

Weed control in Muskmelon on Black Plastic - HTRC - 2013

Project Code: 108-13-3

Location: East Lansing, MI
Block 108-109

Personnel: Bernard H. Zandstra, Colin Phillippo

Crop: Muskmelon

Variety: Goddess

Planting Method: Transplant Planting Date: 5/24/13

Harvest Date: See data

Spacing: 4 ft

Row Spacing: 15 ft

Tillage Type: Conventional

Study Design: RCB

Replications: 3

Plot Size: 5.5 ft wide x 50 ft long

Soil Type: Capac Loam

OM: 1.6%

pH: 7.2

Sand: 48%

Silt: 36%

Clay: 16%

CEC: 6.1

Herbicide Application Information

Timing	Date	Time	Air/Soil	T	Soil Surf	Wind	RH	Sky	Dew
PRT	5/17/13	11:45 am	69/60	F	Dry	5-7 NE	34	40% Cloudy	N
POTDIR	5/28/13	3:45 pm	64/65	F	Wet	4-5 SE	43	30% Cloudy	N

Crop and Weed Information at Application

	Height or Diameter	Growth Stage	Density
5/17	No weeds present		
5/28	No weeds present		

Notes and Comments

1. Spray applied with 4 nozzle boom. FF8002, 20 gpa, 30 psi, 3.2 mph, CO2 backpack sprayer.
 2. Crop and weed injury ratings on scale of 1-10; 1 = no injury, 10 = complete kill.
 3. The field was worked 5/17/13. Pre-transplant treatments were applied 5/17/13 and then plastic was laid. Melons were transplanted 5/24/13.
 4. POTDIR = post transplant directed spray. Spray was applied to the soil on each side of the plastic; 5.4 ft on each side
 5. The field was hand weeded to reduce weed pressure through harvest.
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Trial ID: 108-13-3 Location: HTRC block 108-109
 Protocol ID: 108-13-3 Investigator: Dr. Bernard Zandstra
 Study Director: Colin Phillippo

Pest Code				BYGR	RRPW	WIRA						
Crop Code				MELON			MELON	MELON				
Rating Date				24/Jun/13	24/Jun/13	24/Jun/13	24/Jun/13	2/Jul/13	10/Jul/13			
Rating Type				RATING	RATING	RATING	RATING	RATING	RATING			
Rating Unit				1-10	1-10	1-10	1-10	1-10	1-10			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Growth Stage						
1	Untreated						1.3	4.0	3.7	9.0	1.0	1.0
2	fomesafen	2 SL		0.25 lb ai/a	PRT		4.7	7.7	9.3	10.0	5.3	5.7
3	fomesafen	2 SL		.375 lb ai/a	PRT		4.0	9.7	10.0	10.0	6.0	6.7
4	fomesafen	2 SL		0.5 lb ai/a	PRT		5.3	9.0	10.0	10.0	6.3	6.7
5	ethalfuralin	1.61 SE		3.06 pt/a	PRT		3.0	10.0	10.0	9.3	3.3	2.3
	clomazone	.494 SE		0.94								
6	oxyfluorfen	4 SC		0.5 lb ai/a	PRT		1.3	10.0	9.0	7.3	1.3	1.3
7	halosulfuron	75 WG		.047 lb ai/a	PRT		2.0	10.0	10.0	10.0	2.3	1.3
8	fomesafen	2 SL		.375 lb ai/a	POT DIR		1.7	9.7	6.0	5.7	1.3	1.0
LSD (P=.05)							1.40	3.17	3.89	2.98	1.42	1.17
Standard Deviation							0.80	1.81	2.22	1.70	0.81	0.67
CV							27.49	20.72	26.13	19.06	24.08	20.56

Pest Code												
Crop Code				MELON	MELON	MELON	MELON	MELON	MELON			
Rating Date				22/Jul/13	5/Aug/13	5/Aug/13	8/Aug/13	8/Aug/13	9/Aug/13			
Rating Type				RATING	HARVEST	HARVEST	HARVEST	HARVEST	HARVEST			
Rating Unit				1-10	#/PLOT	KG/PLOT	#/PLOT	KG/PLOT	#/PLOT			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Unit	Growth Stage						
1	Untreated						1.7	5.3	10.26	9.0	18.71	4.0
2	fomesafen	2 SL		0.25 lb ai/a	PRT		5.3	0.3	0.51	3.3	4.90	1.3
3	fomesafen	2 SL		.375 lb ai/a	PRT		6.0	0.0	0.00	0.0	0.00	0.0
4	fomesafen	2 SL		0.5 lb ai/a	PRT		6.0	0.0	0.00	0.0	0.00	0.0
5	ethalfuralin	1.61 SE		3.06 pt/a	PRT		2.0	0.7	1.48	4.0	6.87	8.0
	clomazone	.494 SE		0.94								
6	oxyfluorfen	4 SC		0.5 lb ai/a	PRT		1.7	3.3	6.11	13.7	25.96	6.3
7	halosulfuron	75 WG		.047 lb ai/a	PRT		1.0	2.0	3.91	8.0	16.13	5.7
8	fomesafen	2 SL		.375 lb ai/a	POT DIR		1.3	4.3	10.47	9.7	20.63	7.3
LSD (P=.05)							0.98	3.78	7.205	6.84	13.694	5.00
Standard Deviation							0.56	2.16	4.114	3.90	7.819	2.85
CV							17.97	108.01	100.53	65.53	67.12	69.91

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Pest Code					MELON	MELON	MELON	MELON	MELON		
Crop Code					9/Aug/13	12/Aug/13	12/Aug/13	15/Aug/13	15/Aug/13		
Rating Date					HARVEST	HARVEST	HARVEST	HARVEST	HARVEST		
Rating Type					KG/PLOT	#/PLOT	KG/PLOT	#/PLOT	KG/PLOT		
Rating Unit											
Trt	Treatment	Form	Form	Rate	Growth						
No.	Name	Conc	Type	Rate	Unit	Stage					
1	Untreated						7.98	7.7	16.10	1.7	3.36
2	fomesafen	2	SL	0.25	lb ai/a	PRT	2.52	1.7	3.70	0.0	0.00
3	fomesafen	2	SL	.375	lb ai/a	PRT	0.00	0.0	0.00	0.3	0.54
4	fomesafen	2	SL	0.5	lb ai/a	PRT	0.00	0.0	0.00	0.0	0.00
5	ethalfluralin	1.61	SE	3.06	pt/a	PRT	16.06	10.0	22.00	3.0	6.87
	clomazone	.494	SE	0.94							
6	oxyfluorfen	4	SC	0.5	lb ai/a	PRT	11.81	6.7	13.05	2.7	4.16
7	halosulfuron	75	WG	.047	lb ai/a	PRT	11.91	9.0	19.03	0.3	1.10
8	fomesafen	2	SL	.375	lb ai/a	POT DIR	16.21	10.0	21.52	3.0	6.48
LSD (P=.05)					10.380	5.75	12.606	1.87	3.915		
Standard Deviation					5.927	3.28	7.198	1.07	2.236		
CV					71.31	58.39	60.36	77.55	79.49		

Pest Code					MELON	MELON	MELON	MELON	MELON	MELON		
Crop Code					19/Aug/13	19/Aug/13	20/Aug/13	20/Aug/13				
Rating Date					HARVEST	HARVEST	HARVEST	HARVEST	TOTAL	TOTAL		
Rating Type					#/PLOT	KG/PLOT	#/PLOT	KG/PLOT	#/PLOT	KG/PLOT		
Rating Unit												
Trt	Treatment	Form	Form	Rate	Growth							
No.	Name	Conc	Type	Rate	Unit	Stage						
1	Untreated						3.3	6.36	1.0	1.98	32.0	64.75
2	fomesafen	2	SL	0.25	lb ai/a	PRT	1.3	2.44	0.7	0.62	8.7	14.69
3	fomesafen	2	SL	.375	lb ai/a	PRT	0.3	0.55	0.0	0.00	0.7	1.09
4	fomesafen	2	SL	0.5	lb ai/a	PRT	0.3	0.31	0.3	0.45	0.7	0.77
5	ethalfluralin	1.61	SE	3.06	pt/a	PRT	3.7	8.82	1.0	1.61	30.3	63.70
	clomazone	.494	SE	0.94								
6	oxyfluorfen	4	SC	0.5	lb ai/a	PRT	2.7	5.39	0.7	1.01	36.0	67.50
7	halosulfuron	75	WG	.047	lb ai/a	PRT	2.7	7.37	1.0	2.19	28.7	61.63
8	fomesafen	2	SL	.375	lb ai/a	POT DIR	3.0	5.14	1.0	1.27	38.3	81.71
LSD (P=.05)					2.46	5.660	1.23	1.854	7.91	16.172		
Standard Deviation					1.40	3.231	0.70	1.059	4.52	9.234		
CV					64.78	71.06	99.23	92.79	20.6	20.76		