

1 Appendix 1:

Harvest Year	Field No	Crop	Stage 1						Stage 2						Stage 3						Stage 4									
			Duration	GDD	VPd	PEt	PTU	T _{min}	Prec.	Duration	GDD	VPd	PEt	PTU	T _{min}	Prec.	Duration	GDD	VPd	PEt	PTU	T _{min}	Prec.	Duration	GDD	VPd	PEt	PTU	T _{min}	Prec.
2011	5	Brl	49	425	30	41	4293	-0.6	84.9	29	90	10	23	906	-5.1	40.7	66	554	32	83	6551	-6.2	149.3	25	344	13	71	4614	1.7	100.2
2012	5	Brl	31	71	6	18	650	-6.0	86.8	72	351	33	114	4234	-6.3	125.2	17	266	15	59	3333	4.7	90.4	9	170	10	29	2281	7.9	0.0
2013	5	Brl	8	118	5	9	1207	7.9	0.0	37	317	11	23	3188	-2.4	241.5	89	524	30	87	5575	-5.2	200.5	36	466	23	93	5843	-0.5	30.6
2011	10	Wht	30	341	21	33	3306	2.0	22.6	36	217	13	34	2264	-0.6	55.7	27	178	10	39	1794	-3.1	37.6	55	709	38	149	8719	0.8	62.2
2012	10	Wht	29	181	10	25	1911	-0.5	28.0	56	235	18	65	2547	-5.0	163.8	32	284	21	69	3540	-1.5	31.3	17	287	16	37	3725	7.2	0.0
2013	10	Wht	9	131	5	10	1324	7.2	1.0	17	193	6	13	1899	4.5	49.6	66	422	19	47	4392	-3.0	221.0	57	648	31	123	7632	0.8	56.9
2013	10	Wht	16	245	11	19	2475	7.2	1.6	30	260	8	18	2571	0.0	142.2	42	245	14	32	2579	-3.0	65.0	62	662	31	119	7666	0.8	118.1
2011	19	Wht	11	138	10	8	1423	2.4	0.0	31	234	10	22	2312	0.3	44.9	53	317	20	59	3487	-4.5	77.2	38	478	28	93	5811	-1.2	41.4
2012	19	Wht	13	114	7	13	1165	-0.5	5.2	43	205	17	26	2507	-3.1	18.4	84	412	32	101	4556	-4.5	154.0	28	431	24	77	5436	4.5	7.2
2013	19	Wht	22	114	6	12	1225	-5.0	32.0	19	104	5	15	1130	-2.9	10.2	28	256	9	32	2777	0.3	64.0	43	565	32	103	6812	-1.4	16.9
2011	20	Brl	18	236	16	15	2398	2.7	0.0	64	404	24	56	4187	-3.0	82.8	7	45	2	7	480	-4.2	16.7	58	716	38	137	8552	-1.0	95.3
2012	20	Wht	14	51	7	11	686	-3.1	0.0	54	278	15	37	2960	-4.0	62.8	51	263	22	78	2821	-3.5	76.2	29	436	26	81	5407	2.9	40.6
2013	20	Wht	29	131	9	19	1438	-4.1	31.5	43	391	15	56	4268	-0.5	77.7	20	247	13	47	2842	0.2	13.2	17	291	16	54	3723	6.8	0.4
2013	20	Wht	10	136	4	9	1416	8.0	48.2	96	734	26	74	7646	-4.1	171	32	362	20	69	4143	-0.5	17.2	22	362	19	67	4645	6.1	2.8
2011	23	Wht	20	190	9	16	1812	2.0	54.4	32	212	12	28	2133	-1.7	53.1	45	388	22	68	4294	-0.5	45.5	30	444	24	82	5565	5.7	19.5
2012	29	Wht	35	34	12	22	597	-4.3	35.8	82	124	22	88	1417	-6.6	137.8	23	269	15	60	3447	0.3	37.2	16	269	15	56	3532	8.2	9.4
2012	29	Wht	21	39	5	12	547	-4.3	16.8	76	141	23	91	1586	-6.6	132.2	20	242	12	52	3117	0.3	37.2	21	362	19	74	4808	8.2	22.8
2013	29	Wht	38	236	9	21	2309	-1.3	92.4	87	462	28	95	4982	-8.2	165.4	16	237	11	44	2962	5.8	14.8	18	256	13	58	3395	5.6	18.6
2012	31	Wht	45	130	15	28	1538	-6.7	40.6	84	194	24	85	2268	-6.5	117.6	19	222	12	40	2807	-2.5	24.2	25	414	23	76	5547	5.1	27.6
2013	31	Wht	24	124	5	12	1274	-1.5	105.4	65	264	14	41	2772	-5.8	160.6	21	201	12	34	2300	-3.6	8.3	35	451	23	84	5722	-1.9	40.1
2012	35	Wht	32	223	14	28	2225	0.1	26.4	55	218	18	61	2310	-5.8	115.2	32	236	17	69	2834	-1.6	37.2	26	437	22	89	5505	5.9	10.0
2013	35	Wht	24	235	9	18	2287	2.7	89.6	73	505	23	68	5077	-3.7	173.3	26	284	14	59	3145	0.2	11.9	23	359	17	71	4440	3.1	11.0
2012	38	Wht	26	202	17	32	1954	-2.3	15.6	46	298	16	44	2834	-4.2	106.6	45	256	21	79	2863	-3.2	73.8	40	641	38	129	8075	0.5	24.4
2013	38	Wht	20	192	7	20	1940	2.8	131.5	29	292	14	47	3215	2.4	58.5	16	212	11	40	2415	3.4	9.6	38	695	41	141	8843	6.9	28.0
2012	40	Wht	29	102	13	20	799	-5.0	18.6	68	143	23	64	1396	-6.2	302.8	29	187	18	58	2204	-3.0	20.8	30	481	35	81	6157	1.1	29.0
2013	40	Wht	13	181	9	12	1846	6.1	17.8	23	215	12	16	2087	0.9	80.7	89	467	33	82	4786	-4.6	323.6	34	465	37	94	5581	-1.1	22.4
2012	47	Wht	15	104	6	15	1109	-1.0	25.6	61	307	17	50	2989	-5.3	118.8	43	152	15	61	1710	-3.2	95.4	37	462	26	102	5738	-1.3	25.2
2013	47	Wht	22	113	6	14	1109	-3.4	35.8	46	356	12	45	3857	0.7	95.8	25	262	13	50	2959	-1.0	14.5	28	411	18	81	5231	2.9	42.2

Harvest Year	Field No	Crop	Stage 5						Stage 6						Stage 7						Total									
			Duration	GDD	VPD	PET	PTU	T _{min}	Prec.	Duration	GDD	VPD	PET	PTU	T _{min}	Prec.	Duration	GDD	VPD	PET	PTU	T _{min}	Prec.	Duration	GDD	VPD	PET	PTU	T _{min}	Prec.
2011	5	Brl	23	410	21	88	5648	6.6	14.2	18	430	28	94	6066	12.9	9.2	10	271	22	58	3727	14.7	0.0	220	2522	157	459	31805	24.0	398.5
2012	5	Brl	23	453	25	93	6258	8.6	27.0	18	459	35	91	6318	11.1	0.2	17	487	41	89	6881	17.2	0.3	187	2257	165	492	29955	37.2	329.9
2013	5	Brl	18	344	22	70	4549	4.2	31.2	11	194	9	38	2711	8.4	29.2	16	383	27	79	5297	10.1	7.2	215	2345	126	398	28370	22.5	540.2
2011	10	Wht	9	145	5	28	1971	7.6	27.8	29	624	38	136	8597	10.8	12.4	6	166	12	36	2312	17.2	2.8	192	2381	138	454	28963	34.7	221.1
2012	10	Wht	19	396	24	62	5417	9.3	2.7	22	487	31	84	6783	10.9	2.0	24	735	68	109	10435	14.7	1.0	199	2605	188	451	34358	35.0	228.8
2013	10	Wht	27	470	27	100	6169	6.3	9.6	20	408	21	80	5750	10.3	76.8	14	353	27	82	4946	13.1	0.4	210	2626	137	455	32110	39.0	415.3
2013	10	Wht	31	551	32	115	7200	6.3	11.2	21	433	22	86	6130	10.3	77.2	12	305	24	71	4241	13.1	0.0	214	2700	141	461	32863	34.6	415.3
2011	19	Wht	9	131	7	25	1704	3.5	31.8	45	876	48	178	12112	6.7	40.0	7	195	16	37	2740	17.3	0.0	194	2371	140	422	29588	24.5	235.3
2012	19	Wht	9	182	12	31	2422	8.1	0.0	28	581	33	117	8135	10.9	9.4	10	247	19	44	3461	11.9	0.0	215	2172	143	408	27683	27.3	194.2
2013	19	Wht	11	161	8	29	2158	6.0	8.0	33	704	45	127	9710	5.7	36.6	11	280	22	52	3922	12.4	0.4	167	2184	126	370	27734	15.1	168.1
2011	20	Brl	13	212	9	40	2856	7.3	18.5	22	423	23	91	5836	9.1	18.2	16	403	27	82	5621	14.2	3.8	198	2439	139	430	29930	25.0	235.3
2012	20	Wht	11	211	14	39	2783	8.6	0.0	27	560	31	106	7818	11.3	9.4	13	319	23	56	4466	11.8	0.0	199	2117	139	409	26941	24.0	189.0
2013	20	Wht	15	241	14	49	3181	6.4	5.4	36	824	55	156	11481	10.7	32.4	3	73	5	18	1049	16.6	0.0	163	2198	127	399	27982	36.1	160.6
2013	20	Wht	7	99	5	21	1323	6.4	3.0	38	854	56	160	11812	8.5	32.4	2	53	4	13	752	17.4	0.0	207	2599	136	413	31737	41.8	274.6
2011	23	Wht	13	217	9	39	2893	9.0	9.3	30	628	36	127	8747	10.5	19.8	20	551	41	116	7818	17.0	4.4	190	2630	155	476	33261	42.0	206.0
2012	29	Wht	20	381	19	77	5331	11.6	25.8	21	477	33	109	6732	10.9	2.0	16	465	40	73	6726	19.7	0.4	213	2019	155	485	27781	39.8	248.4
2012	29	Wht	14	266	13	55	3736	11.6	12.4	22	499	34	113	7051	10.9	2.0	11	327	30	53	4698	19.7	0.0	185	1876	135	449	25542	39.8	223.4
2013	29	Wht	10	211	13	42	2837	12.0	0.4	28	561	33	117	8013	9.7	61.2	10	251	20	55	3584	14.9	0.0	207	2215	127	433	28082	38.5	352.8
2012	31	Wht	17	332	18	63	4710	9.7	12.0	22	524	38	105	7288	9.3	0.6	16	447	37	71	6355	15.4	0.0	228	2263	166	468	30512	23.8	222.6
2013	31	Wht	9	142	10	32	1953	6.4	0.6	39	774	46	153	10951	7.9	11.2	13	331	26	67	4733	12.4	0.8	206	2287	135	424	29705	13.9	327.0
2012	35	Wht	7	151	9	30	2026	11.7	2.4	27	569	32	115	7851	11.1	4.4	18	514	44	96	7202	11.4	0.0	197	2348	158	487	29953	32.8	195.6
2013	35	Wht	14	223	12	52	2948	6.0	0.8	28	582	32	118	8134	9.0	1.6	12	302	23	68	4198	12.8	0.0	200	2490	130	453	30230	30.1	288.2
2012	38	Wht	13	295	18	46	3941	12.9	1.6	14	323	21	59	4434	12.2	6.0	15	378	29	79	5299	12.8	0.0	199	2393	159	469	29401	28.7	228.0
2013	38	Wht	11	230	13	42	3189	9.7	49.4	20	487	35	102	6845	12.7	15.4	9	238	19	53	3365	14.0	0.0	143	2347	139	445	29811	52.0	292.4
2012	40	Wht	12	227	14	33	3092	10.9	16.0	26	542	31	120	7668	10.3	14.0	13	390	35	78	5598	17.7	0.0	207	2071	169	455	26913	25.8	401.2
2013	40	Wht	25	462	32	94	6059	5.9	38.6	23	474	33	94	6677	10.4	90.6	11	260	18	64	3731	14.1	1.6	218	2524	175	455	30766	31.7	575.3
2012	47	Wht	11	209	12	37	2766	7.8	0.0	30	586	29	114	8178	11.1	22.4	17	455	35	98	6407	12.9	0.0	214	2276	142	477	28897	21.0	287.4
2013	47	Wht	8	143	9	34	1866	8.4	5.4	31	675	40	136	9326	10.9	38.8	18	429	28	106	6155	14.9	1.8	178	2389	125	467	30503	33.5	234.3

