

Fruit Crop Phenology Model Output Data for Apr. 24, 2009 (program drops overnight low & backs up date by one day). Normal dates are calculated using 20 yr ave. temperatures; observed dates are calculated using 2008-09 temperatures. For information, contact: Dr. Harold Larsen, WCRC—OM, Grand Junction, CO. Phone: 970-434-3264, x-205 Email: Harold.Larsen@Colostate.edu

Location: **WCRC - Rogers Mesa**, [Delta Co.] Colo. Observation Date: Apr. 23, 2009

Crop: APRICOT Cultivar: Tilton Deviation From Normal: -14 days
 CU Required / Accumulated: 721 Growing Degree Hours Accumulated: 6,556
 Calculated Stage of Development: 7.7 Spring T50 temperature (Model): 27 °F

Stage	Description	Req'd (CU) / GDH	Normal Date	Estimated (*) or Observed Date	Estimated Critical Temperatures	
					T10	T90
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(720)	Dec. 4	Dec. 19		
1	First Swell	949	Mar. 15	Feb. 24	15°F	--
2	Tip Separates	1,444	Mar. 23	Mar. 2	20°F	0°F
3	Red Calyx	2,122	Apr. 2	Mar. 9	22°F	9°F
4	First White	3,039	Apr. 13	Mar. 19	24°F	14°F
5	First Bloom	3,533	Apr. 16	Mar. 21	25°F	19°F
6	Full Bloom	4,111	Apr. 21	Mar. 30	27°F	22°F
→ 7	In The Shuck	5,217	Apr. 29	Apr. 15	27°F	24°F
8	First Green	6,828	May 8	Apr. 24*	28°F	25°F
9	Fruit Growth					

¹ Critical temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

Crop: PRUNE PLUM Cultivar: Italian Deviation From Normal: -14 days
 CU Required / Accumulated: 791 Growing Degree Hours Accumulated: 6,530
 Calculated Stage of Development: 7+ Spring T50 temperature (Model): 30 °F

Stage	Description	Req'd (CU) / GDH	Normal Date	Estimated (*) or Observed Date	Estimated Critical Temperatures	
					T10	T90
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(788)	Dec. 11	Jan. 8		
1	First Swell	2,533	Apr. 7	Mar. 16	14°F	0°F
2	Side White	3,056	Apr. 13	Mar. 19	17°F	3°F
3	Tip Green	3,633	Apr. 17	Mar. 22	20°F	7°F
4	Tight Cluster	4,489	Apr. 24	Apr. 9	24°F	16°F
5	First White	5,417	May 1	Apr. 16	26°F	22°F
→ 6	First Bloom	5,684	May 2	Apr. 19	27°F	23°F
7	Full bloom	6,412	May 6	Apr. 22	28°F	23°F
8	Fruit Growth				28°F	23°F

¹ Critical temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

Date: 4/23/2009

Crop: PEACH Cultivar: Elberta
 CU Accumulated: 802
 Calculated Stage of Development: 7+

Deviation From Normal: -14 days
 Growing Degree Hours Accumulated: 6,521
 Spring T50 temperature (Model): 30 °F

Stage	Description	Req'd. (CU)/ GDH	Normal Date	Observed or Estimated (*) Date	Estimated Critical Temperatures T10 T90	
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(800)	Dec. 12	Jan. 9		
1	First Swell	2,196	Apr. 3	Mar. 12	18°F	1°F
2	Calyx Green	2,662	Apr. 9	Mar. 17	21°F	5°F
3	Calyx Red	3,169	Apr. 14	Mar. 20	23°F	9°F
4	First Pink	3,729	Apr. 18	Mar. 22	25°F	15°F
5	First Bloom	4,365	Apr. 23	Apr. 8	26°F	21°F
6	Full Bloom	5,116	Apr. 29	Apr. 14	27°F	24°F
→ 7	Post Bloom	6,089	May 5	Apr. 21	28°F	25°F
8	Fruit Growth				28°F	25°F

¹ Critical temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

Crop: PEACH Cultivar: Redhaven
 CU Accumulated: 877
 Calculated Stage of Development: 7+

Deviation From Normal: -14 days
 Growing Degree Hours Accumulated: 6,490
 Spring T50 temperature (Model): 30 °F

Stage	Description	Req'd/ (CU) / GDH	Normal Date	Observed or Estimated (*) Date	Estimated Critical Temperatures T10 T90	
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(870)	Dec. 22	Jan. 21		
1	First Swell	1,952	Mar. 25	Mar. 3	18°F	1°F
2	Calyx Green	2,449	Apr. 6	Mar. 16	21°F	5°F
3	Calyx Red	3,193	Apr. 14	Mar. 20	23°F	9°F
4	First Pink	3,860	Apr. 19	Mar. 24	25°F	15°F
5	First Bloom	4,470	Apr. 24	Apr. 9	26°F	21°F
6	Full Bloom	5,036	Apr. 28	Apr. 14	27°F	24°F
→ 7	Post Bloom	5,565	May 1	Apr. 18	28°F	25°F
8	Fruit Growth				28°F	25°F

¹ Critical temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

NOTE: Current actual bud development (arrow) s behind the model.

Date: 4/23/2009

Crop: Sweet CHERRY Cultivar: Bing
 CU Accumulated: 891
 Calculated Stage of Development: 8.2

Deviation From Normal: -11 days
 Growing Degree Hours Accumulated: 6,475
 Spring T50 temperature (Model): 27 °F

Stage	Description	Req'd. (CU) / GDH	Normal Date	Observed or Estimated (*) Date	Estimated Critical Temperatures ¹	
					T10	T90
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(880)	Dec. 25	Jan. 22		
1	First Swell	2,356	Apr. 5	Mar. 15	17°F	5°F
2	Side Green	2,683	Apr. 9	Mar. 18	22°F	9°F
3	Green Tip	3,533	Apr. 16	Mar. 22	25°F	14°F
4	Tight Cluster	4,050	Apr. 21	Apr. 2	26°F	17°F
5	Open Cluster	4,417	Apr. 23	Apr. 9	27°F	21°F
6	First White	4,661	Apr. 26	Apr. 11	27°F	24°F
7	First Bloom	5,328	Apr. 30	Apr. 16	28°F	25°F
→ 8	Full Bloom	6,172	May 5	Apr. 22	28°F	25°F
9	Post Bloom	7,528	May 11	Apr. 28*	28°F	25°F
10	Fruit Growth				28°F	25°F

¹ Critical temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

Crop: Tart CHERRY Cv. Montmorency
 CU Accumulated: 951
 Calculated Stage of Development: 7.2

Deviation From Normal: -11 days
 Growing Degree Hours Accumulated: 6,432
 Spring T50 temperature (Model): 26 °F

Stage	Description	Req'd. (CU) / GDH	Normal Date	Observed or Estimated (*) Date	Estimated Critical Temperatures ¹	
					T10	T90
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(950)	Jan. 9	Jan. 25		
1	First Swell	1,703	Mar. 27	Mar. 4	15°F	0°F
2	Side Green	2,327	Apr. 5	Mar. 15	24°F	10°F
3	Green Tip	2,988	Apr. 12	Mar. 19	26°F	22°F
4	Tight Cluster	3,690	Apr. 18	Mar. 22	26°F	24°F
5	Open Cluster	4,446	Apr. 24	Apr. 9	28°F	24°F
6	First White	5,267	Apr. 30	Apr. 16	28°F	24°F
→ 7	First Bloom	6,176	May 5	Apr. 22	28°F	24°F
8	Full Bloom	7,208	May 11	Apr. 27*	28°F	25°F
9	Post Bloom	8,433	May 15	May 2*	28°F	25°F
10	Fruit Growth				28°F	25°F

¹ Critical temperatures from researchers at Michigan State University, and mortality is based on 30 min. exposure to that temperature.

NOTE: Current actual bud development (arrow) is behind the model.

Date: 4/23/2009

Crop: PEAR Cultivar: Bartlett
 CU Accumulated: 1,222
 Calculated Stage of Development: 7.2

Deviation From Normal: -9 days
 Growing Degree Hours Accumulated: 5,857
 Spring T50 temperature (Model): 26 °F

Stage	Description	Req'd. (CU)/ GDH	Normal Date	Estimated (*) or Observed Date	Estimated Critical Temperatures ¹	
					T10	T90
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(1,210)	Feb. 13	Feb. 17		
1	Scale Separation	1,794	Mar. 30	Mar. 16	15°F	0°F
2	Blsm Buds Exposed	2,722	Apr. 10	Mar. 21	20°F	6°F
3	Tight Cluster	3,128	Apr. 14	Mar. 23	24°F	15°F
4	First White	4,244	Apr. 22	Apr. 13	25°F	19°F
5	Full White	4,750	Apr. 26	Apr. 16	26°F	22°F
6	First Bloom	5,044	Apr. 28	Apr. 20	27°F	23°F
→ 7	Full Bloom	5,644	May 2	Apr. 23	28°F	24°F
8	Post Bloom	6,817	May 8	Apr. 29*	28°F	24°F
9	Fruit Growth				28°F	24°F

¹ Critical temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

Crop: APPLE Cultivar: (red) Delicious
 CU Accumulated: 1,235
 Calculated Stage of Development: 6.5

Deviation From Normal: -9 days
 Growing Degree Hours Accumulated: 5,842
 Spring T50 temperature (Model): 27 °F

Stage	Description	Req'd. (CU)/ GDH	Observed or Normal Date	Estimated Estimated (*) Date	Critical Temperatures ¹	
					T10	T90
	Begin CU Accum.		Oct. 3	Oct. 3		
	Rest Completion	(1,234)	Feb. 16	Feb. 18		
1	Silver Tip	2,061	Apr. 2	Mar. 18	15°F	2°F
2	Green Tip	2,544	Apr. 8	Mar. 20	18°F	10°F
3	1/2 in. Green Tip	3,100	Apr. 14	Mar. 22	23°F	15°F
4	Tight Cluster	3,939	Apr. 20	Apr. 10	27°F	21°F
5	First Pink	4,856	Apr. 27	Apr. 16	28°F	24°F
→ 6	Full Pink	5,394	May 1	Apr. 22	28°F	25°F
7	First Bloom	6,172	May 6	Apr. 25*	28°F	25°F
8	Full Bloom	6,933	May 9	Apr. 29*	28°F	25°F
9	Fruit Growth				28°F	25°F

¹ For red Delicious. Critical temperatures prior to petal fall are approx. 1° lower for Golden Delicious and Winesap and approx. 2° lower for Rome Beauty. All varieties are equally tender after petal fall. Temperatures from Wash. St. Univ. researchers, Prosser, WA (1964-76) and are based on 30 min. exposure to that temperature.

NOTE: Current actual bud development (arrow) is behind the model.