IR-4
FIELD DATA BOOK

TITLE: PYRETHRINS + PBO MAGNITUDE OF THE RESIDUE ON MUSHROOM (WHITE BUTTON AND OYSTER)

PR# 05954

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Fogging

White Button

SPONSOR
IR-4 Project Headquarters
500 College Road East, Suite 201 W
Princeton, NJ 08540
(732) 932-9575, FAX# (609) 514-2612

STUDY DIRECTOR
Mr. Kenneth S. Samoil
(732) 932-9575 extension 4614, FAX# (609) 514-2612
E-mail: samoil@aesop.rutgers.edu

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD DATA BOOK REVISIONS FOR TRIAL YEAR 2014

Revisions have been made in response to suggestions made by Field Cooperators, Study Directors, Regional Field Coordinators, Quality Assurance professionals, and EPA Auditors. They are intended to prompt for additional information where needed, to reduce misunderstandings of the data prompts by the people who use this book, and to facilitate the transcription of the data into final reports.

1B	The statement that pH strips "are compliant only if an SOP is in place" has been removed because SOPs that mention the strips but have little information about their use and maintenance may be inadequate to make them GLP-compliant. It is acceptable to use non-GLP-compliant pH strips in IR-4 field trials.
4B	The prompt for INSTRUMENTS USED TO MEASURE TEST SUBSTANCE has been removed from this page and relocated to 6G.
4D	A check-off prompt has been added for adjuvants that do not have an available batch number or expiration date.
5C	Adjacent treated plots (and test substances used) shall be listed in a table beneath the plot plan for this trial, rather than included in the plot plan. In this way, the plot plan does not need alteration when there is a trial cancellation in one of the adjacent plots. The information that had been entered into the table for the cancelled trial is lined out, and information about the replacement trial (if any) is entered below in the same table.
5F	All data prompts are now in table format. Some prompts that had been near the top of the page have been moved towards the bottom. All of the same prompts are in the new table.
5H	If a facility or grower's list of all maintenance chemical applications is inserted here, the applications to the plots in this trial must be notated in some way to distinguish them from applications made to other areas of the farm or research facility. (*I.e.* data dumping is prohibited)
5I	Crop Destruction: Description of the post-trial crop destruction has been moved here from Part 7B.
6C	If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* YES_____ NO_____ (The sprayer must operate consistently [within 5%] during the 3 runs for the calibration to be valid.) [The last column on the right of the calibration table now prompts for output/second.]
6G	Prompts have been added for additional agitation time, for identification of measuring instruments with increments, and for indicating the order of mixing the spray mixture.
6H	The narrative summary of the application has been removed from this page to give more room for descriptions of poor crop vigor and equipment cleaning.
6I	The post-application rate confirmation has been removed from this page and has been replaced by the narrative summary of the application.
6J	Post-application rate confirmation is now on this page, with example calculations.
6K	Application equipment maintenance and repair log has been moved and replaced by phytotoxicity data and first rain or irrigation after application entries. Was There Any Visible Phytotoxicity Damage? If YES, then contact the Study Director. If a digital camera is available, it is preferable to take one or more photographs and send them in an email message to the Study Director. Also, provide a written description below. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below** (first irrigation after application).
6L	Revised table of options for differentiating multiple field trials conducted by the same person or by two people within 20 miles of each other. This table was developed after discussions between U.S. and Canadian regulators.
6M	Application equipment maintenance and repair log is now on this page.
7A1	Protocol requirement questions (*e.g.* minimum # plants collected) are now in table format.
7A1	Number and Location of Rows from Which Each Sample Was Collected *Examples: "6 middle rows" "All 3 rows" "1" (for single-row plot)*
7A2	Include a description of equipment, duration of procedure(s), temperatures, estimated moisture content, etc., as appropriate. (When the protocol requires that certain samples have specified moisture content, the estimated (or calculated) moisture content of the collected samples must be recorded.

GENERAL INSTRUCTIONS FOR THE COMPLETION OF THE IR-4 FIELD DATA BOOK

This book is designed for use in collecting data in the course of completing a field trial sponsored by the IR-4 Project that **must** be conducted in compliance with the EPA or OECD Good Laboratory Practice Standards. It has been extensively updated in recent years. **DO NOT USE PAGES FROM FIELD DATA BOOKS PRINTED IN PREVIOUS YEARS. All of the data pages in this book should have "Trial Year 2014" in the lower right corner.** (Inserts such as bills of lading do not need to have this phrase; field ID# and page# are sufficient.) This Field Data Book (**FDB**) is an authentic record of your work. The IR-4 FDB is divided into Parts, each containing the following information:

PART NO.	SUBJECT
PART 1	GOOD LABORATORY PRACTICE COMPLIANCE INFORMATION
PART 2	PERSONNEL LOG
PART 3	NOTES AND COMMUNICATION LOG
PART 4	TEST SUBSTANCE RECORDS (Receipt/storage/disposition records, test substance use log)
PART 5	TRIAL SITE INFORMATION (Maps, soil characterization information, crop/pesticide history, and test crop records)
PART 6*	APPLICATION RECORDS (General equipment information, equipment calibration records, delivery rate calibration/calculations, treatment information, and environment records during treatment)
PART 7	SAMPLE COLLECTION AND STORAGE (General sampling information, sample balance calibration, sample log, freezer temperature and inventory)
PART 8	RESIDUE SAMPLE SHIPPING (Residue sample shipping forms)
PART 9	WEATHER AND IRRIGATION RECORDS

PROTOCOL & PROTOCOL CHANGES (formerly Part 10)–This part may be kept in the back of the FDB, or moved to the front of the FDB (ahead of Part 1), or inserted between other FDB Parts.

*Part 6 is available in a version specific for airblast applications. If you intend to apply the test substance in this study via airblast and have not received the pages entitled "PART 6. APPLICATION RECORDS-AIRBLAST SPRAYER", then you should contact the Regional Field Coordinator, or print the pages from the IR-4 website: **http://ir4.rutgers.edu/Fooduse/Fieldbook/index.htm**

If the instructions below are followed, the IR-4 FDB can serve as both a scientific record and a legal document. Failure to comply is not necessarily a protocol deviation, but will result in time-consuming follow-up work by the Study Director, Regional Field Coordinator, QA Officer, and/or the Field Research Director.

1. One copy of each form (template) has been provided. However, some forms require completion of that form on various dates (e.g. Treatment Information Form must be completed for each application date). Prior to entering data, make appropriate number of photocopies of the template(s). Insert the Field ID on each page. If additional templates are needed, contact the Regional Field Coordinator, or print them from the IR-4 website: http://ir4.rutgers.edu/FoodUse/FieldBook/index.htm

2. Some data requested on a form can be applicable to more than one IR-4 field trial. When this occurs, a verified true copy of the completed form can be made and inserted in the proper Part(s) of other IR-4 FDB's. A verified true copy is made by marking on the page which is copied that "THIS IS A TRUE COPY OF ORIGINAL" or similar statement, noting which IR-4 FDB or other documents contain the original and having the person responsible for verifying the copy, initial and date the verification statement. In general, Parts 6G, 6H, 6I, 7A, and 7B should not be copied; they should have original entries. Contact the Study Director if a possible exception exists.

3. Staples and paper clips should not be used on pages in the FDB. Photographs and small pieces of paper with data should be taped to a standard-sized, blank piece of paper.

4. Follow all directions on how to complete the FDB carefully. When completing forms, you should enter all of the requested information, if possible. If a particular form or section of the form does not require a response, make a line-out (diagonal line from the top of the page or field to the bottom), then initial and date the line-out or the bottom of the page. If the requested data are not applicable, give an explanation. Some forms allow the submission of equivalent information versus completion of forms (e.g. verified true copy of recording temperature monitor printout instead of completing the temperature log).

5. All entries should be clear, understandable, legible, and made with a ballpoint pen in **indelible blue or black ink**. Changes to the raw data can only be made by **drawing a single line** through the original entry so as not to obscure it. The date, signature (or initials) and reasons for change (brief description or Error Code) must accompany any change. Acceptable Error Codes include:

AW=Accidental Write-over	**LE=Late Entry**	**SP=Spelling Error**
CE=Calculation Error	**ME=Measurement Error**	**TE=Transcription Error**
EE=Entry Error	**NA=Not Applicable**	**UE=Unnecessary Entry**
IE=Illegible Entry	**NI=New Information**	**NR=Not Recorded**
IW=Inappropriate Word	**PE=Pagination Error**	**WE=Wrong Entry**

Other error codes can be used; however, the codes must be outlined in an approved SOP or noted in this IR-4 FDB. Circling error codes is not required, but may be done for clarity.

6. **Do not write on the back of any page in the FDB. Do not insert 2-sided documents (pages with printing on both sides) in the FDB. If necessary, make one-sided copies of 2-sided documents for the FDB, and save the original in facility files. The MSDS for the test substance is not needed in the FDB, though a copy should be retained by the field personnel at each trial.** The *OBSERVATIONS, EXPLANATIONS AND COMMUNICATION LOG* (Part 3) can be used to record observations, notes, phone calls, correspondence, and other events that have no specific place in the IR-4 FDB. Also, if there is not enough space in a section of a form to record the complete entry, add another page, or make a reference to Part 3 and complete the entry there.

7. If entries are made on a page over more than one day, each day's entry must be initialed and dated. When more than one person enters data on a page in one day, each of the initials (or signatures) must be dated. Data that have been recorded on non-FDB pages that are being inserted into the FDB must be initialed and dated, even if the data are also transcribed onto an FDB page. Multi-page documents, which are themselves paginated, may be inserted into a FDB with initial and date on either the first or last page only.

8. The FDB should be complete when submitted, with the permissible exceptions of laboratory receipt forms, certificates of analysis, and protocol deviation forms that have been signed by the Study Director. Occasionally, additional exceptions may be made with the permission of the Regional Field Coordinator. Do not make a notation that the requested information will be submitted at a future date. Make a certified, true copy that includes each page of the IR-4 FDB for your records. **Send the original to the designated Regional Field Coordinator.**

9. If there are any questions on how to conduct research or capture information in the IR-4 FDB, contact the Study Director and the Regional Field Coordinator. Additionally, the Study Director should be contacted if:
   - ☐ the protocol requires changes
   - ☐ unforeseen or unavoidable circumstances force a change from protocol directions
   - ☐ actual application rate deviates more than - 5% or +10% from the protocol rate

PAGINATION INSTRUCTIONS FOR THE FIELD DATA BOOK

Initial pagination of the Field Data Book:
Pages should be numbered consecutively within each Part, starting each Part with Page 1. Do not paginate sub-parts separately. (There should not be Part 6A, page 1, followed by Part 6B, page 1. Part 6 is paginated as 1, 2, 3... until the last page in Part 6.) **When an FDB Part is initially paginated, the total number of pages in that part is entered at the bottom of page 1 next to the words "Total number of pages in this section at initial pagination".** It is not necessary to enter this total on each page within the section. All pages, including those not originally part of the FDB (such as Bills of Lading), should be paginated and identified with the field ID number. Pages in the Protocol/Protocol Changes section do not need pagination, but should be identified with the field ID number. Pages in Part 6 should be grouped by application#. I.e. all of the pages related to application #1 should come first, followed by all of the pages related to application #2, and so on.

Additional pages inserted into the Field Data Book after it has been paginated:
If a page is added after the FDB has been paginated, number that page with the previous page number and a letter. E.g. a page inserted after Part 6, page 15, would be Part 6, page 15A. If two pages had been added here, the second page would be Part 6, page 15B. The total number of pages that had been entered on page 1 is not revised. The addition of these pages to the Field Data Book must be noted on the table on the next page, with the initials of the person who inserted the pages and the date of entry. **Each row of the table should include only pages entered within one Part on one date (see example below); however all entries made on one date should be initialed and dated as a group. After all new pages have been entered on a particular date, a horizontal line must be drawn across the "Initials" and "Date" column to indicate which entries are confirmed by the initials and date above the line. This page should be kept just in front of the divider for Part 1.** Unused portions of this table should not be lined out.

Example: PAGES ADDED TO THE FIELD DATA BOOK AFTER INITIAL PAGINATION			
FDB Part	**Identity of inserted pages (e.g. 6A-B, 9A)**	**Initials**	**Date**
6	7A, 14A	Grl	8/8/14
7	2A, 14B		
4	3A-C	Rs	10/1/14
5	1A	KH	2/28/15
6	7B-F, 14C, 20A		

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Fogging
White Button

Field ID No. _____

CHAIN OF CUSTODY FOR IR-4 FIELD DATA BOOK

FIELD RESEARCH DIRECTOR: DAVID ENNES

After receipt of this IR-4 Field Data Book, the Field Research Director shall start the chain of custody log by completing the first part. Once raw data entry has begun in the Field Data Book, the data books are to be in the custody of the Field Research Director (or personnel under the Field Research Director's supervision). When the Field Data Book is transferred to another individual (e.g. sending completed Field Data Book to IR-4 Regional Field Coordinator), the sender must note to whom and when the data book is sent. **The recipient must sign the next block and date the form upon receipt.**

Signature of Field Research Director: David Ennes Date: 3-13-14

Printed name: DAVID ENNES Initials: dfe

Field Data Book sent/given to: Becky Sisco Date Sent: 9-26-14 dfe 9-26-14

Signature of recipient: Rebecca Sizio Date Received: 10-1-14

Printed name of recipient: Rebecca Sizio Initials: RS

Field Data Book sent/given to: Grace Lennon Date Sent: 10/2/14

Signature of recipient: _____ Date Received: _____

Printed name of recipient: _____ Initials: _____

Field Data Book sent/given to: _____ Date Sent: _____

Signature of recipient: _____ Date Received: _____

Printed name of recipient: _____ Initials: _____

Field Data Book sent/given to: _____ Date Sent: _____

Signature of recipient: _____ Date Received: _____

Printed name of recipient: _____ Initials: _____

Field Data Book sent/given to: _____ Date Sent: _____

Field ID No.________Ennes________

Additional Chain of Custody Signature Blocks: **DO NOT LINE OUT THIS PAGE!**

Signature of recipient: ____________________ Date Received: __________

Printed name of recipient: ____________________ Initials: __________

Field Data Book sent/given to: ____________________ Date Sent: __________

Signature of recipient: ____________________ Date Received: __________

Printed name of recipient: ____________________ Initials: __________

Field Data Book sent/given to: ____________________ Date Sent: __________

Signature of recipient: ____________________ Date Received: __________

Printed name of recipient: ____________________ Initials: __________

Field Data Book sent/given to: ____________________ Date Sent: __________

Signature of recipient: ____________________ Date Received: __________

Printed name of recipient: ____________________ Initials: __________

Field Data Book sent/given to: ____________________ Date Sent: __________

Signature of recipient: ____________________ Date Received: __________

Printed name of recipient: ____________________ Initials: __________

Field Data Book sent/given to: ____________________ Date Sent: __________

Signature of recipient: ____________________ Date Received: __________

Printed name of recipient: ____________________ Initials: __________

Field Data Book sent/given to: ____________________ Date Sent: __________

Field ID No. _____

PAGES ADDED TO THE FIELD DATA BOOK AFTER INITIAL PAGINATION (See Page 4 for instructions on entering multiple pages on the same date—you only need to enter initials once on each date!)			
FDB Part	**Identity of inserted pages (e.g. 6A-B, 9A)**	**Initials**	**Date**

Do not line out unused portions of this table.
(Additional "Pages Added" tables may be inserted if needed.)

GLP

Part 1

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 1. GOOD LABORATORY PRACTICE COMPLIANCE INFORMATION

A. STANDARD OPERATING PROCEDURES

Provide a verified true copy of the SOP index(s) ***or*** *complete the below section by listing all SOP's used in this research trial.*

SOP IDENTIFICATION *(INCLUDING REVISION NO.)*	DATE APPROVED *(by IR-4 Regional Field Coordinator)*
Refer to the following page DK 9-8-14	

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-8-14

PART 1 PAGE 1 Trial Year 2014

Total number of pages in this section at initial pagination: 3

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"

THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS_____DATE_____

UC Kearney Agricultural Research and Extension - IR-4 Field Research Center

9240 S. Riverbend Ave., Parlier, CA 93648

2014 STANDARD OPERATING PROCEDUES – TABLE OF CONTENTS

SOP No. UCKARE-(#)	TITLE	Year Revised	Date Revised
10	**Administration**		
10-1.3	IR-4 Field Research Center Management	2011	03/03/11
10-2.6	Standard Operating Procedures	2014	02/13/14
10-3.4	Personnel	2013	03/18/13
10-4.4	Quality Assurance	2011	03/03/11
10-5.3	EPA (Environmental Protection Agency) Inspections	2011	03/03/11
20	**Data (Reporting & Records)**		
20-1.6	Raw Data (Recording)	2014	02/13/14
20-2.2	Disposition of Field Data Books	2006	02/09/06
20-3.5	Archiving Raw Data	2011	03/03/11
20-4.2	Rounding	2012	02/22/12
30	**Test System**		
30-1.3	Commodity Establishment and Maintenance	2011	03/03/11
30-2.4	Test Site (Selection, Design, Maintenance, Destruction)	2014	02/13/14
30-3.4	Performance Evaluation	2014	02/13/14
30-4.2	Greenhouse Facilities	2011	03/03/11
40	**Test Substance**		
40-1.4	Test Substance Receipt, Storage and Disposal	2007	12/04/07
40-2.6	Test Substance Application	2014	01/15/14
50	**Test System Samples**		
50-1.7	Residue Sample Collection	2014	02/13/14
50-2.6	Residue Sample Storage and Shipment	2014	02/13/14
50-3.4	Drying of Plums, Grapes (Raisins), and Figs	2014	02/25/14
60	**Equipment**		
60-1.4	Flowmeter –Scienco	2007	04/08/10
60-2.4	Freezers	2014	02/13/14
60-3.5	Sprayer - Croplands Handgun	2007	12/04/07
60-4.4	Sprayer - R & D Model T Backpack	2007	12/04/07
60-5.5	Temperature Measurement Instruments (Thermometers)	2014	02/13/14
60-6.5	Temperature/Humidity Measurement Instrument (Psychrodyne)	2014	02/13/14
60-7.5	Temperature/Humidity Measurement Instrument (Thermo-Hygro.)	2014	02/13/14
60-8.7	Temperature or Temperature/Humidity Recording Instruments (HOBO - Onset)	2014	02/13/14
60-9.5	Weights (Calibration)	2014	02/13/14
60-10.5 (1)	Weighing Instruments	2014	02/13/14
60-11.~~23~~ 3	Wind Speed Measurement Instrument (Turbometer-Davis)	2014	02/13/14
60-12.5	Sprayer – Airblast (Tractor-Mounted)	2012	02/22/12
60-13.3	Liquid Measurement – Bulk Containers	2014	02/13/14
60-14-1	Washer/Waxer (Post Harvest)	2007	02/23/07
60-15-1	Borrowed Equipment	2010	04/08/10
60-16-1	Chemigation	2012	02/22/12

This is an exact copy of the original
Original in UCKARE records
Initials: DR Date: 9-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SOP numbering Format: [Facility ID] - [sop category] - [sop number]. [version number] (1) (EE) DR 3-5-14

*All SOPs have been reviewed prior to signing

SOPs submitted by: David Ennes — Field/Research Director, UCKARE — Date: 2/27/14

Part 1
Page: 2

SOPs submitted by: Jeri Stiles — Field Research Director, UCKARE — Date: 2/27/14

Date SOPs approved by: Mike P. Tolson — Regional Field Coordinator/Assistant Regional Field Coordinator — Approval Date: 3/3/14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 1. GOOD LABORATORY PRACTICE COMPLIANCE INFORMATION

B. GOOD LABORATORY PRACTICE STATEMENT

INSTRUCTIONS: The Field Research Director should print his/her name, sign, and date the Good Laboratory Practice statement. Additionally, the GLP compliance status of data in this study should be documented.

I, DAVID Ennes, served as "Field Research Director" for this research trial. I have reviewed the appropriate raw data and I attest that the data accurately reflect the conduct of and the observations made during this trial. All activities associated with this trial were conducted according to *Chapter 40, Code of Federal Regulations, Part 160* or OECD Good Laboratory Practices, except for those noted below (check appropriate GLP status column):

GLP Compliant			DATA CATEGORY
YES	NO	NA[1]	
	X		Weather, irrigation, and soil characterization data are not required by the protocol to be compliant with GLP's and are noted as non-compliant in the final report for the study.
	X		TEST SITE HISTORY (chemical applications prior to the trial year) (FDB Part 5)
	X		CULTURAL PRACTICES (dating back to harvest of the previous crop), MAINTENANCE FERTILIZERS AND PESTICIDES (current trial year) (FDB Part 5)
			Potential data-generating equipment is listed below. Indicate the GLP compliance status of each. In U.S. trials, GLP-compliant equipment must comply with 40 CFR 160, Subpart D, which includes 160.81 (b) (11).
X			ENVIRONMENTAL MONITORING DEVICES for test substance storage (FDB Part 4)
		X	GLOBAL POSITIONING DEVICE used to determine plot location (FDB Part 5)
		X	FLOW METERS and similar SPRAYER OUTPUT CALIBRATION EQUIPMENT used to measure water (**excluding** marked, calibrated beakers, graduated cylinders or flasks suitable for scientific research) (FDB Part 6)
	X		pH METER or STRIP for measuring the acidity of the carrier (water) (FDB Part 6)
	X		RESIDUE SAMPLE WEIGHING EQUIPMENT (FDB Part 7)
X			ENVIRONMENTAL MONITORING DEVICES for sample storage (FDB Part 7)
			List below additional *non*-compliant items (additional pages may be used for more items)
	X		Cardinal / Micron Master fogger for applications

FIELD PERSONNEL SHOULD NOT LINE OUT BLANK CELLS ON THIS PAGE

[1]"NA" should be checked for equipment that was not used in this trial.

David Ennes — SIGNATURE OF FIELD RESEARCH DIRECTOR

9-25-14 — DATE

Personnel

Part 2

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 2. PERSONNEL INVOLVED IN TRIAL

A. IDENTIFICATION OF INDIVIDUALS

INSTRUCTIONS: Complete this form to document the Field Research Director and other personnel involved in the trial. Also include all individuals who entered data and/or worked on this trial (these include scientists, technicians, summer interns, and their supervisors). General field workers and Quality Assurance Unit personnel should not be included. Upon completion of this section participants may use their initials to verify data. ***Original signatures and initials are preferred on this page, but a true copy is acceptable.***

FIELD RESEARCH DIRECTOR

NAME *(print)*: DAVID Ennes

AFFILIATION: UC Kearney Agricultural Research and Extension

ADDRESS: 9240 South Riverbend Ave

CITY: Parlier

STATE or PROVINCE: CA ZIP (Postal Code): 93648

TELEPHONE: (559) 646-6061 FAX: (559) 646-6015

E-MAIL ADDRESS: djennes@uckac.edu

SIGNATURE: David Ennes DATE: 6-19-14

INITIALS: DE

OTHER TRIAL PERSONNEL

PRINT NAME	SIGNATURE	INITIALS	DATE
Keri Skiles	Keri Skiles	KS	6/19/14
		DE	9-8-14

Total number of pages in this section at initial pagination: 16

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"

THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 2. PERSONNEL INVOLVED IN TRIAL

B. QUALIFICATIONS SUMMARY

INSTRUCTIONS: Provide current curriculum vitae containing the education, training and experience records of trial personnel, concentrating on items that are applicable to field research with pesticides and good laboratory practices for every individual listed on Part 2-A. If this is not available complete a copy of this Form.

NAME _____ _____
(PRINTED) (SIGNATURE)

EDUCATION SUMMARY: Refer to the following pages OR 9-8-14

WORK EXPERIENCE SUMMARY:

SPECIAL TRAINING, QUALIFICATIONS OR ACCOMPLISHMENTS:

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-8-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"

THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

University of California Kearney Agriculture Research and Extension , IR-4 Program
9240 S. Riverbend **Telephone (559) 646-6061**
Parlier, California 93648 **Facsimile (559) 646-6015**

CURRICULUM VITAE

Name: David J. Ennes

Title: Field Research Director

Education: California State University, Fresno, CA; BS Degree - Plant Science
Yuba College, Yuba City, CA; AS Degree - Agriculture

Professional Experience:

06/2005-Present.....University of California Kearney Research and Extension Center, Parlier, CA
Field Research Director - Responsibilities include: Coordination of all operations involving field agrichemical residue trials involving pesticides, efficacy and environmental fate studies and all documentation supporting such activities, and assuring that those activities are performed in accordance with the EPA's GLP Standards.

06/99-6/2005.....Research For Hire, Porterville, CA
Research Biologist - Supervision of field agrichemical residue trials, efficacy and environmental fate studies and all documentation supporting such activities, and assuring that those activities are performed in accordance with the EPA's GLP Standards.

1998-1999.....AgSolutions, Inc., Corvalis, OR
Research Associate - Conduct efficacy and residue studies, field and greenhouse trials, and lab bioassays for the purpose of registration and re-registration of chemical and biological products for private industry, grower commissions and agricultural companies. Residue trials conducted under EPA's GLP Standards. Work includes identifying and setting-up trial sites and plots layouts, designing experiments, applying test substances, evaluating product performance, analyzing data, and scientific report writing.

1997-1998.....Idaho State Seed Lab, Boise, ID
Seed Analyst Trainee - Assisted in the planting and evaluation procedures for a variety of crops.

1997.....Valent USA, Walnut Creek, CA
Summer Intern - Assisted in setting up herbicide demonstration trials in commercial sugar beet fields.

05/96-01/97.....Research For Hire, Porterville, CA
Research Biologist - Supervision of field agrichemical residue trials, efficacy and environmental fate studies and all documentation supporting such activities, and assuring that those activities are performed in accordance with the EPA's GLP Standards.

04/95-05/96.....Stimson Lane Ltd, Grandview, WA
Viticultural Assistant - Assisted in management of company vineyards, maintained research vineyard and assisted in propagation projects.

07/91-02/94.....Research For Hire, Porterville, CA
Research Biologist - Supervision of field agrichemical residue trials, efficacy and environmental fate studies and all documentation supporting such activities, and assuring that those activities are performed in accordance with the EPA's GLP Standards.

Part 2
Page: 3

Professional Licenses: Qualified Applicator License 105352

Signature: David Ennes Initials: DJE Date: 1-15-14

Authentic Copy-Original in UCKARE Records DJE 9-8-14 **FIELD ID NO:**

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

University of California Kearney Agricultural Research Extension (UCKARE)
IR-4 Program

Historical training records for

DAVID ENNES

prior to 2007 are located in UCKARE records.

Signature David Ennes Date 6-13-11

Part 2
Page: 4

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

Field Research

EMPLOYEE NAME: DAVID ENNES - Dfe 2-15-07 **JOB TITLE:** Director - Dfe 2-15-07

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
2-15-07	Respirator Fit Test Parlier, CA	Alan Cary	Dfe 2-15-07
6-19-07	UC Pesticide Policy Parlier, CA	Rick Melnicoe	Dfe 6-19-07
3-12-08	Respirator Fit Test Parlier, CA	Alan Cary	Dfe 3-12-08
5-29-08	UC Pesticide Policy Parlier, CA	Rick Melnicoe	Dfe 5-29-08
11-13, 14-08	Application of GLP's to Field Studies Paso Robles, CA	Deborah Garvin	Dfe 11-17-08
12-17-08	Shipping with dry ice On line training ①-Parlier, CA	Edu where	Dfe 12-17-08
2-24, 25-09	IR-4 National Education Conference Training ①-San Antonio TX	Various	Dfe 3-2-09
3-4-09	Respirator Fit Test Parlier, CA	Alan Cary	Dfe 3-4-09
6-2-09	UC Pesticide Policy Parlier, CA	Rick Melnicoe	Dfe 6-2-09
9-10-09	Defensive Driving Awareness Parlier, CA	Jerry Bach	Dfe 9-10-09

① (LE) Dfe 1-12-10

SAFETY AND IR-4 TRAINING SESSIONS

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

EMPLOYEE NAME: DAVID ENNES - DE 9-10-09

JOB TITLE: Research Director Field
DE 9-10-09

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
2-2,3-2010	Western Region IR-4 Residue Training Workshop (Field and GLP)	Parlier, CA Various	DE 2-3-10
3-18-10	working safely in the greenhouse EPA WPS Training for workers Parlier, CA	Video	DE 3-18-10
4-7-10	Respirator Fit Test Parlier, CA	Alan Cary	DE 4-7-10
10-20-10	UC Pesticide Policy Parlier, CA	Rick Melnicoe	DE 10-20-10
6-9-11	UC Pesticide Policy Parlier, CA	Rick Melnicoe	DE 6-9-11
6-17-11	Respirator Fit Test Parlier, CA	Alan Cary	DE 6-17-11
8-25-11	Shipping with dry ice on-line training Parlier, CA	Edu where	DE 8-25-11
1-13-12	GLP Residue Training webinars in 2012 Parlier, CA	Various	DE 1-17-12
2-10-12	GLP Residue Training webinars in 2012 Parlier, CA	Various	DE 2-10-12
3-9-12	GLP Residue Training webinars in 2012 Parlier, CA	Various	DE 3-9-12

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

Field Research

EMPLOYEE NAME: DAVID ENNES DE 4-16-12 **JOB TITLE:** Director DE 4-16-12

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
4-13-12	GLP Residue Training Webinars in 2012 Parlier, CA	Various	DE 4-13-12
5-11-12	GLP Residue Training Webinars in 2012 Parlier, CA	Various	DE 5-11-12
5-31-12	Respirator Fit Test Parlier, CA	Alan Cary	DE 5-31-12
6-8-12	GLP Residue training Webinars in 2012 Parlier, CA	Various	DE 6-8-12
6-14-12	UC Pesticide Policy Parlier, CA	Rick Melnicoe	DE 6-14-12
7-13-12	GLP Residue Training Webinars in 2012 Clovis, CA	Various	DE 7-16-12
8-10-12	GLP Residue Training Webinars in 2012 Parlier, CA	Various	DE 8-10-12
9-14-12	GLP Residue Training Webinars in 2012 Parlier, CA	Various	DE 9-14-12
10-30-12	GLP Residue Training Webinars in 2012 Parlier, CA	Listened to recording of oct 12 session Various	DE 10-30-12
11-9-12	GLP Residue Training Webinars in 2012 Clovis, CA	Various	DE 11-13-12

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: DAVID ENNES DK 12-14-12

JOB TITLE: Director DK 12-14-12 Field Research

① EE DK 1-10-13

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
12-14-12	GLP Residue Training webinars in 2012 Parlier, CA	Various	DK 12-14-12
1-8-1①3	GLP Residue Training webinars in 2013 Parlier, CA	Various	DK 1-8-13
2-27, 28-13	IR-4 National Education Conference Training San Antonio, TX	Various	DK 3-4-13
4-3-13	UC Pesticide Policy Parlier, CA	Lisa Blecker	DK 4-3-13
4-9-13	GLP Residue Training webinars in 2013 Parlier, CA	Various	DK 4-9-13
5-13-13	Respirator Fit Test Parlier, CA	Alan Cary	DK 5-13-13
8-13-13	GLP Residue Training webinars in 2013 eQA Live Parlier, CA	Various	DK 8-13-13
8-13-13	GLP Residue Training webinars in 2013 Trial Documentation, Phytodata, writing deviations, Test substance TIPS.	Various	DK 8-13-13
8-13-13	Application verification and Sample Packing Parlier, CA	Various	DK 8-13-13
2-27-13	IR-4 eQA Training San Antonio Texas	Tammy Barkalow	DK 9-19-13

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SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: DAVID ENNES DE 1-14-14 **JOB TITLE:** Field Research Director DE 1-14-14

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
1-14-14	Webinar in 2014 GLP Residue Training. Highlights of Smart Moves by our Field Research Directors Parlier, CA	Various	DE 1-14-14
1-16-14	UC Pesticide Policy Parlier, CA	Lisa Bleeker	DE 1-16-14
3-4-14	Webinar in 2014 GLP Residue Training. CDA System update and making IR-4 FRE work Parlier, CA	Various	DE 3-4-14
3-26-14	Respirator Fit Test Parlier, CA	Alan Cary	DE 3-26-14
5-13-14	Webinar Crop Residue/GLP training Session Whats on your mind Questions/answers/Discussion	Parlier, CA Various	DE 5-13-14
7-8-14	Webinar Crop residue/GLP training Sessions Mistakes, Corrections and Human Beans Parlier, CA	Various	DE 7-8-14
	DE 9-8-14		

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

Authentic Copy-Original in UCKARE Records DE 9-8-14 FIELD ID NO: Ennes

University of California Kearney Agriculture Research and Extension, IR-4 Program

9240 S. Riverbend
Parlier, California 93648

Telephone (559) 646-6061
Facsimile (559)-646-6015

CURRICULUM VITAE

Name: Keri M. Skiles

Title: Field Research Director

Education: Porterville College, Porterville, CA
TAPP High School, Porterville, CA

Professional Training:

GLP Certification: Critical Aspects of Conducting GLP Field Studies and Regulatory Issues, 12/(17-18)/1998; FIFRA GLP Field & Analytical Training Session, 2/7/2001; GLPs for the Field, 1/(21-22)/2002; Western Region IR-4 GLP and Field Residue Training, 3/(5-6)/2002; Western Region IR-4 Residue Training Workshop (Field, Laboratory and GLP), 1/(17-18)/2007; Application of GLPs to Field Studies, 11/(12-13)/2007; Application of GLP's to Field Studies, 11/(13-14)/2008; IR-4 National Education Conference, 2/(24-25)/2009; Western Region IR-4 Residue Training Workshop (Field, and GLP), 2/(2-3)/2010; IR-4 National Education Conference, 2/(27-28)/2013

Field Study Related Training: 1998 – 2007: sponsor and facility specific SOPs, "Advantage" electronic field trial notebooks, radioactive materials safety; environmental heath and safety; Worker Protection Standard; FedEx dangerous goods seminars (DOT training)

Professional Experience:

1/2008 – Present University of California, Kearney Research & Extension Center, Parlier, CA

Field Research Director – Responsibilities include: Coordination of all operations involving field agrichemical residue trials involving pesticides, efficacy and environmental fate studies and all documentation supporting such activities, and assuring that those activities are performed in accordance with the EPA's GLP Standards.

2/2007 – 12/2007 University of California, Kearney Research & Extension Center, Parlier, CA

Laboratory Assistant III – Under general supervision, conduct and/or supervise all aspects of GLP compliant IR-4 residue field trials. Perform the duties of a Field Research Director and assist other Field Research Director(s).

11/2006 – 2/2007 University of California, Kearney Research & Extension Center, Parlier, CA
University of California, Riverside

Laboratory Assistant II – Perform or supervise the technical conduct of IR-4 field research trials under the supervision of Laura Van der Staay, Staff Research Associate (*KREC IR-4 Field Research Center Director*), UC, ANR, KREC. Provide operational support to the KREC IR-4 Field Research Directors by generating and maintaining raw data documentation for field research trial activities; assure that those activities are GLP compliant. Perform or supervise standardized and recurring technical procedures in a research laboratory under the supervision of Dr. James E. Adaskaveg, Professor, UCR, Department of Plant Pathology.

3/2006 – 11/2006 Spartan Computer Services, Irvin, CA

Computer Technician – Repair and replace computer parts for restaurant point of sales and office computers. Re-image and trouble shoot computers. Repair and replace wiring.

2/2003 – 3/2006 Research For Hire, Porterville, CA

Research Assistant/Laboratory Coordinator – Manage all operations involving the maintenance or use of a radioisotope laboratory for C^{14} metabolic fate GLP compliant field research trials. Perform or supervise complex critical event components of GLP compliant field research trials. Maintain and calibrate GLP equipment. Perform or supervise the technical conduct of GLP compliant field research trials under the supervision of a Research Biologist. Generate and maintain GLP compliant raw data documentation for field research trial activities. Conduct quality control audits of Field Trial Notebooks to ensure GLP compliance. Train employees.

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3/1998 – 2/2003 Research For Hire, Porterville, CA

Research Assistant - Perform or supervise the technical conduct of GLP compliant field research trials under the supervision of a Research Biologist. Generate and maintain GLP compliant raw data documentation for field research trial activities. Conduct quality control audits of Field Trial Notebooks to ensure GLP compliance. Train employees.

Signature: Keri Skiles Initials: KS Date: 3/3/14

Authentic Copy-Original in UCKARE Records OK 9-8-14 FIELD ID NO:

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

This is an exact copy of the original
Original in UCKARE records
Initials: DE Date: 9-8-14

EMPLOYEE NAME: Keri Skiles **JOB TITLE:** LAB Assistant II

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EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
11/8/06	Reviewed org- charts ③Parlier, CA	Laura Van der Staay	KS 11/8/06
↓	KREC IR-4 SOP's 1.01-1.06 ③Parlier, CA	↓	↓
11/9/06	Reviewed UCKREC SOP's ③Parlier, CA	Laura Van der Staay	KS 11/9/06
11/13/06	IIPP Fire ~~prevention~~ ①Revention ③Parlier, CA	Alan Cary	KS 11/13/06
11/29/06	orchard-Ladder ~~Safety~~ ②safety Note #98 ③Parlier, CA	Laura Van der Staay	KS 11/29/06
12/11/06	Respirator Fit test ③Parlier, CA	Alan Cary	KS 12/11/06
1/17, 18/07	Western Region IR-4 Residue training Workshop (Field, Laboratory and GLP) ~~③Parlier CA~~ ⑤Oahu, HI	Various	KS 1/22/07
2/6/07	Respirator Fit Test ③Parlier, CA	MARK Barros	KS 2/6/07
2/14/07	Hazardous Waste management ③Parlier, CA	Alan Cary	KS 2/14/07
5/18/07	Tractor Training ③Parlier, CA	Alan Cary	KS 5/18/07

①Spelling error. KS 1/29/07 ②Spelling Error. KS 3/2/09 ③Late entry. KS 4/12/10
④Entry error. KS 4/12/10 ⑤Late entry. KS 4/12/10

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: Keri Skiles

JOB TITLE: Laboratory Assistant III
KS 5/21/07

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
5/21/07	Operation and use of tractor ①Parlier, CA	David Ennes	KS 5/21/07
6/19/07	UC Pesticide Policy, Parlier, CA	Rick Melnicoe	KS 6/19/07
11/12-13/07	Application of GLPs to Field Studies, Hood River OR	Deborah Garvin	KS 11/19/07
2/20/08	Respirator Fit test ①Parlier CA	mark Barros	KS 2/20/08
5/29/08	UC Pesticide Policy, Parlier, CA	Rick Melnicoe	KS 5/29/08
11/13-14/08	Application of GLP's to Field Studies Paso Robles, CA	Deborah Garvin	KS 11/17/08
1/20/09	Respirator Fit Test, Parlier, CA	Thor Benzing	KS 1/20/09
2/24,25/09	IR-4 National Education conference Training, San Antonio, TX	Various	KS 3/2/09
6-2-09	UC Pesticide Policy, Parlier, CA	Rick Melnicoe	KS 6/2/09
9-10-09	Defensive Driving Awareness Parlier, CA	Jerry Bach	KS 9/10/09

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① Late entry. KS 1/12/10

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: Keri Skiles - KS 9/10/09

JOB TITLE: Field Research Director KS 9/10/09

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
2-2-10 2-3-10	Western Region IR-4 Residue Training workshop (Field + GLP), Parlier, CA	Various	KS 2/3/10
3-18-10	~~Worker Safe~~ working safely in the greenhouse EPA WPS Training for workers, Parlier, CA	Video	KS 3/18/10
4-7-10	Respirator fit test, Parlier, CA	Alan Cary	KS 4/7/10
10-20-10	uc Pesticide Policy, Parlier CA	Rick Melnicoe	KS 10/20/10
6/9/11	uc Pesticide Policy, Parlier CA	Rick Melnicoe	KS 6/9/11
6/17/11	Respirator fit test, Parlier, CA	Alan Cary	KS 6/17/11
1/13/12	GLP Residue Training webinar in 2012. Parlier, CA	Various	KS 1/17/12
2/13/12 ②	GLP Residue Training webinar in 2012 Parlier CA	Various	KS 2/13/12
3/9/12	GLP Residue Training webinar in 2012 Parlier CA	Various	KS 3/9/12
4/13/12	GLP Residue Training webinar in 2012, Parlier CA	Various	KS 4/13/12

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① Entry error. KS 3/18/10 ② Entry error. KS 2/13/12

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: Keri Skiles - KS 5/11/12 **JOB TITLE:** Field Research Director. KS 5/11/12

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
5/11/12	GLP Residue Training Webinar in 2012 Parlier CA	Various	KS 5/11/12
5/31/12	Respirator Fit test, Parlier CA	Alan Cary	KS 5/31/12
6/8/12	GLP Residue Training ~~webinar~~ webinar in 2012. Parlier CA KS 6/8/12	Various	KS 6/8/12
6/14/12	Uc Pesticide Policy, Parlier CA	Rick Melnicoe	KS 6/14/12
7/13/12	GLP Residue Training Webinar CA in 2012 Parlier	Various	KS 7/13/12
8/10/12	GLP Residue training Webinar 2012 Parlier CA	Various	KS 8/10/12
9/14/12	GLP Residue Trainingwebinar in 2012 Parlier CA	Various	KS 9/14/12
10/30/12	GLP Reside Training webinar in 2012. Parlier CA	Listened to recording of oct 12 session, Various	KS 10/30/12
11/9/12	GLP Residue Training webinar in 2012 Terra Bella CA	Various	KS 11/13/12
12/14/12	GLP Residue Training Webinar in 2012 Terra Bella CA	Various	KS 12/14/12

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SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: Keri Skiles KS 1/8/13 **JOB TITLE:** Field Research Director KS 1/8/13

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
1/8/13	GLP Residue Training Webinar in 2013 Parlier, CA	Various	KS 1/8/13
2/27,28/13	IR-4 National Education Conference Training, San Antonio, TX	Various	KS 3/6/13
4/3/13	UC Pesticide Policy, Parlier CA	Lisa Blecker	KS 4/3/13
4/9/13	GLP Residue Training Webinar in 2013: Tena Bella CA	Various	KS 4/9/13
5/13/13	Respirator fit Test Parlier CA	Alan Cary	KS 5/13/13
8-13-13	GLP Residue Training Webinar in 2013 eQA Live Parlier CA	Various	KS 8/13/13
↓	Reminders for Improving Field trials Parlier CA	↓	KS 8/13/13
2/27/13	IR-4 eQA Training Program San Antonio, TX	Tammy Barkalow	KS 9/19/13
1/14/14	Highlights of Smart moves by our Field Research Directors, Parlier CA	Various	KS 1/14/14
1/16/14	UC Pesticide Policy, Parlier, CA	Lisa Blecker	KS 1/16/14

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

SAFETY AND IR-4 TRAINING SESSIONS

EMPLOYEE NAME: Keri Skiles KS 3/4/14 **JOB TITLE:** Field Research Director KS 3/4/14

EVENT DATE	TRAINING EVENT/LOCATION	TRAINER	INITIALS/DATE
3/4/14	Webinar in 2014 GLP residue training eqA System Update ag making IR-4 FRC work in a resource limited world, Parlier CA	Various	KS 3/4/14
3/26/14	Respirator fit test, Parlier CA	Alan Cary	KS 3/26/14
5/13/14	Webinar Crop residue/GLP training sessions what's on your mind Questions/Answers/Discussions, Parlier CA	Various	KS 5/13/14
7/8/14	Webinar Crop residue/GLP Training sessions: mistakes, corrections, and Human Beans, Parlier CA	Various	KS 7/8/14
	DK 9-8-14		

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

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Notes & Communication Part 3

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 3. NOTES AND COMMUNICATION LOG

INSTRUCTIONS: This section is to be used to document phone calls, fax communications, and e-mails associated with the field trial (e.g. call to inform Study Director of deviation, call to the laboratory to notify that samples will be shipped tomorrow, etc.), notes on events that relate to the integrity of the research, and data for which there is no specified location in the Field Data Book or for continued entries or explanations to other sections. Follow instructions on data entry, error correction, etc. in the General Instructions. Printed communications such as faxes and email messages that are inserted into this section should be initialed and dated. More than one day's entry may be made on one page in the NOTES AND COMMUNICATION LOG. However, each day's entry must be dated and initialed. Additionally, if a day's entry continues on more than one page, both pages must have the day's entry dated. Photocopy and insert additional pages if needed. Draw a line through all unused space to signify that no additional entries will be made on that page. Initial and date the line. ***Several trials within the same study under one Field Research Director may be documented on one form; however SEPARATE STUDIES MUST BE DOCUMENTED ON SEPARATE FORMS. When several trials are documented, true copies of the communication records must be placed in each Field Data Book to which the comments apply. (The original goes in one of the Field Data Books.)***

ENTRY DATE/ INITIALS	NOTES (include date of event described)
DR 6-19-14	Talked with Monterey Mushroom personnel. I was told that Growing room number 3 and 13 were cleaned on 6-17-14. The compost that will be used for TRT 01 and 03 boxes was pasturized on 6-15-14 at ~240° F.
7-9-14 DR	Talked with Monterey Mushroom personnel. I was told that the mushroom boxes were cased on Sat. 7-5-14.
9-11-14 DR	The information on Part 5E and 5H was obtained verbally from the grower.
	DR 9-25-14

PART 3 PAGE 1 Trial Year 2014

Total number of pages in this section at initial pagination: 14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 3. NOTES AND COMMUNICATION LOG

ENTRY DATE/ INITIALS	NOTES (include date of event described)
	OK 9-25-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

UNIVERSITY OF CALIFORNIA, DAVIS

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COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES
AGRICULTURAL EXPERIMENT STATION
TEL: (530) 752-7633
FAX: (530) 752-2866
http://wrir4.ucdavis.edu

IR-4 PROGRAM, WESTERN REGION
DEPARTMENT OF ENVIRONMENTAL TOXICOLOGY
4218 MEYER HALL
ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616

OK
3-13-14

March 11, 2014

David Ennes
UC Kearney Research and Extension Center
9240 S. Riverbend Ave.
Parlier, CA 93648

Federal Express

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Re: 2014 Protocols
Pyrethrins+PBO/Mushrooms (White Button & Oyster), PR# 05954
Field ID No. 05954.14-CA52 (Fogging) (White Button)
Field ID No. 05954.14-CA53 (Fogging) (Oyster)

Dear David,

Enclosed are two (2) original IR-4 National Pesticide Clearance Protocols and Field Data Notebooks for subject residue research trials. These items contain all the necessary information and forms for conducting IR-4 field research and reporting results in accordance with the EPA's Good Laboratory Practice (GLP) requirements. Please review these items prior to beginning your research. **Note that the complete field and lab protocols are enclosed in accordance with GLP. Disregard Sections 25-34 as they pertain only to laboratory research.**

Carefully read Debbie Carpenter's cover letters attached to the protocols instructing you how to initiate these trials. If the proposed directions meet with your approval, please provide estimated research dates for the Master Timetable and sign the GLP Certifications located on the cover letters. **Return the original signed copy of these letters to our office immediately.**

Please use the enclosed **14** residue sample bags for submitting samples to the laboratory. Inside each notebook are small trial identification labels which are to be affixed to all pages of the Field Data Notebooks. **We have your 2014 revised Standard Operating Procedures (SOPs) on file. We assume you will be following these SOPs for these trials.**

Thank you for agreeing to conduct this research. If you should have any further questions, please contact me at (530) 752-7634, email: rsisco@ucdavis.edu; Stephen Flanagan at (541) 688-3155, email: srflanagan@ucdavis.edu; or Mika Tolson at (530) 752-7635, email: mptolson@ucdavis.edu.

Sincerely,

Rebecca Sisco

Rebecca (Becky) Sisco
Regional Field Coordinator
Western Region IR-4 Program
University of California
Dept. of Environmental Toxicology
One Shields Avenue, Meyer Hall Room 4218
Davis, CA 95616-8588
530-752-7634 (office)
530-752-2866 (fax)
Email: rsisco@ucdavis.edu

RS/jh
Enclosures

Part 3
Page: 3

cc: Laura Van der Staay (via email)

David Ennes

From: David Ennes
Sent: Thursday, April 24, 2014 11:46 AM
To: 'Ken Samoil'
Subject: 05954.14-CA52 and CA53 Pyrethrins + PBO Mushroom

Importance: High

Ken: I have not received the test substance yet for these two trials. Possibly may start one of the trials 5-9-14.

Thanks,
David

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

DE 4-24-14

Part 3
Page: 4

David Ennes

From: Ken Samoil <samoil@AESOP.Rutgers.edu>
Sent: Thursday, April 24, 2014 12:17 PM
To: David Ennes
Subject: Test substance shipments

I'm checking with the registrants...

Ken Samoil
Entomologist / Technical Coordinator
IR-4 Project
500 College Road East
Suite 201W
Princeton, NJ 08540
(732)932-9575 x4614
FAX: 609-514-2612
Email: samoil@aesop.rutgers.edu
Website: ir4.rutgers.edu

OK
4-24-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 3
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David Ennes

From: David Ennes
Sent: Friday, May 02, 2014 6:47 AM
To: 'Ken Samoil'
Cc: Rebecca Sisco
Subject: RE: 05954.14-CA52 and CA53 Pyrethrins+PBO Mushroom

Ken: Hopefully the test substance shows up soon. Will go ahead with the oyster variety. Will you be able to change the protocol for application 5 for the white button mushroom trial?

Thanks,
David

OK
5-2-14

From: Ken Samoil [mailto:samoil@AESOP.Rutgers.edu]
Sent: Friday, May 02, 2014 6:03 AM
To: David Ennes
Cc: Rebecca Sisco
Subject: RE: 05954.14-CA52 and CA53 Pyrethrins+PBO Mushroom

David - I am hopeful that you will receive the test substance this month; I sent the registrant a reminder last month and got a response that they would "get right on top of it."

I think it is critical that we have a non-button mushroom trial. They could suggest another mushroom variety, if that is an option, or we could just wait until they resolve the issues with their oyster mushroom growing room.

Ken Samoil
Entomologist / Technical Coordinator
IR-4 Project
500 College Road East
Suite 201W
Princeton, NJ 08540
(732)932-9575 x4614
FAX: 609-514-2612
Email: samoil@aesop.rutgers.edu
Website: ir4.rutgers.edu

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

From: David Ennes [mailto:djennes@ucanr.edu]
Sent: Thursday, May 01, 2014 5:39 PM
To: Ken Samoil
Subject: 05954.14-CA52 and CA53 Pyrethrins+PBO Mushroom

Part 3
Page: 6

Ken: I talked with my contacts at Monterey Mushroom yesterday. They mentioned that for the white button mushroom trial that for application 5 the app would need to be made at days 8-15 of case hold so that there would be viable mushrooms for sampling 2 days after the application, the application would be made at day 15. I was wondering if you could write an amendment for this. Also they asked if my trials could be changed to two white button mushroom trials instead of an oyster mushroom since they are having trouble with the oyster growing room where the trial will be

conducted. Perhaps this could be done in the same amendment. If it is absolutely critical to do the oyster variety I will discuss with them if something else could be done, there is only one growing room at this time for the treated plot. The first application for the white button trial will be 6-19-14 so there is still time to receive the test substance for these two trials. Do you think the test substance will be delivered to me before then? If not I will reschedule the trials.

Thanks,
David

OK
5-7-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 3
Page: 7

The IR-4 Project

Pest Management Solutions for Specialty Crops and Minor Uses

IR-4 Headquarters
Rutgers, The State University of New Jersey
500 College Road East, Suite 201W
Princeton, NJ 08540
732.932.9575 fax 609.514.2612
www.ir4.rutgers.edu

TO: David Ennes

FROM: Deborah H. Carpenter

SUBJECT: Pyrethrins + PBO/Mushrooms – BUTTON (Fogging)

Field ID No: 05954.14-CA52

Thank you for agreeing to participate in the IR-4 Minor Use Research Program. We have assigned the above unique Field Identification Number for your phase of the study. Please use it on all correspondence, the IR-4 Raw Databook and other forms associated with this research. Please review your phase of the research protocol. **Note, this protocol may be different from prior versions**. Please provide estimated research dates for the Master Timetable and sign the GLP Certification below.

First Application of Test Pesticide:	6-19-14
Residue Samples Collected:	7-22, 30-14
Samples Transferred to Analytical Laboratory:	8-15-14
Field Databook Completed by Field Research Director:	10-15-14

GLP Certification:

I acknowledge that I have reviewed, and understand, the material contained in Sections 1 to 24 of this IR-4 Protocol. The field research will be conducted in accordance with this protocol which reflects EPA's Good Laboratory Practice Standards. I further acknowledge that written Standard Operating Procedures that have been properly approved by IR-4 management are available. Additionally, I will cooperate with the independent Quality Assurance Unit in scheduling needed inspections and documenting corrective actions taken.

David Ennes 5-6-14

Field Research Director (Date)

Return the original signed copy of this letter to your Regional/ARS Field Research Coordinator. If you have any questions contact your Regional/ARS Field Research Coordinator or me (732) 932-9575 ext 4637 or the study director.

cc: Regional/ARS Field Research Coordinator
IR-4 Quality Assurance Unit (Field)

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Major funding for IR-4 is provided by Special Research Grants and Hatch Act Funds from USDA-NIFA, in cooperation with the State Agricultural Experiment Stations, and USDA-ARS.

RUTGERS

David Ennes

From: David Ennes
Sent: Thursday, May 15, 2014 7:39 AM
To: 'Ken Samoil'
Cc: Rebecca Sisco; Marylee Ross; Edith Lurvey
Subject: RE: Rate for fogging applications in Pyrethrins+PBO/Mushroom/05954

Ken: Okay. I will follow the 10 oz/gallon of water rate.

Thanks,
David

Ok
5-15-14

From: Ken Samoil [mailto:samoil@AESOP.Rutgers.edu]
Sent: Thursday, May 15, 2014 5:55 AM
To: David Ennes
Cc: Rebecca Sisco; Marylee Ross; Edith Lurvey
Subject: RE: Rate for fogging applications in Pyrethrins+PBO/Mushroom/05954

David,

The rate that you mentioned is the low end of the allowable concentrations used for fogging indoor food areas. Those instructions also state that you can use up to 1 part to 11 parts water (1 quart with 3 gallons). The protocol instructions require a concentration of 10 ounces Evergreen to 1 gallon of water, which equals 30 ounces with 3 gallons, which is just under 1 quart (32 ounces) with 3 gallons.

You need to apply 10 ounces per 10,000 cubic feet of mushroom space. If I were to make the concentration more dilute, you would need to apply more water (as fog) to achieve this rate. I think that the concentration should remain as is. Let me know if this presents a problem with the use of your fogger.

Ken Samoil
Entomologist / Technical Coordinator
IR-4 Project
500 College Road East
Suite 201W
Princeton, NJ 08540
(732)932-9575 x4614
FAX: 609-514-2612
Email: samoil@aesop.rutgers.edu
Website: ir4.rutgers.edu

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 3
Page: 9

From: David Ennes [mailto:djennes@ucanr.edu]
Sent: Tuesday, May 13, 2014 4:46 PM
To: Ken Samoil
Cc: Rebecca Sisco
Subject: 05954.14-CA52 and CA53

Ken: For the mushroom trials the test substance label has a rate of dilution on page 3 under space spray in food of 1 part with 29 parts water (1 qt. with 7.5 gallons of water). I didn't understand the example. I thought it would be 1 qt. in 29 quarts water? Would this be okay to use this rate for the trials?

Thanks,
David

Ok
5-15-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 3
Page: 10

David Ennes

From: Jacqueline Hale <jbhale@ucdavis.edu>
Sent: Thursday, May 15, 2014 2:28 PM
To: David Ennes; 'Clark Oman'
Subject: Signed IR-4 Protocol Cover Letters CO141, CO139, CA52, CA53
Attachments: Signed IR-4 Protocol Let_20140515122148.pdf

Good afternoon, Don. Attached you will find the scanned letter to **Deborah Carpenter** regarding your Signed Protocol Cover Letters received in our office:

Dinotefuran/Apple	Field ID No. 11302.14-CA141	FRD – C Oman
Dinotefuran/Cherry (Tart)	Field ID No. 11302.14-CA141	FRD – C Oman
Pyrethrins+PBO/Mushrooms-BUTTON (Fogging)	Field ID No. 05954.14-CA52	FRD – D Ennes
Pyrethrins+PBO/Mushrooms-OYSTER (Fogging)	Field ID No. 05954.14-CA53	FRD – D Ennes

If you have any questions, please contact Becky Sisco (530) 752-7634. Have a great day.

Jackie

OK 5-30-14

Jackie Hale
Office Manager
Western Region IR-4 Program
4218 Meyer Hall
One Shields Avenue
Davis, California 95616
Tel: (530)752-7633
Fax: (530)752-2866

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 3
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UNIVERSITY OF CALIFORNIA, DAVIS

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COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES
AGRICULTURAL EXPERIMENT STATION
TEL: (530) 752-7633
FAX: (530) 752-2866
http://wrir4.ucdavis.edu

IR-4 PROGRAM, WESTERN REGION
DEPARTMENT OF ENVIRONMENTAL TOXICOLOGY
4218 MEYER HALL
ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616

May 15, 2014

Deborah H. Carpenter
IR-4 Project Headquarters
Rutgers, The State University of NJ
500 College Road East, Suite 201 W
Princeton, NJ 08540

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Federal Express

RE: Signed IR-4 Protocol Cover Letters

DE
5-30-14

Dinotefuran/Apple	Field ID No. 11302.14-CO141	FRD – C Oman
Dinotefuran/Cherry (Tart)	Field ID No. 11302.14-CO139	FRD – C Oman
Pyrethrins+PBO/Mushrooms-BUTTON (Fogging)	Field ID No. 05954.14-CA52	FRD – D Ennes
Pyrethrins+PBO/Mushrooms-OYSTER (Fogging)	Field ID No. 05954.14-CA53	FRD – D Ennes

Dear Debbie,

We are forwarding four (4) signed protocol cover letters as submitted by the Western Region field research directors listed above. Estimated research dates for the Master Timetable have been provided and the GLP Certifications signed.

If you should have any additional questions, please contact our office.

Sincerely,

Rebecca Sisco

Rebecca (Becky) Sisco
Regional Field Coordinator
Western Region IR-4 Program
530-752-7634 (office)
Email: rsisco@ucdavis.edu

RS/jh
Enclosures

cc : David Ennes (via email)
Clark Oman (via email)

Part 3
Page: 12

University of California Kearney Agricultural Research and Ext., IR-4 Program
9240 S. Riverbend
Parlier, California 93648
Telephone (559) 646-6061
Facsimile (559) 646-6015

FACSIMILE TRANSMISSION

Total Pages Sent: 3

DATE	August 14, 2014
TO	X Study Director: Ken Samoil Company: IR-4 Headquarters FAX No: (609) 514-2612 X Regional/ARS Field Research Coordinator: Becky Sisco Company: Western Region IR-4 FAX No: (530) 752-2866 ___ Receiving Laboratory: Golden Pacific Laboratories Attention: Megan Boatwright FAX No: (559) 275-1800 10 ① EE OK 8-14-14 OK ___ Other: FAX No: 8-14-14
FROM	David Ennes
STUDY NO.	05954.14-CA52 Pyrethrins+PBO Mushroom

Notification of the following study related event(s) is either attached or reported below:

X Sample Shipment (Shipment Date): August 14, 2014

Shipment Information (if not attached): Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Destination: Golden Pacific Labs

Courier: ACDS Bill of Lading Nos: 137667

No. of Boxes: 2 Sample Description(s)/Interval: 2 Days after App 5 and 6 Mushroom

Other information: See following forms Part 8A and 8B

① wrong fax number in protocol. Re faxed with correct number at 2:18 PM on 8-14-14 OK 8-14-14

Part 3
Page: 13

David Ennes

From: Megan Boatwright <mboatwright@gplabs.com>
Sent: Friday, August 22, 2014 11:38 AM
To: David Ennes; Rebecca Sisco
Cc: samoil@aesop.rutgers.edu
Subject: Receipt of mushrooms from CA
Attachments: 140542 mushrooms.pdf

Dear all,

Please find attached the paperwork confirming receipt of the mushroom samples from Kearney Agricultural Research in CA.

Sincerely, 8-22-14

Megan

Megan T. Boatwright
Laboratory Manager
Golden Pacific Laboratories, LLC
4720 W. Jennifer Ave, Suite 105
Fresno, CA 93722
Tel: (559) 275-9091
Fax: (559) 275-1810
mboatwright@gplabs.com

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 3
Page: 14

Test Substance

Part 4

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

A. RECEIPT, STORAGE AND DISPOSITION OF TEST SUBSTANCE--*INSTRUCTIONS:*
*Complete a separate form for **each different** batch/lot of test substance that has been received.*

NAME OF TEST SUBSTANCE ON CONTAINER LABEL *E.g. Darnitall 2 EC or GroundUp or XYZ8-0.*		Evergreen Crop Protection 60-6 (F-7448)	
BATCH/LOT NO.	AB 4586	DATE OF RECEIPT	5-13-14
Provide the batch/lot number of the test substance as it appears on the test material container label		TEST SUBSTANCE EXPIRATION DATE	3-10-2015
Do not assign an expiration date if none is provided with the test substance—contact the Study Director.			
SOURCE OF EXPIRATION DATE	Test substance container label		
Note the source of the expiration date of the test substance (e.g., expiration date noted on test material container label, expiration date listed on documentation provided by manufacturer, expiration date obtained by IR-4 Headquarters)			

CARRIER THAT TRANSPORTED TEST SUBSTANCE		FedEx	
INDIVIDUAL WHO RECEIVED TEST SUBSTANCE		David Ennes	
WAS A BILL OF LADING/WAYBILL RECEIVED?		YES ✓ NO ___	
BILL OF LADING/WAYBILL/TRACKING NO. *Insert true copy if a Bill of Lading or Waybill was included in the shipment*		7988 3147 4595	
APPROXIMATE AMOUNT RECEIVED	1 pint	NUMBER OF CONTAINERS	1
CONTAINER DESCRIPTION (*glass bottles, water soluble packets, etc.*)		white plastic bottle	
CONDITION OF CONTAINER ON ARRIVAL *(intact, bags broken, etc.)*		Good, intact	
GLP STATUS KNOWN AT TIME OF RECEIPT *(Check YES if the documentation provided by the manufacturer or information on the test material container claims that the test substance has been characterized per GLP requirements. If NO is checked, contact the Study Director.)*		YES ✓ NO ___	
IF "NO", ENTER THE DATE THAT THE STUDY DIRECTOR WAS INFORMED		~~OK 5-13-14~~	
IF "YES", SOURCE OF GLP STATUS INFORMATION		COA received with shipment paperwork	
Label, shipping form, etc. Insert the Certificate of Analysis (COA) in this FDB Part if a COA has been received. It is not necessary to insert the MSDS in this FDB. Two-sided documents should not be inserted.			

STORAGE LOCATION	VCKARE Bldg 117 Room 11 IR-4 Locker		
Provide the location (building name, cabinet numbers, etc.) where the test substance will be stored during the trial.			
WAS THE TEST SUBSTANCE HELD TEMPORARILY* IN ANOTHER LOCATION PRIOR TO TRANSFER TO ITS LONG-TERM STORAGE LOCATION DURING THE FIELD TRIAL?		YES ___ NO ✓	
**Temperature monitoring should begin within 2 days of receipt of the test substance, regardless of where it is held or stored.*			
~~IF YES, ENTER LOCATION~~	~~OK 5-13-14~~		
~~DATES~~		~~ESTIMATED TEMPERATURE prior to monitoring~~	

ABOVE DATA ENTERED BY: David Ennes *DATE:* 5-13-14

Total number of pages in this section at initial pagination: 30

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

From: (763) 544-0341 Origin ID: AELA
Dain Thompson
McLaughlin Gormley King Company
8810 10th Avenue N.

GOLDEN VALLEY, MN 55427

FedEx Express

J14101402070326

Ship Date: 12MAY14
ActWgt: 4.0 LB
CAD: 8538645/INET3490

Delivery Address Bar Code

Ref # Sample - SPLFT
Invoice #
PO #
Dept #

SHIP TO: (559) 646-6061 BILL SENDER
Keri Skiles
Kearney Agucultural Center
9240 S RIVERBEND AVE

PARLIER, CA 93648

TUE - 13 MAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7988 3147 4995

NC VISA

93648
CA-US
OAK

522G1/62D3/F220

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

OK 5-13-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 4
Page: 2

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Chain of Custody Letter

EVERGREEN® Crop Protection EC 60-6, Lot # AB4586, Trial No. 05954.14-CA52 – 1 pint
EVERGREEN® Crop Protection EC 60-6, Lot # AB4586, Trial No. 05954.14-CA53 – 1 pint

These materials were characterized under GLP.

(Please Print Name) Dain A. Thompson

Signed [signature] Date 5/12/14

The listed samples were sent to:

Keri Skiles
Kearney Agricultural Research & Ext. Center
9240 S. Riverbend Ave.
Parlier, CA 93648

The listed samples were received by

(Please Print Name) DAVID ENNES

Signed David Ennes Date 5-13-14

Please return a signed and dated copy of this letter to MGK.

Part 4
Page: 3

8810 Tenth Avenue North
Minneapolis, MN 55427

TOLL FREE 800.645.6466
TEL 763.544.0341
FAX 763.544.6437
WWW.MGK.COM

MGK®
Insect Control Solutions

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

CERTIFICATE OF ANALYSIS

OK 5-13-14

LOT# AB4586

MATERIAL EVERGREEN® Crop Protection EC 60-6

Active Ingredient	% Found	% Declared	% of Declared
Pyrethrin I	3.56		
Pyrethrin II	2.47		
Pyrethrin - Total	6.03	6.00	100.5
PBO (Technical)	58.34	60.00	97.2
PBO (Actual)	55.60		

Expiration Date: 3/10/2015

This material was characterized under GLP-2871.
Originally characterized under GLP-2797. Original results: Total Pyrethrins - 5.79%, Technical PBO- 58.32%.

Signed Brian Dunker **Date** 3/10/14

Brian M. Dunker

Part 4
Page: 4

8810 Tenth Avenue North
Minneapolis, MN 55427

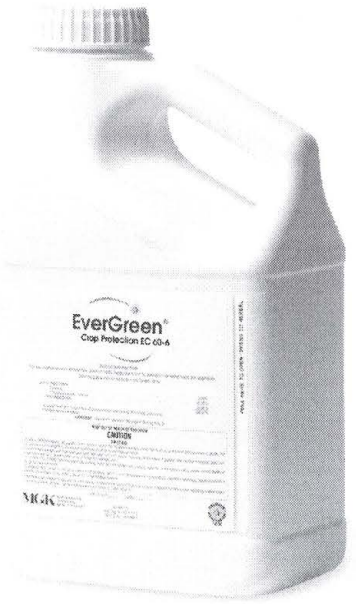
TOLL FREE 800.645.6466
TEL 763.544.0341
FAX 763.544.6437
WWW.MGK.COM

EverGreen®
Crop Protection EC 60-6

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Specimen Label

- Multi-purpose insecticide
- For use on growing crops, ornamentals, stored products, livestock and fruit fly control on harvested fruits and vegetables
- Used alone as a clean-up spray or a pre-harvest spray



ACTIVE INGREDIENTS:

Pyrethrins	6.00%
*Piperonyl butoxide, Technical	60.00%
OTHER INGREDIENTS	34.00%
	100.00%

*Equivalent to 48.00% (butylcarbityl) (6-propylpiperonyl) ether and 12.00% related compounds.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See pages 4 and 5 for first aid and precautionary statements.

OK 5-13-14

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

GENERAL PRECAUTIONS & USE RESTRICTIONS

- See separate directions and precautions for mosquito control applications.
- Do not contaminate food or feedstuffs.
- Do not enter or allow others to enter until vapors, mists and aerosols have dispersed, and the area has been thoroughly ventilated.
- Do not apply this product in a way that will contact workers or other persons, either directly or through drift.
- Only protected handlers may be in the area during application.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until aerosols, vapors and/or mists have dispersed.
- Remove or cover exposed food and drinking water before application.
- Remove or cover dishes, utensils, food processing equipment and food preparation surfaces, or wash them before use.
- For direct application to non-domestic animals/livestock: Do not apply more than 1 time per day.
- When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.
- When used in indoor food handling/processing facilities: Do not make space spray applications when facility is in operation. During space spray applications, cover or remove exposed food. During space spray applications, cover food processing surfaces or clean after treatment with a suitable detergent, rinse with potable water before use. Do not apply more than 1 time per day.
- For food crops growing outdoors or in greenhouses in agricultural setting: Do not apply more than 10 times per season. Do not re-apply within 3 days except under extreme pest pressure. In case of extreme pest pressure, do not re-apply within 24 hours. Do not harvest until spray has dried. Do not apply to cotton within 14 days of seed harvest.
- For post-harvest applications to vegetables, fruits, nuts and other commodities: Do not re-apply within 7 days. Do not apply more than 10 times to sweet potatoes.
- For post-harvest applications to stored grains and seed: Do not re-apply within 30 days.
- For greenhouse grown ornamental, flowering and foliage plants: Do not apply more than 1 time per day.
- Remove pets, birds and cover fish aquariums before application.

Part 4
Page: 5

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR, Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water, is:

- Coveralls;
- Chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton;
- Shoes plus socks; and
- Protective eyewear.

OK 5-13-14

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

USED ALONE: This concentrate can be used also as a clean up or a pre-harvest spray where other materials cannot be used because of residue restrictions. Contains natural pyrethrins.

USED IN COMBINATION WITH OTHER INSECTICIDES: Evergreen® Crop Protection EC 60-6 may be combined with other insecticides and acaricides where resistance may be a problem and to provide a flushing of insects from hiding and into contact with other spray residues for quicker and more complete control. The application must conform to the accepted use precautions and directions for both products.

Prior to tank mixing, a compatibility test should be conducted using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture.

Tank mix applications must be made in accordance with the more restrictive of label limitations and precautions, No label application rates may be exceeded. This product cannot be mixed with any product with label prohibitions against such mixing.

USE THROUGH IRRIGATION SYSTEMS (CHEMIGATION): Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for the operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the pump motor stops. The irrigation line or water pump must include a functional pressure valve that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must be a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of more dilute suspension per unit of time.

GROWING CROPS (OUTDOORS AND IN GREENHOUSES):

Apply 2 to 16 ounces per acre and repeat if required to maintain effective control. Use in sufficient water for thorough coverage of upper and lower leaf surfaces unless otherwise noted. This product may be applied by air in no less than 2 gallons of water per acre and by ground in no less than 10 gallons of water per acre. **It is recommended that the final spray mix be buffered to a pH of 5.5-7.0.**

This concentrate is relatively non-toxic to honey bees. To avoid possible harm to honey bees, it is advisable to apply in the early morning or late evening hours.

Evergreen® Crop Protection EC 60-6 may be used on most crops because its active ingredients are exempt from tolerances when applied to growing crops. The crop-grouping scheme used on this label was devised by the Environmental Protection Agency to expedite minor use pesticide registration.

ROOT AND TUBER VEGETABLES: Arracacha, Arrowroot, Purple Arrowroot, Japanese Artichoke, Jerusalem Artichoke, Garden Beets, Sugar Beets, Edible Burdock, Edible Canna, Carrots, Cassava (bitter or sweet), Celeriac (celery root), Chayote, Chervil (turnip rooted), Chicory, Chufa, Dasheen, Ginger, Ginseng, Horseradish, Leren, Parsley (turnip rooted), Parsnip, Potato, Radish, Japanese Radish (Daikon), Rutabaga, Salsify, Black Salsify, Spanish Salsify, Skirret, Sweet Potato, Tanier, Turmeric, Turnip, Yam (true), Yam Bean.

LEAVES OF ROOT AND TUBER VEGETABLES: Garden Beet, Sugar Beet, Edible Burdock, Carrot, Cassava (bitter or sweet), Celeriac (celery root), Chervil (turnip rooted), Chicory, Dasheen (taro), Parsnip, Radish, Japanese Radish (Daikon), Rutabaga, Black Salsify, Sweet Potato, Tanier, Turnip, Yam (true).

BULB VEGETABLES: (Allium spp.): Garlic, Great-headed Garlic, Leek, Onion (dry bulb and green), Onion, Welch, Shallot.

LEAFY VEGETABLES: Amaranth (Leafy Amaranth, Chinese Spinach, Tampala), Arrugula, Cardoon, Celery, Chinese Celery, Celtuce, Chervil, Cilantro, Corn Salad, Chrysanthemum (edible leaved), Chrysanthemum (garland), Cress (garden, water), Upland Cress (yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Fennel (Florence), Lettuce (head and leafy), Orach, Parsley, Purslane (garden & winter), Radicchio, Rhubarb, Spinach, Vine Spinach (Malabar, Indian), Spinach (New Zealand), Swiss Chard.

BRASSICA (COLE) LEAFY VEGETABLES: Broccoli, Chinese Broccoli (Gai Lan), Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

LEGUME VEGETABLES (SUCCULENT OR DRIED): Adzuki Beans, Field Beans, Kidney Beans, Lima Beans, Moth Beans, Mung Beans, Navy Beans, Pinto Beans, Rice Beans, Runner Beans, Snap Beans, Tepary Beans, Urd Beans, Wax Beans, Asparagus Beans, Black-eyed Peas, Catjang, Chinese Longbeans, Cowpeas, Crowder Peas, Southern Peas, Yardlong Beans, Broad Beans (Fava Beans), Chick Peas (Garbanzo Beans), Guar, Jackbean (Sword Bean), Lablab Bean (Hyacinth Bean), Lentils, Peas (Edible Pod Pea, Garden Peas, Field Peas, Sugar Snap Peas, English Pea, Snow Pea), Pigeon Peas, Soybeans, Sweet Lupin Beans, White Lupin Beans, White Sweet Lupin, Sword Bean.

FOLIAGE OF LEGUME VEGETABLES: Plant parts of any legume vegetable included in the legume vegetable group that will be used as animal feed including any variety of Beans, Field Peas, Soybeans.

FRUITING VEGETABLES: Eggplant, Ground Cherry, Okra, Pepino, Pepper (Bell Pepper, Chili Peppers, Cooking Peppers, Pimentos, Sweet Peppers), Tomatillo, Tomato.

CUCURBIT VEGETABLES: Balsam Apple, Balsam Pear (Bitter Melon), Chayote, Chinese Waxgourd (Chinese preserving melon), Chinese Cucumber, Citron Melon, Cucumber, Gherkin, Edible Gourds, Muskmelons (including hybrids, Cantaloupe, Casaba, Crenshaw, Golden Pershaw Melon, Honeydew Melons, Honey Balls, Mango Melon, Muskmelon, Persian Melon, Pineapple Melon, Santa Claus Melon, Snake Melon), Pumpkin, Squash (summer & winter), Watermelon (including hybrids).

CITRUS FRUITS: Calamondin, Citrus Citron, Citrus Hybrids, Grapefruit, Kumquats, Lemons, Limes, Mandarin (Tangerine), Orange (sweet & sour), Pummelo, Satsuma Mandarin, (Citrus spp. includes Chironja, Tangelos, Tangors).

POME FRUITS: Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince.

STONE FRUITS: Apricot, Cherry (sweet & sour), Nectarine, Peach, Plum, Prune, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot.

SMALL FRUITS AND BERRIES: Blackberry, Blueberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Grape, Huckleberry, Loganberry, Olallie Berry, Raspberry (black & red), Strawberry, Youngberry.

TREE NUTS: Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Walnut, Black and English (Persian).

ORIENTAL VEGETABLES: Acerola, Atemoya, Balsam Pear (bitter melon), Carambola, Japanese Artichoke, Chinese Broccoli (Gai Lan), Chinese Cabbage (Bok Choy, Napa),

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Chinese Mustard Cabbage (Gai Choy), Dasheen, Ginger, Ginseng, Chinese Longbeans, Mung Beans, Citron Melon, Balsam Pear (Bitter Melon), Japanese Radish (Daikon), Chinese Spinach, Chinese Waxgourd, Cilantro, Citron Melon, Rambutan, Water Chestnuts.

SUBTROPICAL FRUITS: Avocado, Banana, Carob, Barbados Cherry, Cherimoya, Dates, Durian (Jackfruit), Feijoa, Figs, Guava, Kiwifruit, Lychee, Mango, Papaya, Passion Fruit, Paw Paw, Persimmon, Pineapple, Pomegranate.

ADDITIONAL CROPS: Artichoke, Asparagus, Avocado, Coffee, Cotton, Hops, Jojoba, Mushroom, Okra, Peanuts, Pineapple, Safflowers, Sesame, Sugar Cane, Sunflowers, Tea.

CEREAL GRAINS: Barley, Buckwheat, Corn (sweet and field), Millet, Oats, Pearl, Popcorn, Proso, Rice, Rye, Sorghum (milo), Teosine, Triticale, Wheat, Wild Rice.

FORAGE, FODDER AND STRAW OF CEREAL GRAINS: Barley, Buckwheat, Corn (sweet and field), Millet, Oats, Pearl, Popcorn, Proso, Rice, Rye, Sorghum (milo), Teosine, Triticale, Wheat, Wild Rice.

GRASSES FOR SEED, FORAGE, FODDER AND HAY: Any grass (Gramineal family, (green or cured), except sugarcane and those listed in the cereal grains group) that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage, Bermuda Grass, Bluegrass, Bromegrass, Fescue.

NON-GRASS ANIMAL FEEDS: Alfalfa, Velvet Bean, Clover, Kudzu, Lespedeza, Lupin, Sainfoin, Trefoil, Crown Vetch, Milk Vetch.

HERBS AND SPICES: Allspice, Angelica, Anise (Anise seed), Annatto, Balm, Basil, Borage, Burnet, Camomile, Caper Buds, Caraway, Black Caraway, Cardamon, Cassia Bark, Cassia Buds, Catnip, Celery Seed, Chervil Dried, Chives, Chinese Chive, Clary, Clove Buds, Coriander (cilantro or Chinese parsley leaf), Coriander (cilantro seed), Costmary, Cilantro, Cumin, Curry Leaf, Dill (dill weed), Dill (seed), Fennel (Italian and Sweet), Fenugreek, Grains of Paradise, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage (leaf & seed), Mace, Marigold, Sweet Marjoram, Wild Marjoram, Mustard (seed), Nasturtium, Nutmeg, Parsley, Oregano, Mint, Paprika, Parsley, Pennyroyal, Pepper (black & white), Poppy Seed, Rosemary, Rue, Saffron, Sage, Savory, Summer and Winter Savory, Sweet Bay (Bay Leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

ORNAMENTALS: African Violet, Ageraturm, Aster, Azalea, Begonia, Cacti, Calceolaria, Calendula, Calla, Camellia, Carnation, Ceanothus, Cineraria, Chrysanthemum, Coleus, Cyclamen, Cypress, Daffodil, Dahlia, Delphinium, Dogwood, Fern, Ficus, Foliage Plants, Fuschia, Gardenia, Geranium, Gladiolus, Gloxinia, Gypsophila, Holly, Hyacinth, Hydrangea, Iris, Lilies, Maidenhair Fern, Marigold, Juniper, Narcissus, Palm, Pansy, Pelargonium, Peony, Petunia, Philodendron, Phlox, Pine, Pyracantha, Rhododendron, Roses, Rubber Plant, Snapdragon, Stock, Sweet Pea, Tulips, Viburnum, Wandering Jew, Yew, Zinnia and Andromeda, Arborvitae, Ash, Beech, Birch, Boxwood, Cotoneaster, Crabapple, Dogwood, Elm, Euonymus, Fir, Firethorn, Forsythia, Hawthorn, Hemlock, Hickory, Holly, Honey Locust, Horse Chestnut, Juniper, Larch, Laurel, Lilac, Linden, Mimosa (Silk Tree), Myrtle, Oak, Pine, Privet, Tulip Tree, Viburnum, Willow, Yew.

FOR THE CONTROL OF INSECTS SUCH AS:

Ants
Aphids
Apple Maggot
Armyworms
Artichoke Plume Moth
Asparagus Beetle
Beet Armyworm
Bagworm
Bean Beetles
Blister Beetles
Blow Flies
Biting Flies
Boll Weevil
Cabbage Looper
Cankerworms
Carrot Weevil
Caterpillars
Clover Mite
Clover Weevil
Cockroaches
12-spotted Cucumber Beetle
Codling Moth
Colorado Potato Beetles
Corn Earworm
Crickets
Crane Flies
Cross-striped Cabbageworm
Cucumber Beetles
Deer Fly
Deer Tick
Earwigs
Diamondback Moth Larvae
Eastern Tent Caterpillar
Elm Leaf Beetle
European Corn Borer
European Pine Tip Moth
Face Fly
Fall Webworm
Fire Ants
Firebrats
Fireworms
Flea Beetles
Flies
Forest Tent Caterpillar
Fungus Gnats
Fruit Flies
Fruittree Leafroller
Grape Leafhopper
Grape Leaf Skeletonizer
Grasshoppers
Green Fruit Worm
Green Peach Aphids
Greenhouse Thrips
Gypsy Moth (adults & larvae)
Harlequin Bug
Heliothis sp.
Hornets
Horn Fly
Hornworm
Horse Fly
House Fly
Imported Cabbageworm
Indian Meal Moth
Imported Cabbageworm
Japanese Beetle
Katydids
Lace Bugs
Leafhopper
Leafrollers
Leaftiers
Lice
Loopers
Lygus
Mealy Bugs
Mediterranean Flour Moth
Mexican Bean Beetle
Midges
Millipedes
Mosquitoes
Mushroom Flies
Navel Orangeworm
Onion Maggot
Pear Psylla
Potato Leafhopper
Psyllids
Rice Weevil
Saw-toothed Grain Beetle
Silverfish
Skippers
Sowbugs
Stable Fly
Stink Bugs
Spiders
Tabanidae
Tarnished Plant Bug
Thrips
Tomato Hornworm
Vinegar Flies
Wasps
Webworms
Whiteflies
Yellow Jackets

USE ON GREENHOUSE FRUIT, VEGETABLE, FLOWER AND FOLIAGE PLANTS:

USED ALONE: Combine 12 to 24 ounces of Evergreen® Crop Protection EC 60-6 with 100 gallons of water for applications with conventional hydraulic sprayers or 1 to 2 teaspoons per gallon of water for applications with compressed air sprayers.

USED IN COMBINATION WITH OTHER INSECTICIDES: To provide quick knockdown of insects when used with a residual insecticide, tank-mix 1 to 4 ounces of Evergreen® Crop Protection EC 60-6 with the proper amount of companion insecticide, tank mix 1 to 4 ounces of Evergreen® Crop Protection EC 60-6 with the proper amount of companion insecticide in 100 gallons of water and apply with a conventional hydraulic sprayer.

Applications must be made in accordance with the more restrictive label limitations and precautions. No label application rates may be exceeded. This product cannot be mixed with any product with label prohibitions against such mixing.

IMPORTANT NOTE: Plant safety is an important consideration when using insecticides in a greenhouse. However, it is not possible to evaluate the phytotoxicity of Evergreen® Crop Protection EC 60-6 towards numerous plant varieties that may react differently to insecticides in different growth stages or under varying environmental conditions. Before making widespread applications of Evergreen® Crop Protection EC 60-6, treat a limited number of plants and observe for phytotoxicity over a 10 day period.

FOR USE OUTDOORS ON TREES, SHRUBS, FLOWERS AND FOLIAGE PLANTS:

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USED ALONE: Combine 12 to 24 ounces of Evergreen® Crop Protection EC 60-6 with 100 gallons of water for applications with conventional hydraulic and air blast sprayers or 12 to 24 ounces of Evergreen® Crop Protection EC 60-6 with 10 gallons of water for applications with low volume mist blowers or 1 to 2 teaspoons per gallon water for applications with compressed air sprayers.

USED IN COMBINATION WITH OTHER INSECTICIDES: To provide quick knockdown of insects when used with a residual insecticide, tank mix 1 to 4 ounces of Evergreen® Crop Protection EC 60-6 with the proper amount of companion insecticide in 100 gallons of water (10 gallons of water for low volume application with mist blowers) and apply with conventional hydraulic or air blast sprayers.

Applications must be made in accordance with the more restrictive label limitations and precautions. No label application rates may be exceeded. This product cannot be mixed with any product with label prohibitions against such mixing.

FOR CONTROL OF GYPSY MOTH CATERPILLARS AND ADULTS:

Combine 8 to 12 ounces of Evergreen® Crop Protection EC 60-6 with 100 gallons of water for applications with conventional hydraulic sprayers or 8 to 12 ounces of Evergreen® Crop Protection EC 60-6 with 10 gallons of water for applications with air blast sprayers. To provide quick knockdown or gypsy moth caterpillars when used with a residual insecticide, tank-mix 1 to 4 ounces of Evergreen® Crop Protection EC 60-6 with the proper amount of companion insecticide in 100 gallons of water (10 gallons of water for air blast sprayers) and apply with a conventional hydraulic sprayer.

Applications must be made in accordance with the more restrictive of label limitations and precautions. No label application rates may be exceeded. This product cannot be mixed with any product with label prohibitions against such mixing.

USE INDOORS ON TREES, SHRUBS, FLOWERS AND FOLIAGE PLANTS:

USED ALONE: Combine 12 to 24 ounces of Evergreen® Crop Protection EC 60-6 with 100 gallons of water for applications with conventional hydraulic sprayers or 1 to 2 teaspoons of Evergreen® Crop Protection EC 60-6 per gallon of water for applications with compressed air sprayers.

USED IN COMBINATION WITH OTHER INSECTICIDES: To provide quick knockdown of insects when used with a residual insecticide, tank-mix 1 to 4 ounces of Evergreen® Crop Protection EC 60-6 with the proper amount of companion insecticide in 100 gallons of water and apply with a conventional hydraulic sprayer. Applications must be made in accordance with the more restrictive of label limitations and precautions. No label application rates may be exceeded. This product cannot be mixed with any product with label prohibitions against such mixing.

USE WITH HYDROPONICALLY GROWN VEGETABLES AS A WATER SYSTEM TREATMENT:

To control aquatic diptera larvae, apply Evergreen® Crop Protection EC 60-6 to the water at the rates outlined in the following table:

Pyrethrins concentration	ml. of Evergreen® EC 60-6	Gallons of water
0.1 ppm	64.6	10,000
0.01 ppm	6.46	10,000
0.001 ppm	0.646	10,000

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FOR USE AROUND HOMES AND OTHER BUILDINGS:

In grassy undeveloped areas use this concentrate at 1 part to 59 parts water to control foraging fire ants. Also spray grassy areas around yard borders liberally to control ticks that may carry Lyme Disease.

FOR USE ON HARVESTED FRUITS AND VEGETABLES:

Including apples, blackberries, blueberries, boysenberries, cherries, crabapples, currants, dewberries, figs, gooseberries, grapes, guavas, loganberries, mangoes, muskmelons, oranges, peaches, pears, peas, pineapples, plums, raspberries, tomatoes.

DIRECT SPRAY TO FRUITS IN BASKETS, ON TRUCKS OR IN PROCESSING PLANTS:

To control Drosophila spp., Tephritid spp. Fruit Flies, Vinegar Flies and other nuisance pests dilute this concentrate at the rate of 1 part with 1,200 parts water (1 pint per 150 gallons or 1 teaspoon per 12.5 pints water). Thoroughly mix the emulsion in the spray tank and treat as follows:

1) Apply liberally to fruits and vegetables in baskets, on trucks and in plants. Use sprayers at a high pressure for applying at the rate of five or six pints of diluted spray to a 2-ton load of produce. Direct the spray for maximum coverage of the baskets or hampers. It is important to spray between and beneath the containers.

2) Spray the raw stock stacked in the yard.

3) Dip baskets in the diluted spray, after dumping the produce to kill adhering larvae and pupae.

FOR USE IN CANNERIES:

The entire space inside of the cannery should be sprayed after washing and cleaning up and just before bringing produce into it, with this product diluted 1 part to 29 parts of water (1 quart with 7.5 gallons water) up to 1 part to 11 parts of water (1 quart with 3 gallons water). Use 1 gallon of the spray per 750 square feet, directing it on walls, ceiling, and floors paying special attention to forcing the spray into all cracks and crevices for the control of ants, roaches, silverfish, crickets, spiders and cheese mites. This same dilution used as a space spray will give excellent control of fruit flies, houseflies, hornets, grain moths, gnats, mosquitoes, and skipper flies. Use one ounce diluted spray per 1,000 cubic feet of space. Do not spray while the plant is in operation as dead flies may fall into containers or the products being processed.

AS A SPACE SPRAY IN FOOD AND NONFOOD AREAS OF FOOD PROCESSING PLANTS, INDUSTRIAL INSTALLATION, BAKERIES, RICE AND WHEAT MILLS, RESTAURANTS, TOBACCO WAREHOUSE, GRAIN ELEVATORS, HOMES, AND WAREHOUSES:

To kill flying insects such as fruit flies, house flies, hornets, wasps, grain moths, gnats, mosquitoes and skipper flies, dilute this concentrate at the rate of 1 part with 29 parts water (1 quart with 7.5 gallons water) up to 1 part to 11 parts water (1 quart with 3 gallons water). Use at the rate of 1/2 to 1 ounce of diluted spray per 1,000 cubic feet of space. Direct the space treatment upward and whenever practical, keep doors and windows closed for at least 10 minutes after application. The use of this product in food processing or food handling establishments should be confined to time periods when the plant is not in operation. Food should be removed or covered during treatments. All food processing surfaces should be covered during treatment or thoroughly cleaned before use.

Where oil residues are not undesirable, this product can be diluted at the rate of 1 part to 29 parts up to 1 part to 11 parts in deodorized base oil instead of water and applied as a space spray with any good type applicator such as mechanical or ULV fogger capable of producing particles of aerosol size.

CRAWLING AND FLYING INSECTS:

For control of accessible, exposed stages of CRAWLING INSECTS including, but not limited to, Ants, Cockroaches, Cadelles, Cigarette Beetles, Confused Flour Beetles, Dark Mealworms, Dried Fruit Beetles, Drugstore Beetles, Grain Mites, Red Flour Beetles, Rice Weevils, Saw-toothed Grain Beetles, Spider Beetles, Yellow Mealworms and FLYING INSECTS including, but not limited to, Angoumois Grain Moths, Cheese Skippers, Fruit Flies, Fungus Gnats, Gnats, House Flies, Indian Meal Moths, Mosquitoes, Mediterranean Flour Moths, Small Flying Moths, Tobacco Moths, dilute 1 part of Evergreen® Crop Protection EC 60-6 with 11 parts of water or oil (10.67 ounces per gallon) and apply at the rate of 1 ounce per 1,000 cubic feet of space. Direct the spray towards the ceiling and upper corners of the area and behind obstructions. Vacate the treated area and keep the area closed for at least 30 minutes after treatment. Ventilate the area before reoccupying. Repeat treatment as necessary.

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USE AS A SURFACE SPRAY IN HOMES, RESTAURANTS, FOOD PROCESSING PLANTS, INDUSTRIAL INSTALLATIONS AND WAREHOUSES:

To control accessible, exposed stages of crawling insects including, but not limited to, Ants, Cockroaches, Cadelles, Cigarette Beetles, Confused Flour Beetles, Dark Mealworms, Dried Fruit Beetles, Drugstore Beetles, Grain Mites, Red Flour Beetles, Rice Weevils, Saw-toothed Grain Beetles, Spider Beetles, Yellow Mealworms, dilute 1 part Evergreen® Crop Protection EC 60-6 with 59 parts water and apply at the rate of 1 gallon to 750 square feet, paying special attention to force the spray into all cracks and crevices.

Except in Federally inspected meat and poultry plants, food processing operations may continue when this product is applied as a surface spray with care and in accordance with the directions and precautions given above.

To control accessible, exposed stages of crawling insects including, but not limited to, ants, cockroaches, cadelles, cigarette beetles, confused flour beetles, dark mealworms, dried fruit beetles, drugstore beetles, grain mites, red flour beetles, rice weevils, saw-toothed grain beetles, spider beetles, yellow mealworms, dilute 1 part Evergreen® Crop Protection EC 60-6 with 19 parts of water and apply at the rate of 1 gallon to 750 square feet, paying special attention to force the spray into all cracks and crevices.

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FOR USE ON SWEET POTATOES IN STORAGE:

For control of Fruit Flies and Vinegar Flies dilute this concentrate at 1 part to 19 parts water (6.4 fluid ounces per gallon). Apply as a space fog with a mechanical fogger capable of producing particles of aerosol size at the rate of 1 gallon diluted spray per 100,000 cubic feet of space. Apply only when flying insects are present. Several applications may be necessary during period of heavy infestation, but do not make more than 10 applications

FOR USE ON STORED PRODUCTS:

This concentrate can be used at the rate of 1 part to 29 parts up to 1 part to 11 parts water or deodorized base oil can be used on rice, barley, beans, birdseed, buckwheat, cocoa beans, corn, cottonseed, flax, oats, grain nuts, dried fruit, almond nutmeat and shells, walnut nutmeat and shells, pistachio, dried prunes, dried apricots, raisins, figs, wheat, rye, sorghum, tobacco and peanuts held in storage for control of the accessible stages of Almond Moths, Angoumois Grain Moths, Cadelle Beetles, Cigarette Beetle, Confused Flour Beetles, Flat Grain Beetles, Granary Weevils, Indian Meal Moths, Red Flour Beetles, Rice Weevils, Rusty Grain Beetles, Saw-toothed Grain Beetles, Square-necked Grain Beetles, and Tobacco Moths.

SURFACE TREATMENT OF STORED GRAIN AND SEED:

To control Indian Meal Moths, Angoumois Grain Moths and Mediterranean Flour Moth, monthly inspections should be made after the grain is placed in storage. If the top two or three inches are infested, dilute 1 part Evergreen® Crop Protection EC 60-6 with 19 parts of water and apply at the rate of 1 to 2 gallons per 1,000 square feet of grain. Rake the mixture into the grain to a depth of 4 inches.

FOR USE AS A GRAIN PROTECTANT:

This concentrate when diluted with water and sprayed directly on grains will effectively protect the grain against grain storage insects for a full season or approximately 8 months. Dilute at the rate of 1 part to 29 parts water (1 quart with 7.5 gallons water). Thoroughly mix the emulsion and apply at the rate of 4 to 5 gallons per 1,000 bushels of grain as it is carried along a belt or as it enters the auger or elevator. This concentrate may be used in combination with a registered fumigant for use on heavily infested stored products.

ON ALMONDS, PEANUTS AND WALNUTS IN BULK OR IN BAGS:

To control stored product insects such as Almond Moths, Angoumois Grain Moths, Ants, Cadelles, Cigarette Beetles, Confused Flour Beetles, Drugstore Beetles, Flat Grain Beetles, Granary Weevils, Indian Meal Moths, Lesser Grain Borers, Maize Weevils, Mediterranean Flour Moths, Merchant Grain Beetles, Red Flour Beetles, Rice Weevils, Rusty Grain Beetles, Saw-toothed Grain Beetles and Square-necked Grain Beetles, dilute 1.5 ounces of Evergreen® Crop Protection EC 60-6 per gallon of water and apply as a coarse wet spray over the top of stored nuts or the outside surface of stacked bagged nuts at the rate of 4 gallons per 1,000 square feet. Apply at weekly intervals for about 6 weeks and then at 15-day intervals. The first two applications should be applied at the rate of 4 gallons per 1,000 square feet and subsequent treatments should be applied at the rate of 2 gallons per 1,000 square feet.

Pyrethrins+PBO/Mushroom
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FOR USE IN STORAGE SITES:

This concentrate can be used to treat grain and seed in warehouse bins and trucks, cargo ships, mills, bin hoppers, elevators and conveying equipment as a clean-up prior to using them for storage. In mills and elevators, all infested accumulations of grain should be removed from the bin hoppers. All storage areas and conveying equipment should be thoroughly cleaned by sweeping out the waste grain, cobwebs and other debris from the walls and rafters as well as on the floor and door frames with special attention to material lodged in the cracks and crevices. All of the debris should be removed and burned to kill eggs and insects that might be present.

For farms, particular attention should be given to cleaning up around the used feed and grain bags, grain residues from wagons, harvesting equipment and feed troughs. Newly harvested grain should not be placed in the same bin with carry-over grain and all carry-over grain stocks that are not treated with grain protectant should be fumigated. These cleaning operations should be done within two or three weeks before harvest.

After above sanitation measures have been employed, spray all areas prior to use for storage with 1 part to 29 parts water (1 quart with 7.5 gallons water) up to 1 part to 11 parts (1 quart with 3 gallons water). Apply at the rate of one gallon per 750 square feet on walls, floors, ceilings and partition boards of bins, paying particular attention to forcing the spray into all cracks and crevices.

Monthly inspections should be made. If the top 2 or 3 inches are found to be infested, re-treat applying at the rate of 1 to 2 gallons of diluted material per 1,000 bushels of stored product.

FOR USE AS A LIVESTOCK AND POULTRY SPRAY:

1) To kill and repel horn flies, houseflies, mosquitoes and gnats, dilute at the rate of 1 to 2 fluid ounces per gallon of water and apply to wet the hair thoroughly with particular attention to topline, underline, flanks, withers and other infested areas. Repeat treatment at intervals of 5 to 12 days for small insect populations or as needed when flies are emerging in large numbers.

2) To kill and repel stable flies, horse flies, and deer flies, dilute at the rate of 2 to 3 fluid ounces per gallon of water and apply at a quart per adult animal to wet the hair thoroughly with particular attention to the legs, flanks, barrel, topline and other body areas commonly attacked by these flies. Repeat treatment each week as needed.

3) To kill and repel face flies dilute at the rate of 2 fluid ounces per gallon of water and apply using spray which produces large wetting droplets. Apply to the face of the animal in the morning before releasing to pasture. Apply sufficiently to wet the face but not more than 1-1/2 ounces per animal. Repeat daily as needed.

4) For effective control of biting and sucking lice on cattle, horses, sheep, goats and hogs, dilute at the rate of 1 quart with 75 gallons of water (1 fluid ounce with 2 gallons) and spray to thoroughly wet the hair of the animal including the head and brush of the tail. Repeat treatment in 10 days to kill newly hatched lice.

5) To control poultry lice, using a dilution of 2 to 3 ounces of concentrate per gallon of water spray roosts, walls and nests or cages thoroughly. It is not necessary to remove poultry from the housing unit during treatment. This should be followed by spraying over the birds with a fine mist.

6) For control of bed bugs and mites on poultry and in poultry houses, dilute at the rate of 2 to 3 fluid ounces per gallon of water and spray crevices of roost poles, cracks in walls and cracks in nests where the bed bugs and mites hide, followed by spraying over the birds with a fine mist.

7) To control sheep "tick" or ked, dilute at the rate of 1 to 2 fluid ounces per 4 gallons of water and thoroughly wet all portions of the body by dipping or by spraying with sufficient pressure and with a nozzle adjustment to give penetration of the wool. Treat at a rate sufficient to wet the animal.

8) To kill fleas and ticks on livestock and pets, and to obtain protection against reinfestation, dilute at the rate of 2 fluid ounces per gallon of water and wet the animal by dipping or spraying. For best results against fleas and ticks on dogs and cats the kennels and/or animal quarters and bedding should be treated.

FOR USE IN BARNS, DAIRIES, MILKING PARLORS, MILKING ROOMS AND POULTRY HOUSES:

To control flying insects including, but not limited to, Flies, Fruit Flies, Mosquitoes, Gnats, Wasps, Hornets and Small Flying Moths, dilute at the rate of 2 fluid ounces per gallon of water. Apply as a fog or fine mist (at approximately 2 ounces per 1,000 cubic feet of space), directing the nozzle for maximum coverage and above livestock and poultry toward the ceiling and upper corners of the area being treated. For best results, close doors and windows before spraying, and keep them closed for 10 to 15 minutes. Applicator should vacate the treated area and ventilate it prior to returning. Repeat application as necessary.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in a warm, dry area. Always store pesticides in the original container. Store away from food and pet food.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Avoid contact with skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves (such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber or Viton, Selection Category E). Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE) [Professional]

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart.

Applicators and other handlers who may be exposed to the dilute and/or concentrate through application or other tasks must wear:

- Long-sleeved shirt and long pants;
- Chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton;
- Shoes plus socks; and
- Protective eyewear.

In addition to the above PPE, applicators using hand- held foggers in an enclosed area must wear a half-face, full-face or hood-style NIOSH-approved respirator with:

- A dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or
- A canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or
- A cartridge or canister with any R, P, or HE filter.

See engineering controls for additional requirements.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

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ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(6)].

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and run-off may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through run-off. This product has a potential for run-off for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce run-off that contains this product.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Except as specified in the directions for use, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

See separate directions and precautions for mosquito control applications.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

HOTLINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), you may call 1-888-740-8712.

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EPA Reg. No. 1021-1770

PREMIUM PYRETHRUM MGK

EPA Est. No. 1021-MN-2

SAFETY DATA SHEET (GHS)

Date Issued : 6/15/2009
MSDS No : 007448CP
Date-Revised : 4/24/2014
Revision No : 2

EVERGREEN® Crop Protection EC 60-6

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: EVERGREEN® Crop Protection EC 60-6
PRODUCT DESCRIPTION: A Multi-Purpose Insecticide for use on Growing Crops.
PRODUCT CODE: 7448A, EPA REG. NO. : 1021-1770
ACTIVE INGREDIENT(S): Pyrethrins; Piperonyl Butoxide

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MANUFACTURER
McLaughlin Gormley King Company
8810 10th Avenue North
Minneapolis, MN 55427
Emergency Contact: SafetyCall®
E-Mail: mgk-sds@mgk.com
Emergency Phone: 1(888) 740-8712
Alternate Emergency Phone: 1(952) 852-9509
Service Number: 1(800) 645-6466

24 HR. EMERGENCY TELEPHONE NUMBERS
FOR TRANSPORTATION:
CHEMTREC® U.S. and CANADA: 1(800) 424-9300
CHEMTREC® All Other Areas: 1(703) 527-3887

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COMMENTS: MGK® Hours of operation are 8:00 am to 4:30 pm CST, 14:00 to 22:30 GMT.

For MEDICAL EMERGENCIES or PESTICIDE INCIDENTS, call 24 hours a day to 1-888-740-8712.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health	Environmental
Acute Toxicity (Oral), Category 4 Acute Toxicity (Inhalation), Category 4	Aquatic-Acute, Category 1 Aquatic-Chronic, Category 1

GHS LABEL

 Environment (GHS 09)	 Exclamation mark (GHS 07)
WARNING	WARNING
H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long lasting effects.	H302: Harmful if swallowed. H332: Harmful if inhaled.

PRECAUTIONARY STATEMENT(S)

Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P270: Do no eat, drink, or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.

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Response:

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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P330: Rinse mouth.
P391: Collect spillage.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

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Disposal:

P501: Dispose of contents/container to an approved waste disposal plant.

COMMENTS: This material is considered hazardous by the 2012 OSHA Hazard Communication Standard [29 CFR 1910.1200(a)(1)], and the G.H.S.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
Pyrethrins	6	8003-34-7	232-319-8
Piperonyl Butoxide	60	51-03-6	200-076-7

COMMENTS: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: If swallowed, IMMEDIATELY call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or a doctor. Never give anything by mouth to an unconscious person.

INHALATION: Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN: For skin effects, a highly efficient therapeutic agent for pyrethrin exposure is topical application of tocopherol acetate (Vitamin E).

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: This product is NOT classified as flammable or combustible by OSHA.

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EXTINGUISHING MEDIA: Foam, carbon dioxide or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: This product is classified as Non-Combustible, however in the extreme temperatures that fires may produce, some of the constituents of this formula may decompose to give off such gases as carbon dioxide, carbon monoxide, and nitrogen oxides.

FIRE FIGHTING PROCEDURES: Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Absorb with

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appropriate absorbent such as sand, or vermiculite. Clean spill area of residues and absorbent.

LARGE SPILL: Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Collect product into drums, storage tanks, etc., via drains, pumps, etc. Absorb with appropriate absorbent such as sand or vermiculite. Clean spill area of residues and absorbent.

ENVIRONMENTAL PRECAUTIONS

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WATER SPILL: Contains Pyrethrins, which are toxic to fish and other aquatic invertebrates. Contaminated absorbent and wash water should be disposed of according to local, state, and federal regulations.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Do not use or store near heat, sparks, open flame, or any other ignition sources.

HANDLING: Wear OSHA-approved safety glasses with side-shields, safety goggles, or a full face-shield. Wear chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton. Wear a long-sleeved shirt, long pants, shoes and socks.

Applicators using hand-held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with a dust/ mist filtering cartridge (MSHA/ NIOSH approval number prefix TC-21C), or a canister approved for pesticides (MSHA/ NIOSH approval number prefix TC-14G), or a cartridge or canister with any R, P or HE filter.

Do not contaminate water, food or feedstuffs by storage, handling, or disposal.
READ AND OBSERVE ALL PRECAUTIONS AND INSTRUCTIONS ON THE PRODUCT LABEL.

STORAGE: Store in a cool, dry place. Keep container closed. Always store pesticides in the original container. Store away from food and pet-food.

KEEP OUT OF REACH OF CHILDREN.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		**ppm**	**mg/m³**	**ppm**	**mg/m³**	**ppm**	**mg/m³**
Pyrethrins	**TWA**		5		5		
Piperonyl Butoxide	**TWA**	None		None		None	

ENGINEERING CONTROLS: Ventilate treatment area thoroughly before re-entry.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear OSHA-approved safety glasses with side-shields, safety goggles, or a full-face shield.

SKIN: Wear chemical-resistant gloves such as Barrier Laminate, Neoprene Rubber, Nitrile Rubber, or Viton, and wear protective clothing.

RESPIRATORY: Applicators using hand-held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with a dust/ mist filtering cartridge (MSHA/ NIOSH approval number prefix TC-21C), or a canister

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approved for pesticides (MSHA/ NIOSH approval number prefix TC-14G), or a cartridge or canister with any R, P or HE filter.

PROTECTIVE CLOTHING: Wear chemical-resistant gloves, shoes and socks, long-pants, and a long-sleeved shirt.

WORK HYGIENIC PRACTICES: DO NOT SMOKE, EAT, OR DRINK, OR APPLY COSMETICS IN WORK AREA! Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking, or using the toilet.

OTHER USE PRECAUTIONS: AGRICULTURAL USE REQUIREMENTS:

Use this product only in accordance with its labeling and with the Woker Protection Standard, 40 CFR, Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE), and restricted-entry interval. The requirements listed below only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
Coveralls;
Chemical-resistant gloves, such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton;
Shoes plus socks;
Protective eyewear.

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COMMENTS: NON-AGRICULTURAL USE REQUIREMENTS:

The requirements in this section apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, Part 170). The WPS applies when this product is used to treat agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOR: Sweet, solvent-odor.
APPEARANCE: Clear, amber-brown colored liquid.
COLOR: Gardner Scale 7
pH: 5.10
Notes: @ 10% in water.
FLASHPOINT AND METHOD: > 93.3°C (200°F) TAG Closed Cup
VAPOR DENSITY: Heavier than air.
FREEZING POINT: Not Available
SOLUBILITY IN WATER: Partially miscible in water.
SPECIFIC GRAVITY: 1.017 (Water = 1) at 20°C (68°F)
VISCOSITY #1: 57.5 CPS at 22°C (71.6°F) Brookfield

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(VOC): < 1.000 %

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

CONDITIONS TO AVOID: Not compatible with strong acids or bases. Not compatible with strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD_{50}: > 5000 mg/kg

Notes: Albino rabbit.

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ORAL LD_{50}: > 3129 mg/kg

Notes: Albino rat.

INHALATION LC_{50}: > 5.06 mg/L

Notes: Rats exposed for 4 hours to test atmosphere. The Acute Inhalation LC_{50} of this material places it in EPA Toxic Category IV.

EYE EFFECTS: Irritation clearing within 48 hours.

SKIN EFFECTS: Moderate irritation at 72 hours. Produced a primary skin Irritation Index of 3.5

SENSITIZATION: Positive.

COMMENTS: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.

Carcinogenicity/ Oncogenicity - Slightly elevated incidences of benign tumors of the thyroid and liver were seen in rats following lifetime administration of high doses of Pyrethrins. Further detailed scientific studies into the mode of action responsible for these effects show that:
1) Because of biological species differences, the rat thyroid tumors are not relevant to humans.
2) The rat liver tumors occur in animals *only* at doses greatly exceeding human exposure levels and that cause cell proliferation (mitogenesis).
Based on these data, the USEPA has classified Pyrethrins as "Not Likely to be Carcinogenic to Humans," at doses that do not cause a mitogenic response in the liver/ cell proliferation. Thus, Pyrethrins can be considered to be non-carcinogenic at exposure levels relevant to human use of Pyrethrins-containing products.

Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of these observations is questionable and under review. The doses at which tumors were observed for PBO greatly exceeded potential human exposure from labeled uses. Doses at which these effects were observed greatly exceeded anticipated human dietary intake. At anticipated dietary exposure levels, it is highly unlikely that this product will result in carcinogenic effects.

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12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: ENVIRONMENTAL HAZARDS FOR TERRESTRIAL APPLICATIONS

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and run-off may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through run-off. This product has a potential

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for run-off for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce run-off that contains this product.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Except as specified in the "Directions for Use" (on the product label), do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

ENVIRONMENTAL HAZARDS FOR WIDE-AREA MOSQUITO ADULTICIDE APPLICATIONS

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This pesticide is toxic to aquatic organisms, including fish and invertebrates. Run-off from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

When applying as a wide-area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply when bees are visiting the treatment area, except when applications are made to prevent or control a threat to public and/ or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

When applying as a wide-area mosquito adulticide, do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body.

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: To avoid wastes, use all materials in the containers by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (NOTE: such programs are often run by state or local governments, or by industry).

EMPTY CONTAINER: Non-refillable container. DO NOT reuse or refill this container.
Triple-rinse container (or equivalent) promptly after emptying. Then, offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of container in a sanitary landfill, or by other procedures approved by state and local authorities.

Triple-rinse as follows for containers less than < 5 gallons (< 18.9 L) or less: Empty the remaining contents into application equipment or a mix-tank and drain for 10 seconds after the flow begins to drip. Fill the container $^1/_4$ full with water and re-cap. Shake for 10 seconds. Pour rinsate into application equipment or a mix-tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple-rinse as follows for containers greater than > 5 gallons (> 18.9 L): Empty the remaining contents into application equipment or a mix-tank. Fill the container $^1/_4$ full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix-tank or store rinsate for later use or disposal. Repeat this procedure two more times.

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Container Handling [*for Refillable Containers*]:

Refillable container. Refill this container with pesticide ONLY. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix-tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 hours. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then, offer for recycling if available, or reconditioning if appropriate, or puncture and dispose of container in a sanitary landfill, or by other procedures approved by state and local authorities.

RCRA/EPA WASTE INFORMATION: This product contains the following RCRA/CERCLA Hazardous wastes/substances:

Component, RCRA ID#, CERCLA RQ:

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Pyrethrins, N/A, 1 Lb.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. RQ (Pyrethrins)

PRIMARY HAZARD CLASS/DIVISION: 9

PACKING GROUP: III

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 1 Lb. (Pyrethrins/ Pyrethrum)

OTHER SHIPPING INFORMATION: This material is not regulated as a hazardous material by the DOT in quantities less than 16.67 Lbs.

Shipping name for quantities less than 16.67 Lbs. :
Insecticides, Insect or Animal Repellents, Liquid, N.O.S.

AIR (ICAO/IATA)

SHIPPING NAME: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. RQ (Pyrethrins)

PRIMARY HAZARD CLASS/DIVISION: 9

PACKING GROUP: III

NOTE: This material is not regulated as a hazardous material by IATA in quantities less than 16.67 Lbs.

Shipping name for quantities less than 16.67 Lbs. :
Insecticides, Insect or Animal Repellents, Liquid, N.O.S.

VESSEL (IMO/IMDG)

SHIPPING NAME: UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. RQ (Pyrethrins)

PRIMARY HAZARD CLASS/DIVISION: 9

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PACKING GROUP: III

MARINE POLLUTANT #1 : Pyrethrins/ Pyrethrum

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15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes

313 REPORTABLE INGREDIENTS:
COMPONENT, CAS#, Max %

Piperonyl Butoxide, 000051-03-6, 60.0

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302/304 EMERGENCY PLANNING

EMERGENCY PLAN: There are no SARA Title III Section 302 extremely hazardous substances present in this formulation (40 CFR 355).

See Section 13 of this MSDS for the components that are subject to emergency requirements under CERCLA Section 103(a)(40 CFR 302.4).

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All chemical substances found in this product comply with the Toxic Substances Control Act's inventory reporting requirements.

REGULATIONS

STATE REGULATIONS:
VOLATILE ORGANIC COMPOUNDS (VOC):

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This product contains less than 1% VOC's.

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):

NOTE: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for Safety Data Sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

CAUTION. Harmful if swallowed. Avoid contact with skin, eyes, and clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE):

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Mixer's, loaders, and other handlers:

Wear OSHA-approved safety glasses with side-shields, safety goggles, or a full face-shield.
Wear chemical-resistant gloves such as Barrier Laminate, Neoprene Rubber, Nitrile Rubber, or Viton.
Wear a long-sleeved shirt and long pants, shoes and socks.

Applicators using hand-held foggers in an enclosed-area must also wear the following additional PPE:

Wear a MSHA/ NIOSH-approved respirator, such as a half-face, full-face, or hood-style NIOSH-approved respirator with a dust/ mist filtering cartridge (MSHA/ NIOSH approval number prefix TC-21C), or a canister approved for pesticides (MSHA/ NIOSH approval number prefix TC-14G), or a cartridge or canister with any R, P or HE filter.

16. OTHER INFORMATION

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REVISION SUMMARY: This MSDS replaces the 1/31/2011 MSDS. Revised: **Section 1:** PRODUCT CODE. **Section 2:** CHRONIC EFFECTS, EMERGENCY OVERVIEW - IMMEDIATE CONCERNS POTENTIAL HEALTH EFFECTS (SKIN, SKIN ABSORPTION, INHALATION, INGESTION). **Section 7:** STORAGE. **Section 9:** (VOC). **Section 11:** ACUTE - INHALATION LC_{50} (rat) SKIN EFFECTS. **Section 12:** ECOTOXICOLOGICAL INFORMATION, ENVIRONMENTAL DATA. **Section 13:** EMPTY CONTAINER. **Section 14:** AIR (ICAO/IATA) - UN/NA NUMBER DOT (DEPARTMENT OF TRANSPORTATION) - UN/NA NUMBER VESSEL (IMO/IMDG) (MARINE POLLUTANT #1, PRIMARY HAZARD CLASS/DIVISION, PACKING GROUP). **Section 15:** FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT), STATE REGULATIONS.

HMIS RATING

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

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HMIS RATINGS NOTES: We assign HMIS ratings to this product based on the hazards of its ingredients(s). Since the customer is most aware of the applications and conditions of use, he or she must ensure that the proper Personal Protective Equipment is provided, consistent with the information contained in Section's 2, 7, and 8 of this MSDS.

COMMENTS: The data contained herein are based on information currently available to McLaughlin Gormley King Company and, to the best of our knowledge, are accurate and based on sound expert opinion. Our statements herein, however, are not to be taken as a warranty or representation for which McLaughlin Gormley King Company assumes legal responsibility.

MSDS Prepared by T. Azzivitto

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IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

B. USE LOG

*INSTRUCTIONS: Complete a separate form for **each different** container of test substance used. Insert records on form or provide equivalent information. Indicate use of the stated container of the test substance by recording the dates that test substance was removed, the amount of test substance removed on each date, the purpose of the use (**include trial ID# for all uses on IR-4 studies**), and the initials of the individual responsible for the removal.*

CHEMICAL NAME Evergreen Crop Protection 60-6

BATCH/LOT NUMBER AB 4586 CONTAINER ID #1

DESCRIPTION OF TEST SUBSTANCE Amber liquid

(e.g. brown liquid, white powder. Note any unusual characteristics or changes here.)

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

DATE REMOVED	AMOUNT (*UNITS*) REMOVED	PURPOSE (include trial ID#) *[e.g. apply treatments, used in other research, etc.]*	INITIALS/DATE
6-19-14	14.6ml	05954.14-CA52 Application 1	DE 6-19-14
6-20-14	14.6ml	05954.14-CA52 Application 2	DE 6-20-14
6-25-14	14.6ml	05954.14-CA52 Application 3	DE 6-25-14
7-9-14	14.6ml	05954.14-CA52 Application 4	DE 7-9-14
7-20-14	14.6ml	05954.14-CA52 Application 5	DE 7-20-14
7-28-14	14.6ml	05954.14-CA52 Application 6	DE 7-28-14
		DE 7-28-14	

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

C. DISPOSITION OF TEST SUBSTANCE CONTAINERS

INSTRUCTIONS: Complete the appropriate part (PART 1, PART 2 or PART 3) that best explains the disposition of the test substance containers after the completion of applications for the trial or provide equivalent information. Line-out the parts that do not apply to this trial.

PLEASE NOTE: **Test substance containers may not be discarded without prior approval from the Study Director or confirmation that the study has been completed (final report signed by the Study Director) or cancelled. Field Research Directors may contact the Study Director or their Regional Field Coordinator to determine if a waiver from EPA permits proper test substance container disposal, or regarding completion of the final study report (study completion confirmation can also be determined from an IR-4 database search using the "Test Substance Container Disposal Approval" link). Alternatively, some registrants will archive the test substance container(s).**

PART 1

If the container(s) were shipped and are no longer in the Field Research Director 's possession, indicate where the containers were shipped (include address and to whose attention), date of shipment, carrier, bill of lading number and the name of the individual responsible for shipment. ***A chain of custody form should be included in the shipment. The Field Research Director may use a form on the letterhead of his/her facility, or the form on the IR-4 website: ir4.rutgers.edu/FoodUse/FieldBook/TSCOC***

~~SHIPPED~~ CONTAINERS TO _____

OK 9-8-14

DATE SHIPPED _____ CARRIER _____ ~~BILL OF~~ LADING NO. _____

SHIPPED BY _____

PART 2

If the containers will remain in the possession of the Field Research Director, indicate location where the containers are stored.

STORING CONTAINERS AT:

UCKARE Bldg 117 Room 11 IR-4 Locker

OK 9-8-14

PART 3

If containers were not handled by any of the above methods briefly explain how they were handled.

OK 9-8-14

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-8-14

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THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

D. IDENTIFICATION AND RECEIPT OF SPRAY ADDITIVES

NOTE: The use of spray additives with the test substance must be approved in the protocol or in a protocol amendment. Spray additives are <u>not</u> considered test substances, thus no statement of GLP compliance or non-compliance is required.

INSTRUCTIONS: Complete one section of the form for each spray additive used in the trial.
<u>Also</u>, place a copy of the label after this page.

NAME OF THE SPRAY ADDITIVE ON CONTAINER LABEL _____

ACTIVE INGREDIENT(S) _____

TYPE OF SPRAY ADDITIVE: NONIONIC SURFACTANT (NON-SILICONE) ___

SILICONE SURFACTANT ___ CROP OIL CONCENTRATE ___ VEGETABLE OIL ___

METHYLATED SEED OIL ___ METHYLATED SPRAY OIL ___

OTHER: There were no additives received of used

DATE OF RECEIPT OK 9-11-14 RECEIVED BY _____

BATCH/LOT NO. [If this information is not available, check here: ____] _____

EXPIRATION DATE [If this information is not available, check here: ____] _____

AMOUNT RECEIVED _____

CONTAINER DESCRIPTION *(e.g. glass bottles)* _____

CONDITION ON ARRIVAL *(e.g. good, bags broken, etc.)* _____

ABOVE DATA ENTERED BY: _____ *DATE:* _____

NAME OF THE SPRAY ADDITIVE ON CONTAINER LABEL _____

ACTIVE INGREDIENT(S) _____

TYPE OF SPRAY ADDITIVE: NONIONIC SURFACTANT (NON-SILICONE) ___

SILICONE SURFACTANT ___ CROP OIL CONCENTRATE ___ VEGETABLE OIL ___

METHYLATED SEED OIL ___ METHYLATED SPRAY OIL ___

OTHER: _____

DATE OF RECEIPT _____ RECEIVED BY _____

BATCH/LOT NO. [If this information is not available, check here: ____] _____

EXPIRATION DATE [If this information is not available, check here: ____] _____

AMOUNT RECEIVED _____

CONTAINER DESCRIPTION *(e.g. glass bottles)* _____

CONDITION ON ARRIVAL *(e.g. good, bags broken, etc.)* _____

ABOVE DATA ENTERED BY: _____ *DATE:* _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

FIELD ID NO: _ Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

E. CHEMICAL STORAGE BUILDING TEMPERATURE LOG

INSTRUCTIONS: Use this (or an equivalent) form when chemical storage building temperatures are taken manually. For each day that temperatures are taken, directly record the date, the minimum and maximum air temperature, the degree units (°F or °C) and provide the initials of the person entering the data. When temperature records are monitored automatically, the original or certified true copy of the output (data logger disk, computer printout, etc.) must be placed in the Field Data Book.

UNIQUE IDENTIFIER FOR TEMPERATURE RECORDER: Hobo ID: Chemical-2

Enter Temperature Recorder ID—may be make/model/serial# or assigned identifier.

DATE	TEMP MIN/MAX	INITIALS	DATE	TEMP. MIN/MAX	INITIALS	DATE	TEMP MIN/MAX	INITIALS
			Refer to the following pages					
				DK	9-8-14			

Please enter the overall minimum and maximum storage temperatures below, even if temperature printouts are inserted. The overall min/max temperatures should not include temperatures during transportation between storage and field. If there are two or more test substances (or separate shipments of test substance), then enter separate min/max temperatures below for each one, depending on the dates of receipt and application. (1)(EE) 9-17-14

Test Substance 1: Evergreen Crop Protection 60-6	
Minimum test substance storage temperature between receipt and last application in this trial:	48 °F
Maximum test substance storage temperature between receipt and last application in this trial:	(1) ~~85~~ 88 °F
Test Substance 2: DK 9-8-14	
Minimum test substance storage temperature between receipt and last application in this trial:	
Maximum test substance storage temperature between receipt and last application in this trial:	

Unless otherwise noted above, all temperature units are in (Check one): °C____ °F ✓

Above data entered by: David Ennes *Date* 9-8-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

MEMO to the FILE

The test substance container was removed from chemical storage at 7:25 Am on 6-19-14 The container was placed into a cooler with blue ice, min/max thermometer mm-6 is in the cooler with the test substance
Ofc 6-20-14 min/max thermometer reading on 6-20-14 at 6:30 Am 50°/70° F. Placed the T-S Container into Chemical Storage at 2:20 Pm min/max reading in cooler at this time 58°/88° F
Ofc 6-24-14 The T.S. Container was removed from Storage at 3:00 Pm on 6-24-14 and placed into a cooler with blue ice and min/max thermometer mm-6
Ofc 6-25-14 T.S. Container back into Storage at 11:25 Am on 6-25-14 min/max reading 50°/72° F.
Ofc 7-8-14 The T.S. Container was removed from storage at 2:50 Pm on 7-8-14 and placed into a cooler with blue ice and min/max thermometer mm-6.
Ofc 7-9-14 The T.S. Container placed back into Chemical Storage room at 11:54 Am on 7-9-14 min/max reading 48°/82° F
Ofc 7-19-14 The T.S. Container was removed from storage at 11:50 Am on 7-19-14 and placed into Cooler with blue ice and min/max thermometer mm-6
Ofc 7-21-14 The T.S. Container was placed back into Storage at 6:45 Am ~~at~~ (1) on (1) 7-21-14 min/max reading 50°/82° F
(1) (EE) Ofc 7-21-14

PART 4 PAGE 24

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-21-14

Trial Year 2014

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO:

IR-4 FIELD DATA BOOK

MEMO to the FILE

The T.S. Container was removed from storage on 7-25-14 at 3:25 PM and placed into a cooler with blue ice and min/max thermometer mm-6

Ok 7-28-12 The T.S. Container was placed back into Chemical Storage on 7-28-14 at 12:46 PM min/max reading 52°/80°F

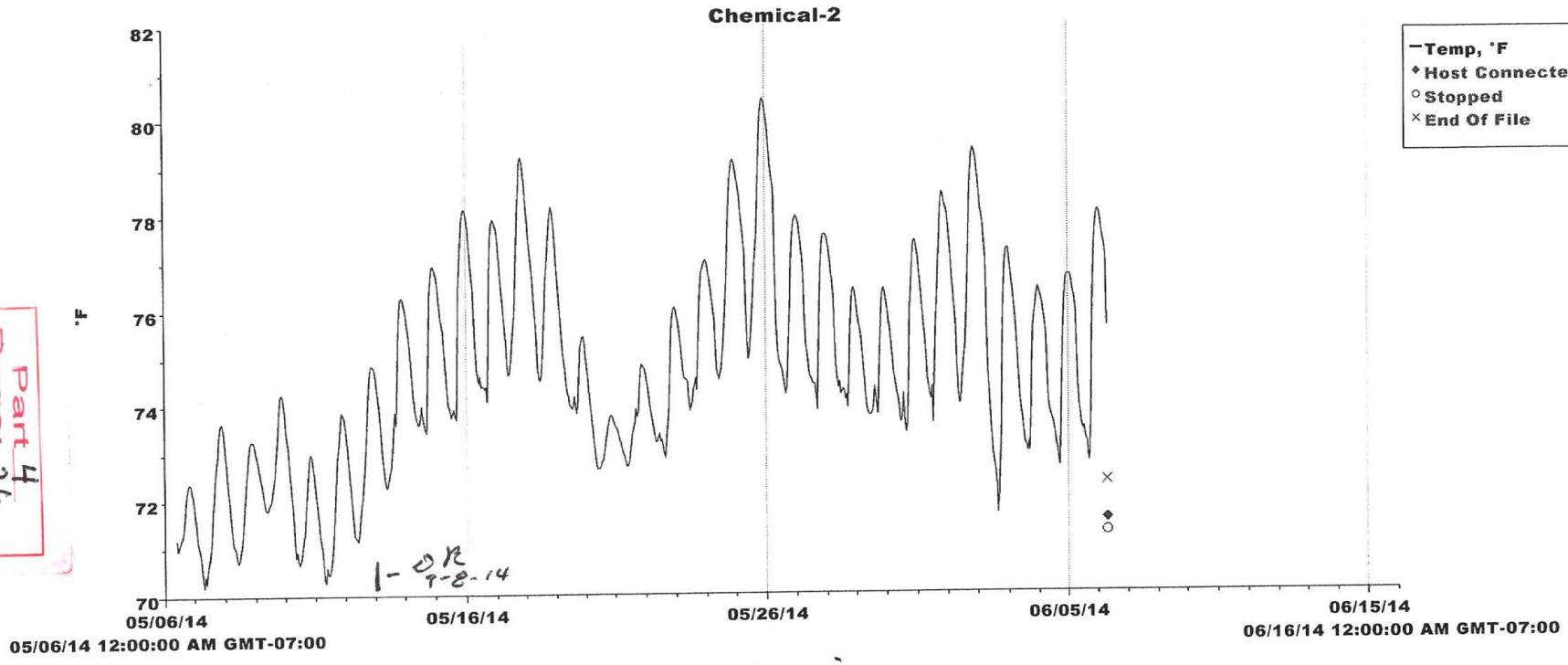
Ok 9-8-14

PART 4 PAGE 25

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-25-14

Trial Year 2014

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____



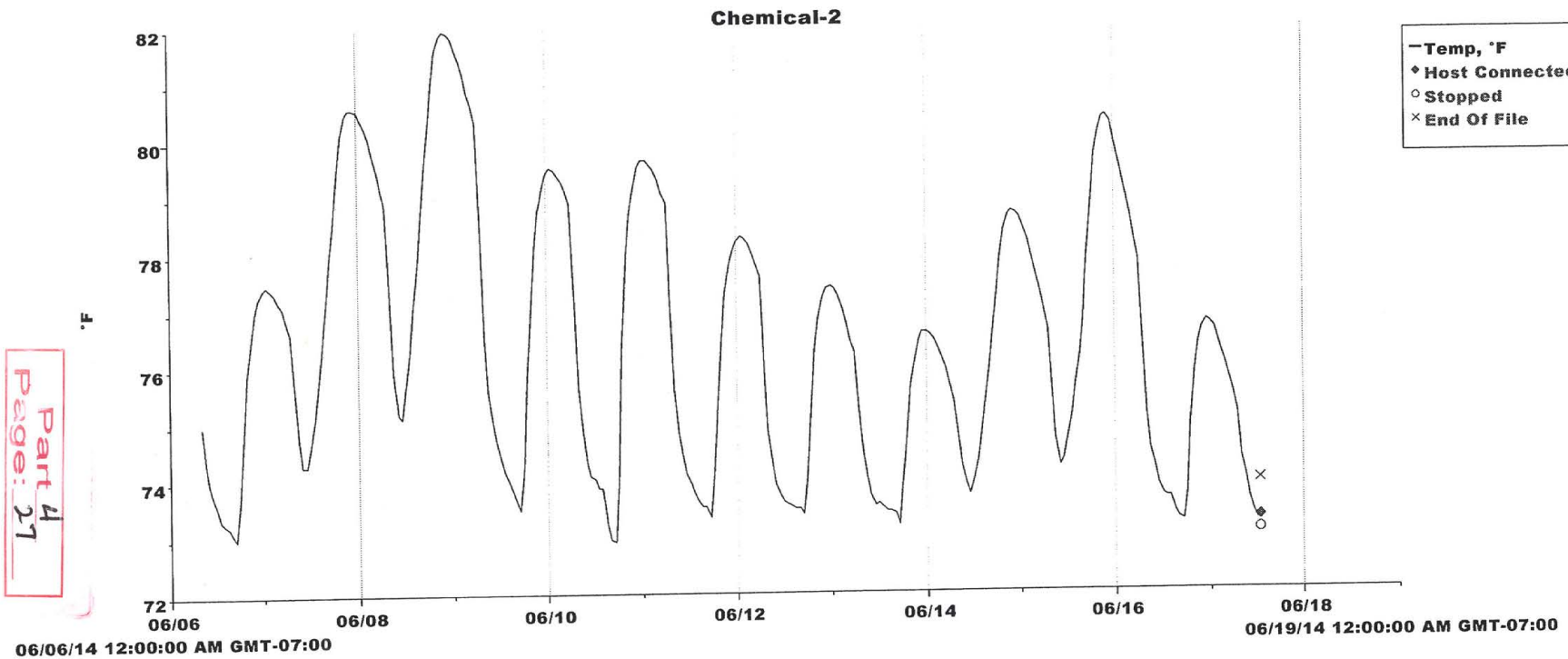
Part 4
Page: 26

Chemical Storage original data
5-6-14 to 6-6-14
OR 6-6-14

This is an exact copy of the original
Original in UCKARE records
Initials: OR Date: 9-8-14

Storage Date: 5-13-14 to 7-28-14
Temp (°F): Min: 71 Max: 85
Initials: OR Date: 9-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

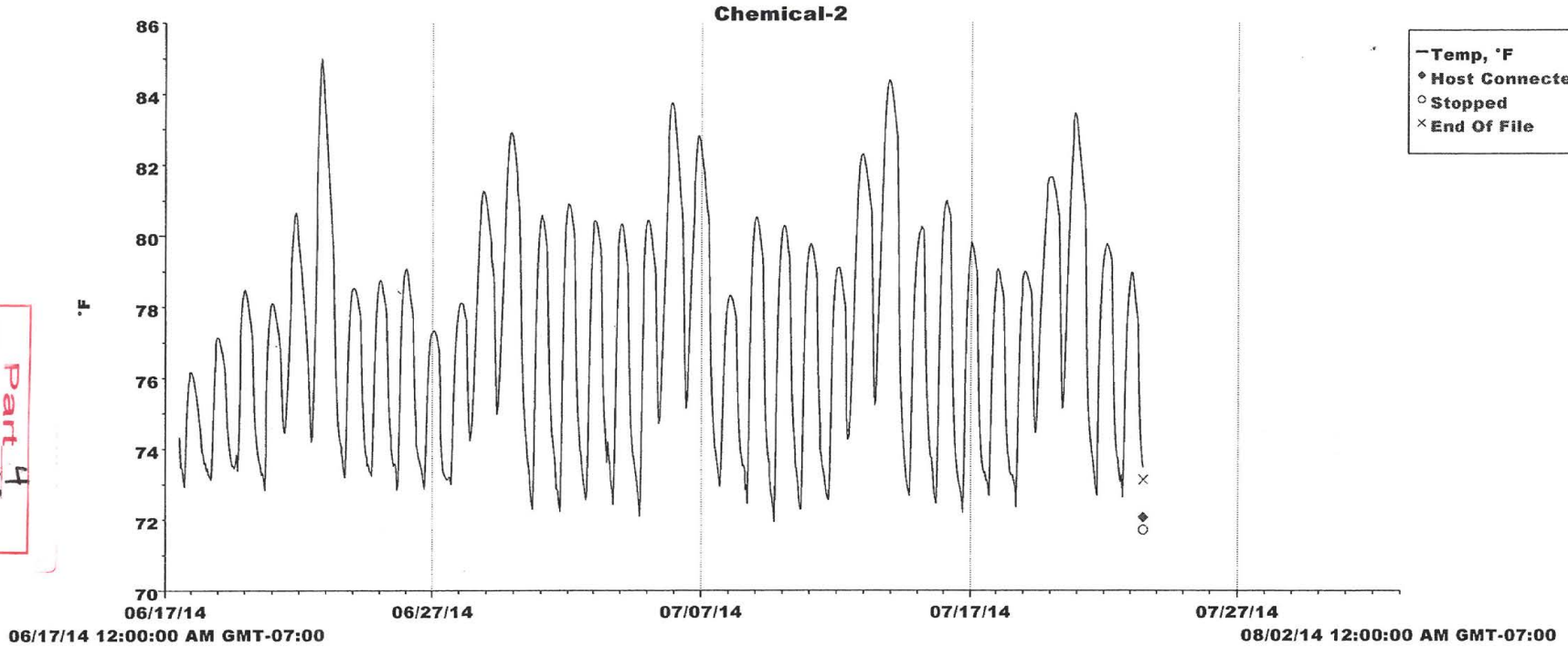


Part 4
Page: 27

Chemical storage original data
6-6-14 to 6-17-14
OK 6-17-14

This is an exact copy of the original
Original in UCKARE records
Initials: OK Date: 7-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

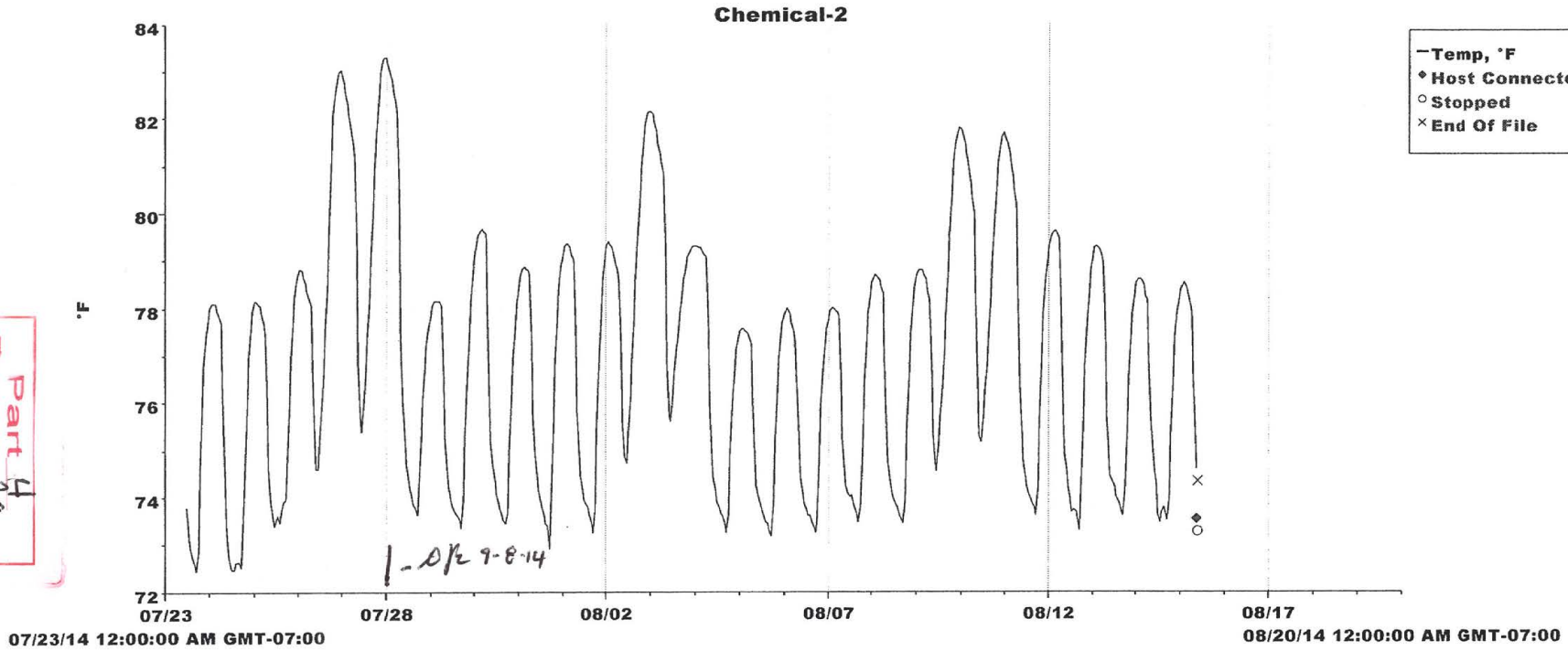


Part 4
Page: 28

Chemical storage
original data
6-17-14 to 7-23-14
Ok 7-23-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

This is an exact copy of the original
Original in UCKARE records
Initials: Ok Date: 9-8-14



Part 4
Page: 19

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

This is an exact copy of the original
Original in UCKARE records
Initials: DK Date: 9-8-14

Chemical Storage
original data
7-23-14 to 8-15-14
8/15/14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

F. BALANCE CALIBRATION CHECK

INSTRUCTIONS: Complete this form or provide equivalent information when the test substance is a dry formulation. Check balance calibration by weighing standard weights that bracket the desired measurement. Record: date(s) that the balance calibration was checked, the standard weights, and the results. In addition, provide dates and a brief description of maintenance and repair work completed on the balance relevant to the trial. Be sure to initial all entries.

MAKE, MODEL, SERIAL NUMBER OR ASSIGNED IDENTIFIER: _____

Date	Stated Wt.	Recorded Wt.	Stated Wt.	Recorded Wt.	Initials
		The test substance was a liquid			
		So no scale was used			
		OK	9-8-14		

Stated Wt. = Stated mass of the standard weight(s) used in the calibration check
If more than one weight is used to attain the standard weight, indicate on the lines below the individual weights.
Recorded Wt. = Actual recorded mass of the standard weight(s)

RECORD DATES AND BRIEF DESCRIPTION OF ANY CALIBRATION, MAINTENANCE AND REPAIR WORK DONE ON BALANCE

_____

_____

_____

_____

_____

_____

_____

_____

_____

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-8-14

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THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Trial Site

Part 5

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

A. DIRECTIONS TO TEST SITE

INSTRUCTIONS: Indicate the name and location (street, town, state) of the test site (e.g. Banana Research Center, Rt. 3, Nenana, AK), the county (e.g. Denali), and provide directions from the nearest city or town ***or*** *provide a map to the test site. The map can be sketched here; otherwise attach a clear photocopy or computer printout of the appropriate section of a state or county map with the test site location marked and the highways, nearest city or town identified.*

NAME AND LOCATION Monterey Mushroom Biotech Lab
777 Maher Court Watsonville, CA 95076

COUNTY Monterey

DIRECTIONS FROM NEAREST CITY OR TOWN TO THE TEST SITE Refer to the following pages ODR 6-19-14

Refer to the following pages
ODR 6-19-14

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

PART 5 PAGE 1 Trial Year 2014

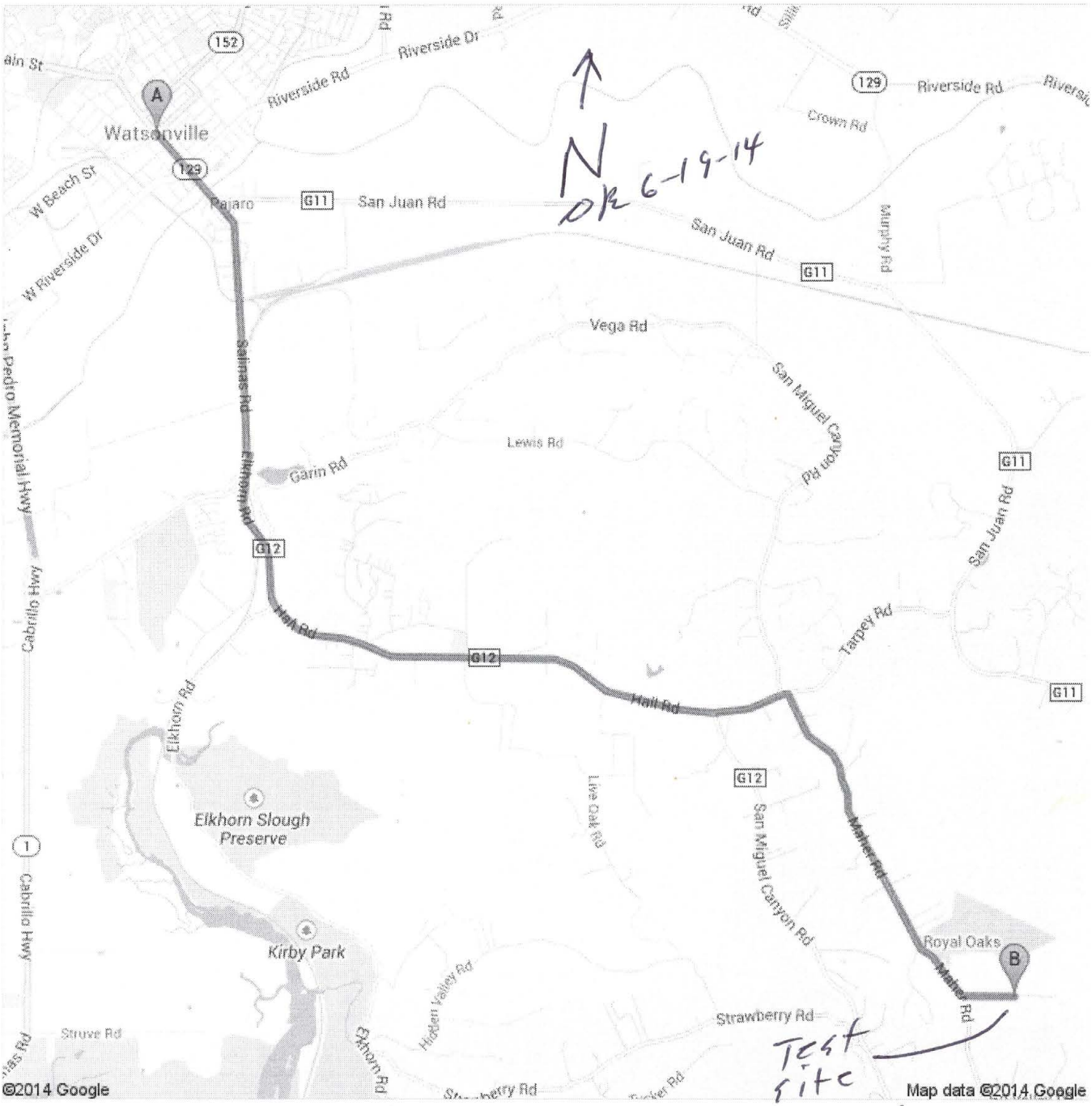
Total number of pages in this section at initial pagination: 15

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"

THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Google

Directions to Maher Ct
8.9 mi – about **15 mins**



Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 5
Page: 2

A Watsonville, CA

1.	Head **southeast** on **Main St** toward **Peck St** About 2 mins	go 0.5 mi total 0.5 mi
2.	Continue onto **Porter Dr**	go 0.3 mi total 0.7 mi
3.	Continue onto **Salinas Rd** About 2 mins	go 1.4 mi total 2.1 mi
4.	Turn left onto **Elkhorn Rd/Hall Rd** Continue to follow Hall Rd About 5 mins	go 3.9 mi total 6.0 mi
5.	Slight left onto **San Miguel Canyon Rd**	go 0.5 mi total 6.4 mi
6.	Turn right onto **Maher Rd** About 4 mins	go 2.2 mi total 8.6 mi
7.	Turn left onto **Maher Ct** About 1 min	go 0.3 mi total 8.9 mi

B Maher Ct

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

OK 6-19-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 5
Page: 3

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

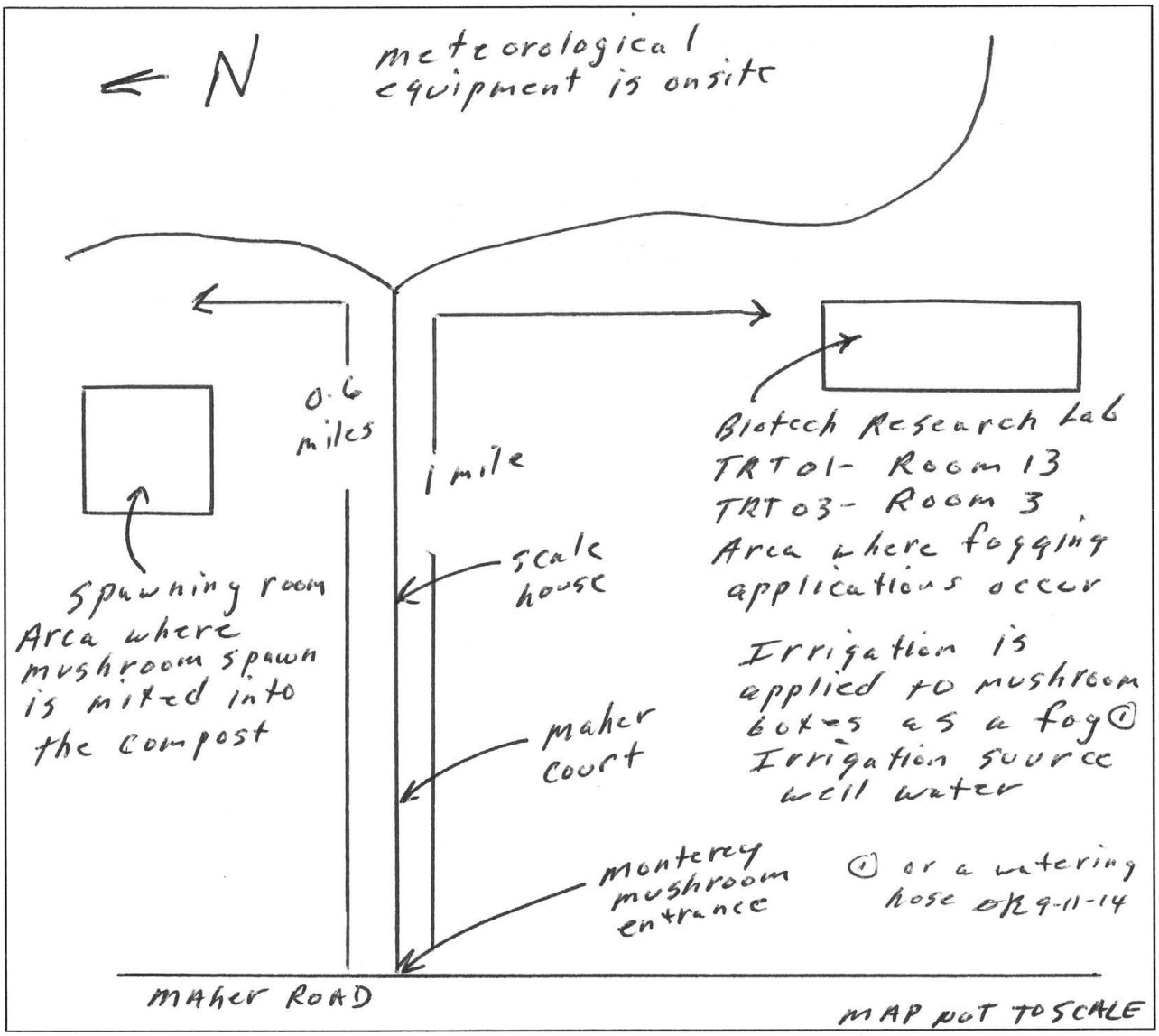
FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

B. DIRECTIONS TO TEST PLOT AREA

INSTRUCTIONS: Provide the general direction with distances from the entrance of test site to test plot area (indicate North direction) ***or*** *provide a map containing this information. (The entrance must be clearly indicated on the map.) Also indicate the irrigation source location and location of meteorological equipment if they are on site.*



ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

C.1. PLOT PLAN

INSTRUCTIONS: Legibly sketch on the next page the actual plot plan. Computer-generated plans are acceptable. ***Check off the required items in the table below to confirm that they have been included in the plot plan:***

Required items in the plot plan	√
The dimensions and locations of treated and untreated plots*	✓
Dimensions and locations of buffer zones	✓
Distances to permanent landmarks from at least two plot corners per plot (Optionally from two plot centers per plot for perennial crops)	N/A
Distance between the untreated plot and all treated plots in this study	✓
The north direction	✓
Slope direction with an arrow pointing down slope	✓
The number of rows* and/or beds and their direction	N/A
Label plot replicates (if applicable)	N/A
Distances and relative locations of <u>immediately</u> adjacent plots treated with test chemicals that are not part of the trial covered by this Field Data Book. *(Adjacent plots more distant than 50 feet/15 meters for row crops, or 100 feet/30 meters for tree fruits and nuts, from the plots in this trial do not need to be included.)*	N/A
<u>Identity of the test chemical(s) used on the adjacent plots</u> *Exception: Proprietary compounds that cannot be identified because of a secrecy agreement may be labeled as "experimental compound" in this Field Data Book.*	N/A
It is acceptable to have the information for the adjacent plots on a separate map that is inserted in this section behind the plot plan. In that case the plot plan would only have the items indicated for the trial plots. The information for the adjacent plots may alternatively be listed in a table beneath the plot plan; see "Part-5C alternate" on the IR-4 website.	
Initials and date of the person who checked off items above:	DK 6-19-14

**Items marked with an asterisk are also required in 5F; <u>please enter on both pages for clarity</u>.*

Global Position System readings are acceptable for permanent reference points only if SOP's kept at the testing facility cover their use, accuracy, and precision. Also provide the date the test plots were measured and staked, the initials of the individual responsible for laying out the plots and the SOPs (include revision number) used in laying out the plots.

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

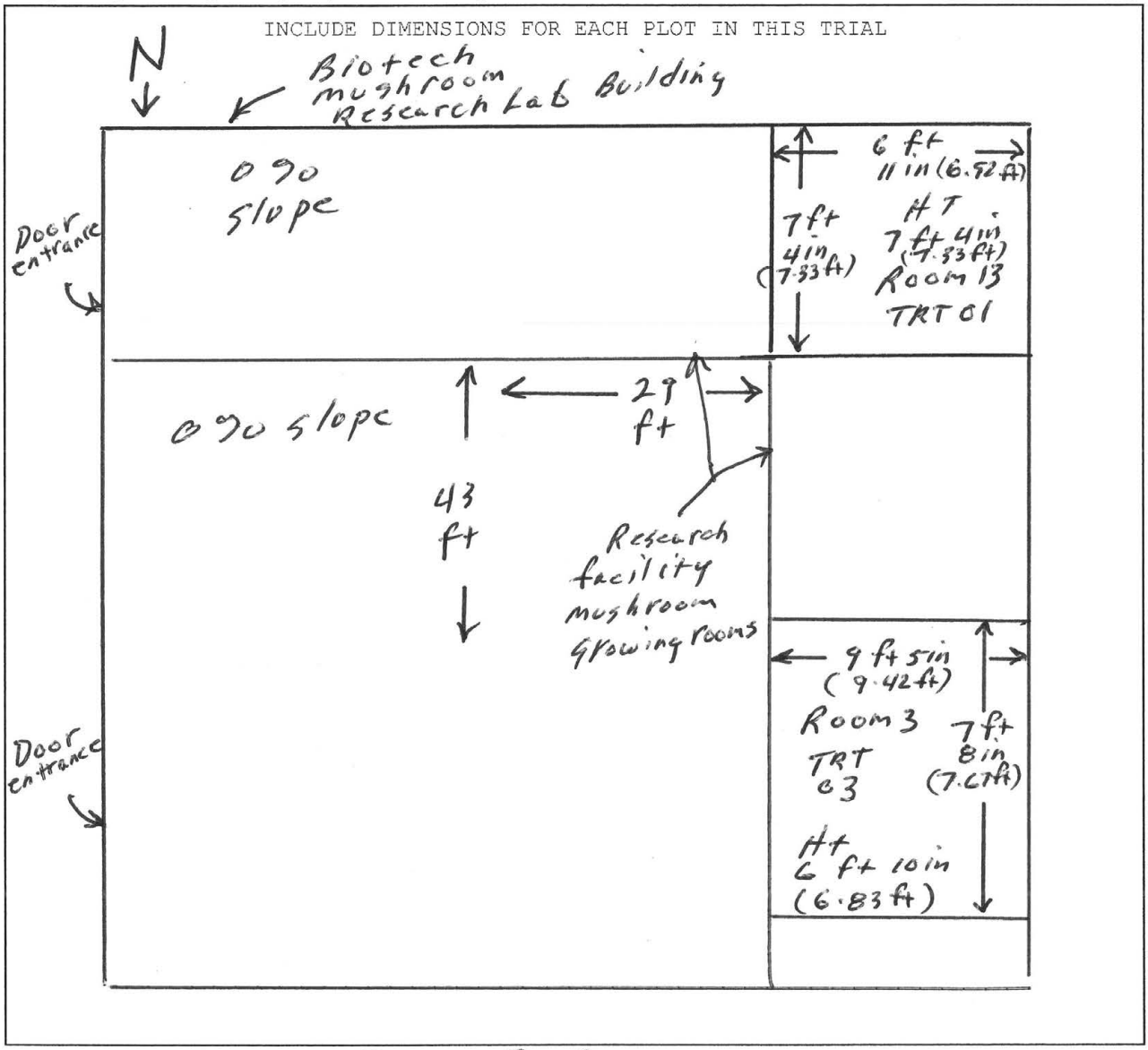
C.2. PLOT PLAN

DATE OF PLOT LAYOUT 6-19-14 PERFORMED BY DJE SOP UTILIZED 30-2.4 UC KARE

Are there adjacent plots treated with test substances as described in part 5.C.1? YES_____ NO ✓

If a global position system (GPS) was used for plot location, enter GPS-related SOP utilized OK 6-19-14

INCLUDE DIMENSIONS FOR EACH PLOT IN THIS TRIAL



ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

FIELD ID NO: _____Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

D. SITE AND SOIL INFORMATION CHARACTERISTICS

INSTRUCTIONS: Furnish soil description and classification information for the plot area. This information shall be transcribed from USDA Soil Conservation Service soil maps containing description of the soil series, land class capabilities, and soil characteristics or via soil sampling and laboratory analysis of the soil. ***All supporting information shall be placed in the IR-4 Field Data Book directly following this page.***

SITE IDENTIFIER	Monterey Mushroom Research Lab Room 3 and 13							
ESTIMATE OF SLOPE PERCENTAGE IN PLOT	0 %							
TAXONOMIC NAME OF SOIL IN PLOT	see following pages for details on compost in boxes and supplement added to compost							
SOIL TEXTURE/TYPE (e.g., sandy loam)								
SOIL TEXTURE PERCENTAGES		SAND		SILT	DK 9-8-14	CLAY		
ORGANIC MATTER %		pH		CATION EXCHANGE CAPACITY (CEC) in meq/100 g				

IS THIS A GREENHOUSE TRIAL USING SOIL-LESS MEDIA? YES_____ NO ✓

IF YES, INCLUDE A LIST OF INGREDIENTS (copy may be inserted): _____

DK 9-8-14

IF SOIL ANALYSIS IS PERFORMED, COMPLETE THE FOLLOWING AND INSERT THE ORIGINAL OR CERTIFIED TRUE COPY OF THE SOIL CHARACTERIZATION REPORT DIRECTLY FOLLOWING THIS PAGE.

SOIL SAMPLE DATE_____ PERFORMED BY_____ SOP UTILIZED_____

WAS SOIL SAMPLING REPRESENTATIVE OF SITE? *(Check one)* YES____ NO____

IF NO IS CHECKED, EXPLAIN: _____

DK 9-8-14

DATE SOIL SAMPLE SHIPPED TO LABORATORY FOR ANALYSIS _____

NAME AND ADDRESS OF LABORATORY _____

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-8-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

David Ennes

From: CHarvey@montmush.com
Sent: Tuesday, June 24, 2014 12:41 PM
To: David Ennes
Cc: CRobles@montmush.com
Subject: Crop Variables - IR-4 Pyrethrins + PBO Trial
Attachments: ITF Room Cleaning Protocol.doc

Hi David,

Here is the information you requested on major test crop variables.

So nice to see you again!
Cathy

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Agaricus Mushroom Compost:

Ingredient	Wet Wt. (lbs)	% of Total
STRAW	44000	13.7
RACE TRACK	222000	69.2
DPW	23000	7.2
AMMONIUM SULFATE	3725	1.2
GYPSUM	16000	5.0
UREA	300	0.1
CSM	12000	3.7
		100.0

OK
6-24-14

Pleurotus (Oyster Mushroom) Log Substrate:

Cottonseed Hulls	78.5%
Rye Grain	10.5%
Spawn Mate II SE	9.5% (soybean meal based supplement similar to what is used in Agaricus crops)
Calcium Carbonate	1.5%

Nutritional Supplement Used at Spawning:

Part 5
Page: 8

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION

E. TEST SITE HISTORY FORM

*INSTRUCTIONS: Complete this form **or** provide equivalent information. Enter all pesticide and fertilizer applications for the time period specified in the protocol. Note the active ingredient applied, along with the trade name (e.g. carbaryl/SEVIN 80 S), the rate of chemical and the units measured (e.g. lbs active ingredient {ai} per acre or pints {pts} product per acre), the approximate date (at minimum season and year) the pesticide/fertilizer was applied and the crop growing on the plot.*

Active Ingredient	TRADE NAME	RATE *(units)*	Date or season applied	CROP
	The grower	indicated	that they	only treat
	the Com	post with	Armor (cyro	mazine) at
	SP	awning an	d at casing.	For this
		trial ne	w compost v	sed in 2014
		NO	armor applie	d to bo tes
			for this tri	al
			DR 9-11-14	

APPLICABLE TREATMENT(S) All

If the treated and untreated plots have different histories, then provide the name of the treatment that this form covers. When the histories are the same, enter "ALL".

SOURCE OF DATA verbal from grower
(E.g. Facility logbook, farmer's records)

TEST SITE HISTORY DATA ARE (*Check one*): TRUE COPY___ TRANSCRIBED X

IF TEST SITE HISTORY DATA ARE TRANSCRIBED, CHECK APPROPRIATE LINE BELOW

____DATA WERE VERIFIED BY_____
(Print name above of someone other than transcriber and Quality Assurance)

X DATA WERE OBTAINED VERBALLY FROM GROWER (THEREFORE, DATA WERE NOT VERIFIED)
Please document this communication in Part 3 of this Field Data Book. no records provided DR 9-11-14

____DATA WERE TRANSCRIBED FROM WRITTEN RECORDS, BUT WERE NOT VERIFIED

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-11-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

ITF Room Cleaning Protocol

Page: 1 of 1
Revision Date: 5/6/2014 **Revision Number# 1**

Purpose: To Clean and sanitize ITF rooms prior to filling a new crop

1. Tray Treatment
    a. Spray trays and compost surface with 10% bleach solution at the end of the crop. (Saturday or Sunday)
    b. Keep trays in warm room 2-3 days to dry out
    c. Remove trays from room and take them to the "kill building" for post crop steam treatment (Tuesday)
    d. Remove compost from trays and pasteurize them in the farm's Phase II room (Thursday)
    e. Trays are used on spawning day (Friday)
2. Room treatment
    a. Wash emptry room with a mixed solution of Contrex brand detergent and Neutral Quat sanitizer (Tuesday)
    b. Allow surfaces to air dry with door closed.

Received as an email attachment on 6-24-14 OK 6-24-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Part 5
Page: 10

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

F. TEST CROP RECORDS

CROP	Mushroom (white button)	VARIETY	Phoenix x Delta millet
FIELD (TEST PLOT) PLANTING DATE or AGE OF ESTABLISHED CROP	6-20-14	PLANT SPACING *Indicate the distance (with units) between the plants within the row*	Does not apply

IF THE NUMBER OF ROWS PER BED = 1 (OR IF BEDS ARE NOT USED), THEN ENTER:			
ROW OR BED WIDTH *Distance (with units) between the centers of the crop row*	Does not apply DK 6-19-14	NUMBER OF ROWS PER PLOT *Each treatment (Untreated, TRT 02, etc.) consists of one plot*	
IF NUMBER OF ROWS/BED > 1, THEN ENTER: ***Rows/Bed must be 2 or more****; otherwise enter data above.*		NUMBER OF ROWS/BED ***Do not enter '1' in this space.***	
BED WIDTH *Distance (with units) between the centers of the bed*		NUMBER OF BEDS PER PLOT *Each treatment (Untreated, TRT 02, etc.) consists of one plot*	
TRT 01 (UNTREATED) PLOT DIMENSIONS	Growing room	7.33 ft x 6.92 ft x 7.33 ft DK 6-19-14	
TRT 02 (TREATED) PLOT DIMENSIONS		DK 6-19-14	
TRT 03 (TREATED) PLOT DIMENSIONS	Growing Room	9.42 ft x 7.67 ft x 6.83 ft DK 6-19-14	
Indicate the dimensions (with units) of each plot (e.g. 6' x 50' or 2m x 15m)			

SOURCE OF SEED/TRANSPLANTS	Monterey mushroom
DATE SEEDS/TRANSPLANTS RECEIVED	6-20-14
LOT NO. OF SEED	Not available
PLANTING METHOD *(Check One)*	SEEDED X TRANSPLANTED____ ESTABLISHED CROP____
TYPE OF PLANTER OR TRANSPLANTER	By hand Spawn mixed into Compost

IF THIS IS A TREE FRUIT OR NUT TRIAL:	NUMBER OF TREES PER PLOT	
IF THIS IS A FRUIT, NUT, OR ARTICHOKE TRIAL:	ESTIMATED BUSH/TREE HEIGHT	DK 6-19-14
IS THIS IS A GREENHOUSE TRIAL? *(check one)*	YES ____ NO ✓	DK 6-19-14

Responses that do not fit above (e.g. Trt 04 plot dimensions or differing numbers of rows per plot) may be entered here:

DK 9-8-14

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-20-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION: (1) Done prior to App 4 DK 7-9-14

G. CULTURAL PRACTICES LOG

INSTRUCTIONS: List all soil preparation and crop maintenance activities (e.g., cultivation, pruning) performed on test site from the harvest of the previous crop until the residue samples are collected. If no crop was grown on the test site, collect data for a period of one year prior to the first test substance application. Include the activity (operation), dates performed, source of information (e.g., farmer), equipment used, and if appropriate, the depth into soil which the practice was performed (e.g., roto-tiller mixed soil to 6 inches) and initials/date of the individual responsible for collecting information.

	OPERATION	DATE	INFO SOURCE	EQUIPMENT	INITIALS/DATE
(2)	The mushroom boxes	7-5-14	Verbal from grower	By hand	DK 7-9-14
	were cased ~2 in	↓	↓	↓	↓
	of a peat moss and				
	Sugar beet lime mixture				
	placed on top of boxes	↓	↓	↓	
(1)	The top of the boxes	7-9-14	Direct entry	By hand with a	DK 7-9-14
(3)	were scratched ~1-2 in	↓	↓	scratching tool	↓
	in depth	↓	↓	↓	↓
				DK 9-8-14	

Cultural Practices Data Are (*Check all that apply*): (3) ORIGINAL DATA X TRUE COPY___ (2) TRANSCRIBED X

IF CULTURAL PRACTICES DATA ARE TRANSCRIBED, CHECK APPROPRIATE LINE BELOW

_____DATA WERE VERIFIED BY_____
(Print name above of someone other than transcriber and Quality Assurance)

X DATA WERE OBTAINED VERBALLY FROM GROWER (THEREFORE, DATA WERE NOT VERIFIED)
Please document this communication in Part 3 of this Field Data Book.

_____DATA WERE TRANSCRIBED FROM WRITTEN RECORDS, BUT WERE NOT VERIFIED

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-8-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

H. MAINTENANCE FERTILIZERS AND PESTICIDES (INCLUDE ADJUVANTS)

INSTRUCTIONS: Enter all maintenance pesticide and fertilizer applications during the trial. Note the date the chemical was applied, the ***active ingredient*** *applied, along with the trade name (**e.g. carbaryl/SEVIN 80 S**), the application rate of chemical and the units measured (i.e. lbs active ingredient per acre or pints product per acre), the purpose of the chemical (e.g., fertilizer, weeds, insects) and initials of the person responsible for direct supervision of the application with date of data entry. If two or more chemicals were tank mixed, list them together and bracket the tank mix on the form. If the crop was established from transplants, include all maintenance chemicals applied to the plants prior to transplanting. If treated seed was used, list treatment chemical (Date Applied would be "NA").*

If a facility or grower's list of all maintenance chemical applications is inserted here, the applications to the plots in this trial must be notated in some way to distinguish them from applications made to other areas of the farm or research facility.

DATE APPLIED	Active Ingredient	TRADE NAME	RATE *(units)*	PURPOSE	INITIALS/DATE
6-20-14	(1) Various	Promycel Gold	207 gr/box	Growth supplement	eDK 6-20-14
		(2) There were applied	no pesticides or during eDK 9-11-14	the trial	fertilizers period

MAINTENANCE FERTILIZERS AND PESTICIDES DATA ARE (*Check all that apply*): (1) See following page eDK 9-11-14

ORIGINAL DATA X TRUE COPY____ TRANSCRIBED X

IF MAINTENANCE FERTILIZERS AND PESTICIDE DATA ARE TRANSCRIBED, check appropriate line below

____DATA WERE VERIFIED BY_____
(Print name above of someone other than transcriber and Quality Assurance)

(2) X DATA WERE OBTAINED VERBALLY FROM GROWER (THEREFORE, DATA WERE NOT VERIFIED)
Please document this communication in Part 3 of this Field Data Book. no records provided eDK 9-11-14

____DATA WERE TRANSCRIBED FROM WRITTEN RECORDS, BUT WERE NOT VERIFIED

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 9-11-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

PROMYCEL GOLD 0.5438

ITEM	LBS.	% protein	lbs. protein
RAF	1000	0.11	110
20/80	2000	0.55	1100
DP 70	100	0.70	70
FORM	63	--	--
OIL	92	--	--
LECITHIN	1.5	--	--
Feathmeal	1400	0.87	1218
Tot. Wt.	4656.5		2498
Dry wt.	4593.5		

Disinfectant Used at the ITF:

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Neutral Quat

Didecyl Dimethyl Ammonium Chloride	5.07%
N-Alkyl (C14 50%, C12 40%, C16 10%) Dimethyl benzyl ammonium chloride	3.38%
Insert Ingredients	91.55%
TOTAL	100.00%

ok
6-24-14

- Cyromazine (Armor) was not used in this crop.

Room Cleaning SOP:

Received as an email attachment on 6-24-14
ok 9-11-14

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

I. CROP DESTRUCTION

INSTRUCTIONS: Describe how the remaining crop (after the completion of this field trial) has been destroyed or handled in such a way that it is not consumed as a human food or animal feed. Include the date(s) of destruction or handling activities. If the (leftover) treated crop was not destroyed because the pesticide use in this trial is registered in your state or territory or province, then that should be indicated here:

The remaining treated mushroom were harvested by hand and placed into trash disposal by Monterey mushroom personnel. This is commercial practice to harvest all of the mature mushrooms at 1st break.

DR 7-30-14 The remaining treated mushrooms and Compost in boxes was placed into trash disposal on 7-30-14.

DR 9-11-14

SOURCE OF DATA: Direct entry
(Facility records, grower's records, etc.)

DATA WERE OBTAINED VERBALLY FROM GROWER: YES_____ NO ✓
Please document this communication in Part 3 of this Field Data Book.

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-20-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Application

Part 6

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

A. EQUIPMENT

*INSTRUCTIONS: Complete a separate form for **each piece** of test substance application equipment used in the trial.*

EQUIPMENT USED FOR **APPLICATION NUMBER(S)** 1-6 - OK 9-8-14

EQUIPMENT IDENTIFIER[1] Cardinal Micron Master Fogger

[1]*Each test substance application equipment must have a unique identifying name or code*

APPLICATION EQUIPMENT TYPE *(Check one)* TRACTOR____ BACKPACK____ GRANULAR____

OTHER X *(Describe)* Fogger

PROPELLANT *(Check one)* CO_2_____ COMPRESSED AIR_____ PUMP_____

OTHER X *(Describe)* c/c ctric pump

TYPE OF APPLICATION *(Check all that apply)*

1) FOLIAR_____ TO THE GROUND_____

2) BROADCAST_____ BANDED_____ DIRECTED_____ IN-FURROW_____

3) OTHER X *(Describe)* Fogging

NUMBER OF PASSES THAT ARE NEEDED TO TREAT THE PLOT Fogging of grow room

NUMBER OF NOZZLES OR HOPPER OUTLETS USED		1 nozzle	
MESH SIZE USED IN THE STRAINERS	Does not apply	SPACING BETWEEN NOZZLES OR HOPPER OUTLETS	Does not apply
NOZZLE BRAND/TYPE/SIZE *(e.g. T-JET 8004, even flat fan)*:		Cardinal nozzle 45° angle	

TREATED AREA[2] 9.42 ft X 7.67 ft X 6.83 ft = 493.48 ft^3

[2]*Calculated width of nozzle discharge pattern (CWNDP) at proper boom height X length of plot sprayed or treated. For a broadcast application, CWNDP = (# of nozzles X nozzle spacing). For a banded application, CWNDP = # of nozzles X swath per nozzle. If application is foliar or soil directed enter row width X # of rows X length of plot sprayed or treated; treated row width may differ from actual row width when the actual row width is wider or narrower than local commercial practices. In this circumstance, the application rate should be calculated using a local commercial row width, and an explanation should be included on this page or inserted behind this page. Contact the Study Director if guidance is needed.*

DOES TREATED AREA = PLOT AREA (from Parts 5C and 5F)? YES ✓ NO_____

IF NO, PLEASE EXPLAIN: _____

OK 6-19-14

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

Total number of pages in this section at initial pagination: 60

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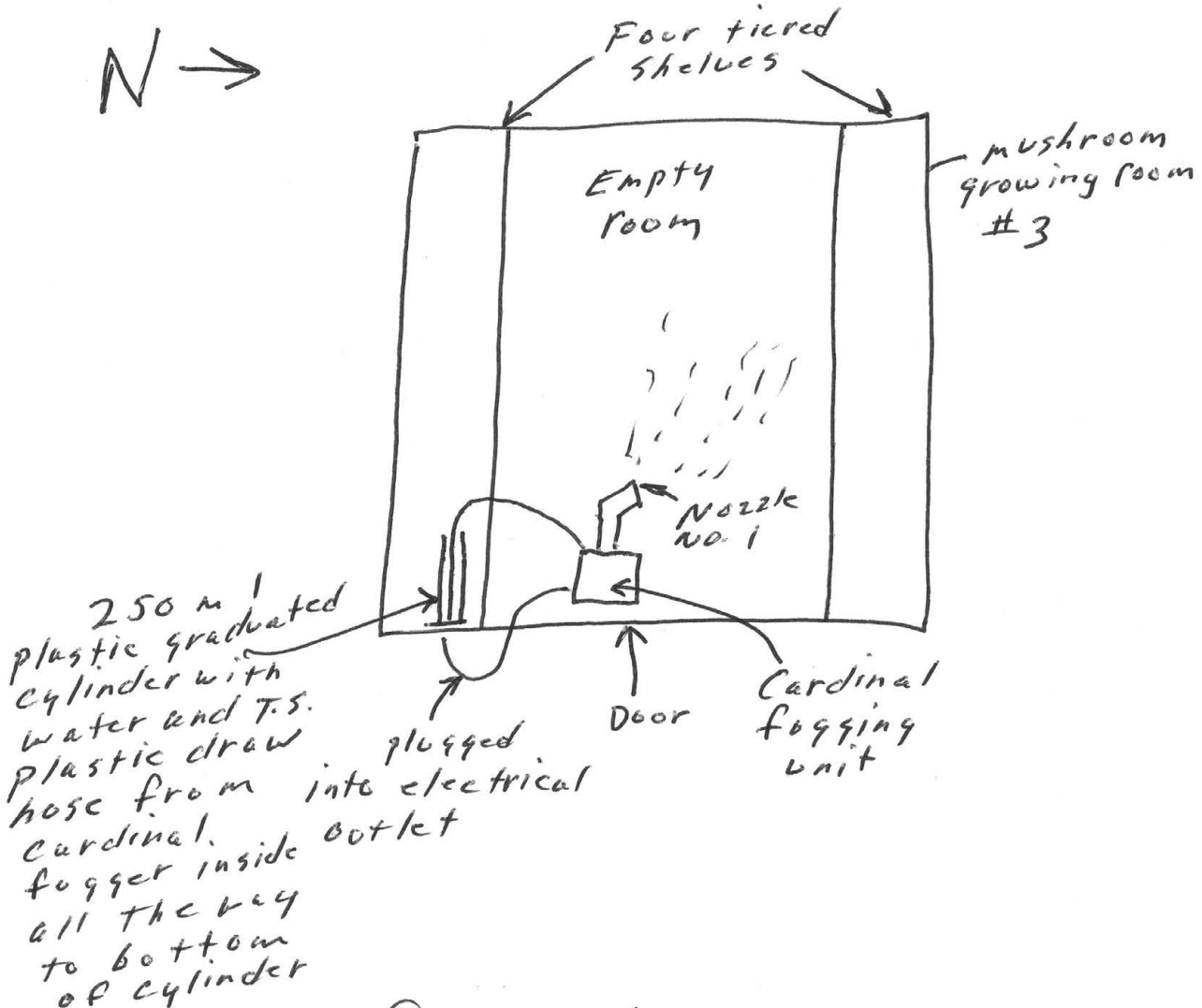
IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

B. DIAGRAM OF APPLICATION EQUIPMENT

EQUIPMENT USED FOR **APPLICATION NUMBER(S)** 1

*INSTRUCTIONS: Complete a separate form for **each piece** of test substance application equipment used in the trial. Sketch a diagram and/or provide clear photograph of application equipment. Include the relative location and size of the target crop and the nozzle/hopper outlet placement and application pattern in relation to crop, in the sketch or photograph. In addition, on the sketch or photograph assign each nozzle or hopper outlet a unique number.*



ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR **APPLICATION NUMBER** 1

INSTRUCTIONS: Complete a copy of this form (PHOTOCOPY IF NECESSARY) for additional times when a complete calibration or calibration-recheck of application equipment is required.

EQUIPMENT IDENTIFIER Cardinal Micron Master Fogger

DISCHARGE CALIBRATION DATE 6-19-14 PERFORMED BY DR *(INITIALS)*

APPROXIMATE TIME OF DAY THAT THE CALIBRATION WAS PERFORMED 11:09 AM

PRESSURE OR OTHER STANDARD SETTING UTILIZED IN CALIBRATION None

DISCHARGE UNITS MEASURED *(e.g. ml, oz., grams)* None

INSTRUMENT USED TO MEASURE WATER *(e.g. 100 ml graduated cylinder)* 25 and 5 ml pipette 0.2 and 0.1 ml increments

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION Placed 201.5 ml water into a 250 ml graduated cylinder. The draw hose from fogger was placed all the way to the bottom of cylinder. The fogger was turned on and timed with a stopwatch the time needed to disperse all. 119 sec

DISCHARGE CALIBRATION *Record time applicator is allowed to discharge. Collect output from each nozzle or hopper. Record this value in "RUN" Row 1 under the appropriate outlet. Calculate the total and average discharge for all the nozzles/hoppers. Entry prompts have been provided for 3 discharge calibration runs. Calculate sums and averages of each nozzle/hopper outlet AND whether the results are within 5% (if applicable). Show all calculations.* (2) (EE) DR 6-19-14

RUN	TIME (sec) (1)	Nozzle/hopper Outlet Number Along Boom (see equipment diagram for nozzle numbers)													
		1	2	3	4	5	6	7	8	9	10	11	Total	Output/ Nozzle	Output/ Second
1	167.04												~~167.04~~	~~167.04~~	(2)
2															
3										DR	6-19-	14			
Total (required)	167.04														
Average (optional)															

CALCULATIONS:

(1) Time to disperse the total volume of 201.5 ml of water DR 6-19-14

Was this a recheck of discharge calibration or a target output? *(Check one)* YES_____ NO ✓

If yes, were results within 5% of original calibration or target output? *(Check one)* YES~~_____~~ NO DR 6-19-14

If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* ~~YES~~_____ NO DR 6-19-14

An output consisting of an average of three runs or a target output may be used when calculating the sprayer output and amount of test substance to use. If this is a recheck (one run) then the results of the original calibration must be used. If the output result of the recheck is more than 5% different than the original calibration result, then two more runs are needed to produce a new, full calibration. The original calibration data, or a true copy, must be in this field data book.

ABOVE DATA ENTERED BY: Daniel Ennes DATE: 6-19-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
FIELD ID NO: _ Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

D. SPEED CALIBRATION FOR **APPLICATION NUMBER(S)** 1

INSTRUCTIONS: Complete a separate form for additional times when a complete calibration or calibration- recheck of application equipment is required.

EQUIPMENT IDENTIFIER _____

SPEED CALIBRATION DATE _____ _____ PERFORMED BY_____ *(INITIALS)*

TERRAIN OF CALIBRATION TRACK *(e.g. tilled field)* _____

BRIEFLY DESCRIBE PROCEDURE USED FOR SPEED CALIBRATION _____

There is no speed calibration required for this trial
OK 6-19-14

SPEED CALIBRATION: *Calculate the speed of the application equipment. If appropriate, note the gear setting and /or RPM setting used in the speed calibration. Indicate the distance (in feet) of the track on which the application equipment was tested to determine speed (e.g. speed of application equipment tested for 100 ft.). The speed is calculated by dividing the length of test track (in feet or meters) by the time needed to cover that length (in seconds). Entry prompts have been provided for 2 additional runs. If this is a recheck, calculate the result is within 5% of the original calibration. Show all calculations.* ***For studies beginning in 2011 or later, a speed recheck (one run) is required whenever an output recheck is performed.***

RUN	GEAR	RPM	Length of test track	TIME (sec)	CALCULATED SPEED (include units)	
1						
2						
3						
Total of test run times (sec)			Average time (sec)		Average speed	

CALCULATIONS:

WAS THIS A RECHECK OF SPEED CALIBRATION? *(Check one)* YES_____ NO_____
IF YES, WERE RESULTS WITHIN 5% OF ORIGINAL CALIBRATION? *(Check one)* YES_____ NO_____
The original calibration data, or a true copy, must be in this field data book.

NOTE: A target speed may be used for application calculations, rather than the mean of three runs, as long as the mean of the three runs in the speed calibration is within 5% of the target speed.
WAS THIS A CHECK OF A TARGET SPEED? *(Check one)* YES_____ NO_____
IF YES, WERE RESULTS WITHIN 5% OF TARGET SPEED? *(Check one)* YES_____ NO_____

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 6-19-14

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FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

E. DELIVERY RATE CALIBRATION FOR **APPLICATION NUMBER(S)** 1

INSTRUCTIONS: Complete a separate form for each application, unless the same parameters are used-- you are using the same equipment, and have performed a recheck to confirm the result of the full calibration. Determine the rate of delivery from the application equipment. Briefly describe the procedure, including formulas used to determine delivery rate calibration. Show all calculations and units. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

PROCEDURE/FORMULA:

This form is not needed for this trial
OK 6-19-14

CALCULATIONS:

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

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IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

F. VOLUME, MIXING AND DILUTION CALCULATIONS FOR **APPLICATION NUMBER(S)** 1

INSTRUCTIONS: Complete a separate form for each application, unless there are no changes in multiple applications. Show all calculations, formulas, and results below, define units of measure, and cite the initials of the person performing the calculations. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

Growing room dimensions

9.42 ft (length) x 7.67 ft (width) x 6.83 ft (Height) =

493.48 ft^3

Test substance rate 296 ml / 10000 ft^3

$$\frac{296\ ml \times 493.48\ ft^3}{10000\ ft^3} = 14.6\ ml$$

Dilution rate 10 oz product per gallon water

29.57 mls/oz x 10 oz = 295.7 ml

1 gallon = 3785 ml

$$\frac{14.6\ ml \times 3785\ ml}{295.7\ ml} = 186.9\ mls\ water$$

14.6 ml T.5 + 186.9 mls water = 201.5 ml Total

DESCRIBE HOLDING AND TRANSPORT OF TEST SUBSTANCE FROM STORAGE AREA TO LOCATION OF TANK MIXING *(E.g.: "Test substance held securely in an insulated cooler during transport to field site in the bed of a pickup truck" or "Tank mix prepared within walking distance of the chemical storage building")*

The test substance was transported in a cooler with blue ice in the back of a pickup truck from UCKARE to Monterey Mushroom.

DR 6-19-14

ABOVE DATA ENTERED BY: Daniel Ennes DATE: 6-19-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
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Pyrethrins+PBO/Mushroom
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PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** 1 APPLICATION DATE 6-19-14

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST CALIBRATION/RECHECK WAS PERFORMED? *(Check one)* YES_____ NO X (If YES, then a recheck is needed.)

INSTRUCTIONS: **Complete a separate form for each application date.** *Complete one column for each treated plot* **(use the Treatment Number as indicated in the protocol).** *Provide the name of the test substance (common chemical name or chemical code number); the batch or lot number of the test substance; the approximate time the test substance was mixed with the carrier and the approximate time the mixture was applied to the plots, along with* ***the initials of the person(s) mixing and spraying the tank mix****; the time of additional agitation (if any); the unique name or code for the application equipment used to apply this treatment; the placement of the test substance (e.g. broadcast, in-furrow, directed, knifed-in, banded); the amount of carrier, formulated product and other additives in the mix; the measuring equipment with increments; the distance (include units) of the nozzles above the canopy or ground (indicate which); the pressure in pounds per square inch at the boom; if treatment(s) were incorporated, the method and/or equipment used to incorporate the test substance mix (e.g. disked, rotovator, irrigated, etc.), depth to which the test substance was incorporated* ***or*** *the amount of water used to move the test substance into the soil; the time after treatment the incorporation activity was performed; and the carrier (normally water), its source (e.g. farm pond, city water), pH of the carrier and its temperature, and the equipment used to measure the carrier pH.*

	TRT Number 03	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION	N/A	TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE	Evergreen crop protection 60-6	
BATCH/LOT NUMBER	AB 4586	
TIME MIXED/INITIALS	11:32 AM DR	DR 6-19-14
TIME APPLIED/INITIALS	11:36 AM DR	
EQUIPMENT IDENTIFIER	Cardinal micron master fogger	
PLACEMENT OF TEST SUBSTANCE	Fogging of mushroom room	
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)	186.9 ml	see following page
VOLUME of WATER REMOVED from starting volume (if applicable)	None	DR 6-19-14
TEST SUBSTANCE (formulated product)	14.6 ml	
ADJUVANT OR SURFACTANT	None	
TOTAL VOLUME OF TANK MIX	201.5 ml	*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET	Fogger sprayed up into air in room	ORDER IN WHICH ITEMS WERE ADDED TO SPRAY MIXTURE* W=Water, TS=Test Substance, A=Adjuvant *e.g. 1-W, 2-TS, 3-A, 4-W
PSI AT BOOM	None	
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME	DR 6-19-14	1-W 2-T.S
CARRIER SOURCE/TYPE	Monterey mushroom well water	
CARRIER pH/TEMPERATURE	7.0 68°F	
EQUIPMENT used to MEASURE pH	ph strip	

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 6-19-14

Description of Equipment Used to Measure Liquid Test Substances, Adjuvant and Carrier Water

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID No. _____ **Application No.** 1

The pipettes used to measure test substances or adjuvants are 5 ml, 10 ml and 25 ml (TD) plastic pipettes. The 5 ml and 10 ml pipettes measure in 0.1 ml increments and the 25 ml pipette measures in 0.2 ml increments.

The following pipettes were used in this study:

Test Substance	Adjuvant
____ 5 ml	____ 5 ml
____ 10 ml	____ 10 ml
X 25 ml	____ 25 ml

DR 6-19-14

Equipment used to remove volume of water: None

- X No Surfactant Used
- ____ T.S. Mixed Prior to Surfactant
- ____ Surfactant Mixed Prior to T.S.

The graduated cylinders used to measure test substance, adjuvant or carrier water are 50,100, 250, 500, 1000 and 4000 mls. The 50 and 100 ml cylinders measure in increments of 1 ml, 250 ml cylinder in 2 ml increments, 500 ml cylinder in 5 ml increments, 1000 ml cylinder in 10 ml increments and the 4000 ml cylinder in 50 ml increments. Carrier water for airblast sprays is measured with a Scienco flow meter which measures water out to hundredths (i.e. 1.00)

The following cylinders or flow meter were used in this study:

Test Substance	Adjuvant	Carrier Water
____ 50 ml	____ 50 ml	____ 50 ml
____ 100 ml	____ 100 ml	____ 100 ml
____ 250 ml	____ 250 ml	X 250 ml
____ 500 ml	____ 500 ml	____ 500 ml
____ 1000 ml	____ 1000 ml	____ 1000 ml
____ 4000 ml	____ 4000 ml	____ 4000 ml

DR 6-19-14

X 10 (EE) 5 ml pipette DR 6-19-14

____ Scienco Flow meter

Part 6
Page: 8

Signature: David Ennes **Date:** 6-19-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

H. ADDITIONAL INFORMATION FROM **APPLICATION NUMBER** 1

APPLICATION DATE 6-19-14 *(Complete a separate form for each application date)*

PLANT GROWTH & ENVIRONMENTAL DATA AT THE TIME OF APPLICATION	Enter data in this column 6/19/14
CROP HEIGHT *(Measure or estimate crop height, include units of measurements)*	No Crop
CROP GROWTH STAGE *(e.g. seed, vegetative, bud, bloom, fruiting, #true leaves)*	↓
CROP VIGOR *(e.g. poor, fair, good, variable)**	↓
PLANT SURFACE MOISTURE *(Check one)*	**SATURATED**___ **DAMP**___ **DRY**___ **NA** X
ESTIMATED % OF SOIL AREA COVERED BY CROP CANOPY	No Crop
MEASURED AIR TEMPERATURE *(Check F or C)*	80.2 **°F** X **°C**___
MEASURED WIND SPEED *(Check MPH or Km/Hr)*	0 **MPH** X **Km/Hr**___
WIND DIRECTION FROM *(Check one)*	**N**___ **NE**___ **E**___ **SE**___ **S**___ **SW**___ **W**___ **NW**___ or **NO WIND** X
ESTIMATED % OF CLOUDS IN THE SKY	Does not apply
MEASURED RELATIVE HUMIDITY%	38
DEW *(heavy, light, none, etc.)*	Do not apply
DESCRIPTION OF SOIL TILTH *(smooth, firm, packed, cloddy, etc.)*	↓
ESTIMATE OF SOIL SURFACE MOISTURE *(wet, moist, dry, etc.)*	↓
SOIL TEMPERATURE *(Check F or C)*	**°F**___ **°C**___
DEPTH OF MEASUREMENT OF SOIL TEMPERATURE *(Check INCHES or cm)*	**INCHES**___ **cm**___

*IF CROP VIGOR IS POOR OR VARIABLE, EXPLAIN: _____

DK 6-19-14

BRIEFLY DESCRIBE PROCEDURE USED TO CLEAN APPLICATION EQUIPMENT The fogging unit plastic line and fogger unit were rinsed with water, rinsed with soap and water, then rinsed with water.

DK 6-19-14

CLEANED BY DK *(Initials)*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

I. PASS TIMES FOR **APPLICATION NUMBER** 1

APPLICATION DATE 6-19-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

RECORD PASS TIME AND PASS DIRECTION - *Complete the table by providing the time required to make each pass of the application equipment through the plot and direction of that pass (e.g. NE).*

	TREATMENT 03		TREATMENT __		
PASS NUMBER	① TIME	DIRECTION	PASS NUMBER	TIME	DIRECTION
1	180.31 sec	Fogging of room	1		
2			2	OK 6-19-14	
3	OK	6-19-14	3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
TOTAL PASS TIME	180.31 sec				

① Time that the fogging unit was running OK 6-19-14

PROVIDE A BRIEF NARRATIVE SUMMARY OF THE APPLICATION

(E.g. *"Test substance was applied to the treated test plot in two passes; one pass down each side of the row. Each pass was applied to the soil, in a 3 ft. band out from the tree, with the spray boom 24 inches above the soil."*)

The test substance was applied to the empty mushroom growing room as a fogging treatment The fogging unit output orifice was aimed upwards towards the ceiling of the room at a 45° angle At the time of the application the door to the growing room was closed and the ventilation system was shut off. The unit ran past the time for calibration to ensure that all liquid in the cylinder had been dispersed.

OK 9-11-14 NARRATIVE ENTERED BY OK *(Initials)*

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 6-19-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

J. POST APPLICATION RATE CONFIRMATION FOR **APPLICATION NUMBER** 1

APPLICATION DATE 6-19-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

CALCULATION OF ACTUAL APPLICATION RATE - *Using information such as total pass time, plot size, tank mix amounts, and discharge rate (average of 3 outputs) determine the actual amount of formulated test substance applied to treated plots. Even if a target rate was used for the pre-application calculations, the data from the calibration (average of 3 outputs) must be used for calculating the application rate. (If the protocol does not include a rate of formulated product, then the amount of active ingredient should be determined.) Convert this amount to the amount applied per acre (or hectare), and determine deviation from target application in the protocol, rounded to the nearest whole percent. Show all calculations and label all units.* ***It is not sufficient to merely compare the actual pass times to the "practice" pass times.*** *The example formulas listed at the bottom of 6J may be used to calculate the application rate.* ***Calculations may be entered on a separate page placed after this one, if there is not enough space below.***

EXAMPLE FORMULAS: The formulas below may be used to calculate the amount of test substance (TS) applied per acre as required in Part 6I. Other formulas may be used instead; however, it is not sufficient to merely compare the actual pass times to the "practice" pass times.

1) Total Pass Time x Discharge Rate/Nozzle x #Nozzles = Volume of Tank Mix applied to Plot

2) Volume of Tank Mix applied to Plot x $\frac{\text{Amount of TS in Tank Mix}}{\text{Total Volume of Tank Mix}}$ = Amount of TS applied to Plot

3) Amount of TS applied to Plot x $\frac{\text{43,560 sq ft per acre}}{\text{Plot area treated in sq ft}}$ = Amount of TS applied per acre

****

DISCHARGE RATE (ml/sec or g/sec): 201.5 ml in 167.64 sec

ACTUAL AREA TREATED (*swath width or treated row or bed width x # of passes x length of plot*): 9.42 ft x 7.67 ft x 6.83 ft = 493.48 ft3

Note: *Use bed width for plots with multi-row beds.*

The growing room was vented at 12:10 PM visually looked at the graduated cylinder that contained the T-5 and water and observed that all of the liquid in cylinder had been dispersed through the fogging unit

$$\frac{14.6 \text{ ml T-5} \times 10000 \text{ ft}^3}{493.48 \text{ ft}^3} = 295.86 \text{ ml}/10000 \text{ ft}^3$$

$$\frac{295.86 \text{ ml}/10000 \text{ ft}^3 \text{ (Actual rate)}}{296 \text{ ml}/10000 \text{ ft}^3 \text{ (protocol rate)}} \times 100 = 99.95\% \text{ of target rate.}$$

0% deviation from target

WAS ACTUAL APPLICATION RATE WITHIN -5% TO +10% OF PROTOCOL RATE?

(Check one) YES ✓ NO ___ IF NO, **Contact the Study Director immediately.**

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 6-19-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

K. POST TREATMENT RECORDS FOR **APPLICATION NUMBER** 1

APPLICATION DATE 6-19-14 *(Complete a separate form for each application date)* wrong date OR 7-20-14

Was There Any Visible Phytotoxicity Damage? *(Check one)* YES___ NO✓ OR & 7-20-14 *(Initials/date)*

If YES, then contact the Study Director. If a digital camera is available, email digital photograph(s) to the Study Director along with a detailed explanation of the damage. A written description should also be entered below:

OR 7-28-14

PHYTOTOXICITY DESCRIBED BY: _____ *(Initials/date)*

DATE STUDY DIRECTOR WAS CONTACTED: _____ CONTACTED BY: _____ *(Initials/date)*

Enter the requested information below for both the first rainfall and first irrigation after each application, regardless of whether subsequent applications were made prior to the first rainfall or irrigation. The rainfall/irrigation data entered below should be transcribed from the data included in Part 9 unless otherwise indicated on this page. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below. "NONE BEFORE HARVEST" OR "NONE BEFORE SAMPLING" MAY BE ENTERED, IF APPLICABLE.**

DATE OF FIRST RAIN *(Note the date of first rainfall after this application.)*	
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST RAINFALL (*Check DAYS or HOURS*) *(Enter #hours if first rainfall was on the date of application.)*	**DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES or mm*) Does not apply OR 7-28-14	**INCHES**___ **mm**___
RAIN INFORMATION RECORDED BY *(Initials/date)*	
TYPE OF IRRIGATION *(e.g. overhead, trickle, flood)*	water hose by hand
DATE OF FIRST IRRIGATION *(Note the date of first irrigation after this application.)*	7-6-14
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST IRRIGATION (*Check DAYS or HOURS*) *(Enter #hours if first irrigation was on the date of application.)*	17 **DAYS** X **HOURS**___
AMOUNT OF WATER (*Check INCHES, mm, or mL*)	not measured **INCHES**___ **mm**___ **mL**___
IRRIGATION INFORMATION RECORDED BY *(Initials/date)*	OR 9-11-14

If the data entered above differ from the rainfall/irrigation data included in Part 9, explain: _____

OR 9-11-14

Initials/date: _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

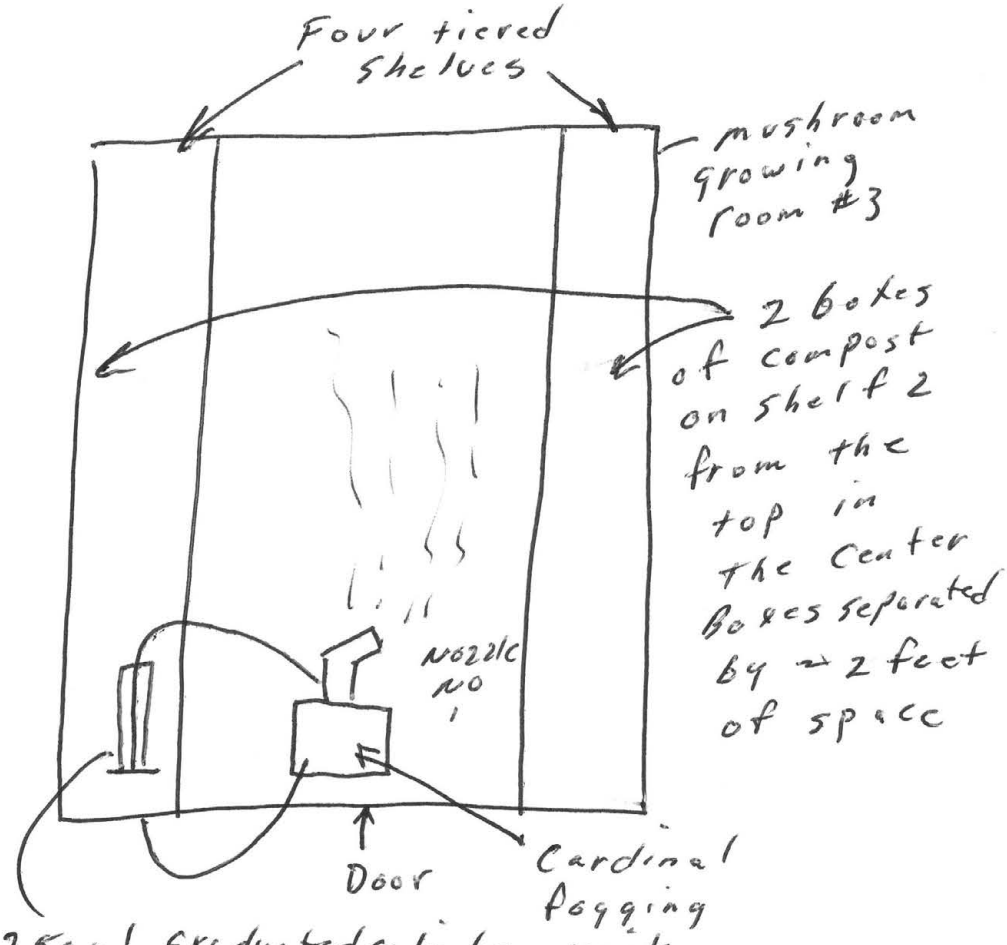
IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

B. DIAGRAM OF APPLICATION EQUIPMENT

EQUIPMENT USED FOR **APPLICATION NUMBER(S)** 2

*INSTRUCTIONS: Complete a separate form for **each piece** of test substance application equipment used in the trial. Sketch a diagram and/or provide clear photograph of application equipment. Include the relative location and size of the target crop and the nozzle/hopper outlet placement and application pattern in relation to crop, in the sketch or photograph. In addition, on the sketch or photograph assign each nozzle or hopper outlet a unique number.*



ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-20-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR **APPLICATION NUMBER** 2

INSTRUCTIONS: Complete a copy of this form (PHOTOCOPY IF NECESSARY) for additional times when a complete calibration or calibration-recheck of application equipment is required.

EQUIPMENT IDENTIFIER_____

DISCHARGE CALIBRATION DATE_____ PERFORMED BY_____ *(INITIALS)*

APPROXIMATE TIME OF DAY THAT THE CALIBRATION WAS PERFORMED_____

PRESSURE OR OTHER STANDARD SETTING UTILIZED IN CALIBRATION_____

DISCHARGE UNITS MEASURED *(e.g. ml, oz., grams)* _____

INSTRUMENT USED TO MEASURE WATER *(e.g. 100 ml graduated cylinder)* _____

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION _____

Refer to Part 6C dated 6-19-14
Same calculations used for App 2 on 6-20-14

DISCHARGE CALIBRATION *Record time applicator is allowed to discharge. Collect output from each nozzle or hopper.* Record this value in " RUN" Row 1 under the appropriate outlet. *Calculate the total and average discharge for all the nozzles/hoppers. Entry prompts have been provided for 3 discharge calibration runs. Calculate sums and averages of each nozzle/hopper outlet AND whether the results are within 5% (if applicable). Show all calculations.*

RUN	TIME (sec)	Nozzle/hopper Outlet Number Along Boom (see equipment diagram for nozzle numbers)													
		1	2	3	4	5	6	7	8	9	10	11	Total	Output/ Nozzle	Output/ Second
1															
2															
3															
Total (required)															
Average (optional)															

CALCULATIONS:

Was this a recheck of discharge calibration or a target output? *(Check one)* YES_____ NO_____
If yes, were results within 5% of original calibration or target output? *(Check one)* YES_____ NO_____
If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* YES_____ NO_____

An output consisting of an average of three runs or a target output may be used when calculating the sprayer output and amount of test substance to use. If this is a recheck (one run) then the results of the original calibration must be used. If the output result of the recheck is more than 5% different than the original calibration result, then two more runs are needed to produce a new, full calibration. The original calibration data, or a true copy, must be in this field data book.

ABOVE DATA ENTERED BY: David Ennes DATE: 6-20-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

F. VOLUME, MIXING AND DILUTION CALCULATIONS FOR **APPLICATION NUMBER(S)** 2

INSTRUCTIONS: Complete a separate form for each application, unless there are no changes in multiple applications. Show all calculations, formulas, and results below, define units of measure, and cite the initials of the person performing the calculations. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

Refer to part 6F dated 6-19-14
Same calculations used for
application 2
DR 6-20-14

DESCRIBE HOLDING AND TRANSPORT OF TEST SUBSTANCE FROM STORAGE AREA TO LOCATION OF TANK MIXING *(E.g.: "Test substance held securely in an insulated cooler during transport to field site in the bed of a pickup truck" or "Tank mix prepared within walking distance of the chemical storage building")*

Refer to Part 6F dated 6-19-14 Same method
used. T.S. stored overnight in cooler with
blue ice
DR 6-20-14

ABOVE DATA ENTERED BY: David Ennes DATE: 6-20-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** 2 APPLICATION DATE 6-20-14

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST CALIBRATION/RECHECK WAS PERFORMED? *(Check one)* YES ✓ NO _____ (If YES, then a recheck is needed.)

INSTRUCTIONS: **Complete a separate form for each application date.** *Complete one column for each treated plot* **(use the Treatment Number as indicated in the protocol).** *Provide the name of the test substance (common chemical name or chemical code number); the batch or lot number of the test substance; the approximate time the test substance was mixed with the carrier and the approximate time the mixture was applied to the plots, along with* ***the initials of the person(s) mixing and spraying the tank mix****; the time of additional agitation (if any); the unique name or code for the application equipment used to apply this treatment; the placement of the test substance (e.g. broadcast, in-furrow, directed, knifed-in, banded); the amount of carrier, formulated product and other additives in the mix; the measuring equipment with increments; the distance (include units) of the nozzles above the canopy or ground (indicate which); the pressure in pounds per square inch at the boom; if treatment(s) were incorporated, the method and/or equipment used to incorporate the test substance mix (e.g. disked, rotovator, irrigated, etc.), depth to which the test substance was incorporated* ***or*** *the amount of water used to move the test substance into the soil; the time after treatment the incorporation activity was performed; and the carrier (normally water), its source (e.g. farm pond, city water), pH of the carrier and its temperature, and the equipment used to measure the carrier pH.*

	TRT Number 03	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION	1	TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE	Evergreen crop protection 60-6	
BATCH/LOT NUMBER	AB 4586	
TIME MIXED/INITIALS	8:53 AM DK	
TIME APPLIED/INITIALS	8:59 AM DK	DK 6-20-14
EQUIPMENT IDENTIFIER	Cardinal micron master Fogger	
PLACEMENT OF TEST SUBSTANCE	Fogging of mushroom room	
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)	186.9 ml	See following page
VOLUME of WATER REMOVED from starting volume (if applicable)	None	DK 6-20-14
TEST SUBSTANCE (formulated product)	14.6 ml	
ADJUVANT OR SURFACTANT	None	
TOTAL VOLUME OF TANK MIX	201.5 ml	*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET	Fog sprayed up into the air in room	ORDER IN WHICH ITEMS WERE ADDED TO SPRAY MIXTURE* W=Water, TS=Test Substance, A=Adjuvant *e.g. 1-W, 2-TS, 3-A, 4-W
PSI AT BOOM	None	
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME	DK 6-20-14	1-W 2-TS
CARRIER SOURCE/TYPE	Monterey mushroom well water	
CARRIER pH/TEMPERATURE	7.0 60°F	
EQUIPMENT used to MEASURE pH	ph strip	

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-20-14

Description of Equipment Used to Measure Liquid Test Substances, Adjuvant and Carrier Water

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID No. Ennes **Application No.** 2

The pipettes used to measure test substances or adjuvants are 5 ml, 10 ml and 25 ml (TD) plastic pipettes. The 5 ml and 10 ml pipettes measure in 0.1 ml increments and the 25 ml pipette measures in 0.2 ml increments.

The following pipettes were used in this study:

Test Substance	Adjuvant
____ 5 ml	____ 5 ml
____ 10 ml	____ 10 ml
X 25 ml	____ 25 ml

OK 6-20-14

Equipment used to remove volume of water: None

- X No Surfactant Used
- ____ T.S. Mixed Prior to Surfactant
- ____ Surfactant Mixed Prior to T.S.

The graduated cylinders used to measure test substance, adjuvant or carrier water are 50,100, 250, 500, 1000 and 4000 mls. The 50 and 100 ml cylinders measure in increments of 1 ml, 250 ml cylinder in 2 ml increments, 500 ml cylinder in 5 ml increments, 1000 ml cylinder in 10 ml increments and the 4000 ml cylinder in 50 ml increments. Carrier water for airblast sprays is measured with a Scienco flow meter which measures water out to hundredths (i.e. 1.00)

The following cylinders or flow meter were used in this study:

Test Substance	Adjuvant	Carrier Water
____ 50 ml	____ 50 ml	____ 50 ml
____ 100 ml	____ 100 ml	____ 100 ml
____ 250 ml	____ 250 ml	X 250 ml
____ 500 ml	____ 500 ml	____ 500 ml
____ 1000 ml	____ 1000 ml	____ 1000 ml
____ 4000 ml	____ 4000 ml	____ 4000 ml
		____ Scienco Flow meter

OK 6-20-14

X 10 ml pipette

Part 6
Page: 17

Signature: David Ennes **Date:** 6-20-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

H. ADDITIONAL INFORMATION FROM **APPLICATION NUMBER** 2

APPLICATION DATE 6-20-14 *(Complete a separate form for each application date)*

PLANT GROWTH & ENVIRONMENTAL DATA AT THE TIME OF APPLICATION	Enter data in this column
CROP HEIGHT *(Measure or estimate crop height, include units of measurements)*	No crop Compost in 4 boxes only
CROP GROWTH STAGE *(e.g. seed, vegetative, bud, bloom, fruiting, #true leaves)*	
CROP VIGOR *(e.g. poor, fair, good, variable)**	
PLANT SURFACE MOISTURE *(Check one)*	**SATURATED**___ **DAMP**___ **DRY**___ **NA** X
ESTIMATED % OF SOIL AREA COVERED BY CROP CANOPY	No crop
MEASURED AIR TEMPERATURE *(Check F or C)*	65.8 **°F** X **°C**___
MEASURED WIND SPEED *(Check MPH or Km/Hr)*	0 **MPH** X **Km/Hr**___
WIND DIRECTION FROM *(Check one)* **N**___ **NE**___ **E**___ **SE**___ **S**___ **SW**___ **W**___ **NW**___ or **NO WIND** X	
ESTIMATED % OF CLOUDS IN THE SKY	Does not apply
MEASURED RELATIVE HUMIDITY%	72
DEW *(heavy, light, none, etc.)*	None
DESCRIPTION OF SOIL TILTH *(smooth, firm, packed, cloddy, etc.)*	Compost loose in boxes
ESTIMATE OF SOIL SURFACE MOISTURE *(wet, moist, dry, etc.)*	Moist-Compost
SOIL TEMPERATURE *(Check F or C)* Compost temperature	66 **°F** X **°C**___
DEPTH OF MEASUREMENT OF SOIL TEMPERATURE *(Check INCHES or cm)*	4 **INCHES** X **cm**___

*IF CROP VIGOR IS POOR OR VARIABLE, EXPLAIN: _____

OK 6-20-14

BRIEFLY DESCRIBE PROCEDURE USED TO CLEAN APPLICATION EQUIPMENT Followed the same procedure for cleaning as on Part 6 H dated 6-19-14

OK 6-20-14

CLEANED BY OK *(Initials)*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-20-14

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

I. PASS TIMES FOR **APPLICATION NUMBER** 2

APPLICATION DATE 6-20-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

RECORD PASS TIME AND PASS DIRECTION - *Complete the table by providing the time required to make each pass of the application equipment through the plot and direction of that pass (e.g. NE).*

	TREATMENT 03		TREATMENT __		
PASS NUMBER	① TIME	DIRECTION	PASS NUMBER	TIME	DIRECTION
1	210.31 sec	Fogging of room	1		
2			2		
3			3		
4			4		
5			5	Dk 6-20-14	
6		Ok	6		
7		6-20-14	7		
8			8		
9			9		
10			10		
11			11		
12			12		
TOTAL PASS TIME	210.31 sec				

① Time that the fogging unit was running Ok 6-20-14

PROVIDE A BRIEF NARRATIVE SUMMARY OF THE APPLICATION

(E.g. *"Test substance was applied to the treated test plot in two passes; one pass down each side of the row. Each pass was applied to the soil, in a 3 ft. band out from the tree, with the spray boom 24 inches above the soil."*)

The test substance was applied to the compost (5 days after pasturization) in boxes - 4 boxes 39 lbs each that were in the mushroom growing room as a fogging treatment. The fogging unit orofice was pointed upward towards the ceiling of the room at a 45° angle. At the time of the application the door to the growing room was closed and the ventilation system was shut off. The unit was run past the time required for calibration to ensure that all of the T.S. was dispersed. After waiting for +30 min the boxes of compost were taken to the spawn room added spawn and supplement and placed back into boxes. Boxes 5 placed back into growing room #3.

NARRATIVE ENTERED BY DF (Initials)

ABOVE DATA ENTERED BY: David Ennes DATE: 6-20-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: __

IR-4 FIELD DATA BOOK

MEMO to the FILE

TRT01 Time Started 8:15 AM
Time End 8:30 AM

Placed into growing room #13 ~ 8:40 AM OK
EC OK 6-20-14

Box 1 - 39.00 lbs
Box 2 - 39.00 lbs
Box 3 - 39.00 lbs
Box 4 - 39.00 lbs

6-20-14

OK 9-11-14

① In to each box is added 11 oz of mushroom spawn and 207 grams of supplement. The spawn and supplement are mixed into the compost by hand Also add 0.56 gal of water to the compost OK 6-20-14
① This is done by Monterey Mushroom personnel OK 6-20-19

OK 9-11-14

EC OK 6-20-14
The dimensions of the boxes for both treatments are 21 in length x 16 in width x 18 in in ht. OK 6-20-14

OK 9-11-14

PART 6 PAGE 20

ABOVE DATA ENTERED BY: [signature] DATE: 6/20/14

Trial Year 2014

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
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FIELD ID NO: Pyrethrins+PBO/Mushroom ID No. 05954.14-CA52 Ennes

IR-4 FIELD DATA BOOK

MEMO to the FILE

TRT03 Filling of boxes
Time started 10:15 Am
Time ended 10:29 Am
Time into growing room #3 10:43 Am

Box 1 39.00 lbs
2 39.00 lbs
3 39-00 lbs
4 39-00 lbs

DR 9-11-14

See mixing procedure for compost on previous page. Same procedure used for the treated boxes

DR 9-11-14

The compost and spawn are mixed on a stainless steel table. The table is cleaned with ① Neutral Quat between boxes

DR 9-11-14

① See page following part 5H for Neutral Quat composition DR 9-11-14

PART 6 PAGE 21

ABOVE DATA ENTERED BY: David Ennes DATE: 6-20-19

Trial Year 2014

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

J. POST APPLICATION RATE CONFIRMATION FOR **APPLICATION NUMBER** 2

APPLICATION DATE 6-20-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

CALCULATION OF ACTUAL APPLICATION RATE - *Using information such as total pass time, plot size, tank mix amounts, and discharge rate (average of 3 outputs) determine the actual amount of formulated test substance applied to treated plots. Even if a target rate was used for the pre-application calculations, the data from the calibration (average of 3 outputs) must be used for calculating the application rate. (If the protocol does not include a rate of formulated product, then the amount of active ingredient should be determined.) Convert this amount to the amount applied per acre (or hectare), and determine deviation from target application in the protocol, rounded to the nearest whole percent. Show all calculations and label all units.* ***It is not sufficient to merely compare the actual pass times*** to the "practice" pass times. *The example formulas listed at the bottom of 6J may be used to calculate the application rate.* ***Calculations may be entered on a separate page placed after this one, if there is not enough space below.***

EXAMPLE FORMULAS: The formulas below may be used to calculate the amount of test substance (TS) applied per acre as required in Part 6I. Other formulas may be used instead; however, it is not sufficient to merely compare the actual pass times to the "practice" pass times.

1) Total Pass Time x Discharge Rate/Nozzle x #Nozzles = Volume of Tank Mix applied to Plot

2) Volume of Tank Mix applied to Plot x $\frac{\text{Amount of TS in Tank Mix}}{\text{Total Volume of Tank Mix}}$ = Amount of TS applied to Plot

3) Amount of TS applied to Plot x $\frac{43{,}560 \text{ sq ft per acre}}{\text{Plot area treated in sq ft}}$ = Amount of TS applied per acre

****

DISCHARGE RATE (ml/sec or g/sec): $\frac{201.5 \text{ ml in}}{167.04 \text{ sec}}$

ACTUAL AREA TREATED (*swath width or treated row or bed width x # of passes x length of plot*): $9.42 \text{ ft} \times 7.67 \text{ ft} \times 6.83 \text{ ft} = 493.48 \text{ ft}^3$

Note: *Use bed width for plots with multi-row beds.*

The growing room was vented at 10:00 AM
6-20-14 OK EE
Visually looked at the graduated cylinder that contained the T.S. and water and observed that all of the solution had been dispersed by the Cardinal fogger

$$\frac{14.6 \text{ ml T.S} \times 10000 \text{ ft}^3}{493.48 \text{ ft}^3} = 295.86 \text{ ml}/10000 \text{ ft}^3$$

$$\frac{295.86 \text{ ml}/10000 \text{ ft}^3 \text{ (Actual rate)}}{296 \text{ ml}/10000 \text{ ft}^3 \text{ (Protocol rate)}} \times 100 = 99.95\% \text{ of target rate.}$$

0% deviation from target

WAS ACTUAL APPLICATION RATE WITHIN -5% TO +10% OF PROTOCOL RATE?

(Check one) YES ✓ NO ___ IF NO, **Contact the Study Director immediately.**

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-20-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

K. POST TREATMENT RECORDS FOR **APPLICATION NUMBER** 2

APPLICATION DATE 6-20-14 *(Complete a separate form for each application date)*

Was There Any Visible Phytotoxicity Damage? *(Check one)* YES___ NO ✓ OR 7-20-14 *(Initials/date)*

If YES, then contact the Study Director. If a digital camera is available, email digital photograph(s) to the Study Director along with a detailed explanation of the damage. A written description should also be entered below:

OR 7-28-14

_____ PHYTOTOXICITY DESCRIBED BY: _____ *(Initials/date)*

DATE STUDY DIRECTOR WAS CONTACTED: _____ CONTACTED BY: _____ *(Initials/date)*

Enter the requested information below for both the first rainfall and first irrigation after each application, regardless of whether subsequent applications were made prior to the first rainfall or irrigation. The rainfall/irrigation data entered below should be transcribed from the data included in Part 9 unless otherwise indicated on this page. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below.** "NONE BEFORE HARVEST" OR "NONE BEFORE SAMPLING" MAY BE ENTERED, IF APPLICABLE.

DATE OF FIRST RAIN *(Note the date of first rainfall after this application.)*	
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST RAINFALL (*Check DAYS or HOURS*) (*Enter #hours if first rainfall was on the date of application.*)	**DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES or mm*)	Does not apply OR 7-28-14 **INCHES**___ **mm**___
RAIN INFORMATION RECORDED BY *(Initials/date)*	
TYPE OF IRRIGATION *(e.g. overhead, trickle, flood)*	water hose by hand
DATE OF FIRST IRRIGATION *(Note the date of first irrigation after this application.)*	7-6-14
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST IRRIGATION (*Check DAYS or HOURS*) (*Enter #hours if first irrigation was on the date of application.*)	16 **DAYS** X **HOURS**___
AMOUNT OF WATER (*Check INCHES, mm, or mL*)	not measured **INCHES**___ **mm**___ **mL**___
IRRIGATION INFORMATION RECORDED BY *(Initials/date)*	OR 9-11-14

If the data entered above differ from the rainfall/irrigation data included in Part 9, explain: OR 9-11-14

_____ *Initials/date*: _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _____

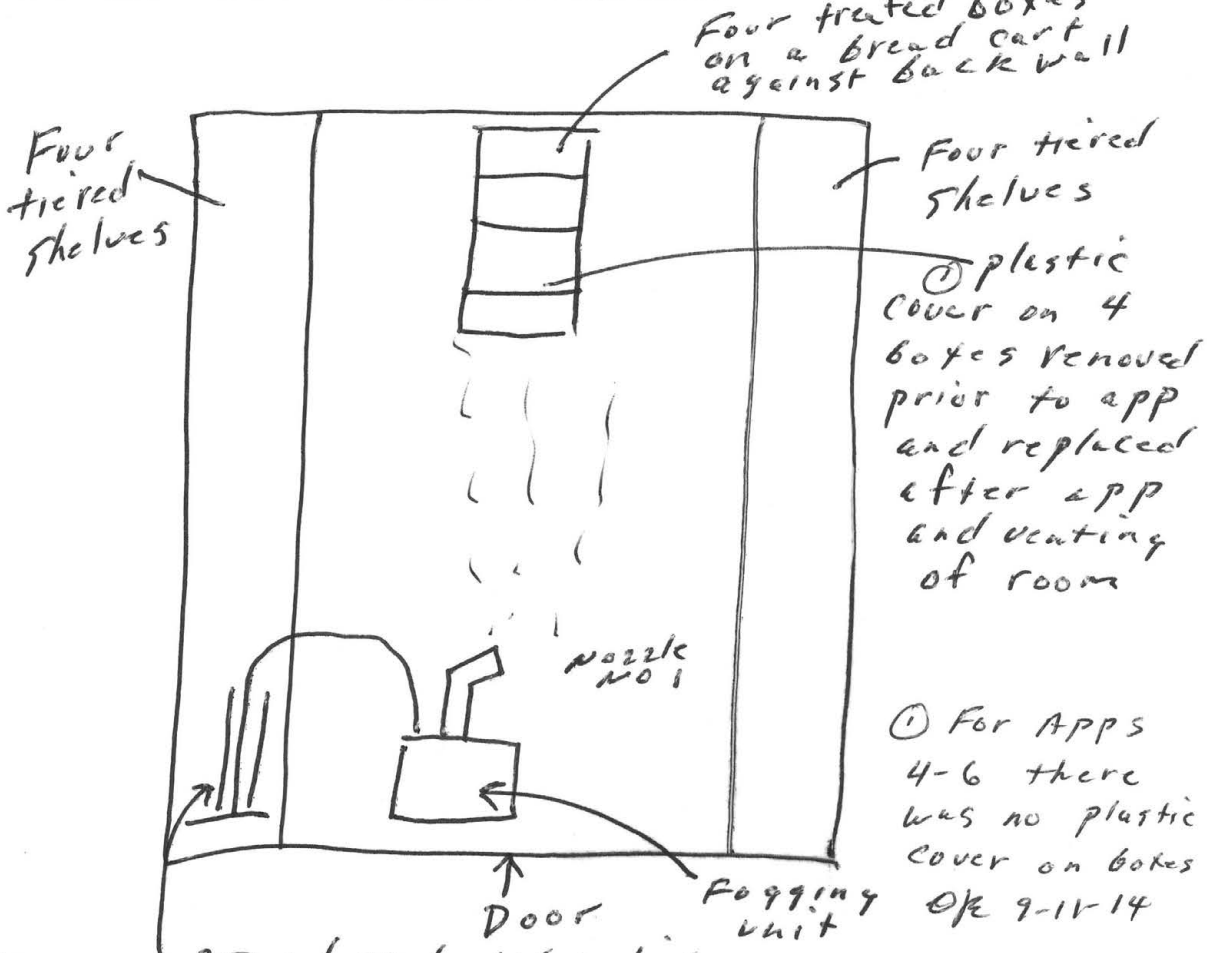
IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

B. DIAGRAM OF APPLICATION EQUIPMENT

EQUIPMENT USED FOR **APPLICATION NUMBER(S)** 3-6- OK 9-8-14

*INSTRUCTIONS: Complete a separate form for **each piece** of test substance application equipment used in the trial. Sketch a diagram and/or provide clear photograph of application equipment. Include the relative location and size of the target crop and the nozzle/hopper outlet placement and application pattern in relation to crop, in the sketch or photograph. In addition, on the sketch or photograph assign each nozzle or hopper outlet a unique number.*



① For Apps 4-6 there was no plastic cover on boxes OK 9-11-14

250 ml graduated cylinder with water and T.S. Plastic draw hose from cardinal fogger all the way to bottom of cylinder

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-25-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR **APPLICATION NUMBER** 3

INSTRUCTIONS: Complete a copy of this form (PHOTOCOPY IF NECESSARY) for additional times when a complete calibration or calibration-recheck of application equipment is required.

EQUIPMENT IDENTIFIER_____

DISCHARGE CALIBRATION DATE_____ PERFORMED BY_____ *(INITIALS)*

APPROXIMATE TIME OF DAY THAT THE CALIBRATION WAS PERFORMED_____

PRESSURE OR OTHER STANDARD SETTING UTILIZED IN CALIBRATION_____

DISCHARGE UNITS MEASURED *(e.g. ml, oz., grams)* _____

INSTRUMENT USED TO MEASURE WATER *(e.g. 100 ml graduated cylinder)* _____

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION _____

Refer to Part 6C dated 6-19-14. The same calculations were used for App 3 on 6-25-14

DISCHARGE CALIBRATION *Record time applicator is allowed to discharge. Collect output from each nozzle or hopper.* Record this value in " RUN" Row 1 under the appropriate outlet. *Calculate the total and average discharge for all the nozzles/hoppers. Entry prompts have been provided for 3 discharge calibration runs. Calculate sums and averages of each nozzle/hopper outlet AND whether the results are within 5% (if applicable). Show all calculations.*

RUN	TIME (sec)	Nozzle/hopper Outlet Number Along Boom (see equipment diagram for nozzle numbers)													
		1	2	3	4	5	6	7	8	9	10	11	Total	Output/ Nozzle	Output/ Second
1															
2															
3															
Total (required)															
Average (optional)															

CALCULATIONS:

Was this a recheck of discharge calibration or a target output? *(Check one)* YES_____ NO_____

If yes, were results within 5% of original calibration or target output? *(Check one)* YES_____ NO_____

If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* YES_____ NO_____

An output consisting of an average of three runs or a target output may be used when calculating the sprayer output and amount of test substance to use. If this is a recheck (one run) then the results of the original calibration must be used. If the output result of the recheck is more than 5% different than the original calibration result, then two more runs are needed to produce a new, full calibration. The original calibration data, or a true copy, must be in this field data book.

ABOVE DATA ENTERED BY: David Ennes DATE: 6-25-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

F. VOLUME, MIXING AND DILUTION CALCULATIONS FOR **APPLICATION NUMBER(S)** 3

INSTRUCTIONS: Complete a separate form for each application, unless there are no changes in multiple applications. Show all calculations, formulas, and results below, define units of measure, and cite the initials of the person performing the calculations. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

Refer to part 6F dated 6-19-14
The same calculations were used
for application 3
DK 6-25-14

DESCRIBE HOLDING AND TRANSPORT OF TEST SUBSTANCE FROM STORAGE AREA TO LOCATION OF TANK MIXING *(E.g.: "Test substance held securely in an insulated cooler during transport to field site in the bed of a pickup truck" or "Tank mix prepared within walking distance of the chemical storage building")*

The test substance was transported in cooler with blue ice in the back of a pickup truck on 6-24-14 from UCKARE to Clovis, CA and stored overnight in garage, on 6-25-14 transported as above from Clovis, CA to Monterey Mushroom.

ABOVE DATA ENTERED BY: Daniel Ennes DATE: 6-25-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** 3 APPLICATION DATE 6-25-14

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST CALIBRATION/RECHECK WAS PERFORMED? *(Check one)* YES ✓ NO _____ (If YES, then a recheck is needed.)

INSTRUCTIONS: **Complete a separate form for each application date.** *Complete one column for each treated plot* **(use the Treatment Number as indicated in the protocol).** *Provide the name of the test substance (common chemical name or chemical code number); the batch or lot number of the test substance; the approximate time the test substance was mixed with the carrier and the approximate time the mixture was applied to the plots, along with* ***the initials of the person(s) mixing and spraying the tank mix****; the time of additional agitation (if any); the unique name or code for the application equipment used to apply this treatment; the placement of the test substance (e.g. broadcast, in-furrow, directed, knifed-in, banded); the amount of carrier, formulated product and other additives in the mix; the measuring equipment with increments; the distance (include units) of the nozzles above the canopy or ground (indicate which); the pressure in pounds per square inch at the boom; if treatment(s) were incorporated, the method and/or equipment used to incorporate the test substance mix (e.g. disked, rotovator, irrigated, etc.), depth to which the test substance was incorporated* ***or*** *the amount of water used to move the test substance into the soil; the time after treatment the incorporation activity was performed; and the carrier (normally water), its source (e.g. farm pond, city water), pH of the carrier and its temperature, and the equipment used to measure the carrier pH.*

	TRT Number 03	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION	5	TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE	Evergreen Crop Protection 60-6	
BATCH/LOT NUMBER	AB 45 EC	
TIME MIXED/INITIALS	7:47 AM DK	DK 6-25-14
TIME APPLIED/INITIALS	7:52 AM DK	
EQUIPMENT IDENTIFIER	Cardinal, micron Master fogger	
PLACEMENT OF TEST SUBSTANCE	Fogging of mushroom room	
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)	186.9 ml	See following page
VOLUME of WATER REMOVED from starting volume (if applicable)	None	DK 6-25-14
TEST SUBSTANCE (formulated product)	14.6 ml	
ADJUVANT OR SURFACTANT	None	
TOTAL VOLUME OF TANK MIX	201.5 ml	*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET	Fogger Sprayed upward into air in room	ORDER IN WHICH ITEMS WERE ADDED TO SPRAY MIXTURE* W=Water, TS=Test Substance, A=Adjuvant *e.g. 1-W, 2-TS, 3-A, 4-W
PSI AT BOOM	None	
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME	DK 6-25-14	1-W 2-TS
CARRIER SOURCE/TYPE	Monterey Mushroom Well Water	
CARRIER pH/TEMPERATURE	7.0 62°F	
EQUIPMENT used to MEASURE pH	ph strip	

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-25-14

Description of Equipment Used to Measure Liquid Test Substances, Adjuvant and Carrier Water

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID No. Ennes **Application No.** 3

The pipettes used to measure test substances or adjuvants are 5 ml, 10 ml and 25 ml (TD) plastic pipettes. The 5 ml and 10 ml pipettes measure in 0.1 ml increments and the 25 ml pipette measures in 0.2 ml increments.

The following pipettes were used in this study:

Test Substance	Adjuvant	Equipment used to remove volume of water: None
____ 5 ml	____ 5 ml OR 6-25-14	X No Surfactant Used
____ 10 ml	____ 10 ml	____ T.S. Mixed Prior to Surfactant
X 25 ml	____ 25 ml	____ Surfactant Mixed Prior to T.S.

The graduated cylinders used to measure test substance, adjuvant or carrier water are 50,100, 250, 500, 1000 and 4000 mls. The 50 and 100 ml cylinders measure in increments of 1 ml, 250 ml cylinder in 2 ml increments, 500 ml cylinder in 5 ml increments, 1000 ml cylinder in 10 ml increments and the 4000 ml cylinder in 50 ml increments. Carrier water for airblast sprays is measured with a Scienco flow meter which measures water out to hundredths (i.e. 1.00)

The following cylinders or flow meter were used in this study:

Test Substance	Adjuvant	Carrier Water
____ 50 ml OR 6-25-14	____ 50 ml	____ 50 ml
____ 100 ml	____ 100 ml	____ 100 ml
____ 250 ml	____ 250 ml	X 250 ml
____ 500 ml	____ 500 ml	____ 500 ml
____ 1000 ml	____ 1000 ml	____ 1000 ml
____ 4000 ml	____ 4000 ml	____ 4000 ml
		____ Scienco Flow meter

X 10 ml pipette

Part 6
Page: 28

Signature: Daniel Ennes **Date:** 6-25-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
FIELD ID NO: _ Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

H. ADDITIONAL INFORMATION FROM **APPLICATION NUMBER** 3

APPLICATION DATE 6-25-14 *(Complete a separate form for each application date)*

PLANT GROWTH & ENVIRONMENTAL DATA AT THE TIME OF APPLICATION		Enter data in this column
CROP HEIGHT *(Measure or estimate crop height, include units of measurements)*		0 in
CROP GROWTH STAGE *(e.g. seed, vegetative, bud, bloom, fruiting, #true leaves)*		Spawn run
CROP VIGOR *(e.g. poor, fair, good, variable)**		mushrooms not visible
PLANT SURFACE MOISTURE *(Check one)*	**SATURATED**___	**DAMP**___ **DRY**___ **NA** X
ESTIMATED % OF SOIL AREA COVERED BY CROP CANOPY		0
MEASURED AIR TEMPERATURE *(Check F or C)*		69.4 °F X °C___
MEASURED WIND SPEED *(Check MPH or Km/Hr)*		0 **MPH** X **Km/Hr**___
WIND DIRECTION FROM *(Check one)*	**N**___ **NE**___ **E**___ **SE**___ **S**___ **SW**___ **W**___ **NW**___ or **NO WIND** X	
ESTIMATED % OF CLOUDS IN THE SKY		Does not apply
MEASURED RELATIVE HUMIDITY%		6.8
DEW *(heavy, light, none, etc.)*	on compost	light
DESCRIPTION OF SOIL TILTH *(smooth, firm, packed, cloddy, etc.)*	compost	smooth, packed
ESTIMATE OF SOIL SURFACE MOISTURE *(wet, moist, dry, etc.)*	compost	moist
SOIL TEMPERATURE *(Check F or C)*	compost	82 °F X °C___
DEPTH OF MEASUREMENT OF SOIL TEMPERATURE *(Check INCHES or cm)*		4 **INCHES** X **cm**___

*IF CROP VIGOR IS POOR OR VARIABLE, EXPLAIN: _____

OK 6-25-14

BRIEFLY DESCRIBE PROCEDURE USED TO CLEAN APPLICATION EQUIPMENT Followed the same procedure for cleaning as on Part 6H dated 6-19-14

OK 6-25-14

CLEANED BY OK *(Initials)*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-25-14

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

I. PASS TIMES FOR **APPLICATION NUMBER** 3

APPLICATION DATE 6-25-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

RECORD PASS TIME AND PASS DIRECTION - *Complete the table by providing the time required to make each pass of the application equipment through the plot and direction of that pass (e.g. NE).*

	TREATMENT 03		TREATMENT __		
PASS NUMBER	① TIME	DIRECTION	PASS NUMBER	TIME	DIRECTION
1	210.28 sec	Fogging of room	1		
2			2		
3			3		
4			4	D/k	6-25-14
5			5		
6		D/k	6		
7		6-25-14	7		
8			8		
9			9		
10			10		
11			11		
12			12		
TOTAL PASS TIME	210.28 sec				

① Time that the fogging unit was running OK 6-25-14

PROVIDE A BRIEF NARRATIVE SUMMARY OF THE APPLICATION

(E.g. *"Test substance was applied to the treated test plot in two passes; one pass down each side of the row. Each pass was applied to the soil, in a 3 ft. band out from the tree, with the spray boom 24 inches above the soil."*)

The test substance was applied to the treated mushroom bates during the first 7 days of the spawn run. The fogging unit orofice was pointed upward towards the ceiling of the room at a 45° angle. At the time of the application the door to the growing room was closed and the ventilation system was shut off. The unit was ran past the time required for calibration to ensure that all of the T.S. solution was dispersed. Prior to the application the plastic covering bates was removed and replaced after venting of the room.

NARRATIVE ENTERED BY D/k *(Initials)*

ABOVE DATA ENTERED BY: [signature] *DATE:* 6-25-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

J. POST APPLICATION RATE CONFIRMATION FOR **APPLICATION NUMBER** 3

APPLICATION DATE 6-25-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

CALCULATION OF ACTUAL APPLICATION RATE - *Using information such as total pass time, plot size, tank mix amounts, and discharge rate (average of 3 outputs) determine the actual amount of formulated test substance applied to treated plots. Even if a target rate was used for the pre-application calculations, the data from the calibration (average of 3 outputs) must be used for calculating the application rate. (If the protocol does not include a rate of formulated product, then the amount of active ingredient should be determined.) Convert this amount to the amount applied per acre (or hectare), and determine deviation from target application in the protocol, rounded to the nearest whole percent. Show all calculations and label all units.* ***It is not sufficient to merely compare the actual pass times*** to the "practice" pass times. *The example formulas listed at the bottom of 6J may be used to calculate the application rate.* ***Calculations may be entered on a separate page placed after this one, if there is not enough space below.***

EXAMPLE FORMULAS: The formulas below may be used to calculate the amount of test substance (TS) applied per acre as required in Part 6I. Other formulas may be used instead; however, it is not sufficient to merely compare the actual pass times to the "practice" pass times.

1) Total Pass Time x Discharge Rate/Nozzle x #Nozzles = Volume of Tank Mix applied to Plot

2) Volume of Tank Mix applied to Plot x $\frac{\text{Amount of TS in Tank Mix}}{\text{Total Volume of Tank Mix}}$ = Amount of TS applied to Plot

3) Amount of TS applied to Plot x $\frac{\text{43,560 sq ft per acre}}{\text{Plot area treated in sq ft}}$ = Amount of TS applied per acre

****

DISCHARGE RATE (ml/sec or g/sec): $\frac{201.5 \text{ ml/m}}{167.0 \text{ ml/sec}}$

ACTUAL AREA TREATED (*swath width or treated row or bed width x # of passes x length of plot*): $9.42 \text{ ft} \times 7.67 \text{ ft} = 493.98 \text{ ft}^3$

Note: *Use bed width for plots with multi-row beds.*

The growing room was heated at 8:40 AM
Visually looked at the graduated cylinder that held the T.S. solution and observed that all of the solution had been dispersed by the Cardinal fogger

$$\frac{14.6 \text{ ml T.S} \times 10000 \text{ ft}^3}{493.98 \text{ ft}^3} = 295.86 \text{ ml}/10000 \text{ ft}^3$$

$$\frac{295.86 \text{ ml}/10000 \text{ ft}^3 \text{ (Actual rate)}}{296 \text{ ml}/10000 \text{ ft}^3 \text{ (protocol rate)}} \times 100 = 99.95\% \text{ of target rate}$$

0% deviation from target

WAS ACTUAL APPLICATION RATE WITHIN -5% TO +10% OF PROTOCOL RATE?

(Check one) YES V NO ___ IF NO, **Contact the Study Director immediately.**

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 6-25-14

Pyrethrins+PBO/Mushroom
FIELD ID NO: _ ID No. 05954.14-CA52
Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

K. POST TREATMENT RECORDS FOR **APPLICATION NUMBER** 3

APPLICATION DATE 6-25-14 *(Complete a separate form for each application date)*

Was There Any Visible Phytotoxicity Damage? *(Check one)* YES___ NO✓ OK 7-20-14 *(Initials/date)*

If YES, then contact the Study Director. If a digital camera is available, email digital photograph(s) to the Study Director along with a detailed explanation of the damage. A written description should also be entered below:

_____

_____

_____

_____ OK 7-28-14

_____

_____ PHYTOTOXICITY DESCRIBED BY: _____ *(Initials/date)*

DATE STUDY DIRECTOR WAS CONTACTED: _____ CONTACTED BY: _____ *(Initials/date)*

Enter the requested information below for both the first rainfall and first irrigation after each application, regardless of whether subsequent applications were made prior to the first rainfall or irrigation. The rainfall/irrigation data entered below should be transcribed from the data included in Part 9 unless otherwise indicated on this page. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below.** "NONE BEFORE HARVEST" OR "NONE BEFORE SAMPLING" MAY BE ENTERED, IF APPLICABLE.

DATE OF FIRST RAIN *(Note the date of first rainfall after this application.)*	
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST RAINFALL (*Check DAYS or HOURS*) (*Enter #hours if first rainfall was on the date of application.*)	**DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES or mm*)	Does not apply **INCHES**___ OK 7-28-14 **mm**___
RAIN INFORMATION RECORDED BY *(Initials/date)*	
TYPE OF IRRIGATION *(e.g. overhead, trickle, flood)*	water hose by hand
DATE OF FIRST IRRIGATION *(Note the date of first irrigation after this application.)*	7-6-14
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST IRRIGATION (*Check DAYS or HOURS*) (*Enter #hours if first irrigation was on the date of application.*)	11 **DAYS** X **HOURS**___
AMOUNT OF WATER (*Check INCHES, mm, or mL*)	not measured **INCHES**___ **mm**___ **mL**___
IRRIGATION INFORMATION RECORDED BY *(Initials/date)*	OK 9-11-14

If the data entered above differ from the rainfall/irrigation data included in Part 9, explain: _____

_____ OK 9-11-14

_____ *Initials/date*: _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR **APPLICATION NUMBER** 4

INSTRUCTIONS: Complete a copy of this form (PHOTOCOPY IF NECESSARY) for additional times when a complete calibration or calibration-recheck of application equipment is required.

EQUIPMENT IDENTIFIER_____

DISCHARGE CALIBRATION DATE_____ PERFORMED BY_____ *(INITIALS)*

APPROXIMATE TIME OF DAY THAT THE CALIBRATION WAS PERFORMED_____

PRESSURE OR OTHER STANDARD SETTING UTILIZED IN CALIBRATION_____

DISCHARGE UNITS MEASURED *(e.g. ml, oz., grams)* _____

INSTRUMENT USED TO MEASURE WATER *(e.g. 100 ml graduated cylinder)* _____

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION _____

Refer to Part 6.C dated 6-19-14

Same calculations used for App 4 on 7-9-14

DISCHARGE CALIBRATION *Record time applicator is allowed to discharge. Collect output from each nozzle or hopper.* Record this value in " RUN" Row 1 under the appropriate outlet. *Calculate the total and average discharge for all the nozzles/hoppers. Entry prompts have been provided for 3 discharge calibration runs. Calculate sums and averages of each nozzle/hopper outlet AND whether the results are within 5% (if applicable). Show all calculations.*

RUN	TIME (sec)	Nozzle/hopper Outlet Number Along Boom (see equipment diagram for nozzle numbers)													
		1	2	3	4	5	6	7	8	9	10	11	Total	Output/ Nozzle	Output/ Second
1															
2															
3															
Total (required)															
Average (optional)															

CALCULATIONS:

Was this a recheck of discharge calibration or a target output? *(Check one)* YES_____ NO_____

If yes, were results within 5% of original calibration or target output? *(Check one)* YES_____ NO_____

If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* YES_____ NO_____

An output consisting of an average of three runs or a target output may be used when calculating the sprayer output and amount of test substance to use. If this is a recheck (one run) then the results of the original calibration must be used. If the output result of the recheck is more than 5% different than the original calibration result, then two more runs are needed to produce a new, full calibration. The original calibration data, or a true copy, must be in this field data book.

ABOVE DATA ENTERED BY: Donald Ennes DATE: 7-9-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

F. VOLUME, MIXING AND DILUTION CALCULATIONS FOR **APPLICATION NUMBER(S)** 4

INSTRUCTIONS: Complete a separate form for each application, unless there are no changes in multiple applications. Show all calculations, formulas, and results below, define units of measure, and cite the initials of the person performing the calculations. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

Refer to Part 6 F dated 6-19-14
The same calculations were used
for application 4
OK 7-9-14

DESCRIBE HOLDING AND TRANSPORT OF TEST SUBSTANCE FROM STORAGE AREA TO LOCATION OF TANK MIXING *(E.g.: "Test substance held securely in an insulated cooler during transport to field site in the bed of a pickup truck" or "Tank mix prepared within walking distance of the chemical storage building")*

The test substance was transported in a cooler with
blue ice in the back of a pickup truck on 7-8-14
from UCKARE to Clovis, CA and stored overnight in a
garage. On 7-9-14 transported as above from Clovis, CA
to Monterey Mushroom.

ABOVE DATA ENTERED BY: David Ennes DATE: 7-9-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** 4 APPLICATION DATE 7-9-14

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST CALIBRATION/RECHECK WAS PERFORMED? *(Check one)* YES ✓ NO _____ (If YES, then a recheck is needed.)

INSTRUCTIONS: **Complete a separate form for each application date.** *Complete one column for each treated plot* **(use the Treatment Number as indicated in the protocol).** *Provide the name of the test substance (common chemical name or chemical code number); the batch or lot number of the test substance; the approximate time the test substance was mixed with the carrier and the approximate time the mixture was applied to the plots, along with* ***the initials of the person(s) mixing and spraying the tank mix****; the time of additional agitation (if any); the unique name or code for the application equipment used to apply this treatment; the placement of the test substance (e.g. broadcast, in-furrow, directed, knifed-in, banded); the amount of carrier, formulated product and other additives in the mix; the measuring equipment with increments; the distance (include units) of the nozzles above the canopy or ground (indicate which); the pressure in pounds per square inch at the boom; if treatment(s) were incorporated, the method and/or equipment used to incorporate the test substance mix (e.g. disked, rotovator, irrigated, etc.), depth to which the test substance was incorporated* ***or*** *the amount of water used to move the test substance into the soil; the time after treatment the incorporation activity was performed; and the carrier (normally water), its source (e.g. farm pond, city water), pH of the carrier and its temperature, and the equipment used to measure the carrier pH.*

	TRT Number 03	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION	14	TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE	Evergreen Crop Protection 60-6	
BATCH/LOT NUMBER	AB 4586	
TIME MIXED/INITIALS	8:16 Am DK	DK 7-9-14
TIME APPLIED/INITIALS	8:20 Am DK	
EQUIPMENT IDENTIFIER	Cardinal Micron Master Fogger	
PLACEMENT OF TEST SUBSTANCE	Fogging of mushroom room	
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)	186.9 ml	See following Page
VOLUME of WATER REMOVED from starting volume (if applicable)	None	DK 7-9-14
TEST SUBSTANCE (formulated product)	14.6 ml	
ADJUVANT OR SURFACTANT	None	
TOTAL VOLUME OF TANK MIX	201.5 ml	*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET	Fogger sprayed up into air in room	ORDER IN WHICH ITEMS WERE ADDED TO SPRAY MIXTURE* W=Water, TS=Test Substance, A=Adjuvant *e.g. 1-W, 2-TS, 3-A, 4-W
PSI AT BOOM	None	
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME	DK 7-9-14	1-W 2-T.S.
CARRIER SOURCE/TYPE	Monterey Mushroom well water	
CARRIER pH/TEMPERATURE	7.0 60°F	
EQUIPMENT used to MEASURE pH	PH strip	

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 7-9-14

Description of Equipment Used to Measure Liquid Test Substances, Adjuvant and Carrier Water

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID No. Ennes **Application No.** 4

The pipettes used to measure test substances or adjuvants are 5 ml, 10 ml and 25 ml (TD) plastic pipettes. The 5 ml and 10 ml pipettes measure in 0.1 ml increments and the 25 ml pipette measures in 0.2 ml increments.

The following pipettes were used in this study:

Test Substance	Adjuvant
____ 5 ml	____ 5 ml DK 7-9-14
____ 10 ml	____ 10 ml
X 25 ml	____ 25 ml

Equipment used to remove volume of water: None

- X No Surfactant Used
- ____ T.S. Mixed Prior to Surfactant
- ____ Surfactant Mixed Prior to T.S.

The graduated cylinders used to measure test substance, adjuvant or carrier water are 50,100, 250, 500, 1000 and 4000 mls. The 50 and 100 ml cylinders measure in increments of 1 ml, 250 ml cylinder in 2 ml increments, 500 ml cylinder in 5 ml increments, 1000 ml cylinder in 10 ml increments and the 4000 ml cylinder in 50 ml increments. Carrier water for airblast sprays is measured with a Scienco flow meter which measures water out to hundredths (i.e. 1.00)

The following cylinders or flow meter were used in this study:

Test Substance	Adjuvant	Carrier Water
____ 50 ml DK 7-9-14	____ 50 ml	____ 50 ml
____ 100 ml	____ 100 ml	____ 100 ml
____ 250 ml	____ 250 ml	X 250 ml
____ 500 ml	____ 500 ml	____ 500 ml
____ 1000 ml	____ 1000 ml	____ 1000 ml
____ 4000 ml	____ 4000 ml	____ 4000 ml

X 10 ml pipette

____ Scienco Flow meter

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Signature: [signature] **Date:** 7-9-14

Pyrethrins+PBO/Mushroom
FIELD ID NO: _ ID No. 05954.14-CA52
Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

H. ADDITIONAL INFORMATION FROM **APPLICATION NUMBER** 4

APPLICATION DATE 7-9-14 *(Complete a separate form for each application date)*

PLANT GROWTH & ENVIRONMENTAL DATA AT THE TIME OF APPLICATION		Enter data in this column
CROP HEIGHT *(Measure or estimate crop height, include units of measurements)*		mushrooms have not emerged yet
CROP GROWTH STAGE *(e.g. seed, vegetative, bud, bloom, fruiting, #true leaves)*		During the first 5 days of casing
CROP VIGOR *(e.g. poor, fair, good, variable)**		crop not visible yet
PLANT SURFACE MOISTURE *(Check one)*	**SATURATED**___	**DAMP**___ **DRY**___ **NA** X
ESTIMATED % OF SOIL AREA COVERED BY CROP CANOPY		0
MEASURED AIR TEMPERATURE *(Check F or C)*		71.6 °F X °C___
MEASURED WIND SPEED *(Check MPH or Km/Hr)*		0 **MPH** X **Km/Hr**___
WIND DIRECTION FROM *(Check one)*	**N**___ **NE**___ **E**___ **SE**___ **S**___ **SW**___ **W**___ **NW**___ or **NO WIND** X	
ESTIMATED % OF CLOUDS IN THE SKY		Does not apply
MEASURED RELATIVE HUMIDITY%		81
DEW *(heavy, light, none, etc.)*	on Compost	light
DESCRIPTION OF SOIL TILTH *(smooth, firm, packed, cloddy, etc.)*	Compost	smooth, packed
ESTIMATE OF SOIL SURFACE MOISTURE *(wet, moist, dry, etc.)*	Compost	moist
SOIL TEMPERATURE *(Check F or C)*		76 °F X °C___
DEPTH OF MEASUREMENT OF SOIL TEMPERATURE *(Check INCHES or cm)*		4 **INCHES** X **cm**___

*IF CROP VIGOR IS POOR OR VARIABLE, EXPLAIN: _____

OK 7-9-14

BRIEFLY DESCRIBE PROCEDURE USED TO CLEAN APPLICATION EQUIPMENT Followed the same procedure for cleaning as on Part 6H dated 6-19-14

OK 7-9-14

CLEANED BY OK *(Initials)*

ABOVE DATA ENTERED BY: David Emmes *DATE:* 7-9-14

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

I. PASS TIMES FOR **APPLICATION NUMBER** 4

APPLICATION DATE 7-9-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

RECORD PASS TIME AND PASS DIRECTION - *Complete the table by providing the time required to make each pass of the application equipment through the plot and direction of that pass (e.g. NE).*

	TREATMENT 03		TREATMENT __		
PASS NUMBER	① TIME	DIRECTION	PASS NUMBER	TIME	DIRECTION
1	210.31 sec	fogging of room	1		
2			2	D/E 7-9-14	
3			3		
4			4		
5			5		
6		D/E	6		
7		7-9-14	7		
8			8		
9			9		
10			10		
11			11		
12			12		
TOTAL PASS TIME	210.31 sec				

① Time that the fogging unit was running D/E 7-9-14

PROVIDE A BRIEF NARRATIVE SUMMARY OF THE APPLICATION

(E.g. *"Test substance was applied to the treated test plot in two passes; one pass down each side of the row. Each pass was applied to the soil, in a 3 ft. band out from the tree, with the spray boom 24 inches above the soil."*)

The test substance was applied to the treated mushroom boxes 4 days after the boxes were cased. The fogging unit orifice was pointed upward towards the ceiling of the room at a 45° angle. At the time of the application the door to the growing room was closed and the ventilation system was shut off. The fogging unit was ran past the time required for calibration to ensure that all of the T.S. solution was dispersed. The top of the boxes are no longer covered with plastic.

D/E 9-11-14

NARRATIVE ENTERED BY D/E *(Initials)*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-9-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

J. POST APPLICATION RATE CONFIRMATION FOR **APPLICATION NUMBER** 4

APPLICATION DATE 7-9-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

CALCULATION OF ACTUAL APPLICATION RATE - *Using information such as total pass time, plot size, tank mix amounts, and discharge rate (average of 3 outputs) determine the actual amount of formulated test substance applied to treated plots. Even if a target rate was used for the pre-application calculations, the data from the calibration (average of 3 outputs) must be used for calculating the application rate. (If the protocol does not include a rate of formulated product, then the amount of active ingredient should be determined.) Convert this amount to the amount applied per acre (or hectare), and determine deviation from target application in the protocol, rounded to the nearest whole percent. Show all calculations and label all units.* ***It is not sufficient to merely compare the actual pass times*** to the "practice" pass times. *The example formulas listed at the bottom of 6J may be used to calculate the application rate.* ***Calculations may be entered on a separate page placed after this one, if there is not enough space below.***

EXAMPLE FORMULAS: The formulas below may be used to calculate the amount of test substance (TS) applied per acre as required in Part 6I. Other formulas may be used instead; however, it is not sufficient to merely compare the actual pass times to the "practice" pass times.

1) Total Pass Time x Discharge Rate/Nozzle x #Nozzles = Volume of Tank Mix applied to Plot

2) Volume of Tank Mix applied to Plot x $\frac{\text{Amount of TS in Tank Mix}}{\text{Total Volume of Tank Mix}}$ = Amount of TS applied to Plot

3) Amount of TS applied to Plot x $\frac{\text{43,560 sq ft per acre}}{\text{Plot area treated in sq ft}}$ = Amount of TS applied per acre

****

DISCHARGE RATE (ml/sec or g/sec): $\frac{201.5\text{ml}}{167.04\text{ sec}}$ in

ACTUAL AREA TREATED (*swath width or treated row or bed width x # of passes x length of plot*): 9.42ft x 7.67ft x 6.83ft = 493.48 ft³

Note: *Use bed width for plots with multi-row beds.*

The growing room was vented at 9:00 AM Visually looked at the graduated cylinder that held the T.S. solution and observed that all of the solution had been dispersed by the Cardinal fogger.

$$\frac{14.6\text{ ml T.S.} \times 10000\text{ ft}^3}{493.48\text{ ft}^3} = 295.86\text{ ml}/10000\text{ ft}^3$$

$$\frac{295.86\text{ ml}/10000\text{ ft}^3\text{ (Actual rate)}}{296\text{ ml}/10000\text{ ft}^3\text{ (protocol rate)}} \times 100 = 99.95\%\text{ of target rate}$$

0% deviation from target

WAS ACTUAL APPLICATION RATE WITHIN -5% TO +10% OF PROTOCOL RATE?

(Check one) YES ✓ NO IF NO, **Contact the Study Director immediately.**

ABOVE DATA ENTERED BY: [signature] *DATE:* 7-9-14

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

K. POST TREATMENT RECORDS FOR **APPLICATION NUMBER** 4

APPLICATION DATE 7-9-14 *(Complete a separate form for each application date)*

Was There Any Visible Phytotoxicity Damage? *(Check one)* YES___ NO ✓ DR 7-20-14 *(Initials/date)*

If YES, then contact the Study Director. If a digital camera is available, email digital photograph(s) to the Study Director along with a detailed explanation of the damage. A written description should also be entered below:

DR 7-28-14

PHYTOTOXICITY DESCRIBED BY: _____ *(Initials/date)*

DATE STUDY DIRECTOR WAS CONTACTED: _____ CONTACTED BY: _____ *(Initials/date)*

Enter the requested information below for both the first rainfall and first irrigation after each application, regardless of whether subsequent applications were made prior to the first rainfall or irrigation. The rainfall/irrigation data entered below should be transcribed from the data included in Part 9 unless otherwise indicated on this page. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below.** "NONE BEFORE HARVEST" OR "NONE BEFORE SAMPLING" MAY BE ENTERED, IF APPLICABLE.

DATE OF FIRST RAIN *(Note the date of first rainfall after this application.)*	
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST RAINFALL (*Check DAYS or HOURS*) (*Enter #hours if first rainfall was on the date of application.*)	**DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES or mm*)	Does not apply **INCHES**___ DR 7-28-14 **mm**___
RAIN INFORMATION RECORDED BY *(Initials/date)*	
TYPE OF IRRIGATION *(e.g. overhead, trickle, flood)*	water hose by hand
DATE OF FIRST IRRIGATION *(Note the date of first irrigation after this application.)*	7-9-14
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST IRRIGATION (*Check DAYS or HOURS*) (*Enter #hours if first irrigation was on the date of application.*)	not known **DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES, mm, or mL*)	not measured **INCHES**___ **mm**___ **mL**___
IRRIGATION INFORMATION RECORDED BY *(Initials/date)*	DR 9-11-14

If the data entered above differ from the rainfall/irrigation data included in Part 9, explain: _____

DR 9-11-14

Initials/date: _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR **APPLICATION NUMBER** 5

INSTRUCTIONS: Complete a copy of this form (PHOTOCOPY IF NECESSARY) for additional times when a complete calibration or calibration-recheck of application equipment is required.

EQUIPMENT IDENTIFIER_____

DISCHARGE CALIBRATION DATE_____ PERFORMED BY_____ *(INITIALS)*

APPROXIMATE TIME OF DAY THAT THE CALIBRATION WAS PERFORMED_____

PRESSURE OR OTHER STANDARD SETTING UTILIZED IN CALIBRATION_____

DISCHARGE UNITS MEASURED *(e.g. ml, oz., grams)* _____

INSTRUMENT USED TO MEASURE WATER *(e.g. 100 ml graduated cylinder)* _____

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION _____

Refer to Part 6C dated 6-19-14. Same Calibration used for App 5 OK 7-20-14

DISCHARGE CALIBRATION *Record time applicator is allowed to discharge. Collect output from each nozzle or hopper.* Record this value in " RUN" Row 1 under the appropriate outlet. *Calculate the total and average discharge for all the nozzles/hoppers. Entry prompts have been provided for 3 discharge calibration runs. Calculate sums and averages of each nozzle/hopper outlet AND whether the results are within 5% (if applicable). Show all calculations.*

RUN	TIME (sec)	Nozzle/hopper Outlet Number Along Boom (see equipment diagram for nozzle numbers)													
		1	2	3	4	5	6	7	8	9	10	11	Total	Output/ Nozzle	Output/ Second
1															
2															
3															
Total (required)															
Average (optional)															

CALCULATIONS:

Was this a recheck of discharge calibration or a target output? *(Check one)* YES_____ NO_____
If yes, were results within 5% of original calibration or target output? *(Check one)* YES_____ NO_____
If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* YES_____ NO_____

An output consisting of an average of three runs or a target output may be used when calculating the sprayer output and amount of test substance to use. If this is a recheck (one run) then the results of the original calibration must be used. If the output result of the recheck is more than 5% different than the original calibration result, then two more runs are needed to produce a new, full calibration. The original calibration data, or a true copy, must be in this field data book.

ABOVE DATA ENTERED BY: David Ennes DATE: 7-20-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

F. VOLUME, MIXING AND DILUTION CALCULATIONS FOR **APPLICATION NUMBER(S)** 5

INSTRUCTIONS: Complete a separate form for each application, unless there are no changes in multiple applications. Show all calculations, formulas, and results below, define units of measure, and cite the initials of the person performing the calculations. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

Refer to Part 6F dated 6-19-14
The same calculations were used
for application 5
OK 7-20-14

DESCRIBE HOLDING AND TRANSPORT OF TEST SUBSTANCE FROM STORAGE AREA TO LOCATION OF TANK MIXING *(E.g.: "Test substance held securely in an insulated cooler during transport to field site in the bed of a pickup truck" or "Tank mix prepared within walking distance of the chemical storage building")*

The test substance was transported in a cooler with blue ice in the back of a pickup truck on 7-19-14 from UCKARE to Clovis, CA and stored overnight in a garage. On 7-20-14 transported as above from Clovis, CA to Monterey mushrooms. The T.S. container was stored back in garage in Clovis, CA on 7-20-14 (The container was transported as above on 7-21-14 from Clovis, CA to chemical storage)

ABOVE DATA ENTERED BY: David Ennes DATE: 7-20-14 OR 7-21-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** 5 APPLICATION DATE 7-20-14

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST CALIBRATION/RECHECK WAS PERFORMED? *(Check one)* YES ✓ NO _____ (If YES, then a recheck is needed.)

INSTRUCTIONS: **Complete a separate form for each application date.** *Complete one column for each treated plot* **(use the Treatment Number as indicated in the protocol).** *Provide the name of the test substance (common chemical name or chemical code number); the batch or lot number of the test substance; the approximate time the test substance was mixed with the carrier and the approximate time the mixture was applied to the plots, along with* ***the initials of the person(s) mixing and spraying the tank mix****; the time of additional agitation (if any); the unique name or code for the application equipment used to apply this treatment; the placement of the test substance (e.g. broadcast, in-furrow, directed, knifed-in, banded); the amount of carrier, formulated product and other additives in the mix; the measuring equipment with increments; the distance (include units) of the nozzles above the canopy or ground (indicate which); the pressure in pounds per square inch at the boom; if treatment(s) were incorporated, the method and/or equipment used to incorporate the test substance mix (e.g. disked, rotovator, irrigated, etc.), depth to which the test substance was incorporated* ***or*** *the amount of water used to move the test substance into the soil; the time after treatment the incorporation activity was performed; and the carrier (normally water), its source (e.g. farm pond, city water), pH of the carrier and its temperature, and the equipment used to measure the carrier pH.*

	TRT Number 03	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION	11	TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE	Evergreen Crop Protection 60-6	
BATCH/LOT NUMBER	AB 4586	
TIME MIXED/INITIALS	9:54 AM OK	OK 7-20-14
TIME APPLIED/INITIALS	9:59 AM OK	
EQUIPMENT IDENTIFIER	Cardinal micron master fogger	
PLACEMENT OF TEST SUBSTANCE	Fogging of mushroom growing room	
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)	186.9 ml	See following page OK 7-20-14
VOLUME of WATER REMOVED from starting volume (if applicable)	None	
TEST SUBSTANCE (formulated product)	14.6 ml	
ADJUVANT OR SURFACTANT	None	
TOTAL VOLUME OF TANK MIX	201.5 ml	*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET	Fogger sprayed up into air in room	ORDER IN WHICH ITEMS WERE ADDED TO SPRAY MIXTURE* W=Water, TS=Test Substance, A=Adjuvant *e.g. 1-W, 2-TS, 3-A, 4-W
PSI AT BOOM	None	
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME	OK 7-20-14	1-W 2-T.S
CARRIER SOURCE/TYPE	Monterey Mushroom well water	
CARRIER pH/TEMPERATURE	7.0 70° F	
EQUIPMENT used to MEASURE pH	ph strip	

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 7-20-14

Description of Equipment Used to Measure Liquid Test Substances, Adjuvant and Carrier Water

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID No. Ennes **Application No.** 5

The pipettes used to measure test substances or adjuvants are 5 ml, 10 ml and 25 ml (TD) plastic pipettes. The 5 ml and 10 ml pipettes measure in 0.1 ml increments and the 25 ml pipette measures in 0.2 ml increments.

The following pipettes were used in this study:

Test Substance	Adjuvant
____ 5 ml	____ 5 ml
____ 10 ml	____ 10 ml
X 25 ml	____ 25 ml

OK 7-20-14

Equipment used to remove volume of water: None

X	No Surfactant Used
____	T.S. Mixed Prior to Surfactant
____	Surfactant Mixed Prior to T.S.

The graduated cylinders used to measure test substance, adjuvant or carrier water are 50,100, 250, 500, 1000 and 4000 mls. The 50 and 100 ml cylinders measure in increments of 1 ml, 250 ml cylinder in 2 ml increments, 500 ml cylinder in 5 ml increments, 1000 ml cylinder in 10 ml increments and the 4000 ml cylinder in 50 ml increments. Carrier water for airblast sprays is measured with a Scienco flow meter which measures water out to hundredths (i.e. 1.00)

The following cylinders or flow meter were used in this study:

Test Substance	Adjuvant	Carrier Water
____ 50 ml	____ 50 ml	____ 50 ml
____ 100 ml	____ 100 ml	____ 100 ml
____ 250 ml	____ 250 ml	X 250 ml
____ 500 ml	____ 500 ml	____ 500 ml
____ 1000 ml	____ 1000 ml	____ 1000 ml
____ 4000 ml	____ 4000 ml	____ 4000 ml

OK 7-20-14

X 10 ml pipette

____ Scienco Flow meter

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Page: 44

Signature: David Ennes **Date:** 7-20-14

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

H. ADDITIONAL INFORMATION FROM **APPLICATION NUMBER** 5

APPLICATION DATE 7-20-14 *(Complete a separate form for each application date)*

PLANT GROWTH & ENVIRONMENTAL DATA AT THE TIME OF APPLICATION	Enter data in this column
CROP HEIGHT *(Measure or estimate crop height, include units of measurements)*	½-1 inches
CROP GROWTH STAGE *(e.g. seed, vegetative, bud, bloom, fruiting, #true leaves)*	Fruiting
CROP VIGOR *(e.g. poor, fair, good, variable)**	Good
PLANT SURFACE MOISTURE *(Check one)*	**SATURATED**__ **DAMP**__ **DRY** X **NA**__
ESTIMATED % OF SOIL AREA COVERED BY CROP CANOPY	20
MEASURED AIR TEMPERATURE *(Check F or C)*	72.1 **°F** X **°C**__
MEASURED WIND SPEED *(Check MPH or Km/Hr)*	0 **MPH** X **Km/Hr**__
WIND DIRECTION FROM *(Check one)* **N**__ **NE**__ **E**__ **SE**__ **S**__ **SW**__ **W**__ **NW**__ or **NO WIND** X	
ESTIMATED % OF CLOUDS IN THE SKY	Does not apply
MEASURED RELATIVE HUMIDITY%	75
DEW *(heavy, light, none, etc.)*	light
DESCRIPTION OF SOIL TILTH *(smooth, firm, packed, cloddy, etc.)*	Smooth packed
ESTIMATE OF SOIL SURFACE MOISTURE *(wet, moist, dry, etc.)*	moist
SOIL TEMPERATURE *(Check F or C)*	70 **°F** X **°C**__
DEPTH OF MEASUREMENT OF SOIL TEMPERATURE *(Check INCHES or cm)*	4 **INCHES** X **cm**__

Compost

*IF CROP VIGOR IS POOR OR VARIABLE, EXPLAIN: _____

DK 7-20-14

BRIEFLY DESCRIBE PROCEDURE USED TO CLEAN APPLICATION EQUIPMENT Followed the same procedure for cleaning as on Part 6H dated 6-19-14

DK 7-20-14

CLEANED BY DK *(Initials)*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-20-14

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

I. PASS TIMES FOR **APPLICATION NUMBER** 5

APPLICATION DATE 7-20-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

RECORD PASS TIME AND PASS DIRECTION - *Complete the table by providing the time required to make each pass of the application equipment through the plot and direction of that pass (e.g. NE).*

	TREATMENT 03		TREATMENT __		
PASS NUMBER	① TIME	DIRECTION	PASS NUMBER	TIME	DIRECTION
1	220.97 sec	Fogging of room	1		
2			2		
3			3		
4			4		
5			5		
6		OK	6		OK
7		7-20-14	7		7-20-14
8			8		
9			9		
10			10		
11			11		
12			12		
TOTAL PASS TIME	220.97 sec				

① Time that the fogging unit was running OK 7-20-14

PROVIDE A BRIEF NARRATIVE SUMMARY OF THE APPLICATION

(E.g. *"Test substance was applied to the treated test plot in two passes; one pass down each side of the row. Each pass was applied to the soil, in a 3 ft. band out from the tree, with the spray boom 24 inches above the soil."*)

The test substance was applied to the treated mushroom boxes during 8-15 days of case hold 2 days before 1st sample harvest. The fogging unit orofice was pointed upward towards the ceiling of the growing room at a 45° angle At the time of the application the door to the growing room wes closed and the ventilation system was shut off. The fogging unit was ran past the time required for calibration to ensure that all of the T.S. solution was dispersed.

OK 7-20-14 NARRATIVE ENTERED BY OK *(Initials)*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-20-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

J. POST APPLICATION RATE CONFIRMATION FOR **APPLICATION NUMBER** 5

APPLICATION DATE 7-20-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

CALCULATION OF ACTUAL APPLICATION RATE - *Using information such as total pass time, plot size, tank mix amounts, and discharge rate (average of 3 outputs) determine the actual amount of formulated test substance applied to treated plots. Even if a target rate was used for the pre-application calculations, the data from the calibration (average of 3 outputs) must be used for calculating the application rate. (If the protocol does not include a rate of formulated product, then the amount of active ingredient should be determined.) Convert this amount to the amount applied per acre (or hectare), and determine deviation from target application in the protocol, rounded to the nearest whole percent. Show all calculations and label all units.* ***It is not sufficient to merely compare the actual pass times*** to the "practice" pass times. *The example formulas listed at the bottom of* 6J *may be used to calculate the application rate.* ***Calculations may be entered on a separate page placed after this one, if there is not enough space below.***

EXAMPLE FORMULAS: The formulas below may be used to calculate the amount of test substance (TS) applied per acre as required in Part 6I. Other formulas may be used instead; however, it is not sufficient to merely compare the actual pass times to the "practice" pass times.

1) Total Pass Time x Discharge Rate/Nozzle x #Nozzles = Volume of Tank Mix applied to Plot

2) Volume of Tank Mix applied to Plot x $\frac{\text{Amount of TS in Tank Mix}}{\text{Total Volume of Tank Mix}}$ = Amount of TS applied to Plot

3) Amount of TS applied to Plot x $\frac{\text{43,560 sq ft per acre}}{\text{Plot area treated in sq ft}}$ = Amount of TS applied per acre

****

DISCHARGE RATE (ml/sec or g/sec): 28.5 ml/1h = 167.05 cc

ACTUAL AREA TREATED (*swath width or treated row or bed width x # of passes x length of plot*): 9.42 ft x 7.67 ft x 6.83 ft = 493.48 ft3

Note: *Use bed width for plots with multi-row beds.*

The growing room was vented at 10:40 AM
Visually looked at the graduated cylinder that held the T.S. solution and observed that all of the solution had been dispersed by the cardinal fogger into the room

$$\frac{14.6 \text{ ml T.S} \times 10000 \text{ ft}^3}{493.48 \text{ ft}^3} = 295.86 \text{ ml}/10000 \text{ ft}^3$$

$$\frac{295.86 \text{ ml}/10000 \text{ ft}^3 \text{ (Actual rate)}}{296 \text{ ml}/10000 \text{ ft}^3 \text{ (protocol rate)}} \times 100 = 99.95\% \text{ of target rate}$$

0% deviation from target

WAS ACTUAL APPLICATION RATE WITHIN -5% TO +10% OF PROTOCOL RATE?

(Check one) YES ✓ NO ___ IF NO, **Contact the Study Director immediately.**

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-20-14

FIELD ID NO: Pyrethrins+PBO/Mushroom ID No. 05954.14-CA52 Ennes

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

K. POST TREATMENT RECORDS FOR **APPLICATION NUMBER** 5

APPLICATION DATE 7-20-14 *(Complete a separate form for each application date)*

Was There Any Visible Phytotoxicity Damage? *(Check one)* YES___ NO✓ DK 7-28-14 *(Initials/date)*

If YES, then contact the Study Director. If a digital camera is available, email digital photograph(s) to the Study Director along with a detailed explanation of the damage. A written description should also be entered below:

DK 7-28-14

PHYTOTOXICITY DESCRIBED BY: _____ *(Initials/date)*

DATE STUDY DIRECTOR WAS CONTACTED: _____ CONTACTED BY: _____ *(Initials/date)*

Enter the requested information below for both the first rainfall and first irrigation after each application, regardless of whether subsequent applications were made prior to the first rainfall or irrigation. The rainfall/irrigation data entered below should be transcribed from the data included in Part 9 unless otherwise indicated on this page. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below.** "NONE BEFORE HARVEST" OR "NONE BEFORE SAMPLING" MAY BE ENTERED, IF APPLICABLE.

DATE OF FIRST RAIN *(Note the date of first rainfall after this application.)*		
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST RAINFALL (*Check DAYS or HOURS*) (*Enter #hours if first rainfall was on the date of application.*)		**DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES or mm*)	Does not apply	**INCHES**___ DK 7-28-14 **mm**___
RAIN INFORMATION RECORDED BY *(Initials/date)*		
TYPE OF IRRIGATION *(e.g. overhead, trickle, flood)*	Fog	
DATE OF FIRST IRRIGATION *(Note the date of first irrigation after this application.)*		7-20-14
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST IRRIGATION (*Check DAYS or HOURS*) (*Enter #hours if first irrigation was on the date of application.*)		NOT known **DAYS**___ **HOURS**___
AMOUNT OF WATER (*Check INCHES, mm, or mL*)		NOT measured **INCHES**___ **mm**___ **mL**___
IRRIGATION INFORMATION RECORDED BY *(Initials/date)*	DK 9-11-14	

If the data entered above differ from the rainfall/irrigation data included in Part 9, explain: DK 9-11-14

_____ *Initials/date*: _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR **APPLICATION NUMBER** 6

INSTRUCTIONS: Complete a copy of this form (PHOTOCOPY IF NECESSARY) for additional times when a complete calibration or calibration-recheck of application equipment is required.

EQUIPMENT IDENTIFIER_____

DISCHARGE CALIBRATION DATE_____ PERFORMED BY_____ *(INITIALS)*

APPROXIMATE TIME OF DAY THAT THE CALIBRATION WAS PERFORMED_____

PRESSURE OR OTHER STANDARD SETTING UTILIZED IN CALIBRATION_____

DISCHARGE UNITS MEASURED *(e.g. ml, oz., grams)* _____

INSTRUMENT USED TO MEASURE WATER *(e.g. 100 ml graduated cylinder)* _____

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION _____

Refer to Part 6C dated 6-19-14
Same calibration used for APP 6
DR 7-28-14

DISCHARGE CALIBRATION *Record time applicator is allowed to discharge. Collect output from each nozzle or hopper.* Record this value in " RUN" Row 1 under the appropriate outlet. *Calculate the total and average discharge for all the nozzles/hoppers. Entry prompts have been provided for 3 discharge calibration runs. Calculate sums and averages of each nozzle/hopper outlet AND whether the results are within 5% (if applicable). Show all calculations.*

RUN	TIME (sec)	Nozzle/hopper Outlet Number Along Boom (see equipment diagram for nozzle numbers)													
		1	2	3	4	5	6	7	8	9	10	11	Total	Output/ Nozzle	Output/ Second
1															
2															
3															
Total (required)															
Average (optional)															

CALCULATIONS:

Was this a recheck of discharge calibration or a target output? *(Check one)* YES_____ NO_____
If yes, were results within 5% of original calibration or target output? *(Check one)* YES_____ NO_____
If this is a 3-discharge calibration run, are the averages (last column on the right) of the second and third runs within 5% of the first run? *(Check one)* YES_____ NO_____

An output consisting of an average of three runs or a target output may be used when calculating the sprayer output and amount of test substance to use. If this is a recheck (one run) then the results of the original calibration must be used. If the output result of the recheck is more than 5% different than the original calibration result, then two more runs are needed to produce a new, full calibration. The original calibration data, or a true copy, must be in this field data book.

ABOVE DATA ENTERED BY: David Ennes DATE: 7-28-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

F. VOLUME, MIXING AND DILUTION CALCULATIONS FOR **APPLICATION NUMBER(S)** 6

INSTRUCTIONS: Complete a separate form for each application, unless there are no changes in multiple applications. Show all calculations, formulas, and results below, define units of measure, and cite the initials of the person performing the calculations. Equations used in electronic (computer software) calculations in this trial must be transcribed or printed out and attached here. Computer-generated values (as opposed to those entered by the field cooperators) must be reviewed and clearly delineated by circling, initialing, and dating.

Refer to Part 6F dated 6-19-14
The same calculations were used
for application 6
OK 7-28-14

DESCRIBE HOLDING AND TRANSPORT OF TEST SUBSTANCE FROM STORAGE AREA TO LOCATION OF TANK MIXING *(E.g.: "Test substance held securely in an insulated cooler during transport to field site in the bed of a pickup truck" or "Tank mix prepared within walking distance of the chemical storage building")*

The test substance was transported in a cooler with blue ice in the back of a pickup truck on 7-25-14 to clovis, CA and stored in garage until 7-28-14. on 7-28-14 transported as above to monterey mushroom

ABOVE DATA ENTERED BY: David Ennes DATE: 7-28-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** 6 APPLICATION DATE 7-28-14

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST CALIBRATION/RECHECK WAS PERFORMED? *(Check one)* YES ✓ NO _____ (If YES, then a recheck is needed.)

INSTRUCTIONS: **Complete a separate form for each application date.** *Complete one column for each treated plot* **(use the Treatment Number as indicated in the protocol).** *Provide the name of the test substance (common chemical name or chemical code number); the batch or lot number of the test substance; the approximate time the test substance was mixed with the carrier and the approximate time the mixture was applied to the plots, along with* ***the initials of the person(s) mixing and spraying the tank mix****; the time of additional agitation (if any); the unique name or code for the application equipment used to apply this treatment; the placement of the test substance (e.g. broadcast, in-furrow, directed, knifed-in, banded); the amount of carrier, formulated product and other additives in the mix; the measuring equipment with increments; the distance (include units) of the nozzles above the canopy or ground (indicate which); the pressure in pounds per square inch at the boom; if treatment(s) were incorporated, the method and/or equipment used to incorporate the test substance mix (e.g. disked, rotovator, irrigated, etc.), depth to which the test substance was incorporated* ***or*** *the amount of water used to move the test substance into the soil; the time after treatment the incorporation activity was performed; and the carrier (normally water), its source (e.g. farm pond, city water), pH of the carrier and its temperature, and the equipment used to measure the carrier pH.*

	TRT Number 03	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION	8	TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE	Evergreen crop protection 60-6	
BATCH/LOT NUMBER	AB 4586	
TIME MIXED/INITIALS	7:56 AM DR	DR 7-28-14
TIME APPLIED/INITIALS	7:59 AM DR	
EQUIPMENT IDENTIFIER	Cardinal micron master fogger	
PLACEMENT OF TEST SUBSTANCE	Fogging of mushroom growing room	
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)	186.9 ml	See following page
VOLUME of WATER REMOVED from starting volume (if applicable)	None	DR 7-28-14
TEST SUBSTANCE (formulated product)	14.6 ml	
ADJUVANT OR SURFACTANT	None	
TOTAL VOLUME OF TANK MIX	201.5 ml	*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET	Fogger sprayed up into air in room	ORDER IN WHICH ITEMS WERE ADDED TO SPRAY MIXTURE* W=Water, TS=Test Substance, A=Adjuvant *e.g. 1-W, 2-TS, 3-A, 4-W
PSI AT BOOM	None	
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME	DR 9-11-14	1-W 2-TS
CARRIER SOURCE/TYPE	Monterey mushroom well water	
CARRIER pH/TEMPERATURE	7.0 62°F	
EQUIPMENT used to MEASURE pH	ph strip	

ABOVE DATA ENTERED BY: David Cramer *DATE:* 7-28-14

Description of Equipment Used to Measure Liquid Test Substances, Adjuvant and Carrier Water

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID No. Ennes **Application No.** 6

The pipettes used to measure test substances or adjuvants are 5 ml, 10 ml and 25 ml (TD) plastic pipettes. The 5 ml and 10 ml pipettes measure in 0.1 ml increments and the 25 ml pipette measures in 0.2 ml increments.

The following pipettes were used in this study:

Test Substance	Adjuvant	Equipment used to remove volume of water: None
____ 5 ml	____ 5 ml OK 7-28-14	X No Surfactant Used
____ 10 ml	____ 10 ml	____ T.S. Mixed Prior to Surfactant
X 25 ml	____ 25 ml	____ Surfactant Mixed Prior to T.S.

The graduated cylinders used to measure test substance, adjuvant or carrier water are 50,100, 250, 500, 1000 and 4000 mls. The 50 and 100 ml cylinders measure in increments of 1 ml, 250 ml cylinder in 2 ml increments, 500 ml cylinder in 5 ml increments, 1000 ml cylinder in 10 ml increments and the 4000 ml cylinder in 50 ml increments. Carrier water for airblast sprays is measured with a Scienco flow meter which measures water out to hundredths (i.e. 1.00)

The following cylinders or flow meter were used in this study:

Test Substance	Adjuvant	Carrier Water
____ 50 ml	____ 50 ml	____ 50 ml
____ 100 ml	____ 100 ml	____ 100 ml
____ 250 ml	OK 7-28-14 ____ 250 ml	X 250 ml
____ 500 ml	____ 500 ml	____ 500 ml
____ 1000 ml	____ 1000 ml	____ 1000 ml
____ 4000 ml	____ 4000 ml	____ 4000 ml
		____ Scienco Flow meter

X 10 ml pipette

Part 6
Page: 52

Signature: David Ennes **Date:** 7-28-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

H. ADDITIONAL INFORMATION FROM **APPLICATION NUMBER** 6

APPLICATION DATE 7-28-14 *(Complete a separate form for each application date)*

PLANT GROWTH & ENVIRONMENTAL DATA AT THE TIME OF APPLICATION	Enter data in this column
CROP HEIGHT *(Measure or estimate crop height, include units of measurements)*	1-1½ inches
CROP GROWTH STAGE *(e.g. seed, vegetative, bud, bloom, fruiting, #true leaves)*	Fruiting
CROP VIGOR *(e.g. poor, fair, good, variable)**	Good
PLANT SURFACE MOISTURE *(Check one)* **SATURATED**___	**DAMP**___ **DRY** X **NA**___
ESTIMATED % OF SOIL AREA COVERED BY CROP CANOPY	80
MEASURED AIR TEMPERATURE *(Check F or C)*	66.9 °F X °C___
MEASURED WIND SPEED *(Check MPH or Km/Hr)*	0 **MPH** X **Km/Hr**___
WIND DIRECTION FROM *(Check one)* **N**___ **NE**___ **E**___ **SE**___ **S**___ **SW**___ **W**___ **NW**___ or **NO WIND** X	
ESTIMATED % OF CLOUDS IN THE SKY	Does not apply
MEASURED RELATIVE HUMIDITY%	71
DEW *(heavy, light, none, etc.)* Compost	None
DESCRIPTION OF SOIL TILTH *(smooth, firm, packed, cloddy, etc.)* Compost	Smooth packed
ESTIMATE OF SOIL SURFACE MOISTURE *(wet, moist, dry, etc.)*	moist
SOIL TEMPERATURE *(Check F or C)*	66 °F ✓ °C___
DEPTH OF MEASUREMENT OF SOIL TEMPERATURE *(Check INCHES or cm)*	4 **INCHES** ✓ **cm**___

*IF CROP VIGOR IS POOR OR VARIABLE, EXPLAIN: _____

DR 7-28-14

BRIEFLY DESCRIBE PROCEDURE USED TO CLEAN APPLICATION EQUIPMENT Followed the same procedure for cleaning as on Part 6H dated 6-19-14

DR 7-28-14

CLEANED BY DR *(Initials)*

ABOVE DATA ENTERED BY: David Emmes *DATE:* 7-28-14

PART 6. APPLICATION RECORDS

I. PASS TIMES FOR **APPLICATION NUMBER** 6

APPLICATION DATE 7-28-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

RECORD PASS TIME AND PASS DIRECTION - *Complete the table by providing the time required to make each pass of the application equipment through the plot and direction of that pass (e.g. NE).*

	TREATMENT 03		TREATMENT __		
PASS NUMBER	① TIME	DIRECTION	PASS NUMBER	TIME	DIRECTION
1	205.31 sec		1		
2			2	OK	7-28-14
3	OK	7-28-14	3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
TOTAL PASS TIME	205.31 sec				

① Time that the fogging unit was running OK 7-28-14

PROVIDE A BRIEF NARRATIVE SUMMARY OF THE APPLICATION

(E.g. *"Test substance was applied to the treated test plot in two passes; one pass down each side of the row. Each pass was applied to the soil, in a 3 ft. band out from the tree, with the spray boom 24 inches above the soil."*)

The test substance was applied to the treated mushroom boxes between 1st and 2nd break, after first sample harvest 2 days before second harvest. The fogging unit orofice was pointed upward towards the ceiling of the growing room at a 45° angle At the time of the application the door to the growing room was closed and the ventilation system was shut off. The fogging unit was ran past the time required for calibration to ensure that all of the test substance solution was dispersed into the growing room

NARRATIVE ENTERED BY OK *(Initials)*

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 7-28-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

J. POST APPLICATION RATE CONFIRMATION FOR **APPLICATION NUMBER** 6

APPLICATION DATE 7-28-14 *(COMPLETE A SEPARATE FORM FOR EACH APPLICATION DATE)*

CALCULATION OF ACTUAL APPLICATION RATE - *Using information such as total pass time, plot size, tank mix amounts, and discharge rate (average of 3 outputs) determine the actual amount of formulated test substance applied to treated plots. Even if a target rate was used for the pre-application calculations, the data from the calibration (average of 3 outputs) must be used for calculating the application rate. (If the protocol does not include a rate of formulated product, then the amount of active ingredient should be determined.) Convert this amount to the amount applied per acre (or hectare), and determine deviation from target application in the protocol, rounded to the nearest whole percent. Show all calculations and label all units.* ***It is not sufficient to merely compare the actual pass times*** to the "practice" pass times. *The example formulas listed at the bottom of 6J may be used to calculate the application rate.* ***Calculations may be entered on a separate page placed after this one, if there is not enough space below.***

EXAMPLE FORMULAS: The formulas below may be used to calculate the amount of test substance (TS) applied per acre as required in Part 6I. Other formulas may be used instead; however, it is not sufficient to merely compare the actual pass times to the "practice" pass times.

1) Total Pass Time x Discharge Rate/Nozzle x #Nozzles = Volume of Tank Mix applied to Plot

2) Volume of Tank Mix applied to Plot x $\frac{\text{Amount of TS in Tank Mix}}{\text{Total Volume of Tank Mix}}$ = Amount of TS applied to Plot

3) Amount of TS applied to Plot x $\frac{\text{43,560 sq ft per acre}}{\text{Plot area treated in sq ft}}$ = Amount of TS applied per acre

****

DISCHARGE RATE (ml/sec or g/sec): $\frac{201.5 \text{ ml in}}{167.05 \text{ sec}}$

ACTUAL AREA TREATED (*swath width or treated row or bed width x # of passes x length of plot*): 9.42 ft x 7.67 ft x 6.83 ft = 493.48 ft³

Note: *Use bed width for plots with multi-row beds.*

The growing room was vented at 8:41 Am. Visually looked at the graduated cylinder that held the T.S. solution and observed that all of the solution had been dispersed by the Cardinal fogger into the room

$$\frac{14.6 \text{ ml T.S} \times 10000 \text{ ft}^3}{493.48 \text{ ft}^3} = 295.86 \text{ ml}/10000 \text{ ft}^3$$

$$\frac{295.86 \text{ ml}/10000 \text{ ft}^3 \text{ (Actual rate)}}{296 \text{ ml}/10000 \text{ ft}^3 \text{ (protocol rate)}} \times 100 = 99.95\% \text{ of target rate}$$

0.90 deviation from target

WAS ACTUAL APPLICATION RATE WITHIN -5% TO +10% OF PROTOCOL RATE?

(Check one) YES ✓ NO ___ IF NO, **Contact the Study Director immediately.**

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-28-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

K. POST TREATMENT RECORDS FOR **APPLICATION NUMBER** 6

APPLICATION DATE 7-28-14 *(Complete a separate form for each application date)*

Was There Any Visible Phytotoxicity Damage? *(Check one)* YES___ NO✓ DK 7-30-14 *(Initials/date)*

If YES, then contact the Study Director. If a digital camera is available, email digital photograph(s) to the Study Director along with a detailed explanation of the damage. A written description should also be entered below:

DK 7-30-14

_____ PHYTOTOXICITY DESCRIBED BY: _____ *(Initials/date)*

DATE STUDY DIRECTOR WAS CONTACTED: _____ CONTACTED BY: _____ *(Initials/date)*

Enter the requested information below for both the first rainfall and first irrigation after each application, regardless of whether subsequent applications were made prior to the first rainfall or irrigation. The rainfall/irrigation data entered below should be transcribed from the data included in Part 9 unless otherwise indicated on this page. **If irrigation is required by the protocol to incorporate the test substance, or if the test substance is applied by irrigation, then that event should be recorded below.** "NONE BEFORE HARVEST" OR "NONE BEFORE SAMPLING" MAY BE ENTERED, IF APPLICABLE.

DATE OF FIRST RAIN *(Note the date of first rainfall after this application.)*	
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST RAINFALL *(Check DAYS or HOURS) (Enter #hours if first rainfall was on the date of application.)*	**DAYS**___ **HOURS**___
AMOUNT OF WATER *(Check INCHES or mm)*	Does not apply **INCHES**___ DK 7-28-14 **mm**___
RAIN INFORMATION RECORDED BY *(Initials/date)*	
TYPE OF IRRIGATION *(e.g. overhead, trickle, flood)*	watering hose by hand
DATE OF FIRST IRRIGATION *(Note the date of first irrigation after this application.)*	7-28-14
TIME AFTER APPLICATION THAT PLOTS WERE EXPOSED TO FIRST IRRIGATION *(Check DAYS or HOURS) (Enter #hours if first irrigation was on the date of application.)*	Not known **DAYS**___ **HOURS**___
AMOUNT OF WATER *(Check INCHES, mm, or mL)*	Not measured **INCHES**___ **mm**___ **mL**___
IRRIGATION INFORMATION RECORDED BY *(Initials/date)*	DK 9-11-14

If the data entered above differ from the rainfall/irrigation data included in Part 9, explain: _____

DK 9-11-14

_____ *Initials/date*: _____

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

L.1. DIFFERENTIATION OF MULTIPLE TRIALS CONDUCTED IN CLOSE PROXIMITY*

ARE YOU CONDUCTING MORE THAN ONE TRIAL IN THIS STUDY? YES ✓ NO___

IS ANOTHER FIELD RESEARCH DIRECTOR IN THIS STUDY CONDUCTING A TRIAL WITHIN 20 MILES OF YOUR TRIAL(S)? YES___ NO ✓

If "NO" is checked twice, then no other input is needed except for signing and dating at the bottom of each page.

If "YES" is checked at least once, then an independently prepared tank-mix must be used in each trial, except in studies in which this is not applicable such as studies with granular formulations.

In order to differentiate these trials, select one option from Set 1 OR two options from Set 2.

If 3 or more trials in this study cannot be differentiated by the same options, then you should check all options that have been used, and explain below which options are differentiating between which trials.

If different crop varieties are being used as a differentiation option, then enter below information that explains why these varieties were chosen. Examples: Variety A produces large fruit, whereas Variety B produces small fruit. Variety A produces fruit with a smooth skin, whereas Variety B produces fruit with a rough skin. Varieties A and B are the two most commonly grown cultivars in this state.

If options are used that are listed in the protocol but are not listed in the table in Part 6.L.2, then enter descriptions of those options below.

Enter below any additional information that will improve the understanding of the options that have been chosen.

*Trials conducted in different calendar years are exempt from these requirements. (If separate trials by the same person or within 20 miles are conducted in late fall/early winter, then the differentiation options should be used to reduce the possibility of data rejection by a regulatory agency.)

Trial IDs of other trials in this study to which these options are being applied:

05954.14-CA53

Additional information:

CA52- white button mushroom

CA53- Oyster mushroom

An independently prepared tank mix will be used in each trial for each application

OK 6-19-14

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 6-19-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

L.2. DIFFERENTIATION OF MULTIPLE TRIALS (IF YOU CHECKED "YES" ON THE PREVIOUS PAGE)

Check the options (in the third column) used to differentiate the trials that you are conducting in this study:

Set	Option	√	Description
1	A		Trial sites must be separated by at least 20 miles (32 km)
	B	✓	First application or planting date (for annual crops) in each trial is separated by at least 30 days
	C		Different crop variety (different size or shape at maturity, rough vs. smooth surface, different amount of foliage shielding the commodity, different rate of growth, or representative of the major varieties grown within the region)—confirm with Study Director if this option will be chosen
2	A		Spray volume must vary by at least 25% of the lower volume (minimum 10 GPA difference) Example 1, Trial A has a volume of 20 GPA and Trial B has a volume ≥ 30 GPA Example 2, Trial A has a volume of 60 GPA and Trial B has a volume ≥ 75 GPA The trial with the lowest spray volume for the first application must remain the lowest for each application; the trial with the highest must remain the highest for each, and so on
	B		Use of an adjuvant (of any suitable type) in the tank mix for one trial vs. no adjuvant in the tank mix for another trial
	C		Different foliar application type: foliar directed or foliar broadcast (Do not use this option if the label instructions for this commodity will specify one type or the other)
	D		Different granular application type: broadcast or banded (only if label supports both types)
	E		Different types of application equipment be used in each trial (for example, tractor-pulled boom sprayer, tractor-pulled spreader, airblast sprayer, axial fan orchard sprayer, proptec sprayer, cannon mist sprayer, tower sprayer, over-row sprayer, tunnel sprayer, backpack sprayer, waist pack sprayer, hand gun, hand-held spreader, or shaker can)
	F		Different spray droplet size (fine, medium, coarse, very coarse, or extra coarse) This may be accomplished by changing nozzles and/or by changing spray pressure Document in the Field Data Book the droplet size that results from the pressure and nozzles used in the trial (nozzle catalog may be used as a reference) Coarse, very course, and extra course are appropriate for herbicides only
	G		Different incorporation method for soil-applied test substance: mechanical or irrigation
	H		Different band width for soil applications: band width must vary by at least 50% of the lower width
	I		Different irrigation type (drip or furrow or sprinkler/over-the-top) (Irrigation must be applied at least once after each application, but over-the-top irrigation must not be applied within one hour of an application, and irrigation is not needed following the last application if samples are to be collected on the same day)
	J		For test substances that must be applied through drip irrigation: surface drip line or buried drip line
	K		Different planting arrangement for annual crops: single row beds or multi-row beds (two or more rows on each bed)
	L		One trial shall have trellised plants and the other shall not
	M		Different training system for fruit trees (for example, central leader or open center)
	N		Different maturity of trees or bushes in fruit and nut studies—young trees or bushes in one trial and mature trees or bushes in the other (minimum 5 year age difference); all trees/bushes must be commercially productive
	O		Different soil series, type, or texture (only in trials in which applications are made to the soil)
	P		Different formulations of the test substance (within the types generally considered equivalent) (This option may be used only if the alternate formulation is included in Section 13 of this protocol or is added by protocol amendment)

ABOVE DATA ENTERED BY: David Ennes *DATE:* 6-19-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

M. APPLICATION EQUIPMENT MAINTENANCE AND REPAIR LOG

INSTRUCTIONS: Complete this form or provide equivalent information. Provide dates and a brief description of maintenance and repair work completed on the application equipment relevant to this trial. Be sure to date and initial all entries.

APPLICATION EQUIPMENT IDENTIFIER Cardinal Micron Master Fogger

EQUIPMENT USED FOR **APPLICATION NUMBERS** 1-6

INITIALS/DATE OK 9-8-14

RECORD DATES AND BRIEF DESCRIPTION OF ANY CALIBRATION, MAINTENANCE AND REPAIR WORK DONE ON THE APPLICATION EQUIPMENT, OR ATTACH TRUE COPIES OF THE LOGS.
ALSO RECORD SOP# FOLLOWED, IF APPLICABLE.

Initials and Date	Was Maintenance or Repair routine? (Check one) Yes	No	SOP#	Description
				Refer to the following page OK 9-8-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Borrowed Equipment Data Sheet

Field ID No.: Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Owner/Source: Cardinal Professional Products Woodland, CA

Description of equipment, e.g., type, make, and model: Cardinal micron master fogger

Year manufactured (when available): Not available

Year acquired (when available): 2014

Purpose: Fogging mushroom growing room

Condition upon receipt (e.g., good, needed repair) Good

Maintenance preformed (when applicable): None

Modifications required (when applicable): None

Cleaning/decontamination procedures preformed: Triple rinsed unit after each application

Field Research Director statement of suitability for use: This unit is suitable for use in this trial

Date of use: 6/19, 6/20, 6/25, 7/9, 7/20, 7/28/14

Time procedure initiated and completed: Refer to Part 6 G and I for each application

Part 6
Page: 60

Signature [signature] Date 9-8-14

Sample Collection

Part 7

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

A.1. GENERAL HARVESTING INFORMATION *INSTRUCTIONS: Complete a separate form for each sampling date.*

HARVEST DATE[1] 7-22-14 **SAMPLING DATE**[2] 7-22-14 **PHI**[3] 2 days after 5th application 1st break

[1] *Record the date of crop harvest (harvest defined as crop digging, crop cutting, picking, etc.)*
[2] *Enter the date the sampled crop items were placed in sample bags (i.e. sample collection)*
[3] *Record the number of days from last application to harvest (PHI)*

IF THE PHI IS 0 DAYS, WAS THE SPRAY DRY BEFORE THE CROP WAS HARVESTED? YES___ NO___ NA X
(Check NA if PHI>0 days or if the test substance was not sprayed, e.g. a granular application.)

DESCRIPTION OF HARVESTED CROP STAGE
(E.g. commercially mature lettuce heads, blueberries mature in size (mostly blue in color), mature plums for drying)
Commercially mature mushroom (market size)

Number of (check one) **Plants**_____ **Trees**_____ **Bushes**_____ **Areas** X **of the Plot from Which Each Sample was Collected**	4 mushroom boxes per plot +12 areas
Number and Location of Rows from Which Each Sample Was Collected *Examples: "6 middle rows" "All 3 rows" "1" (for single-row plot)*	4 mushroom boxes per plot
Minimum Number of (check one) **Fruit**_____ **Heads**_____ **Roots**_____ **Plants**_____ **Other** X (describe) **Actually Collected per Sample**	+12 mushrooms/sample *(If a minimum is required by the protocol)*
Number of (check one) **Plants**_____ **Trees**_____ **Bushes**_____ **at Each End, or** (check) **Length of Row Ends** X **, That Were Not Sampled**	Did not sample 4 inches on each end of boxes
Was Less Than 50% of the Harvestable Crop Sampled? (May be determined by visual estimation)	**YES** ✓ **NO**_____ *If* **no** *is checked, contact the Study Director*
Was Each Sample Collected in a Separate Run Through the Entire Plot?	**YES** ✓ **NO**_____ *If* **no** *is checked, contact the Study Director*
HARVESTING EQUIPMENT *(Provide a brief description of harvesting equipment, including make and model numbers, if appropriate.* ***Do not include gloves, sample bags, coolers, or scales.)***	
mushroom knife	
ORDER OF SAMPLE COLLECTION	TRT 01 sample A, B TRT 03 sample CF, DF

BRIEFLY DESCRIBE PROCEDURES UTILIZED TO HARVEST CROP. Provide enough details in addition to data entered above to ensure that protocol requirements have been met and to inform a data reviewer exactly how this crop was harvested. *Examples: "Hand-picked berries from one side of the row, then the other. Collected fruit from high and low, exposed and shielded areas." "Barley was cut 3-4 inches above the ground with a scythe and left on the ground to dry for hay samples. Each entire plot was cut."* ATTACH A SEPARATE SHEET IF NECESSARY.

There were two representative samples collected from each plot The mushrooms were pulled by hand from boxes and the stem was cut off with a knife at about the halfway point. The bottom of the stem was discarded and the top portion retained for the sample

Were harvested crop items collected directly into residue sample bags? YES✓ NO___

IF NO, PLEASE EXPLAIN DA 7-22-14

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-22-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

A.2. GENERAL SAMPLING INFORMATION--*Complete a separate form for each sampling date.*

DESCRIPTION OF SAMPLED CROP STAGE *(if different from harvested crop, such as dried plums, mint oil)*

Same as previous page

IF THE SAMPLING OCCURRED AFTER THE HARVEST DATE, DESCRIBE SAMPLE COLLECTION. ALSO, DESCRIBE ANY MODIFICATIONS TO THE HARVESTED CROP SUCH AS TRIMMING, CLEANING, CUTTING, DRYING AND/OR COMPOSITING SAMPLES. IF THE MODIFICATIONS ARE TOO COMPLEX TO BE DESCRIBED BELOW, ATTACH A SEPARATE SHEET THAT CLEARLY DESCRIBES THE MODIFICATION PROCEDURES

Include a description of equipment, duration of procedure(s), temperatures, estimated moisture content, etc., as appropriate.

The stems of each mushroom collected were cut with a knife about at the halfway point. The bottom of the stem was discarded and the cap and other half of stem were retained for samples. The discarded stems for all samples were placed into trash disposal. As the mushrooms were collected any loose adhering media on mushrooms was lightly brushed off with a clean gloved hand.

DK 9-11-14

CHECK ALL PROCEDURES USED TO PREVENT CONTAMINATION OF RESIDUE SAMPLES

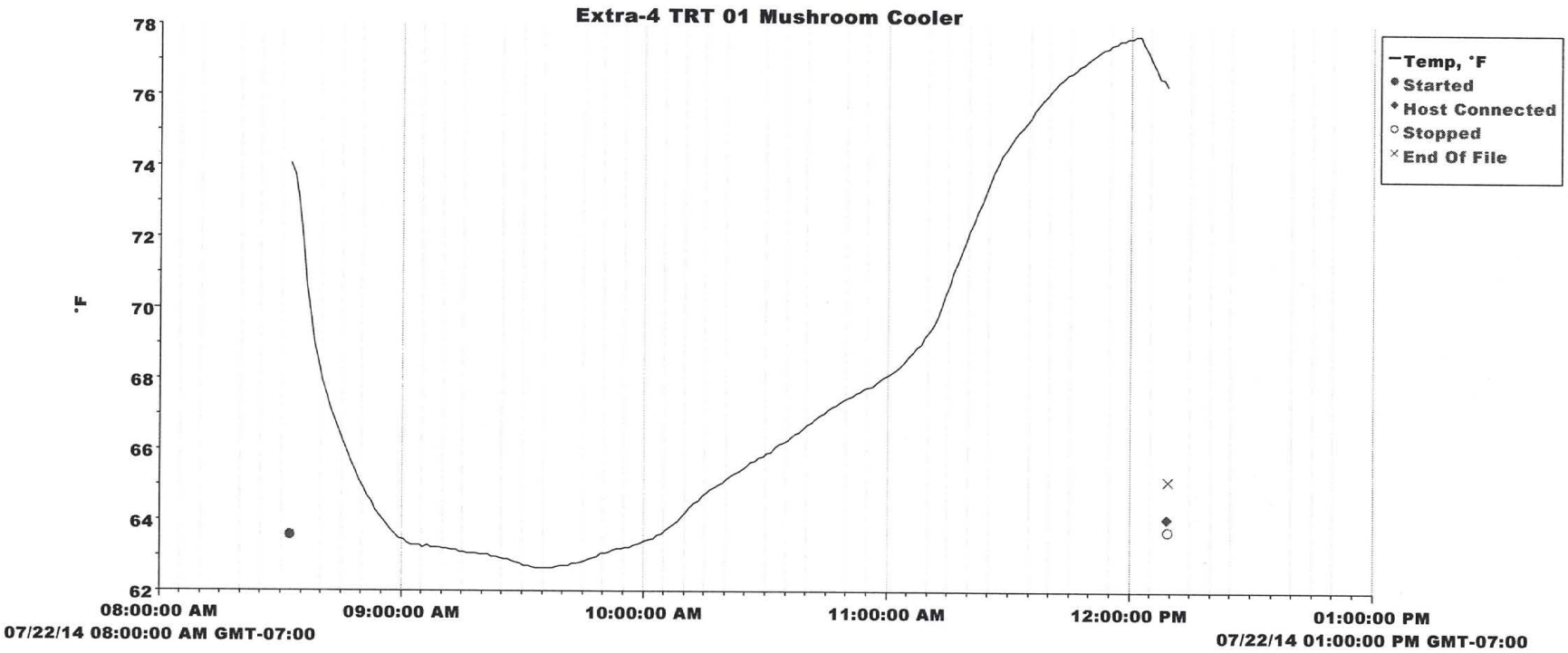
- X UNCONTAMINATED GLOVES WORN AND CHANGED BETWEEN SAMPLES
- ___ TREATMENTS WERE SAMPLED BY DIFFERENT PEOPLE
- X PHYSICALLY SEPARATED TREATED AND UNTREATED SAMPLES
- ___ CLEANED SAMPLING EQUIPMENT BETWEEN COLLECTIONS OF EACH TREATMENT
- X OTHER, EXPLAIN: The mushroom knife was cleaned with soap and water prior to sampling, between samples and after sampling

DESCRIBE HOLDING AND TRANSPORT OF SAMPLES FROM FIELD TO FREEZER

(E.g. Sample bags placed in cooler with blue ice, then transported by pickup truck to research center for pitting. Following pit removal, sample bags were hand-carried to freezer.)

The samples were transported in separate coolers with dry ice, Hobo data logger Extra-4 with TRT01 cooler and Extra-6 with TRT03 cooler. The data loggers were placed on top of residue bags at the top of the coolers. The coolers were transported in the back of a pickup truck to the freezer room and placed into IR-4 UTC and TRT chest freezers. When samples placed into freezer they were partially frozen since they were in contact with the dry ice in bottom of coolers.

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-22-14



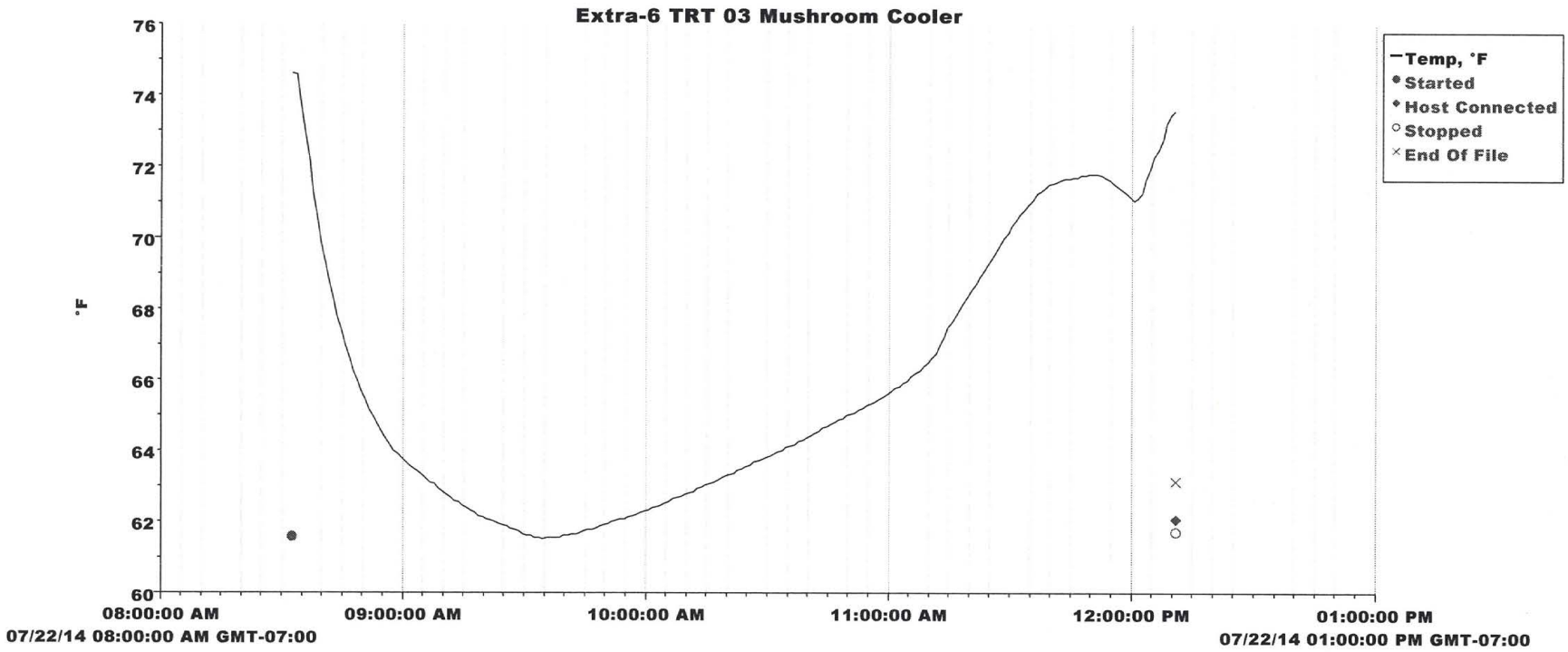
Samples were on dry ice
OK 9-8-14

Transport Cooler Temperature
OK 7-22-14

Hobo started at 8:32 Am
Hobo stopped at 12:09 pm
OK 7-22-14

Part 7
Page: 3

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes



Samples were on dry ice
OK 9-8-14

Transport cooler temperature
OK 7-22-14

Hobo started at 8:32 AM
Hobo stopped at 12:11 pm
OK 7-22-14

Part
Page: 7 4

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: _____Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

B. SPECIFIC SAMPLE INFORMATION AND INVENTORY

INSTRUCTIONS: Complete this form ***or*** *provide equivalent information.* **USE A SEPARATE PAGE FOR EACH SAMPLE DATE.** *Enter the date the individual samples were collected (***do not enter the harvest date when this date is different from sample date***), the sample ID (see protocol Section 18 for Sample ID code), a brief description of the crop part sampled (e.g. turnip roots, turnip tops, tomato fruit, corn forage etc.,), the weight of the sample, the approximate time of day of* **completion of each sample collection–i.e., sample placed in sample bag following any modifications** *(e.g., 10:15 a.m.), the approximate time of day that each sample was placed in a freezer, the approximate time interval between completion of collection of each sample (***placement of the sample in sample bag***) and the placement of the sample in freezer (e.g., 45 minutes), the identification code of the freezer where the samples are stored, and the initials of the person providing the above information and the date it is entered on this form.*

SAMPLE COLLECTION DATE: 7-22-14

SAMPLE ID*	CROP FRACTION	WEIGHT (INCLUDE UNITS)	APPROXIMATE TIME OF DAY OF COMPLETION OF SAMPLE COLLECTION	APPROXIMATE TIME OF DAY THAT SAMPLE WAS PLACED IN FREEZER	APPROXIMATE ELAPSED TIME TO FREEZER FROM SAMPLE COLLECTION	FREEZER ID	INITIALS & DATE
A	Mushroom	2.20 lbs	7:59 AM	12:02 PM	4 hr 3 min	UTC Chest Freezer	DR 7-22-14
B	↓	2.14 lbs	8:07 AM	↓	3 hr 55 min	↓	↓
CF	↓	2.20 lbs	8:15 AM	↓	3 hr 47 min	FRT Chest Freezer	↓
DF	↓	2.24 lbs	8:30 AM	↓	3 hr 32 min	↓	↓
			DR	7-22-14			

* See Protocol Section 18 for assigned Sample ID code

Was a GLP-maintained scale used to determine weight of residue samples? YES____ NO ✓

CROP DESTRUCT: Please describe in Part 5I of this Field Data Book how the (leftover) treated crop has been destroyed or handled in such a way that it cannot be consumed as a human food or animal feed.

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-22-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

A.1. GENERAL HARVESTING INFORMATION *INSTRUCTIONS: Complete a separate form for each sampling date.*

HARVEST DATE[1] 7-30-14 **SAMPLING DATE**[2] 7-30-14 **PHI**[3] 2 days after 6th application 2nd Break

[1] *Record the date of crop harvest (harvest defined as crop digging, crop cutting, picking, etc.)*
[2] *Enter the date the sampled crop items were placed in sample bags (i.e. sample collection)*
[3] *Record the number of days from last application to harvest (PHI)*

IF THE PHI IS 0 DAYS, WAS THE SPRAY DRY BEFORE THE CROP WAS HARVESTED? YES___ NO___ NA X
(Check NA if PHI>0 days or if the test substance was not sprayed, e.g. a granular application.)

DESCRIPTION OF HARVESTED CROP STAGE
(E.g. commercially mature lettuce heads, blueberries mature in size (mostly blue in color), mature plums for drying)
Commercially mature mushroom (market size)

Number of (check one) **Plants**____ **Trees**____ **Bushes**____ **Areas** X **of the Plot from Which Each Sample was Collected**	4 mushroom boxes + 12 areas
Number and Location of Rows from Which Each Sample Was Collected *Examples: "6 middle rows" "All 3 rows" "1" (for single-row plot)*	4 mushroom boxes
Minimum Number of (check one) **Fruit**____ **Heads**____ **Roots**____ **Plants**____ **Other** X (describe) **Actually Collected per Sample**	+12 mushrooms/sample *(If a minimum is required by the protocol)*
Number of (check one) **Plants**____ **Trees**____ **Bushes**____ **at Each End, or** (check) **Length of Row Ends**____, **That Were Not Sampled**	Did not sample ~4 in on each end of boxes
Was Less Than 50% of the Harvestable Crop Sampled? (May be determined by visual estimation)	**YES** ✓ **NO**____ *If* **no** *is checked, contact the Study Director*
Was Each Sample Collected in a Separate Run Through the Entire Plot?	**YES** ✓ **NO**____ *If* **no** *is checked, contact the Study Director*

HARVESTING EQUIPMENT *(Provide a brief description of harvesting equipment, including make and model numbers, if appropriate.* ***Do not include gloves, sample bags, coolers, or scales.)***

mush room knife

ORDER OF SAMPLE COLLECTION TRT 03 Sample EF, FF

BRIEFLY DESCRIBE PROCEDURES UTILIZED TO HARVEST CROP. Provide enough details in addition to data entered above to ensure that protocol requirements have been met and to inform a data reviewer exactly how this crop was harvested. *Examples: "Hand-picked berries from one side of the row, then the other. Collected fruit from high and low, exposed and shielded areas." "Barley was cut 3-4 inches above the ground with a scythe and left on the ground to dry for hay samples. Each entire plot was cut."* ATTACH A SEPARATE SHEET IF NECESSARY.

Followed the same procedure as on Part 7.A.1 dated 7-22-14 except there were no untreated samples collected only treated samples

OK 7-30-14

Were harvested crop items collected directly into residue sample bags? YES ✓ **NO**___

IF NO, PLEASE EXPLAIN OK 7-30-14

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-30-14

Total number of pages in this section at initial pagination: 6 OK 9-16-14

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

A.2. GENERAL SAMPLING INFORMATION--*Complete a separate form for each sampling date.*

DESCRIPTION OF SAMPLED CROP STAGE *(if different from harvested crop, such as dried plums, mint oil)*

Same as previous page

IF THE SAMPLING OCCURRED AFTER THE HARVEST DATE, DESCRIBE SAMPLE COLLECTION. ALSO, DESCRIBE ANY MODIFICATIONS TO THE HARVESTED CROP SUCH AS TRIMMING, CLEANING, CUTTING, DRYING AND/OR COMPOSITING SAMPLES. IF THE MODIFICATIONS ARE TOO COMPLEX TO BE DESCRIBED BELOW, ATTACH A SEPARATE SHEET THAT CLEARLY DESCRIBES THE MODIFICATION PROCEDURES

Include a description of equipment, duration of procedure(s), temperatures, estimated moisture content, etc., as appropriate.

Followed the same procedures as on Part 7.A.2 dated 7-22-14

DK 7-30-14

CHECK ALL PROCEDURES USED TO PREVENT CONTAMINATION OF RESIDUE SAMPLES

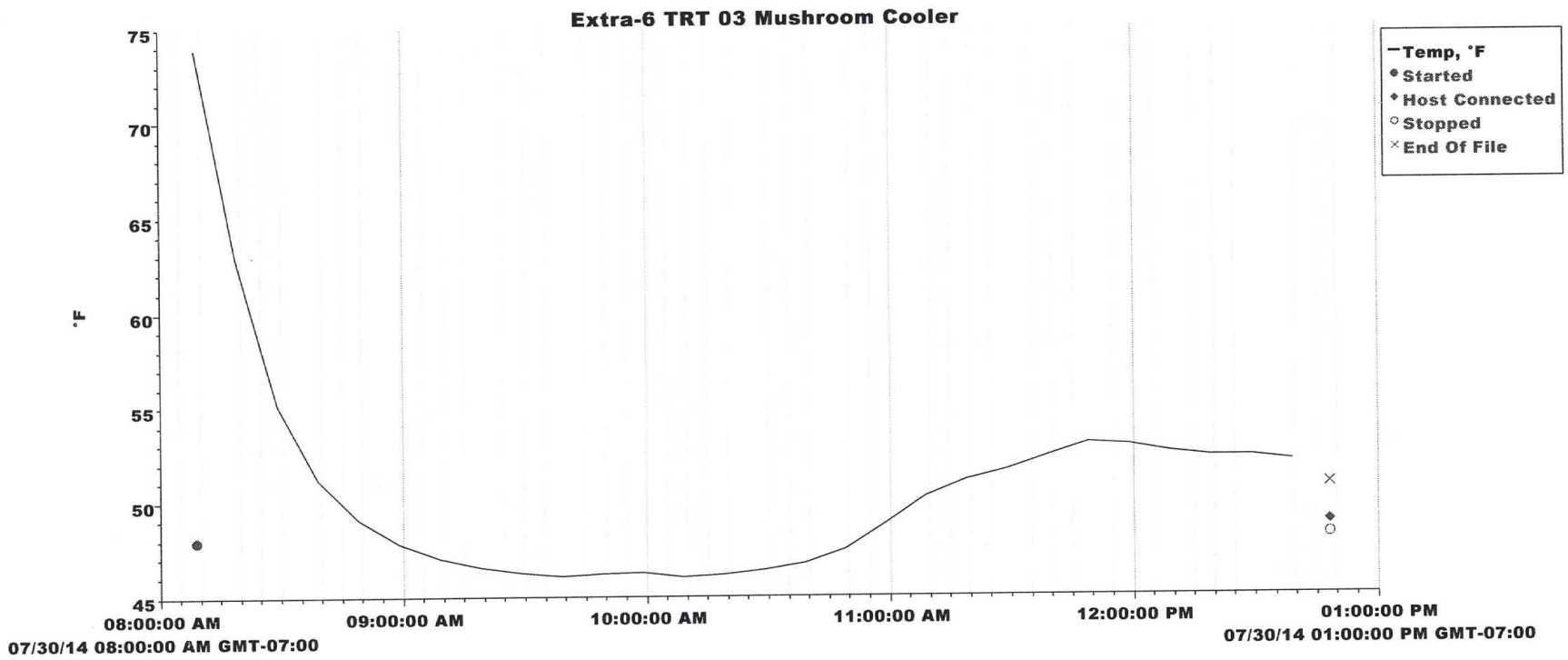
- X UNCONTAMINATED GLOVES WORN AND CHANGED BETWEEN SAMPLES
- ___ TREATMENTS WERE SAMPLED BY DIFFERENT PEOPLE
- ___ PHYSICALLY SEPARATED TREATED AND UNTREATED SAMPLES
- ___ CLEANED SAMPLING EQUIPMENT BETWEEN COLLECTIONS OF EACH TREATMENT
- X OTHER, EXPLAIN: The mushroom knife was cleaned with soap and water prior to sampling, between samples and after sampling

DESCRIBE HOLDING AND TRANSPORT OF SAMPLES FROM FIELD TO FREEZER

(E.g. Sample bags placed in cooler with blue ice, then transported by pickup truck to research center for pitting. Following pit removal, sample bags were hand-carried to freezer.)

The samples were transported in a cooler with dry ice in the back of a pickup truck. Hobo datalogger Extra-6 was placed on top of samples at the top of the cooler. The samples in the back of a pickup truck were transported to the freezer room and placed into IR-4 TRT Chest freezer. When samples placed into freezer the samples were partially frozen since they were in contact with the dry ice

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 7-30-14



Part
Page: 8

Samples placed
on dry ice
Ok 9-11-14

Transport Cooler Temperature
Hobo started @:09 AM
Hobo stopped 12:48 PM
Last reading at 12:39 PM
Ok 7-30-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

B. SPECIFIC SAMPLE INFORMATION AND INVENTORY

INSTRUCTIONS: Complete this form ***or*** *provide equivalent information.* **USE A SEPARATE PAGE FOR EACH SAMPLE DATE.** *Enter the date the individual samples were collected (***do not enter the harvest date when this date is different from sample date***), the sample ID (see protocol Section 18 for Sample ID code), a brief description of the crop part sampled (e.g. turnip roots, turnip tops, tomato fruit, corn forage etc.,), the weight of the sample, the approximate time of day of* **completion of each sample collection–i.e., sample placed in sample bag following any modifications** *(e.g., 10:15 a.m.), the approximate time of day that each sample was placed in a freezer, the approximate time interval between completion of collection of each sample (***placement of the sample in sample bag***) and the placement of the sample in freezer (e.g., 45 minutes), the identification code of the freezer where the samples are stored, and the initials of the person providing the above information and the date it is entered on this form.*

(2) EE ok 7-30-14

SAMPLE COLLECTION DATE: 7-30-14

SAMPLE ID*	CROP FRACTION	WEIGHT (INCLUDE UNITS) (1)	APPROXIMATE TIME OF DAY OF COMPLETION OF SAMPLE COLLECTION	APPROXIMATE TIME OF DAY THAT SAMPLE WAS PLACED IN FREEZER	APPROXIMATE ELAPSED TIME TO FREEZER FROM SAMPLE COLLECTION	FREEZER ID	INITIALS & DATE
EF	mushroom	948gr (2)	7:48 AM	12:40 PM	4hr 52min	TRT Chest Freezer	ok 7-30-14
FF	mushroom	958gr	8:06 AM	12:40 PM	4hr 34min	TRT Chest Freezer	ok 7-30-14
				ok 7-30-14			

* See Protocol Section 18 for assigned Sample ID code

Was a GLP-maintained scale used to determine weight of residue samples? YES____ NO ✓

CROP DESTRUCT: Please describe in Part 5I of this Field Data Book how the (leftover) treated crop has been destroyed or handled in such a way that it cannot be consumed as a human food or animal feed.

ABOVE DATA ENTERED BY: David Ennes *DATE:* 7-30-14

(1) used monterey mushroom scale SN 112248 scale only weighs in grams ok 7-30-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

C. FREEZER TEMPERATURE LOG

INSTRUCTIONS: Use this (or an equivalent) form when freezer temperatures are taken manually. For each day that temperatures are taken, directly record the date, the minimum and maximum temperature, the degree units (°F or °C), and provide the initials of the person entering the data. Photocopy this form if space for more freezer records is needed. When temperature records are monitored automatically, the original or certified true copy of the output (disk from data logger, computer printout, etc.) must be placed in this Field Data Book.

UNIQUE IDENTIFIER FOR FREEZER: IR-4 chest freezers UTC and TRT
Enter Freezer ID—may be make/model/serial# or assigned identifier. UTC freezer-3

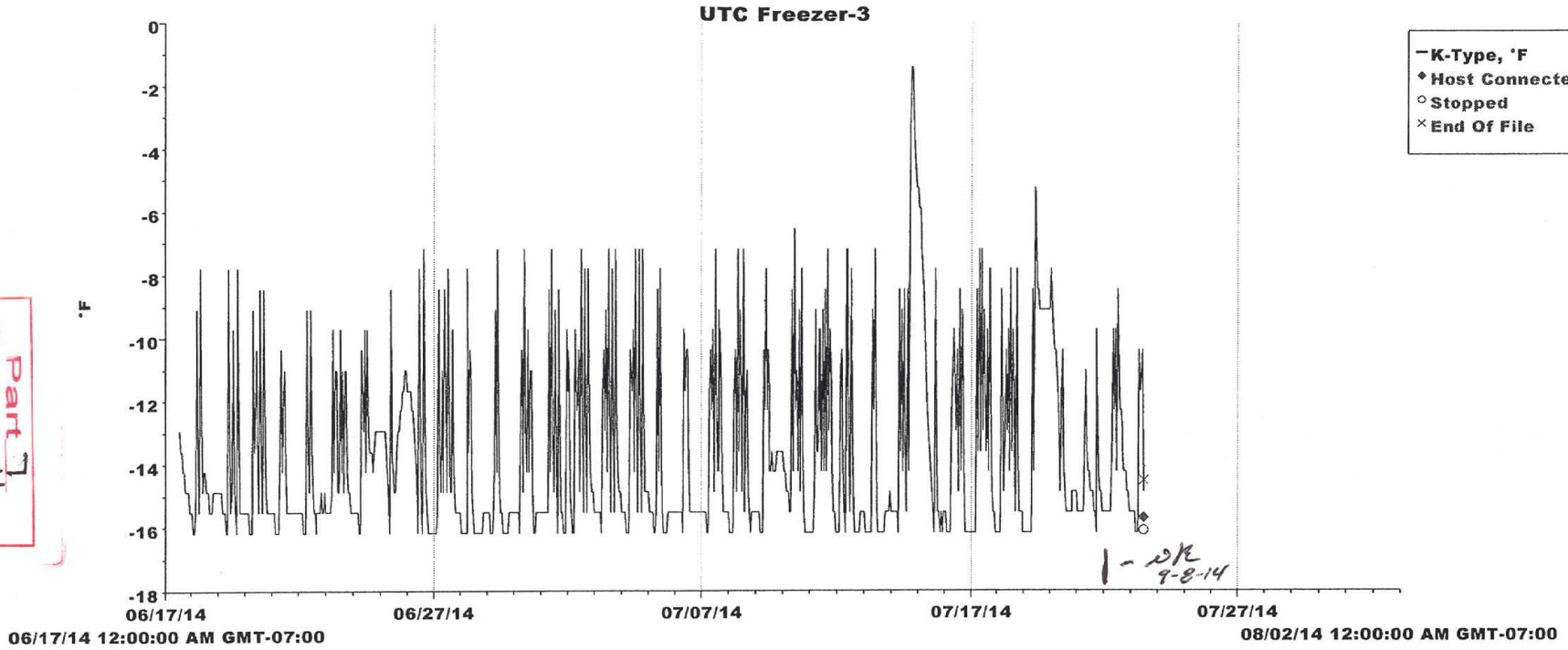
UNIQUE IDENTIFIER FOR FREEZER TEMPERATURE RECORDER: Hobo ID: TRT freezer-3
Enter Freezer Temperature Recorder ID—may be make/model/serial# or assigned identifier. OK 9-8-14

DATE	TEMP MIN/MAX	INITIALS	DATE	TEMP. MIN/MAX	INITIALS	DATE	TEMP MIN/MAX	INITIALS
			Refer	to the	followi	ng pa	ges	
				OK				
				9-8-14				

Unless otherwise noted in the table above, all temperature units are in (*Check one*):

°C___ °F✓ OK (Initials) 9-8-14 (Date)

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____



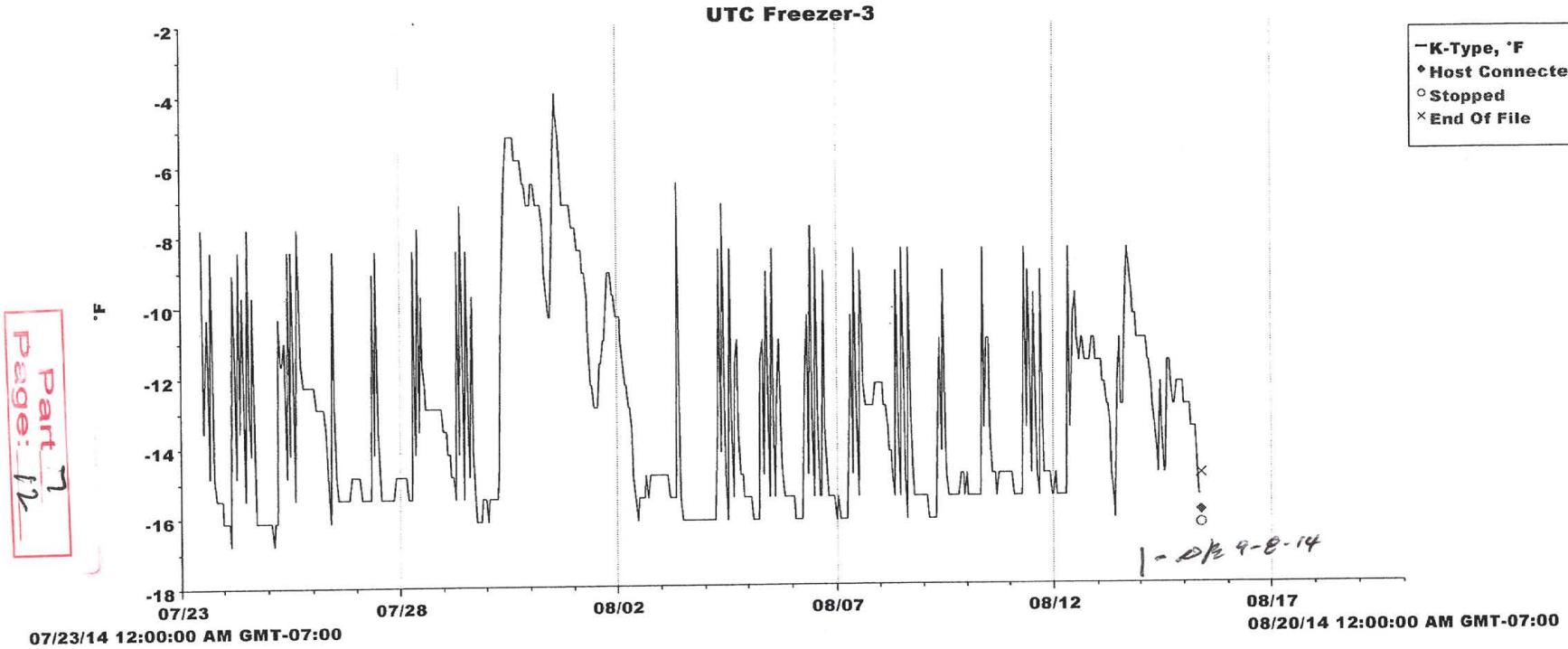
Part 5
Page: 11

Storage Date: 7-22-14 to 8-14-14
Temp (°F): Min: -16 Max: -4
Initials: ok Date: 9-8-14

Untreated freezer storage
original data
6-17-14 to 7-23-14
ok 7-23-14

This is an exact copy of the original
Original in UCKARE records
Initials: ok Date: 9-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes



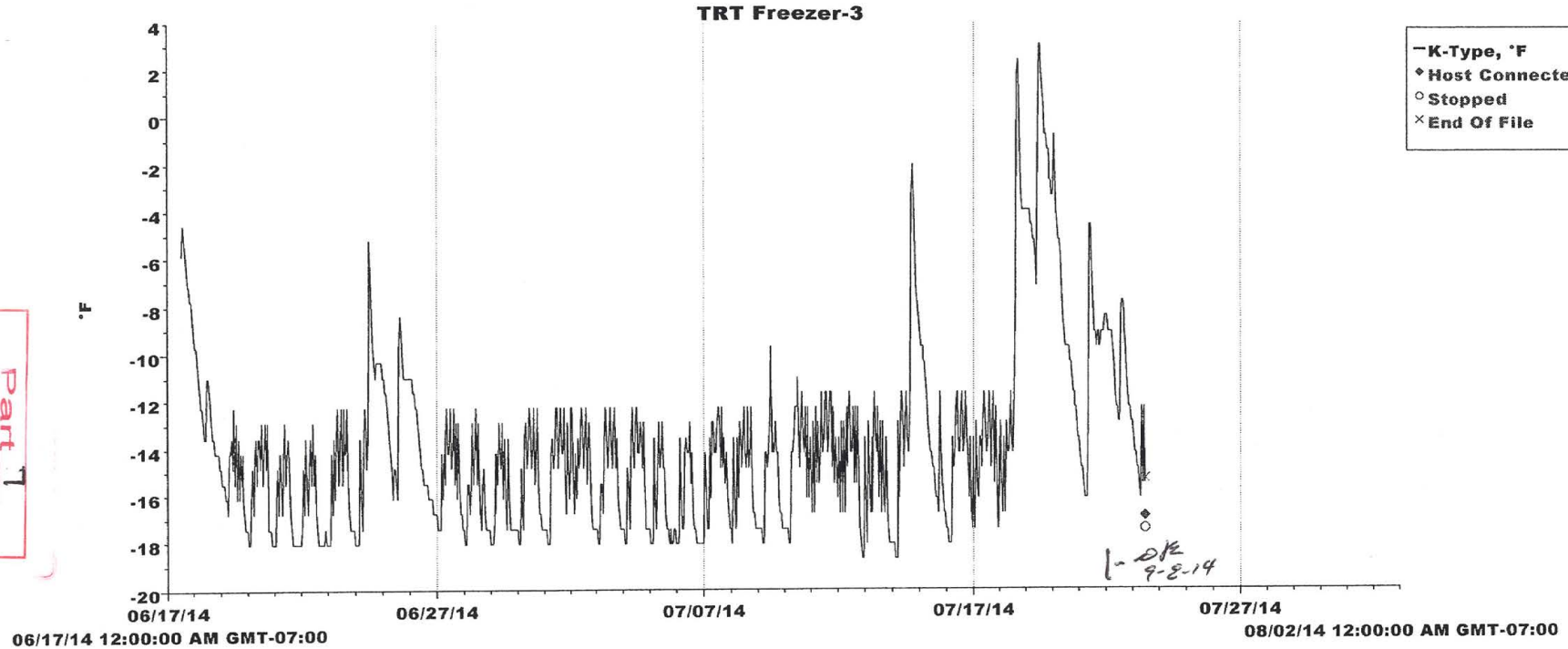
Part 7
Page: 12

1 - ok 9-8-14

Untreated freezer Storage
original data
7-23-14 to 8-15-14
8/15/14

This is an exact copy of the original
Original in UCKARE records
Initials: ok Date: 9-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes



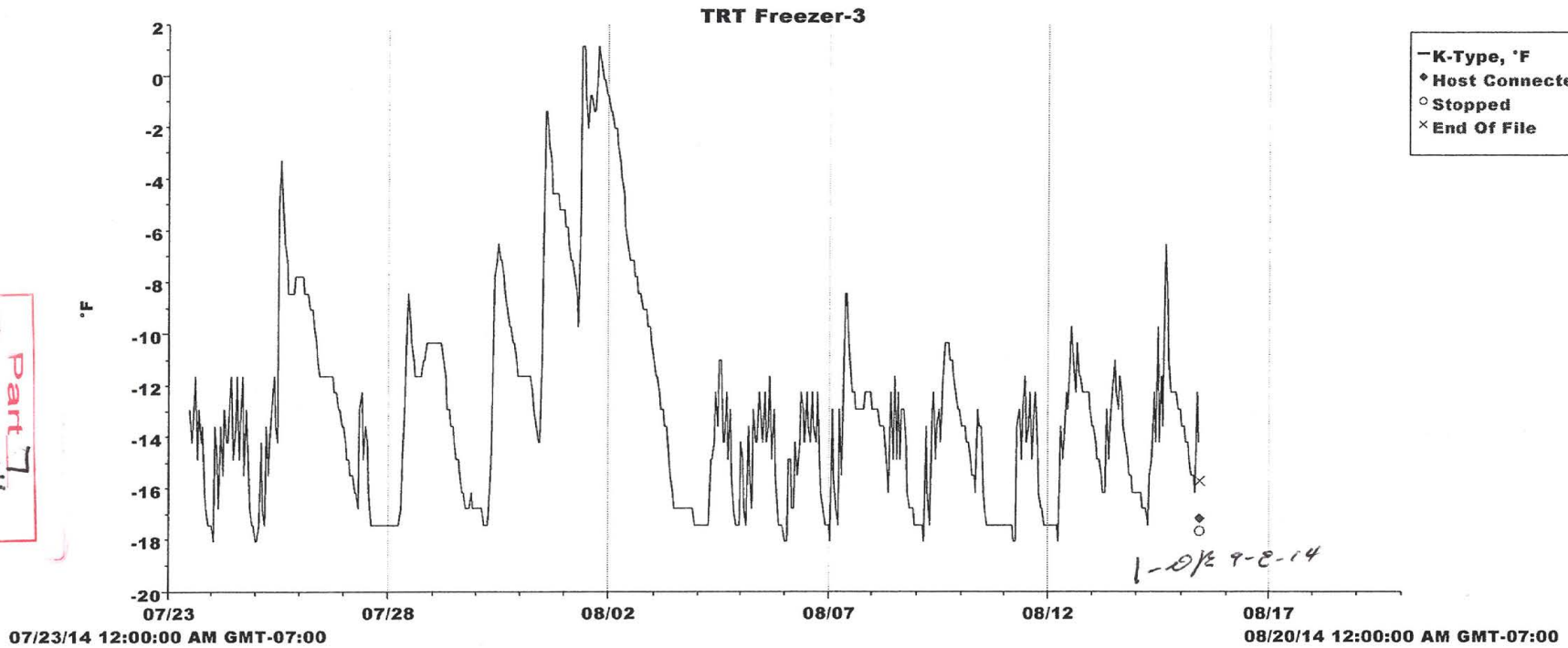
Part 1
Page: 13

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Treated freezer storage
original data
6-17-14 to 7-23-14
DR 7-23-14

Storage Date: 7-22-14 to 8-14-14
Temp (°F): Min: -18 Max: 1
Initials: DR Date: 9-8-14

This is an exact copy of the original
Original in UCKARE records
Initials: DR Date: 9-8-14



Part 7
Page: 14

1-OK 9-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Treated freezer Storage
Original data
7-23-14 to 8-15-14
KO 8/15/14

This is an exact copy of the original
Original in UCKARE records
Initials: OK Date: 9-8-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

D. FREEZER CONTENTS LOG

INSTRUCTIONS: Use this (or an equivalent) form to record the movement of residue samples in and out of the freezer. Note the trial ID # (e.g., 06788.99-CA45), "contents" (e.g. treated peppers), the day and time it entered the freezer and the initials of the person putting the samples into the freezer. Also note the date and time the same samples are removed from the freezer and the initials of the person removing the samples from the freezer.

UNIQUE IDENTIFIER FOR FREEZER: IR-4 chest freezers VTC and TRT
Enter Freezer ID—may be make/model/serial# or assigned identifier. DK 9-8-14

TRIAL ID#	CONTENTS	DAY/TIME IN	INITIALS	DAY/TIME OUT	INITIALS
	Refer to the following pages				
	DK 9-8-14				

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

RESIDUE SAMPLE FROZEN STORAGE LOG
Chest Freezer (UTC)
Model #: 253.13009100

This is an exact copy of the original
Original in UCKARE records
Initials: [illegible] Date: 9-8-14

LOCATION: Kearney Agricultural Research and Extension

Date/Time Stored	Study No.	Sample Type	Sampling Interval	No. of Bags/Sample ID	Stored By	Date/Time Removed	Removed By
4-23-14 8:48 Am	11256.14-CA63	Strawberry Fruit	2 DALA	2 A,B	OK	5-5-14 9:50 Am	OK
5/9/14 11:56 Am	A2659.14-CA01	Leaf Lettuce	32 DALA	2 A,B	VS	6-5-14 9:30 Am	VS
5-22-14 9:25 Am	11311-14-CA108	Cherry Fruit	43 DALA	2 A,B	OK	↓	↓
5-22-14 9:25 Am	11311.14-CA109	Cherry Fruit	43 DALA	2 A,B	OK	↓	↓
6-3-14 9:58 Am	③ 09934.14-CA88	Blackberries	1 DALA	2 A,B	VS	↓	↓
6-4-14 9:47 Am	11304.14-CA111	Peach	1 DALA	2 A,B	VS	① 7/10/14 9:55 Am	① VS
② ~~6-6-14 8:18 Am~~	~~11304.14-CA111~~	~~Peach~~	~~3 DALA~~	~~2~~			
6-9-14 10:47 Am	11079.14-CA114 ~~11090~~	Blackberries	0 DALA	2 AB	VS	6-16-14 VS 9:00 Am	VS
6-11-14 9:40 Am	10909.14-CA137	Blackberries ④	12 DALA	2 A,B	VS	↓	↓
6-16-14 3:05 pm	11315.14-CA36	orange fruit	31 DALA	2 A,B	OK	7-10-14 9:55 Am	VS
6-18-14 9:57 Am	11263.14-CA115	Blackberries	1 DALA	2 A,B	VS	↓	↓
6-25-14 9:14 Am	11279.14-CA49	Blackberries	1 DALA	2 A,B	VS	↓	↓
7-14-14 4:03 pm	11138.14-CA98	orange Fruit	0 DALA	2 A,B	OK	7-21-14 3:50 pm	OK
7-9-14 9:03 Am	AAFC14-053R-131	Tomato Fruit	1 DALA	2 A,B	OK	8-4-14 11:50 Am	OK
7-22-14 12:02 pm	05954.14-CA52	mushroom	2 Days after STA App	2 A,B	OK	8-14-14 10:40 Am	OK

Part 7
Page: 7b

① Entry error. VS 6-6-14 ② Entry error. VS 6/6/14 ③ Wrong FIN number. VS 9/3/14
④ Entry error. VS 9/5/14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

RESIDUE SAMPLE FROZEN STORAGE LOG

Chest Freezer (TRT)

Model #: 253.16582103

This is an exact copy of the original
Original in UCKARE records
Initials: DK Date: 9-8-14

LOCATION: Kearney Agricultural Research and Extension

Date/Time Stored	Study No.	Sample Type	Sampling Interval	No. of Bags/ Sample ID	Stored By	Date/Time Removed	Removed By
6-10-14 12:03 Pm	11304.14-CA111	Peach	7 DALA	2 G+H	LG	9:55 AM 7-10-14	LG
6-11-14 9:40 Am ②	10909.14-CA137	Blackberries ②	12 ~~1X~~ DALA	2 C+D	LG	9:00 AM LG 6-16-14	LG
6-16-14 3:05 pm	11315.14-CA36	orange Fruit	31 DALA	4 C, D E, F	DK	9:55 Am LG 7-10-14	LG
6-17-14 12:20 Am	11304.14-CA111	Peach	14 DALA	2 I, J	LG	↓	↓
6-18-14 9:57 Am	11263.14-CA115	Blackberries	1 DALA	2 C, D	LG	↓	↓
6-24-14 11:44 Am	11304.14-CA111	Peach	21 DALA	2 K, L	LG	↓	↓
6-25-14 9:14 am	11279.14-CA49	Blackberries	1 DALA	2 C, D	LG	↓	↓
6-25-14 2:03 pm	11315.14-CA36	orange fruit	40 DALA	2 M, N	DK	↓	↓
7-14-14 4:03 pm	11138.14-CA98	orange Fruit	0 DALA	2 C, D	DK	7-21-14 3:50 pm	DK
7-18-14 1:49 pm	AAFC14-053R-131	Tomato Fruit	0 DALA	4 G, H Q, R	DK	8-4-14 11:50 Am - 12:05 Pm	DK
7-19-14 9:34 Am	AAFC14-053R-131	Tomato Fruit	1 DALA	4 C, D E, F	DK	↓	↓
7-21-14 8:16 Am	AAFC14-053R-131	Tomato Fruit	3 DALA	4 I, J S, T	DK	↓	↓
7-22-14 12:02 pm	05954.14-CA52	mushroom	2 Days after 5th App	2 CF DF	DK	~~8-14-14~~ ① ~~10:40AM~~	~~①~~ DK
7-25-14 12:28 pm	AAFC14-053R-131	Tomato Fruit	7 DALA	4 K, L U, V	DK	↓	↓
7-28-14 9:05 Am	AAFC14-053R-131	Tomato Fruit	10 DALA	4 M, N W, X	LG	↓	↓

① Entry Error mushrooms not shipped on 8-4-14 DK 8-13-14 ② Entry error. Info from FTW. LG 9/5/14

Part 7
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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

RESIDUE SAMPLE FROZEN STORAGE LOG

Chest Freezer (TRT)

Model #: 253.16582103

This is an exact copy of the original
Original in UCKARE records
Initials: OK Date: 9-8-14

① (EE) OK 7-31-14

LOCATION: Kearney Agricultural Research and Extension

Part 1
Page: 1 of 1

Date/Time Stored	Study No.	Sample Type	Sampling Interval	No. of Bags/ Sample ID	Stored By	Date/Time Removed	Removed By
7-30-14 9:21 Am	11309.14-CA89	onion Bulb	6 DALA	2 G,H	KB	8-14-14 10:40 Am	OK
7-30-14 10:43 Am	AAFC14-061R-025	onion Bulbs	6 DALA	2 C,D	KB	8-14-14 10:40 Am	OK
7-30-14 12:40 pm	05954.14-CA52	mushroom	2 days after 6th App	2 EF FF	OK	8-14-14 10:40 Am	OK
7-31-14 11:12 Am	11342.14-CA59	Fresh Figs	14 DALA	2 C,D	OK	8-14-14 10:40 Am	OK
7-31-14 11:54 Am	11342.14-CA58	Fresh Figs	14 DALA	2 M N	OK	8-14-14 10:40 Am	OK
7-31-14 12:57 Pm	11304.14-CA12	Peach Fruit	3 DALA	2 C,D	KB	8-14-14 10:40 Am	OK
8-1-14 8:40 Am	AAFC14-053R-131	Tomato Fruit	14 DALA	4 O, P Y Z	OK	8-4-14 11:50Am-12:05Pm	OK
8-1-14 1:16 Pm	05954.14-CA53	mushrooms	2 DAYS after App 3	2 CO DO	KB		
8-1-14 5:36 pm	11342.14-CA54	Dried Figs	14 DALA	1 P	OK	8-14-14 10:40 Am	OK
8-7-14 8:35 AM	11309.14-CA89	onion	14 DALA	I, J-2	KB	8-14-14 10:40 Am	OK
8-9-14 1:19 pm	05954.14-CA53	mushroom	2 days after 4th App	2 EO FO	OK	OK 9-12-14	
8-12-14 11:37 Am	10582.14-CA18	Grapes	① C,D 14 DALA	2 C,D	KB		
8-12-14 11:37 Am	10582.14-CA18	Grapes	14 DALA	1 N	KB		
8-13-14 11:00 Am	11199.14-CA44	Plums Dried	1 DALA	1 P	KB		
④ 8-12-14 3:00 PM	11199.14-CA44	Plums W/O Pits	1 DALA	1 N	KB		

② ③ Entry error. to 8-12-14 ③ Entry error to 8/12/14 ④ Late entry - info from F

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

E. FREEZER MAINTENANCE AND REPAIR LOG

INSTRUCTIONS: Complete this form or provide equivalent information. Provide dates and a brief description of maintenance and repair work completed on the freezers relevant to this trial. Be sure to date and initial all entries.

UNIQUE IDENTIFIER FOR FREEZER: IR-4 chest freezers UTC and THT
Enter Freezer ID—may be make/model/serial# or assigned identifier. OK 9-8-14

RECORD DATES AND BRIEF DESCRIPTION OF ANY CALIBRATION, MAINTENANCE AND REPAIR WORK DONE ON FREEZER.

ALSO RECORD SOP# FOLLOWED, IF APPLICABLE: SOP# UCKARE 60-2.4
OK 9-8-14

Initials and Date	Was Maintenance or Repair routine? (Check one)		Description
	Routine	Non-Routine	
			Refer to the following pages
			OK 9-8-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

EQUIPMENT NAME: **IR-4 Chest Freezer (UTC)**
Model #: 253.13009100

MAINTENANCE & REPAIR LOG

Date: 1/22/14	Initials: KB
Description of Routine Maintenance or Repair: The freezer was shut off for deicing so the freezer could be cleaned.	
Performed By: KB	Date Performed: 1/22/14
Were SOPs Followed: Yes	SOP No. 60-2.3
IF NON-ROUTINE REPAIR:	
1. Date mal-function discovered: KB 1/22/14	
2. How was mal-function discovered:	
3. Remedial action taken:	

Date: 1/23/14	Initials: KB
Description of Routine Maintenance or Repair: The freezer interior and exterior was cleaned with soap and water after draining water from freezer. After cleaning the freezer was turned back on.	
Performed By: KB	Date Performed: 1/23/14
Were SOPs Followed: Yes	SOP No. 60-2.3
IF NON-ROUTINE REPAIR:	
1. Date mal-function discovered: KB 1/23/14	
2. How was mal-function discovered:	
3. Remedial action taken:	

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Date:	Initials:
Description of Routine Maintenance or Repair: OK 9-8-14	
Performed By:	Date Performed:
Were SOPs Followed:	SOP No.
IF NON-ROUTINE REPAIR:	
1. Date mal-function discovered:	
2. How was mal-function discovered:	
3. Remedial action taken:	

EQUIPMENT NAME: **IR-4 Chest Freezer (TRT)**
Model #: 253.16582103

MAINTENANCE & REPAIR LOG

Date: 1/22/14	Initials: KD
Description of Routine Maintenance or Repair: The freezer was shut off for deicing so the freezer could be cleaned.	
Performed By: KD	Date Performed: 1/22/14
Were SOPs Followed: Yes	SOP No. 60-2.3

IF ~~NON-~~ROUTINE REPAIR:

1. Date mal-function discovered: KD 1/22/14
2. How was mal-function discovered:
3. Remedial action taken:

This is an exact copy of the original
Original in UCKARE records
Initials: DK Date: 9-8-14

Date: 1/23/14	Initials: KD
Description of Routine Maintenance or Repair: The freezer interior and exterior was cleaned with soap and water after draining water from freezer. After cleaning the freezer was turned back on.	
Performed By: KD	Date Performed:
Were SOPs Followed: Yes	SOP No. 60-2.3

IF ~~NON-~~ROUTINE REPAIR:

1. Date mal-function discovered: KD 1/23/14
2. How was mal-function discovered:
3. Remedial action taken:

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Date:	Initials:
Description of Routine Maintenance or Repair: DK 9-8-14	
Performed By:	Date Performed:
Were SOPs Followed:	SOP No.

IF NON-ROUTINE REPAIR:

1. Date mal-function discovered:
2. How was mal-function discovered:
3. Remedial action taken:

Part 7
Page: 21

Sample Shipping

Part 8

FIELD ID NO: Pyrethrins+PBO/Mushroom ID No. 05954.14-CA52 Ennes

IR-4 FIELD DATA BOOK

PART 8. RESIDUE SAMPLE SHIPPING

A. RESIDUE SAMPLE SHIPPING INFORMATION

INSTRUCTIONS: Complete this form for each sample shipment. ***Fax, mail, or email a true copy to the Study Director and to your Regional Field Coordinator (along with 8B).*** *Retain the original in the Field Data Book.*

WERE SAMPLES KEPT FROZEN[1] FROM SAMPLE COLLECTION DATE TO SHIPMENT? *(Check one)* YES ✓ NO ____

[1] *"Kept frozen" indicates storage at temperatures generally <0 °F (-18 °C).*

IF NO, PLEASE EXPLAIN: ____ OK 8-14-14

DATE RESIDUE SAMPLES PACKAGED: 8-14-14 TIME: 10:40 AM X PM ___ *(Check one)*

DESCRIBE PROCEDURES UTILIZED TO PACKAGE SAMPLES:
The untreated samples were placed into box 1 of 2 and the treated samples placed into box 2 of 2. The lids of the boxes were then taped shut with clear shipping tape.

METHOD OF SHIPMENT *(Check one)* OVERNIGHT AIR EXPRESS ____ FREEZER TRUCK X

OTHER ____ *(Describe)*: OK 8-14-14

DATE SAMPLES GIVEN TO CARRIER: 8-14-14 TIME: 10:55 AM X PM ___ *(Check one)*

NAME OF CARRIER ACDS

Were the Chain of Custody Form (8B) and the Sample Arrival Check Sheet (8C) sent with the samples? YES ✓ NO ___

INSERT THE ORIGINAL OR VERIFIED TRUE COPY OF THE BILL OF LADING (WAY BILL) INTO THIS FIELD DATA BOOK AFTER THIS PAGE

SHIPPING ADDRESS (include the name of the person to whom the samples are being sent):
Megan Boatwright
Golden Pacific Laboratories
4720 W. Jennifer Ave Suite 105
Fresno, CA 93722

NAME OF PERSON CONTACTED AT LAB REGARDING SHIPMENT: Megan Boatwright

DATE OF CONTACT: 8-14-14 TIME: 11:05 AM X PM ___ *(Check one)*

METHOD OF CONTACT (*e.g., telephone*): Telefax

ABOVE DATA ENTERED BY: David Ennes *DATE:* 8-14-14

Total number of pages in this section at initial pagination: 5

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. ____ INITIALS ____ DATE ____

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

THIS MEMORANDUM is an acknowledgement that a Bill of lading has been issued and is not the original Bill of Lading nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

RECEIVED, subject to the classifications and tariffs in effect on the date of of receipt by the carrier of the property described in the Original Bill of Lading.

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof if this is a rail or a rail-water shipment or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading set forth in the classification or tariff which governs the transportation of the shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

From: David Ennes, UC Kearney Agricultural Research Ext. Phone: (559) 646-6061

Address: 9240 South Riverbend Ave Bill To: * Becky Sisco IR-4 Program

City: Parlier State: CA 93648 Date: 8-14-14

Carrier: **Agricultural Chemicals Development Services, Inc. (A.C.D.S., Inc.)**

Carrier's Pro No. _____

Shipper's Bill of Lading No. 137667

Consignee's Reference/PO No. _____

Carrier's Code (SCAC) **AGCM**

Consigned to Megan Boatwright Golden Pacific Lab. Phone: (559) 275-9091

Destination Street 4720 W. Jennifer Ave Suite 105 City: Fresno State: CA 93722

Delivering Carrier **Agri. Chem. Dev. Serv., Inc. (A.C.D.S., Inc.) (Phone: 315-548-8612)** Truck/Trailer No. 2058

Additional Shipment Information **(Best Way)**

BOX NO.	DESCRIPTION / CONTENTS	WEIGHT (Subject to Corrections)	FREIGHT CHARGE**
1 of 2	Samples A, B	5 lbs	
2 of 2	Samples CF, DF, EF, FF	11 lbs	
	Pyrethrins+PBO/Mushroom ID No. 05954.14-CA52 Ennes		
	3		
TOTAL PIECES 2			

Project No. 05954.14-CA52 Pyrethrins + PBO mushroom

ACDS Transfers To: _____, _____, _____, _____

Date: _____, _____, _____, _____

By: _____, _____, _____, _____

Delivery Date: _____ Received By: _____

Part 8 Page: 2

** Freight charge to be billed after delivery as per carrier's published and/or amended rates.

Notify if problem enroute or at delivery _____ (for Informational purpose only)
Name Fax No. Tel No.

* Freight Bill To: _____
Company Name Street City State Zip

Shipper David Ennes Per Carrier _____ Per 8-14-14 Date

THIS SHIPMENT IS CORRECTLY DESCRIBED CORRECT WEIGHT IS _____ LBS.

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
FIELD ID NO: _ Ennes

IR-4 FIELD DATA BOOK

PART 8. RESIDUE SAMPLE SHIPPING

B. RESIDUE SAMPLE CHAIN OF CUSTODY FORM

INSTRUCTIONS: Complete this form for each sample shipment. ***Use separate forms if different samples from the same trial are going to different destinations.*** ***Place a true copy within each shipping container and fax, mail, or email a true copy to the Study Director and to your Regional Field Coordinator.*** *Retain the original in the Field Data Book.*

TEST SUBSTANCE Pyrethrins + PBO

CROP Mushroom (button)

Include protocol-specified information such as sour or sweet, small-fruited or large-fruited, processing variety, if applicable.

FIELD RESEARCH DIRECTOR DAVID Ennes

PHONE# (559) 646-6061 FAX# (559) 646-6015

TRIAL LOCATION Monterey Mushroom Watsonville, CA

NUMBER OF BOXES SHIPPED 2 TOTAL NUMBER OF SAMPLES SHIPPED 6

DESTINATION (do not enter more than one destination) Golden Pacific Lab. Fresno, CA

CARRIER ACDS # 137667

Sample ID[1]	Treatment/Rate[2]	No. of Applics.	Date of Last Application	Date Harvested	Date Sampled	Crop Fraction[3]	LAB ID (Lab Use only)
A	TRT 01 UTC	0	None	7-22-14	7-22-14	mushroom	Ok
B	TRT 01 UTC	0	None	↓	↓	↓	9-11-14
CF	TRT 02 296ml/10000ft³	5	7-20-14	↓	↓	↓	↓
DF	↓	5	7-20-14	↓	↓	↓	↓
EF	↓	6	7-28-14	7-30-14	7-30-14	↓	↓
FF	↓	6	7-28-14	7-30-14	7-30-14	↓	↓
			Ok	8-14-14			

[1] *See protocol for assigned ID code under Section 18, Sample ID column*

[2] *Use the rate of the last application if different applications had different rates assigned by the protocol. If there are two active ingredients (a.i.) in the test substance, enter the rate of the a.i. that is to be analyzed for that sample.*

[3] *E.g. fruit, straw, processed apple juice*

ABOVE DATA ENTERED BY: David Ennes *DATE:* 8-14-14

****

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

IR-4 PROJECT	PART 8C: SAMPLE ARRIVAL CHECK SHEET

Note to Field or Processing Personnel: Place a copy of this blank form inside each of the sample boxes before shipment. If a copy of the completed form is received back from the laboratory prior to completion of the Field Data Book, then insert the form in the appropriate area of Part 8.

This form should be completed by the Laboratory Personnel, unless a similar form kept at the laboratory is used instead. Complete all blanks in this form that apply to these samples. Keep this form and any accompanying shipping forms, such as Federal Express receipts and field cooperator's residue sample shipping forms, in the raw data file for this study. ***Mail, fax, or e-mail a copy to the Field Research Director, the Regional Field Coordinator and the Study Director.*** If multiple boxes from one trial are received, each with a copy of this form, then it is only necessary to complete one form for all of the samples.

Laboratory ID# (from Protocol Part 24 or amendment):		
Chemical:	Commodity:	
Field Trial ID# (format is 00000.YY-XX##):		
Shipper: [ ]ACDS [ ]Federal Express [ ]Other:		
Shipping Reference#: OK 8-22-14	# Boxes:	
Date Received:	Rec'd by *(print name)*:	

A. CONDITION OF SAMPLES (check all that apply)

[ ]Frozen	[ ]Dry Ice Present	[ ]Fresh, Never Frozen
[ ]Thawed	[ ]Sample Bags Intact	[ ]Sample Bags Not Intact and Contents Mixed

B. FORM OF SAMPLES AS RECEIVED		Matrix (e.g., roots, leaves):	
[ ] Whole	[ ] Halved or Quartered	[ ] Sliced	[ ] Other:

C. RESIDUE SAMPLE CHAIN OF CUSTODY FORM	Received with Samples: [ ] Yes [ ] No

Please note any apparent missing samples or protocol deviations in Section E.

D. SAMPLE LOG	Project Listed on the Laboratory's Master Schedule: [ ]Yes [ ]No	
Lab Numbers Assigned:		Date:

E. COMMENTS:

Signature/Date of person filling out this form:

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

This is an exact copy of the original
OK 8-14-14
Initials Date

IR-4 PROJECT	PART 8C: SAMPLE ARRIVAL CHECK SHEET

Note to Field or Processing Personnel: Place a copy of this blank form inside each of the sample boxes before shipment. If a copy of the completed form is received back from the laboratory prior to completion of the Field Data Book, then insert the form in the appropriate area of Part 8.

This form should be completed by the Laboratory Personnel, unless a similar form kept at the laboratory is used instead. Complete all blanks in this form that apply to these samples. Keep this form and any accompanying shipping forms, such as Federal Express receipts and field cooperator's residue sample shipping forms, in the raw data file for this study. ***Mail, fax, or e-mail a copy to the Field Research Director, the Regional Field Coordinator and the Study Director.*** If multiple boxes from one trial are received, each with a copy of this form, then it is only necessary to complete one form for all of the samples.

Laboratory ID# (from Protocol Part 24 or amendment): 05954.14-GR-01

Chemical: Pyrethrins + PBO | Commodity: Mushroom (white button and Oyster)

Field Trial ID# (format is 00000.YY-XX##): 05954.14-CA52

Shipper: [✓] ACDS [ ] Federal Express [ ] Other:

Shipping Reference#: 137667 | # Boxes: 2

Date Received: 08/14/14 2:00pm | Rec'd by (print name): Todd Newm. Ike

A. CONDITION OF SAMPLES (check all that apply)

[✓] Frozen	[ ] Dry Ice Present	[ ] Fresh, Never Frozen
[ ] Thawed	[✓] Sample Bags Intact	[ ] Sample Bags Not Intact and Contents Mixed

B. FORM OF SAMPLES AS RECEIVED | Matrix (e.g., roots, leaves): Buttons

[✓] Whole	[ ] Halved or Quartered	[ ] Sliced	[ ] Other:

C. RESIDUE SAMPLE CHAIN OF CUSTODY FORM | Received with Samples: [✓] Yes [ ] No

Please note any apparent missing samples or protocol deviations in Section E.

D. SAMPLE LOG | Project Listed on the Laboratory's Master Schedule: [✓] Yes [ ] No

Lab Numbers Assigned: assigned when analyzed to place in set. We don't rename samples | Date: 08/22/14 mtk

E. COMMENTS: Received as an e-mail attachment on 8-22-14
OK 8-22-14

Signature/Date of person filling out this form:

(Paginate if a copy of the completed form is received from the analytical laboratory.)

Meteorological

Part 9

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

FIELD ID NO: _

IR-4 FIELD DATA BOOK

PART 9. WEATHER AND IRRIGATION RECORDS

A. DAILY FIELD TRIAL WEATHER RECORDS

INSTRUCTIONS: Document field trial weather records by manually collecting information or by providing computer generated records. ***Weather records are required from planting of annual crops or for a minimum of one month prior to the first application onto perennial crops, until last residue sample collection.*** *Weather records that are collected manually must be recorded directly on this (or equivalent) forms daily. Document computer generated weather data by placing the original or true copy of the data printout directly behind this page.* **Whether manually recorded or computer-generated, please indicate the approximate time of day that weather data were collected.** *Be sure to date and initial all entries.*

MONTH June - July 2014

Date/Initials	Air Temp. Min/Max	Rainfall	Irrigation	Date/Initials	Air Temp. Min/Max	Rainfall	Irrigation
1 /				17/			
2/				18/			
3/		Refer	to the	19/ following		Monterey	
4/			mushroom	20/ data	sheets		
5/			DR	21/ 9-11-14			
6/				22/			
7/				23/			
8/				24/			
9/				25/			
10/				26/			
11/				27/			
12/				28/			
13/				29/			
14/				30/			
15/				31/			
16/							

TEMPERATURE UNITS: °F ✓ °C___ (*Check one*) MOISTURE UNITS: ~~CM___~~ ~~Inches___~~ DR 9-12-14 (*Check one*)

APPROXIMATE TIME OF DAY THAT WEATHER DATA WERE COLLECTED Not available

LOCATION AND AFFILIATION OF WEATHER STATION Inside mushroom growing rooms Monterey Mushroom Watsonville CA

Provide the location (nearest town) and affiliation (on-site, NOAA, state, etc.) of the weather station(s) from which meteorological data are obtained.

ESTIMATED DISTANCE FROM METEOROLOGICAL STATION TO FIELD TRIAL SITE on site inside the mushroom growing rooms

ABOVE DATA ENTERED BY: David Ennes *DATE:* 9-11-14

Total number of pages in this section at initial pagination: 8

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

INTERMEDIATE TESTING FACILITY

TRT 01 ok

Spawn Date: 6/20/14 | Experimental Description: PAC Development | Crop and Room number: 1425B Rm #13 | Strain: Delta 9-11-14

DAY	DATE:	Air temperature AM	Air temperature PM	bed temperature lo-hi	bed temperature lo-hi	CO2 AM	CO2 PM	RH	SET POINT AM	SET POINT PM	WATER	COMMENTS
0	6/20	—	73	—	72/76	—	6175	99%	—	76	=	
1	6/21	76	75+	79/83		5844		99%	76	76	=	
2	6/22	74	70	83/85		5922		99%	70	70	=	
3	6/23	66	67+	78/84	77/83	4529	5660	99%	70	71 (72?)	=	
4	6/24	69+	70X	78/84	79/84	4925	6216	99%	72	72	=	
5	6/25	70	71	80/86	80/86	4822	6771	99%	72	72	=	
6	6/26	69	70+	81/87	81/83	4934	6545	99%	72	71	=	
7	6/27	70	69	83/89	84/89	4939	5381	99%	68	65	=	Close Hot Hd!
8	6/28	66	69	84/89		5189		99%	65	65	=	Increase Air!
9	6/29	64	64	83/87		4286		99%	65	66	=	
10	6/30	64	66	79/84	79/82	3947	4814	94%	66	67/68	=	Air is normal
11	7/1	67+	70	77/81	77/83	4586	3791	99%	71	73	=	open Hot Hd!
12	7/2	71	70	80/84	79/84	3962	10K	99%	73	73	=	Plastic off!
13	7/3	71	70	78/84	79/84	6948	7311	99%	73	73	=	
14	7/4	70	72	77/83	77/81	6049	6593	99	75	76	=	
15	7/5	73+	73	78/84		6197		99%	77	77	=	CASE

Accepted as a fax on 9-8-14 ok 9-9-14

Writeovers and corrections on this page were not done (corrected) under GLP guidelines ok 9-11-14

Part 9 Page: 2

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Received as a fax on 9-9-14 DR 9-9-14

INTERMEDIATE TESTING FACILITY

TRT01 9-11-14

CASING Date: 7/5/14 Experimental Description: PAC Development Crop and Room number: 14258 Pritt 13 Strain: Delta

DAY	DATE:	Air temperature AM	Air temperature PM	bed temperature lo-hi	bed temperature lo-hi	CO2 AM	CO2 PM	RH	SET POINT AM	SET POINT PM	WATER	COMMENTS
1	7/6	75	75	78/83		6022		99%	72	77	3X	
2	7/7	72	74	78/86	79/85	6930	8013	99%	77	77	3X	
3	7/8	73	75	79/84	79/83	7134	8631	99%	77	77	4X	
4	7/9	73+	76	79/83	78/83	7880	7362	99%	77	77	2X	Scratch
5	7/10	78	75	79/83	79/84	6315	6844	99%	79	79	FOG	
6	7-11	76	77	79/83	78/82	7147	7211	99%	80	82	FOG	
7	7/12	78	70	80/84		7053		99%	64	64	1 FOG	Flush.
8	7/13	65		79/75		1037		99%	64	64	FOG	
9	7/14	62	62	65/68	64/68	883	922	99%	64	64	FOG	
10	7/15	62	62+	64/67	64/67	903	891	99%	64	64	FOG	
11	7/16	62	62	64/67	64/66	850	817	99%	64	64	FOG	
12	7/17	62	63	64/66	64/68	813	930	99%	65	66	FOG	
13	7/18	63	66	65/69	64/68	1183	1074	99%	67	68	FOG	
14	7/19	64	66	67/70		1119	[illegible]	99%	69	69	FOG	
15	7/20	66	67	68/72		1106		99%	70	70	FOG	
16	7-21	68	70	71/76	73/77	1669	2099	99	71	71	1X	
17	7/22	70	66	75/82	75/82	2182	1980	99%	69	68	1X	[illegible]
18	7-23	66	65	74/79	72/77	1836	1187	99%	65	[illegible]		

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Part 9
Page: 3

Received as a fax on 9-9-14 e/k 9-9-14

INTERMEDIATE TESTING FACILITY

TRT01 9-11-14

CASING Date: 7/5/14 Experimental Description: PAC Development Crop and Room number: 14/513 Rm #13 Strain: Delta

DAY	DATE:	Air temperature		bed temperature		CO2		RH	SET POINT		WATER	COMMENTS
		AM	PM	lo-hi	lo-hi	AM	PM		AM	PM		
19	7/24	67	64	72/79	71/77	2399	1638	99 %	65	65	2 X	75/25
20	7/25	63	64	69/71	68/72	980	1081	90%	65	65	2X	75/25
21	7/26	63	66	66/69		1375		99%	67	68	2X	75/25
22	7/27	65	69	69/71		1176		90%	70%	73	2X	~~75/25~~ 75/25
23	7/28	70	70	72/76	73/76	1306	1594	96%	73	74 @	2X	
24	7/29	71	68	75/79	75/78	1858	1917	99%	71	65	1X	
25	7/30	63+	63	70/74	69/72	1924	1339	99%	65	65	1.0X	75/25
26	7/31	63	63	66/70	68/72	1316	1410	99%	65	65	1X	75/25
27	8/1	63	63	69/70	69/69	826	1086	75%	65	65	1X	75/25
28	8/2	63	62	65/68		989		99%	65	65	1X	
29	8/3	63	62	65/68		992		99%	67	68	1X	60/40
30	8/4	64+	67	66/69	67/70	1192	1229	99%	72	74	1X	
31	8/5	72	71	70/74	70/75	1266	1364	99%	74	74	1X	
32	8/6	70	68	72/75	71/75	1091	1330	99%	70	69/65	1X	
33	8/7	63		65/69		1187		99%	68			
34												
35												
36												

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Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

INTERMEDIAT. ESTING FACILITY TRT03 - OK 9-11-14

Spawn Date: | Experimental Description: | Crop and Room number | Strain:

6/20/14 - Amicel inoculum Prosess - 1425A - Rm #3 - PHXX (PHOENIXX)

DAY	DATE:	Air temperature		bed temperature		CO2		RH	SET POINT		WATER	COMMENTS
		AM	PM	lo-hi	lo-hi	AM	PM		AM	PM		
0	6/20	—	76	—	70/76	—	7810	96%	—	76	=	
1	6/21	77	75	81/85		5846		99%	75	75	=	
2	6/22	74	70+	82/86		6921		99%	70	70	=	
3	6/23	70	72	80/86	80/86	6874	7910	99%	70	70	=	
4	6/24	70	72	80/86	80/84	6812	8131	99%	70	70	=	
5	6/25	71	75	81/87	83/88	6629	9383	99%	70	68	=	increase air + spray
6	6/26	68	70	81/86	80/86	6215	8511	99%	68	70	=	
7	6/27	72	72	84/88	81/88	5101	7621	99%	69	65	=	
8	6/28	66		80/86		5974		99%	65	65	=	
9	6/29	67	66+	79/87		5081		99%	66	66	=	
10	6/30	66+	68	79/85	80/85	5693	6258	96%	66	66W	=	
11	7/1	67+	68	81/85	80/85	5512	5476	99%	66	67N	=	
12	7/2	69	71	80/87	81/85	5154	6920	99	68N	69N	=	plastic off
13	7/3	70	71+	79/87	79/85	5326	7533	99	69	69	=	
14	7/4	69	71+	76/85	77/82	5991	6374	99	71	71	=	
15	7/5	68	68	76/82		5810		99%	72	72/73	=	Bleed Room CASE !
	7/6	67+		75/79								

Nitrapyrin / Onion
ID No. 11309.14-CA89
Ennes

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Initials Date

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Initials Date

original at Monterey mushroom

INTERMEDIATE TESTING FACILITY

CASING Date:	Experimental Description:	Crop and Room number	Strain:	
7/5/14	Amicel-inoculum process	1423A - Rm #3	PHXX	TRT03 - OK 9-11-14

DAY	DATE:	Air temperature AM	Air temperature PM	bed temperature lo-hi	bed temperature lo-hi	CO2 AM	CO2 PM	RH	SET POINT AM	SET POINT PM	WATER	COMMENTS
1	7/6	67	74 76	75/79		5971		99%	75	75	1X	Bleed Rm!
2	7/7	75	76	79/84	80/87	6591	6917	99%	75	75	1X	check Hot valve!
3	7/8	76+	77	81/86	81/85	7250	8512	99%	75	75	1X	
4	7/9	76	72+	81/85	80/85	7081	7312	99%	75	75	1X	scratch
5	7/10	74	75	81/86	81/85	5732	6416	99%	75	75	FOG	
6	7/11	74+	75+	79/82	79/83	5971	6631	99	76	77	FOG	
7	7/12	73	66	79/87		6320		99%	64		1X FOG	Flush
8	7/13	65		72/77		835		99%	64	64	FOG	
9	7/14	64	64	68/72	68/71	1066	905	99%	64	64	FOG	
10	7/15	63	64	67/70	67/70	973	965	99%	64	64	FOG	
11	7/16	64	64	68/71	68/71	950	873	99%	64	64	FOG	
12	7/17	63+	64	68/70	67/70	844	955	99%	64	65 66	FOG	
13	7/18	65	65	68/70	68/70	1081	904	99%	65	66	FOG	
14	7/19	67	66	68/70		976		99%	66	67	FOG	
15	7/20	67+	67	69/71		1021		99%	68	68	FOG	60/40
16	7-21	68	69x	71/75	71/76	1171	1277	99%	70	71	1X	
17	7/22	71	68	75/80	74/80	1690	1713	99%	70	66	1X (2 pulses)	75/25
18	7-23	67	65	74/80	73/79	1481	1102	99%	65	65	2X	75/25

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Original at Monterey Mushroom

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

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OK 8-15-14
Initials Date

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

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original at Monterey Mushroom

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Initials: DK
Date: 8-15-14

INTERMEDIATE TESTING FACILITY

TRT03-DK

CASING Date: 7/5/14 - Amicel inoculum

Experimental Description: Process - 1425A - Rm#3

Crop and Room number: PHXX

Strain: 9-11-14

DAY	DATE:	Air temperature		bed temperature		CO2		RH	SET POINT		WATER	COMMENTS
		AM	PM	lo-hi	lo-hi	AM	PM		AM	PM		
19	7-24	66	65+	74/82	74/79	1559	1340	99%	65	65	2+	75/25
20	7/25	65+	67	71/74	71/74	1020	1110	99%	65	65	2+	75/25
21	7/26	65	66	69/73		1280		99%	65	66 (D)	2+	75/25
22	7/27	65	67	69/72		934		99%	65	64	2+	60/40
23	7/28	64	62	68/71	67/70	1039	1229	99%	62	62/60	2X	
24	7/29	60	60	64/67	63/67	1167	1051	99%	60	60	1X	
25	7/30	60	62	62/66	63/66	1298	963	99%	64	65 (D)	1X	75/25 Air increased
26	7/31	63	66	65/68	66/69	1020	822	99%	65	65	1X	75/25
27	8/1	63	66	67/69	66/70	805	985	99%	65	65	1X	75/25
28	8/2	63+	63	66/69		1011		99%	65	65	1X	
29	8/3	63	67	66/70		1022		99%	68	69	1X	60/40
30	8/4	67+	70	68/72	72/73	1058	7 AM	99%	70/72	71	1X	
31	8/5	69	69	71/74	71/74	1355	1192	99%	71	71	1X	
32	8/6	70-		71/74		941		99%	65		=	60/40
33												
34												
35												
36												

write overs and errors on this page not corrected under GLP guidelines DK 9-11-14

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PART 9. WEATHER AND IRRIGATION RECORDS

B. ADDITIONAL METEOROLOGICAL INFORMATION

WERE THE TEST PLOTS IRRIGATED? (*Check one*) YES ✓ NO ___

TYPE OF IRRIGATION (e.g., drip, flood, overhead sprinkler) water hose or fogging of mushroom boxes

IRRIGATION WATER SOURCE (e.g., canal, well) well water

IF THE TEST PLOTS WERE IRRIGATED, DESCRIBE HOW THE DAILY AMOUNTS WERE DETERMINED:

There were no daily amounts determined since water is applied with a water hose or as a fog

DK 9-11-14

IF IRRIGATION DATA ARE PLACED IN THIS FIELD DATA BOOK IN A SECTION OTHER THAN PART 9*, INDICATE HERE THE PART AND PAGE NUMBERS WHERE THE DATA ARE FOUND: PART ___ PAGES ___

DK 9-12-14

**Excluding the "first irrigation after application" entries in Part 6.*

WAS WEATHER NORMAL? (*Check one*) YES ✓ NO ___

Severe weather events such as damaging hail, hard frosts, tropical storms, excessive rain and unusually prolonged or high winds are cause for checking "no" above, even if such events are not considered unusual in the location of the trial.

INSTRUCTIONS: ***IF "NO" IS CHECKED,*** *then assess the impact on the crop in the test plots for this trial of any unusual weather conditions. Note whether temperatures were unusually high or low, and whether precipitation was unusually heavy or light, during the growing season of the crop, and include the dates of unusual or severe weather events. Include the initials of the person making these notes along with the date the notes are recorded.*

The mushrooms were grown in a research lab growing rooms at Monterey Mushroom, Watsonville, CA Normal practices for propagating mushrooms were followed

DK 9-11-14

ABOVE DATA ENTERED BY: Daniel Ennes *DATE:* 9-11-14

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL"
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE _____

Additional Info

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
FIELD ID NO: _____ Ennes

IR-4 FIELD DATA BOOK

PROTOCOL & PROTOCOL CHANGES

The protocol shall be inserted into this IR-4 Field Data Book after this protocol cover page. Sequentially insert all relevant protocol amendments and deviations that have been received from the Study Director. Protocol changes are sent only to those field trials to which they pertain, thus the changes that are received during the course of this trial may not comprise a complete set. ***Protocol changes pertinent to this trial that have been signed by the Study Director or received by the Field Research Director (FRD) after the Field Data Book has left the custody of the FRD do not need to be inserted into the Field Data Book.***

PAGES IN THIS SECTION DO NOT NEED TO BE NUMBERED.

PAGES IN THIS SECTION DO NOT NEED LINING OUT IF NO ENTRIES ARE MADE

INSTRUCTIONS FOR COMPLETING THE PROTOCOL/SOP DEVIATION FORM:
Every effort should be made to follow the protocol and standard operating procedures. If an unforeseen or an unavoidable circumstance results in a change, the Study Director must be notified as soon as practical (via phone call, email or FAX). **Also notify the Regional Field Coordinator (via phone call, fax, or cc on an email message). If possible, contact the Study Director prior to taking actions that differ from the protocol.** The Study Director will provide instructions and/or appropriate protocol change authorization. Otherwise, document the deviation with completion of this or similar form for each individual deviation. **If the deviation is faxed or emailed to the Study Director, then the original should be mailed to the Study Director. A true copy should be retained in the Field Data Book in the Protocol and Protocol Changes section.** The return copy (signed by the Study Director) should be placed in the Protocol/Protocol Changes section of the Field Data Book.

The brief description of the deviation should make clear what the protocol or SOP requirement is, and what was done that is different from this requirement. For example, *"The application interval was 10 days instead of the 7(±1) days required by the protocol."*

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52

CHEMICAL/CROP/FIELD ID NO: Ennes

IR-4 FIELD DATA BOOK

DEVIATION FORM **(PHOTOCOPY THIS PART IF NECESSARY)**

THE DATE THAT THE DEVIATION OCCURRED _____

THE DATE THAT THE DEVIATION WAS RECOGNIZED _____

THE DATE THAT THE STUDY DIRECTOR WAS NOTIFIED _____

METHOD OF NOTIFICATION (e.g. telephone, email, fax) _____
(Include telephone notes or copy of email or fax in Part 3 of this book)

THE DEVIATION IS FROM *(check appropriate)* PROTOCOL_____ SOP'S_____

SECTION OF THE PROTOCOL OR SOP'S THAT IS AFFECTED _____

BRIEF DESCRIPTION OF DEVIATION: _____

_____

_____

_____

_____

_____

EXPLAIN WHY THE DEVIATION OCCURRED: _____

_____

_____

_____

_____

ABOVE DATA ENTERED BY: _____ *DATE:* _____

FIELD PERSONNEL: DO NOT WRITE BELOW THIS LINE

STUDY DIRECTOR'S ASSESSMENT OF IMPACT OF THIS DEVIATION ON THE STUDY:

_____

_____

_____

_____

APPROVED BY:

_____ _____

Study Director/Date Sponsor/Date

PROTOCOL CHANGE NUMBER_____

cc: QA Field Research Director:

Regional Field Coordinator:

Laboratory Research Director:

Trial Year 2014

This protocol change form when copied on colored paper is an exact copy of the original.

IR-4 PROJECT HEADQUARTERS, RUTGERS, THE STATE UNIVERSITY, 500 COLLEGE ROAD EAST, SUITE 201W, PRINCETON, NJ 08540
TEL# 732-932-9575, FAX# 609-514-2612

CHANGE# 1

IR-4 PROTOCOL AMENDMENT FORM*

Project Title: Pyrethrins + PBO / Mushroom (White Button and Oyster) **PR No.:** 05954

Field Trial ID: 05954.14-CA52

Description of Changes:
In this trial, the fifth application may be made during days 8-15 of case hold, 2 days before first sample harvest.

Reason for Change:
This change was suggested by the mushroom growers at this trial site in accordance with their knowledge of the mushroom growing cycle at their facility.

Impact on Study:
No adverse impact.

Authorization:

5/2/14
Mr. Kenneth S. Samoil
Study Director (DATE)

N. P. Bamy 5/2/14
Sponsor Representative (DATE)

cc: IR-4 QA Unit (HQ, Lab, Field)
D. Ennes, CA
R. Sisco, CA
M. Boatwright, GPR

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

* This form is used to document protocol amendments initiated by the Study Director.

F-3 (Replaces PC-10)

THIS PROTOCOL CHANGE FORM COPIED ON COLORED PAPER IS AN EXACT COPY OF THE ORIGINAL

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

Fogging White Button

IR-4 NATIONAL PESTICIDE CLEARANCE PROTOCOL
PYRETHRINS + PBO/MUSHROOM (WHITE BUTTON AND OYSTER)

PR No.: 05954
Date: 03/14

1. PROJECT TITLE:

PYRETHRINS + PBO: Magnitude of the Residue on MUSHROOM (WHITE BUTTON and OYSTER)

2. JUSTIFICATION AND OBJECTIVES:

IR-4 has received a request for the minor use of pyrethrins + PBO (piperonyl butoxide) on mushroom (white button and oyster) for control of flying insects.

To establish these tolerances, it is required that the magnitude of the residue in or on the commodity be determined as per EPA Series 860 Guidelines. (A tolerance may be proposed for PBO on mushrooms prior to the completion of this study, using data from a residue study of another insecticide. If PBO residues in this study fall below the proposed or established tolerance, then this study shall support only a tolerance for pyrethrins.) The purpose of this study is to collect and analyze treated and untreated residue samples from appropriate field sites according to the application parameters requested to provide the sponsor with residue chemistry data to support a pesticide tolerance.

To determine the magnitude of residues of total pyrethrins + PBO in or on mushroom (white button and oyster), this protocol will be employed using appropriate Standard Operating Procedures (SOP's) and will be conducted under provisions outlined in 40 CFR Part 160 **(IN ACCORDANCE WITH EPA's GOOD LABORATORY PRACTICE STANDARDS)**. Canadian field/processing/analytical trials, if any, will be conducted at facilities consistent with the provisions outlined in the Organization for Economic Cooperation and Development (OECD) Series on Principles of Good Laboratory Practice and Compliance Monitoring.

3. SPONSOR/TESTING FACILITY NAME, ADDRESS AND PHONE:

IR-4 Project Headquarters, 500 College Road East, Suite 201 W, Princeton, NJ 08540, (732) 932-9575, FAX# (609) 514-2612.

4. STUDY DIRECTOR[1]:

Mr. Kenneth S. Samoil, IR-4 Project Headquarters, 500 College Road East, Suite 201 W, Princeton, NJ 08540, (732) 932-9575 extension 4614, FAX# (609) 514-2612, E-mail: samoil@aesop.rutgers.edu

5. PROPOSED DATES:

Experimental Start :	03/14
Experimental Termination:	11/15
Study Completion:	10/16

6. PROPOSED TEST SITES:

Field sites: Refer to Section 23
Laboratory: Refer to Section 24

7. STUDY AUTHORIZATION:

Deborah Carpenter March 11, 2014
Sponsor Representative / Date

3/11/14
Kenneth S. Samoil / Study Director / Date

7.1 STUDY DIRECTOR INITIALS: KSS

[1]In case the Study Director is not available, contact Dr. Deborah Carpenter (x4637) or Dr. Daniel Kunkel (x4616) at IR-4 Headquarters (732) 932-9575 for guidance.

8. GOOD LABORATORY PRACTICE COMPLIANCE:

The appropriate cooperative testing facility (field and laboratory) will be responsible for certifying that its portion of the study will be conducted in accordance with EPA's Good Laboratory Practice (GLP) Standards, 40 CFR 160, amended and effective Oct. 16, 1989. A statement of compliance, together with any GLP deviations will be signed and submitted by the appropriate Research Directors in their report or data package.

9. QUALITY ASSURANCE:

Quality Assurance duties and responsibilities will be in conformance with 40 CFR 160.35. A Quality Assurance Statement will be submitted in the final report and shall include the date inspections were made and date(s) the findings were reported to the Study Director and management.

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

10. TEST SYSTEM/CROP:

MUSHROOM - Use a commercial variety. Trials MD223, MD224, and CA52 shall be conducted on white button mushrooms. Trial CA53 shall be conducted on oyster mushrooms. Report: variety, location of mushroom house, and other descriptive information if available.

Field trials will be conducted at the appropriate sites to support the establishment/maintenance of a national residue tolerance, **see Section 23 for these assignments**. Refer to Section 11.4 for requirements to differentiate multiple trials by the same field researcher.

11. TEST SYSTEM DESIGN and STATISTICAL METHOD:

11.1 Each test site will consist of one untreated plot and one treated plot.

The individual plots shall be of adequate size to ensure that no more than 50% of the harvestable crop in the sampled area will be needed to provide the necessary plant material. See Parts 17 & 18 for requirements for residue sampling.

11.2 Employ adequate buffer zones between each of the plots to prevent contamination. For most application types, a minimum distance of 15 feet is required, but a minimum of 50 feet is strongly preferred. For applications made by airblast, mist blower, or power sprayers, a minimum distance of 50 feet is required, but a minimum of 100 feet is strongly preferred. If another study using a test substance with the same active ingredient is being conducted at the same research site, the untreated plot from one study must be separated from the treated plot(s) of the other by the appropriate buffer zone indicated above.

Use separate mushroom houses or compartments/rooms/barriers within a house for the treated and untreated plots. In the fogging trials, it is acceptable to move the mushrooms into an enclosure that will be used only for the applications. The mushrooms must be present during the fogging and for at least 30 minutes afterwards, and may then be moved back into their long-term growing room.

11.3 If this pesticide use is not registered on this crop, federal law requires that the treated crop must be destroyed or handled in such a way that it is not consumed as a human food or animal feed.

11.4 If a Field Research Director is assigned more than one trial in this study, the following requirements must be met: An independently prepared tank-mix must be used in each trial, and the first application in each trial shall be separated by at least 30 days. Also, in the MD trials (conducted in Pennsylvania), the applications in the two trials shall be made using different application types—surface sprays in trial MD223 and fogging with an aerosol generator in trial MD224. In the CA trials, one trial (CA53) shall be conducted on oyster mushrooms and the other (CA52) on white button mushrooms.

If these criteria cannot be met to separate multiple trials, the Field Research Director should contact the Study Director to discuss possible alternatives that can be amended to the protocol. Trials conducted in different calendar years are exempt from these requirements.

11.5 Mark plots with identifiable markers containing at minimum the Field ID number and treatment number or treatment name that will persist for the duration of the field research trial or that can be readily replaced.

11.6 This study is not designed for statistical evaluation of field data.

Pyrethrins+PBO/Mushroom
ID No. 05954.14-CA52
Ennes

12. TEST SITE PREPARATION:

Prepare or select a test site that has been maintained following good local agricultural practices for the production of mushroom (white button or oyster as assigned) including fertilization, irrigation, if necessary and available, and other practices that ensure commercially acceptable crop production.

The test site will have a known pesticide and crop treatment history of a minimum of 1 year and preferably 3 years.

13. TEST/CONTROL SUBSTANCE:

Use the Evergreen Crop Protection EC60-6 formulation [6% pyrethrins (0.05088 lbs./gallon)and 60% PBO (0.5088 lbs./gallon)] (EPA Reg No. 1021-1770, Pyrethrins CAS# 8003-34-7, PBO: 51-03-6) that has been characterized to meet GLP standards.

IR-4 Headquarters personnel will arrange procurement of GLP test substance from the Registrant. Upon receipt, document the lot/batch number, condition, quantity received and if GLP characterized. **Temperature monitoring should begin within 2 days of receipt of the test substance, regardless of where it is held or stored.**

Contact the Study Director if there are any concerns regarding the GLP status, labeled identification, expiration date, etc. of the test substance.

The registrant will provide a copy of the Certificate of Analysis to IR-4 Headquarters.

Store the test substance in a secure, clean, dry area and document storage temperatures.

EPA regulations require that test substance container(s) must be retained until the final study report is completed.

Study completion can be confirmed by contacting the Study Director or the Regional Field Coordinator, or by searching the IR-4 web site; click on "Food Crops" and under the "IR-4 Food Crops Database" click on the "Test Substance Container Disposal Approval" link. URL: http://ir4.rutgers.edu/FoodUse/Food_UseSimple3.cfm

Alternatively, some registrants will archive the test substance containers. If test substance containers are shipped to another location, the shipment must be conducted in accordance with local, state, and Federal regulations. See

shipping documents for directions for return of the test substance; if none are given, contact the registrant representative: Jan Sharp, MGK, e-mail: Jan.Sharp@mgk.com or jksharp@aol.com, phone (765) 593-3410, cell: 763-568-1039

The registrant will archive a retention sample of the test substance.

Control substances are not relevant to this study.

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14. TEST SUBSTANCE APPLICATION:

14.1 Simulate commercial application practices by applying the test substance in a manner that represents a major application technique that is used by area commercial growers, while following the directions specified in Section 15.

- Use application equipment that will provide uniform application of the test substance and result in adequate coverage.
- The test substance, if applied in a mixture, must be applied to the test system within 2 hours of mixing.
- Each field trial requires a unique spray mixture. Do not use the spray mixture from one field trial on another field trial.
- Agitate the test substance during the application, if practical, to ensure that it is well mixed.

In trials in which a sprayer is used (MD223):
To prepare a diluted spray solution, fill the mixing container with ½ gallon water (±5%), add 0.5 oz (14.8 ml) of Evergreen, mix, and complete filling with a total of 1 gallon of water (±5%). Apply at a rate of 1 gallon of diluted solution per 1,000 square feet of surface area with any low-pressure sprayer typically used for indoor applications. Treat all areas that may harbor insect pests including outside and inside of trays (prior to casing and composting), posts, cracks, crevices, voids, around door frames and other areas where organic matter builds or pests are seen. (It is not necessary to spray the ceilings.) **DO NOT DIRECTLY SPRAY THE MUSHROOMS.**

In trials in which a fogger is used (CA52, CA53, MD224):
Apply as an ultra-low volume (ULV) mist or aerosol. Dilute 10 oz. product per gallon of water. **Apply at the rate of 10 ounces (296 ml) product per 10,000 cubic feet.** Use appropriate spray equipment, such as mechanical break up cold aerosol generators or spot aerosol generators (Actisol), to achieve uniform coverage. Close all doors and windows and shut off all ventilating systems. Apply the product as a fine mist in the air above trays, shelves, and other areas where organic matter may accumulate. Do not remain in treated areas and ventilate before re-entry. Leave the room closed and ventilation off for 30 minutes or longer to allow spray mist to settle before re-entry.

14.2 Full Calibrations for output and speed must be performed to ensure accurate delivery. A calibration consists of a minimum of three consecutive, documented checks for nozzle or hopper output and speed (equipment or walking speed). (When the output of a fogger is calibrated or rechecked, it is not necessary to record the outputs of individual nozzles. No speed check is required because no movement occurs during the applications.) The variation of the total output recorded for any one of the three checks must not be greater than 5% from the mean for the full calibration.

In trials in which a fogger is used, it is acceptable to conduct a single calibration run for output prior to the first application. Recalibrations and rechecks will not be required. The calibration is needed in order to calculate the amount of time the fogger must run in order to dispense the required amount of test substance.

Discharge/Output Calibrations must be performed:
Just prior to the first application of test substance, completely calibrate[2].

[2]"Just prior" includes the day prior to the application, but calibration on the day of use is preferred.

In trials in which a sprayer is used, another complete calibration must be performed and documented when application parameters or equipment components have changed between applications. Recalibration is required after any of the following have changed: application type; intended nozzle or hopper output; nozzle size or type, or other equipment that may affect the output etc. A recalibration is required even if the pressure (intended nozzle output) has been changed back to the pressure used at the initial calibration. It is not necessary to fully recalibrate when CO_2 tanks are changed, or when equipment is transported offsite or cleaned, or if nozzles are removed and then placed back on (even if other nozzles have been used in the interim, unless the pressure has also been changed); however a recheck must take place prior to the next application. If the recheck is out of specification (see paragraphs below) a recalibration is required. Use equipment logs to document changes in the equipment parameters.

Rechecking the output, at a minimum, is necessary for multiple applications, as long as parameters have not changed. A single output check may be conducted to confirm consistent delivery (±5% of the last complete calibration) just prior to subsequent applications.

The equipment must be completely recalibrated if:
- a recheck results in an output that differs from the mean of the complete calibration by greater than 5%
- the variation of any nozzle's output from the mean output of all of the nozzles during the same run is greater than 5%

To minimize the occurrence of application rates that fall outside the protocol range, calculations for the amount of test substance to be applied that are based on the discharge rate should be performed using mean output calculated from the most recent complete calibration data (mean of three output checks), not on single-output recheck results. The use of a target output rather than the mean output may be used in the calculations made prior to the application; however a complete calibration must be conducted just prior to each use of a target output, and the mean output must be within 5% of the target output. Using a target output rather than a mean output increases the probability that an application rate deviation will occur. Verification of the amount of test substance that has been applied will always be calculated using the most recent complete calibration data.

Complete calibration data from another trial (performed on the day of or day prior to the application in this trial) may be used. However, a recheck (single output check) must be performed just prior to the application in this trial, but subsequent to any other applications with the application equipment. If more than one field trial in this study has been assigned to the same Field Research Director, it is not necessary to perform separate output rechecks for applications made on the same day in the respective trials.

14.3 Actual Application Rate: Record actual application pass-times in the Field Data Book and verify the accuracy of the application against the protocol rate. **The application is considered acceptable if the accuracy is within -5% and +10% of the target rate specified in Section 15. If the application did not meet this range, the Study Director must be notified of this deviation before proceeding with this trial.**

The submitted Field Data Book shall contain the original calibration data or a true copy of all complete calibrations referenced, along with the original data from the rechecks performed for this trial.

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15. APPLICATION TREATMENTS AND TIMING:

15.1 These treatments shall be applied only in: MD223

Trt#	Treatment	Target Rate of active ingredients	Target Rate of formulated product*	Application Type	Spray Volume Range**
01	Untreated	Not Applicable	Not Applicable	Not Applicable	Not Applicable
02	PYRETHRINS + PBO	0.008664 lbs pyrethrins + 0.08664 lbs. PBO per acre (0.0002 lbs. pyrethrins + 0.002 lbs. PBO per 1000 sq. ft.)	14.8 ml/1000 sq. ft.*** (0.5 oz./1000 sq. ft.)	Surface application spray	41-46 GPA

*The nominal formulation concentration of the test substance will be used in calculating application rates (see Section 13 for the nominal concentration).
**GPA=gallons per acre
***Dilute 0.5 oz. product per gallon of water.
If it appears that phytotoxicity has resulted from applications made in this trial, contact the Study Director. If possible, take one or more photographs and send them to the Study Director via email to facilitate the evaluation of crop/ test substance effects.

Make 6 applications as follows:

1) **Following cleaning of the room from previous crop, treating inside and outside of trays prior to adding compost**
2) **2-5 days after pasteurization**
3) **During the first 7 days of spawn run**
4) **During the first 5 days of casing**
5) **During days 8-13 of case hold, 2 days before first sample harvest**
6) **Between first and second break, after first sample harvest and 2 days before second harvest**

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15.2 These treatments shall be applied in the following trials only: CA52, CA53, MD224

Trt#	Treatment	Target Rate of active ingredients	Target Rate of formulated product*	Application Type	Spray Volume
01	Untreated	Not Applicable	Not Applicable	Not Applicable	Not Applicable
03	PYRETHRINS + PBO	0.003975 lbs. pyrethrins + 0.03975 lbs. PBO per 10,000 cu. ft.	296 ml/10,000 cu. ft.**** (10 oz./10,000 cu. ft.)	Fogging	Ultra-low volume, in accordance with equipment specifications

*The nominal formulation concentration of the test substance will be used in calculating application rates (see Section 13 for the nominal concentration).
****Dilute 10 oz. product per gallon of water.
If it appears that phytotoxicity has resulted from applications made in this trial, contact the Study Director. If possible, take one or more photographs and send them to the Study Director via email to facilitate the evaluation of crop/ test substance effects.

Trials CA52 and MD224—Make 6 applications as follows:

1) **Following cleaning of the room from previous crop**
2) **2-5 days after pasteurization**
3) **During the first 7 days of spawn run**
4) **During the first 5 days of casing**
5) **During days 8-13 of case hold, 2 days before first sample harvest**
6) **Between first and second break, after first sample harvest and 2 days before second harvest**

Trial CA53 (oyster mushrooms)--Make 5 applications as follows:

1) **Following cleaning of the room from previous crop, 1 day before fill**
2) **Within 2 days after filling**
3) **2 days before first sample harvest (first break)**
4) **2 days before second sample harvest (second break)**
5) **2 days before third sample harvest (third break)**

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16. SUPPLEMENTAL CROP TREATMENTS:

Protect the integrity of the field trial by managing pests that may cause significant damage to the test crop. Only EPA-registered maintenance pesticides should be used; apply according to labeled directions. Make identical applications to the untreated and treated plots.

Consult with Study Director if no registered pesticides are available to control the pests. Document all supplemental crop treatments. DO NOT USE pesticides that are similar to the test substance or other chemicals that might interfere with analysis of the test substance. If unsure, **contact the Study Director**.

17. RESIDUE SAMPLE COLLECTION:

Collect two samples from each plot. Each sample should be representative of the entire plot (except plot ends). At 2 days after the **fifth** application in trials CA52, MD223, and MD224 and 2 days after the **third** application in trial CA53, (starting with the untreated plot) collect a minimum of 12 marketable-sized mushrooms per sample. Each sample should be collected during a separate run through the entire plot. Each sample should weigh a minimum of 2 lbs (but preferably not more than 3 lbs). Avoid sampling from plot ends.

Remove loose adhering media by either lightly brushing with a soft dry clean brush or lightly rinsing with a minimum of clean water (document what is used to remove the debris, e.g. a clean brush, clean gloved hand, clean dry towel, or similar method). Pat lightly while drying with clean paper towels. DO NOT RUB WHILE RINSING OR DRYING THE MUSHROOMS.

Follow proper handling practices with clean or gloved hands and clean tools to prevent transfer of pesticide residue from one sample to another. If practical, complete harvest and sample preparation for the untreated plot(s) before proceeding to the treated plot(s).

Place all samples in plastic-lined cloth bags. Bags may be obtained from the Field Research Coordinator (Section 23). Identify each sample bag** with correct Field ID number, Test Substance (common chemical name and formulation), complete sample ID (see Section 18) and harvest/sampling dates. See Section 19 for residue sample handling directions.

Collect two additional treated samples as above, 2 days after the **sixth** application in trials CA52, MD223, and MD224 and 2 days after the **fourth AND fifth** applications in trial CA53.

When using **IR-4 plastic lined cloth residue sample bags, complete attached sample tag as follows:
Field ID Number; Crop Fraction; Test Substance (enter the chemical name listed in Section 15); **Sample ID; Trt#; Harvest Date; Sample Date; Field Research Director** (enter name and telephone number).

18. FIELD RESIDUE SAMPLE INVENTORY:

18.1 FIELD RESIDUE SAMPLE INVENTORY: Trial MD223

SAMPLE ID	TRT#	TREATMENT	DAYS AFTER MOST RECENT APPLICATION	MINIMUM SAMPLE SIZE	CROP FRACTION
A	01	Untreated	NA	12 mushrooms / 2 lbs.	Mushroom
B	01	Untreated	NA	12 mushrooms / 2 lbs.	Mushroom
CS	02	PYRETHRINS + PBO	2 (5 applications)	12 mushrooms / 2 lbs.	Mushroom
DS	02	PYRETHRINS + PBO	2 (5 applications)	12 mushrooms / 2 lbs.	Mushroom
ES	02	PYRETHRINS + PBO	2 (6 applications)	12 mushrooms / 2 lbs.	Mushroom
FS	02	PYRETHRINS + PBO	2 (6 applications)	12 mushrooms / 2 lbs.	Mushroom

18.2 FIELD RESIDUE SAMPLE INVENTORY: Trial CA53

SAMPLE ID	TRT#	TREATMENT	DAYS AFTER MOST RECENT APPLICATION	MINIMUM SAMPLE SIZE	CROP FRACTION
A	01	Untreated	NA	12 mushrooms / 2 lbs.	Mushroom
B	01	Untreated	NA	12 mushrooms / 2 lbs.	Mushroom
CO	03	PYRETHRINS + PBO	2 (3 applications)	12 mushrooms / 2 lbs.	Mushroom
DO	03	PYRETHRINS + PBO	2 (3 applications)	12 mushrooms / 2 lbs.	Mushroom
EO	03	PYRETHRINS + PBO	2 (4 applications)	12 mushrooms / 2 lbs.	Mushroom
FO	03	PYRETHRINS + PBO	2 (4 applications)	12 mushrooms / 2 lbs.	Mushroom
GO	03	PYRETHRINS + PBO	2 (5 applications)	12 mushrooms / 2 lbs.	Mushroom
HO	03	PYRETHRINS + PBO	2 (5 applications)	12 mushrooms / 2 lbs.	Mushroom

18.3 FIELD RESIDUE SAMPLE INVENTORY: Trials CA52 and MD224

SAMPLE ID	TRT#	TREATMENT	DAYS AFTER MOST RECENT APPLICATION	MINIMUM SAMPLE SIZE	CROP FRACTION
A	01	Untreated	NA	12 mushrooms / 2 lbs.	Mushroom
B	01	Untreated	NA	12 mushrooms / 2 lbs.	Mushroom
CF	03	PYRETHRINS + PBO	2 (5 applications)	12 mushrooms / 2 lbs.	Mushroom
DF	03	PYRETHRINS + PBO	2 (5 applications)	12 mushrooms / 2 lbs.	Mushroom
EF	03	PYRETHRINS + PBO	2 (6 applications)	12 mushrooms / 2 lbs.	Mushroom
FF	03	PYRETHRINS + PBO	2 (6 applications)	12 mushrooms / 2 lbs.	Mushroom

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19. RESIDUE SAMPLE HANDLING AND SHIPMENT:

After residue sample collection, store samples in a freezer. If the samples cannot be placed into a freezer within approximately one hour, use an appropriate method of cooling and temperature-monitoring samples in order to maintain integrity.

Sample handling and storage methods can be outlined generally in SOP's, but describe methods fully in the Field Data Book.

For pre-shipment storage, the samples will be held frozen at temperatures generally less than -18 °C (0 °F), allowing for normal variations of less than 24 hours duration due to freezer cycling, sample movement, etc. If the analytical laboratory is close enough to the field site to permit delivery of the samples by field personnel on the day of sampling, then pre-shipment frozen storage is not required.

Freezer logs will be used to document all sample additions to and removals from storage. All on-site storage temperatures will be monitored and documented.

Shipment of frozen samples will be by freezer truck or express shipment. Shipments sent via express shipment (overnight carriers such as Federal Express or Airborne) will require the addition of quantities of dry ice sufficient to maintain sample integrity while in transit to the laboratory. Document the notification made to the sample destination by use of e-mail, fax, telephone log, Field Data Book communication note, etc.

Insert a true copy of Field Data Book Part 8B and a blank copy of Field Data Book Part 8C (Sample Arrival Check Sheet) into each box or container used to ship sample bags.

For analysis, send samples to: Megan T. Boatwright, Golden Pacific Laboratories, LLC, 4720 W. Jennifer Ave., Suite 105, Fresno, CA 93722; (559) 275-9091; FAX# 559-275-1800; e-mail: mboatwright@gplabs.com

20. FIELD DOCUMENTATION AND RECORD KEEPING:

All operations, data and observations appropriate to this study should be **recorded directly and promptly into the IR-4 Field Data Book.**

The content of the Field Data Book should be **sufficiently detailed to completely reconstruct the field trial.** At a minimum, collect and maintain the following raw data:

20.01- Names of all personnel conducting specific research functions

20.02- Amendments and deviations from protocol and standard operating procedures (including copies of signed protocol changes received prior to submission of the Field Data Book to the Regional Field Coordinator).

20.03- Test site information

20.04- Plot maps

20.05- Test substance receipt, use and container/substance disposition records

20.06- Test substance storage conditions (including temperatures)

20.07- Data regarding calibration and use of application equipment

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20.08- Treatment application data

20.09- Crop maintenance pesticides and cultural practices, test plot history, and growing medium information. (The nature of this study is such that growing medium characteristics do not need to be determined under GLP standards.)

20.10- Residue sample identification, collection, storage conditions and handling (Weight measurements are considered estimates for the samples collected from field or processing trials, and the scales/balances used for this purpose do not need to be maintained in strict adherence to GLP.)

20.11- Residue sample shipping information

20.12- Description of crop destruction, or explanation for lack of destruction

20.13- Temperature/humidity records are --required for a minimum of one month prior to the first application until last residue sample collection. These records do not need to be determined under GLP standards.

20.14- Pass times (if applicable) and other data to confirm amount of material applied to plots

20.15- Equipment maintenance records with indication of routine vs. non-routine nature of maintenance

20.16- Other applicable data requested in the IR-4 Field Data Book necessary for confirmation that the study was conducted in accordance with the protocol.

Compliance with GLP's is not required for the collection of data associated with crop phytotoxicity.

21. PROTOCOL/SOP MODIFICATIONS - FIELD RESEARCH:

Consult with the Study Director and with the Regional/ARS Field Research Coordinator to discuss desired changes in the protocol prior to occurrence. If appropriate, an amendment will be issued.

Any deviations from the protocol will require the Field Research Director to complete a written report outlining the changes. **Provide this report to the Study Director promptly** (e.g. within 14 days of occurrence or recognition) for review and signature.

All deviations from the approved SOP's also require documentation and **approval by the Study Director**.

22. FIELD RESEARCH REPORT/ARCHIVING:

The Field Research Director will forward the completed originals of the IR-4 Field Data Book and other raw data to the Regional/ARS Field Research Coordinator as soon as possible after the shipment of residue samples.

The Field Research Director will maintain a complete certified true copy of these field documents.

The original IR-4 Field Data Book and other raw data will be forwarded to IR-4 Headquarters for reporting and archiving.

23. FIELD PERSONNEL / ID NO. / REGIONAL/ARS FIELD RESEARCH LOCATION

If a Field Research Director is assigned more than one trial in this study, refer to Section 11.4 for requirements to differentiate the trials.

Field Research Director	Field ID NO.	RFC	Test Crop
Ms. Marylee Ross, Univ. of MD/LESREC, 27664 Nanticoke Rd., Salisbury, MD 21801, (410) 742-8788 x 310, FAX# 410-742-1922; e-mail: mross@umd.edu	05954.14-MD223 05954.14-MD224	NER	Mushroom (white button) Mushroom (white button)
David Ennes, Kearney Agricultural Research & Ext. Center (KARE), 9240 S. Riverbend Ave., Parlier, CA 93648, (559) 646-6061, FAX# 559-646-6015, CELL# (559)-791-5309,e-mail: djennes@ucanr.edu	05954.14-CA52 05954.14-CA53	WSR	Mushroom (white button) Mushroom (oyster)

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RFC = Regional/ARS Field Coordinator
Location:

NER: Ms. Edith L. Lurvey, Dept. of Entomology, 630 W. North Street, Geneva, NY 14456; Tel: (315) 787-2308, FAX# 315-787-2326; e-mail: ell10@cornell.edu.

WSR: Ms. Rebecca Sisco, Regional Field Coordinator, Western Region IR-4 Project, Univ. of CA, Dept. of Environmental Toxicology, One Shields Ave., 4218 Meyer Hall, Davis, CA 95616; Tel: (530) 752-7634; FAX# 530-752-2866; e-mail: rsisco@ucdavis.edu.

24. LABORATORY PERSONNEL/ID NO.: **LAB ID NO.:** **05954.14-GPR01**

LABORATORY RESEARCH DIRECTOR/TESTING LABORATORY:
Megan T. Boatwright, Golden Pacific Laboratories, LLC, 4720 W. Jennifer Ave., Suite 105, Fresno, CA 93722; (559) 275-9091; FAX# 559-275-1800; e-mail: mboatwright@gplabs.com

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25. LABORATORY SAMPLE INVENTORY:

Treated and untreated samples of mushroom (white button or oyster) will be received from each of the field sites in Section 23.

Notify appropriate Field Research Director and Regional/ARS Field Research Coordinator of sample receipt.

26. LABORATORY SAMPLE IDENTIFICATION:

Each sample (raw commodity, crop fractions, storage stability, method validation, etc.) is to be assigned a unique laboratory sample number by the laboratory personnel.

A cross-reference must be maintained between the assigned laboratory sample number and the identification utilized in the Residue Sample Shipping and Identification Sheet.

27. LABORATORY SAMPLE STORAGE/PREPARATION:

Store samples in a limited access area at temperatures that will maintain frozen sample integrity (generally less than -20°C), until extraction.

The samples may be stored whole or ground, depending on the standard procedure of the analytical laboratory. However, if maceration will cause residue deterioration, then samples must be stored whole until analysis.

Do not composite samples.

The entire sample provide from the field must be ground, if sample is too large to be manageable then contact the Study Director for appropriate subsampling to assure the representative nature of the sample obtained in the field is maintained by the laboratory procedure.

Generally, sample extracts should be stored at $\leq$ 4°C for no longer than 14 days before analysis.

Storage stability of extracts must be demonstrated if extracts are not analyzed on the same day as they are obtained.

Concurrent fortifications may be used to show extract storage stability, as long as the extracts from the concurrent fortifications have been stored at least as long as the extracts obtained from the weathered samples.

Contact the Study Director if samples extracts are stored greater than 14 days prior to analysis.

All storage temperatures, conditions and location of sample storage are to be monitored and documented.

28. LABORATORY REFERENCE SUBSTANCE:

Obtain the laboratory reference substance(s): pyrethrins (or PY 1), piperonyl butoxide (PBO), PBO (internal standard, PBO-IS)) & MGK 264, from the Registrant. Contact Brice.besser@mgk.com, phone# 763-593-3439 to procure the proper material.

Document the date the analytical standards are received, the source, stated purity, storage conditions, and expiration date.

Use only reference standards that have been characterized to meet GLP standards.

Archival and characterization of the reference substance (purity, identity, stability and solubility) is the responsibility of the registrant.

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29. ANALYTICAL METHODOLOGY:

REFERENCE METHOD:

Method *of* Analysis for Residues *of* Pyrethrins, Piperonyl Butoxide, and MGK 264 in Prunes, Beans, Sugar, Chocolate cakes, Peanuts, Butter, Candy, Lettuce, Flour, Potatoes, Banana Cream Pie, Bread, Meat, and Acetone Surface Extract

OR

GPL-MTH-074: Determination of Pyrethrins and Piperonyl Butoxide (PBO) in crops. Prepared by Mary Huebner, Effective May 24, 2010, 28 pp

REFERENCE METHOD MODIFICATIONS/METHOD VALIDATION

The above listed Reference Method(s) may be modified if needed for the test matrix.

The Reference Method, along with any modifications must be validated on each crop fraction prior to residue sample analysis of that crop fraction. (For the purpose of this residue analysis, oyster mushroom is considered the same crop fraction as white button mushroom.)

To validate the method, fortify some of the *white button* control samples in triplicate with pyrethrin, piperonyl butoxide & MGK 264 at a minimum of 3 concentration levels each, lowest level of method validation (0.1 ppm or lower), 1ppm, and 10 ppm.

A minimum of 6 fortification samples (recovery spikes) at the lowest level of method validation (LLMV) is required for each analyte on each fraction prior to completion of the analytical phase of the study. **The acceptable recovery range is 70-120%.**

Documented approval from the Study Director is needed for recoveries outside of this range.

Document the exact procedures for sample analysis.

This validated step-by-step Working Method should incorporate all changes from the Reference Method.

Provide the Study Director with a copy of this Working Method and results of method validation prior to treated sample analysis.

If the Working Method has been used successfully on the test matrix or a similar matrix, the Study Director may waive the requirement for method validation. **Contact the Study Director for details**.

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SAMPLE ANALYSIS:

Samples will be analyzed for the residues of pyrethrin, piperonyl butoxide & MGK 264 following the Working Method.

For each field trial associated with this study, analyze at least one untreated and all treated residue samples for each matrix.

Contact the Study Director if residues above the lowest level of method validation for each matrix are detected in the untreated samples.

Any changes or modifications to the Working Method **require Study Director approval**. Whenever possible, **notify the Study Director** prior to occurrence.

Any change or modification to the Working Method must be documented in the raw data and discussed in the final report.

A typical analytical set (or run) should consist of calibration standards, untreated sample(s), concurrent recovery sample(s), and treated sample(s). Each analytical set must begin and end with a calibration standard. Additional calibration standards should be injected with sample analysis to ensure goodness of fit to the standard curve.

Over the course of method validation, residue sample and storage stability (if appropriate) analysis, adequate fortification samples that bracket the actual residues should be analyzed. At least one concurrent fortification sample should be analyzed per analytical set.

The Study Director should be immediately notified if concurrent recoveries deviate from the acceptable recovery range of 70% to 120%.

All efforts will be made to resolve existing recovery problems before continuing forward with additional analytical sets.

If residues in samples are above the highest Working Method validation concentration, additional recovery samples at levels above actual residues must be run in triplicate (3 uniquely extracted samples) as soon as practical. A minimum of 6 fortification samples (recovery spikes) at the lowest level of method validation (LLMV) is required for each analyte on each fraction prior to completion of the analytical phase of the study.

Treated samples may be analyzed using a screening run prior to analysis of treated samples using the working method, if the procedure is covered in the laboratory SOPs and the working method for the study. The peak areas of the treated samples and highest standard from any screening run will not be quantified or reported. (Any data, such as chromatograms, generated during screening run(s) will be kept).

STORAGE STABILITY ANALYSIS:

As soon as possible after receipt of samples, a minimum of nine subsamples of all available crop fractions of the control (white button mushroom) shall be fortified with pyrethrin, piperonyl butoxide & MGK 264 at 1 ppm each.

Three samples of each analyte and crop fraction will be analyzed after the appropriate storage period. The analysis of storage stability samples may be conducted following a storage period equal to or greater than 90% of the longest storage period of the field-treated samples prior to their analysis. The remaining samples will be retained for long-term storage.

If analysis of treated/control samples is completed within 30 days of harvest analysis of storage fortification samples may not be required. If appropriate, **contact Study Director**.

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STATISTICAL METHOD(S):

Utilize regression analysis to determine the linearity of the standard curve (r^2) or the goodness of fit if the standard curve is non-linear.

Criteria for acceptance of the standard curve(s) or other statistical methods shall be determined by Laboratory Research Director and documented in the raw data.

30. DISPOSITION OF SAMPLES:

A minimum of 100 g or all (if less than 100 g) of each of the remaining frozen treated and untreated crop samples is to be retained for at least 12 months after submission of the laboratory report.

Long term fortified storage study samples shall be retained for a period of 1 to 5 years, as appropriate, after submission of the final report.

Sample extracts can be disposed of after data analysis.

The Study Director is to be contacted prior to discarding samples.

31. LABORATORY PROTOCOL/SOP MODIFICATIONS - LABORATORY RESEARCH:

Consult with the Study Director regarding desired changes in the protocol prior to occurrence. If appropriate, an amendment will be issued. Any unauthorized changes to the protocol will require the Laboratory Research Director to complete a written report outlining the changes.

This report should be **provided to the Study Director promptly** (e.g. within 14 days of occurrence) for review and signature.

All deviations from the approved SOP's also require documentation and approval by the Study Director.

32. LABORATORY DOCUMENTATION AND RECORD KEEPING:

All operations, data and observations shall be recorded in the analyst's notebook and log books, which must be signed and dated on date of entry.

At a minimum, collect and maintain the following raw data:

32.01 - Analytical standard(s) receipt, use and disposition records

32.02 - Analytical standard(s) storage conditions

32.03 - Analytical standard(s) dilution calculations and preparation records

32.04 - Sample storage conditions and locations

32.05 - Calculation work sheets

32.06 - All chromatograms, including those that are not reported

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32.07 - Chain of custody records

32.08 - Deviations from protocol, Working Method and/or standard operating procedures

32.09 - Name of personnel conducting specific research functions

32.10 - Sample analysis worksheets

32.11- Storage stability fortification records

32.12 - Concurrent recovery fortification records

A study file shall be developed and maintained by the Laboratory Research Director in conjunction with the analysis. It will contain a copy of the protocol, all pertinent raw data, documentation, records, correspondence, and the final analytical summary report. In addition, records of equipment maintenance and calibrations will be kept and periodically archived.

33. LABORATORY RESEARCH REPORT:

The analytical summary report sent to IR-4 HQ shall contain, but not be limited to:

33.01 - Applicable method validation data

33.02 - Applicable storage stability data

33.03 - Residue levels for control and treated samples with concurrent fortified recoveries

33.04 - Complete copy of the analytical Working Method

33.05 - Any modifications or deviations from the protocol and/or Working Method

33.06 - Completed IR-4 residue data reporting form or appropriate reporting form which includes information listed on the IR-4 generic residue data reporting form

33.07 - A minimum of 10 representative chromatograms of treated samples (if fewer than 10 submit all), a minimum of three chromatograms each of control and fortified control samples, chromatograms (one of each concentration) for at least one set of calibration standards for each compound analyzed, and any chromatograms of samples with unusual or inconsistent results

33.08 - Summary of quantitative data associated with samples and spike recovery samples should be provided (e.g. peak heights, injection volumes, sample sizes, final volumes, etc.)

33.09 - Clearly presented example calculations or statistical evaluations

33.10 - Discussion of results (including purpose of method modifications, sample storage conditions, etc.)

33.11 - Summary data associated with calibration standards (dilution and use records, calibration curves, etc.)

34. LABORATORY ARCHIVES:

When the final analytical summary report is completed the analytical report and all original raw data will be sent to IR-4 Project Headquarters, 500 College Road East, Suite 201 W, Princeton, NJ 08540, (732) 932-9575, FAX# (609) 514-2612 (when an original document cannot be provided a "true copy" will be provided). All original raw data shall be secured in the archives of IR-4 Headquarters, Princeton, NJ. A "true copy" of the raw data and the final analytical report shall be secured in the archives of the Laboratory Research Director/Testing Facility.

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Jan Sharp, MGK, e-mail: Jan.Sharp@mgk.com or jksharp@aol.com, phone (765) 593-3410, cell: 763-568-1039

Field Research Director	Field ID NO.	Formulation	Amount of Test Substance	Date Needed
Ms. Marylee Ross, Univ. of MD/LESREC, 27664 Nanticoke Rd., Salisbury, MD 21801, (410) 742-8788 x 310, FAX# 410-742-1922; e-mail: mross@umd.edu	05954.14-MD223 05954.14-MD224	Evergreen Crop Protection EC60-6	1 pint 1 pint	3/21/2014
David Ennes, Kearney Agricultural Research & Ext. Center (KARE), 9240 S. Riverbend Ave., Parlier, CA 93648, (559) 646-6061, FAX# 559-646-6015, CELL# (559)-791-5309,e-mail: djennes@ucanr.edu	05954.14-CA52 05954.14-CA53	Evergreen Crop Protection EC60-6	1 pint 1 pint	3/21/2014

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