Because wheat cultivars with pubescent leaves are less attractive to many economically important insects, including cereal leaf beetle and Hessian fly, leaf pubescence has been incorporated into some cultivars to reduce insect damage. T. L. Harvey and T. J. Martin report, however, that pubescent wheats become more heavily infested by airborne *Eriophyes tulipae*, the wheat curl mite and vector of wheat streak mosaic virus. The incidence of wheat streak mosaic was higher in pubescent cultivars than in glabrous cultivars, even though the types were equally susceptible to the disease when inoculated mechanically. Plant hair length and density were directly associated with mite infestation. (Econ. Entomol. 73:225-227)

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In Great Britain, the cereal cyst nematode (*Heterodera avenae*) often fails to multiply in fields cropped intensively to the host plants because nematophagous fungi parasitize the female cysts and eggs. An equilibrium population of about 10 eggs per gram of soil is eventually established and is below the threshold for yield loss. B. R. Kerry and D. H. Crump have identified the most common parasite as a new genus and species, *Nematophthora gynophila* of the Leptolegniellaceae Dick. A fungus of the Lagenidiales that also attacks females of the cereal cyst nematode was recovered in lower frequency. The authors describe the parasitism as "the only known example of natural agents giving effective, long-term control of a cyst nematode." (Trans. Br. Mycol. Soc. 74:119-125)

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An apple scab alarm described by T. J. Gillespie and G. E. Kidd uses semiconductors that detect changes in the electrical resistance of temperature and leaf-surface wetness sensors. An electronic circuit combines the data according to criteria for development of apple scab and displays the result as a single number. This number is then used as a guide to the potential for apple scab. Except for two occasions when slight errors occurred in leaf wetness detection, the alarm display agreed within 8.6% of expected counts based on independently obtained temperature data (thermohydrograph) and duration of surface wetness (deWit recorder or impedance grid). The authors estimate the cost of a commercially produced unit following their design would be only 40% of the current cost of a scab-monitoring station in Ontario. Full details of their design, including electronic circuitry, are given. (Can. J. Plant Sci. 60:209-212)

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One of two yellows-type diseases described for strawberries in Queensland, Australia, is associated with rickettsialike organisms (RLO) and the other, with mycoplasmalike organisms (MLO). Symptoms are similar for the two diseases and include purple or bronze pigment in older leaves followed by small, chlorotic leaves, fewer flowers, and often plant death. RLO and MLO were found only in sieve tubes of the host, which probably explains the similarity of symptoms, report R. S. Greber and D. H. Gowanlock. They propose the common names "rickettsia-yellows" and "mycoplasma-yellows." This is apparently the first record of RLO in strawberry. (Aust. J. Agric. Sci. 30:1101-1109)

□ □ □

Barley grown in dry soil had greater adult plant resistance to powdery mildew caused by *Erysiphe graminis* f. sp. *hordei* than did barley grown in wet soil. The greater resistance could not be attributed to lower leaf solute potential or leaf water potential or to increased thickness of the cell walls or cuticle of the stressed plants, according to P. G. Ayres and B. Wollacott. Solute potentials of the pathogen were lower than those of the host, and fungal growth was not limited by water potential per se. Conidia of the pathogen from plants grown in dry soil had a lower solute potential than those from plants grown in wet soil. Conidia from water-stressed plants also had greater ability to infect plants grown in dry soil than those from plants grown in wet soil. The authors suggest that as the plant ages or is stressed by lack of water, specific substances toxic to the fungus accumulate in high concentrations in the cell wall, cuticle, or sap. (Ann. Appl. Biol. 94:255-263)

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The binding of germ tubes of *Phytophthora infestans* to potato cell membranes is mediated by potato lectin, according to N. Furuichi, K. Tomiyama, and N. Koke. The cell membrane vesicles of the host were bound to the surfaces of hyphae of compatible and incompatible races of the pathogen when potato lectin was present. Binding was inhibited by N,N′-diacetylchitobiase (a specific hapten of potato lectin). Lectin activity was the same from the cultivars Rishiri and Irish Cobbler tested against race 0 and race 1,2 of the pathogen. The authors conclude that compatible and incompatible races of the pathogen have about the same amounts and/or locations of binding sites for lectins on their cell wall surfaces. (Physiol. Plant Pathol. 16:249-256)

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Purified, host-specific pathotoxin produced by *Bipolaris* (*Helminthosporium*) *maydis* race T has been shown by G. Payne, H. W. Knoche, Y. Kono, and J. M. Daly to consist of several (at least seven) nearly identical linear polyketols (C_{35} to C_{45}). Each component had the same specific toxicity for mitochondria from susceptible corn. The toxin was active at concentrations between 5 and 50 ng ml^{-1} (6.5×10^{-9} to 6.5×10^{-8} M) on several processes in susceptible corn, including ion balance, dark CO_2 fixation, coleoptile elongation, and mitochondrial oxidation. In comparison, corn with N cytoplasm was unaffected by 1,000 times these concentrations of toxin. The authors relate their data to earlier findings for two other race T toxin preparations. (Physiol. Plant Pathol. 16:227-239)

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The electrodynamic method for applying ultralow-volume droplets of pesticides described by R. A. Coffee at the 1979 British Crop Protection Conference is summarized by G. Richards as follows: Liquid is supplied to a nozzle of high voltage provided by ordinary flashlight batteries. The divergent electric field encountered by the emerging charged droplets, estimated at two orders of magnitude greater than gravitational pull, is sufficient to carry the droplets to the target, which is at earth potential. Because the droplets have curved trajectories, the chemical is delivered to the back as well as the front of the plant. (Nature 283:430)

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