

MSU Weed Science Research Program

Tillage Comparison with Micro-rate

Trial ID: SB07-06-Tillage Study Dir.: Sprague, Powell, Bollman
 Conducted: Saginaw Bean & Beet Investigator: Christy Sprague

Date Planted: 3/30/2006 **Row Spacing:** 30 IN
Variety: Crystal 963 PAT **No. of Reps:** 4
Population: 4 3/8" Seed Spacing **% OM:** 3.2
Soil Type: Clay **pH:** 6.8
Plot Size: 10 X 35 FT **Design:** SPLIT-PLOT

Tillage: Fall Chisel Plow, Fall Moldboard Plow. Spring Field Cultivate 3/23/06.
Fertilizer: Urea sidedressed immediately after planting, 83#/acre actual Nitrogen.

Crop	Code	Common Name
1.	BETVU	SUGAR BEET

Application Description

A
Application Timing: Pre 'A'
Date Treated: 3/30/2006
Time Treated: 3:30 PM
% Cloud Cover: 0
Air Temp., Unit: 67 F
% Relative Humidity: 31
Wind Speed/Unit/Dir: 8 mph SW
Soil Temp., Unit: 48 F
Soil/Leaf Surface M: 5 5
Soil Moist (1=w 5=d): 4

Crop Stage at Each Application

A
Crop Name: BETVU
Height (In.): -
Stage (L): -

Weed Density (plants/sq. ft.)

1
Date: 7/21/2006
Weed Name: CHEAL
Density: <1

Application Equipment

Appl	Sprayer	Speed	Nozzle	Nozzle	Nozzle	Nozzle	Boom			
	Type	MPH	Type	Size	Height	Spacing	Width	GPA	Carrier	PSI
A	Cub	3.8	AirMix	11003	20"	20"	120"	19	water	27

Comments: 3/31-0.17" rain, within 4 days of "pre" application = 0.5" rain for preemergence herbicide activation.

Dual Mag-	2.5 gallon = 83 ml at 1.33 pt	302,306,204
Nortron-	2.5 gallon = 187 ml at 3 pt	104,108,208
Pryamin	281 gm = 4.7 lb rate 2.5 gallon =	402,406

Standard MicroRate applied to all treatments on: April 30, May 3, May 22, and May 30
 Betamix (8 oz/A) + Upbeet (0.125 oz/A) + Stinger (1 oz/A) + MSO (1.5% v/v)

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Weed Code												CHEAL		
Crop Code												BETVU		
Rating Data Type												BETVU		
Rating Unit												BETVU		
Rating Date												BETVU		
Trt-Eval Interval												BETVU		
Trt No.	Treatment Name	Form Conc	Rate	Grow Unit	Appl Stg	Code	Stand Count number	Stand Count number	Stand Count number	Stand Count number	injury percent	injury percent	injury percent	control percent
							4/18/2006	4/26/2006	5/3/2006	5/17/2006	5/17/2006	5/30/2006	6/5/2006	6/5/2006
							19 DA-A	27 DA-A	34 DA-A	48 DA-A	48 DA-A	61 DA-A	67 DA-A	67 DA-A
1	Chisel						40	45	43	43	0	0	0	91
1	Untreated													
2	Chisel						31	39	41	41	31	14	13	96
2	Dual Magnum	7.64	1.33	pt/a	Pre	A								
3	Chisel						41	43	39	41	19	9	6	93
3	Nortron	4	3	pt/a	Pre	A								
4	Chisel						39	42	38	40	25	11	4	73
4	Nortron	4	3	pt/a	Pre	A								
4	Pyramin	65	4.7	lb/a	Pre	A								
5	Moldboard						45	48	46	47	0	0	0	97
5	Untreated													
6	Moldboard						40	44	44	45	18	1	1	99
6	Dual Magnum	7.64	1.33	pt/a	Pre	A								
7	Moldboard						42	48	48	49	1	6	0	99
7	Nortron	4	3	pt/a	Pre	A								
8	Moldboard						47	50	48	44	8	5	0	99
8	Nortron	4	3	pt/a	Pre	A								
8	Pyramin	65	4.7	lb/a	Pre	A								
LSD (P=.05)							6.6	4.0	2.9	6.3	11.9	8.4	4.9	27.1
Standard Deviation							4.5	2.7	2.0	4.3	8.1	5.7	3.3	18.4
CV							11.12	6.12	4.62	9.89	64.03	97.89	112.72	19.77

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Weed Code
 Crop Code BETVU BETVU BETVU BETVU BETVU
 Rating Data Type count % sugar yield RWST RWSA
 Rating Unit 100' row ton/acre # / ton # / acre
 Rating Date 9/19/2006 9/19/2006 9/19/2006 9/19/2006 9/19/2006
 Trt-Eval Interval 173 DA-A 173 DA-A 173 DA-A 173 DA-A 173 DA-A

Trt No.	Treatment Name	Form Conc	Rate	Unit	Grow Stg	Appl Code	BETVU count	BETVU % sugar	BETVU yield ton/acre	BETVU RWST # / ton	BETVU RWSA # / acre
1	Chisel						163	18.5	10.2	273	2773
1	Untreated										
2	Chisel						176	18.2	11.4	267	3031
2	Dual Magnum	7.64	1.33	pt/a	Pre	A					
3	Chisel						181	18.5	13.0	272	3553
3	Nortron	4	3	pt/a	Pre	A					
4	Chisel						187	18.4	12.2	271	3307
4	Nortron	4	3	pt/a	Pre	A					
4	Pyramin	65	4.7	lb/a	Pre	A					
5	Moldboard						181	18.8	18.8	278	5220
5	Untreated										
6	Moldboard						186	18.3	20.8	273	5269
6	Dual Magnum	7.64	1.33	pt/a	Pre	A					
7	Moldboard						185	19.0	17.6	279	4893
7	Nortron	4	3	pt/a	Pre	A					
8	Moldboard						196	18.4	19.5	271	5288
8	Nortron	4	3	pt/a	Pre	A					
8	Pyramin	65	4.7	lb/a	Pre	A					
LSD (P=.05)							27.4	0.69	3.33	11.4	852.9
Standard Deviation							18.6	0.47	2.26	7.7	578.2
CV							10.26	2.54	14.69	2.83	13.88