Appendix I - Antigo Weather Data 2007

Table 1. Data recorded by a weather station in the potato canopy at the Langlade County Research Project Area, Antigo, WI. Temperature scale is Fahrenheit. P-Day and Severity Values are calculated beginning at 50% emergence for the field (1 Jun).

Date	Air Temperature (F)			Hours	Rainfall	Severity	Sum of Sev-		Sum of P-
	Max.	Min.	Avg.	>90% RH	(Inches)	Values	erity Values	P-Days	Days
May 16	56.2	35.1	45.6	0	0.1				
May 17	71.6	29.3	50.5	0	0.0				
May 18	74.4	32.5	53.4	0	0.0				
May 19	79.6	39.7	59.6	0	0.0				
May 20	61.2	35.2	48.2	0	0.0				
May 21	71.8	42.0	56.9	0	0.1				
May 22	87.4	47.8	67.6	0	0.0				
May 23	87.1	61.6	74.4	12	0.4				
May 24	78.7	47.4	63.1	0	0.5				
May 25	70.3	41.4	55.9	0	0.0				
May 26	65.6	43.4	54.5	0	0.0				
May 27	67.7	44.1	55.9	0	0.0				
May 28	77.1	35.1	56.1	0	0.0				
May 29	87.6	52.2	69.9	0	0.0				
May 30	87.5	57.7	72.6	0	0.7				
May 31	74.4	55.5	64.9	0	0.0	0	0	8.9	8.9
Jun 1	78.4	50.6	64.5	0	0.0	0	0	7.9	16.8
Jun 2	75.6	57.8	66.7	11	0.0	1	1	9.2	26.0
Jun 3	72.6	58.3	65.4	22	0.7	5	6	9.3	35.2
Jun 4	67.8	53.3	60.5	0	0.2	0	6	8.1	43.4
Jun 5	62.8	44.4	53.6	0	0.0	0	6	5.0	48.3
Jun 6	70.4	42.8	56.6	14	0.1	1	7	5.9	54.2
Jun 7	75.5	53.0	64.3	0	0.5	0	7	8.5	62.7
Jun 8	67.8	44.9	56.4	0	0.0	0	7	5.9	68.6
Jun 9	76.0	41.6	58.8	0	0.0	0	7	6.1	74.7
Jun 10	85.2	51.3	68.2	0	0.0	0	7	7.3	82.0
Jun 11	85.0	50.7	67.8	0	0.0	0	7	7.2	89.2
Jun 12	88.1	53.5	70.8	0	0.0	0	7	7.2	96.4
Jun 13	87.7	49.1	68.4	0	0.0	0	7	6.7	103.1
Jun 14	90.5	55.0	72.7	0	0.0	0	7	7.0	110.1
Jun 15	89.3	56.7	73.0	0	0.0	0	7	7.2	117.3
Jun 16	83.2	60.0	71.6	0	0.1	0	7	8.4	125.7
Jun 17	84.5	53.9	69.2	0	0.0	0	7	7.7	133.4
Jun 18	85.5	62.1	73.8	15	1.7	2	9	7.9	141.2
Jun 19	72.0	48.9	60.4	0	0.0	0	9	7.5	148.7
Jun 20	79.7	43.7	61.7	0	0.0	0	9	6.4	155.1
Jun 21	81.8	48.2	65.0	0	0.0	0	9	7.2	162.3
Jun 22	80.0	48.3	64.1	0	0.0	0	9	7.4	169.6
Jun 23	83.8	46.3	65.0	10	0.0	1	10	6.6	176.2
Jun 24	87.5	55.1	71.3	11	0.0	1	11	7.4	183.6
Jun 25	87.3	56.3	71.8	11	0.0	1	12	7.4	191.0
Jun 26	90.5	60.9	75.7	10	0.0	1	13	7.0	198.0
Jun 27	84.5	59.0	71.7	0	0.1	0	13	8.1	206.1
Jun 28	78.6	48.5	63.6	0	0.0	0	13	7.5	213.5
Jun 29	84.8	41.8	63.3	0	0.0	0	13	5.9	219.4
Jun 30	85.3	44.9	65.1	0	0.0	0	13	6.1	225.5
Jul 1	83.5	43.5	63.5	0	0.0	0	13	6.1	231.6
Jul 2	70.4	54.0	62.2	13	0.0	2	15	8.5	240.1
Jul 3	79.9	57.3	68.6	17	0.9	3	18	8.8	248.9
Jul 4	85.3	60.6	73.0	12	0.1	1	19	7.9	256.8
Jul 5	80.5	54.8	67.6	0	0.3	0	19	8.4	265.2
Jul 6	85.9	51.6	68.8	0	0.0	0	19	7.2	272.4
Jul 7	92.1	53.7	72.9	0	0.0	0	19	6.7	279.1
Jul 8	98.0	66.5	82.2	14	0.0	2	21	4.7	283.8
Jul 9	91.8	62.6	77.2	0	0.0	0	21	6.6	290.4
Jul 10	85.8	58.1	72.0	0	0.0	0	21	7.7	298.1
Jul 11	78.4	49.2	63.8	0	0.1	0	21	7.6	305.7
Jul 12	74.7	46.7	60.7	0	0.3	0	21	7.0	312.8
Jul 13	73.1	40.8	56.9	0	0.0	0	21	5.8	318.6
Jul 14	70.9	47.3	59.1	0	0.1	0	21	7.0	325.6
Jul 15	82.6	46.6	64.6	0	0.0	0	21	6.8	332.4
Jul 16	86.9	54.2	70.5	0	0.0	0	21	7.3	339.7
Jul 17	84.1	53.6	68.8	20	2.1	4	25	7.8	347.5
Jul 18	89.6	61.2	75.4	11	0.0	1	26	7.1	354.6
Jul 19	72.6	49.0	60.8	0	0.0	0	26	7.5	362.1
Jul 20	82.0	42.5	62.3	0	0.0	0	26	6.2	368.3
Jul 21	84.9	45.5	65.2	0	0.0	0	26	6.3	374.6
Jul 22	83.6	50.8	67.2	0	0.0	0	26	7.5	382.0
Jul 23	84.9	55.2	70.0	12	0.0	1	27	7.8	389.8
Jul 24	96.7	60.6	78.7	10	0.0	1	28	5.6	395.4
Jul 25	96.6	63.9	80.2	12	0.1	1	29	5.1	400.5
Jul 26	93.5	63.5	78.5	18	2.2	3	32	6.1	406.5
Jul 27	84.9	57.2	71.1	11	0.0	1	33	7.9	414.4
Jul 28	89.2	55.6	72.4	0	0.0	0	33	7.2	421.6
Jul 29	90.2	54.7	72.5	10	0.0	1	34	7.0	428.6
Jul 30	89.6	56.1	72.9	10	0.0	1	35	7.1	435.8
Jul 31	94.1	57.1	75.6	0	0.0	0	35	6.4	442.2
Aug 1	91.5	58.6	75.0	0	0.0	0	35	6.9	449.1
Aug 2	88.6	56.6	72.6	0	0.0	0	35	7.3	456.4
Aug 3	88.6	45.6	67.1	0	0.0	0	35	6.1	462.5
Aug 4	83.6	52.0	67.8	0	0.0	0	35	7.6	470.1
Aug 5	70.6	52.9	61.7	14	0.0	2	37	8.3	478.4
Aug 6	90.7	64.1	77.4	11	0.0	1	38	6.7	485.1
Aug 7	93.2	61.1	77.2	10	0.3	1	39	6.4	491.5

Appendix I – Antigo Weather Data 2007, continued

Date	Air Temperature (F) Max.	Min.	Avg.	Hours >90% RH	Rainfall (Inches)	Severity Values	Sum of Severity Values	P-Days	Sum of P-Days
Aug 8	88.8	53.2	71.0	0	0.0	0	39	7.1	498.5
Aug 9	91.0	60.5	75.7	10	0.0	1	40	6.9	505.5
Aug 10	96.5	62.4	79.4	0	0.0	0	40	5.4	510.9
Aug 11	91.3	58.3	74.8	0	0.0	0	40	6.9	517.8
Aug 12	87	65	76		0.0				
Aug 13	87	48	67.5		0.0				
Aug 14	80	62	71		0.05				
Aug 15	82	54	68		0.0				
Aug 16	75	59	67		0.0				
Aug 17	77	47	62		0.0				
Aug 18	72	43	57.5		0.0				
Aug 19	62	53	57.5		0.15				
Aug 20	62	55	58.5		0.93				
Aug 21	61	57	59		0.07				
Aug 22	66	58	62		0.03				
Aug 23	74	62	68		0.02				
Aug 24	75	62	68.5		0.06				
Aug 25	75	59	67		0.0				
Aug 26	72	48	60		0.0				
Aug 27	76	57	66.5		0.15				
Aug 28	70	59	64.5		0.11				
Aug 29	89	63	76		0.66				
Aug 30	73	44	58.5		0.0				
Aug 31	73	44	58.5		0.0				
Sep 1	79	56	67.5		0.0				
Sep 2	85	58	71.5		0.0				
Sep 3	81	50	65.5		0.0				
Sep 4	81	56	68.5		0.0				

Date	Air Temperature (F) Max.	Min.	Avg.	Hours >90% RH	Rainfall (Inches)	Severity Values	Sum of Severity Values	P-Days	Sum of P-Days
Sep 5	86	65	75.5		0.0				
Sep 6	88	66	77		0.0				
Sep 7	83	69	76		0.15				
Sep 8	73	52	62.5		0.0				
Sep 9	73	46	59.5		0.02				
Sep 10	67	47	57		0.0				
Sep 11	54	43	48.5		0.0				

The weather station in our research plots malfunctioned 11 Aug. Data after 11 Aug were obtained from http://www.nws.noaa.gov/climate/xmacis.php?wfo=grb, National Weather Service Forecast Office, Green Bay, WI; NOWData - NOAA Online Weather Data, Antigo, WI. Without hourly data, P-Days and Severity Values could not be calculated for the rest of the season.

Air temperature maximum and minimum are recorded for each day (midnight to midnight)

Hours RH > 90% - number of hours with the relative humidity equal to or greater than 90 %

Severity Values are used to denote the effect of temperature and relative humidity on the development of potato late blight

Sum of Sev. Values - A running total of severity value accumulation from emergence date.

P-Days - Physiological days are calculated from emergence and are used to predict the first seasonal increase in airborne inoculum of the early blight fungus, to initiate the first fungicide spray for early blight control, and to adjust the rates and intervals of fungicide applications for the remainder of the growing season.

Sum of P-Days - A running total of P-Day accumulation from emergence date.