

# Focus

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Three new soybean cultivars have been released to certified seed growers for 1982: Fayette by Illinois, Kentucky, and Missouri; Lawrence by Illinois, Missouri, and Purdue; and Williams 82 by Illinois, Iowa, Kansas, Missouri, and Purdue. The cultivars were developed jointly by the USDA-ARS and the respective state experiment stations. (USDA-ARS Research News, NC-301, 21 January 1982)

Acid sulfate concentrations were increased in arctic snow at 74°N latitude, report R. M. Koerner and D. Fisher of Energy, Mines and Resources Canada, Ottawa. The high sulfur concentrations are attributed to mid-latitude Eurasian sources. (Nature Vol. 295, No. 5845, 1982)

The white rot fungus Phanerochaete chrysosporium added to pulp effluent removed 80% of the dark color by metabolizing the lignin, according to scientists at the USDA Forest Products Laboratory, Madison, WI. The fungi were attached to a rotating disk of a "decolorization reactor." (J. For. Vol. 80, No. 1, 1982)

An endophytic fungus specific to perennial ryegrass (Lolium perenne) appears to cause ryegrass staggers in livestock in pastures, report L. R. Fletcher of the New Zealand Department of Scientific and Industrial Research and I. C. Harvey of the New Zealand Ministry of Agriculture and Fisheries, Lincoln. This slow-growing fungus is concentrated in plant leaf sheaths. (N.Z. Vet. J. Vol. 29, No. 10, 1981)

Amounts of Rhizoctonia disease of potato were low in potato-wheat rotations and increasingly greater in potato-barley, potato-onion, and potato-corn rotations in southern Manitoba surveys by R. C. Zimmer and W. A. Russell of Agriculture Canada, Morden. Irrigation appeared to have no effect on disease in rotations with corn or onion. (Can. Plant Dis. Surv. Vol. 61, No. 2, 1981)

Mushroom yields were greater from coppices (forests derived from regrowth) than from adjacent mixed coniferous forests in Finland, according to M. Kirsi and P. Oinonen of the University of Joensuu, Finland. The higher yields were attributed to greater variability in coppice microflora. The arboricide iso-octyl ester of MCPA had no effect on species composition of mushrooms but reduced mushroom yields indirectly by changing the brush ecosystem. (Karstenia Vol. 21, No. 1, 1981)

Trichoderma hamatum accounts for 1.5% of the fungal propagules in pasture soil of Nova Scotia and may be important in causing ill-thrift in young sheep and cattle grazing in such pastures, according to D. Brewer and A. Taylor of the National Research Council of Canada, Halifax. Fifty-three isolates (1% of fungal propagules isolated) produce toxic, water-soluble metabolites, two of which are isonitrile acids. (Mycopathologia Vol. 76, No. 3, 1981)

All nine isolates of Fusarium roseum 'Graminearum' from vomitoxin-contaminated winter wheat and barley harvested in Ontario produced both vomitoxin and zearalenone when cultured on autoclaved grain, report G. A. Neish and H. Cohen of Agriculture Canada, Ottawa. This confirms the assumption that F. roseum 'Graminearum' was the source of vomitoxin contamination in the 1980 crop. (Can. J. Plant Sci. Vol. 61, No. 4, 1981)

Radicles of broomrape (Orobanche spp.) are attracted to roots of broad bean (Vicia faba) only at certain concentrations of the bean root exudate, according to P. J. Whitney and C. Carsten of the University of Surrey, England. High concentrations of host exudate affect broomrape radicles by inhibiting cell enlargement, causing broomrape to grow to host root regions with optimal exudate concentrations. (Ann. Bot. Vol. 48, No. 6, 1981)