

Focus

The three most damaging diseases of wheat in Kansas in 1983 appear to be leaf rust, speckled leaf blotch, and tan spot, in which 100% incidence of infection is common, according to W. G. Willis of Kansas State University, Manhattan, and T. Sim IV of the Kansas State Board of Agriculture, Topeka. Damage is greatest in east and central counties. (Kans. Plant Dis. Surv. Rep. No. 10, 17 June 1983)

Seedling blight caused by Septoria nodorum was reported for the first time on barley by W. Fitzgerald and B. M. Cooke of University College, Dublin, Ireland. Inoculum was seedborne, and all six cultivars tested were susceptible. (Plant Pathol. 32:217-219, 1983)

Cotton plants have been regenerated from tissue culture for the first time, by researchers at Phytogen Co., Pasadena, CA. Somaclonal variation has resulted in new strains, one with improved resistance to *Verticillium* wilt. (Genet. Eng. News 3[3]:3, 1983)

Dwarf bean (Phaseolus vulgaris) infected with a toxin-producing strain of the halo blight bacterium (Pseudomonas syringae pv. phaseolicola) severely reduces nodulation by Rhizobium phaseoli, report C. N. Hale and J. C. Shanks of Dominion Scientific & Industrial Research, Auckland, New Zealand. Nontoxic strains have no effect. (Plant Sci. Lett. 29:291-294, 1983)

The gypsy moth defoliates trees with acidic young leaves poor in condensed tannins to a greater extent than trees with young leaves with a high condensed tannin concentration, according to M. J. Lechowicz of McGill University, Montreal, Canada. Fourteen tree species were examined, and those leafing out early escaped serious defoliation. (Am. J. Bot. 70[5,Part 2]:48, 1983)

Vesicular-arbuscular mycorrhizae (VAM) promoted apple, leek, and marigold plant growth in the absence of soil, even with high concentrations of soluble phosphorus, report C. Plenchette and colleagues of the Ministry of Agriculture and Laval University, Quebec, Canada. VAM stimulated root growth of all three hosts grown in calcined montmorillonite clay in nutrient solutions. (Can. J. Bot. 61:1377-1383, 1983)

Intercropped wheat and lupines compete mainly belowground, according to W. K. Gardner of the University of Melbourne, Parkville, and K. A. Boundy of Rutherglen, Australia. Wheat growing with lupines has access to a greater pool of available phosphorus, manganese, and nitrogen than wheat growing in monoculture. (Plant Soil 70:391-402, 1983)

Exudates of cotton cultivars susceptible to *Fusarium* wilt stimulated germination of conidia and chlamydospores, whereas the opposite occurred with exudates from resistant cultivars, report B. A. Youssef and R. Heitefuss of Georg-August University, Göttingen, West Germany. Wilt-resistant cultivars contained more mycorrhiza arbuscules and vesicles than did susceptible ones. (Z. Pflanzenkr. Pflanzenschutz 90:160-172, 1983)

Of 63 tree species, sugar maple, box elder, hackberry, black walnut, plane tree, and three oak species produce extracts that inhibit growth of Thiobacillus ferrooxidans, partially accountable for acid water in abandoned coal strip mines, according to V. K. Hurt of the University of Oklahoma, Norman. These tree species may be important in reclamation management. (Botanical Society of America/Canadian Botanical Association annual meeting, University of North Dakota, Grand Forks, 7 August 1983)