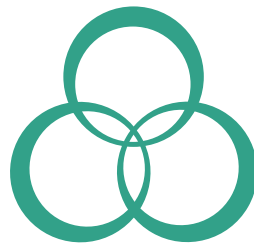


■ **F i e l d T r i a l R e p o r t** ■

Surround: Evaluation of the Effects of
Surround WP on Apple

Alan Schreiber, Eltopia, WA



**NovaSource Advisory
Council**

2008



Study Description:	Evaluation of the Effects of Surround WP on Apple
Reference Number:	
Researcher:	Alan Schreiber, ADG; Eltopia, WA; 509-266-4305
Location:	Wenatchee, WA
Year:	2008
Trial Quality (Excellent, Good, Fair, Poor):	Good

Product(s):	Surround WP, Eclipse, Raynox, Vapor Gard
Rate(s):	Surround 50 lb/A fb 25 lb/A
Adjuvant(s):	
Rate(s):	

Crop(s):	Apple
Variety:	Golden Delicious
Pest(s):	
Quality:	Sunburn
Summary:	<p>Evaluations based on 0-5 scale where 0 is no sunburn, 1 is a slightly visible mark, 2 is a pronounced discoloring from sunburn, 3 is a buckskin marking that is at least 3/8 inch in diameter or greater, 4 is a large or pronounced buckskin discoloration and 5 is complete necrosis of apple tissue.</p> <p>Eight trees were sampled per treatment. Twenty five fruit per tree were sampled. Fruit was collected from the upper one-half to one-third of the tree on the south/southwest portion of the canopy. Fruit was selected at random from a height of 7 to 14 feet above the ground. The treatments were unreplicated. The variety was Golden Delicious. A rating of 3 or higher is considered to either be a cull or suitable only for a secondary market.</p> <p>Surround was compared to Eclipse, Raynox and Vapor Gard. All treatments provided significant reduction (45%-65%) in incidence of sunburned fruit. Surround had the lowest incidence of damaged fruit but was not significantly different from other treatments. The severity of sunburn was not significantly different among any of the treatments or the untreated check.</p> <p>All plots were harvested commercially and will be graded in 2009 for sunburn, etc., following storage.</p>

Evaluation of the Effect of Surround WP on Apples

Study Director: Chad Dobie, Agriculture Development Group, Inc.
Principal Investigator: Alan Schreiber, Agriculture Development Group, Inc.

8/15/08 Evaluations based on 0-5 scale where 0 is no sunburn, 1 is a slightly visible mark, 2 is a pronounced discoloring from sunburn, 3 is a buckskin marking that is at least 3/8 inch in diameter or greater, 4 is a large or pronounced buckskin discoloration and 5 is complete necrosis of apple tissue.

Eight trees were sampled per treatment. Twenty five fruit per tree were sampled. Fruit was collected from the upper one-half to one-third of the tree on the south/southwest portion of the canopy. Fruit was selected at random from a height of 7 to 14 feet above the ground. The treatments were unreplicated. The variety was Golden Delicious. A rating of 3 or higher is considered to either be a cull or suitable only for a secondary market.

Surround was compared to Eclipse, Raynox and Vapor Gard. All treatments provided significant reduction (45%-65%) in incidence of sunburned fruit. Surround had the lowest incidence of damaged fruit but was not significantly different from other treatments. The severity of sunburn was not significantly different among any of the treatments or the untreated check.

All plots were harvested commercially and will be graded in 2009 for sunburn, etc., following storage.

Table 1: Trial ID: apple.sunburn_08 Location: OFF FARM

	Surround	Raynox	Vaporgard+Omega	Eclipse
Application Rate	50, 25, 25 lb/A	2.5 gal/A	1 gal + 1 gal	3 gal
Application dates	6/27, 7/9, 7/23/08	6/26, 7/9, 7/24/08	6/26, 7/10, 7/25/08	6/27, 7/9, 7/23/08

Replications: 8, Design: Randomized Complete Block, Treatment units: Treated plot size, Dry Form. Unit: %, Treated plot size Width: 4 meters, Treated plot size Length: 6 meters, Application volume: 200 l/ha, Mix size: 2 liters, Format definitions: G-A117.DEF, G-A117.FRM

Table 2: Apple sunburn trial

Crop Code:				MABSD		
BBCH Scale:				BPOM		
Crop Name:				Apple		
Crop Variety:				Golden Delicious		
Part Rated:				FRUCOLC		
Rating Date:				8/15/2008		
Rating Date Type:				PESINC	PESSEV	
Rating Unit:				%	0-5	
Sample Size:				25		
Sample Size Unit:				Fruit		
Collection Basis:				8		
Collection Basis Unit:				Tree		
Number of Subsamples:				1	25	1
Trt. No.	Treatment Name	Product Rate	Product Rate Unit	1	2	3
1	Untreated			10.0a	1.9a	
2	Eclipse			5.0b	1.7a	
3	Surround			4.5b	1.9a	
4	Raynox			6.1b	1.8a	
5	Omega Vapor Gard			6.6b	2.4a	
LSD (P=.05)				2.25	0.51	.
Standard Deviation				2.20	0.50	.
CV				33.99	25.83	.
Bartlett's X2				0.901	5.051	.
P (Bartlett's X2)				0.924	0.272	.
Replicate F				0.589	1.291	
Replicate Prob(F)				0.7591	0.2909	
Treatment F				8.068	2.088	
Treatment Prob(F)				0.0002	0.1091	

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.