



What's New for 2020 IR-4 Field Data Books?

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To review the entire Field Data Book to identify elements that may be improved for greater efficiency and less opportunity for mistakes or omissions while maintaining GLP compliance without excessive documentation.



Members of the Field Data Book Review Committee

Marylee Ross, Chairperson, IR-4 Northeast Regional Field Coordinator
Tammy Barkalow, IR-4 Headquarters, Assistant Director, Quality Assurance
Roger Batts, North Carolina State University, Field Research Director
Michael Chen, IR-4 North Central Region, Quality Assurance
David Ennis, University of California-Davis, Field Research Director
Megan James, University of Maryland, Field Research Assistant
Sherita Normington, IR-4 Western Region, Quality Assurance
Sara Palmer, Reality Research
Ken Samoil, IR-4 Headquarters, Study Director
Janine Spies, IR-4 Southern Regional Field Coordinator
Rebecca Tannenbaum, University of Florida, Field Research Director
Mika Tolson, IR-4 Western Region Headquarters
Anthony VanWoerkom, IR-4 North Central Regional Field Coordinator

2020 FDB, Part 1

- Part 1 now consists of just one page—the GLP Compliance Statement.
- A true copy of the SOP index should be inserted *after* the Compliance Statement.

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 1. GOOD LABORATORY PRACTICE COMPLIANCE INFORMATION

STANDARD OPERATING PROCEDURES: Insert a verified true copy of the SOP index(s) after this page.

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, _____, 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	(Field personnel should not line out blank cells on this page.)
	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.
			TEST SITE HISTORY (chemical applications prior to the trial year) (FDB Part 5)
			CULTURAL PRACTICES (dating back to harvest of the previous crop), MAINTENANCE FERTILIZERS AND PESTICIDES (current trial year) (FDB Part 5)
			In U.S. trials, GLP-compliant equipment must comply with 40 CFR 160, Subpart D, which includes 160.81 (b) (11). Adjuvants in U.S. trials must comply with 40 CFR 160.83.
			ADJUVANT DATA (See Part 4D for specific items of non-compliance with GLPs) Check NO here if one or more items are non-GLP compliant.
			ENVIRONMENTAL MONITORING DEVICES for test substance storage (FDB Part 4)
			GLOBAL POSITIONING DEVICE used to determine plot location (FDB Part 5)
			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)
			pH METER or STRIP for measuring the acidity of the carrier (water) (FDB Part 6)
			RESIDUE SAMPLE WEIGHING EQUIPMENT (FDB Part 7)
			ENVIRONMENTAL MONITORING DEVICES for sample storage (FDB Part 7)
			List below additional non-compliant items (additional pages may be used for more items)

¹"NA" should be checked for equipment that was not used in this trial and if adjuvants were not used.

SIGNATURE OF FIELD RESEARCH DIRECTOR _____

DATE _____

This page should be signed and dated just prior to the submission of the Field Data Book to the Regional Coordinator.

PART 1 PAGE _____

Trial Year 2020

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

2020 FDB, Part 2

- 2A: “Address” (for the FRD) has been revised to “Office Address”
- 2B and 2C: These pages (Qualifications and Training Summaries) are now optional, and may be removed from the FDB prior to pagination if they are not needed. Pages removed must be indicated on the checklist in the General Instructions section, page 6.

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 2. PERSONNEL INVOLVED IN TRIAL

B. QUALIFICATIONS SUMMARY (OPTIONAL)

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.

If this form is not needed, it may be removed from the Field Data Book before pagination.

Indicate the removal in the Optional Pages Removed table on Page 6 of the Instructions section with initials and date.

NAME _____
(PRINTED)

(SIGNATURE)

EDUCATION SUMMARY: _____

WORK EXPERIENCE SUMMARY: _____

OPTIONAL PAGES REMOVED FROM THE FIELD DATA BOOK			
FDB Part	Enter X if removed	Initials	Date
2B			
2C			
4F			

***** 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 Part 10 (Protocol & Protocol Changes) do not need pagination or field ID numbers; these pages are intended for reference for the field personnel while they are in possession of the Field Data Book. 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.

- Many of the instructions have been relocated to the General Instructions section, page 4.
- References to faxes have been removed.

INSTRUCTIONS: This section may be used to document phone calls and emails associated with the field trial, 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. Printed communications such as email messages that are inserted into this section should be initialed and dated.

[illegible]

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

2020 FDB, Part 4A

- Prompt for Anticipated Last Application Date has been removed, and replaced by an instruction to contact the SD if the anticipated date is after the expiration date.
- Separate prompts for Carrier That Transported TS and Bill of Lading have been combined. “Was a Bill of Lading Received?” has been deleted.
- GLP status prompt moved to second table, and temperature monitoring instructions have been slightly revised.
- Instruction to insert TS label in the FDB has been deleted.

FIELD ID NO: _____
IR-4 FIELD DATA BOOK

PART 4 TEST SUBSTANCE RECORDS
A. RECEIPT, STORAGE AND DISPOSITION OF TEST SUBSTANCE (TS)—INSTRUCTIONS:
Complete a separate form for each different batch/lot of test substance that has been received.
PLEASE INSERT THE SHIPPING DOCUMENTS AND COA FOR TS AND ADJUVANT LABEL AFTER PART 4F.

NAME OF TEST SUBSTANCE ON CONTAINER LABEL <i>E.g. Darnitall 2 EC or GroundUp or XYZ8-0.</i>		DATE OF RECEIPT	
BATCH/LOT NO.	TEST SUBSTANCE EXPIRATION DATE		
Provide the batch/lot number of the test substance as it appears on the test material container label			
Do not assign an expiration date if none is provided with the test substance—contact the Study Director.			
SOURCE OF EXPIRATION DATE			
<i>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)</i> Contact the Study Director if the anticipated last application date is after the expiration date of the test substance.			
WILL THE TEST SUBSTANCE EXPIRE BEFORE THE ANTICIPATED LAST APPLICATION DATE? <i>If yes, contact the Study Director immediately.</i>		YES	NO

GLP STATUS KNOWN AT TIME OF RECEIPT <i>(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.)</i>		YES	NO
IF “NO”, ENTER DATE THAT STUDY DIRECTOR WAS INFORMED			
IF “YES”, SOURCE OF GLP STATUS INFORMATION <i>Label, shipping form, etc. Insert Certificate of Analysis (COA) in FDB Part 4 (if a COA has been received).</i>			
CARRIER/TRACKING NO. <i>E.g. UPS/ABCDE12K0601601993</i>			
INDIVIDUAL WHO RECEIVED TEST SUBSTANCE			
APPROXIMATE AMOUNT RECEIVED	NUMBER OF CONTAINERS		
CONTAINER DESCRIPTION <i>(glass bottles, water soluble packets, etc.)</i>			
CONDITION OF CONTAINER ON ARRIVAL <i>(intact, bags broken, etc.)</i>			

WAS THE TEST SUBSTANCE HELD TEMPORARILY* IN ANOTHER LOCATION PRIOR TO TRANSFER TO ITS LONG-TERM STORAGE LOCATION DURING THE FIELD TRIAL?		YES	NO
<i>*Temperature monitoring should begin within 2 days of receipt of the test substance by the Field Research Director or the designated person responsible for receiving it, regardless of where the test substance is held or stored.</i>			
IF YES, ENTER LOCATION			
DATES	ESTIMATED TEMPERATURE prior to monitoring		

ABOVE DATA ENTERED BY: _____ DATE: _____

PART 4 PAGE _____ Trial Year 2020

Total number of pages in this section at initial pagination: _____ (Paginate labels/SDS as belonging to Part 4)

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

2020 FDB, Parts 4B and 4C

- 4B: “Chemical Name” prompt has been revised to “Name of Test Substance on Container Label”.
- 4C: Instructions for Part 1 have been shortened and an obsolete URL has been deleted.

FIELD ID NO: _____
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. If test substance is removed for application to more than one plot (in this trial or in separate trials), list separately the amount of test substance removed for each plot.

NAME OF TEST SUBSTANCE ON CONTAINER LABEL _____

BATCH/LOT NUMBER _____ CONTAINER ID _____

DESCRIPTION OF TEST SUBSTANCE _____
(E.g. brown liquid, white powder. Note any unusual characteristics or changes here.)

ABOVE DATA ENTERED BY: _____ DATE: _____

DATE REMOVED	AMOUNT (UNITS) REMOVED	PURPOSE (include trial ID#) [E.g. apply treatments, used in other research, etc.]	INITIALS/DATE

FIELD ID NO: _____
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, enter the information requested below. 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 Test Substance Chain of Custody Form on the IR-4 website under Food Crop Researcher Resources/Field Data Book.

SHIPPED CONTAINERS TO (Name and Address) _____

- 4D: Yes/No checkoff of GLP compliance items for the adjuvant has been added to the bottom of the page. The statement at the top has been shortened.
- 4E: The instructions have been simplified to require a “certified true copy of the data”.
- 4F: Now an optional page.
- Green page: MSDS/SDS may be kept with TS label.

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS
D. IDENTIFICATION AND RECEIPT OF ADJUVANTS

NOTE: The use of adjuvants with the test substance must be approved in the protocol or in a protocol amendment. Adjuvants are considered to be reagents, not test substances. Place a copy of the label after Part 4F.

NAME OF THE ADJUVANT ON CONTAINER LABEL		
TYPE OF ADJUVANT (check one or specify other):	CROP OIL CONCENTRATE	
	METHYLATED SEED OIL	
	METHYLATED SPRAY OIL	
	NONIONIC SURFACTANT (NON-SILICONE)	
	SILICONE SURFACTANT	
	VEGETABLE OIL	
OTHER:		
DATE OF RECEIPT		
RECEIVED BY		
DOES THE ADJUVANT HAVE A BATCH OR LOT NUMBER? YES ____ NO ____		
IF YES, ENTER THE BATCH/LOT NO.		
EXPIRATION DATE:		
WAS THE EXPIRATION DATE ASSIGNED BY FIELD PERSONNEL? YES ____ NO ____		
AMOUNT RECEIVED		
SOP UTILIZED		
CONTAINER DESCRIPTION (e.g. glass bottles)		
CONDITION ON ARRIVAL (e.g. good, bags broken, etc.)		
ADJUVANT STORAGE LOCATION		
ARE THE FOLLOWING ITEMS GLP COMPLIANT?		
Date of receipt of ADJUVANT at field facility is recorded (usually the purchase date)	YES	NO
Identity and concentration of ADJUVANT is indicated on the adjuvant label		
Recommended storage conditions are listed on ADJUVANT label or SDS		
Expiration date of ADJUVANT has been assigned by manufacturer or field personnel		

ABOVE DATA ENTERED BY: _____ DATE: _____

PART 4 PAGE _____ Trial Year 2020

COMPLETE IF APPROPRIATE: "THIS IS A TRUE COPY OF THE ORIGINAL."
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2020 FDB, Part 4, Seed Treatment

- Throughout Part 4, prompts for a second seed treatment have been added where appropriate.
- 4A: New instruction to insert an image of the seed container label after 4F.
- 4B: This page was previously labeled as 4A2, and now includes a requirement to list previous seed treatments; page 4A3 has been deleted.
- 4C: This page now includes prompts that had previously been in both 4B and 4C. “Chemical Name” prompt has been revised to “Name of Test Substance on Seed Documentation”.
- 4E: Temperature records for seed should be kept from date of receipt until *date of planting*.

2020 FDB, Part 5

- New prompt in 5H (Maintenance fertilizers and pesticides):
If seed was used, had there been seed treatments*?
YES/NO/Seed was not used
*If this is a seed treatment study, include only seed treatments other than the test substance.
- A new column has been added for bracketing tank mixes.

FIELD ID NO: _____
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. Include all chemicals necessary to produce the crop. (Row crops begin at first fertilizer, plowing and bed formation. Perennial crops include all maintenance materials necessary to produce that crop of fruit.) 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. List tank-mixed chemicals together, if known, and bracket the tank mix in the first (left) column on the form. If the crop was established from transplants, include all maintenance chemicals applied to the plants prior to transplanting.

If seed was used, had there been seed treatments*? Yes ___ No ___ Seed was not used ___
*If this is a seed treatment study, include only seed treatments other than the test substance.
If YES, enter treatment chemical below (Date Applied would be "Seed TRT")

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
BRACKET TANK MIXES						

MAINTENANCE FERTILIZERS AND PESTICIDES DATA ARE (Check all that apply):

ORIGINAL DATA _____ TRUE COPY _____ TRANSCRIBED _____

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)

_____ 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: _____ DATE: _____

PART 5 PAGE _____ Trial Year 2020

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

2020 FDB, Part 7

- 7A2: If samples have not been placed in a freezer within 1 hour of collection, it is no longer required to enter the high and low transport temperatures, unless a min-max thermometer has been used. Temperature graphs must be inserted when a data logger has recorded the temperatures.

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): _____

DESCRIBE SAMPLE COLLECTION IF IT OCCURRED AFTER THE HARVEST DATE. ALSO, DESCRIBE ANY MODIFICATIONS TO THE HARVESTED CROP SUCH AS TRIMMING, CLEANING, CUTTING, DRYING AND/OR COMPOSITING SAMPLES. You may attach a separate sheet that clearly describes these procedures. Include a description of equipment, duration of procedure(s), temperatures, estimated moisture content, etc., as appropriate.

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 (attach a separate sheet if there are >4 samples):

Sample ID	Time that Modifications were Completed	Time that Sample was Placed in a Cooler	Elapsed Time (minutes)

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 ___

¹Following the completion of any modifications, such as drying or pitting, or following harvest if there were no modifications

If no, and you used a min-max thermometer, enter the temperature ranges of the samples during transport and check off °F or °C:	Untreated	_____ °F	_____ °C	NA
	Treated	_____ °F	_____ °C	NA

If NO, and you used a data logger, insert the temperature graphs in this Field Data Book (true copies are acceptable).

ABOVE DATA ENTERED BY: _____ DATE: _____



What's New for 2021 IR-4 Field Data Books?

The Field Data Book Review Committee will continue to work on revisions. Since the publication of the 2020 Field Data Book, the committee has focused on Parts 5 and 6.

One notable change has been made to Part 6...

2021 FDB, Part 6

- 6C: The output calibration section has been restored to a single page.
- The standard page (included in the Field Data Book) may be used for sprayers with up to 6 nozzles, for full calibrations and one-run rechecks.
- Alternate pages will be available for booms with >6 nozzles, as well as for greenhouse trials, airblast sprayers, horizontal tables, and 3-run target checks.

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 6. APPLICATION RECORDS

C. DISCHARGE CALIBRATION FOR APPLICATION NUMBER _____

INSTRUCTIONS: Use this form when conducting full (3-run) calibrations or rechecks. If conducting a recheck, please provide calculations to verify that the output is within $\pm 5\%$ of the most recent full calibration. If your boom has >6 nozzles/outlets, please use the form labeled [Part-6C, Large Boom](#) provided on the IR-4 website.

If you are conducting a 3-run target check, please use the 3-run target check form provided on the IR-4 website.

EQUIPMENT IDENTIFIER _____

DISCHARGE CALIBRATION DATE _____ TIME _____ PERFORMED BY _____ (INITIALS)

LOCATION WHERE THE CALIBRATION WAS PERFORMED _____

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

BRIEFLY DESCRIBE PROCEDURE USED TO CHECK DISCHARGE CALIBRATION _____

PRESSURE (psi) _____ UNITS (e.g. ml, grams) _____

Output Run Number	1	2	3	
Nozzle/Hopper				
Outlet Number				
Along Boom				
(If more than 6 nozzles, use the alternate form provided on the website.)				
4				
5				
6				
Total Boom Volume				A
Mean per nozzle or outlet				B
Time (seconds)				C
Discharge Rate				Average Discharge Rate* D

Is this a recheck?

Yes _____

No _____

Indicate whether discharge rate is calculated for: Total Boom Volume _____ Mean Nozzle Volume _____ % (A or B)/C=D

Is the discharge rate of each run within 5% of the mean? YES _____ NO _____ NA _____

Are individual nozzle outputs within 5% of the mean during each run? YES _____ NO _____ NA _____

If this is a recheck, are results within 5% of original output? YES _____ NO _____ NA _____

ABOVE DATA ENTERED BY: _____ DATE: _____

PART 6 PAGE _____ Trial Year 2021

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 2021 FDB, but feedback *at any time* is much appreciated.

Please send your comments to Ken at:
samoil@njaes.rutgers.edu

Or contact your Regional Field Coordinator