SCIENCE NEWS

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TYPHUS, DDT AND MALARIA AND AFRICAN SLEEPING SICKNESS

DDT can send malaria mosquitoes, typhus lice and other disease-carrying insects to join the dodo and the dinosaur in the limbo of extinct species, thereby ending these particular plagues for all time.

This was the promise held out by the two Swiss chemists who started DDT on its present spectacular career as a killer of insects—Dr. Paul Lauger, technical director of the firm of J. R. Geigy, S.A., and Dr. Paul Muller, inventor of the DDT insecticides—at a press conference in New York City.

African sleeping sickness, spread by the tsetse fly, was another scourge mentioned as a possible candidate for extinction. The area in Africa that is now practically an unpopulated waste because of the menace of this terrible disease could be hemmed in by a cordon of DDT-armed insect-fighters, who would press constantly in upon the fly-infested terrain both in the air and over the ground, until the last acre had been mopped up.

Mass attacks of this kind, Drs. Lauger and Muller admitted, would cost money and take time; but the cost in either would be only a fraction of that demanded by war—and human lives would be saved, not recklessly spilled. Such campaigns would also be devastating to beneficial insects and other cold-blooded forms of life, they said, but they claimed these could repopulate the areas by inward dispersal from the unsprayed margins.

On a less sweeping scale, but still on a major field campaign basis, the two Swiss chemists pointed out how DDT can be used to combat some of our worst crop pests, like boll weevil and other cotton insects. These often constitute the bulk of the insect life of the large fields where the crops are grown, so that damage to beneficial insect populations becomes a less serious consideration.

DDT can even be used in warfare against dug-in insect enemies, it has been discovered. It can be used effectively in this way against the grubs or larvae of the Japanese beetle, though oddly enough it has not been found particularly poisonous to their close cousins, the big white grubs that grow up to turn into June bugs or May beetles. Another ground-dwelling pest that succumbs to DDT is the roundworm or nematode that causes root rot, a disease afflicting many plants.

For some of these mass attacks, DDT has been found a hundred times more effective than the arsenical poisons hitherto in use. For instance, 15 pounds of DDT per acre will be as effective against Japanese beetle larvae as 1,500 pounds of a standard arsenic compound applied to the same area, Drs. Lauger and Muller stated.

DDT can be applied by practically any method now in use with other insecticides. It is especially effective dissolved in Freon and released as an aerosol, but it also works well dissolved in kerosene or other light oils and used with ordinary spraying machinery. It is only slightly soluble in water, but oil solutions can be easily made into emulsions. Dispersed in inert powdered materials such as talc or kaolin, DDT is an excellent crop-dusting medium.

One of the most promising carriers for household use of DDT seems to be wall paint. Since flies, mosquitoes and other domestic pests need only to touch it with their feet in order to pick up enough to kill them, a DDT-carrying painted surface turns the whole interior of a room into a big death-trap for them. Several well-known commercial firms are already manufacturing DDT paints.

Such paints are effective only as long as their surface remains clean. Coatings of dirt or grease form protecting layers between the poison and the feet of the insects, causing loss of killing potency. Paints that tend to scale or crumble a little, thereby automatically keeping fresh surfaces exposed, promise to be especially good as DDT carriers.

DDT stays good indefinitely, either in pure crystal form or in the various solutions in which it is marketed.

ITEMS

TELEGRAPH, telephone and other wood poles will soon have to comply with standard specifications prepared recently under the leadership of the American Standards Association at the request of the Government. The prime purpose of the job will be to conserve natural timber supplies, and secondly to channel the production and use of poles so that all users will have a fair share of the available timbers. "War needs have depleted our timber supply to an extent that we do not yet fully realize," according to Dr. R. H. Colley, of Bell Telephone Laboratories. Civilian use of poles was cut in half during the war, leaving a big pent-up demand now that restrictions are removed. It is estimated that at least 4,000,000 poles a year during the next few years will be required. The new specifications will cover wood poles from jack pine, red pine, western white pine, inland types of Douglas fir, western hemlock, western larch and certain miscellaneous species. The specifications will aim at treatment of every pole with wood preservatives so that the poles will last as long as possible. The specifications, also, will cover prohibited and permitted defects, such as sap stain, twist grain, insect damage, knots and scars. Such matters as manufacturing, dimensions, storage and handling will be covered.

MORE durability and sightly finishes for household refrigerators, stoves and other equipment are promised with new synthetic, exceptionally hard, stainproof enamels developed here by the Arco Company and already in production. They will be known as synox finishes. One type of the new enamel is designed for such articles as refrigerators, stoves, ironers and electric mixers, and another for dishwashers and washing machines. Laboratory and practical tests show that they have an unusual degree of water and alkali resistance, it is claimed, also resistance to stains and change of color. The new material has been successfully applied to clean steel, with or without primer, and to aluminum and magnesium. Despite its hardness, synox has a flexibility which is more than ample to meet all service conditions.