

Declassified E.O. 12356 Section 3.3/NND No.

785017

ACC

10000/135/106

AERIAL SPR.
ETC.
JULY 1946

10000/135/106

AERIAL SPRAYING, ANTI-MALARIAL, CROP SPRAYING,
ETC.
JULY 1946

Director 11/17

M1

Ref enclosure 1A.

I saw a spraying demonstration while at Elmer on 17 July 1946.

The timer taken to use 300 gallons of the DOT mixture was 90 seconds.

The apparatus is simpler and adapted from the Ballinacraig range bulby tank; a diagram which will be filed in an engineering file is attached.

I have drafted a signal to RAF. and ~~ME~~ for your approval. (2A).

W. J. Gannon

18. 7. 46

6642

2A

AIR FORCE'S SUB COMMISSION, A.C. ROME.

18 1630 JULY 1946

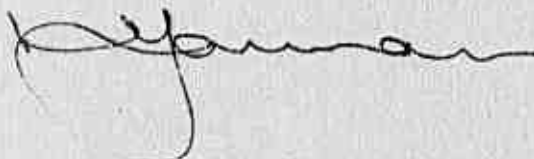
R.A.P. ROME (R) A.H.Q. MILITARY (R) HEAD SECRETARIAT.

UNCLASSIFIED

UNDER SEVEN CASES IT IS SUBJECT TO SUBSTITUTION OF R.A.P. BY ITALIAN AIR FORCE
PERSONNEL AT MILITARY HEADQUARTERS. IT IS FIRST STEP TO SAVING R.A.P. HEADQUARTERS
ITALIAN AIR FORCE UNDER SUPERVISION OF AIR FORCE'S SUB COMMISSION ROME OVER ANTI
BALANCE. COMMISSION OF HEADQUARTERS CAN FORM FIVE ANTI BALANCE FLIGHT DETACH-
MENT. IT ITALIAN AIR FORCE ARE EQUIPPED WITH BALANCE AIRCRAFT AND CAN PROVIDE
GROUND AND AIRCRAFT. IT IF APPROVED REQUEST ITALIAN AIR FORCE TAKE OVER ON 15 JAN
THE TWO BALANCE FLIGHTS ^{For} SERVING ALSO GROUND EQUIPMENT AND SPRAY MIXTURES TO
COVER CURRENT RESEARCH COMMISSION. IT

6641

AFSC/421AIR



ROUTINE

SENIOR STAFF OFFICER

A.C. MONTAGNI, P/O

L.E. JARDAN, G/CHIEF.

J.E.M.
22/7

179

FROM : OFFICE CHIEF, 13.5 Anti-Malarial Flight Det., R.A.F. Station, Hms, C.S.I.

TO : Director Air Forces and Commanders,
Allied Command, Hms.

Date : 16th July, 1945.

Work Carried out by 13.5 Anti-Malarial Flight
Det., R.A.F. Hms, Hms.

Summary.

- (1) Spraying of swamp south of Lake Ogilvie (approximately 1 mile in width and 2 miles long).
- (2) Spraying northern edges of Lake Ogilvie.

Spray Mixture Used.

as follows :

750 gallons of D.D.T. solution every ten days, made up	
375 gallons heavy oil (H.D. 50 or H.A.O.)	6640
375 gallons light diesel oil (LDX).	
34 gallons GLAC acid.	
180 lbs. D.D.T.	

The oil is obtainable from local R.A.F. sources, and the D.D.T. from Hms (3,000 lbs. is due to arrive by the next ship, but further supplies will be difficult to obtain). A substitute, Malarial Oil, is available, and although not so good as D.D.T., it breaks up the larvae, preventing breeding. The GLAC acid is only obtainable through A.F.O. Lonsdale.

Equipment & Personnel.

The flight consists of : 1 Cpl. P.H.E., 1 L.A.O. P.H.E., 1 Sgt. and 2 A.C. A.C.H. It is equipped with two Bellmore Mk. IV aircraft, specially fitted for anti-malarial work. It is under the Administrative control of A.F.O. Hms, and the operational control of Headquarters, R.A.F. Hms (P.H.O.). The establishment for motor transport is 4 3 tonners, 1 15 C.H.E., and 1 signals van. As there are no signals van available on this station, a V.E.P. Pack Set is used for ground-air control. Two other important items are the Bellmore winches (bush) for lowering and lifting the belly tank into position, and the motor pump for filling the tank with D.D.T. spray mixture.

A specially constructed mixing plant is situated on Hms aerodrome. The two oils are heated in the boilers, the powder D.D.T. added, and the mixture stirred until the D.D.T. is completely dissolved. The D.D.T. will not dissolve unless the oil is heated. When the mixture has cooled, the GLAC acid is added.

Anti Lonsdale spraying has been carried out with success, but its success is problematical.

The spraying height is determined from an average of wind velocity at ground level, and 300 ft. The following table gives the height to

OPERATIONS.

- (1) Spraying of swamp areas of Lake (Bay) (approximately 2 miles in width and 2 miles long).
- (11) Spraying northern edges of Lake (Bay).

Spray Mixture Ltd.

as follows:

750 gallons of D.D.T. solution every ten days, more up
 575 gallons heavy oil (H.O. 50 or H.A.O.)
 575 gallons light diesel oil (LD.O.)
 50 gallons (H.A.O.) acid.
 450 lbs. D.D.T.

6640

The oil is obtainable from local H.A.O. sources, and the D.D.T. from Naples (3,000 lbs. is due to arrive by the next ship, but further supplies will be difficult to obtain). A substitute, Heliodol oil, is available, and although not so good as H.A.O., it breaks up the larvae, preventing breeding. The O.A.S. acid is only obtainable through A.H.O. agent.

Equipment & Personnel.

The flight consists of: 1 Cyl. P.11.E., 1 H.A.O. P.H.E., 1 Sgt. and 2 A.O. A.O.H. It is equipped with two Bellanca H. IV aircraft, specially fitted for anti-Heliodol work. It is under the Administrative control of A.H.O. Malta, and the operational control of Headquarters, H.A.O. H.O.H. (P.H.O.). The establishment for motor transport is 13 buses, 145 C.W.T., and 1 signals van. As there are no signals van available at this station, a V.H.E. Pack set is used for ground-air control. Two other important items are the Bellanca vehicles (both) for lowering and lifting the belly tank into position, and the motor pump for filling the tank with D.D.T. spray mixture.

A specially constructed mixing plant is situated in the use aerodrome. The two oils are heated in the boilers, the water H.A.O. added, and the mixture stirred until the H.A.O. is completely dissolved. The D.D.T. will not dissolve unless the oil is heated. When the mixture has cooled, the O.A.S. acid is added.

Anti-loose spraying has been carried out with paraffin, but its success is probable.

The spraying height is determined from an average of wind velocity at ground level, and 300 ft. The following table gives the height to fly:

Aircraft speed - 200 M.P.H.

Distance from spraying track to wind edge of target - 100 yds.

Wind Speed

3 M.P.H.
 4 " "
 5 " "
 6 " "
 7 " "
 8 " "
 9 " "

Height to fly

300 ft.
 410 " "
 490 " "
 410 " "
 370 " "
 340 " "
 270 " "

14
 11
 27

-2-

Wind Speed	Height to Fly
10 M.P.H.	250 ft.
11 "	220 "
12 "	200 "
13 "	190 "
14 "	175 "
15 "	160 "
16 "	150 "
17 "	145 "
18 "	135 "
19 "	130 "
20 "	120 "

With a restrictor valve fitted, for the spraying of the edges of the lake and small canals, spraying should be carried out from as near the ground as possible to avoid excessive drift of spray.

(sgd) O.C. Hughes
 Flight Lieutenant, Commanding,
 1345 Anti-Malaria Flight, Det.,
 R.A.F. Station Komes, C.M.F.

Copy to : P.M.O., Headquarters, R.A.F. MOMB.

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