Focus

Anaerobic nitrogen-fixing, cellulose-fermenting bacteria were isolated from mud and soil for the first time by S. B. Leschine, K. Holwell, and E. Canale-Parola of the University of Massachusetts, Amherst. These bacteria may play major roles in carbon and nitrogen cycling. (Science 242:1157-1159, 1988)

Phytotoxicology offers a supplement to organic synthesis as a means of developing and implementing new biorational herbicides, according to D. Kenfield, G. Bunkers, G. A. Strobel, and F. Sugawara of Montana State University, Bozeman. Toxins include eremophilanes, ophiobolins, curvulins, isocoumarins, resorcylides, triticones, tryptophol, and maculosins. (Weed Technol. 2:519-524, 1988)

Criteria for classifying and identifying 126 species of vesicular-arbuscular mycorrhizae and for assessing problem areas have been described by J. B. Morton of West Virginia University in Morgantown. (Mycotaxon 32:267-324, 1988)

Helminthosporium root rot of wheat affects the primary photosynthetic reactions, report Y. N. Fadeev, G. A. Tarabrin, and E. E. Bystrykh of the Institute of Applied Molecular Biology and Genetics in Moscow, USSR. The fungus and its toxins inhibit photosynthetic electron transport and phosphorylation. (Arch. Phytopathol. Plant Prot. 24:317-323, 1988)

Frequency of isolation of endophytic fungi of 100 species from Norway spruce needles decreased with increasing altitudes in Switzerland, reports V. T. Sieber of the Microbiological Institute of the Federal Technical High School in Zurich. *Lophodermium piceae* and *Tiarosporella parca* were dominant; *L. piceae* increased, whereas *T. parca* decreased, colonization from fall to winter. (Eur. J. For. Pathol. 18:321-342, 1988)

The phytoalexin rishitin produced in potato challenged with *Erwinia carotovora* is nematicidal, according to T. J. W. Alphey, W. M. Robertson, and G. D. Lyon of the Scottish Crop Research Institute, Invergowrie. Active against *Xiphinema diversicaudatum*, rishitin is toxic to bacteria and fungi at high concentrations but in soil is biodegradable. (Rev. Nematol. 11:399-404, 1988)

Aspergillus flavus is an efficient lignin-degrading promoter of soft rot in larch, according to W. B. Betts, R. K. Dart, and M. C. Ball of the University of Technology, Leicestershire, UK. (Trans. Br. Mycol. Soc. 91:227-232, 1988)

Bipolaris setariae and *Pyricularia grisea* used as mycoherbicides can control goosegrass, report S. S. Figliola, N. D. Camper, and W. R. Ridings of Clemson University in South Carolina. Host range was limited to Poaceae; corn was slightly susceptible. (Weed Sci. 36:830-835, 1988)

Rhizoctonia solani and *Fusarium oxysporum* were frequently associated with reduced emergence and stunted soybean plants in Ontario, Canada, report T. R. Anderson and T. Welacky of Agriculture Canada in Harrow and H. Olechowski of the Ontario Ministry of Agriculture and Food in Ridgetown. *F. graminearum* was also present. (Can. Plant Dis. Surv. 68:143-145, 1988)

A system involving tobacco tissue culture and *Thielaviopsis basicola* is suitable for determining molecular events in expressing quantitatively inherited resistance, report R. Gasser, H. Kern, and G. Defago of the Institute for Phytomedicine, Zurich, Switzerland. Incorporation of T-DNA from *Agrobacterium tumefaciens* induced susceptibility in resistant tissues. (J. Phytopathol. 123:105-114, 1988)