Studies of nutrient translocation in rhizomorphs of *Armillaria mellea* were conducted by J. B. Anderson and R. C. Ullrich of the University of Vermont, Burlington, to determine whether a rhizomorph conducts nutrients from the food base to the tip, from the tip back to the base, or in both directions. The fungus was grown in a defined medium, across an air space, and into either a defined medium or water agar. Exogenously applied (U-$^{14}$C) glucose and $^{32}PO_4$ were used as the labeled nutrients. Uptake and transport both occurred in cultures grown aerobically, whereas label was absorbed but not transported under anaerobic conditions. Transport of $^{14}$C and $^{32}$P under aerobic conditions occurred toward the tip but not from the tip to the base. The findings suggest that transport depends on aerobic respiration and that label movement is from transport within the rhizomorph, not by diffusion on the rhizomorph's surface. (Exp. Mycol. 6:31-40)

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*Sclerotium rolfsii* is a serious pathogen of potato in Bangladesh and has been increasing in importance in recent years. A. Bakr and A. A. Khan of Bangladesh Agricultural University, Mymensingh, have confirmed results of studies in other countries that certain forms of nitrogen applied as fertilizer have the potential to suppress the disease. Potatoes were grown in large earthenware pots with the top 10 cm of soil infested with *S. rolfsii*. Application of urea to the top 7.5 cm of soil significantly suppressed the incidence of infected plants in proportion to the rate used. The highest rate—the equivalent of 168 kg N/ha—was most effective, reducing disease to only one-fifth that in the control. Mustard oil cake, a common form of nitrogen used for potato production in Bangladesh, was also effective but less so than urea. (Potato Res. 24:363-365)

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The cells of virulent *Agrobacterium tumefaciens*, the cause of crown gall, attached directly to the plasma membrane of carrot protoplasts in a sequence of events similar to that for attachment to intact carrot cells in tissue culture, report A. G. Matthysse, K. V. Holmes, and R. H. G. Gurlitz of the University of North Carolina, Chapel Hill. The events included: 1) attachment singly to the smooth surface of the plant cell membrane; 2) synthesis by the bacterium of cellulose fibrils that entrapped more cells, evident as clusters; and 3) division of bacterial cells in the clusters. These and other results suggested that the initial receptor for bacterial attachment may be a component of the plant cell plasma membrane or possibly a component of the cell wall retained on the cell protoplast. The authors suggest further that the transfer of the tumor-inducing plasmid DNA from bacterium to plant cell would be facilitated by the tight binding of the bacterium to the plant cell membrane. (Physiol. Plant Pathol. 20:27-33)

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Many agricultural areas in the world use mixed cropping and interplanting rather than uniform planting of a single crop. In some areas of Africa, growers have refused to abandon their systems of mixed cropping despite encouragement from the extension services of the ministries of agriculture to do so. H. A. Van Rheenen, O. E. Hasselbach, and S. G. S. Muigai of the Ministry of Agriculture, Thika, Kenya, compared the incidence of insect pests and diseases in uniform sowings of beans with that in beans grown in association with maize; comparisons were made at several locations for several years. The incidence of halo blight, common bean mosaic, anthracnose, common blight, scab, *Phoma*, mildew, bollworm, and, to a lesser extent, angular leaf spot was significantly and sometimes remarkably lower on beans in the mixed cropping system. The incidence of white mold and the black beetle *Systates* was higher on beans grown with maize, and that of rust and aphids was erratic. The authors propose that the healthier bean crop obtained with mixed cropping accounts for the popularity of the method in the areas studied. (Neth. J. Plant Pathol. 87:193-199)

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Development of root rot of *Chamaecyparis lawsoniana* 'Ellwoodi' was prevented for 12 wk (after which damage was only slight) by inoculating the woody plant with spores of a mixed population of vesicular-arbuscular (VA) mycorrhizal fungi 6 mo before inoculation with *Phytophthora cinnamomi*, report H. Bartschi of the Université Claude-Bernard, Lyon; V. Gianinazzi-Pearson of the I.N.R.A., Dijon; and I. Vegh of the I.N.R.A., Versailles, France. Inoculation with a single species (*Glomus mosseae*) only delayed onset of severe disease, even when it was established on the roots 8 mo before inoculation with *P. cinnamomi*. Establishing mixed populations of VA mycorrhizal fungi on the roots for only 2 mo before exposure to *P. cinnamomi* or at the time of pathogen inoculation was ineffective or only slightly beneficial. Good mycorrhizal establishment was therefore necessary for disease control. The authors suggest that a mixture enhanced the chances for obtaining the right symbiont-host combination. (Phytopathol. Z. 102:213-218)

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The Formosan subterranean termite (*Coptotermes formosanus*) is an important pest of wooden structures in Hilo and Kona, but not Kamuela, on the island of Hawaii. W. H. Ko, J. K. Fujii, and K. M. Kanegawa of the University of Hawaii, Hilo, report that 75–100% of termites died within 2 wk in seven of nine soils from Kamuela, whereas 80% were still alive after 4 wk in soils from the Hilo area. The pernicious soils from Kamuela are analogous to the "suppressive soils" known to occur for certain soilborne plant pathogens in various areas around the world. Failure of termites to persist in the pernicious soils was associated with *Entomophthora coronata, Metarhizium anisopliae, Aspergillus flavus,* and an unidentified bacterium; these microorganisms were isolated from 60–100% of dead termites. When infested with *E. coronata* and *M. anisopliae*, the favorable soil from Hilo became pernicious. (J. Invertebr. Pathol. 39:38-40)

**Recent reports from fields related to plant pathology for inclusion in *Scientific News* may be sent to R. James Cook, 367 Johnson Hall, Washington State University, Pullman, WA 99164.**