What's New for 2017 IR-4 Field Data Books?

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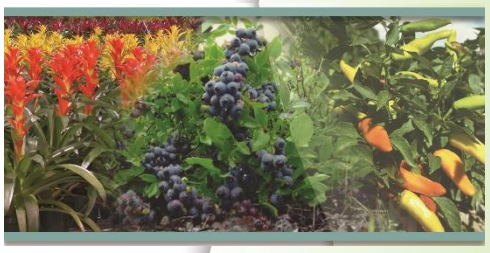
IR-4 Headquarters



Recording the Addition of Pages to the FDB

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	GM	8/8/16
7	2A, 14B		
4	3A-C	RS	10/1/16
5	1A	KH	2/28/17
6	7B-F, 14C, 20A		

Note: The broken lines under initials and dates are intended to indicate hand-drawn lines. It is not necessary to actually draw the lines broken up this way; they may be continuous.

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Field ID No. _____

PAGES ADDED TO THE FIELD DATA BOOK AFTER INITIAL PAGINATION

IMPORTANT: The information below is added by the person who inserts the new pages into the original Field Data Book, not the field cooperator who is sending the new pages. Each row of the table should include only pages entered within one Part on one date; all entries made on one date should be initialed and dated once 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 (see pg. 6 for example).

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.)

Inserted printouts

- Inserted printouts do not need blank areas lined out. This includes pesticide labels, weather data, maintenance chemical application lists, and other documents that are inserted into the FDB.

- Labels and shipping documents for test substance and adjuvants should be inserted after the green page that follows 4F. Please paginate that green page and the labels and shipping documents within Part 4.

2A (required) vs. 2C (optional)

FIELD ID NO: _____

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 critical phases of this trial. General field workers, seasonal assistants who have been instructed to perform specific (non-data entry) tasks, 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)*: _____

AFFILIATION: _____

ADDRESS: _____

CITY: _____

STATE or PROVINCE: _____ ZIP (Postal Code): _____

TELEPHONE: ( ) _____ FAX: ( ) _____

E-MAIL ADDRESS: _____

SIGNATURE: _____ DATE: _____

INITIALS: _____

OTHER TRIAL PERSONNEL

PRINT NAME	SIGNATURE	INITIALS	DATE

PART 2 PAGE ___ Trial Year 2017

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

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 2C. TEMPORARY/SEASONAL PERSONNEL INVOLVED IN TRIAL

C. TRAINING SUMMARY

INSTRUCTIONS: This optional form may be used to provide a brief narrative of instructions given to temporary personnel for completion of tasks within this study. CV's and educational records are NOT required for personnel listed below.

TRAINER NAME: _____ (PRINTED) _____ (SIGNATURE)

INSTRUCTIONS: _____

PRINT NAME	TASK PERFORMED

ABOVE DATA ENTERED BY: _____ *DATE:* _____

PART 2 PAGE ___ Trial Year 2017

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

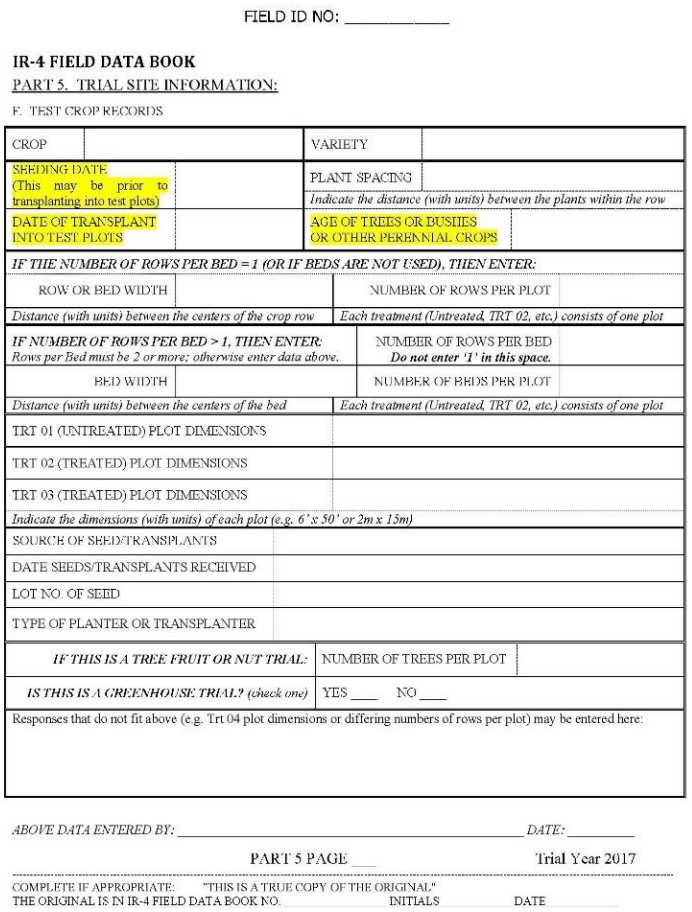
THE ORIGINAL IS IN IR-4 FIELD DATA BOOK NO. _____ INITIALS _____ DATE_____

5C – The plot map

- The plot map must include distances to permanent landmarks from at least two plot corners per plot (optionally from two plot centers per plot for perennial crops)
- Or GPS coordinates for each corner of the plot (or two plot centers per plot for perennial crops)

5F – Trial Site Information

- Separate Cells for:
- Seeding Date*
- Date of Transplant
- and Age of Trees or Bushes or other Perennial Crops
- Prompts for Planting Method and Bush/Tree Height have been Deleted
- *If the plants were obtained for the trial as transplants and the seeding date is unknown, enter “NR” or “Unknown”



FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 5. TRIAL SITE INFORMATION:

F. TEST CROP RECORDS

CROP		VARIETY	
SEEDING DATE (This may be prior to transplanting into test plots)		PLANT SPACING *Indicate the distance (with units) between the plants within the row*	
DATE OF TRANSPLANT INTO TEST PLOTS		AGE OF TREES OR BUSHES OR OTHER PERENNIAL CROPS	
IF THE NUMBER OF ROWS PER BED = 1 (OR IF BEDS ARE NOT USED), THEN ENTER:			
ROW OR BED WIDTH		NUMBER OF ROWS PER PLOT	
Distance (with units) between the centers of the crop row		*Each treatment (Untreated, TRT 02, etc.) consists of one plot*	
IF NUMBER OF ROWS PER BED > 1, THEN ENTER: *Rows per Bed must be 2 or more; otherwise enter data above.*		NUMBER OF ROWS PER BED ***Do not enter '1' in this space.***	
BED WIDTH		NUMBER OF BEDS PER PLOT	
Distance (with units) between the centers of the bed		*Each treatment (Untreated, TRT 02, etc.) consists of one plot*	
TRT 01 (UNTREATED) PLOT DIMENSIONS			
TRT 02 (TREATED) PLOT DIMENSIONS			
TRT 03 (TREATED) PLOT DIMENSIONS			
Indicate the dimensions (with units) of each plot (e.g. 6' x 50' or 2m x 15m)			
SOURCE OF SEED/TRANSPLANTS			
DATE SEEDS/TRANSPLANTS RECEIVED			
LOT NO. OF SEED			
TYPE OF PLANTER OR TRANSPLANTER			
IF THIS IS A TREE FRUIT OR NUT TRIAL:		NUMBER OF TREES PER PLOT	
IS THIS IS A GREENHOUSE TRIAL? (check one)		YES ___ NO ___	
Responses that do not fit above (e.g. Trt 04 plot dimensions or differing numbers of rows per plot) may be entered here:			

ABOVE DATA ENTERED BY: _____ *DATE:* _____

PART 5 PAGE ___ Trial Year 2017

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

5H – Maintenance Fertilizers and Pesticides

- If treated seed was used, list treatment chemical (Date Applied would be “Seed TRT”). The instructions used to state that Date Applied would be “NA”.

- List tank-mixed chemicals together, if known, and bracket the tank mix on the form.

Part 6 – Application Records

- 6C2 – In the calibration table, the “Output per Second” data prompt has been revised to “Boom Output (mL/Second)”
- 6E – On the delivery rate calculation page, new prompt: “Protocol Specified Spray Volume (from Part 15, in gallons per acre)” [Liters per hectare is fine for Canadian and other foreign trials]
- 6H – New prompt: “Cleaned By” (beneath the equipment cleaning description)
- 6I – New prompt: “Application Was Made By” (beneath the application description)
- 6J – New prompt: “Was actual spray volume within the protocol range? Yes/No/NA If no, contact the SD immediately.”

Part 6 – Application Records

- Whoops! We prompted for: Was actual spray volume within the protocol range?
- But we didn't provide an example formula!

- Volume of Tank Mix applied to Plot x $\frac{\text{1 gallon}}{\text{3785 ml}}$ x $\frac{\text{43,560 sq ft per acre}}{\text{Plot area treated in sq ft}}$ = GPA
- Or: Determine the %Deviation from the Protocol of the Test Substance Rate, and Multiply that %Deviation by the Pre-Calculated Spray Volume.
- E.g.: You planned to spray at 40 GPA
- Your TS rate was 6% above the protocol rate
- +6% x 40 GPA = +2.4 GPA; 40+2.4=42.4 GPA

Part 6G – Application Records (current)

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

G. APPLICATION INFORMATION FOR **APPLICATION NUMBER** ___ APPLICATION DATE _____

HAS THE APPLICATION EQUIPMENT BEEN USED SINCE THE LAST *(Check one)* YES_____ NO_____
CALIBRATION/RECHECK WAS PERFORMED? (If you are about to check YES, then a recheck is usually required.)

INSTRUCTIONS: **Complete a separate form for each application date and for each treatment on one application date (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 ___	
NUMBER OF DAYS SINCE PREVIOUS APPLICATION		TIME OF ADDITIONAL AGITATION/INITIALS (if applicable) e.g. "10:00" or "continuous" or "just prior to application"
TEST SUBSTANCE		
BATCH/LOT NUMBER/Container#[1]		
TIME MIXED/INITIALS		
TIME APPLIED/INITIAL		
EQUIPMENT IDENTIFIER		
PLACEMENT OF TEST SUBSTANCE		
TANK MIX AMOUNTS		MEASURING EQUIPMENT with INCREMENTS*
CARRIER (starting volume of water)		
VOLUME of WATER REMOVED from starting volume (if applicable)		
TEST SUBSTANCE (formulated product)		
ADJUVANT OR SURFACTANT		
TOTAL VOLUME OF TANK MIX		*e.g. 1000 mL grad. cylinder/10 ml incr.
NOZZLE DISTANCE from TARGET		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		
INCORPORATION - Methodology and/or Equipment - DEPTH - TIME		
CARRIER SOURCE/TYPE		
CARRIER pH/TEMPERATURE		
EQUIPMENT used to MEASURE pH		

[1] *If more than one test substance container was received for this trial. If not, only batch or lot number is needed.*

ABOVE DATA ENTERED BY: _____ *DATE:* _____

Part 6G – Application Records (current)

- The instructions require you to enter: *the approx. time the test substance was mixed with the carrier and the approx. 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);*
- There is no requirement indicated for initialing the agitation entry.
- But the data entry cell in the table has:

  TIME OF ADDITIONAL AGITATION / INITIALS (if applicable)

We do not usually need initials for this entry! "If applicable" means if the person making this entry is different than the person filling out the rest of the page. This will be fixed for 2018.

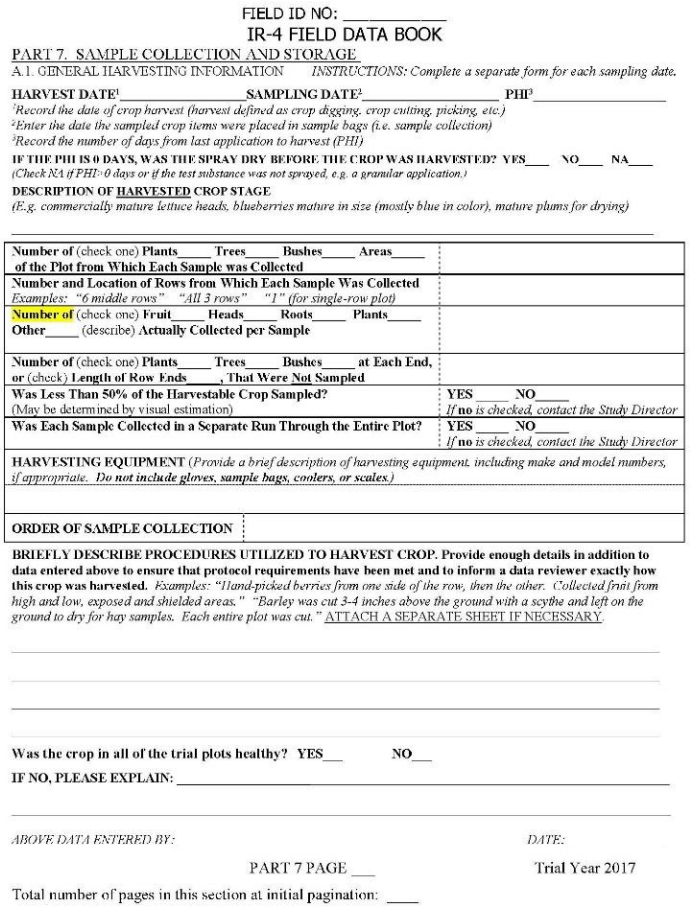
Part 6G – Application Records (current)

- MEASURING EQUIPMENT with INCREMENTS*
  *e.g. 1000 mL graduated cylinder/10 ml incr.
- The precision of your measurements should not exceed the precision of your measuring equipment.
- For example, if you are using a cylinder or pipet with 1 mL increments, you should not measure 5.7 mL TS.
- For reporting data that meets GLP standards, we cannot “eyeball” measurements.

- What to do?
- Our protocols allow a range of -5% to +10% from the target rate.
- You should measure to the nearest marked increment.
- If the increments on your cylinder or pipet are too large to keep you within the protocol range, then you need more precise equipment.

7A1 – General Harvesting Information

- The prompt formerly stated as "*Minimum* Number of Fruit/Heads/ Roots/Plants/Other Actually Collected per Sample" has been reworded as "Number of Fruit/Heads/Roots/Plants/ Other Actually Collected per Sample"
- Enter the number that really was collected, not necessarily the minimum stated in the protocol



FIELD ID NO: _____

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]_____ **SAMPLING DATE**[2]_____ **PHI**[3]_____

[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___
(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)

_____

Number of (check one) **Plants_____ Trees_____ Bushes_____ Areas_____ of the Plot from Which Each Sample was Collected**	
Number and Location of Rows from Which Each Sample Was Collected *Examples: "6 middle rows" "All 3 rows" "1" (for single-row plot)*	
Number of (check one) **Fruit_____ Heads_____ Roots_____ Plants_____ Other_____** (describe) **Actually Collected per Sample**	
Number of (check one) **Plants_____ Trees_____ Bushes_____ at Each End, or** (check) **Length of Row Ends_____, That Were Not Sampled**	
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.)*	
ORDER OF SAMPLE COLLECTION	

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.

_____

_____

_____

Was the crop in all of the trial plots healthy? YES___ NO___

IF NO, PLEASE EXPLAIN: _____

_____

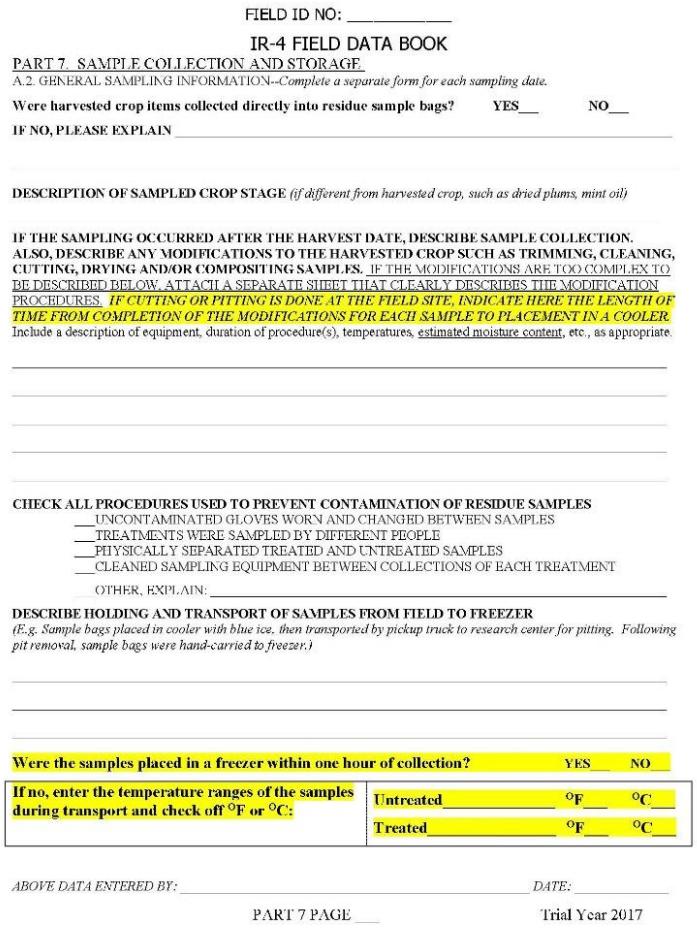
ABOVE DATA ENTERED BY: *DATE:*

PART 7 PAGE ___ Trial Year 2017

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

7A2 – General Sampling Instructions

- If cutting or pitting is done at the field site, indicate here the length of time from completion of the modifica-tions for each sample to placement in a cooler.
- Were the samples placed in a freezer within one hour of collection? Yes/No
- If no, enter the temperature ranges of the samples during transport and check off ºF or ºC



FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 7. SAMPLE COLLECTION AND STORAGE

A.2. GENERAL SAMPLING INFORMATION--*Complete a separate form for each sampling date.*

Were harvested crop items collected directly into residue sample bags? **YES___** **NO___**

IF NO, PLEASE EXPLAIN _____

DESCRIPTION OF SAMPLED CROP STAGE *(if different from harvested crop, such as dried plums, mint oil)*

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. *IF CUTTING OR PITTING IS DONE AT THE FIELD SITE, INDICATE HERE THE LENGTH OF TIME FROM COMPLETION OF THE MODIFICATIONS FOR EACH SAMPLE TO PLACEMENT IN A COOLER.*

Include a description of equipment, duration of procedure(s), temperatures, estimated moisture content, etc., as appropriate.

CHECK ALL PROCEDURES USED TO PREVENT CONTAMINATION OF RESIDUE SAMPLES

___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
___OTHER, EXPLAIN: _____

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.)

Were the samples placed in a freezer within one hour of collection? **YES___** **NO___**

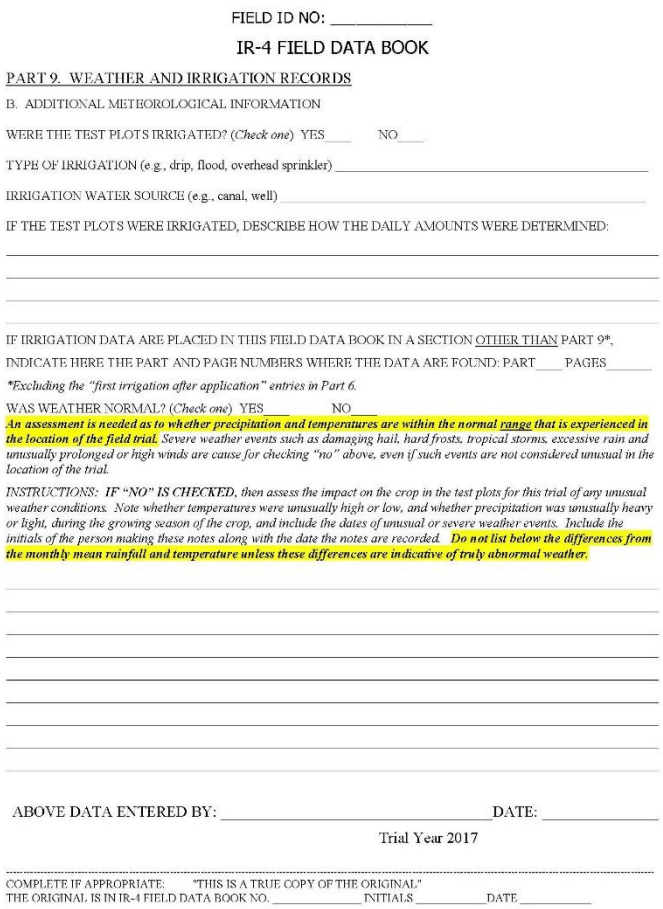
If no, enter the temperature ranges of the samples during transport and check off ºF or ºC:	**Untreated**_____	**ºF___**	**ºC___**
	Treated_____	**ºF___**	**ºC___**

ABOVE DATA ENTERED BY: _____ *DATE:* _____

PART 7 PAGE ___ Trial Year 2017

9B – Additional Meteorological Information

- An assessment is needed as to whether precipitation and temperatures are within the normal range that is experienced in the location of the field trial. Do not list below the differences from the monthly mean rainfall and temperatures unless these differences are indicative of truly abnormal weather.
- Describe it the way you would at the water cooler



FIELD ID NO: _____

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) _____

IRRIGATION WATER SOURCE (e.g., canal, well) _____

IF THE TEST PLOTS WERE IRRIGATED, DESCRIBE HOW THE DAILY AMOUNTS WERE DETERMINED:

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_____

**Excluding the "first irrigation after application" entries in Part 6.*

WAS WEATHER NORMAL? (*Check one*) YES____ NO____

An assessment is needed as to whether precipitation and temperatures are within the normal range that is experienced in the location of the field trial. *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.* ***Do not list below the differences from the monthly mean rainfall and temperature unless these differences are indicative of truly abnormal weather.***

ABOVE DATA ENTERED BY: _____ DATE: _____

Trial Year 2017

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

Ideas are welcomed

Feedback received before August can potentially result in changes to the 2018 FDB, but feedback *at any time* is much appreciated.

Please send your comments to me at:

samoil@njaes.rutgers.edu

Or call me at: (732) 932 – 9575 ext. 4614

Thank you for your attention!