



# 2024 IR-4 Training Webinars

February



# IR-4 Training Webinar: February

- Field Trial Planning
  - Tools from FRDs in all regions
- Greenhouse trial tips and tricks
  - David Ennes
  - Marylee Ross
- Tour of the eFDB Resources
- National SOPs in eQA
  - Martin Beran





# Field Trial Planning Tools and Tips

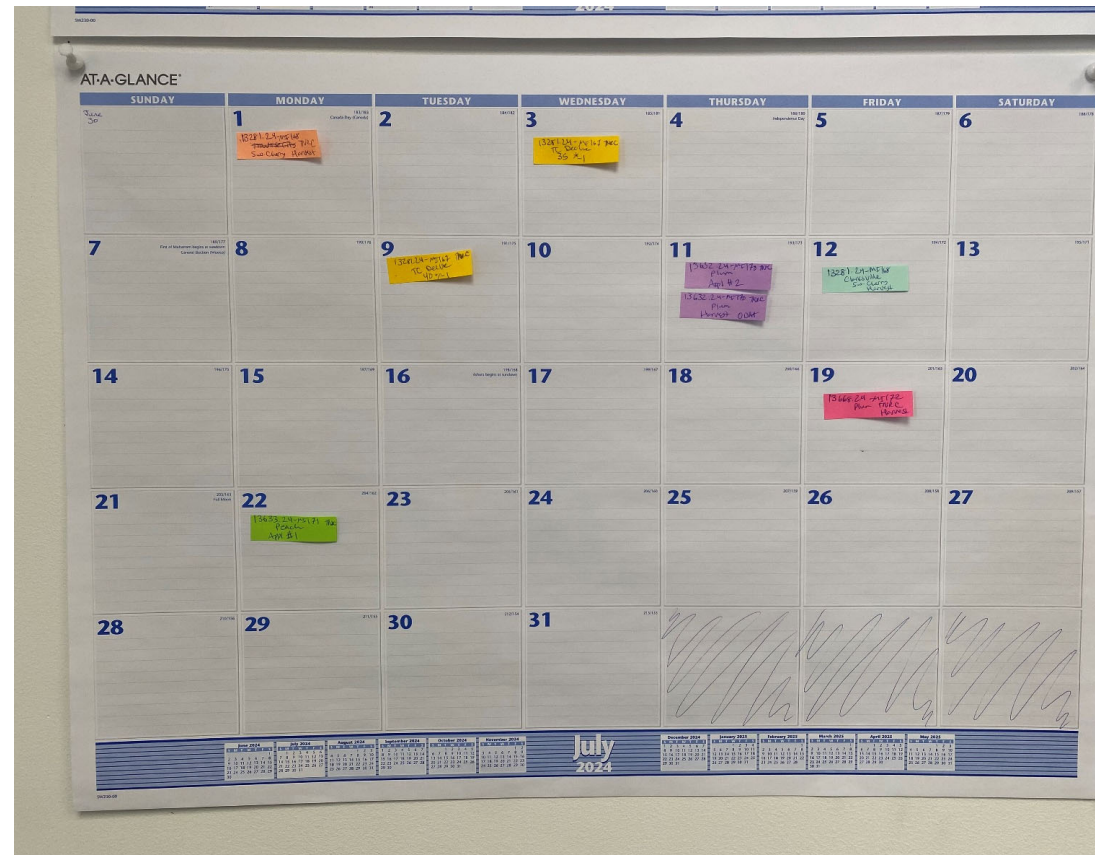
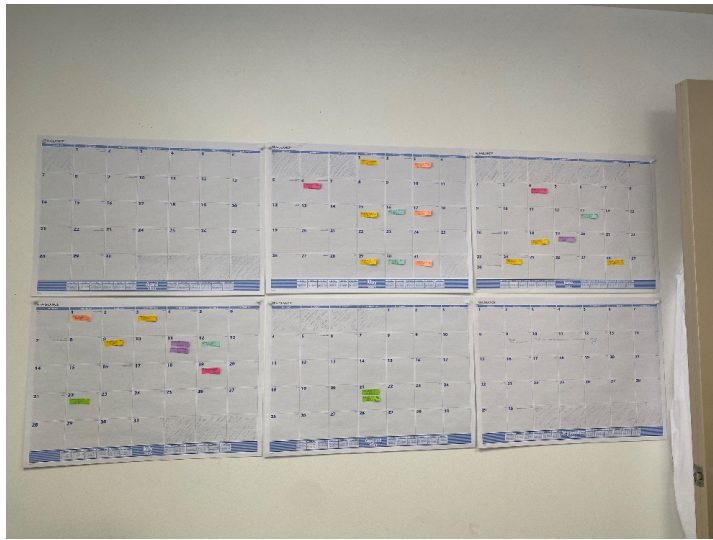
From researchers in each region





# Celeste Wheeler, North Central Region

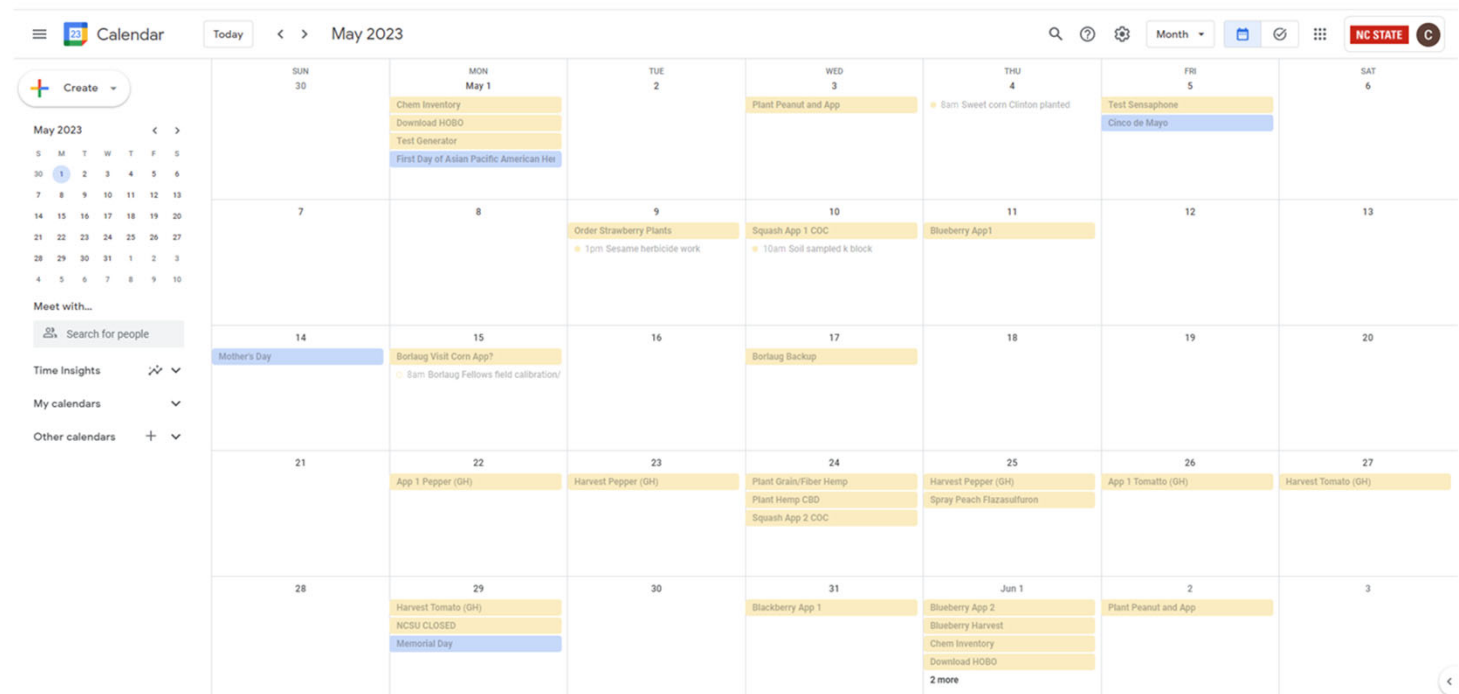
- Paper wall calendars and color stickies





# Cole Smith, Southern Region

- Google Calendar on phone and computer
- I do what the calendar tells me and if it isn't on the calendar it doesn't get done.



# Dani Lightle, Western Region

- Large whiteboard with tape
- Tip: Add your planned vacation on the calendar FIRST. Then schedule your planting timing and application/harvest dates around those. That way you protect your precious time off.

Days Off	Trial ID	Product	Crop	Trial Site	App 1	App 2	App 3	Harvest	Notes
July	✓ 13485.23-08233	Bifenthrin	ONION	NWREC	May 1	—	—		
July 1-5	13495.23-08235	Quizalofop	HOPS	Stauffer	Aug 7	Aug 21	—	Sept 4	
July 20-24	✓ 13505.23-08234	Mefenitrifluconazole	GA HOPS	Stauffer	Aug 14	Aug 21	—	Sept 4	
	✓ 13295.23-08267	Gf-4031 QA	Cherry	MCAREC	June 20	June 27	July 4	July 11	
	✓ 11808.23-08262	Cyflumetofen QA	Raspberry	NWREC	June 6	June 21	—	June 21	DECLINE
	✓ 11808.23-08263	Cyflumetofen	Blackberry	Albany	June 30	July 13	—	July 14	
	✓ 11808.23-08264	Cyflumetofen	Raspberry						
	✓ 13487.23-08274	TiaGua.Cil	Blueberry	NWREC	June 29	July 20	—	July 20	
	✓ 09102.23-08261	Flutolanil	Strawberry	NWREC	June 7	July 7	—	July 21	DECLINE
	✓ 13455.23-08272	Glufosinate	Strawberry	NWREC	June 26	—	—	July 17	
	✓ 07883.23-08260	Piridate	Corn (sweet)	NWREC	July 10	—	—	Aug 24	
	13035.23	Cyleniliprole	Hemp	NWREC	Sept 3	Sept 8	Sept 13	Sept 20	
	13033.23	Conpyroximate QA	Hemp	NWREC	AUG 30	Sept 13	—	Sept 20	
	✓ 13541.23	Fluazifop-P-Butyl	Pea	NWREC	Apr 13	Apr 27	June 2	May 11 / June 30	Apr 4 June 15
	13452.23	Ethephon QA	Hazelnut	NWREC	AUG 31	—	—	Sept 14	
	13450.23	Ethephon	Hazelnut						
	13450.23	Ethephon	Hazelnut						
	13450.23	Ethephon	Hazelnut						
	✓ 13502	Novaluron	Blackberry	NWREC	June 15	June 22	June 29	July 7	Apr 4 - July 6

# David Ennes and Keri Skiles, Western Region

- Excel file color coded
- 2023 Late Season

Test Substance/Test System/Field ID No.	App's	App's made	Planting date	App 1	App 2	App 3	App 4	App 5	App 6	App 7	App 8	Last App	Sample date	Samples shipped	Notebook shipped
13451.23-CA43				7-Sep	21-Sep	5-Oct	19-Oct					19-Oct	2-Nov	15-Nov	15-Jan
Ethaboxam Grapfruit	2	1		12-Dec											
13283.23-CA32				12-Dec	11-Jan							11-Jan	10-Feb	15-Feb	15-Apr
Fluazifop-P-Butyl Squash	2	2	18-Apr	10-May	23-May							23-May	6-Jun	9-Jun	29-Jun
13540.23-CA84			19-Apr	17-May	31-May							31-May	14-Jun	15-Jul	15-Sep
Flutianil Basil	5	5	18-Apr	13-Jun	20-Jun	27-Jun	3-Jul	10-Jul				10-Jul	7/10,11/23	17-Jul	16-Aug
13542.23-CA86			18-Apr	8-Jun	15-Jun	22-Jun	29-Jun	6-Jul				6-Jul	6-Jul	15-Jul	15-Sep
Flutolanil Strawberry	2	2	7-Apr	10-Apr	10-May							10-May	7-Jun	21-Aug	30-Aug
09102.23-CA15			22-Mar	17-Apr	17-May							17-May	31-May	15-Jun	15-Aug
Fenpyroximate Hemp (GH)	CBD	2	0	21-Dec											
13033.23-CA22			13-Dec	14-Mar	28-Mar							28-Mar	4-Apr	15-Apr	15-Jun
GF-4031 Cherry	3	3		9-May	16-May	23-May						23-May	30-May	9-Jun	25-Jul
13295.23-CA36				9-May	16-May	23-May						23-May	30-May	15-Jun	15-Aug
Glufosinate Strawberry	1	1	7-Apr	8-May								8-May	30-May	21-Aug	11-Oct
13455.23-CA46			22-Mar	4-Apr								4-Apr	30-May	15-Jun	15-Aug
Inpyrfluxam/Tomato Decline	4	4	15-May	16-May	14-Jun	14-Jul	14-Aug					14-Aug	8/14,15,17,21,28/23	12-Sep	20-Oct
13511.23-CA71			15-May	16-May	15-Jun	14-Jul	14-Aug					14-Aug	8/14,15,17,21,28/23	15-Sep	15-Nov
Isocycloseram/Pomegrante	2	2		18-Aug	18-Sep							18-Sep	2-Oct	18-Oct	20-Nov
13504.23-CA67				18-Aug	18-Sep							18-Sep	2-Oct	15-Oct	15-Dec
Isocycloseram/Pomegrante	2	2		19-Sep	19-Oct							19-Oct	2-Nov	30-Nov	
13504.23-CA68				19-Sep	19-Oct							19-Oct	2-Nov	15-Nov	15-Jan
Pyridate Corn (Sweet)	1	1	18-Apr	12-Jun								12-Jun	7/27, 8/2/23	21-Aug	25-Sep
07883.23-CA11			18-Apr	30-May								30-May	13-Jul	15-Aug	15-Oct
Rimsulfuron Avocado	Trial moved to UCR	1	0												
13484.23-CA49				13-Feb								13-Feb	27-Feb	15-Mar	15-May
Tiafenacil/Pepper Non-bell	2	2	14-Apr	11-Apr	7-Jul							7-Jul	7-Jul	17-Jul	5-Sep
10501.23-CA65			14-Apr	11-Apr	6-Jul							6-Jul	6-Jul	15-Jul	15-Sep
Tiafenacil/Pepper Bell	2	2	15-May	12-May	31-Jul							31-Jul	31-Jul	21-Aug	25-Sep
10501.23-CA66			15-May	11-May	14-Aug							14-Aug	14-Aug	15-Sep	15-Nov
Tiafenacil/Tomato	2	2	15-May	11-May	7-Aug							7-Aug	7-Aug	21-Aug	25-Sep
13500.23-CA61			15-May	11-May	29-Aug							29-Aug	29-Aug	15-Sep	15-Nov
**Red Font placed in the second (or third) line of a trial = original schedule															



# David Ennes and Keri Skiles, Western Region

- 2024 Early Season

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1		FRD	Location	App's	App's	Planting	App 1	App 2	App 3	App 4	App 5	App 6	App 7	App 8	Last App	Sample date	Samples	Notebook
2	Test Substance/Test System/Field ID No.				made	date											shipped	shipped
3	Afidopyropen Lemon	DJE	UCLREC	1	0													
4	13760.24-CA79						23-Feb								23-Feb	23-Feb	15-Mar	15-May
5	Afidopyropen Grapefruit	DJE	UCLREC	1	1		30-Jan								30-Jan	30-Jan		
6	13761.24-CA84						24-Jan								24-Jan	24-Jan	15-Feb	15-Apr
7	Ethofumesate Swiss Chard	DJE	UCKARE	2	0													
8	12714.24-CA13					14-Mar	14-Mar	29-Apr							29-Apr	29-May	15-Jun	15-Aug
9																		
10																		
11	Fenpyroximate CBD Hemp GH	DJE	UCKARE	2	0													
12	13033.24-CA25					21-May	29-Jul	12-Aug							12-Aug	19-Aug	15-Sep	15-Nov
13	Isofetamid Strawberry GH	DJE	UCKARE	3	0													
14	12609.24-CA12					21-Mar	24-Apr	8-May	22-May						22-May	22-May	15-Jun	15-Aug
15																		
16																		
17																		
18																		
19																		
20																		
21	Mefentrifluconazole Broccoli	DJE	UCKARE	3	0													
22	13741.24-CA69					15-Aug	22-Oct	29-Oct	5-Nov						5-Nov	5-Nov	15-Nov	15-Jan
23																		
24																		

## Jennifer Fisher, North East Region

- Current view of IR-4 fields



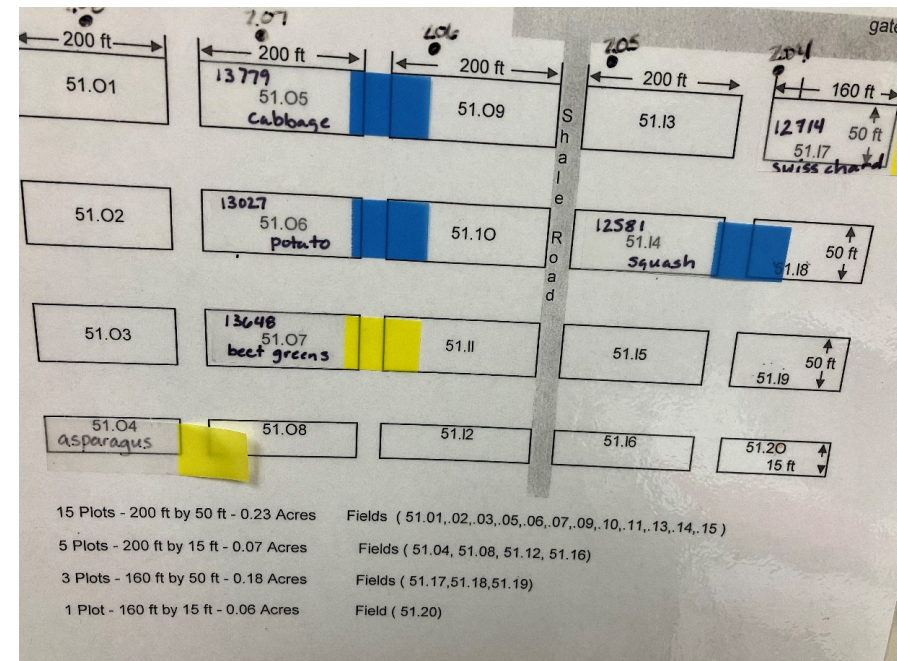
# Old School Tools

- Paper calendar, laminated field maps

**MAY 2023**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Trimmed onion 30 fert 1.25 oz/plant 21-00-24S	2	3	4 1345S Strawberry app 1 of 2	5 13304 App 2 14.51 d before harvest	6
7	8 fert lettuce 451b 46-0-0 per A & sidedress moved onion plants to wagon	9 strawberry 09102 app 2 30:2 to harvest	10 transplanted 13500 + 13511 tomato plugs to 48s freezer alarm lost	11	12 VAC	13
14	15 lettuce app 2 31 days after app 1 irrigated	16	17 trimmed onion	18 transplanted onion and app	19	20 13304 strawberry harvest 15 d after app 2
21	22 seed squash? 1-10 385 50d	23 planted 8-38s Squash	24	25 seed 13542 basil + 12028 basil TRT01, TRT02, TRT03	26	27
28 1345S strawberry harvest first fruit	29	30	31 tomato on wagon harvest 13304 strawberry harvest 1345S strawberry			
MEMORIAL DAY (CLOSED)						

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**Legend:**

- Food Bank Master Gardener Block
- Still Looking for researcher
- Trees will be removed
- Rutgers Fruit Breeding Program
- Dr. Megan Muehlbauer
- Dr. Thierry Besancon

**Map Labels:**

- Field #12.8** (Yellow)
- Tall Spindle** (Orange)
- Field#12.6b** (Green)
- Field#12.5** (White)
- Field #12.1a** (Yellow)
- Field #12.1b** (Yellow)
- Field #12.1c** (Green)
- Field #12.1d** (Pink)
- Field #12.1e** (Orange)
- Field #12.1f** (Green)
- Field #12.1g** (Green)
- Field #12.1h** (Green)
- Field #12.1i** (Green)
- Field #12.1j** (Green)
- Field #12.1k** (Green)
- Field #12.1l** (Green)
- Field #12.1m** (Green)
- Field #12.1n** (Green)
- Field #12.1o** (Green)
- Field #12.1p** (Green)
- Field #12.1q** (Green)
- Field #12.1r** (Green)
- Field #12.1s** (Green)
- Field #12.1t** (Green)
- Field #12.1u** (Green)
- Field #12.1v** (Green)
- Field #12.1w** (Green)
- Field #12.1x** (Green)
- Field #12.1y** (Green)
- Field #12.1z** (Green)
- Field #12.1aa** (Green)
- Field #12.1ab** (Green)
- Field #12.1ac** (Green)
- Field #12.1ad** (Green)
- Field #12.1ae** (Green)
- Field #12.1af** (Green)
- Field #12.1ag** (Green)
- Field #12.1ah** (Green)
- Field #12.1ai** (Green)
- Field #12.1aj** (Green)
- Field #12.1ak** (Green)
- Field #12.1al** (Green)
- Field #12.1am** (Green)
- Field #12.1an** (Green)
- Field #12.1ao** (Green)
- Field #12.1ap** (Green)
- Field #12.1aq** (Green)
- Field #12.1ar** (Green)
- Field #12.1as** (Green)
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- Field #12.1au** (Green)
- Field #12.1av** (Green)
- Field #12.1aw** (Green)
- Field #12.1ax** (Green)
- Field #12.1ay** (Green)
- Field #12.1az** (Green)
- Field #12.1ba** (Green)
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- Field #12.1bo** (Green)
- Field #12.1bp** (Green)
- Field #12.1bq** (Green)
- Field #12.1br** (Green)
- Field #12.1bs** (Green)
- Field #12.1bt** (Green)
- Field #12.1bu** (Green)
- Field #12.1bv** (Green)
- Field #12.1bw** (Green)
- Field #12.1bx** (Green)
- Field #12.1by** (Green)
- Field #12.1bz** (Green)
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- Field #12.1cg** (Green)
- Field #12.1ch** (Green)
- Field #12.1ci** (Green)
- Field #12.1cj** (Green)
- Field #12.1ck** (Green)
- Field #12.1cl** (Green)
- Field #12.1cm** (Green)
- Field #12.1cn** (Green)
- Field #12.1co** (Green)
- Field #12.1cp** (Green)
- Field #12.1cq** (Green)
- Field #12.1cr** (Green)
- Field #12.1cs** (Green)
- Field #12.1ct** (Green)
- Field #12.1cu** (Green)
- Field #12.1cv** (Green)
- Field #12.1cw** (Green)
- Field #12.1cx** (Green)
- Field #12.1cy** (Green)
- Field #12.1cz** (Green)
- Field #12.1da** (Green)
- Field #12.1db** (Green)
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- Field #12.1dl** (Green)
- Field #12.1dm** (Green)
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- Field #12.1dp** (Green)
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- Field #12.1dw** (Green)
- Field #12.1dx** (Green)
- Field #12.1dy** (Green)
- Field #12.1dz** (Green)
- Field #12.1ea** (Green)
- Field #12.1eb** (Green)
- Field #12.1ec** (Green)
- Field #12.1ed** (Green)
- Field #12.1ee** (Green)
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- Field #12.1eg** (Green)
- Field #12.1eh** (Green)
- Field #12.1ei** (Green)
- Field #12.1ej** (Green)
- Field #12.1ek** (Green)
- Field #12.1el** (Green)
- Field #12.1em** (Green)
- Field #12.1en** (Green)
- Field #12.1eo** (Green)
- Field #12.1ep** (Green)
- Field #12.1eq** (Green)
- Field #12.1er** (Green)
- Field #12.1es** (Green)
- Field #12.1et** (Green)
- Field #12.1eu** (Green)
- Field #12.1ev** (Green)
- Field #12.1ew** (Green)
- Field #12.1ex** (Green)
- Field #12.1ey** (Green)
- Field #12.1ez** (Green)
- Field #12.1fa** (Green)
- Field #12.1fb** (Green)
- Field #12.1fc** (Green)
- Field #12.1fd** (Green)
- Field #12.1fe** (Green)
- Field #12.1ff** (Green)
- Field #12.1fg** (Green)
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- Field #12.1fi** (Green)
- Field #12.1fj** (Green)
- Field #12.1fk** (Green)
- Field #12.1fl** (Green)
- Field #12.1fm** (Green)
- Field #12.1fn** (Green)
- Field #12.1fo** (Green)
- Field #12.1fp** (Green)
- Field #12.1fq** (Green)
- Field #12.1fr** (Green)
- Field #12.1fs** (Green)
- Field #12.1ft** (Green)
- Field #12.1fu** (Green)
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- Field #12.1fw** (Green)
- Field #12.1fx** (Green)
- Field #12.1fy** (Green)
- Field #12.1fz** (Green)
- Field #12.1ga** (Green)
- Field #12.1gb** (Green)
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- Field #12.1ge** (Green)
- Field #12.1gf** (Green)
- Field #12.1gg** (Green)
- Field #12.1gh** (Green)
- Field #12.1gi** (Green)
- Field #12.1gj** (Green)
- Field #12.1g**



# Paper Calendar

- Start with planning done in pencil
- When events actually occur, record in pen

harvest? harvest sweet corn?

AUGUST 2023						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		13541 pea forage TRTO3 App1 14±1d BB harvest ending 2023 1 day dry	2	13542 Basil App3 Squash harvest 21+1d I,J	13511 tomato App3 29d	5
6	ACDS	7	8 harvested 12028 TRT basil today DA DB harvested Squash 27d KL	9	10 collected 12028 Sample FAFB,FCFD harvested 12028 TRTO2 DC,DD	11
13	13541 pea forage TRTO3 App2 14±1d Corn 70d	14	15 harvested 13542 TRTO1 basil to dry Brix 17-18.6 [sampled DA, DB 13542]	16	17 13542 Basil app5 + harvest PH10 FAFBFCFD dry DC,DD Corn harvest/sample dry samples 43d	18
20	21	22	23 13500 tomato app 2 + harvest PH10 App1 AAFC 7±1d	24	25	26 harvested wine grapes Brix 17.5-19 17 bins
27	28 harvest pea forage 11808 caneberry 14±1d app1 App1 peas seed 14±1	29 App2 AAFC 7±1d	30 TOMATO TASTING	31	lots of rasp this week	

Grapes should be Brix 22-26 pH 2.9-3.3

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# Trial Tracking with Excel

- TS receipt
- Crop establishment
- Applications complete
- Sample shipping
- Submitting notebook

## TRACKING TRIALS IN EXCEL FILE:

2023 IR-4 Trial Tracking:

<i>PR#/Test Substance/Crop</i>	<i>received TS</i>	<i>crop established in field</i>	<i>GLP applications completed</i>	<i>residue samples collected</i>	<i>samples shipped to lab</i>	<i>Field Data Book submitted for QA/QC</i>
13304.22-NJ197 2,4-D Choline/Strawberry	X (3/23/2022)	X	X	X	X (6-30-23 UFL)	10/24/2023
13485.23-NJ207 Bifenthrin/Onion	X (1/19/2023)	X	X	X	X (USDA-ARS GA 8-8-23)	11/28/2023
11808.23-NJ203 Cyflumetofen/Caneberry	X (5/26/2023)	X	X	X	X (UCD 10-2-23)	1/3/2024
13540.23-NJ213 Fluzifop-p-butyl/Squash (Summer)	X (4/3/2023)	X	X	X	X (UFL 9-6-23)	11/28/2023
13541.23-NJ214 Fluzifop-P-Butyl/Pea (Edible Podded & Succulent Shelled)	X (4/3/2023)	X	X	X	X (UFL 10-2-23)	1/17/2024
13542.23-NJ215 Flutolanil/Basil	X (4/23/2023)	X	X	X	X (UCD 9-6-23)	1/3/2024
09102.23-NJ202 Flutolanil/Strawberry	X (3/1/2023)	X	X	X	X (GPL CA 9-6-23)	1/17/2024
13455.23-NJ206 Glufosinate/Strawberry	X (2/3/2023)	X	X	X	X (ADPEN FL 8-8-23)	1/17/2024
13511.23-NJ212 Inpyrfluxam/Tomato (Processing)	X (3/16/2023)	X	X	X	X (UFL 9-6-23)	1/3/2024
13194.23-NJ205 Mefenoxam/Lettuce (Head)	X (4/3/2023)	X	X	X	X (WA 6-30-23)	11/28/2023
AAFC23-007R-036 Novaluron+Acetamiprid/Caneberry	X (4/28/2023)	X	X	X	X (AAFC VL 10-2-23)	1/3/2024
07883.23-NJ201 Pyridate/Corn (Sweet)	X (3/29/2023)	X	X	X	X (UFL 10-2-23)	1/17/2024
13487.23-NJ209 Tiafenacil/Blueberry	X (2/1/2023)	X	X	X	X (UCD 8-8-23)	11/28/2023
13500.23-NJ210 Tiafenacil/Tomato	X (3/9/2023)	X	X	X	X (UFL 9-6-23)	1/3/2024
12028.23-NJ204 Uniconazole-P/Basil (GH)	X (5/1/2023)	X	X	X	X (WA 9-6-23)	1/3/2024



# IR-4 Chemical Inventory

- When TS is received, it is recorded in chemical inventory excel spreadsheet

## TRACKING TS RECEIPT IN INVENTORY (EXCEL SPREADSHEET):

IR-4 Test Substance Inventory  
Rutgers University Snyder Research and Extension Farm-Bldg 6343  
Pittstown, NJ

Container Number	Date Received	Field ID Number	TS/Chemical Name	Active Ingredient	Manufacturer/ Registrant	Batch/Lot #	EPA Reg. #	Signal Word	Amount	#/Container Type	Storage Conditions	Date Removed	Disposition	Initials	Notes:	TS Container Disposal Approval
16-01	2/2/2016	11862.16-N0452	Fusilade DX	Fluazifop-P-butyl 24.8%	Syngenta	VWC3C26030	100-1070	CAUTION	200 ml	1 plastic bottle	<30 deg C	2/3/2017	Moved to IR-4 bin in general pesticide storage (for IR-4 maintenance sprays/general ST spraying). Will retain container when empty until Test Substance container disposal has been approved.	JF		X
16-02	3/3/2016	11604.16-N0474	Quadris Top 58	Azoxystrobin 18.2% Difenoconazole 11.4%	Syngenta	MHA4C24-FA1	100-1313	CAUTION	300 ml	1 plastic bottle	<30 deg C	2/3/2017	Moved to IR-4 bin in general pesticide storage (for IR-4 maintenance sprays/general ST spraying). Will retain container when empty until Test Substance container disposal has been approved.	JF		product used, retained container
A16-01	5/19/2016	Adjutant	Induce (ND)	Allyl Aryl Polyoxyalkane ethers, alkanolamides, dimethyl siloxane, and Free Fatty Acids 90%	Helena	CG6C0134GHS	NA	WARNING	2.5 gal	1 plastic jug	Store in original container only. Keep container tightly closed. Do not allow water to be introduced into the contents of this container. Do not store near food or open flame. Do not store with oxidizing agents or ammonium nitrate.	3/14/2018	Gave to Snyder Research Farm for general pesticide use	JF	5 year expiration date assigned 5/19/2021	
16-03	8/8/2016	11604.16-N0517	Quadris Top 58	Azoxystrobin 18.2% Difenoconazole 11.4%	Syngenta	MHA4C24-FA1	100-1313	CAUTION	300 ml	1 plastic bottle	<30 deg C	2/3/2017	Moved to IR-4 bin in general pesticide storage (for IR-4 maintenance sprays/general ST spraying). Will retain container when empty until Test Substance container disposal has been approved.	JF		product used, retained container
17-01	11/28/2016	12029.17-N0279	Caperol 4L	Prometryn 44.2% (COA) 44.4% (label)	Syngenta	OMS618019	100-620	CAUTION	200 ml	1 plastic bottle	<30 deg C	11/20/2017	Moved to IR-4 bin in general pesticide storage (for IR-4 maintenance sprays/general ST spraying). Will retain container when empty until Test Substance container disposal has been approved.	JF		X (product used, disposed of container)
17-02	11/28/2016	12034.17-N0280	Caperol 4L	Prometryn 44.2% (COA) 44.4% (label)	Syngenta	OMS618019	100-620	CAUTION	200 ml	1 plastic bottle	<30 deg C	11/20/2017	Moved to IR-4 bin in general pesticide storage (for IR-4 maintenance sprays/general ST spraying). Will retain container when empty until Test Substance container disposal has been approved.	JF		

## Plot Signs

- Once trial assignments are received, I take some time during the offseason to make trial plot signs ahead of time
- Saves time in the middle of the busy field season



# Seed Order

- Planning and tracking seed orders for the trial season
- I use it to keep records of quantities from year to year to help with future planning of seed amounts needed
- Includes dates seed was received and treatment chemicals which need to be recorded in the FDB

2023 IR-4 Seeds

	Variety [DTH]	Amount	Company	Total Cost	Date Rec'd	Notes	seed roller? LJ - 12 or 24 should work
Onion [100 d]	Mountaineer	20,000	Stokes	\$ 163.80	1/12/2023	treated with FarMore FI500 (Apron XL/mefenoxam, Maxim 4FS/fludioxonil, Dynasty/azoxystrobin, Cruiser/thiamethoxam, and Regard/spinosad) seed treatment (+\$30 shipping)	
Squash [50 d]	Golden Glory	500	Stokes	\$ 56.80	1/13/2023	treated with FarMore FI400 (Apron XL/mefenoxam, Maxim 4FS/fludioxonil, Dynasty/azoxystrobin, Cruiser 5FS/thiamethoxam) seed treatment	
Pea [61 d]	Knight(shelled)	15 lb	Stokes	\$ 62.25	1/27/2023	shelling pea (+\$30 shipping) sent 1 - 9 lb, and 6 - 1 lb bags	
Basil [74 d]	Prospera Compact DMR (PL4)	1 oz	Johnny's	\$ 28.00	1/23/2023		
Tomato (Processing)	Hy-Beef 9904 VF?	--	--				
Lettuce (head) [75 d]	Meridian	2000	Harris	\$ 15.00	2/3/2023	untreated non-GMO	
Corn (sweet) [70 d]	Temptress	25,000	Johnny's	\$ 277.50	1/23/2023	treated with Apron XL/mefenoxam, Captan, Dividend Extreme/Difenoconazole and Mefenoxam, Precise, Thiram, and Vitavax/Thiram, Carboxin, Metalaxyl	
Tomato (large) [70 d]	Hy-Beef 9904 VF	1000	Stokes	\$ 24.78	1/13/2023		

\$ 628.13

\$ 688.13 with shipping costs



# Soil Sample Tracking

- Track fields, sample ID, and sample collection/analysis dates for nutrient and textural samples for each IR-4 field

## TRACKING SOIL SAMPLING (EXCEL FILE):

Field	Sample Number	Sampling Date(s)	Shipping Date	Analysis Date	Most Recent Nutrients, PH, OM	Most Recent Soil Texture
11.1 RS	401	11/21/2018	1/23/2019	1/28/2019	1/11/2023	1/28/2019
11.1 RS	416	11/27/2019	1/7/2020	1/10/2020		
11.1 RS	404	12/5/2022	1/9/2023	1/11/2023		
11.1 RN	402	11/21/2018	1/23/2019	1/28/2019	1/11/2023	1/28/2019
11.1 RN	417	11/27/2019	1/7/2020	1/10/2020		
11.1 RN	403	12/5/2022	1/9/2023	1/11/2023		
11.1 BS	403	11/21/2018	1/23/2019	1/28/2019	1/15/2024	1/28/2019
11.1 BS	418	11/27/2019	1/7/2020	1/10/2020		
11.1 BS	411	12/11/2020	1/12/2021	1/15/2021		
11.1 BS	402	12/5/2022	1/9/2023	1/11/2023		
11.1 BS	404	12/15/2023	1/11/2023	1/15/2024		
11.1 BN	404	11/21/2018	1/23/2019	1/28/2019	1/15/2024	1/28/2019
11.1 BN	419	11/27/2019	1/7/2020	1/10/2020		
11.1 BN	410	12/11/2020	1/12/2021	1/15/2021		
11.1 BN	401	12/5/2022	1/9/2023	1/11/2023		
11.1 BN	403	12/15/2023	1/11/2023	1/15/2024		
11.1 GS	405	11/21/2018	1/23/2019	1/28/2019	1/10/2020	1/28/2019
11.1 GS	420	11/27/2019	1/7/2020	1/10/2020		
11.1 GN	406	11/21/2018	1/23/2019	1/28/2019	1/10/2020	1/28/2019
11.1 GN	421	11/27/2019	1/7/2020	1/10/2020		
12.8	421	12/3/2018	1/23/2019	1/28/2019	1/28/2019	1/28/2019

## IR-4 Field Pesticide and Fertilizer History

- Offseason: I update all pesticide/fertilizer apps for each field
- Include any relevant activities using the farm supervisor's pesticide application and field record database

Field 51.07 Pesticide/Fertilizer History

Year	Crop	Active Ingredient	Trade Name	Rate	Date
2017	Tillage Radish	glyphosate	Mad Dog Plus	1.5 qt/A	6/9/2017
2018	12401.18 NJ249 Cyantraniliprole/ Dill (seed)	potash	0-0-60	250 lb/A	5/30/2018
		ammonium sulfate	21-0-0-245	714 lb/A	6/5/2018
		linuron	Lorox DF	1.5 lb/A	6/12/2018
		Cyantraniliprole (app 1 12401.18 NJ249 seed)	Exirel	615.5 ml/A	9/24/2018
		alkylaryl polyoxyikane	Induce	32 fl oz/100 gal	9/24/2018
		Cyantraniliprole (app 2 12401.18 NJ249 seed)	Exirel	612.57 ml/A	9/28/2018
		alkylaryl polyoxyikane	Induce	32 fl oz/100 gal	9/28/2018
		Cyantraniliprole (app 3 12401.18 NJ249 seed)	Exirel	606.956 ml/A	10/2/2018
		alkylaryl polyoxyikane	Induce	32 fl oz/100 gal	10/2/2018
2019	fallow/tillage radish	no applications on record			
2020	12805.20 NJ268 XDE-659/Garden Beet	glyphosate	Mad Dog	3 qt/A	7/1/2020
		46-0-0	urea	163 lb/A	7/14/2020
		boron	Solubor	15 lb/A	7/14/2020
		cycloate	Ro-Neet 6E	2 qt/A	8/11/2020
		thiamethoxam	Platinum 75 WG	4 oz/A	8/12/2020
		XDE-659 (app 1)	XDE-659	608 ml/A	9/24/2020
		alkylaryl polyoxyikane	Induce	32 fl oz/100 gal	9/24/2020
		XDE-659 (app 2)	XDE-659	608 ml/A	10/1/2020
		alkylaryl polyoxyikane	Induce	32 fl oz/100 gal	10/1/2020
		XDE-659 (app 3)	XDE-659	608 ml/A	10/7/2020
		alkylaryl polyoxyikane	Induce	32 fl oz/100 gal	10/7/2020
2021	fallow/rye	glyphosate	Makaze	3 qt/A	4/19/2021
		glyphosate	Makaze	3 qt/A	10/1/2021
		ammonium sulfate	AMS	10 lb/100 gal	10/1/2021
		alkylaryl polyoxyikane	Induce	10 fl oz/A	10/1/2021

6/6/2018 chisel plow  
6/7/2018 heavy disk  
6/8/2018 rototill

8/15/2019 subsoil  
8/20/2019 chisel plow

7/15/2020 chisel plow  
8/11/2020 heavy disk  
8/11/2020 rototill  
8/11/2020 roller harrow



# Greenhouse Trials in the West

David Ennes





# Application on Basil at UC KARE

David Ennes







Aspirated Box With Hobo Dataloggers



Hydroponic Leaf Lettuce



TRT 01 Hot Pepper Plot



Greenhouse Foliar Directed Spray  
Boom 22-Ft Hose




TRT 02 Hot Pepper Viewed  
From TRT 01 Plot



Automatic Drip Irrigation System With Timer and  
Fertilizer Dosatron





# Preparing for the Season's Greenhouse Magnitude of Residue Trials

Marylee Ross, University of Maryland, Lower  
Eastern Shore Research and Education Center,  
Salisbury, Maryland



## Three Very Old 24 X 52 Greenhouses at LESREC

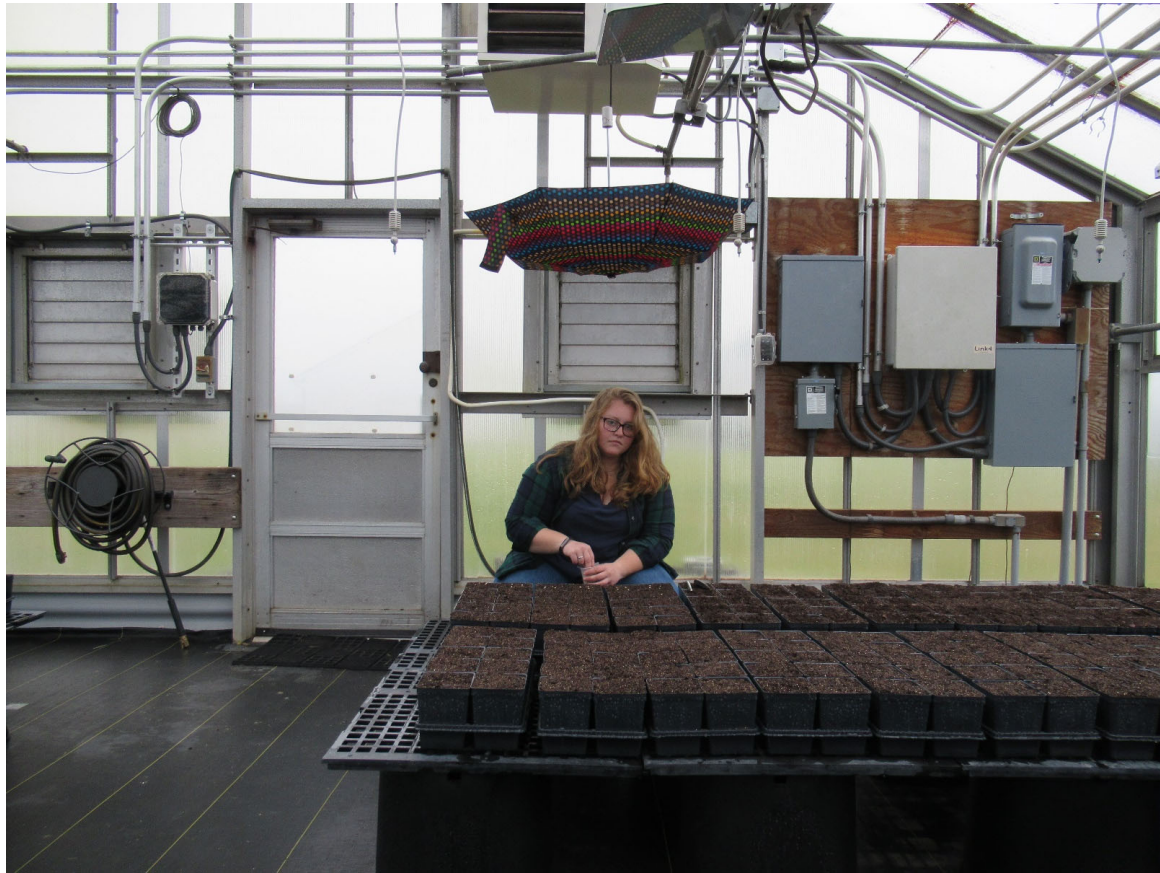




## Our Dedicated IR-4 Glass House Undergoing Glass Replacement



## Before the New Glass – Seeding in the Rain



# Greenhouse Worksheet

## Blank Worksheet

Field Trial Planning Worksheet

Field trial ID # \_\_\_\_\_

Crop \_\_\_\_\_ Variety \_\_\_\_\_

Days to Maturity \_\_\_\_\_ Seeding \_\_\_\_\_

Transplanting \_\_\_\_\_ Harvest \_\_\_\_\_

Plot Size: \_\_\_\_\_

Plot Maintenance Pesticides:

Fertilizer \_\_\_\_\_

Herbicide \_\_\_\_\_

Other \_\_\_\_\_

Notes:

Tentative Start Date \_\_\_\_\_ Tentative Finish \_\_\_\_\_

## Populated Worksheet

Field Trial Planning Worksheet

Field trial ID # AAFC study 13290-24 MD160

Crop GH cucumber Variety \_\_\_\_\_

Days to Maturity 50-54 (lab rep planning) Seeding 04/15/24

Transplanting NA Harvest 06/14/24

Plot Size: \_\_\_\_\_

Plot Maintenance Pesticides:

Fertilizer 20-20-20 (w/ Miracle Gro)

Herbicide NA

Other \_\_\_\_\_

Notes:

2 apps @ 7 days (11) 1 day pH  
harvest = 2 TR101 + 2 TR102 w/ 12 fruits

1st app  
Tentative Start Date 04/10/24 Tentative Finish 06/14/24

# Worksheet and Map

**Field Trial Planning Worksheet**

Field trial ID # 13609-24 MD56 CRP

Crop GH Strawberry Variety \_\_\_\_\_  
 Days to Maturity 12-14 weeks Seeding NA  
 Transplanting 03/18/24 Harvest \_\_\_\_\_

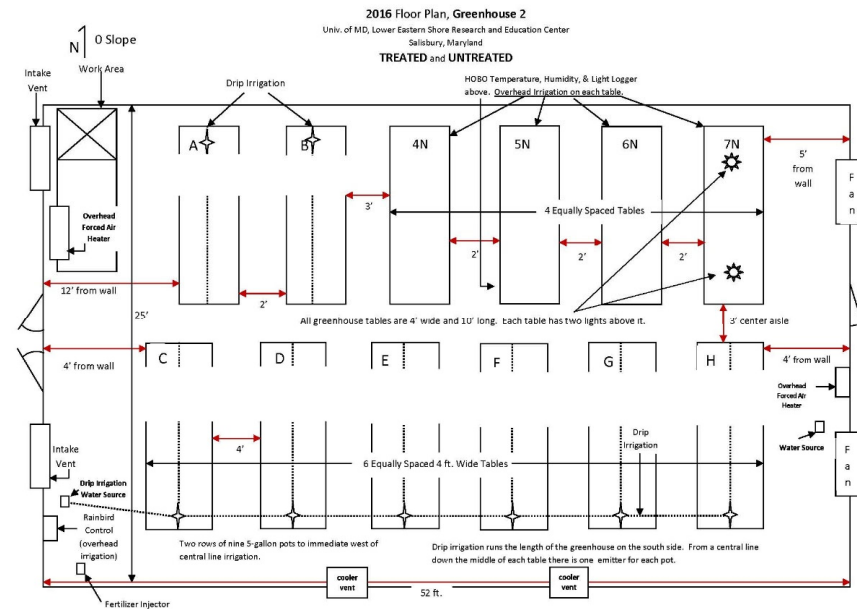
Plot Size: 3 UT  
3 TRT  
need: 72 pots

historical:  
10 weeks (too short).  
+ 6 tables

Plot Maintenance Pesticides: \_\_\_\_\_  
 Fertilizer NA  
 Herbicide NA  
 Other \_\_\_\_\_

Notes: \* if aboron: need more nutrients

1st crop 05/14/24 Tentative Start Date \_\_\_\_\_  
 Tentative Finish 06/11/24





# Cleanliness First

## Empty, Sweep, Wash, Sanitize



# Configure the Setup



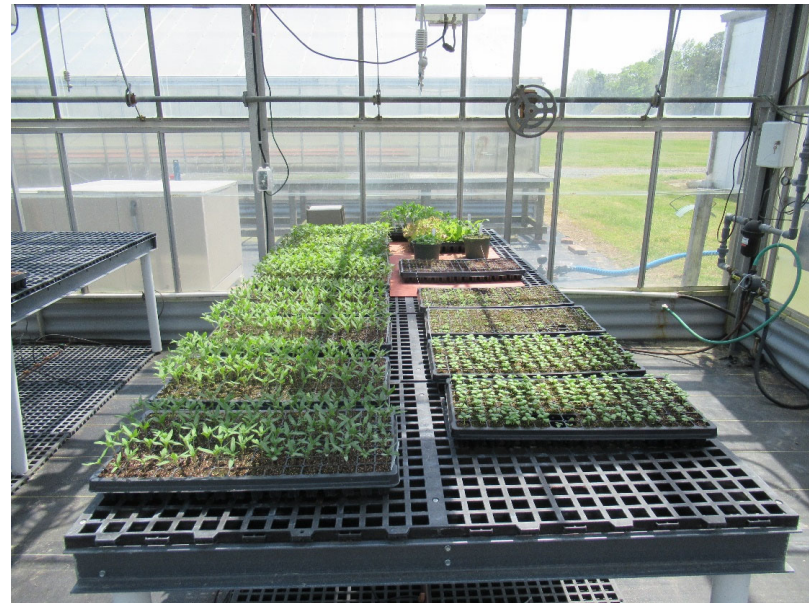


# Systems using overhead irrigation

Short tables and tall tables



Transplants with and without propagation mats



# Pot on Pot for Shorter Crops

Table tops with central drip line



Pot on inverted pot





# Multiple Configurations

Tomatoes in nursery pots with twine support



Cucumbers strung like Tomatoes and Peppers in squat pots with cage support



# Application Techniques

## Three Main Types:

- Foliar Broadcast
- Foliar Directed
- Drench
- Suit up appropriately

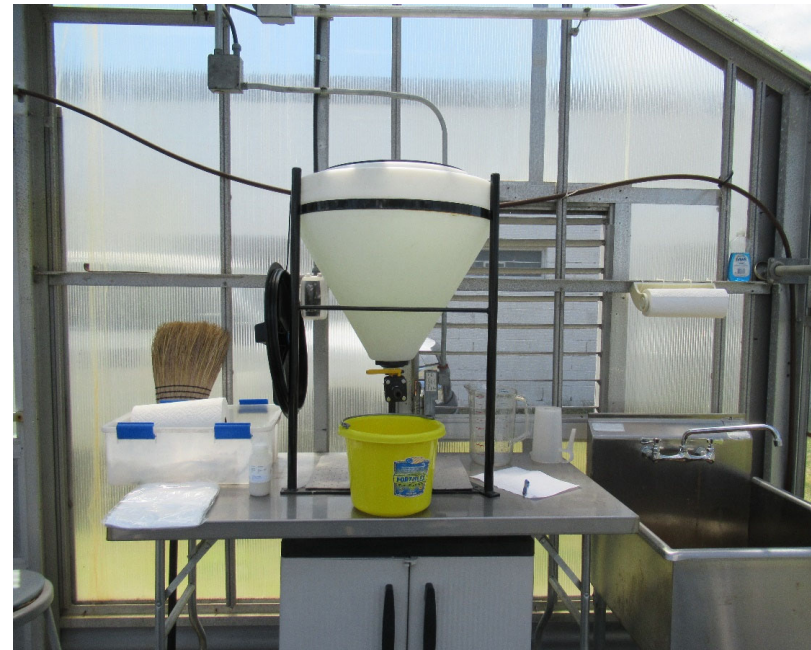


# Mixing Vessels for Drench Applications

5 Gallon Carboy with Spigot



15 Gallon Cone Tank with Spigot





# Drench Application Delivery Equipment

Graduated measuring cup  
Always verify



Disposable syringe and clean mix container





# Rechargeable Pipette Filler (affectionately called suckutron)

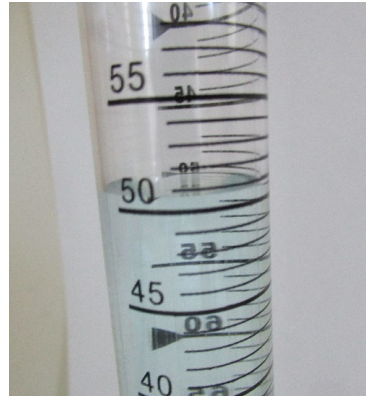
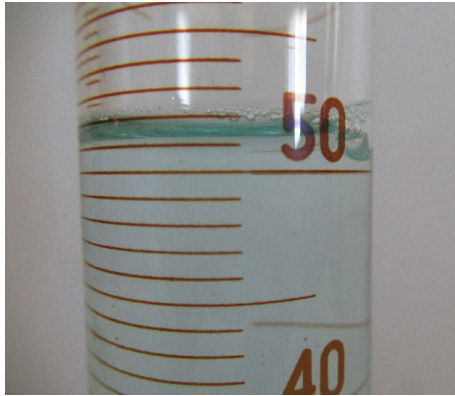
# Pipetter



## 100 ml Pipettes



# Pipetting in Practice





# Foliar Applications



# Vertical Boom Directed Spray





# Backpack Spray Booms

4 Nozzle Broadcast



3 Nozzle Directed



## Single Nozzle Broadcast Spray for the Small Stuff



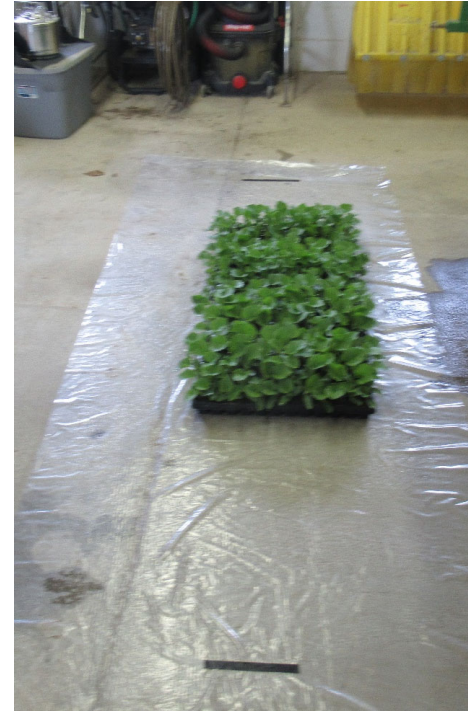


## Moving Transplant Trays Outside the Greenhouse to Spray

Mark off a comfortable distance



Place trays in the center of the space





# Keep Track of Everything

**HOBO Data logger records  
Temperature, Humidity and Light  
Intensity. Locate centrally.**



Greenhouse Drip Irrigation Log 2024  
Greenhouse 2  
University of Maryland Salisbury, Maryland

The drip irrigation timer is programmed to start at a certain time of day and how often it will run. Also programmed is the amount of time that the water will run during each cycle. Each time a change is made it will be entered in this log.

Test run to determine output:  
Date: \_\_\_\_\_ Minutes run: \_\_\_\_\_ Mls of water collected: \_\_\_\_\_  
Resulting ml/minute: \_\_\_\_\_

[illegible]

Greenhouse 2 Overhead Irrigation Log 2024  
University of Maryland, Salisbury, Maryland

There are 7 zones. Start times and duration are programmed for each zone in use. If programming is changed, it is recorded on this table. Output is approximately 0.01 inch per minute.

[illegible]

## In Case of an Emergency You Need to be Resourceful



## Resources for Greenhouse Production Recommendations

There are oodles of different greenhouse styles and systems. You have to decide what works in your greenhouse. General guidelines can be found in numerous locations. Here are a few ways to look for information.

- Many states have greenhouse vegetable production publications. Canada has a wealth of information.
- Some seed suppliers offer production recommendations for the seed they sell
- Ask a local greenhouse grower



## We Love Our Greenhouse





THANK YOU!



# eFDB Resources


Western Region Website and eQA





# eFDB Resources [ir4works.org](https://ir4works.org)

- What's in the Resources?

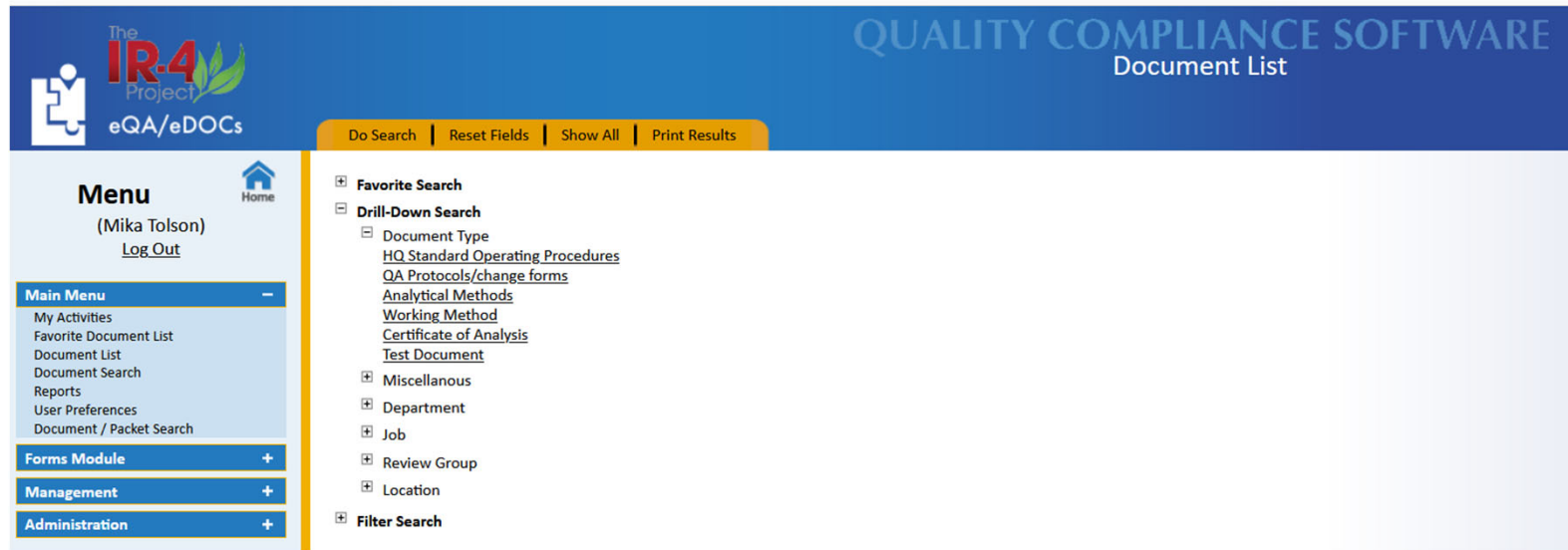


The screenshot shows the website [ir4works.org](https://ir4works.org). The header features the logo for "WR-IR4 WORKS" and "The IR4 Project". The navigation menu includes links for HOME, FRDs, PROJECTS, SLRs, TRAINING, RESOURCES, and CONTACTS, along with a search icon. Below the navigation bar is a banner image showing two people working at a table outdoors, with the text "eFDB Resources" overlaid. The main content area lists several resources:

- Recordings of Current and Past eFDB Training**  
[Separate page with a list of all past eFDB meeting recordings](#)
- Open Office Hours with eStudy Admins**  
For one-on-one support, you can also schedule a 30-minute [office hours session](#) with the eStudy Admins. They can share screens and walk through any issues or questions. Using the link above, select an available date and time and you will receive a calendar invite with a Zoom link after scheduling.
- Connecting to eFDB**
  - Browser version <https://www.estudy.org/ir4/elm/>
  - Organization name is "IR4"

# National SOPs in eQA

- Demo of how to access the National SOPs in eQA



# Thank You for Attending!

- Please complete the post meeting survey
- **GLP training certificates will be sent to all attending**
  - If multiple people connected on one computer, send chat with all names + emails
- **Next Webinar:**  
May 21, 2024