size and were deeper blue than normal petals. The common violet (*Viola* sp.) frequently developed a dull purplish pigment in treated leaves.

Leaves that expanded subsequent to treatment were narrowed on two varieties of sweet corn, one variety of field corn, on bush bean, Kentucky bluegrass grown in shade, crabgrass, sunflower (*Helianthus annuus*), and red coleus (*Coleus blumei*). Several distinctive patterns of chlorosis were observed on these plants.

Interference with water absorption by roots was clearly evident in sweet corn and garden beet (*Beta vulgaris*) sprayed with 2,400 ppm of maleic hydrazide. These crops, grown in the field, in the full sun, wilted severely at the same time that untreated plants in the same rows remained turgid. Plants of field corn grown individually in small flowerpots in the greenhouse were used to observe the effects of maleic hydrazide on roots. In this exploratory test, four plants were treated and four were used as controls. An application of 2,400 ppm to the leaves caused root tips to die and turn brown, and also inhibited the development of additional lateral roots. One month after treatment the total dry weight of new roots on treated plants was one-fourth that of new roots on control plants. If the treated corn plants in the field did not extend their roots into new soil any faster than the treated plants in the greenhouse, they would be expected to wilt (as in reality they did) soon after soil moisture had dropped to slightly below field capacity.

Maleic hydrazide applied at a concentration of 2,400 ppm resulted in total sterility of gladiola (*Gladiolus* sp.), owing probably to proper timing of the spray and to the fact that a gladiola corm gives rise to only one floral axis. Individual flower heads of China aster (*Callistephus chinensis*) were completely sterilized by applying the spray at the young-bud stage. Dayflower treated with 600 ppm of the chemical formed abortive flower buds for a time, but later produced flowers that set seed. Floral axes of nimblewill present when the spray was applied were apparently killed. The production of cleistogamous flowers on the common violet was interrupted for several weeks. Growth of spotted spurge (*Euphorbia maculata*) was checked for a short period but upon resumption of growth the leaves, flowers, and fruits appeared normal. The size of inflorescences and the number of seeds per cluster of crabgrass were greatly reduced for several weeks by the 2,400-ppm treatment. Dayflower, nimblewill, violet, spotted spurge, and crabgrass survived treatment because all of them can extend their vegetative body by growth from lateral buds. Thus, the sterilizing effect of maleic hydrazide was temporary on such plants if they did not die from water shortage after treatment. When sweet corn was treated at a critical stage with 600 ppm, it produced sterile tassels and stubby ears with functional silks. Pollen from control plants produced normal kernels on these small ears. The induction of sterility has not been previously reported for maleic hydrazide (*2*), but is stressed in a report on the *n*-aryl phthalamic acids (*1*).

Carrot (*Daucus carota*), cabbage (*Brassica oleracea* var. *capitata*), bearded iris (*Iris germanica*), lily-of-the-valley (*Convallaria majalis*), Jonathan apple (*Malus sylvestris*), common plantain (*Plantago major*), Kieffer pear (*Pyrus* sp.), and sweet potato (*Ipomoea batatas*) were apparently unaffected by even the higher concentration of maleic hydrazide.

More complete details of tests and a discussion of their possible significance will be published elsewhere.

References

1. Hoffman, Otto L. and Smith, Allen, E. *Science,* 1949, **109**, 588.
2. Schoene, D. L. and Hoffman, Otto L. *Science,* 1949, **109**, 588.

A New Microculture Slide

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In recent years the importance of mold taxonomy has increased, and many mycologists have felt the need of a good, inexpensive, versatile, and easily manipulated slide for microscopic examination of fungi. The slide about to be described has been used successfully in our laboratories for some time in both elementary and advanced studies, and has been found excellent for teaching purposes and for photomicrography.

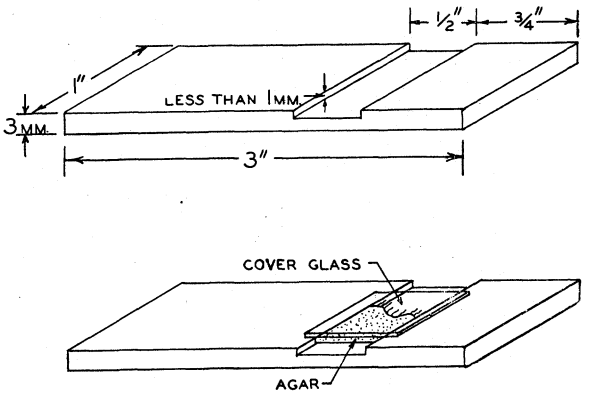

Fig. 1. Microculture slide in use.

The slide, which is used in conjunction with 18-mm cover slips, is a standard 1 in. × 3 in. glass slide, 3 mm thick, with an unpolished channel ½ in. wide and slightly less than 1 mm deep, located ¾ in. from one end of the slide (see Fig. 1).

Cover slips and slides are sterilized separately, and immediately prior to use a cover slip is placed over the channel without cement or wax of any kind, thus forming a small open chamber. Melted seeded agar is allowed to flow under the cover slip by capillarity until part of the space is filled. The inoculated culture slide may then be incubated in a moist chamber, such as a Petri dish containing a piece of moist cotton.

This slide makes possible the rapid production of temporary mounts and very satisfactory permanent mounts with little effort and negligible expense.