

## Comparison of cumulative P-Days and Severity Values generated from SkyBit E-WEATHER SERVICE and on-site weather data

In 2007 we participated in the second year of a multistate study to evaluate the potential to use remote-sensing estimated weather data for disease prediction programs. The tables below compare accumulation of P-Days and severity values using estimated data (SkyBit) and on-site weather measurements for different locations.

**SB** = SkyBit E-WEATHER SERVICE Hindcast data (estimated for past 24 hr, corrected)

**OS** = On site weather data (Campbell CR-10 datalogger at Antigo, Hancock, Plover 1, Plover 2; Spectrum WatchDog datalogger at Coloma, Spooner)

### Antigo, 2007

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
21-Jun	174		23	
2-Jul		240		15
3-Jul	262		26	
5-Jul		265		19
6-Jul	288		29	
9-Jul		290		21
10-Jul	320		31	
13-Jul	343	313	33	21
15-Jul		332		21
16-Jul	362		33	
19-Jul	387	362	39	26
20-Jul	395		40	
22-Jul		382		27
23-Jul	417		40	
24-Jul		395		26
25-Jul	434		44	

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
26-Jul	441		45	
29-Jul		429		35
30-Jul	473		50	
31-Jul	481		51	
2-Aug		456		36
3-Aug	505		53	
6-Aug		485		39
7-Aug	539	491	59	40
8-Aug	546		60	
9-Aug	554		59	
12-Aug		519		41
13-Aug	587		61	
14-Aug				
15-Aug	602		62	
21-Aug	646		78	

### Hancock, 2007

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
3-Jun	118	143	12	4
5-Jun	154		28	
6-Jun		159		4
7-Jun		166		4
8-Jun	175	181	28	9
10-Jun	198	194	28	9
12-Jun	214	208	29	9
14-Jun	230	222	29	9
16-Jun	245	237	29	12
18-Jun	261	253	30	13
20-Jun	279	267	32	13
22-Jun	296	281	32	13
24-Jun	313	285	33	13
25-Jun	314		33	
1-Jul		328		13
2-Jul	369	335	35	13
3-Jul	378		35	
5-Jul		357		16
6-Jul	404		39	
8-Jul		373		17
9-Jul	424	379	41	19
10-Jul	432		42	
13-Jul	457	402	43	19
15-Jul		423		19
16-Jul	482		44	
19-Jul	507	451	48	22

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
20-Jul	516		49	
22-Jul		470		22
23-Jul	540			
24-Jul		483		25
25-Jul	557		47	
26-Jul	571		50	
29-Jul		523		30
30-Jul	603		54	
31-Jul	611		55	
2-Aug		548		31
3-Aug	632		56	
6-Aug		579		33
7-Aug	667	584	67	33
8-Aug	673		68	
9-Aug	681		68	
12-Aug		617		38
13-Aug	712		72	
14-Aug		633		38
15-Aug	730		72	
20-Aug		681		59
21-Aug	782	690	95	63
22-Aug	791		104	
23-Aug	801	708	109	68
24-Aug	810		117	

## Plover, 2007

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
25-May	66	64	8	2
27-May	76	76	10	2
29-May	89	90	10	2
31-May	107	106	10	3
2-Jun	125	123	15	5
4-Jun	143	140	26	7
6-Jun	158	153	26	7
8-Jun	174	168	27	7
10-Jun	189	182	27	7
12-Jun	205	196	28	7
14-Jun	221	210	28	8
16-Jun	236	226	30	12
18-Jun	253	242	31	14
20-Jun	270	257	33	14
22-Jun	287	273	33	14
24-Jun	304	287	34	17
26-Jun	320	302	36	19
28-Jun	336	319	36	19
30-Jun	351	332	36	19
2-Jul	367	347	36	23
4-Jul	385	363	39	27
6-Jul	403	378	41	31
8-Jul	418	391	42	32
10-Jul	431	406	44	33

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
12-Jul	448	421	44	33
14-Jul	464	436	45	33
16-Jul	481	452	47	37
18-Jul	499	467	51	39
20-Jul	516	482	52	39
22-Jul	532	497	52	40
24-Jul	549	512	54	43
26-Jul	563	527	56	45
28-Jul	579	543	58	47
30-Jul	595	557	60	49
1-Aug	610	571	61	50
3-Aug	625	586	61	51
5-Aug	641	604	68	53
7-Aug	659	616	71	54
9-Aug	674	631	71	55
11-Aug	690	644	73	57
13-Aug	706	658	73	57
15-Aug	724	676	75	59
17-Aug	742	691	76	59
19-Aug	756	704	126	82
21-Aug	773	722	126	84
23-Aug	792	740	126	91
25-Aug	812	758	128	92

## Spooner, 2007

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
6-Jun	67		13	
8-Jun	82	72	17	2
10-Jun	98		17	
12-Jun	114		17	
14-Jun	131		17	
16-Jun	147		18	
18-Jun	165		19	
20-Jun	183		19	
22-Jun	198		19	
24-Jun	216		21	
26-Jun	232		22	
28-Jun	249		22	
30-Jun	262		22	
2-Jul	278	254	22	2
4-Jul	297		29	
6-Jul	314	278	30	6
8-Jul	329		31	

Data through:	Sum P-Days		Sum Sev Values	
	SB	OS	SB	OS
9-Jul		306		9
10-Jul	345		34	
12-Jul	361	329	34	9
14-Jul	378		34	
16-Jul	396	359	36	9
18-Jul	413		39	
20-Jul	430		40	
22-Jul	445		40	
24-Jul	464		42	
26-Jul	477		44	
28-Jul	492	438	47	13
30-Jul	508		48	
1-Aug	522	469	49	13
3-Aug	537		49	
5-Aug	554		50	
7-Aug	573	506	52	13
9-Aug	580	528	52	14

Data obtained from the e-weather service appear to do an acceptable job of temperature estimation resulting in P-Day accumulation that could be used to schedule sprays for early blight. However, each of the two years we have tested these data sets, there have been problems with estimated relative humidity – in 2006, severity values were substantially underestimated by the e-weather service data (compared with on-site weather measurements), but in 2007 severity values generated from the e-weather service data reached a much higher level much earlier in the season than calculations done from on-site data. Hence the e-weather service data cannot yet be used for accurate scheduling of sprays to control late blight.