

Focus

A new cyst nematode, Heterodera zaeae, was found in February 1981 on corn in four fields on one farm in Kent County, Maryland, report L. Krusberg and S. Sardanelli of the University of Maryland and M. Goff of the Maryland Department of Agriculture. According to workers in India, this nematode can cause damage to corn comparable to that caused by the golden nematode or the cereal cyst nematode and is regarded as economically important. (USDA-APHIS Memo, March 18, 1981)

Triadimefon, a new systemic seed treatment fungicide, reduced the incidence of take-all in winter wheat, according to W. E. Dolezal and J. P. Jones of the University of Arkansas. The fungicide not only decreased symptoms significantly but also prevented serious yield losses in two field plantings. Delayed planting combined with seed treatment apparently controls take-all effectively. (Agrichem. Age Vol. 25, No. 3, 1981)

Application of thiram to bean seeds (Phaseolus vulgaris) inoculated with a thiram-resistant strain of Rhizobium phaseoli significantly increased dry weight and nitrogen content of plants, compared with plants either inoculated or treated with thiram, according to L. B. Lennox and M. Alexander of Cornell University. Thiram appears to suppress protozoa, especially ciliates, that feed on bacteria, which may account for enhanced bean growth and greater nodule numbers on roots. (Appl. Environ. Microbiol. Vol. 41, No. 2, 1981)

Rust caused by Phakopsora pachyrhizi has been found for the first time on soybeans in a major production area in the Western Hemisphere, in the Cauca Valley of Colombia, report P. R. Hepperly and J. Victoria of the University of Puerto Rico and Instituto Colombiano de Agropecuaria. Rust was first found on a few plants in December 1979. (FAO Plant Prot. Bull. Vol. 28, No. 2, 1980)

Poor emergence of corn seedlings due to high soil temperature is a major limitation of crop potential in the lowland tropics, reports G. J. P. Riley of the Welsh Plant Breeding Station, Aberystwyth. Protein synthesis, an especially temperature-sensitive process in germination of corn embryos, accounts for the sensitivity of seeds to high temperature. (Planta Vol. 151, No. 1, 1981)

One of several options available to the land-grant college system, according to agricultural economist D. Paarberg of Purdue University, is to continue present programs and "acknowledge that [the system] serves the needs of the better, bigger farmers and accelerates the trend towards an industrialized agriculture." Alternatives are to continue the programs without the acknowledgment, revise current programs to be more structurally neutral, or combine options. (Am. J. Agric. Econ. Vol. 63, No. 1, 1981)

Pure stands of white spruce (Picea glauca) have been decimated by dwarf mistletoe (Arceuthobium pusillum) in Sprucewoods Provincial Park, Manitoba, according to D. W. French and F. A. Baker of the University of Minnesota and J. Laut of the Colorado State Forest Service, Fort Collins. Infection rate ranged from 25% of trees in young stands to 100% of trees in old stands. (Can. J. For. Sci. Vol. 11, No. 1, 1981)

Because Pisolithus tinctorius and other ectomycorrhizal fungi vary considerably, workers should use several isolates representing different sources of potential variation (age, tree host, location) before evaluating the symbiotic potential of any fungus, according to D. H. Marx of the Southeast Forest Experiment Station, Athens, GA. He also recommends revitalization by host passage every 4 yr to maintain a high degree of symbiotic potential. (Can. J. For. Sci. Vol. 11, No. 1, 1981)