

Dicamba Impacts on Russet Burbank Potato Evaluation - Hancock - 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, 8 rows/plot (4 center rows treated)  
 Plant Spacing: 12 inches  
 Date Harvested: 9/17/12  
 Plot Size-Design: 24' x 20', 4 Reps  
 Rating Dates: 6/13, 6/20, 6/29, 7/5, 7/12, 7/30, 8/6

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	6/4/12	6/20/12
Time	1:00 pm	3:00 pm	7:00 am
Treatment	HS	PO1	PO2
Soil Moisture			
SF	dry	moist	dry
1"	moist	moist	moist
3"	moist	moist	moist
Soil Temp (F°)			
SF	91.3	81.0	96.5
3"	74.7	80.8	83.3
Air Temp (F°)	74.0	78.4	85.0
Wind	4.0 W	0.5 N	1.5-2.0 SW
%RH	24.0%	34.2%	62.3%
Sky Condition	0% clouds	100% clouds	0% clouds
Crop Stage	pre	10-12"	tuber init.
Weed & Size	pre		
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Summary: This trial was conducted in 2011 and 2012 to determine the effect of simulated synthetic auxin drift on potatoes. In potatoes, simulated dicamba drift was evaluated at three rates (0.04, 0.12 and 0.2 oz/A) and two timings. Potato tuber size distribution was variable and total yield did not differ among treatments and the non-treated control in 2011. In 2012, tuber size distribution was again variable, but more non-marketable cull potatoes were harvested where dicamba was applied at the highest rate to 25 cm potato plants than from any other treatment.

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

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

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Maintenance Fertilizer & Pesticides (R-1 Pivot)

<u>Date</u>	<u>Product</u>	<u>Rate</u>	<u>Unit</u>
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
17-May	Dual Magnum	1	pt/A
17-May	Metribuzin	0.67	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

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Trt No.	Treatment Name	Rate	Unit	Grow Stg	% Injury						Yield 9/17/12 (cwt/A)		
					6/13/12	6/20/12	6/29/12	7/5/12	7/12/12	7/30/12	8/6/12	B's	Culls
1	Untreated Check				0 d	0 d	0.5 c	1.3 d	1.3 b	1.3 d	0 f	77.14 a	60.53 b
2	Clarity	0.04	OZ/A	PO1	16.3 c	22.5 c	13.3 b	4.3 cd	1.3 b	1.3 d	1.3 ef	80.04 a	46.46 b
3	Clarity	0.12	OZ/A	PO1	21.3 b	43.8 a	31.3 a	6.3 c	2 b	3.8 cd	6.3 d	72.15 a	58.63 b
4	Clarity	0.2	OZ/A	PO1	28.8 a	35 b	32.5 a	15 b	8.3 a	10 bc	13.8 c	60.80 a	118.25 a
5	Clarity	0.04	OZ/A	PO2	0 d	0 d	1.5 c	5.8 c	5 ab	7.5 bcd	5 de	81.40 a	54.54 b
6	Clarity	0.12	OZ/A	PO2	0 d	0 d	2.8 c	12.5 b	7 a	12.5 ab	20 b	98.19 a	45.28 b
7	Clarity	0.2	OZ/A	PO2	0 d	0 d	5 c	20 a	8.8 a	20.3 a	28.8 a	85.21 a	60.08 b
LSD (P=.05)					3.44	6.33	5.80	4.43	5.00	8.06	4.44	28.585	32.966

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

Trt No.	Treatment Name	Rate	Unit	Grow Stg	Yield 9/17/12 (cwt/A)						Specific Gravity	
					2-4 oz	4-6 oz	6-10 oz	10-13 oz	13-16 oz	>16 oz		Total Yield
1	Untreated Check				29.77 a	100.6 a	232.6 ab	123 a	74.8 a	50.37 a	748.869 a	1.077 a
2	Clarity	0.04	OZ/A	PO1	57.17 a	111.2 a	238.4 ab	92.7 a	38.9 a	28.59 a	693.512 b	1.077 a
3	Clarity	0.12	OZ/A	PO1	56.81 a	98.19 a	199.1 bc	90.7 a	44.6 a	19.06 a	639.243 c	1.075 a
4	Clarity	0.2	OZ/A	PO1	50.37 a	112.6 a	206.5 bc	116 a	37.8 a	11.62 a	713.567 ab	1.075 a
5	Clarity	0.04	OZ/A	PO2	48.73 a	114.7 a	190.9 c	94.6 a	41.2 a	42.11 a	668.192 bc	1.076 a
6	Clarity	0.12	OZ/A	PO2	43.47 a	103.5 a	227.4 abc	110 a	52.9 a	18.6 a	699.773 ab	1.074 a
7	Clarity	0.2	OZ/A	PO2	63.34 a	112 a	257.2 a	96.2 a	53.1 a	25.41 a	752.499 a	1.077 a
LSD (P=.05)					34.746	51.302	39.510	44.824	30.281	25.350	52.819	0.0027

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

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

