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**Author** Michie, M. M.

**Corporate Author**

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**VIETNAM AFTER-ACTION CONFERENCE  
HELD 12-13 JANUARY 1971 (U)**

Compiled by

M. M. Michie

B. Botwinick

October 1971



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FOREWORD

The information provided in this report is the result of a conference between chemical officers on duty in Vietnam in 1970 and engineers and scientists at Edgewood Arsenal who developed, produced, and tested the equipment involved. The conference took place in the Research Laboratories at Edgewood Arsenal on 12 and 13 January 1971.

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7. It was felt that there should be a training course on the use of the M3 detector in CONUS before a chemical officer is sent to Vietnam.

8. It was the consensus of the panel that the M3 personnel detector or its updated version should be retained as a standard Army item of issue.

**B. Protective Masks.**

1. The panel agreed that the M28 riot control agent mask was superior to the M17A1 protective mask in Vietnam, since no toxic materials were being used by either side. The M28 mask has a tendency to fog when worn during night combat missions. If the M28 riot control agent mask got wet, it was dried and then reused. The M28 riot control agent mask permitted some verbal communication but a less bulky M17A1-type protective mask would be useful for places where communication is extremely important.

2. It was the consensus of the panel that the M17A1 protective mask should be made less bulky if it is going to be used in jungle-type warfare. It provides better vision and verbal communication and exhibits less air resistance than the M28 mask.

**C. Decontaminating Apparatus.**

The panel indicated very little use in their experience of either the M9 or M12A1 decontaminating apparatus in Vietnam. (Large numbers are used as fire-fighting equipment in Ammo Supply Points).

**D. Herbicides.**

1. The AGAVENCO sprayer, modified to suit the heavy use in Vietnam, was the most frequently used item for large-scale dispersal of herbicide. The AGAVENCO sprayer has a 200-gallon tank with a carrying capacity of 145 to 150 gallons of herbicide and was generally carried on a UH-1D helicopter. The windmill blades of the AGAVENCO pump were made of plastic and they had a tendency to break and hit the rear rotor of the helicopter. The problem of the breaking plastic windmill blades was initially solved by the use of rubber windmill blades. This solution was found unacceptable in the Republic of Vietnam because efficient operation of the windmill-powered pump required the helicopter to fly with very narrow speed range. It was found desirable to replace the windmill by using an M113 personnel carrier bilge pump. This pump could deliver 25 gpm and



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mitted the emission of approximately 3 gallons per acre at a speed of 60 to 80 knots. It was recommended that, when spraying herbicide with an AGAVENCO, the helicopter fly as close to the terrain as possible. Mounting time for the AGAVENCO varied from 5 minutes for a group that used the item intensively to approximately 25 minutes for a group that seldom used the item.

2. The enemy tried to destroy planes carrying herbicide, so a helicopter with two pipes, to simulate spray booms, was sometimes flown over the enemy to draw his fire. This revealed the enemy's position so he could be engaged by gunships. Sometimes, to fool the enemy, during a herbicide mission, the planes would be flown in the M3 personnel detector formation, which would draw less fire by the enemy.

3. Pilots did not like spraying herbicide white using a wind-mill equipped sprayer since its use required a double pass with the plane, which was extremely dangerous. Herbicide blue is excellent for destroying rice but poor for destroying manioc. Herbicide orange is the best all-around herbicide. It was recommended that the using organizations follow written instructions implicitly for herbicide application.

4. The panel discussed several field expedients for airdrop herbicides. One of the most effective was the lug-a-jug method of dropping herbicides from helicopters. In this method, collapsing plastic bottles filled with herbicide blue were used. The filled lug-a-jug would be dropped into water-filled rice paddies from a CH47 helicopter. A lug-a-jug dropped from a 1500-foot height would explode like a fragmentation grenade when it hit the ground and spread herbicide 75 to 100 meters in the direction of flight and 25 to 30 meters to either side. Unfortunately, since the containers were needed for water, the lug-a-jug method was limited. An experiment was made using 6-gallon standard plastic bag-lined cardboard messhall milk containers filled with herbicides but was stopped when it was discovered that some bags split before they were dropped.

5. The M106 Mity Mite disperser was sometimes used to disperse herbicide from ground level. A field expedient incorporated two 55-gallon drums welded together and pressurized with air bottles. Another field expedient incorporated a 50-gpm fuel transfer pump and some hoses mounted on the back of a truck or an armed personnel carrier (APC).

6. The consensus was that there was a need for a simple, standard herbicide spray device which would include a tank, a pump, and hoses and also a herbicide device that could be dropped from a high altitude and would not detonate until it reached a low altitude.

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