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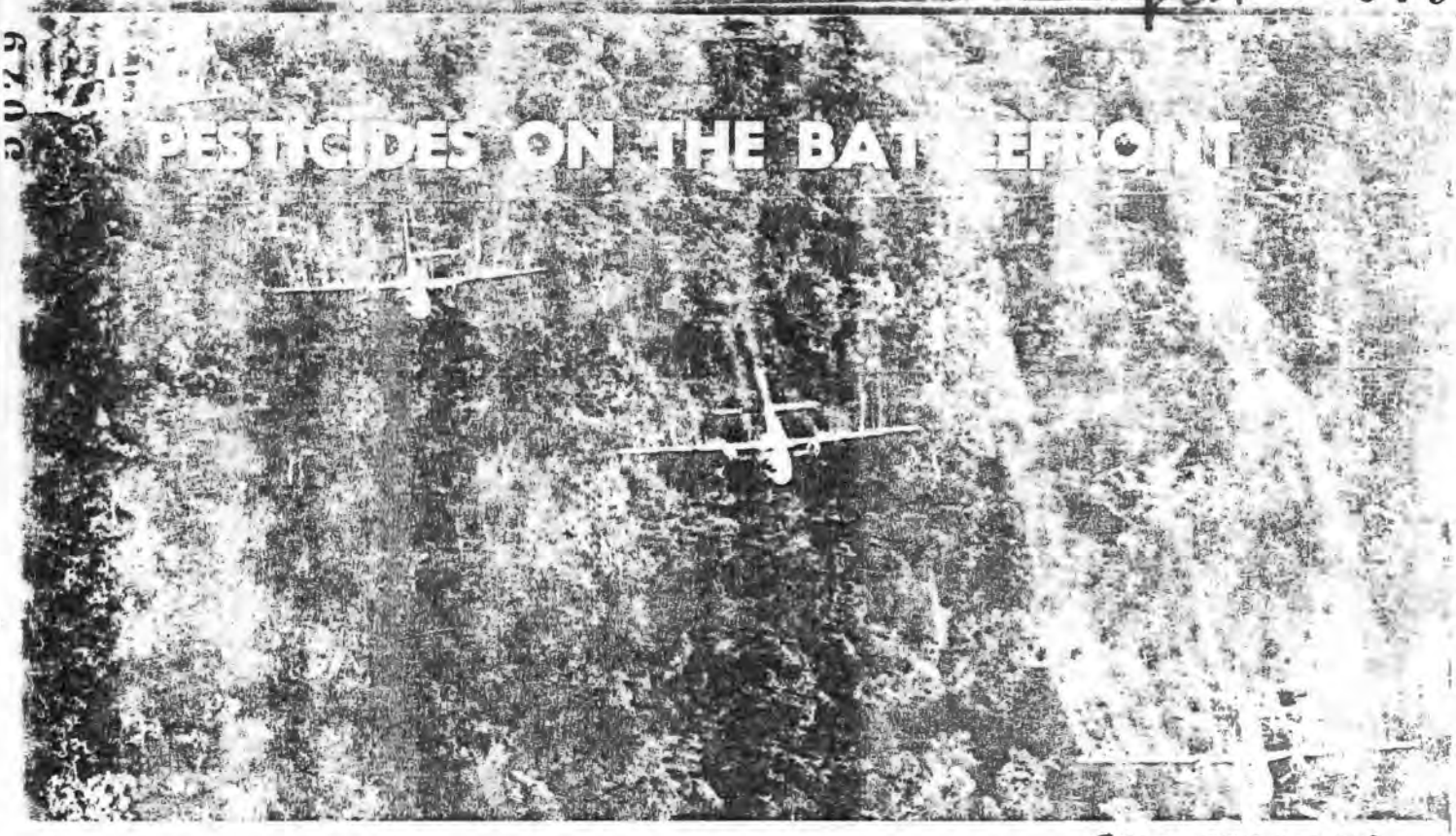
PESTICIDES ON THE BATTLEFRONT



Defoliation of jungle cover is helping U. S. troops in locating Viet Cong strongholds in the war in Vietnam.

FARM CHEMICALS
129 (June 1966), 53.

THE war in Vietnam has opened up a new market for 2,4-D and 2,4,5-T — jungle defoliation. Since 1961 some 200,000 acres have been sprayed with the phenoxy herbicides. Dow's Tordon 101 will be added to the program this year. In addition, cacodylic acid (Ansul) is being used to control grassy vegetation around military encampments, and malathion is being applied as a mosquito control.

These facts were obtained in an exclusive report from the Department of Defense. Here are the questions FARM CHEMICALS posed, with the comments received from the Military Assistance Command in Vietnam:

Q. *What chemicals are being used to defoliate jungle areas in Vietnam?*

A. Chemical currently used for jungle defoliation is Agent Orange, a 50-50 mix of butyl esters of 2,4-D and 2,4,5-T, which kills foliage with leaf fall in four to six weeks. Desiccant Agent Blue, cacodylic acid, has been used primarily against grassy vegetation surrounding military encampments. Agent White, Tordon 101, will be introduced into the program later this year.

Q. *What is the rate and frequency of application?*

A. Aerial application rate is 3 gallons per acre. Double or triple canopy jungle generally requires two applications, with the second application four to six weeks after the first. Agent Orange at 3 gallons per acre gives effective vegetation control for nine to 12 months.

Q. *Are you using fixed wing or helicopters for application? What type of dispensing system is used?*

A. USAF C-123 aircraft mounted with 1000 gallon A/A45y-1 internal defoliation dispensers, manufactured by Hayes International Corp., are used for all aerial herbicide operations. Each plane is fitted with two wing booms and a tail boom, with 14 nozzles on each wing boom and 8 nozzles on the tail boom. Aircraft spray at an altitude of 150 feet and an air speed of 130 knots.

Q. *Are the planes used for application equipped for combat and have there been any instances of attack on these planes during defoliation operations?*

A. C-123 spray aircraft are unarmed. They have been subjected to Viet Cong ground fire on numerous occasions, sustaining more than 900 hits with no loss of aircraft. More than 20 crew members have been wounded, none seriously.

Q. *Since drift is a problem with the volatile phenoxy herbicide, are you using invert emulsion formulations?*

A. Volatile phenoxy herbicides are particularly suited for penetration of dense jungle. Drift damage is minimized by suitable buffer. Non-volatile salt mix formulation of Tordon is planned for use in areas where drift is unacceptable.

Q. *What is your estimate of the acreage that has been treated to date?*

A. More than 200,000 acres of jungle and brush have been treated with herbicides. In addition there has been defoliation of Viet Cong crop producing areas.

Q. *When did the first defoliation operation take place?*

A. At the request of the Government of Vietnam, defoliation began on a limited scale in 1961. Since that time the program has continued as needed.

Q. *Are there any other herbicides now under test in Vietnam?*

A. The proper government agencies are continuously trying to improve upon existing herbicides. However, we don't know of any being specifically tested for Vietnam operations.

Q. *Are there any other ways in which pesticides are being used in Vietnam?*

A. Helicopter spray rigs are being used by preventive medicine personnel for mosquito control. A 57% solution of malathion is used at a rate of ½ pound per acre

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