

resistant. The DDT-talc sample resisting 54 inches of rain was micronized. Although the DDT-talc dusts were slightly superior to the pyrophyllite dusts, the differences were not great and the two diluents may be used interchangeably. In the louse powder recommended for use by the armed forces pyrophyllite was used as a diluent for the DDT (Bushland *et al.* 1945).

Discussion and Summary. The first work on DDT dusts for control of anopheline larvae was directed toward the development of products that would not readily be wet and sunk by rain. Dusts containing large proportions of stearic acid or calcium stearate were highly resistant to artificial rain in the laboratory. For use by the armed forces, however, resistance to rain was eventually found to be a factor of comparatively minor importance. A nonwetable dust was subject to wind and wave action, and remained effective for long periods in the field only when the breeding area was protected by thick vegetation. In general, therefore, DDT dusts could only be recommended for con-

trol of anopheline larvae for short periods. Dusts using talc as a diluent were therefore recommended as anopheline larvicides for use by the Army and Navy DDT-talc dusts, although slightly less rain-resistant than those made with stearic acid and calcium stearate, are less difficult to manufacture and may be dusted more readily.

Differences between resistance to rain of talc and pyrophyllite dusts were not great, and for anopheline larvicide purposes the two diluents may be used interchangeably.

Literature Cited

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"USE OF DDT IN PLAGUE CONTROL AT CASABLANCA"

(Copied from Bulletin of the Army Medical Department, Vol. IV, No. 6 (Dec., 1945), p. 633, as reported by the Tropical Disease Control Division, Surgeon General's Office.)

"Plague was reported as the cause of death of a civilian worker in the port warehouse area of Casablanca, French Morocco, on 21 July 1945, and within a few days several additional civilian cases occurred in the same part of the city. For the protection of American and Italian service units and French military, naval and civilian personnel employed in the area, a meeting was held to plan a program for control of the outbreak. In addition to invoking the international anti-plague measures for ports, restriction of the area to essential personnel, and immunization of individuals likely to be exposed, it was decided to precede the rodent destruction program with applications of DDT in the area to kill any fleas that might leave dead rats.

"A malaria survey detachment experienced in the use of DDT was selected to do the work. A 5 per cent solution of DDT in kerosene was applied with knapsack sprayers to floors and the lower portion of walls in barracks, offices, warehouses, trucks, and two cargo ships moored to the dock. A 10 per cent DDT dust was applied to the clothing of personnel required to enter the area. With a rotary blower, dust was applied to places inaccessible to spray, such as under buildings and in rodent burrows. Local personnel were trained in methods of application of DDT so that they might be prepared to repeat the applications if necessary.

"It is not possible to evaluate accurately the part played by DDT, but, according to latest reports, the plague control program as a whole was completely effective, since no further cases occurred."