

# Spotted Wing Drosophila (SWD) Monitoring Report for Southern Interior Valleys of British Columbia 2014

Traps have been set up throughout the Okanagan, Similkameen and Creston Valleys to monitor adult SWD flies in soft fruits. In addition to the standard deli cup traps we are testing trappit dome trap and different baits this year. The reporting format will therefore be slightly different.

**PROTECT SUSCEPTIBLE FRUIT!!! USE RECOMMENDED PRODUCTS AND TIGHTEN UP SPRAY INTERVALS CLOSE TO HARVEST (SEE ATTACHED SPRAY CALENDAR).**

## August 12 – September 16, 2014

### Confirmed SWD trap captures from packinghouse traps

Please refer to last page for updated data.

Trap A – Deli cup + Apple cider vinegar

Trap B – Trappit + Apple cider vinegar

Trap C – Trappit + Apple cider vinegar + Trece lure

Trap D – Trappit + Apple cider vinegar + Cha-Landolt lure

### Confirmed SWD trap captures from research/consultant traps:

#### AAFC, Summerland update from Trap A traps (H. Thistlewood)

Aug 12-19, 2014				Aug 20-26, 2014				Aug 27 - Sept 2, 2014			
Host Tree	Males	Fem.	Total SWD	Host Tree	Males	Fem.	Total SWD	Host Tree	Males	Fem.	Total SWD
Saskatoon	1	2	3	Saskatoon	26	222	248	Saskatoon	155	818	973
Sweet cherry	14	6	20	Sweet cherry	35	152	187	Sweet cherry	208	1236	1444
Choke cherry	1	7	8	Choke cherry	24	83	107	Choke cherry	76	336	412
Wax Currant	0	4	4	Wax Currant	1	29	30	Wax Currant	45	256	301
Saskatoon	2	11	13	Saskatoon	12	67	79	Saskatoon	110	731	841
Rose	1	2	3	Saskatoon	1	12	13	Saskatoon	4	44	48
Pine	1	1	2	Rose	3	28	31	Rose	31	174	205
Saskatoon	0	5	5	Pine	1	13	14	Pine	15	107	122
				Saskatoon	1	22	23	Saskatoon	11	90	101
				Mahaleb cherry	1	0	1	Mahaleb cherry	7	26	33

# BC Ministry of Agriculture

Aug 12-19				Aug 19-26				Aug 26 - Sept 2				
Location	Crop	Trap type	Total SWD	Location	Crop	Trap type	Total SWD	Location	Crop	Trap type	Total SWD	
Mission	Mulberry	C	48	Mission	Mulberry	C	27	Mission	Mulberry	C	85	
		A	27			A	16			A	15	
Mission	Blackberry	A	1	East Kelowna	Blackberry	A	11	Mission	Blackberry	A	7	
Mission	Table grape	A	2	East Kelowna	Blackberry	A	5	East Kelowna	Blackberry	A	3	
Mission	Table grape	A	3		Table grape	C	13	East Kelowna	Blackberry	A	18	
East Kelowna	Table grape	A	1	Ellison	Table grape	A	14	East Kelowna	Table grape	C	66	
Vernon	Raspberry	A	12		Table grape	C	56	East Kelowna	Blueberry	A	13	
	Late Blackberry	A	1	Mission	Table grape	A	17	East Kelowna	Blackberry	A	6	
Mission	Hardy Kiwi	A	6		Table grape	C	58	Ellison	Table grape	A	60	
				Table grape	A	7	Table grape	C	226			
				Mission	Table grape	C	91	Mission	Table grape	A	11	
					Table grape	A	6		Table grape	C	231	
					East Kelowna	Table grape	C	2	Mission	Table grape	A	53
						Table grape	C	26	Mission	Table grape	A	36
				Table grape		A	24	Table grape		C	305	
				Vernon	Raspberry	A	11	East Kelowna	Table grape	A	43	
					Late Blackberry	A	2		Table grape	A	6	
					Late Blackberry	C	54		Table grape	C	136	
				Mission	Hardy Kiwi	A	11		Table grape	C	158	
					Hardy Kiwi	C	15	Vernon	Raspberry	A	58	
							Late Blackberry		A	7		
							Early Blackberry		C	39		
							Late Blackberry		C	88		
							Mission	Hardy Kiwi	A	50		
								Hardy Kiwi	C	76		
							Winfield	Blueberry	A	2		
								Blueberry	A	22		

Sept 2-9				Sept 9-16				Sept 16-23, Sept 23-30				
Location	Crop	Trap type	Total SWD	Location	Crop	Trap type	Total SWD	Location	Crop	Trap type	Total SWD (Sept 16-23)	Total SWD (Sept 23-30)
Mission	Mulberry	C	76	Mission	Mulberry	C	197	Mission	Mulberry	C	85	47
		A	29			A	86			A	74	55
Mission	Blackberry	A	9	East Kelowna	Table grape	C	73	East Kelowna	Table grape	C	12	8
East Kelowna	Blackberry	A	7	Ellison	Table grape	A	23	Ellison	Table grape	A	37	36
East Kelowna	Blackberry	A	13		Table grape	C	176		Table grape	C	29	28
	Table grape	C	21	Mission	Table grape	A	116	Mission	Table grape	A	170	17
East Kelowna	Blueberry	A	17		Table grape	C	87		Table grape	C	400+	37
East Kelowna	Blackberry	A	2	Mission	Table grape	A	27	East Kelowna	Table grape	A	7	3
Ellison	Table grape	A	16		Table grape	C	62		Table grape	A	21	2
	Table grape	C	256	East Kelowna	Table grape	A	16		Table grape	C	139	8
Mission	Table grape	A	51		Table grape	A	4		Table grape	C	29	7
	Table grape	C	258		Table grape	C	28	Vernon	Early Blackberry	C	107	56
Mission	Table grape	A	15	Table grape	C	155	Late Blackberry		C	206	24	
Mission	Table grape	A	45	Vernon	Early Blackberry	C	107	Mission	Hardy Kiwi	A	9	47
	Table grape	C	316		Late Blackberry	C	207		Hardy Kiwi	C	29	55
East Kelowna	Table grape	A	22	Mission	Hardy Kiwi	A	14					
	Table grape	A	16		Hardy Kiwi	C	130					
	Table grape	C	75									
	Table grape	C	126									
	Late Blackberry	A	25									
	Early Blackberry	C	82									
	Late Blackberry	C	266									
Mission	Hardy Kiwi	A	44									
	Hardy Kiwi	C	200									
Winfield	Blueberry	A	8									
	Blueberry	A	34									

Protect fruit when they start turning colour and continue coverage until harvest. Diazinon used for cherry fruit fly control will also control spotted wing drosophila.

**Admire, Assail, Sevin and GF-120 used for cherry fruit fly control will NOT control SWD.**

Registered SWD control products are **Delegate, Entrust, Exirel, Malathion 85E, Malathion 85W, and Ripcord**. Entrust can be used by organic growers. These products will only control adult SWD, not larvae (see attached spray chart).

### Postharvest sprays

Apply post harvest insecticide sprays to cherries for cherry fruit fly control immediately after harvest. Apply Admire in Lapins, Sweetheart, Sonata and Satin. Dimethoate works well for other varieties and will also control SWD.

Emergency registration labels are posted at [http://www.agf.gov.bc.ca/pesticides/k\\_4.htm](http://www.agf.gov.bc.ca/pesticides/k_4.htm)

**Further information for tree fruit and grapes:**

<http://www.agf.gov.bc.ca/cropprot/swd.pdf>

**Management recommendations for berries:**

[http://www.agf.gov.bc.ca/cropprot/swd\\_management.pdf](http://www.agf.gov.bc.ca/cropprot/swd_management.pdf)

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*Deli cup trap with apple cider vinegar (ACV)*

*Trappit globe trap with Trece Lure + ACV*

Area	# of traps (Sept 9-16)	# of traps with SWD (Sept 9-16)	Number of SWD																																						
			May 13-20		May 20-27		May 27-Jun 3		Jun 3-10		Jun 10-17		Jun 17-24		Jun 24-July 1		July 1-8		July 8-15		July 15-22		July 22-29		July 29-Aug 5		Aug 5-12		Aug 12-19		Aug 19-26		Aug 26-Sept 2		Sept 2-9		Sept 9-16				
			Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD	Total SWD	Average SWD			
Vernon BX	0	0	0	0.00	0	0.00	0	0.00	1	0.25	0	0.00	0	0.00	0	0.00	0	0.00	2	0.4	8	1.6	11	2.2	32	6.4	140	28	70	14	207	41.4	Traps removed								
Bella Vista	0	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.25	0	0	0	0	2	0.5	5	1.25	14	3.5	44	11	Traps removed								
Lavington	0	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.25	0	0.00	0	0	5	1.25	2	0.5	0	0	10	2.5	6	1.5	28	7	Traps removed								
Oyama	8	8	1	0.17	0	0.00	0	0.00	1	0.17	1	0.17	0	0.00	1	0.13	2	0.25	0	0	5	0.63	0	0	6	0.75	16	2	22	2.75	77	9.63	234	29.25	287	35.88	562	70.25			
Carrs Landing	4	4	1	0.17	1	0.14	0	0.00	3	0.43	0	0.00	0	0.00	0	0.00	0	0.00	4	0.44	7	0.78	1	0.11	9	1.00	5	0.56	36	4	153	19.13	62	16	78	19.5	27	6.75			
Winfield	4	3	1	0.33	1	0.20	0	0.00	1	0.20	0	0.00	0	0.00	0	0.00	1	0.17	1	0.17	4	0.67	1	0.17	1	0.17	15	2.5	8	1.33	16	2.67	54	13.5	58	14.5	105	26.25			
Ellison	4	4	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.25	1	0.25	1	0.25	0	0	4	1	2	0.5	30	7.5	17	4.25	123	30.75	148	37			
Glenmore	4	4	0	0.00	0	0.00	2	0.67	2	0.40	0	0.00	1	0.17	1	0.17	0	0.00	0	0	4	0.67	0	0	1	0.17	4	0.67	7	1.17	11	1.83	15	3.75	17	4.25	19	4.75			
Rutland	4	4	3	0.50	0	0.00	2	0.33	0	0.00	1	0.17	0	0.00	0	0.00	0	0.00	1	0.13	1	0.125	1	0.13	6	0.75	26	3.25	13	1.63	63	7.88	121	30.25	211	52.75	350	87.5			
Belgo	4	4	0	0.00	4	1.33	2	0.33	1	0.17	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0	0	0	2	0.33	5	0.83	6	1	14	2.33	28	7	56	14	38	9.5			
East Kelowna	4	4	2	0.22	1	0.11	1	0.08	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	3	0.20	1	0.07	12	0.80	27	1.8	15	1	67	4.47	100	25	313	78.25	583	145.75			
SE Kelowna	0	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.33	0	0	2	0.67	0	0	0	0	7	2.33	12	4	17	5.67	Traps removed								
Mission	4	4	0	0.00	0	0.00	0	0.00	1	0.14	0	0.00	0	0.00	0	0.00	3	0.38	1	0.13	16	2	6	0.75	20	2.5	128	16	32	4	106	13.25	792	158.4	1877	469.25	1318	329.5			
Westbank	0	0	0	0.00	2	0.33	2	0.33	1	0.11	0	0.00	0	0.00	8	0.73	7	0.64	7	0.64	46	4.18	27	2.45	118	10.73	348	31.64	89	8.09	158	14.36	Traps removed								
Peachland	0	0	0	0.00	0	0.00	0	0.00	2	0.67	0	0.00	0	0.00	2	0.50	3	0.75	2	0.5	9	2.25	3	0.75	32	8	67	16.75	26	6.5	41	10.25	Traps removed								
Summerland	12	12	2	0.13	1	0.07	0	0.00	2	0.12	1	0.07	0	0.00	0	0.00	3	0.14	3	0.14	32	1.45	6	0.27	27	1.23	15	0.88	93	5.81	95	5.94	294	24.5	566	47.17	591	49.25			
Naramata	8	8	4	0.33	1	0.08	2	0.17	2	0.17	2	0.17	1	0.06	0	0.00	1	0.06	2	0.13	10	0.63	7	0.44	25	1.56	27	1.69	285	17.81	288	18	386	48.25	859	107.38	1144	143			
Penticton	4	4	0	0.00	2	0.20	1	0.10	2	0.17	0	0.00	1	0.06	0	0.00	1	0.06	1	0.06	2	0.13	4	0.25	14	0.88	24	2	123	10.25	127	10.58	364	91	417	104.25	451	112.75			
Oliver (N of Road 9)	8	7	0	0.00	3	0.21	0	0.00	1	0.07	0	0.00	3	0.17	8	0.44	22	1.22	3	0.17	18	1	8	0.44	27	1.5	20	1.18	10	0.59	86	5.06	262	32.75	269	33.63	253	31.63			
Oliver (S of Road 10)	0	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Traps removed							
Cawston	0	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.25	0	0.00	0	0	0	0	0	0	1	0.25	4	1	22	5.5	0	0	Traps removed								
Keremeos	0	0	2	0.33	1	0.17	0	0.00	1	0.17	0	0.00	0	0.00	0	0.00	1	0.13	3	0.38	5	0.63	4	0.5	5	0.63	5	0.63	7	0.88	16	2	Traps removed								
Osoyoos	4	4	1	0.09	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.23	1	0.08	3	0.23	6	0.46	6	0.46	27	2.08	61	7.63	3	0.38	11	1.38	42	10.5	33	8.25	63	15.75			
Creston	10	7	0	0.00	0	0.00	0	0.00	0	0.00	1	0.04	18	0.60	6	0.21	5	0.17	3	0.10	1	0.03	1	0.03	1	0.03	2	0.07	0	0	0	0	2	0.071	14	0.5	18	1.8			
<b>Total</b>	<b>86</b>	<b>81</b>	<b>17</b>		<b>17</b>		<b>12</b>		<b>21</b>		<b>6</b>		<b>24</b>		<b>31</b>		<b>51</b>		<b>38</b>		<b>185</b>		<b>90</b>		<b>368</b>		<b>965</b>		<b>901</b>		<b>1655</b>		<b>2773</b>		<b>5178</b>		<b>5670</b>				
<b>SWD/Trap(2014)</b>			<b>0.092</b>		<b>0.092</b>		<b>0.065</b>		<b>0.114</b>		<b>0.032</b>		<b>0.104</b>		<b>0.135</b>		<b>0.223</b>		<b>0.166</b>		<b>0.808</b>		<b>0.393</b>		<b>1.607</b>		<b>4.55</b>		<b>4.35</b>		<b>7.92</b>		<b>26.41</b>		<b>49.79</b>		<b>65.93</b>				
<b>Ratio Male/Female</b>			<b>3:16</b>		<b>4:10</b>		<b>1:12</b>		<b>3:18</b>		<b>1:05</b>		<b>0:24</b>		<b>18:13</b>		<b>34:17</b>		<b>15:23</b>		<b>109:76</b>		<b>69:21</b>		<b>232:136</b>		<b>331:634</b>		<b>499:402</b>		<b>839:816</b>		<b>1148:1625</b>		<b>2772:2406</b>		<b>3639:2031</b>				
<b>Percent females</b>			<b>84.2</b>		<b>71.4</b>		<b>92.3</b>		<b>85.7</b>		<b>83.3</b>		<b>100</b>		<b>41.94</b>		<b>33.33</b>		<b>60.5</b>		<b>41.08</b>		<b>23.3</b>		<b>37</b>		<b>34.3</b>		<b>44.6</b>		<b>49.3</b>		<b>58.6</b>		<b>46.5</b>		<b>35.8</b>				

Comparison of Mean SWD Trap Captures (2010-2014) \*Note: we used deli cup traps baited with apple cider vinegar for SWD monitoring from 2010 – 2013. In 2014, a combination of trap types and baits were used.

Year	Mean Number of SWD																					
	May 6-16	May 17-23	May 24-30	May 31-June 6	June 7- 13	June 14-20	June 21-27	June 28-July 4	July 5-11	July 12-18	July 19-25	July 26-Aug 1	Aug 2- 8	Aug 9-15	Aug 16-22	Aug 23-29	Aug 30-Sept 5	Sept 6-12	Sept 13-19	Sept 20-26	Sept 27-Oct 3	Oct 4-10
2014*	0.092	0.092	0.065	0.114	0.032	0.104	0.135	0.223	0.166	0.808	0.393	1.607	4.55	4.35	7.92	26.41	49.79	65.93				
2013	0.27	0.27	0.16	0.16	1.75	0.67	0.18	0.1	0.9	3.1	2.8	6.9	3.4	6.3	14.3	26.5	33.1	20.6	25.9	44.4	23.4	50.7
2012	0.005	0.01	0.005	0.034	0.01	0.058	0.034	0.034	0.024	0.235	0.391	0.386	0.8	1.64	2.13	4.98	7.1	6.7	n/a	n/a	n/a	n/a
2011	0	0	0	0.01	0.01	0.005	0	0.005	0.005	0.01	0.01	0.017	0.017	0.1	0.3	0.4	1.45	2.83	4.23	n/a	n/a	n/a
2010	0	0	0	0	0.005	0.01	0.05	0.07	0.11	0.31	0.45	0.4	0.38	0.69	1.72	3.84	3.31	5.42	4.6	7.1	26.3	40.7