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QUARTERLY RANCH HAND HISTORY

12th Special Operations Squadron

1 January 1969 --- 31 March 1969

TAB C

IN K-UK-315-H1 JAN - MAR 1969

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## Chapter II

### Operations

(U) Fighter tactics are determined by the amount of resistance in the area. On a cool target the fighters may fly top cover for the spray flight while circling over the area, conserving their fuel for a more lucrative target. On other targets, low level dry runs are sufficient to keep the guns quiet. In the event of a hot target in a free bomb zone, the fighters may pre-strike with either CBU, 20 MM, or Napalm or even all three. The spray aircraft like to start their run just a few seconds after the strike takes place to get maximum benefit from the ordnance. Most frequently, the FAC will call in a post strike on the positions marked after the spray aircraft have left the scene.

Orange: Used on a broad spectrum of foliage, composed of 24D and 245T. This is quite volatile because it is in ester formulation.

**White:** Sometimes called Tordon, a little heavier than orange and more reliable when used near areas of friendly crop or plantations.

Blue: Best chemical for use against narrow leaf crop and composed of a cacodylic acid base.

An important point to emphasize is that the defoliant chemicals are completely non-toxic and not harmful to any form of animal or human life. The aircrews are in contact with it daily and the ARVN loaders have been exposed to it for several years with no ill effects.

Combat Operations. (C) For the period 1 January through 31 March 1969 the 12th Special Operations Squadron flew 1,543 combat sorties, dispensing 1,237,525 gallons of herbicide and 11,835 gallons of insecticide. In accomplishing these combat operations the Ranch aircraft received 95 hits from hostile ground fire.

(C) Throughout the January-March quarter, Ranch Hand missions made periodic use of the "turn-around" facilities at NhaTrang and Phu Cat Air Bases. These "secondary" operation points are used for resupplying of aircraft whenever targets are fringed in the northern areas of II corps. The procedure is to fly the first of two missions out of Bien Hoa, land at the "turn around" location, be on-loaded with fuel and herbicide and then proceed on the day's second mission with final landing and mission completion at Bien Hoa. This arrangement greatly increased the squadron's range of targets in the II corps area.

(C) Bien Hoa Air Base, RVN, was expecting an enemy offensive the latter part of February. In order to protect the aircraft of the Ranch from enemy action while on the ground, all that were in commission were moved to Phan Rang Air Base, RVN on 22 February 1969. Crews and maintenance personnel accompanied the aircraft, and missions were flown as scheduled. Administration was handled at Bien Hoa AB. The Ranch would leave Phan Rang AB in the mornings, fly the mission scheduled, stop at Bien Hoa AB to re-fuel and re-herbicide, then fly the second mission of

to Bien Hoa AB.

(U) [REDACTED]

1. The first step in the process of the scientific method is to make an observation or ask a question. For example, a scientist might observe that a plant grows better in one type of soil than another.
2. The second step is to form a hypothesis, which is a prediction or an educated guess about the outcome of an experiment. For example, a scientist might hypothesize that a plant will grow taller in soil A than in soil B.
3. The third step is to design an experiment to test the hypothesis. This involves setting up a controlled experiment where only one variable is changed at a time. For example, the scientist might plant the same type of plant in two different soils and measure the height of the plants over time.
4. The fourth step is to collect data and analyze the results. The scientist might measure the height of the plants in soil A and soil B at regular intervals and compare the results.
5. The fifth step is to draw a conclusion based on the data. If the plants in soil A grew taller than the plants in soil B, the scientist might conclude that soil A is better for growing this type of plant.
6. The final step is to communicate the results of the experiment. The scientist might write a paper or give a presentation about the experiment and the results.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973).

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Statistical breakdown of the 12th Special Operations Squadron for the period 1 January 1969 to 31 March 1969 is as follows:

a. Sorties

1. Defoliation	1,485
2. Insecticide	58
3. Non-Productive Air Aborts	240
4. Survey and Coordination Meetings	10
5. Test Hops	31
6. Rotation of aircrews between DaNang AB and Bien Hoa AB	142

b. Gallons Dispensed

1. Herbicide	1,237,525
2. Insecticide	17,835

c. Flying Time

1. Defoliation	2,501.45
2. Insecticide	119.30
3. Airlift	0.0
4. Others	400.0

d. There were 95 hits on 46 sorties.

*Ed 1 Month total hits 7 3545*

*1<sup>st</sup> of Year total 3450*