

Appendix I - Antigo Weather Data 2000

Table 1. Data recorded by a weather station in the potato canopy, adjacent to plots at the Langlade County Research Project Area, Antigo, WI. Temperature scale is Fahrenheit.

Date	Inches Precip.	Air Temperature		Hours > 90% RH	Max RH Temp	Min RH Temp	Sever-ity Values	Sum of Sev. Values	P-Days	Sum of P-Days
		Max Temp F	Min Temp F							
5/10	0.05	57.13	51.46				0	0	6.05	6.05
5/11	0.29	54.86	48.42	39	64.22	48.42	9	9	4.59	10.64
5/12	0.2	64.22	45.1				0	9	5.43	16.07
5/13	0	49.32	37.14				0	9	0.6	16.67
5/14	0	53.6	31.46				0	9	1.15	17.82
5/15	0	65.41	25.49				0	9	2.9	20.72
5/16	0.62	60.89	39.99	18	60.84	37.65	1	10	3.7	24.42
5/17	0.42	62.42	37.65	20	57.96	43.64	2	12	3.53	27.95
5/18	0.43	52.77	33.96				0	12	1.16	29.11
5/19	0	60.15	30.87				0	12	2.42	31.53
5/20	0	67.78	31.1				0	12	3.51	35.04
5/21	0	66.18	37.44	16	63.09	50.13	2	14	4.25	39.29
5/22	0.03	70.2	50.13	15	64	49.89	1	15	7.64	46.93
5/23	0.01	73.22	45.23	10	58.32	45.23	0	15	6.56	53.49
5/24	0.08	65.44	45.79				0	15	5.85	59.34
5/25	0	67.08	42.68				0	15	5.39	64.73
5/26	0	68.81	34.26				0	15	4.07	68.8
5/27	0.22	62.33	46.33	16	53.78	47.28	1	16	5.5	74.3
5/28	0.1	67.86	44.48	10	51.73	39.94	0	16	5.8	80.1
5/29	0	69.58	45.21	34	64.11	47.57	8	24	6.23	86.33
5/30	0.35	64.11	51.82				0	24	7.36	93.69
5/31	0	72.27	58.14	36	61.2	47.93	8	32	9.24	102.93
6/1	1.16	61.2	49.78				0	32	6.35	109.28
6/2	0	61.88	43.1	11	52.38	36.3	0	32	4.54	113.82
6/3	0.07	67.68	36.3	12	56.82	51.04	0	32	4.29	118.11
6/4	0.49	58.39	43.94	15	54.81	43.16	0	32	3.95	122.06
6/5	0.07	67.62	43.16				0	32	5.55	127.61
6/6	0	73.53	38.76	10	56.14	44.71	0	32	5.54	133.15
6/7	0.32	70.3	44.71				0	32	6.16	139.31
6/8	0	86.95	49.37				0	32	6.78	146.09
6/9	0	86.13	56.64				0	32	7.59	153.68
6/10	0.08	80.26	63.27				0	32	9.04	162.72
6/11	0	71.2	52.18				0	32	8.18	170.9
6/12	0	65.23	43.58	12	61.2	49.3	0	32	5.25	176.15
6/13	0	67.62	49.3	20	68.04	56.64	4	36	7.16	183.31
6/14	0.63	71.62	56.64	17	68.7	54.03	3	39	9.01	192.32
6/15	0.13	66.9	54.03	16	61.97	57.06	2	41	8.21	200.53
6/16	0.31	64.69	49.37				0	41	6.8	207.33

Date	Inches Precip.	Air Temperature		Hours > 90% RH	Max RH Temp	Min RH Temp	Sever-ity Values	Sum of Sev. Values	P-Days	Sum of P-Days
		Max Temp F	Min Temp F							
6/17	0	66.54	40.12	10	56.73	45.84	0	41	4.84	212.17
6/18	0.32	69.84	45.84	12	64.36	55.44	0	41	6.45	218.62
6/19	0.3	77.27	56.34				0	41	8.92	227.54
6/20	0.76	77.22	59.79	15	76.23	59.94	2	43	9.28	236.82
6/21	0	72.23	55.76				0	43	8.89	245.71
6/22	0.05	72.64	55.15	13	66.27	48.7	1	44	8.8	254.51
6/23	0.05	72.16	48.7	17	68.63	56.82	3	47	7.43	261.94
6/24	0.01	76.37	56.82	18	74.84	52.11	3	50	9.02	270.96
6/25	0	78.94	52.11	15	69.94	58.08	2	52	8.17	279.13
6/26	0.14	74.01	52.23	11	65.59	58.08	1	53	8.3	287.43
6/27	0	69.84	47.7	12	62.64	47.05	0	53	6.98	294.41
6/28	0.3	70.2	47.05	17	62.06	46.98	2	55	6.83	301.24
6/29	0	71.87	46.98	10	61.16	46.4	0	55	6.96	308.2
6/30	0	79.48	46.4				0	55	6.94	315.14
7/1	0	79.72	58.37				0	55	8.91	324.05
7/2	0.05	73.29	58.14	31	73.29	49.5	8	63	9.25	333.3
7/3	0	80.26	49.5	12	72.91	53.08	1	64	7.6	340.9
7/4	0	84.87	53.08	11	73.45	59.76	1	65	7.55	348.45
7/5	0	81.88	59.76				0	65	8.66	357.11
7/6	0	75.87	53.53				0	65	8.54	365.65
7/7	0.2	71.28	47.52	41	75.79	58.08	11	76	7.06	372.71
7/8	3.5	75.79	58.08				0	76	9.2	381.91
7/9	0.32	82.35	63.27	11	75.47	61.47	1	77	8.62	390.53
7/10	0	82.24	61.47				0	77	8.64	399.17
7/11	0	78.48	51.98	10	61.66	55.02	0	77	8.18	407.35
7/12	0	76.05	55.02	16	74.08	64.04	3	80	8.78	416.13
7/13	0.01	83.66	62.91	12	72.61	58.98	1	81	8.32	424.45
7/14	0	79.74	57	12	68.74	52.61	1	82	8.78	433.23
7/15	0	80.15	52.61	12	70.18	49.86	1	83	8.17	441.4
7/16	0	82.42	49.86	11	69.58	54.66	1	84	7.46	448.86
7/17	0	76.33	47.75				0	84	7.33	456.19
7/18	0	65.68	40.96	12	56.46	44.83	0	84	4.85	461.04
7/19	0	74.97	44.83	15	65.32	52.54	1	85	6.53	467.57
7/20	0	73	52.66	11	56.57	45.79	0	85	8.36	475.93
7/21	0	66.69	45.79	12	58.08	47.39	0	85	6.03	481.96
7/22	0	74.79	46.74	11	57.33	41.44	0	85	7.05	489.01
7/23	0	82.54	41.44	11	62.78	47.75	0	85	6.01	495.02
7/24	0	84.99	47.75	12	66.74	54.57	1	86	6.72	501.74

Date	Inches Precip.	Air Temperature		Hours > 90% RH	Max RH Temp	Min RH Temp	Sever-ity Values	Sum of Sev. Values	P-Days	Sum of P-Days
		Max Temp F	Min Temp F							
7/25	0	80.46	54.57	85	75.97	58.86	26	112	8.42	510.16
7/26	0.69	74.61	60.3				0	112	9.48	519.64
7/27	0.01	75.97	61.11				0	112	9.48	529.12
7/28	0.06	73.9	61.12				0	112	9.57	538.69
7/29	0.04	79.61	58.86	17	70.38	57.42	3	115	8.96	547.65
7/30	0	82.24	57.42	13	72.66	56.95	2	117	8.45	556.1
7/31	0	85.59	56.95	14	73.49	59.94	2	119	7.72	563.82
8/1	0	86.38	59.94	12	70.95	61.43	1	120	7.66	571.48
8/2	0	78.37	51.89	11	58.66	48.78	0	120	8.16	579.64
8/3	0	83.03	48.78	13	69.31	56.05	2	122	7.19	586.83
8/4	0	82.8	56.05	13	69.1	52.43	2	124	8.24	595.07
8/5	0.01	69.01	52.43	21	79.5	59.09	4	128	8.06	603.13
8/6	0.01	82.08	59.63	13	68.97	57.85	2	130	8.61	611.74
8/7	0	85.41	57.85	17	78.57	59.22	3	133	7.81	619.55
8/8	0.54	86.92	59.22	16	72.57	57.42	3	136	7.58	627.13
8/9	0.01	83.62	57.42	13	68.29	51.53	1	137	8.19	635.32
8/10	0	84.27	51.53	13	68.47	47.7	1	138	7.46	642.78
8/11	0	90.55	47.7	12	67.12	52.9	1	139	6.29	649.07
8/12	0.07	82.62	52.9	22	76.23	61.29	5	144	7.92	656.99
8/13	0.03	92.05	62.31	13	68.79	61.77	2	146	6.56	663.55
8/14	1.2	80.82	61.77	16	73.94	61	3	149	8.92	672.47
8/15	0.09	79.5	51.57				0	149	8.04	680.51
8/16	0.02	79.5	44.24	16	61.83	54.3	2	151	6.45	686.96
8/17	0.28	69.44	54.3	15	62.26	53.11	1	152	8.48	695.44
8/18	0	74.17	46.2	13	58.77	38.92	0	152	6.88	702.32
8/19	0	75.33	38.92	13	59.67	39.28	0	152	5.7	708.02
8/20	0	73.08	39.28	13	62.1	48.29	1	153	5.58	713.6
8/21	0	77.23	48.29	13	72.23	58.12	2	155	7.45	721.05
8/22	0.02	77.41	57.16	14	73.27	50.14	2	157	9.01	730.06

Date	Inches Precip.	Air Temperature		Hours > 90% RH	Max RH Temp	Min RH Temp	Sever-ity Values	Sum of Sev. Values	P-Days	Sum of P-Days
		Max Temp F	Min Temp F							
8/23	0.01	81.95	50.14	13	69.46	45.25	1	158	7.57	737.63
8/24	0	85.89	45.25	14	72.9	54.73	2	160	6.07	743.7
8/25	0	79.14	54.73	17	74.17	61.47	3	163	8.57	752.27
8/26	0.06	85.37	56.95	14	70.95	50.45	2	165	7.77	760.04
8/27	0	79.09	50.45	17	72.25	58.91	3	168	7.86	767.9
8/28	0	78.48	58.91	11	70.11	63.93	1	169	9.09	776.99
8/29	0	80.17	49.91				0	169	7.68	784.67
8/30	0	76.75	45.48				0	169	6.75	791.42
8/31	0.05	92.68	63.93				0	169	6.22	797.64
9/1	1.0	65.97	56.17				0	169	8.53	806.17
9/2	0	63.75	55.45				0	169	8.14	814.31
9/3	0.68	78.01	53.37				0	169	8.44	822.75
9/4	0	68.23	46.8				0	169	6.54	829.29
9/5	0	68.05	36.77	14	58.48	39.82	0	169	4.45	833.74
9/6	0	69.91	39.82	14	66.43	48.11	1	170	5.31	839.05
9/7	0.03	69.73	48.11	14	64.22	38.86	0	170	7.08	846.13
9/8	0	75.31	38.86	16	71.17	48.11	2	172	5.69	851.82
9/9	0	81.9	48.47	17	74.73	64.71	3	175	7.25	859.07
9/10	0.26	80.17	64.11	38	74.95	47.21	10	185	9.06	868.13
9/11	1.88	74.95	55.22				0	185	8.83	876.96
9/12	0.01	65.89	46.08				0	185	6.01	882.97
9/13	0.04	73.53	47.16	13	59.88	43.05	0	185	7.11	890.08
9/14	0.04	66.02	43.05	10	48.42	38.56	0	185	5.29	895.37
9/15	0	58.5	36.29	13	48.69	32.18	0	185	2.5	897.87
9/16	0	63.39	32.18	13	56.37	40.54	0	185	3.02	900.89
9/17	0	71.01	40.54	10	55	45.18	0	185	5.57	906.46
9/18	0	79.38	45.18				0	185	6.64	913.1
9/19	0.15	69.91	54.97	21	64.04	50.04	3	188	8.64	921.74

Inches Precip. includes daily rainfall and irrigation

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 %

MaxRH Temp - Maximum temperature during each period that the relative humidity is ≥ 90 %

MinRH Temp - Minimum temperature during each period that the relative humidity is ≥ 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.

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 -Day accumulation from emergence