

Ignite Application Methods

Trial ID: 10-HRC-WU12-IgApplic Location: Horticulture Res. Ctr.

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Carbondale IL 62901 USA
 Trial Status: FINAL Initiation Date: 06-04-10

Objectives: Evaluate application methods for optimal activity with Ignite.

Crop 1: YACKR Arable land Variety: NON-CROP

Pest 1 Type: W Code: AMASS Amaranthus species amaranthus species
 Pest 2 Type: W Code: BRAPP Brachiaria platyphylla (Griseb.) signalgrass, broadleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 50 FT Tillage Type: NO-TILL
 Replications: 3 Study Design: Factorial

Prior Crops, Year
 1. NONE 2009

Field Prep./Maintenance: N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A

% OM: 2.8 Texture: SILT LOAM
 pH: 6.7
 CEC: 10 Fert. Level: P1: 92 LB/A, K: 334 LB/A

Application Description A

Application Date: 06-04-10
 Time of Day: 16:00
 Application Method: Spray
 Application Timing: 6"WEEDS
 Application Placement: BROFOL
 Applied By: BGY
 Air Temperature, Unit: 87 F
 % Relative Humidity: 65
 Wind Velocity, Unit: 3 MPH
 Wind Direction: SW
 Dew Presence (Y/N): N
 Soil Temperature, Unit: 82 F
 Soil Moisture: NORMAL
 % Cloud Cover: 25

06-04-10
 Crop stage at application: NA

Pest Stage At Each Application

Application Date: 06-04-10
 Weed Code: AMASS
 Stage Majority (leaves): 12
 Stage Min, Max: 4 36
 Height Majority: 6 IN
 Height Min, Max: 2 16
 Density, Unit: 20 FT2
 Weed Code: BRAPP
 Stage Majority (leaves): 8
 Stage Min, Max: 2 12
 Height Majority: 9 IN
 Height Min, Max: 4 18
 Density, Unit: 3 FT2

Application Equipment

Appl. Equipment: CO2 sprayer
 Operating Pressure: 30 PSI
 Nozzle Type: Flat fan
 Nozzle Size: comments
 Boom Length, Unit: 6.67 FT
 Spray Volume, Unit: 20 GPA

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								AMASS	AMASS	BRAPP	BRAPP
Pest Code								06-18-10	07-02-10	06-18-10	07-02-10
Crop Code								Control	Control	Control	Control
Rating Date								Percent	Percent	Percent	Percent
Rating Data Type											
Rating Unit											
Rating Timing											
Trt-Eval Interval								14 DA-A	28 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
1	XR 11003 at 30 PSI, 10 GPA and 8 MPH										
1	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	82 h-m	70 f-j
2	XR 11003 at 30 PSI, 10 GPA and 8 MPH										
2	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	96 ab	94 ab
2	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	81 e-j	65 d-i
3	XR 11003 at 30 PSI, 10 GPA and 8 MPH										
3	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	96 ab	96 a
3	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	83 d-g	57 f-m
3	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
4	XR 11003 at 30 PSI, 10 GPA and 8 MPH										
4	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	89 a-j	76 c-i
4	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	89 bcd	85 ab
4	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
4	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
4	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
5	XR 11003 at 30 PSI, 15 GPA and 5 MPH										
5	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	95 a-e	90 abc
6	XR 11003 at 30 PSI, 15 GPA and 5 MPH										
6	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	90 a-h	84 a-f
6	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	73 l-p	50 h-o
7	XR 11003 at 30 PSI, 15 GPA and 5 MPH										
7	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	93 a-f	93 ab
7	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	83 d-g	67 c-h
7	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
8	XR 11003 at 30 PSI, 15 GPA and 5 MPH										
8	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	86 d-k	69 f-j
8	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	89 bcd	78 a-d
8	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
8	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
8	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
9	TT 11002 at 40 PSI, 10 GPA and 6 MPH										
9	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	63 p	42 l
10	TT 11002 at 40 PSI, 10 GPA and 6 MPH										
10	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	63 q	47 j-o
10	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	94 a-f	89 a-d
11	TT 11002 at 40 PSI, 10 GPA and 6 MPH										
11	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	77 h-n	52 g-n
11	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	96 ab	90 abc
11	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A	83 d-h	65 d-i
12	TT 11002 at 40 PSI, 10 GPA and 6 MPH										
12	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	90 a-h	76 c-h
12	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	86 cde	60 e-l
12	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
12	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
12	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
13	TT 11002 at 40 PSI, 15 GPA and 4 MPH										
13	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	87 b-j	83 a-f
14	TT 11002 at 40 PSI, 15 GPA and 4 MPH										
14	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	78 g-m	60 e-l
14	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	96 abc	88 a-d
15	TT 11002 at 40 PSI, 15 GPA and 4 MPH										
15	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	78 g-m	50 h-o
15	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	95 a-d	87 a-e
15	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A	80 f-k	45 l-o

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Pest Code								06-18-10	07-02-10	06-18-10	07-02-10
Crop Code								Control	Control	Control	Control
Rating Date								Percent	Percent	Percent	Percent
Rating Data Type								14 DA-A	28 DA-A	14 DA-A	28 DA-A
Rating Unit											
Rating Timing											
Trt-Eval Interval											
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
16	TT 11002 at 40 PSI, 15 GPA and 4 MPH									80 i-n	65 d-i
16	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	60 ijk	
16	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	85 def	
16	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
16	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
16	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
17	AIXR 11002 at 40 PSI, 10 GPA and 6 MPH									77 k-o	42 mno
17	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	58 jk	
18	AIXR 11002 at 40 PSI, 10 GPA and 6 MPH									90 a-h	45 l-o
18	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	82 a-f	
18	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	79 g-l	
19	AIXR 11002 at 40 PSI, 10 GPA and 6 MPH									86 e-l	50 h-o
19	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	62 h-k	
19	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	82 e-i	
19	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
20	AIXR 11002 at 40 PSI, 10 GPA and 6 MPH									94 a-f	83 abc
20	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	89 abc	
20	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	95 a	
20	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
20	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
20	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
21	AIXR 11002 at 40 PSI, 15 GPA and 4 MPH									80 j-n	60 e-l
21	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	65 g-k	
22	AIXR 11002 at 40 PSI, 15 GPA and 4 MPH									94 a-f	68 b-g
22	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	81 a-f	
22	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	80 f-k	
23	AIXR 11002 at 40 PSI, 15 GPA and 4 MPH									83 g-m	70 b-f
23	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	74 c-i	
23	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	72 nop	
23	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
24	AIXR 11002 at 40 PSI, 15 GPA and 4 MPH									85 f-m	88 a
24	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	85 a-f	
24	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	92 abc	
24	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
24	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
24	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
25	AI 11003 at 50 PSI, 10 GPA and 10 MPH									76 mno	55 f-n
25	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	58 jk	
26	AI 11003 at 50 PSI, 10 GPA and 10 MPH									86 d-k	50 h-o
26	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	77 c-h	
26	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	71 op	
27	AI 11003 at 50 PSI, 10 GPA and 10 MPH									92 a-f	58 e-m
27	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	90 abc	
27	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A	80 f-k	
27	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
28	AI 11003 at 50 PSI, 10 GPA and 10 MPH									83 h-m	75 a-e
28	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	65 g-k	
28	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A	85 def	
28	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
28	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
28	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
29	AI 11003 at 50 PSI, 15 GPA and 6.7 MPH									70 op	50 h-o
29	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	58 jk	
30	AI 11003 at 50 PSI, 15 GPA and 6.7 MPH									83 g-m	42 mno
30	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A	72 e-j	
30	AMS	100	SG	3	lb/a	3	lb/a	6"W	A	75 j-o	

Ignite Application Methods

Trial ID: 10-HRC-WU12-IgApplic Location: Horticulture Res. Ctr.

								AMASS	AMASS	BRAPP	BRAPP
Pest Code								06-18-10	07-02-10	06-18-10	07-02-10
Crop Code								Control	Control	Control	Control
Rating Date								Percent	Percent	Percent	Percent
Rating Data Type											
Rating Unit											
Rating Timing											
Trt-Eval Interval								14 DA-A	28 DA-A	14 DA-A	28 DA-A
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Other Rate	Other Rate Unit	Growth Stage	Appl Code		
31	AI 11003 at 50 PSI, 15 GPA and 6.7 MPH									92 a-g	85 a-f
31	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
31	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
31	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
32	AI 11003 at 50 PSI, 15 GPA and 6.7 MPH									72 no	38 lm
32	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
32	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A		
32	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
32	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
32	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
33	TTI 11002 at 40 PSI, 10 GPA and 6 MPH									77 l-o	65 g-k
33	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
34	TTI 11002 at 40 PSI, 10 GPA and 6 MPH									93 a-f	87 a-e
34	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
34	AMS	100	SG	3	lb/a	3	lb/a	6"W	A		
35	TTI 11002 at 40 PSI, 10 GPA and 6 MPH									97 a	96 a
35	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
35	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
35	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
36	TTI 11002 at 40 PSI, 10 GPA and 6 MPH									87 c-j	81 a-f
36	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
36	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A		
36	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
36	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
36	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
37	TTI 11002 at 40 PSI, 15 GPA and 4 MPH									87 b-j	73 d-j
37	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
38	TTI 11002 at 40 PSI, 15 GPA and 4 MPH									89 a-i	80 b-g
38	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
38	AMS	100	SG	3	lb/a	3	lb/a	6"W	A		
39	TTI 11002 at 40 PSI, 15 GPA and 4 MPH									70 op	53 kl
39	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
39	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
39	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
40	TTI 11002 at 40 PSI, 15 GPA and 4 MPH									37 q	25 m
40	IGNITE 280	2.34	EC	0.293	lb ai/a	16	fl oz/a	6"W	A		
40	SELECT	2	EC	0.0313	lb ai/a	2	fl oz/a	6"W	A		
40	CLASS ACT NG	100	SL	2.5	% v/v	2.5	% v/v	6"W	A		
40	SUPERB HC	100	SL	1	pt/a	1	pt/a	6"W	A		
40	INTERLOCK	100	SL	4	fl oz/a	4	fl oz/a	6"W	A		
LSD (P=.05)								9.2	15.9	5.9	17.2
Replicate F								4.777	9.094	6.179	0.986
Replicate Prob(F)								0.0112	0.0003	0.0034	0.3784
Treatment F								12.560	8.654	13.715	4.968
Treatment Prob(F)								0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Winfield Solutions.
2. Ratings: WC at 14 and 28 DAT.
3. Application equipment and spray volume are per treatment, see treatment list.
4. Mixing instructions; see attached bulk mixing instructions, requires 2.5 gallon containers.
5. AMASS = Amaranth species including AMATA (common waterhemp) and AMARE (redroot pigweed).
6. Not harvested, non-crop.