PLANT PATHOLOGY

Another DDT Victory

The insecticide has been found successful in keeping down potato insect pest; treated plants thriftier, darker green than untreated controls.

➤ DDT HAS ADDED another of man's insect foes to its list of conquests. This time it is the potato leaf-hopper, serious pest in many commercial potato-growing areas. The story was told before the opening session of the American Phytopathological Society meeting in Cincinnati, by Dr. J. W. Heuberger and D. O. Wolfenbarger of the Delaware Agricultural Experiment Station.

The DDT was used as an addition to two different fungicidal sprays, as well as alone. It had no effect on the fungi that attack growing potato plants when used alone, but it did keep the number of leaf-hoppers down to less than a seventh of the number found on untreated control rows, when used either alone or mixed with the fungicides. DDT-treated potato plants, the two researchers reported, "were taller, broader, darker green in color; also, the leaflets were flatter (less cupped) than when untreated or when the fungicides were used alone. No foliage injury was observed when DDT was used."

The same two workers also reported outstanding results with a new compound, zinc dimethyl dithiocarbamate, which had better effects than several of the best compounds now in general use against both the leaf-hopper and two destructive fungi, on tomatoes and potatoes. Dr. J. D. Wilson, of the Ohio Agricultural Experiment Station at Wooster, confirmed the fungicidal value of the same compound, as applied to celery, as well as potatoes and tomatoes.

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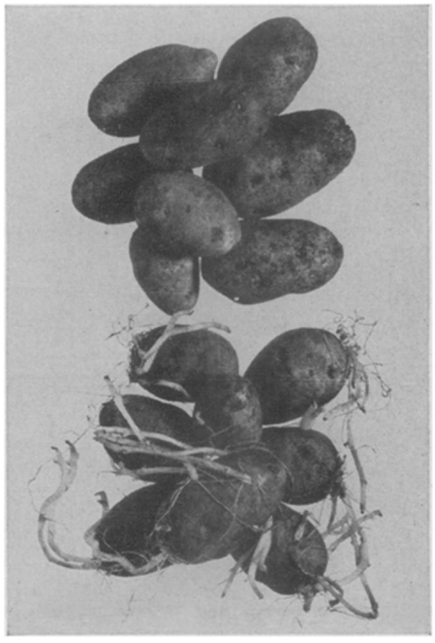

***PREVENTS SPROUTS**—The potatoes at the top have no sprouts though they were stored for a month. They were treated with the methyl ester of alpha-naphthaleneacetic acid. The potatoes at the bottom were not treated.*

Sprouting Prevented

➤ POTATOES can be prevented from sprouting in the cellar by spraying them with the right kind of chemical compounds, John E. Thomas and Prof. A. J. Riker of the University of Wisconsin told the meeting. This natural but disadvantageous behavior of the tubers, late in the storage season, is the cause of large annual losses, which the experimenters were seeking means to prevent.

Best compound for the purpose, the two men found, is one of the growth-controlling hormones, the methyl ester of alpha-naphthaleneacetic acid. This can be applied as a spray, dust, or an emulsion. Nine-tenths of a gram per bushel is sufficient; which works out as about three ounces of the chemical for 100 bushels of potatoes.

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Elms "Vaccinated"

➤ ELM TREES were successfully "vaccinated" against a disease-causing fungus, known as *Verticillium albo-atrum*, by administering the liquid in which masses of the fungus had been grown, or by injecting an extract of the ground-up fungus itself, Dr. L. R. Tehon of the Illinois State Natural History Survey, stated in a paper before the same meeting.

When the trees were subsequently inoculated with quantities of the fungus spores they did not develop the disease. In some cases the trees displayed symptoms reminding one of the anaphylaxis suffered by some persons receiving immunizing "shots," but in no case did wilting occur. In untreated control trees inoculated with the spores at the same time there was definite development of the disease, with pronounced wilting.

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Cabbage Plants Protected

➤ YOUNG CABBAGE plants were protected against another fungus enemy by means of benzene vapor, in experiments described before the meeting by Dr. H. H. Foster and Dr. J. A. Pinckard of the Mississippi Agricultural Experiment Station at Crystal Springs, Miss.

The seedling plants were kept under a close canopy of wet cloth. Suspended on threads were half-ounce wads of cotton, which were soaked in benzene three nights a week for a month. As long as the air over the plants was given this benzene treatment at these close intervals, the mildew disease could make no headway. As soon as the treatments were stopped, it became epidemic.

Dr. Pinckard succeeded in controlling a similar disease among tobacco seedlings by a benzene-vapor treatment, several years ago.

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GENERAL SCIENCE

Science Club in India Conducts Field Trips

➤ THIRTEEN boy scientists in India are conducting Americans in the Armed Forces on hiking and hunting trips. Seven Americans are included among the students of the Woodstock School at Mussoorie, United Provinces, India, who make up the group.

The boys range in age from 13 to 17. They are members of the first science club in India to affiliate with Science Clubs of America, the organization for the promotion of scientific activities for school-age boys and girls, which has 125,000 members in 5,000 clubs in this country.

For five months the club has been making displays of native mammals, reptiles, insects and plants under the direction of Robert L. Fleming, biology instructor. Now they have opened their headquarters to visiting service men and take these men on field trips to see the animals and plants in their native habitat.

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