

**Table 2. Weather data collected at the Hancock Agricultural Research Station, Hancock, WI - 2004. Temperature scale is Fahrenheit. Data in and outside the potato canopy were recorded by a weather station located adjacent to our potato trials.**

Date	Rainfall/ Irrig. Inches	Data Recorded In the Potato Canopy						
		Air Temperature (F)		Hours >90% RH	Severity Values	Sum of Sev- erity Values	P-Days	Sum of P- Days
		Max. Temp	Min. Temp					
04/01				0.00				
04/02				0.00				
04/03				0.00				
04/04				0.00				
04/05				0.00				
04/06				0.00				
04/07				0.00				
04/08				0.00				
04/09				0.00				
04/10				0.00				
04/11	0.51	38.57	26.61	0.00				
04/12	0.00	40.96	21.45	0.00				
04/13	0.00	55.16	18.33	0.00				
04/14	0.00	64.09	34.64	0.00				
04/15	4.83	70.34	37.38	0.00				
04/16				0.00				
04/17	1.27	72.17	48.48	0.00				
04/18	4.32	76.65	46.45	0.00				
04/19	2.03	57.81	38.08	0.00				
04/20	6.35	50.16	34.73	19.00				
04/21	5.08	48.97	40.37	0.00				
04/22	0.00	55.65	32.72	0.00				
04/23	0.00	62.56	30.07	0.00				
04/24	2.29	51.56	35.11	0.00				
04/25	4.06	48.63	37.85	0.00				
04/26	0.00	48.02	31.51	0.00				
04/27	0.00	49.92	23.86	0.00				
04/28	0.00	81.01	43.25	0.00				
04/29	0.00	73.05	45.01	0.00				
04/30	5.08	45.14	41.19	16.00				
05/01	0.00	57.20	36.64	0.00				
05/02	0.00	50.61	27.21	0.00				
05/03	0.00	55.40	21.57	0.00				
05/04	0.00	69.94	41.21	0.00				
05/05	0.00	67.24	30.45	0.00				
05/06	0.00	78.85	50.63	0.00				
05/07	3.05	58.11	38.08	0.00				
05/08	21.08	58.53	38.21	17.00				
05/09	5.33	76.02	46.45	0.00				

Date	Rainfall/ Irrig. Inches	Data Recorded In the Potato Canopy						
		Air Temperature (F)		Hours >90% RH	Severity Values	Sum of Sev- erity Values	P-Days	Sum of P- Days
		Max. Temp	Min. Temp					
05/10	5.33	74.73	48.61	0.00				
05/11	0.00	68.99	48.02	0.00				
05/12	18.80	82.43	60.65	21.00				
05/13	11.18	66.75	46.81	16.00				
05/14	8.13	47.42	34.26	0.00				
05/15	0.00	61.97	30.34	0.00				
05/16	0.00	69.81	42.76	0.00				
05/17	0.10	74.71	57.83	0.00	0.00	0.00	9.20	9.20
05/18	0.00	70.57	49.13	0.00	0.00	0.00	7.42	16.62
05/19	0.05	76.10	41.58	0.00	0.00	0.00	6.12	22.74
05/20	0.30	81.62	58.19	11.00	1.00	1.00	8.61	31.35
05/21	0.93	58.31	43.98	22.00	3.00	4.00	3.94	35.30
05/22	0.36	69.69	47.69	33.00	6.00	10.00	6.96	42.26
05/23	0.67	59.27	46.79	0.00	0.00	10.00	5.05	47.30
05/24	0.00	57.93	44.45	0.00	0.00	10.00	3.95	51.26
05/25	0.00	67.01	44.69	0.00	0.00	10.00	5.73	56.98
05/26	0.00	69.09	42.07	0.00	0.00	10.00	5.58	62.56
05/27	0.10	73.76	51.87	0.00	0.00	10.00	8.22	70.78
05/28	0.00	69.67	39.67	0.00	0.00	10.00	5.25	76.03
05/29	0.46	52.62	44.70	0.00	0.00	10.00	2.64	78.68
05/30	0.70	61.88	50.57	22.00	4.00	14.00	6.69	85.37
05/31	0.09	69.22	55.23	0.00	0.00	14.00	8.64	94.01
06/01	0.03	66.54	53.31	0.00	0.00	14.00	8.01	102.02
06/02	0.00	77.27	53.74	0.00	0.00	14.00	8.53	110.56
06/03	0.00	77.64	44.63	0.00	0.00	14.00	6.52	117.08
06/04	0.00	80.13	46.38	0.00	0.00	14.00	6.91	123.99
06/05	0.17	75.56	48.88	12.00	1.00	15.00	7.60	131.58
06/06	0.00	82.83	59.28	0.00	0.00	15.00	8.45	140.03
06/07	0.00	89.43	64.07	0.00	0.00	15.00	6.96	147.00
06/08	0.01	90.03	71.65	0.00	0.00	15.00	5.39	152.38
06/09	1.49	78.80	53.85	63.00	17.00	32.00	8.47	160.85
06/10	0.84	58.01	49.44	0.00	0.00	32.00	5.63	166.48
06/11	2.42	59.37	52.12	0.00	0.00	32.00	6.67	173.16
06/12	0.03	86.03	53.67	15.00	2.00	34.00	7.37	180.53
06/13	0.79	80.92	61.30	0.00	0.00	34.00	8.89	189.41
06/14	0.00	82.90	55.11	0.00	0.00	34.00	8.13	197.55
06/15	0.00	87.42	53.74	0.00	0.00	34.00	7.26	204.81
06/16	1.37	88.97	57.50	15.00	2.00	36.00	7.28	212.09
06/17	0.01	78.83	60.65	10.00	1.00	37.00	9.17	221.26

Appendix II, Table 2, continued.

Date	Rainfall/ Irrig. Inches	Data Recorded In the Potato Canopy						
		Air Temperature (F)		Hours >90% RH	Severity Values	Sum of Sev- erity Values	P-Days	Sum of P- Days
		Max. Temp	Min. Temp					
06/18	0.00	73.58	50.68	0.00	0.00	37.00	7.96	229.22
06/19	0.00	74.24	43.21	0.00	0.00	37.00	6.25	235.48
06/20	0.00	80.36	46.79	0.00	0.00	37.00	7.00	242.48
06/21	0.02	79.46	55.94	0.00	0.00	37.00	8.69	251.17
06/22	0.38	77.12	47.64	0.00	0.00	37.00	7.30	258.47
06/23	0.26	81.01	52.53	0.00	0.00	37.00	8.07	266.54
06/24	0.25	67.67	45.17	0.00	0.00	37.00	5.97	272.51
06/25	0.00	73.54	40.63	0.00	0.00	37.00	5.84	278.35
06/26	1.06	73.94	43.63	0.00	0.00	37.00	6.29	284.64
06/27	0.10	79.46	44.59	16.00	2.00	39.00	6.48	291.13
06/28	0.01	77.54	50.39	0.00	0.00	39.00	7.91	299.03
06/29	0.36	81.87	53.67	0.00	0.00	39.00	8.12	307.16
06/30	0.00	84.48	55.16	0.00	0.00	39.00	7.84	315.00
07/01	0.54	89.60	58.20	0.00	0.00	39.00	7.20	322.19
07/02	0.00	82.29	56.19	0.00	0.00	39.00	8.34	330.53
07/03	1.01	80.54	58.98	22.00	5.00	44.00	8.84	339.37
07/04	0.56	80.42	60.24	15.00	2.00	46.00	8.93	348.30
07/05	0.00	69.74	57.50	0.00	0.00	46.00	9.06	357.36
07/06	0.60	66.12	54.32	27.00	3.00	49.00	8.18	365.54
07/07	0.11	63.93	50.86	0.00	0.00	49.00	7.09	372.63
07/08	0.00	75.90	49.98	0.00	0.00	49.00	7.84	380.47
07/09	0.20	69.83	50.03	20.00	4.00	53.00	7.58	388.06
07/10	0.00	87.47	55.76	12.00	1.00	54.00	7.40	395.45
07/11	0.00	83.08	61.07	16.00	3.00	57.00	8.45	403.91
07/12	0.26	87.63	60.65	14.00	2.00	59.00	7.48	411.39
07/13	0.01	90.12	62.42	0.00	0.00	59.00	6.97	418.36
07/14	0.00	85.56	57.14	0.00	0.00	59.00	7.74	426.09
07/15	0.53	87.83	50.86	12.00	1.00	60.00	6.93	433.02
07/16	0.04	86.61	57.43	12.00	1.00	61.00	7.57	440.60
07/17	0.59	79.98	55.36	0.00	0.00	61.00	8.57	449.16
07/18	0.00	85.83	51.15	13.00	2.00	63.00	7.12	456.28
07/19	0.00	88.01	58.82	11.00	1.00	64.00	7.43	463.71
07/20	0.60	94.04	61.14	15.00	2.00	66.00	6.20	469.91
07/21	0.02	85.33	69.08	11.00	1.00	67.00	7.27	477.18
07/22	0.56	84.70	60.83	0.00	0.00	67.00	8.06	485.24
07/23	0.00	82.22	53.60	0.00	0.00	67.00	8.07	493.31
07/24	0.63	87.44	49.78	0.00	0.00	67.00	6.81	500.12
07/25	0.00	87.33	52.07	0.00	0.00	67.00	7.11	507.23
07/26	0.00	87.80	47.40	0.00	0.00	67.00	6.42	513.66
07/27	0.61	91.43	51.87	11.00	1.00	68.00	6.67	520.33
07/28	0.01	85.35	53.07	0.00	0.00	68.00	7.45	527.78
07/29	0.82	82.88	60.42	12.00	1.00	69.00	8.48	536.26

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		Air Temperature (F)		Hours >90% RH	Severity Values	Sum of Sev- erity Values	P-Days	Sum of P- Days
		Max. Temp	Min. Temp					
07/30	0.01	91.76	56.06	11.00	1.00	70.00	6.83	543.09
07/31	0.64	85.17	59.70	12.00	1.00	71.00	7.93	551.01
08/01	1.00	91.92	60.17	12.00	1.00	72.00	6.74	557.76
08/02	0.13	86.50	64.02	12.00	1.00	73.00	7.53	565.28
08/03	0.55	90.03	61.91	13.00	2.00	75.00	7.02	572.30
08/04	0.00	82.95	56.94	0.00	0.00	75.00	8.29	580.59
08/05	0.61	78.31	45.84	0.00	0.00	75.00	6.84	587.43
08/06	0.00	86.01	46.02	0.00	0.00	75.00	6.22	593.64
08/07	0.65	70.91	48.23	13.00	2.00	77.00	7.22	600.86
08/08	0.00	86.37	58.82	0.00	0.00	77.00	7.64	608.51
08/09	0.04	86.25	59.70	0.00	0.00	77.00	7.67	616.18
08/10	0.57	63.32	51.94	0.00	0.00	77.00	7.28	623.46
08/11	0.01	60.35	46.92	0.00	0.00	77.00	5.31	628.77
08/12	0.56	73.88	43.98	0.00	0.00	77.00	6.34	635.11
08/13	0.07	75.25	42.00	0.00	0.00	77.00	6.14	641.25
08/14	0.60	80.67	43.27	0.00	0.00	77.00	6.30	647.55
08/15	0.00	83.21	44.29	0.00	0.00	77.00	6.23	653.78
08/16	0.18	69.53	49.91	15.00	2.00	79.00	7.52	661.31
08/17	0.42	79.10	54.75	0.00	0.00	79.00	8.57	669.88
08/18	0.00	82.23	50.12	0.00	0.00	79.00	7.53	677.41
08/19	0.56	70.32	39.07	0.00	0.00	79.00	5.24	682.65
08/20	0.00	72.98	40.26	0.00	0.00	79.00	5.73	688.38
08/21	0.56	74.48	35.13	0.00	0.00	79.00	5.00	693.38
08/22	0.00	83.13	51.29	0.00	0.00	79.00	7.61	700.99
08/23	0.00	67.01	57.50	0.00	0.00	79.00	8.86	709.86
08/24	1.48	78.20	55.94	34.00	9.00	88.00	8.80	718.66
08/25	0.00	75.32	64.92	18.00	3.00	91.00	9.71	728.37
08/26	0.46	87.78	65.93	13.00	2.00	93.00	7.10	735.47
08/27	0.19	83.28	63.17	0.00	0.00	93.00	8.41	743.88
08/28	0.09	64.43	52.59	0.00	0.00	93.00	7.59	751.47
08/29	0.00	74.66	49.62	13.00	1.00	94.00	7.75	759.22
08/30	0.05	78.85	53.02	0.00	0.00	94.00	8.33	767.56
08/31	0.00	78.81	47.94	0.00	0.00	94.00	7.33	774.89
09/01	0.31	85.26	60.83	12.00	1.00	95.00	7.91	782.81
09/02	0.00	87.60	64.49	0.00	0.00	95.00	7.29	790.10
09/03	0.00	87.65	60.06	11.00	1.00	96.00	7.49	797.58
09/04	0.00	86.27	57.99	0.00	0.00	96.00	7.63	805.21
09/05	0.00	85.40	64.85	0.00	0.00	96.00	7.74	812.96
09/06	0.00	76.58	58.10	0.00	0.00	96.00	9.17	822.12
09/07	0.35	71.72	49.31	0.00	0.00	96.00	7.55	829.68
09/08	0.00	72.68	47.40	0.00	0.00	96.00	7.13	836.80
09/09	0.35	72.91	46.40	0.00	0.00	96.00	6.87	843.68

**Appendix II, Table 2, continued.**

Date	Rainfall/ Irrig. Inches	Data Recorded In the Potato Canopy						
		Air Temperature (F)		Hours >90% RH	Severity Values	Sum of Sev- erity Values	P-Days	Sum of P- Days
		Max. Temp	Min. Temp					
09/10	0.00	81.33	53.09	0.00	0.00	96.00	8.11	851.79
09/11	0.00	84.56	61.14	10.00	1.00	97.00	8.10	859.89
09/12	0.00	86.75	56.48	0.00	0.00	97.00	7.52	867.40
09/13	0.00	83.37	57.63	0.00	0.00	97.00	8.25	875.66
09/14	0.38	82.25	63.84	0.00	0.00	97.00	8.64	884.30
09/15	0.31	76.15	59.21	0.00	0.00	97.00	9.31	893.60
09/16	0.00	70.75	46.43	0.00	0.00	97.00	6.71	900.31
09/17	0.00	73.99	42.80	0.00	0.00	97.00	6.18	906.50
09/18	0.00	78.51	52.37	0.00	0.00	97.00	8.24	914.74
09/19	0.00	80.61	55.47	0.00	0.00	97.00	8.51	923.25
09/20	0.00	79.23	53.18	0.00	0.00	97.00	8.33	931.58
09/21	0.00	84.95	52.46	0.00	0.00	97.00	7.46	939.04
09/22	0.00	84.18	50.45	0.00	0.00	97.00	7.32	946.36

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 %

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 P -Day accumulation from emergence