Potato Herbicide Efficacy Evaluation - Hanocock - 2012

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Location: Hancock Ag Research Station: R-1 Pivot

Plot Information:

Soil Type: Plainfield Loamy Sand; pH 6.8; OM 1.0%.
Potato Cultivar: Russet Burbank
Date Planted: 5/1/12
Row Spacing: 36 Inches, 4 rows/plot
Plant Spacing: 12 inches
Date Harvested: 9/17/12
Plot Size-Design: 12' x 20', 3 Reps
Rating Dates: 5/30, 6/13, 6/20

Application Equipment: Tractor mounted air pressure sprayer. GPA 20, PSI 27, MPH 3.3, Nozzle - XR8003VS, Nozzle spacing 18", Height 18".

Herbicide Application Data:

Date	5/16/12	5/30/12
Time	10:30 am	10:00 am
Treatment	HS	PO1
Soil Moisture		
SF	dry	dry
1"	moist	moist
3"	moist	moist
Soil Temp (F^o)		
SF	80.7	66.5
3"	68.6	63.4
Air Temp (F^o)	69.3	57.5
Wind	4.8 W	4.2 NW
%RH	28.4%	54.1%
Sky Condition	0% clouds	90% clouds
Crop Stage	pre	8-10"
Weed & Size	pre	COLQ 1"
	-----	CORW 1"
	-----	WIBU 1"

Summary: NAI 1333 is a potato vine desiccant reported to have crop safety applied pre-emergence. Although their were no crop safety issues, broadleaf weed control was less optimal at rates less than 5.5 oz/A. A number of herbicides currently unregistered on potato resulted in minimal or no injury and acceptable weed control; including combinations of Callisto, Sharpen, Firstrate, V-10142 and Pyroxasulfone. Additonal trials will be perfomed with these herbicides to further test their potential in potato.

Weed Abbreviations:	Plot Weed Density:
COLQ = Common Lambsquarters	moderate
HANS = Hairy Nightshade	low
CORW = Common Ragweed	high
WIBU = Wild Buckwheat	high
YEFT = Yellow Foxtail	moderate

Note: Research results only. Some treatments in this trial are not currently registered on the crop

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2012 Field Season Precipitation/Irrigation (R-1 Pivot)

Date	Type	Amount (inches)
6-May	Precipitation	0.35
7-May	Precipitation	0.64
9-May	Precipitation	0.02
14-May	Irrigation	0.4
18-May	Irrigation	0.5
22-May	Irrigation	0.5
25-May	Precipitation	0.34
25-May	Irrigation	0.5
26-May	Precipitation	0.24
27-May	Precipitation	0.85
29-May	Precipitation	0.42
30-May	Irrigation	0.5
1-Jun	Irrigation	0.5
3-Jun	Irrigation	0.5
5-Jun	Irrigation	0.5
6-Jun	Irrigation	0.25
7-Jun	Irrigation	0.25
8-Jun	Irrigation	0.25
9-Jun	Irrigation	0.25
9-Jun	Precipitation	0.1
10-Jun	Irrigation	0.5
14-Jun	Irrigation	0.5
16-Jun	Irrigation	0.5
17-Jun	Precipitation	0.15
18-Jun	Precipitation	0.56
20-Jun	Irrigation	0.5
21-Jun	Precipitation	0.92
23-Jun	Irrigation	0.5
25-Jun	Irrigation	0.5
27-Jun	Irrigation	0.75
29-Jun	Irrigation	0.75
1-Jul	Irrigation	0.5
3-Jul	Irrigation	0.75
3-Jul	Precipitation	0.04
5-Jul	Irrigation	0.75
7-Jul	Irrigation	0.75
9-Jul	Irrigation	0.6
11-Jul	Irrigation	0.75
13-Jul	Irrigation	0.5
15-Jul	Irrigation	0.5
15-Jul	Precipitation	0.07
17-Jul	Irrigation	0.75
19-Jul	Irrigation	0.5
19-Jul	Precipitation	0.17
21-Jul	Irrigation	0.6
23-Jul	Irrigation	0.6
24-Jul	Precipitation	0.08
25-Jul	Irrigation	0.5
25-Jul	Precipitation	0.06
26-Jul	Precipitation	0.06
27-Jul	Irrigation	0.5
27-Jul	Precipitation	0.15
29-Jul	Irrigation	0.5
31-Jul	Irrigation	0.5
2-Aug	Irrigation	0.5
3-Aug	Precipitation	0.03
4-Aug	Irrigation	0.5
4-Aug	Precipitation	0.05
6-Aug	Irrigation	0.5
8-Aug	Irrigation	0.5
9-Aug	Precipitation	0.68
10-Aug	Precipitation	0.4
13-Aug	Irrigation	0.5
16-Aug	Precipitation	1.07
20-Aug	Irrigation	0.5
23-Aug	Irrigation	0.5
26-Aug	Precipitation	0.66
27-Aug	Precipitation	0.04
31-Aug	Irrigation	0.5
2-Sep	Irrigation	0.5
4-Sep	Irrigation	0.5
7-Sep	Irrigation	0.5
7-Sep	Precipitation	0.07
8-Sep	Precipitation	0.2
9-Sep	Precipitation	0.08
10-Sep	Irrigation	0.5
13-Sep	Precipitation	0.1

Potato Herbicide Efficacy - Hancock, WI - 2012

Maintenance Fertilizer & Pesticides (R-1 Pivot)

Date	Product	Rate	Unit
9-Apr	0-0-60	400	lb/A
9-Apr	0-0-0-17S-21Ca	500	lb/A
1-May	6-30-22-4S, Platinum impreg.	550	lb/A
15-May	21-0-0-24S	360	lb/A
21-Jun	Blackhawk	3.3	oz/A
22-Jun	Dithane DF	2	lb/A
29-Jun	Bravo ZN	2.125	pt/A
6-Jul	Bravo ZN	2.125	pt/A
6-Jul	Headline	10	oz/A
12-Jul	Bravo ZN	2.125	pt/A
13-Jul	34-0-0	100	lb/A
17-Jul	Coragen	5	oz/A
19-Jul	Brigade	6	oz/A
20-Jul	Bravo Weathstik	1.5	pt/A
20-Jul	Endura	3.5	oz/A
27-Jul	Bravo Weathstik	1.5	pt/A
27-Jul	Headline	10	oz/A
31-Jul	Coragen	3	oz/A
2-Aug	Bravo Weathstik	1.5	pt/A
2-Aug	Tanos	8	oz/A
7-Aug	Revus Top	7	oz/A
12-Aug	Tanos	8	oz/A
12-Aug	Penncozeb 75 DF	2	lb/A
17-Aug	Forum	6	oz/A
17-Aug	Penncozeb 75 DF	2	lb/A
22-Aug	Tanos	8	oz/A
22-Aug	Dithane DF	2	lb/A
27-Aug	Forum	6	oz/A
27-Aug	Dithane DF	2	lb/A
1-Sep	Tanos	8	oz/A
1-Sep	Dithane DF	2	lb/A
5-Sep	Reglone	1	pt/A
5-Sep	NIS	1	pt/A
5-Sep	Agri Tin 80WP	1.87	oz/A
10-Sep	Reglone	1	pt/A
10-Sep	NIS	1	pt/A
10-Sep	Agri Tin 80WP	1.87	oz/A

Potato Herbicide Efficacy 2012 - Hancock, WI

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stage	% Injury 5/30/12	% Weed Control 5/30/12 COLQ	CORW	WIBU
1	Untreated Check				0 a	0 c	0 d	0 d
2	Metribuzin	0.5	LB A/A	HS	0 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
3	Lorox	1	LB/A	HS	0 a	100 a	98.3 ab	100 a
	Curbit	3	PT/A	HS				
4	NAI 1333	1.5	OZ/A	HS	0 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
5	NAI 1333	2	OZ/A	HS	0 a	82.7 b	88.3 c	66.7 c
6	NAI 1333	2	OZ/A	HS	0 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
7	NAI 1333	2.5	OZ/A	HS	0 a	94.3 a	93.7 abc	85 b
8	NAI 1333	2.5	OZ/A	HS	1.7 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
9	NAI 1333	3	OZ/A	HS	0 a	97.7 a	96 abc	96 a
10	NAI 1333	3	OZ/A	HS	0 a	100 a	99.3 ab	100 a
	Dual Magnum	1	PT/A	HS				
11	NAI 1333	4.25	OZ/A	HS	0 a	98.3 a	91.7 bc	98.3 a
	Dual Magnum	1	PT/A	HS				
12	NAI 1333	5.5	OZ/A	HS	0 a	100 a	98.3 ab	100 a
	Dual Magnum	1	PT/A	HS				
13	Matrix	1.5	OZ/A	PO1	0 a	0 c	0 d	0 d
	NIS	0.25	% V/V	PO1				
14	Solida	1.5	OZ/A	PO1	0 a	0 c	0 d	0 d
	NIS	0.25	% V/V	PO1				
15	Callisto	1	OZ/A	HS	0 a	100 a	99.3 ab	100 a
	Dual Magnum	1	PT/A	HS				
16	Callisto	2	OZ/A	HS	1.7 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
17	Sharpen	1.5	OZ/A	HS	0 a	100 a	98.3 ab	100 a
	Dual Magnum	1	PT/A	HS				
18	Sharpen	2.5	OZ/A	HS	1.7 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
19	Firstrate	0.25	OZ/A	HS	0 a	100 a	99.3 ab	99.3 a
	Dual Magnum	1	PT/A	HS				
20	Firstrate	0.5	OZ/A	HS	3.3 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
21	V-10142	0.4	LB A/A	HS	0 a	100 a	100 a	100 a
22	Pyroxasulfone	0.21	LB A/A	HS	0 a	100 a	100 a	100 a
23	Pyroxasulfone	0.21	LB A/A	HS	1 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
24	Chateau	2	OZ/A	HS	1.7 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS				
LSD (P=.05)					2.74	9.62	7.94	6.28

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

Potato Herbicide Efficacy 2012 - Hancock, WI

Trt No	Treatment Name	Rate	Rate Unit	Grw Stg	% Injury 6/13/12	% Weed Control 6/13/12 COLQ	CORW	WIBU	HANS	YEFT
1	Untreated Check				0 a	0 c	0 e	0 d	0 e	0 a
2	Metribuzin	0.5	LB A/A	HS	0 a	99.3 a	98.7 a	100 a	60 a-d	100 a
	Dual Magnum	1	PT/A	HS						
3	Lorox	1	LB/A	HS	0 a	100 a	100 a	100 a	100 a	100 a
	Curbit	3	PT/A	HS						
4	NAI 1333	1.5	OZ/A	HS	0 a	96.7 a	85 abc	100 a	36.7 de	100 a
	Dual Magnum	1	PT/A	HS						
5	NAI 1333	2	OZ/A	HS	0 a	59.3 b	63.3 d	93.3 bc	36.7 de	100 a
6	NAI 1333	2	OZ/A	HS	0 a	98.3 a	96.7 a	96.7 ab	56.7 bcd	100 a
	Dual Magnum	1	PT/A	HS						
7	NAI 1333	2.5	OZ/A	HS	0 a	68.3 b	85 abc	90 c	50 cd	100 a
8	NAI 1333	2.5	OZ/A	HS	0 a	96 a	90 abc	96 abc	78.3 a-d	100 a
	Dual Magnum	1	PT/A	HS						
9	NAI 1333	3	OZ/A	HS	0 a	63.3 b	76.7 cd	94.3 abc	55 bcd	96.7 a
10	NAI 1333	3	OZ/A	HS	0 a	96.7 a	80 bc	95 abc	80 abc	100 a
	Dual Magnum	1	PT/A	HS						
11	NAI 1333	4.25	OZ/A	HS	0 a	98.7 a	88.3 abc	94.3 abc	88.3 abc	100 a
	Dual Magnum	1	PT/A	HS						
12	NAI 1333	5.5	OZ/A	HS	0 a	98.7 a	93.3 ab	98.3 ab	65 a-d	100 a
	Dual Magnum	1	PT/A	HS						
13	Matrix	1.5	OZ/A	PO1	0 a	100 a	100 a	100 a	100 a	100 a
	NIS	0.25	% V/V	PO1						
14	Solida	1.5	OZ/A	PO1	0 a	96.7 a	100 a	100 a	100 a	100 a
	NIS	0.25	% V/V	PO1						
15	Callisto	1	OZ/A	HS	0 a	100 a	98.3 a	99.3 ab	100 a	100 a
	Dual Magnum	1	PT/A	HS						
16	Callisto	2	OZ/A	HS	0 a	100 a	98.3 a	100 a	83.3 abc	100 a
	Dual Magnum	1	PT/A	HS						
17	Sharpen	1.5	OZ/A	HS	0 a	98.7 a	93.3 ab	98.7 ab	100 a	100 a
	Dual Magnum	1	PT/A	HS						
18	Sharpen	2.5	OZ/A	HS	0 a	99.3 a	97.7 a	99.3 ab	100 a	100 a
	Dual Magnum	1	PT/A	HS						
19	Firstrate	0.25	OZ/A	HS	0 a	100 a	98.3 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS						
20	Firstrate	0.5	OZ/A	HS	0 a	100 a	100 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS						
21	V-10142	0.4	LB A/A	HS	0 a	100 a	100 a	100 a	96.7 ab	100 a
22	Pyroxasulfone	0.21	LB A/A	HS	0 a	99.3 a	96.7 a	100 a	100 a	100 a
23	Pyroxasulfone	0.21	LB A/A	HS	0 a	100 a	98.3 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS						
24	Chateau	2	OZ/A	HS	0 a	100 a	100 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS						
LSD (P=.05)					0.00	19.36	16.62	6.43	42.32	7.31

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

Potato Herbicide Efficacy 2012 - Hancock, WI

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stage	% Injury 6/20/12	% Weed Control 6/20/12 COLQ	CORW	WIBU	YEFT
1	Untreated Check				0 a	0 d	0 e	0 c	0 d
2	Metribuzin	0.5	LB A/A	HS	0 a	97.7 ab	98.3 a	96.7 a	100 a
	Dual Magnum	1	PT/A	HS					
3	Lorox	1	LB/A	HS	0 a	98.7 ab	100 a	100 a	100 a
	Curbit	3	PT/A	HS					
4	NAI 1333	1.5	OZ/A	HS	0 a	98 ab	81.7 abc	93.3 a	100 a
	Dual Magnum	1	PT/A	HS					
5	NAI 1333	2	OZ/A	HS	0 a	49.3 c	63.3 cd	31.7 b	93.3 ab
6	NAI 1333	2	OZ/A	HS	0 a	75 abc	83.3 abc	96.7 a	70 bc
	Dual Magnum	1	PT/A	HS					
7	NAI 1333	2.5	OZ/A	HS	0 a	72.7 bc	88.3 ab	50 b	98.3 a
8	NAI 1333	2.5	OZ/A	HS	0 a	86 ab	83.3 abc	97.7 a	100 a
	Dual Magnum	1	PT/A	HS					
9	NAI 1333	3	OZ/A	HS	0 a	16.7 d	43.3 d	46.7 b	66.7 c
10	NAI 1333	3	OZ/A	HS	0 a	91.7 ab	71.7 bc	93.3 a	100 a
	Dual Magnum	1	PT/A	HS					
11	NAI 1333	4.25	OZ/A	HS	0 a	93.3 ab	83.3 abc	93.3 a	100 a
	Dual Magnum	1	PT/A	HS					
12	NAI 1333	5.5	OZ/A	HS	0 a	93.3 ab	95 ab	98.3 a	100 a
	Dual Magnum	1	PT/A	HS					
13	Matrix	1.5	OZ/A	PO1	0 a	99.3 ab	99.3 a	99.3 a	100 a
	NIS	0.25	% V/V	PO1					
14	Solida	1.5	OZ/A	PO1	0 a	96 ab	96 a	97.7 a	100 a
	NIS	0.25	% V/V	PO1					
15	Callisto	1	OZ/A	HS	0 a	100 a	98.3 a	98.7 a	100 a
	Dual Magnum	1	PT/A	HS					
16	Callisto	2	OZ/A	HS	0 a	99.3 ab	98.3 a	100 a	100 a
	Dual Magnum	1	PT/A	HS					
17	Sharpen	1.5	OZ/A	HS	0 a	97.7 ab	97.7 a	100 a	100 a
	Dual Magnum	1	PT/A	HS					
18	Sharpen	2.5	OZ/A	HS	0 a	78.3 ab	98.3 a	96.7 a	100 a
	Dual Magnum	1	PT/A	HS					
19	Firstrate	0.25	OZ/A	HS	0 a	99.3 ab	96.7 a	96.7 a	100 a
	Dual Magnum	1	PT/A	HS					
20	Firstrate	0.5	OZ/A	HS	0 a	100 a	98.3 a	100 a	100 a
	Dual Magnum	1	PT/A	HS					
21	V-10142	0.4	LB A/A	HS	0 a	100 a	99.3 a	100 a	100 a
22	Pyroxasulfone	0.21	LB A/A	HS	0 a	99.3 ab	99.3 a	100 a	100 a
23	Pyroxasulfone	0.21	LB A/A	HS	0 a	100 a	98.3 a	100 a	100 a
	Dual Magnum	1	PT/A	HS					
24	Chateau	2	OZ/A	HS	0 a	100 a	100 a	100 a	100 a
	Dual Magnum	1	PT/A	HS					
LSD (P=.05)					0.00	27.31	24.04	24.30	25.69

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

Potato Herbicide Efficacy 2012 - Hancock, WI

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stage	Yield 9/17/12 (cwt/A) B's	Culls	2-4 oz	4-6 oz	6-10 oz
1	Untreated Check				96.20 ab	37.75 a	64.01 a	118.34 a	227.00 a
2	Metribuzin	0.5	LB A/A	HS	68.85 b-f	62.80 a	68.12 a	139.15 a	261.72 a
	Dual Magnum	1	PT/A	HS					
3	Lorox	1	LB/A	HS	52.88 f	53.12 a	78.41 a	121.73 a	241.27 a
	Curbit	3	PT/A	HS					
4	NAI 1333	1.5	OZ/A	HS	73.57 a-f	76.84 a	49.25 a	106.60 a	223.49 a
	Dual Magnum	1	PT/A	HS					
5	NAI 1333	2	OZ/A	HS	91.84 abc	37.75 a	76.47 a	137.34 a	218.65 a
6	NAI 1333	2	OZ/A	HS	79.38 a-f	48.76 a	45.38 a	88.33 a	214.41 a
	Dual Magnum	1	PT/A	HS					
7	NAI 1333	2.5	OZ/A	HS	101.52 a	41.87 a	109.99 a	147.86 a	201.71 a
8	NAI 1333	2.5	OZ/A	HS	71.51 b-f	36.66 a	62.92 a	113.14 a	220.34 a
	Dual Magnum	1	PT/A	HS					
9	NAI 1333	3	OZ/A	HS	93.17 ab	38.84 a	54.93 a	122.21 a	242.85 a
10	NAI 1333	3	OZ/A	HS	82.16 a-e	43.68 a	56.02 a	132.25 a	282.29 a
	Dual Magnum	1	PT/A	HS					
11	NAI 1333	4.25	OZ/A	HS	99.70 a	36.78 a	75.87 a	124.99 a	239.46 a
	Dual Magnum	1	PT/A	HS					
12	NAI 1333	5.5	OZ/A	HS	73.57 a-f	47.92 a	59.05 a	93.05 a	240.06 a
	Dual Magnum	1	PT/A	HS					
13	Matrix	1.5	OZ/A	PO1	79.74 a-f	46.10 a	71.39 a	146.29 a	249.62 a
	NIS	0.25	% V/V	PO1					
14	Solida	1.5	OZ/A	PO1	86.03 a-d	47.19 a	46.46 a	109.99 a	214.78 a
	NIS	0.25	% V/V	PO1					
15	Callisto	1	OZ/A	HS	59.65 def	37.87 a	56.51 a	100.91 a	229.54 a
	Dual Magnum	1	PT/A	HS					
16	Callisto	2	OZ/A	HS	78.05 a-f	45.74 a	35.57 a	95.83 a	235.71 a
	Dual Magnum	1	PT/A	HS					
17	Sharpen	1.5	OZ/A	HS	58.20 def	37.63 a	80.47 a	138.06 a	225.18 a
	Dual Magnum	1	PT/A	HS					
18	Sharpen	2.5	OZ/A	HS	55.66 ef	52.88 a	41.26 a	110.72 a	249.87 a
	Dual Magnum	1	PT/A	HS					
19	Firstrate	0.25	OZ/A	HS	79.98 a-f	54.93 a	45.62 a	107.69 a	264.99 a
	Dual Magnum	1	PT/A	HS					
20	Firstrate	0.5	OZ/A	HS	91.23 abc	34.49 a	44.77 a	68.61 a	199.41 a
	Dual Magnum	1	PT/A	HS					
21	V-10142	0.4	LB A/A	HS	79.50 a-f	46.59 a	56.75 a	107.09 a	281.08 a
22	Pyroxasulfone	0.21	LB A/A	HS	93.41 ab	48.40 a	43.32 a	89.30 a	249.62 a
23	Pyroxasulfone	0.21	LB A/A	HS	93.41 ab	40.78 a	52.88 a	94.14 a	226.27 a
	Dual Magnum	1	PT/A	HS					
24	Chateau	2	OZ/A	HS	65.10 c-f	54.45 a	68.37 a	113.50 a	242.73 a
	Dual Magnum	1	PT/A	HS					
LSD (P=.05)					27.957	28.786	40.251	56.347	78.770

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

Potato Herbicide Efficacy 2012 - Hancock, WI

Trt No.	Treatment Name	Rate	Rate Unit	Grow Stage	Yield 9/17/12 (cwt/A) 10-13 oz	13-16 oz	>16 oz	Total Yld	Specific Gravity
1	Untreated Check				83.85 a	26.62 a	0.00 a	653.76 a	1.072 a
2	Metribuzin	0.5	LB A/A	HS	75.02 a	37.51 a	25.29 a	738.46 a	1.078 a
	Dual Magnum	1	PT/A	HS					
3	Lorox	1	LB/A	HS	87.36 a	49.25 a	18.51 a	702.53 a	1.074 a
	Curbit	3	PT/A	HS					
4	NAI 1333	1.5	OZ/A	HS	96.44 a	44.53 a	11.13 a	681.84 a	1.076 a
	Dual Magnum	1	PT/A	HS					
5	NAI 1333	2	OZ/A	HS	61.47 a	30.73 a	7.99 a	662.23 a	1.075 a
6	NAI 1333	2	OZ/A	HS	99.83 a	49.97 a	32.79 a	658.85 a	1.075 a
	Dual Magnum	1	PT/A	HS					
7	NAI 1333	2.5	OZ/A	HS	50.70 a	15.97 a	5.81 a	675.42 a	1.075 a
8	NAI 1333	2.5	OZ/A	HS	101.52 a	43.44 a	40.17 a	689.70 a	1.072 a
	Dual Magnum	1	PT/A	HS					
9	NAI 1333	3	OZ/A	HS	55.06 a	22.51 a	8.83 a	638.40 a	1.073 a
10	NAI 1333	3	OZ/A	HS	85.18 a	37.15 a	32.67 a	751.41 a	1.075 a
	Dual Magnum	1	PT/A	HS					
11	NAI 1333	4.25	OZ/A	HS	100.19 a	38.24 a	13.07 a	728.30 a	1.074 a
	Dual Magnum	1	PT/A	HS					
12	NAI 1333	5.5	OZ/A	HS	109.02 a	43.20 a	16.94 a	682.80 a	1.076 a
	Dual Magnum	1	PT/A	HS					
13	Matrix	1.5	OZ/A	PO1	82.76 a	41.99 a	16.58 a	734.47 a	1.074 a
	NIS	0.25	% V/V	PO1					
14	Solida	1.5	OZ/A	PO1	76.11 a	54.21 a	20.93 a	655.70 a	1.073 a
	NIS	0.25	% V/V	PO1					
15	Callisto	1	OZ/A	HS	136.13 a	42.11 a	33.88 a	696.60 a	1.073 a
	Dual Magnum	1	PT/A	HS					
16	Callisto	2	OZ/A	HS	110.96 a	45.25 a	40.78 a	687.89 a	1.074 a
	Dual Magnum	1	PT/A	HS					
17	Sharpen	1.5	OZ/A	HS	98.01 a	35.21 a	31.34 a	704.10 a	1.071 a
	Dual Magnum	1	PT/A	HS					
18	Sharpen	2.5	OZ/A	HS	114.59 a	61.71 a	19.97 a	706.64 a	1.076 a
	Dual Magnum	1	PT/A	HS					
19	Firstrate	0.25	OZ/A	HS	98.37 a	37.27 a	21.90 a	710.75 a	1.074 a
	Dual Magnum	1	PT/A	HS					
20	Firstrate	0.5	OZ/A	HS	101.16 a	28.56 a	13.67 a	581.89 a	1.071 a
	Dual Magnum	1	PT/A	HS					
21	V-10142	0.4	LB A/A	HS	96.20 a	33.76 a	22.51 a	723.46 a	1.075 a
22	Pyroxasulfone	0.21	LB A/A	HS	102.97 a	55.06 a	23.47 a	705.55 a	1.075 a
23	Pyroxasulfone	0.21	LB A/A	HS	85.91 a	45.13 a	19.24 a	657.76 a	1.071 a
	Dual Magnum	1	PT/A	HS					
24	Chateau	2	OZ/A	HS	111.08 a	46.22 a	48.64 a	750.08 a	1.074 a
	Dual Magnum	1	PT/A	HS					
LSD (P=.05)					56.262	36.925	37.062	119.290	0.0055

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