

Focus/Diamond Jubilee Historical Gems

Puccinia graminis, causing stem rust on cereals and grasses, comprises six biological forms, according to E. C. Stakman and F. J. Piemeisel of the University of Minnesota and USDA, St. Paul. The forms can be distinguished from each other morphologically and parasitically and are differentiated on selected cereals and grasses. (J. Agric. Res. 10:429-495, 1917)

Stewart's disease of corn (Aplanobacter stewarti) does not occur when the sum of mean temperatures from December through February is below 90 but is destructive when the sum is above 100. N. E. Stevens of the University of Illinois, Urbana, based this conclusion on 35 years of data. (Plant Dis. Rep. 18:141-149, 1934)

A crystalline substance with properties of tobacco mosaic virus (TMV) was isolated from juice of TMV-infected tobacco plants by W. M. Stanley of the Rockefeller Institute for Medical Research, Princeton, NJ. The crystals are 100 times more active than a suspension made from TMV-infected tobacco leaves. (Science 81:644-645, 1935)

The section Elegans (10 species, 18 varieties, 12 forms) in Wollenweber's Fusarium classification was reduced to a single species, F. oxysporum, by W. C. Snyder and H. N. Hansen of the University of California, Berkeley, solely on the basis of morphology. (Am. J. Bot. 27:64-67, 1940)

The pathogenic range in a race of Melampsora lini on flax is determined by pathogenic factors specific for each resistance factor in the host, according to H. H. Flor of the USDA and North Dakota State University, Fargo. Avirulence was dominant in crosses between races. (Phytopathology 32:653-669, 1942)

Iron, lead, and zinc dimethyl derivatives of the dithiocarbamates promise the most as fungicides and injure plants the least, report M. C. Goldsworthy, E. L. Green, and M. A. Smith of the USDA, Beltsville, MD. (J. Agric. Res. 66:277-291, 1943)

A metabolic by-product of Helminthosporium victoriae proved toxic to a susceptible cultivar of oats, report F. Meehan and H. C. Murphy of Iowa State University and USDA, Ames. The toxin is heat-stable and occurs in hyphae and growth substrate. (Science 106:270-271, 1947)

A fungistatic factor appears to be widespread in soil, according to C. G. Dobbs and W. H. Hinson of University College of North Wales, Bangor. Spores were inhibited in all soils tested. The factor is masked by glucose or nutrients liberated from microorganisms in soil. (Nature 172:197-199, 1953)

Mycoplasmalike organisms were found in preparations from witches' broom of potato and from aster yellows of petunia by Y. Doi, M. Teranaka, K. Yora, and H. Asuyama of the University of Tokyo, Japan. Pleomorphic bodies, susceptible to tetracyclines, were observed, providing evidence for a mycoplasma hypothesis in cause of disease. (Ann. Phytopathol. Soc. Jpn. 33:259-266, 1967)

Potato spindle tuber is caused by an infectious, replicating, low molecular weight RNA designated a "viroid" by T. O. Diener of the USDA, Beltsville, MD. (Virology 45:411-428, 1971)

Agrobacterium radiobacter controlled crown gall of peach when seedlings were dipped into a bacterial suspension by P. B. New and A. Kerr of Waite Agricultural Research Institute, South Australia. Biocontrol was effective at a 1:1 ratio of nonpathogenic to pathogenic strains. (J. Appl. Bacteriol. 35:493-497, 1972)