfa mosaic virus is Pachysandra terminalis, according to D. E. Hershman and E. H. Varney of Rutgers University. The virus causes a line pattern and ringspot disease on pachysandra and does not differ significantly from alfalfa mosaic virus in host range or symptomatology; characteristic bacilliform particles are seen in both viruses. (APS Northeastern Division Meeting, November 1980)

Pseudomonas solanacearum causing wilt of tomato in the Philippines apparently survives in rhizospheres of such weeds as goosegrass, jungle rice, and purslane but not in rhizospheres of corn and rice. A. J. Quimio of the University of the Philippines and H. H. Chan of the Malaysian Department of Agriculture report that the incidence of wilt was lower in tomato planted after rice or corn than in tomato planted after tomato or the weeds. (Philipp. Phytopathol. Vol. 15, No. 2, 1979)