

Focus

During fiscal 1980, scientists and engineers in the U.S. Department of Agriculture, Science and Education Administration, will concentrate on research and development of IPM systems and predictive models, according to David C. Unger, Deputy Assistant Secretary for Natural Resources and Environment, Washington, DC, in a speech at the IX International Congress of Plant Protection, 5 August 1979. While many kinds of programs will be supported, one or two pilot tests will be started to integrate various control technologies into systems of national significance. Specific projects include biological control of fungi.

The first report in the Western Hemisphere of the pinewood nematode (Bursaphelenchus lignicolus) was made by Arnold Foudin of APHIS 12 April 1979 on Austrian pine (Pinus nigra) and later on Swiss mountain pine (P. mugo) in Missouri. The nematode was subsequently reported on Scots pine in Kansas, on shortleaf and loblolly pines in Arkansas, on Austrian and Scots pines in Illinois, and possibly on red pine in Minnesota. A cerambycid beetle serves as the vector. Infected trees die in 3 mo, possibly from toxins.

A new race of Helminthosporium turcicum, cause of northern corn leaf blight (NCLB), was found by M. Turner of Funk Seeds International in seed production fields in Indiana in 1979. The race can infect lines carrying the Ht genes for resistance to NCLB. This is the first report of Ht breakdown in the continental United States.

Sudden and widespread occurrence of southern corn rust (Puccinia polysora) was reported in several cornbelt states: by R. E. Hite of APHIS in Ohio, where prevalence varied from trace to 100% and severity ranged from trace to 50% in 30 commercial fields sampled in early fall of 1979; by E. G. Jordan of APHIS in Illinois in late August; and by S. Poe of APHIS in Nebraska in September. (Coop. Pest Rep. Vol. 4, Nos. 33 and 41, 1979)

A new yellows disease on sugar beets in Israel was reported by M. Klein and associates at the Volcani Center, Israel. Proliferation of the flowering stems and absence or degeneration of flowers are symptoms. No vector is known for this bacteriumlike agent, which is similar to organisms that cause Pierce's disease, phony peach, ratoon stunting in sugar cane, and plum leaf scald. The disease occurs only in Israel. (FAO Plant Prot. Bull. Vol. 27, No. 1, 1979)

"Synthetic chemicals are the main pillar of present plant protection and will continue to be an essential part of future technology," said Hans Geissbühler, Ciba-Geigy Ltd., Switzerland, in a speech at the IX International Congress of Plant Protection, Washington, DC, 5 August 1979. He provided data to show that for every dollar invested in herbicide treatment (including application), there was an increased return of \$5, over cultivation, for corn, soybeans, and wheat. Rice yields increased 65-100% in Indonesia by use of insecticides. He indicated a need for controls for wilts in crops.

What changes are foreseen in scientific communication? Are we headed for electronic publication? Not in the view of M. O'Conner, senior editor at Ciba Foundation, London, who, in the book "The Scientist as Editor" (John Wiley), stated that electronic journals may appear in the next two to three decades but along with journals printed on paper. Advances will be made in which journals are photocomposed in one continent and reproduced as bound copies in the same or another continent by means of communication satellites. Other major problems demanding attention are the high costs of books and the too-long time lag between submission and publication of information.