

# Critical temperatures for fruit flower buds

Bud Development Stage <sup>3</sup>		Old Std. Temp. (°F) <sup>1</sup>	Average Temperature for <sup>2</sup> :	
			10% Kill	90% Kill
<b>APPLE (Delicious)</b>				
2	Silver Tip	16	15	1
3	Green Tip	16	18	10
4	Half-inch Green	22	23	15
5	Tight Cluster	27	27	21
5	First Pink	27	28	24
7	Full Pink	28	28	25
8	First Bloom	28	28	25
	Full Bloom	29	28	25
	Post Bloom	29	28	25-
<b>PEAR (Bartlett)</b>				
2	Scales Separate	18	15	0
3	Cluster Showing	23	20	7
4	Tight Cluster	24	22	15
6	First White	28	24	19
7	Full White	29	25	22
8	First Bloom	29	27	23
	Full Bloom	29	28	24
	Post Bloom	29	28	24
<b>PEACH (Elberta)</b>				
2	First Swell	23	18	1
3	Calyx Green	--	21	5
	Calyx Red	--	23	9
6	First Pink	25	25	15
8	First Bloom	--	26	21
	Full Bloom	27	27	24
	Post Bloom	30	28	25

From FG-151 prepared by Dr. Paul A. Domoto,  
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Bud Development Stage <sup>3</sup>		Old Std. Temp. (°F) <sup>1</sup>	Average Temperature for <sup>2</sup> :	
			10% Kill	90% Kill
<b>SWEET CHERRY (Bing) or SOUR CHERRY</b>				
2	First Swell	23	17	1
3	Side Green	23	21	9
4	Green Tip	25	25	14
5	Tight Cluster	28	26	17
6	Open Cluster	28	27	21
7	First White	29	27	24
8	First Bloom	29	28	25
	Full Bloom	29	28	25
	Post Bloom	30	28	25
<b>PRUNE (Plum)</b>				
2	First Swell	--	14	0
3	Side White	--	17	3
4	Tip Green	--	20	7
5	Tight Cluster	--	24	16
7	First White	23	26	22
8	First Bloom	27	27	23
	Full Bloom	27	28	25
	Post Bloom	30	28	23
<b>APRICOT</b>				
2	First Swell	--	15	—
3	Tip Separate	23	20	0
	Red Calyx	--	22	9
6	First White	25	24	14
8	First Bloom	--	25	19
	Full Bloom	28	27	22
	In Shuck	--	27	24
	Green Fruit	31	28	25

<sup>1</sup> From Ballard, J. K., et al 1971. Critical temperatures for blossom buds. Wash.St. Ag. Ext. Cir. Nos 369-374

<sup>2</sup> Under very calm conditions the fruit bud temperature can be lower than the air temperature, resulting in injury when recorded temperatures are slightly above the critical level

<sup>3</sup> Numbers correspond to bud development stages illustrated in Fruit Bud Development Stages, ISU pub.fact sheet FG 151, F-15-83