

2013 Soybean Management Field Days

Adjuvants

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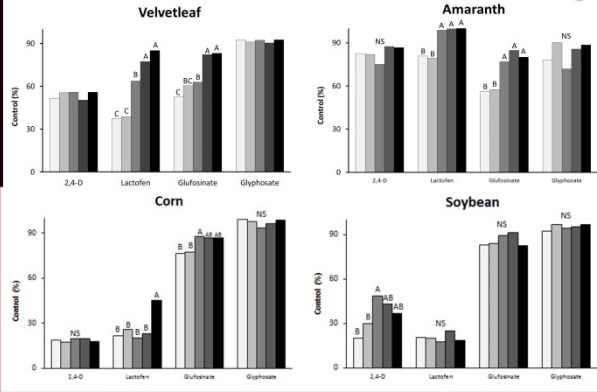
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2012 SMFD Carrier Rate Study



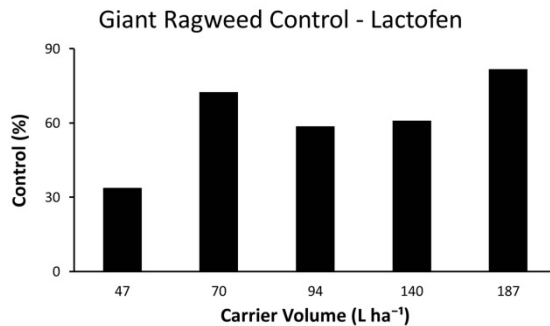
2013SMFD-Adjuvants (1)

2012 SMFD Carrier Rate Study

Carrier Volume	Nozzle	Pressure	Glufosinate	2,4-D	Gllyphosate	Lactofen
L ha ⁻¹		kPa		D _{vol} 5 (µm)		
47	XR11001	103.4	221	242	247	257
70	XR11001	137.9	194	217	220	231
94	XR11001	275.8	164	174	163	182
140	XR110015	275.8	181	189	191	213
187	XR11002	275.8	198	216	210	242

2013SMFD-Adjuvants (2)

2012 SMFD Carrier Rate Study



2013SMFD-Adjuvants (3)

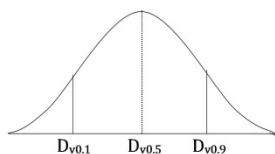
2013 SMFD Adjuvant Study

Herbicide	Adjuvant	D _{vol} 1	D _{vol} 2	D _{vol} 3	Relative Span
Touchdown Hi-Tech	NIS	191	374	583	1.04
Touchdown Hi-Tech	COC	212	386	572	0.92
Touchdown Hi-Tech	MSO	208	377	558	0.92
Touchdown Hi-Tech	HSOC	180	352	570	1.10
Touchdown Hi-Tech	AMS	194	374	579	1.02
Touchdown Hi-Tech	DRT	220	394	573	0.88
Touchdown Hi-Tech	NO ADJ	202	391	592	0.99
Fusilade	NIS	212	385	581	0.95
Fusilade	COC	218	390	566	0.88
Fusilade	MSO	204	372	559	0.94
Fusilade	HSOC	218	405	602	0.94
Fusilade	AMS	217	389	570	0.90
Fusilade	DRT	217	390	566	0.88
Fusilade	NO ADJ	218	385	558	0.88
Cobra	NIS	223	418	658	1.03
Cobra	COC	241	437	656	0.94
Cobra	MSO	226	420	648	0.99
Cobra	HSOC	239	444	682	0.99
Cobra	AMS	240	437	663	0.96
Cobra	DRT	245	446	672	0.95
Cobra	NO ADJ	238	434	659	0.96
Clarity	NIS	174	358	574	1.10
Clarity	COC	215	385	569	0.91
Clarity	MSO	215	387	565	0.89
Clarity	HSOC	198	383	602	1.05
Clarity	AMS	193	367	578	1.04
Clarity	DRT	216	389	568	0.89
Clarity	NO ADJ	201	379	579	0.99
Water Check (100015)	NO ADJ	199	392	583	0.97
Water Check (10003)	NO ADJ	223	434	665	1.01

2013SMFD-Adjuvants (4)

Droplet Size

$D_{v0.1}$, $D_{v0.5}$, and $D_{v0.9}$ = Droplet sizes (in μm) such that 10, 50, or 90% of the spray volume, respectively, is contained in spray droplet sizes of equal or less.



Category	Symbol	Color Code	Approx. $D_{v0.5}$
Extremely Fine	XF	Purple	=50
Very Fine	VF	Red	<136
Fine	F	Orange	136-177
Medium	M	Yellow	177-218
Coarse	C	Blue	218-349
Very Coarse	VC	Green	349-428
Extremely Coarse	EC	White	428-622
Ultra Coarse	UC	Black	>622

$$\text{Relative Span} = \frac{D_{v0.9} - D_{v0.1}}{D_{v0.5}}$$

2013SMFD-Adjuvants (5)

2013 SMFD Treatments

Adjuvants

1. NIS
2. COC
3. MSO
4. HSOC
5. AMS
6. DRT
7. None

Herbicides

1. Touchdown Hi-Tech
2. Fusilade
3. Cobra
4. Clarity

2013SMFD-Adjuvants (6)

TAKE HOME POINTS

- Use recommended carrier volumes
- Adjuvants respond differently with each herbicide
- Adjuvants may increase biological efficacy of herbicides
- Droplet size/spray quality will change when using adjuvants

2013SMFD-Adjuvants (7)