# 2019 DoW List of Locations Where Tactical Herbicides and Their Chemical Components Were Tested, Used or Stored Outside of Vietnam

## Alabama

**Location:** Port of Mobile
**Application Dates or Ranges of Dates:** Aug 1965 – Dec 1968
**Site:** Warehouse used as a transit shed on a pier leased by the Mobile Detachment, and a fenced outside storage area located across the street from a warehouse adjacent to Pier No. 5 about one-half mile from the dock warehouse.
**Tactical Herbicide or Component:** Agent Orange
**Purpose:** Temporary storage
**Personnel involved in application:** Service members assigned to the Mobile Detachment, US Army Gulf Outport, Eastern Area, Military Traffic Management and Terminal Service, Port of Mobile, Alabama.

## Arkansas

**Location**: Fort Chaffee
**Dates**: May 16-18, July 22-23, August 23-25, 1967
**Site**: The Archives Search Report identified defoliant spray areas (DSA) or brush spray areas (BSA) in FTCH-041 as part of the Environmental Baseline Survey completed in 1996.
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Blue, Herbicide White
**Purpose:** Response of woody vegetation to mixtures of herbicides and/or desiccants was evaluated by the Plant Physiology Division, Plant Science Laboratories of Fort Detrick. Applications made with a Bell G-2 helicopter or a cherry picker (elevating work platform) to simulate aerial spray applications.
**Personnel involved in application:** Spray equipment, pilot, and support were furnished under contract with Allied Helicopter Services of Tulsa, Oklahoma. Fort Chaffee Forestry personnel conducted site selections to identify locations with required vegetation prior to herbicide application.

## Arizona

**Location:** Davis-Monthan Air Force Base
**Dates:** 1973- 1977
**Site:** Military Aircraft Storage and Disposition Center.
**Tactical Herbicide:** Herbicide Blue
**Date Updated:** 2025

**Florida**

**Location**: Avon Park
**Application Dates or Ranges of Dates:** February – March 1951 (Phase I)
**Site:** Avon Park Bombing Range
**Tactical Herbicide or Component:** n-butyl 2,4-D/LNA/LN143
**Purpose:** Conducted tests to determine if low volume highly concentrated anticrop agents could be sprayed from aircraft both effectively and practically.
**Personnel involved in application:** Tactical Air Command, Langley AFB, furnished C-47 aircraft, and Navy provided XBT 2D-1 with Navy Aero X 2A.

**Location:** Avon Park
**Application Dates or Ranges of Dates:** Fall 1951 (Phase II)
**Site:** Avon Park Bombing Range
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Conducted low-volume anticrop aerial spray trials (49 missions) with USAF B17, USAF B-26, USN AD Skyraider, and USN F4U Corsair.
**Personnel involved in application:** 3210th Chemical and Ordnance Test Group/3210th Chemical Test Squadron, Army Chemical Center, APG MD furnished the B-17 and B-26 aircraft and experienced test pilots and crew. Malaria and Mosquito Control Unit #1, Jacksonville, NAS furnished the Navy AD Skyraider and F4U Corsair, Navy dispersal equipment and personnel who participated in the Navy phases of the trails.

**Location:** Avon Park
**Application Dates or Ranges of Dates:** March 30 - April 16, 1954
**Site:** Not Specified on Avon Park
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Study the behavior of chemical anticrop aerial sprays when released from high-speed jet aircraft.
**Personnel involved in application:** Bureau of Aeronautics, US Navy made available a Navy F3D aircraft with pilot and provided facilities at the Naval Auxiliary Air Station, Sanford, Florida. A building for a laboratory and extensive bombing range for tests was made available at Avon Park.

**Location:** Avon Park
**Application Dates or Ranges of Dates:** March and April 1955
**Site:** Chemicals were applied with a 250-ml hand sprayer with a flat-spray Tee jet nozzle, usually to a 16 square foot area of the plant. In the case of small shrubs several plants were included in the application
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Evaluate under field conditions those chemical which showed potential in the preliminary tests.
**Personnel involved in application:** Camp Detrick, Crops Division Personnel

**Location:** Avon Park
**Application Dates or Ranges of Dates:** April 15, 1967
**Site:** Native grass-sedge vegetation near Avon Park

**Tactical Herbicide or Component:** Herbicide Blue (Phytar 560G)
**Purpose:** Evaluate 24 soil-applied herbicides over a 3-year period for duration and degree of total vegetation control.
**Personnel involved in application:** Camp Detrick, Crops Division Personnel

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** November - December 1952 (Phase III)
**Site:** Field #2 and Bombing Ranges 52 and 57 *
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Two series of chemical anticrop aerial spray trails. Army Chemical Corps conducting basic research on dispersion using butyl 2,4-D; Air Force evaluation of capacity spraying system for B29 aircraft used butyl 2,4-D and butyl 2,4,5-T.
**Personnel involved in application:** B-17 aircraft and crew were furnished by 6570th Chemical and Ordnance Test Group, Aberdeen Proving Grounds, MD from the 6570th Chemical Test Squadron, Army chemical Center, MD.. B-29 aircraft and crew were detached from the 303rd Bomb wing (M), Davis-Monthan AFB, AZ

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** March - April 1953
**Site:** Not Specified. *
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Evaluation of production model of the Large Capacity Bomb Bay Spray Tank Assembly in B-29 and C-119 aircraft. Initial testing included installation of system in aircraft; filling test using agent; dump test using water; insulation test with agent to determine if fiberglass blankets around the tank and values kept the agents from becoming viscus; performance tests using agent.
**Personnel involved in application:** Special Weapons Branch, Armament Laboratories, Director of Laboratories, Wright Air Development Center, WrightPatterson AFB and Biological Research Laboratories, Camp Detrick, MD

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** June 1962
**Site:** Field 2, unused portion of the runway away from vegetation *
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Flow rate calibration of C123. Aircraft was stationary with trough and screens used to collect spray into 55-gallon drums to be reused.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** B June 24, 27; July 1, 4, 6, 14, 15, 16, 17. 1962
**Site:** Range 52 South*
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Swath width and particle size determination. C-123 aircraft with spray equipment was flown either cross wind or in wind to card line.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** July 18-21, 1962
**Site:** Range 52 South*
**Tactical Herbicide or Component:** Herbicide Purple

**Purpose:** Swath width and particle size determination. HUS-1 helicopter with the HIDAL spray equipment was flown either cross wind or in wind to card line.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** May -July 1963
**Site:** Range 52 South*
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Determine the effective swath widths for each system under specified conditions.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** October 2-23, 1963 (Specific date not specified but it occurred prior to spray flights)
**Site:** Eglin Test Range C-52A south *
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Phase 1 (C-130) Flow rate calibrations to determine the accuracy of the flowmeter. Five tests were run on ground using a 32-foot canvas trough to collect spray and funnel it into a 500- gallon catch tank prior to determination of the ground characteristics.
**Personnel involved in application:** Pilots and flight mechanics 4500th Aerial Spray Flight. List of personnel responsible for testing in the forward

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** October 24- December 29, 1963. All flights were conducted from approximately 0430 to 0730 CST.
**Site:** CB grid was located on Eglin Test Range C-52A south. *
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Phase 1 (C-130) to determine the ground characteristics of the A/A 45Y1 dispenser. Multiple passes were done on each day at varying altitudes and flow rate. All passes were into the wind. A total of 52 passes were done during this time period.
**Personnel involved in application:** Pilots and flight mechanics 4500th Aerial Spray Flight.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** May 19, 1964
**Site:** C52A*
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Ground calibrations were conducted to determine the correct nozzle setting to attain the required flow rates. A 32- foot canvas trough was used to collect and funnel the spray into a catch so it could be measured, and the flow rate determined.
**Personnel involved in application:** Pilots and flight mechanics 4500th Aerial Spray Flight

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** May 21 - June 13, 1964
**Site:** Southwest corner of the square mile CB Grid *
**Tactical Herbicide or Component:** Herbicide Orange

**Purpose:** Fifty-three spray flights were made across the CB Defoliant Grid located on Test Area C-52 South. All flights were made from approximately 0430 to 0730, in order to obtain required weather conditions.
**Personnel involved in application:** Pilots and flight mechanics 4500th Aerial Spray Flight.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** June 26 - July 9, 1964
**Site:** Southwest quarter of the CB grid at Eglin Test Range C-52A. *
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** C-123 ground flow rate calibrations on the A/A 45Y-1 dispenser to determine the accuracy of the flowmeter. Thirteen tests were run on ground using a 32-foot canvas trough to collect spray and funnel it into a 500- gallon catch tank prior to determination of the ground characteristics.
**Personnel involved in application:** Pilots and flight mechanics 4500th Aerial Spray Flight.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** July 10-22, 1964
**Site:** Southwest quarter of the CB grid at Eglin Test Range C-52A. *
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Phase 2 (C-123): ): C-123 flights to determine the ground characteristics of the A/A 45Y-1 dispenser. Multiple passes were done on each day at varying altitudes and flow rates into the wind over the CB Grid. A total of forty-nine passes were conducted.
**Personnel involved in application:** Pilots and flight mechanics 4500th Aerial Spray Flight.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** July 7- November 6, 1965
**Site:** CB grid at Eglin Test Range C-52A*
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Developmental test and evaluation of the COIN defoliant dispenser, A/B 23Y-1, installed on an A-1E aircraft. Thirty-seven flights were conducted. Spray flights were conducted between either 5:30 to 7:30 am or 3-6 pm to obtain required weather conditions over the CB Grid
**Personnel involved in application:** Air Proving Ground Center, Eglin AFB

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** April 14-22, 1966
**Site:** CB grid at Eglin Test Range C -52A *
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Feasibility test of the Stull Bifluid Defoliant System to determine its capability to control droplet size and drift of defoliants. A Cessna 206 Super Skywagon with specially fabricated spray equipment was flown over the southwest corner of the CB Grid on Test Range 52A.

**Personnel involved in application:** Air Proving Ground Center and Air Force Armament Laboratory Eglin AFB; Stull Chemical Company, Operations and Maintenance Contractor

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** June 20 - November 8, 1968
**Site:** CB grid at Eglin Test Range C-52A *
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** A comparison of the Stull Bifluid defoliant system with the C-123 with A/A45Y-a internal defoliant dispenser. Testing was conducted on the sampler grid located in the southwest corner of the CB grid at Test Range C-52A.
**Personnel involved in application:** Aircraft, crew, maintenance, and weather support were supplied by the 4408th Combat Crew Training Wing, 319th Air Commando Squadron, England AFB, Louisiana and Detachment 10, 6th Weather Wing.

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** December 20, 1968; January 10, 13, 14, 21; February 4; March 11, 20, 25 and April 1, 7, 24 1969.
**Site:** CB grid at Eglin Test Range C -52A *
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Determine the ground depositions and swath widths for defoliants using the US-123K/A/A45Y-1 system with 22-foot wing booms. All spray flights were conducted at sunset or later to take advantage of the more favorable weather conditions.
**Personnel involved in application:** Armament Development and Test Center, Eglin AFB

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** April 30, May 1, 13, 19, 20, 21, 22, 23; June 3, 5, 9, 10 1969
**Site:** CB grid at Eglin Test Range C-52A as described in Air Proving Ground Center Technical Facilities Vol II Land Test Area 196804 *
**Tactical Herbicide or Component:** Herbicide White
**Purpose:** Determine the ground depositions and swath widths for defoliants using the US-123K/A/A45Y-1 system with 22 foot wing booms. All spray flights were conducted at sunset or later to take advantage of the more favorable weather conditions.
**Personnel involved in application:** Armament Development and Test Center, Eglin AFB

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** B July 1, 7, 24, 28, 30, 31; August 7, 11, 21, 1969
**Site:** CB grid at Eglin Test Range C -52A *
**Tactical Herbicide or Component:** Blue
**Purpose:** Determine the ground depositions and swath widths for defoliants using the US-123K/A/A45Y-1 system with 22-foot wing booms. All spray flights were conducted at sunset or later to take advantage of the more favorable weather conditions.

**Personnel involved in application:** Armament Development and Test Center, Eglin AFB

**Location:** Eglin AFB
**Application Dates or Ranges of Dates:** November 4, 12, 17, 25; December 1, 2, 3, 4, 5 1969
**Site:** CB grid at Eglin Test Range C -52A *
**Tactical Herbicide or Component:** Orange
**Purpose:** Evaluation of the TMU-28/B spray tank as an interim capability for dispensing defoliant by high-speed aircraft. Nine missions were conducted.
**Personnel involved in application:** Armament Development and Test Center, Eglin AFB

**Georgia**

**Location:** Fort Gordon
**Application Dates or Ranges of Dates:** July 15-17, 1967
**Site:** Not specified in TR114; Defoliant Testing Areas defined in SWMU 037 [Solid Waste Management Unit 37] located in Training Area 47.
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Blue, Herbicide White
**Purpose:** Evaluate rapid-acting desiccants, and defoliants and to assess the defoliation response of woody vegetation to mixtures of herbicides and/or desiccants. Applications made with Bell G-2 helicopter.
**Personnel involved in application:** Spray equipment pilot and support were furnished under contract with Allied Helicopter Services of Tulsa, Oklahoma. Civilian and military personnel from Plant Physiology Division, Plant. Fort Gordon Forestry personnel conducted site selections to identify locations with required vegetation prior to pesticide application.

**Location:** Fort Gordon
**Application Dates or Ranges of Dates:** Dates not specified in 1968 but prior to July 1, 1968
**Site:** Not specified but testing was done on brush and small trees. Defoliants and desiccants were applied with a high-line bucket lift (cherry picker) with a 15 foot boom sprayer used for liquid application.
**Tactical Herbicide or Component:** Picloram
**Purpose:** Evaluation of application of liquid or solid herbicides to leaves and soil by ground and aerial application
**Personnel involved in application:** Army Crops Division Plant Sciences Laboratory, Contract Personnel, (Fort Gordon Forestry personnel conducted site selections to identify locations with required vegetation prior to pesticide application)

**Indiana**

**Location:** Vigo Plant CWS, Terra Haute
**Application Dates or Ranges of Dates:** May 18- August 22, 194

**Site:** 4 experimental grids and 6 field grids
**Tactical Herbicide or Component:** n-butyl 2,4- D (LNA/LN143)
**Purpose:** Determine the effectiveness of chemicals defoliants when dispersed from tactical aircraft.

**Maryland**

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** May 1963
**Site:** M Field, Watsons Creek, Edgewood. Two locations specified as: marsh area with water and marsh/wooded area with no standing water
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Phase II: To determine the effectiveness of the E156 clusters when dropped by helicopter from 2500 feet at 90 MPH.
**Personnel involved in application:** Not specified.

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** May 1963
**Site:** M Field, Watsons Creek, Edgewood. Two locations specified as: marsh area with water and marsh/wooded area with no standing water
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Phase III: To determine the effectives of a single E138 bomblet when dropped by helicopter from 2500 feet at 90 MPH.
**Personnel involved in application:** Not specified.

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** May 1963
**Site:** M Field, Watsons Creek, Edgewood. Five squares horizontal grids, 96 feet on a side, were constructed in cattails four to six feet high
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Phase IV: bomblets were statically fired in an effort to obtain information of applied dosages over selected targets.
**Personnel involved in application:** Fort Detrick Technical Evaluation Division

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** May - July 1965
**Site:** Location not specified. 244 plots of unspecified size with predominant tree species including sweetgum, black willow, persimmon, black gum, white oak, black oak, pin oak, and sumac
**Tactical Herbicide or Component:** Herbicide Purple, Herbicide Orange, Cacodylic Acid
**Purpose:** Simulated aerial applications to forest vegetation. Used truck mounted sprayer designed to closely simulate a helicopter application.
**Personnel involved in application:** Fort Detrick

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** August- September 1965
**Site:** Location not specified. 75 plots of unspecified size with predominant tree species including sweetgum, black willow, persimmon, black gum, white oak, black oak, pin oak, and sumac.
**Tactical Herbicide or Component:** Herbicide Purple, Herbicide Orange, Cacodylic Acid
**Purpose:** Simulated aerial applications to forest vegetation to test seasonal variations of 5 different compounds applied at 3 rates. Used truck-mounted sprayer designed to closely simulate a helicopter application.
**Personnel involved in application:** Fort Detrick

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** May 27 and 28, 1969
**Site:** Three test sites in an open grassy area adjacent to the Phillips Army Airfield, APG
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Evaluate several formulations containing bromacil, Tandex, and diuron for control of native temperatezone grasses and associated broadleaf plants.
**Personnel involved in application:** Fort Detrick

**Location:** Aberdeen Proving Ground
**Application Dates or Ranges of Dates:** July 14-19, 1969
**Site:** Poole's Island
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Evaluate the effectiveness of conducting herbicide operations against tropical vegetation from riverine watercraft.
**Personnel involved in application:** Personnel from Naval Applied Science Laboratory with personnel from Limited War Laboratory conducted defoliation tests along shoreline.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 4, 1946
**Site:** Field A - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Study the influence of droplet size
**Personnel involved in application:** C Division, Camp Detrick, MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 2, 1946
**Site:** Field C - soybeans
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Studies carried out to test the comparative inhibitory effectiveness of several promising plant inhibitors upon field-grown crops when applied in lowvolume aqueous or oil sprays on soybeans.
**Personnel involved in application:** C Division, Camp Detrick, MD

**Location:** Camp Detrick

**Application Dates or Ranges of Dates:** June 13, 1947
**Site:** Field C - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Studies carried out to test the comparative inhibitory effectiveness of several promising plant inhibitors upon field-grown crops when applied in lowvolume aqueous or oil sprays on Irish potatoes.
**Personnel involved in application:** C Division, Camp Detrick, MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 10, 1947
**Site:** Field C - soybeans
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Studies carried out to test the comparative inhibitory effectiveness of several promising plant inhibitors upon field-grown crops when applied in lowvolume aqueous or oil sprays on soybeans.
**Personnel involved in application:** C Division, Camp Detrick, MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 18, 1947
**Site:** Field C - soybeans
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Studies carried out to test the comparative inhibitory effectiveness of several promising plant inhibitors upon field-grown crops when applied in lowvolume aqueous or oil sprays on soybeans.
**Personnel involved in application:** C Division, Camp Detrick, MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 23 and August 25, 1947
**Site:** Field C - sweet potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Studies carried out to further test the inhibitory effectiveness of several plant growth regulators on sweet potatoes
**Personnel involved in application:** C Division, Camp Detrick, MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 16, 1948
**Site:** Field D - soybeans
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143
**Purpose:** Test relative inhibitory effectiveness of aqueous and oil sprays of commercial formulations.
**Personnel involved in application:** Biological Department, Chemical Corps C Division Camp Detrick MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 9, 1948
**Site:** Field D - Irish potatoes

**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Compare inhibitory effectiveness of LN974 and LN-2777 when applied to Irish potatoes in oil and oil emulsion.
**Personnel involved in application** Biological Department, Chemical Corps C Division Camp Detrick MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 28, July 15, July 28, 1948
**Site:** Field D - soybeans
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Comparing the three listed herbicides against each other on soybeans at three stages of development.
**Personnel involved in application:** Biological Department, Chemical Corps C Division Camp Detrick MD

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 29, 1949
**Site:** Field C - soybeans
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Determine if the yield of soybeans could be markedly reduced by varying volume and concentrations. Applications in both water and oil carriers.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** May 18 and June 8, 1949
**Site:** Field C - onion
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of onion plants for possible different responses to two compounds

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 2 and 9, 1949
**Site:** Field C - flax
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of flax plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 4, 1949
**Site:** Field C - peanut
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of peanuts plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 6 and July 5, 1949

**Site:** Field C - kale
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of kale plants for possible different responses to two compounds

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 6 and July 5, 1949
**Site:** Field C - rutabaga
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of rutabaga plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 7 and July 6, 1949
**Site:** Field C - rutabaga
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of rutabaga plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 20 and July 21, 1949
**Site:** Field C - mangle
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of mangle plants for possible different responses to two compounds

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 21 and July 20, 1949
**Site:** Field C - sugar beet
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of sugar beet plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 21 and July 1, 1949
**Site:** Field C - garden beet
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of garden beet plants for possible different responses to two compounds.

**Location:** Camp Detrick

**Application Dates or Ranges of Dates:** June 20 and July 6, 1949
**Site:** Field C - cabbage
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of cabbage plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 21 and August 9, 1949
**Site:** Field C - eggplant
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of eggplant plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 22, 1949
**Site:** Field C - rape
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of rape plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 22, 1949
**Site:** Field C – tobacco
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143);n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screening of tobacco plants for possible different responses to two compounds.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 26, 1949
**Site:** Field C - soybean
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Study the influence of droplet size upon growth inhibiting soybeans.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 27, 1949
**Site:** Field C - soybean
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Study the influence of droplet size upon growth inhibiting for soybeans.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** May 22 and June 2, 1950
**Site:** Field A - wheat

**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of wheat and barley within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 16, 1950
**Site:** Field D - flax
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Limits of growth periods of flax within which the yield of grain maybe markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 2,1950
**Site:** Field D - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Limits of growth periods of Irish potatoes within which the yield of grain maybe markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 27, 1950
**Site:** Field D - sugar beet
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143)
**Purpose:** Limits of growth periods of sugar beet within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 14 and Aug 3, 1950
**Site:** Field D soybeans
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Limits of growth periods of soybean within which the yield of grain maybe markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 5, 1950
**Site:** Field D - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Limits of growth periods of Irish potatoes within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 21, 1950
**Site:** Field D 4 - flax
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Limits of growth periods of flax within which the yield of grain maybe markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 29 and 30, 1950
**Site:** Field D - sugar beet
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143)
**Purpose:** Limits of growth periods of sugar beets within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 20 and 21, 1950
**Site:** Field D - soybean
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Limits of growth periods of soybeans within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 6 and 20, 1950
**Site:** Field D 4 - fiber flax
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143 n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of fiber flax within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 6 and 20, 1950
**Site:** Field D - oil flax
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of oil flax within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 12 and August 2, 1950

**Site:** Field D - sunflower
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of sunflower within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 26 and August 7, 1950
**Site:** Field D - sweet corn
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of sweetcorn within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 4, 14, and 30, 1950
**Site:** Field D - sorghum
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of sorghum within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 5, 1950
**Site:** Field D - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of Irish potatoes within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 31, 1950
**Site:** Field F - soybean
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Limits of growth periods of soybean within which the yield of grain may be markedly reduced by spray applications of plant inhibitors. To prevent drift during applications, a movable chamber was placed around plots during applications.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 25, 1951
**Site:** Field F - soybean

**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143)
**Purpose:** Determine the effectiveness of high concentration (90%) of butyl 2,4,5-T when applied to soybeans.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 11, 1951
**Site:** Field F - lima beans
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of lima beans

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 2, 1951
**Site:** Field F - string beans
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of string beans

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 13, 1951
**Site:** Field F - kale
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of kale.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 17, 1951
**Site:** Field F - sunflower
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of sunflowers.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 10, 1951
**Site:** Field F sweet pepper
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of sweet peppers.

**Location:** Camp Detrick

**Application Dates or Ranges of Dates:** July 18, 1951
**Site:** Field F - tomato
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of tomatoes.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 3, 1951
**Site:** Field F - eggplant
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of eggplant

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** Date treated not in report. Plants were planted on Jun 4 and Harvested on September 17, 1951. Does note plants were in early bud stage.
**Site:** Field F - hemp
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of hemp.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 10, 1951
**Site:** Field F - peanut
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of peanut

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 9 and 10, 1951
**Site:** Field F - rutabaga
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100 of LN 143 required to significantly reduce yield of rutabaga.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 16, 1951
**Site:** Field F - mangle

**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T 9 (LNB/LN974/Herbicide o Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of mangle.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 11, 1951
**Site:** Field F - sugar beets
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of sugar beets.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 13, 1951
**Site:** Field F - sweet potatoes
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of sweet potatoes

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** August 9, 1951
**Site:** Field F - tobacco
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of tobacco.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 3 & 12, 1951
**Site:** Field F - rutabaga
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of rutabaga (purple top).

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 10, 1951
**Site:** Field F - garden beet
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of garden beet.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 19, 1951

**Site:** Field F - cabbage
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN143)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of cabbage.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 20, 1951
**Site:** Field F - flax
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Determine the minimum volume of 96% formulations of LN 974 or 100% of LN 143 required to significantly reduce yield of flax.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 16, July 2 and 9, 1951
**Site:** Field F - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Determine the effectiveness of low volumes of highly concentrated Ln 974 at various stages of development for reducing the yield and/or quality of Irish potatoes.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** January 5; March 5; and April 6&7, 1951
**Site:** Field F winter wheat
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Determine the effectiveness of butyl 2,4-D (LN 143); butyl 2,4,5 T (LN 974); maleic hydrazide (1700); isopropyl N-(3-chlorophenyl) carbamate (2464) at various rates of application and at various stages of development of winter wheat.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 7, 1951
**Site:** Field F - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Determine the effectiveness in reducing potato yields of various organic and inorganic compounds alone and in combination with 974.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June 26, 1951
**Site:** Field F - Irish potatoes
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Screened 45 LN compounds under field conditions in an attempt to find a chemical which would be as effective or more effective than 974

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** July 20, August 2, 1951
**Site:** Field F - soybeans

**Tactical Herbicide or Component:** n-butyl 2,4,5-T (LNB/LN974/ Herbicide Green)
**Purpose:** Determine the effectiveness of LN2, LN14, and LN974 applied as dust formulation to field grown soybeans.

**Location:** Camp Detrick
**Application Dates or Ranges of Dates:** June-July 1953
**Site:** Area B on one-acre plots of soybeans and sweet potatoes
**Tactical Herbicide or Component:** n-butyl 2,4-D (LNA/LN 143); n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** To determine the feasibility of using an experimental spray tower mounted on a pickup truck to simulate aerial spray applications of chemical anticrop agents.
**Personnel involved in application:** Crops Divisions, Chemical Corps, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** November 6 and December 11, 1956; January 4, February 5, March 5, April 11, 13,22,30, May 6, 13 1957
**Site:** Not specified but wheat field
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Investigate if wheat was susceptible to cacodylic acid.
**Personnel involved in application:** Crops Division, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** November 14, 1956; February 24, March 20 and May 1, 1957
**Site:** Not specified but rye field
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Investigate if rye was susceptible to cacodylic acid.
**Personnel involved in application:** Crops Division, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** November 14, 1956; January 1, February 4, and March 26, 1957
**Site:** Not specified but oat field
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Investigate if oats were susceptible to cacodylic acid.
**Personnel involved in application:** Crops Division, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** June 3 and July 26, 1957
**Site:** Not specified but sorghum field
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Investigate if sorghum was susceptible to cacodylic acid.
**Personnel involved in application:** Crops Division, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** June 26 and July 26, 1957

**Site:** Not specified but corn field
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Investigate if corn was susceptible to cacodylic acid.
**Personnel involved in application:** Crops Division, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** August 1957
**Site:** Rice field near Nallin Pond
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Effect of dosage rate and droplet size upon biological activity.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** Feb 28; March 3, 11,17, 19, 28; April 4, 1958
**Site:** Greenhouse - 9 crop plants grown in containers
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Agent applied in a spray room.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** March 3, 1958
**Site:** Greenhouse - rice grown in containers
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Rice plants were treated with cacodylic acid at six rates in the spray room then moved back to the greenhouse.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** July 30; Aug 4, 5, 6, 7, 11, 12, 18, 20, 21, 26, 1958
**Site:** Field grown crops of millet, peanuts, sorghum and soy beans
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Activity of cacodylic acid on crops other than rice.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** March 3, 1958
**Site:** Greenhouse
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Plants placed in dew chamber for one hour then moved to spray room where dust was applied with small duster

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** May 19 - August 2, 1960
**Site:** Field grown crops of wheat, rye, oats, barley kaoliang, millet, corn, sweet potatoes, and Irish potatoes
**Tactical Herbicide or Component:** Irish potatoes, Cacodylic Acid
**Purpose:** Obtain crop response data for a broad range of economically important crop species.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** May 1963
**Site:** Cattails
**Tactical Herbicide or Component:** Herbicide Purple
**Purpose:** Five bomblets were statically fired.
**Personnel involved in application:** Technical Evaluation Division of Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** August 1961- June 1963
**Site:** Primary screening carried out in greenhouses on 14-day old bean plants; secondary screening carried sprayed in green houses at 1,5, 10 lbs./ac on tree seedlings
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** To evaluate them for effectiveness as defoliators, desiccants, and herbicides. Ones identified as promising went to field screening at Fort Ritchie or Fort Meade.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** 1967-68
**Site:** Greenhouse studies on 14-day old Red Kidney Beans
**Tactical Herbicide or Component:** Herbicide Blue (Phytar 560G), Picloram, n-butyl 2,4-D (LNA/LN 143)
**Purpose:** Determine the effect of cacodylic acid on the translocation of 2,4-D and picloram. 100ul of chemical were applied with a pipet to plants.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** May 21, 1968
**Site:** 11 plots, 20 x 20 sq ft
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide White, Picloram
**Purpose:** Plots were observed periodically for lateral and vertical movement of herbicides in soil for 12 months.
**Personnel involved in application:** Crops Division, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** June 12 - September 12, 1968
**Site:** Laboratory and greenhouse studies
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Seven experiments were done on black valentine or red kidney bean plants and three experiments were done on saplings of silver maple or green ash.
**Personnel involved in application:** Plant Sciences Laboratory, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** June 12 - September 12, 1968
**Site:** Laboratory and greenhouse studies
**Tactical Herbicide or Component:** Herbicide Orange

**Purpose:** Study to correlate the spherical drop sizes of the defoliants with the spot sizes they produced by absorption and spreading on Kromekote Cards.
**Personnel involved in application:** Plant Sciences Laboratory, Fort Detrick

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** May 2 and 12, 1969
**Site:** Redcoat winter wheat plots location not specified
**Tactical Herbicide or Component:** Herbicide Blue (Phytar 560G)
**Purpose:** Evaluate the yield response of winter wheat to foliage spray applications of cacodylic acid formulations in comparison to Phytar 560G. Sprays applied using movable spray shield to prevent drift.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** 1970
**Site:** Controlled environmental chamber with individual potted plants
**Tactical Herbicide or Component:** Picloram
**Purpose:** Examine the interaction of bromacil and picloram at varying concentrations.

**Location:** Fort Detrick
**Application Dates or Ranges of Dates:** 1970
**Site:** Controlled environmental chamber with individual potted plants
**Tactical Herbicide or Component:** Picloram
**Purpose:** Second experiment to further explore the interaction of bromacil and picloram at varying concentrations

**Location:** Fort Meade
**Application Dates or Ranges of Dates:** 2 August 1963
**Site:** 24 Plots, each approximately 150 square feed, location not specified.
**Tactical Herbicide or Component:** Cacodylic Acid
**Purpose:** Purpose was to simulate aerial application and evaluate defoliation
**Personnel involved in application:** Crops Division, Chemical Corps, Fort Detrick

**Location:** Fort Meade
**Application Dates or Ranges of Dates:** Spring- Summer 1964
**Site:** Isolated area of an abandoned farm; area was marked off in 225 sq ft plots.
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Purple
**Purpose:** Evaluate selected chemicals under field conditions
**Personnel involved in application:** Chemical Corps, Fort Detrick

**Location:** Fort Ritchie
**Application Dates or Ranges of Dates:** July 11-12, 1963
**Site:** Eighteen individual trees each of: white ash, American elm, red maple, black locust, chestnut oak, and northern red oak
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Purpose was to simulate aerial application and evaluate defoliation

**Personnel involved in application:** Chemical Corps, Fort Detrick

**Mississippi**

**Location:** Naval Construction Battalion Center, Gulfport
**Application Dates or Ranges of Dates:** 26 June 1968- June 10, 1977
**Site:** Secure 12 Acre Storage Area
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Blue, and Herbicide White
**Purpose:** Shipping to Vietnam, then storage pending guidance on disposal.
**Personnel involved in application:** San Antonio Air Material Area (SAAMA); 355th General Supply Company (Air Reserves); 2954th Combat Logistic Support Squadron

**Location:** Naval Construction Battalion Center, Gulfport
**Application Dates or Ranges of Dates:** May 24 - June 10, 1977
**Site:** Redrumming facility
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Drums were moved to redrumming facility where the drumheads were removed, and herbicide was sucked through intake hoses into tank railcars. Rail cars were then moved to the dock where the herbicide was transferred to the Vulcanus. Per IAW EPA regulations, each drum was rinsed with diesel fuel, crushed, and stacked.
**Personnel involved in application:** 32 men from the 2954th CLSS and 76 personnel from other ALCs.

**New York**

**Location:** Fort Drum
**Application Dates or Ranges of Dates:** May - October 1959
**Site:** Four square mile (2,560 acres) area located in an artillery impact area; access to it on the ground was not possible.
**Tactical Herbicide or Component:** Herbicide Orange [1:1 mixture of n-butyl 2,4,5-T (LNB/LN974/Herbicide Green):n-butyl 2,4-D (LNA/LN143)]
**Purpose:** To kill deciduous vegetation in impact area that was obstructing observation of artillery impacts on targets. Defoliants were obtained from the USDA and mixed on-site prior to loading into H-21 helicopter for application.
**Personnel involved in application:** Chemical Corps

**Texas**

**Location:** Kelly AFB
**Application Dates or Ranges of Dates:** November 18, 1970 - Unknown
**Site:** Storage in Yard 62 East Kelly area
**Tactical Herbicide or Component:** Herbicide Blue; n-butyl 2,4,5-T (LNB/LN974/Herbicide Green); n-butyl 2,4-D (LNA/LN143)

**Purpose:** Kelly AFB Yard 62 became the storage location for herbicide blue, n-butyl 2,4-D and n-butyl 2,4,5 –T when SAAMA had to take delivery per contract requirements.
**Personnel involved in application:** San Antonio Air Material Area (SAAMA)

**Utah**

**Location:** Dugway Proving Ground
**Application Dates or Ranges of Dates:** August 7 & 8, 1963
**Site:** Downwind Grid
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** To determine if the disseminating characteristics of the Air Force TMU 28/B spray tank will meet the objectives of the A/B45Y-3 program when the tank is used for defoliating agents.

**Location:** Dugway
**Application Dates or Ranges of Dates:** September 14 -October 6, 1964
**Site:** Firing range
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** To determine the performance, reliability, maintenance requirements, and suitability of the Army interim defoliation system for the US Army OV- 1 (MOHAWK) aircraft.
**Personnel involved in application:** Chemical Corps Fort Detrick/Army Aviation

**Johnston Island (Atoll)**

**Location:** ) Johnston Island (Atoll)
**Application Dates or Ranges of Dates:** April 18, 1972 - July 14, 1977
**Site:** The herbicide area that was located on the northwest corner of Johnston Island
**Tactical Herbicide or Component:** 25,219 drums (1,361,826 gallons) Herbicide Orange moved from Vietnam on the SS Transpacific to Johnston Atoll for storage.
**Purpose:** Storage pending decision on disposition.
**Personnel involved in application:** PACAF.

**Location:** ) Johnston Island (Atoll)
**Application Dates or Ranges of Dates:** July 15, 1977 - September 3, 1977
**Site:** Herbicide Orange moved from herbicide storage area to dock in fuel trucks
**Tactical Herbicide or Component:** 24,708 barrels were transferred to refueling trucks and transported to the ship Vulcan.
**Purpose:** Destruction
**Personnel involved in application:** Personnel from Holmes and Harver Corporation, Anaheim

**Florida**

**Location:** Apalachicola National Forest, near Sopchoppy, Wakulla County, Tallahassee
**Application Dates or Ranges of Dates:** May 3-8, 1967

**Site:** Not specified but land and facilities were provided by the Supervisor, Apalachicola National Forest
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Blue
**Purpose:** Evaluate rapid-acting desiccants and defoliants and to assess the defoliation response of woody vegetation to mixtures of herbicides and/or desiccants. Applications made with Bell G-2 helicopter.

**Georgia**

**Location:** Georgia Power Company: Valdosta-Thomasville line and Bonaire line near Macon
**Application Dates or Ranges of Dates:** May 20-22, 1964
**Site:** Six plots, each 60 X 2640 feet, were treated on the ValdostaThomasville line. Seven plots, each 200 X 750 feet, were treated on the Bonaire line.
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Purple
**Purpose:** Evaluate chemicals under field conditions against a standard herbicide, Herbicide Purple, in a swamp forest. Chemicals were sprayed on 5-acre plots by a Bell helicopter at a rate of 10-gallons total mixture/acre either just after sunrise or just before sunset.
**Personnel involved in application:** Georgia Power Company and U.S. Army Biological Center (Provisional)

**Montana**

**Location:** Bozeman
**Application Dates or Ranges of Dates:** July, 3, 6, and 14, 1953
**Site:** Galatin Valley
**Tactical Herbicide or Component:** n-Butyl 2,4-D (LNA/LN 143) n-butyl 2,4,5-T (LNB/LN974/Herbicide Green)
**Purpose:** Field evaluations of chemical agents for attacking wheat using miniature spraying systems mounted on a light aircraft.

**Tennessee**

**Location:** Tennessee Valley Authority: power line from Hiwassee Dam, NC to Coker Creek, TN
**Application Dates or Ranges of Dates:** June 17; July 2,3; 1964
**Site:** Seven plots, each 200 X 750 feet. Right of way 200 feet wide on the power line from Hiwassee Dam, NC to Coker Creek, TN
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Purple
**Purpose:** Evaluate chemicals under field conditions against a standard herbicide, purple. Compounds were applied by Bell helicopter.
**Personnel involved in application:** Tennessee Valley Authority and U.S. Army Biological Center (Provisional)

**Cambodia**

**Location:** Mimot or Krek, Kompon Cham Province
**Application Dates or Ranges of Dates:** April 16 -30, 1969
**Site:** Dar and Prek Clong Plantations
**Tactical Herbicide or Component:** Orange
**Purpose:** Spray drift from Vietnam defoliation missions. Forty spray missions had been flown to control vegetation in northern Tay Ninh Province.
**Personnel involved in application:** Ranch Hand

**Canada**

**Location:** Canadian Forces Base Gagetown, New Brunswick
**Application Dates or Ranges of Dates:** June 14-17, 1966
**Site:** Western portion of Base Gagetown between Broad Road and Blissville Road (Fig 1). Test site was ~ 4 miles long by 1,200 feet wide. 116 plots, each 200 X 600 feet wide.
**Tactical Herbicide or Component:** Herbicide Orange; Herbicide Purple
**Purpose:** Further evaluate chemical agents that cause rapid defoliation of woody and herbaceous vegetation. Defoliations applied by helicopter using HIDAL spray system.

**Location:** Base Gagetown, New Brunswick
**Application Dates or Ranges of Dates:** 21-24 June 1967
**Site:** Test area was located approximately 10 miles from nearest boarder on Rippon Road east of Broad Road. 50 plots, each 200 x 660 feet with a 200 ft buffer zone between adjacent plots.
**Tactical Herbicide or Component:** Herbicide Orange; Sodium Cacodylate
**Purpose:** Further evaluate chemical agents that cause rapid defoliation of woody and herbaceous vegetation. Defoliations applied by helicopter using HIDAL spray system.
**Personnel involved in application:** Crops Division, Fort Detrick with assistance from enlisted men from the Royal Canadian Army Service Corps, Royal Canadian Army Horse Artillery, Royal Canadian Dragoons, and Royal Canadian Black Watch

**India**

**Location:** Kumbla
**Application Dates or Ranges of Dates:** May 1945- February 1946
**Site:** Kumbla
**Tactical Herbicide or Component:** n-Butyl 2,4-D (LNA/LN143)
**Purpose:** Destructiveness of chemical agents, applied primarily as sprays, was tested on five major tropical crops plants grown in field plots.
**Personnel involved in application:** Chemical Defense Research Establishment, Cannanor, South India, under the jurisdiction of the Chemical Defense Research Department, Ministry of Supply, Great Britian

**Korea**

**Location:** DMZ to include I Corps (GP) Area and FROKA Area

**Application Dates or Ranges of Dates:** Mid-May through mid-July, 1968
**Site:** Area north of Civilian Control Line (CCL) and south of southern boundary of DMZ (South Tape).
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Blue
**Purpose:** Control vegetation.
**Personnel involved in application:** ROKA personnel made all defoliant applications under the Supervision of Chemical Corps officers and enlisted personnel from the Chemical Section, 2nd Infantry Division and Korean Military Advisory Group (KMAG) representatives.

**Laos**

**Application Dates or Ranges of Dates:** December 1965- September 1969
**Site:** Ho Chi Minh Trials and road network
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide White, Herbicide Blue
**Purpose:** Herbicide operations were begun in Laos to counter the use of the Ho Chi Minh trail by the Vietnamese. Sorties being flown from Tan Son Nhut and Da Nang.
**Personnel involved in application:** Ranch Hand

**Thailand**

**Location:** Royal Thai Army Replacement Training Center, Pranburi Military Reservation
**Application Dates or Ranges of Dates:** April 1964/January 1964
**Site:** Hua Hin Airport
**Tactical Herbicide or Component:** Herbicide Orange, Herbicide Purple, Herbicide Pink; Cacodylic Acid, Sodium Cacodylate
**Purpose:** Ground calibration of aircraft spray system, defoliation tests.
**Personnel involved in application:** Personnel from the US Army Biological Center, Fort Detrick.

**Location:** Udorn Royal Thai Air Force Base
**Application Dates or Ranges of Dates:** October 1968
**Site:** Herbicides were only temporarily at Udorn to refill planes for missions in northern Laos.
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Ranch Hand Aircraft, support personnel and Herbicide Orange were flown into Udorn for missions flown in Laos. No herbicide was sprayed in Thailand.
**Personnel involved in application:** Ranch Hand

**Location:** Udorn Royal Thai Air Force Base
**Application Dates or Ranges of Dates:** November 1968
**Site:** Herbicides were only temporarily at Udorn to refill planes for missions in northern Laos.
**Tactical Herbicide or Component:** Herbicide Blue

**Purpose:** Ranch Hand Aircraft, support personnel and Herbicide Blue were flown into Udorn from Phu Cat Air Base Vietnam for missions flown in northern Laos. No herbicide was sprayed in Thailand.
**Personnel involved in application:** Ranch Hand

**Location:** Udorn Royal Thai Air Force Base
**Application Dates or Ranges of Dates:** December 28, 1968 - January 2, 1969
**Site:** Herbicides were only temporarily at Udorn to refill planes for missions in northern Laos.
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Ranch Hand Aircraft, support personnel and Herbicide Orange were flown into Udorn from Phu Cat Air Base Vietnam for missions flown in northern Laos. No herbicide was sprayed in Thailand.
**Personnel involved in application:** Ranch Hand

**Location:** Udorn Royal Thai Air Force Base
**Application Dates or Ranges of Dates:** February 2-5, 1969
**Site:** Herbicides were only temporarily at Udorn for to refill planes for missions in northern Laos.
**Tactical Herbicide or Component:** Herbicide Orange
**Purpose:** Ranch Hand Aircraft, support personnel and Herbicide Orange were flown into Udorn from Phu Cat Air Base Vietnam for missions flown in northern Laos. No herbicide was sprayed in Thailand.
**Personnel involved in application:** Ranch Hand

**Location:** Udorn Royal Thai Air Force Base
**Application Dates or Ranges of Dates:** August 31- September 7, 1969
**Site:** Herbicides were only temporarily at Udorn for to refill planes for missions in northern Laos.
**Tactical Herbicide or Component:** Herbicide Blue
**Purpose:** Ranch Hand Aircraft, support personnel and Herbicide Blue were flown into Udorn from Phu Cat Air Base Vietnam for missions flown in northern Laos. No herbicide was sprayed in Thailand.
**Personnel involved in application:** Ranch Hand