Comments and Communications

The Miticidal Properties of Di (*p*-Chlorophenyl) Methyl Carbinol in Laboratory Insect Rearings

Controlling mites in cultures of insects has long been a problem in many laboratories. The use of the chemical di (*p*-chlorophenyl) methyl carbinol appears to offer a solution to this problem.

The highly specific miticidal action of di (*p*-chlorophenyl) methyl carbinol has proved useful in this laboratory for the control of species of mites, presumably *Tyroglyphus* and *Pediculoides* spp., infesting insect cultures. A dust, 2 per cent by weight, was prepared, using the technical product (supplied by The Sherwin-Williams Co., Agricultural Chemicals Division) and pyrophyllite. This preparation has completely eliminated mites infesting cultures of the pomace fly (*Drosophila melanogaster*), the webbing clothes moth (*Tineola bisselliella*), the confused flour beetle (*Tribolium confusum*), the American roach (*Periplaneta americana*), and the rice weevil (*Sitophilus oryza*) without producing any observable mortality in the egg, immature, or adult stages of these insects. In addition, the following insects have been completely covered with the dust without any deleterious effects: black carpet beetle larvae (*Attagenus piceus*), grouse locusts (*Tettigidae*), and the large milkweed bug (*Oncopeltus faciatus*).

Best results have been obtained by generously applying the dust to the insect itself, sprinkling upon the surface of the culture media, or by mixing the dust intimately with the culture media.

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Is There Laterite in Rocks of the Dakota Group?

During an inspection trip in Gage County Soil Conservation District, Nebraska, in 1943, the senior author noted the close similarity of certain beds of the Dakota group to the laterite of Buchanan. The material is a hard, cellular, slaglike "ironstone," ranging in color from red to yellowish brown and dark brown. In Gage County this material overlies reticulately mottled red and light-gray kaolinite clay beds of the Dakota group and of kinds that occur at several different horizons within the Dakota of Cretaceous age.

In the spring of 1948, C. G. Stephens, head of the Soil Survey of Australia, who was shown several outcrops in Saline and Ellsworth counties, Kansas, stated that some of the ironstone was closely similar to the "fossil laterites" of Australia, and that the mottled kaolinite clay beneath was also a typical companion material. Recently the authors have reviewed some of the literature on the Dakota formation, have studied many outcrops in Nebraska and Kansas, and have reached the following tentative conclusions: (1) that the Dakota group includes more than one horizon that contains material essentially like the laterite first described by Buchanan in India; (2) that this material probably represents a former subsoil horizon of an ancient soil; (3) that these ancient soils presumably were essentially like Marbut's ground-water laterite soils, described in the Amazon Valley, and were formed during periods when subsoil water fluctuated seasonally up and down in what is now a cellular ironstone.

Ground-water laterite soils occur most extensively, at present, under tropical climates with fluctuating, high water table or with periodic seepage. Climates with alternating wet and dry seasons are especially favorable to the formation of ground-water laterite soils, with their subsoil horizons of laterite. Present knowledge suggests that a long time is required for the formation of these soils.

According to various authors, the plant fossils of the Dakota group include persimmon, walnut, tulip tree, fig, laurel, sassafras, and others that suggest a somewhat warmer climate during the formation of the Dakota group beds of Nebraska and Kansas than the present one.

The writers have collected specimens and descriptions of laterite-like material and associated massive ironstones and kaolinitic clays from the Dakota group beds for further study. They expect to prepare a more detailed paper on the subject, and feel that a pedological interpretation will give a better understanding of the morphology and genesis of certain beds of the Dakota group than has been attained to date.

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On the Site of Discovery of the "Male Sterile" John Baer Tomato Mutant

In *Science* of May 14, 1948 (p. 506) the writer reported the finding of a new type of "self-sterility" applicable to hybrid tomato seed production. The site of find was not mentioned. This omission has had embarrassing consequences because a syndicated news rewrite of the article, rather excusably, implied the mutant was first observed at the West Tennessee Experiment Station. Actually it was first found, by the writer, in September 1945 while attending a field day at State College, Pennsylvania. It occurred as a single mutant rogue in a trial row of the variety John Baer growing in the horticultural plots at the Pennsylvania Agricultural Experiment Station. The plant was called to the attention of R. E. Larson, who kindly consented to share cuttings.

During the past year numerous requests for seed have come to the writer. To avoid possible duplication of effort by those interested in working with the plant, it is pointed out that this identical mutant has also been distributed by Dr. Larson.

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