

CHEMISTRY

# DDT Can Wipe Out Plagues

In total war against disease-carrying insects, it could eliminate typhus, malaria and African sleeping sickness, Swiss chemists declare.

► 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.

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 warfares 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

Junebugs 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 1500 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.

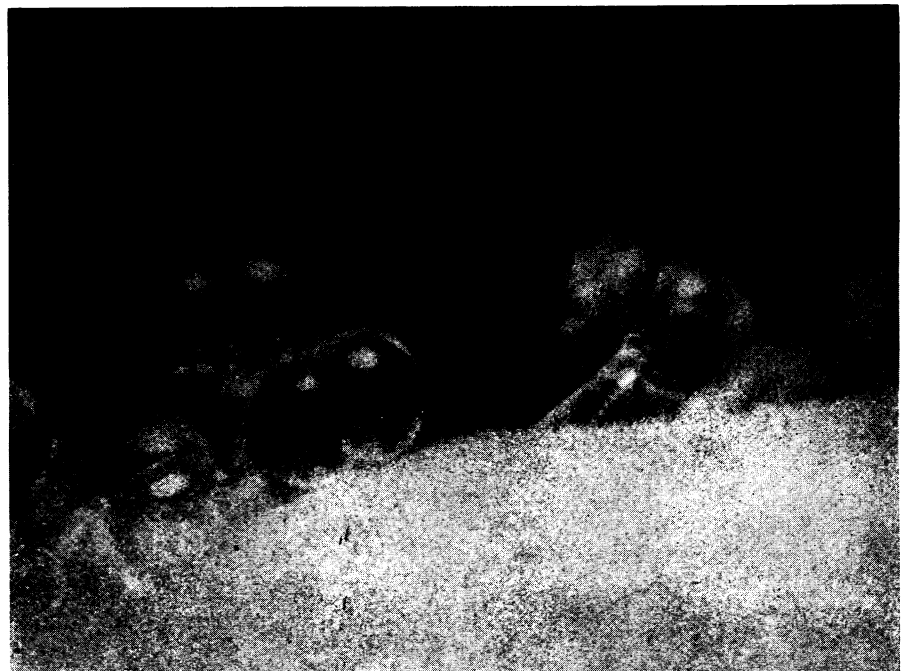
Shelf age, the Swiss scientists declared, holds no terrors for DDT. It stays good indefinitely, either in pure crystal form or in the various solutions.

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PLANT PHYSIOLOGY

## Leaf Glands on Plant Resist Drought

► THE FIRST pair of true leaves appearing on the sesame, an herb bearing seeds from which an oil is obtained, be-



**RESIST DROUGHT**—Glands on the foliage of a sesame plant, as shown in this greatly magnified picture, look like sets of four little soap bubbles on stems. Plants well-equipped with glands seem to be more resistant to drought than plants with bare leaf surfaces.