Critical Spring Temperatures for Tree Fruit Bud Development Stages

Pome Fruit									
Apples	Silver tip	Green Tip	½ inch green	Tight Cluster	First Pink	Full Pink	First Bloom	Full Bloom	Post Bloom
Old temp	16	16	22	27	27	28	28	29	29
10% kill	15	18	23	27	28	28	28	28	28
90% kill	2	10	15	21	24	25	25	25	25
Pears	Bud Swell	Bud Burst		Tight cluster	First White	Full White	First Bloom	Full Bloom	Post Bloom
Old temp	18	23		24	28	29	29	29	30
10% kill	15	20		24	25	26	27	28	28
90% kill	0	6		15	19	22	23	24	24

Stone Fruit								
Apricots	Bud Swell	Bud Burst	Red Tip	First White	First Bloom	Full Bloom	In the Shuck	Green Fruit
Old temp	--	23	--	25	--	28	--	31
10% kill	15	20	22	24	25	27	27	28
90% kill	--	0	9	14	19	22	24	25
Peaches	Bud Swell	Calyx Green	Calyx Red	First Pink	First Bloom	Full Bloom	Post Bloom	
Old temp	23	--	--	25	--	27	30	
10% kill	18	21	23	25	26	27	28	
90% kill	1	5	9	15	21	24	25	
European Plums	Bud Swell	Side White	Tip Green	Tight Cluster	First White	First Bloom	Full Bloom	Post Bloom
Old temp	--	--	--	--	23	27	27	30
10% kill	14	17	20	24	26	27	28	28
90% kill	0	3	7	16	22	23	23	23
Sweet Cherries	Bud Swell	Side Green	Green Tip	Tight Cluster	Open Cluster	First White	First Bloom	Full Bloom	Post Bloom
Old temp	23	23	25	28	28	29	29	29	30
10% kill	17	22	25	26	27	27	28	28	28
90% kill	5	9	14	17	21	24	25	25	25
Tart Cherries	Bud Swell	Side Green	Green Tip	Tight Cluster	Open Cluster	First White	First Bloom	Full Bloom	
10% kill	15	24	26	26	28	28	28	28	
90% kill	0	10	22	24	24	24	24	24	

Old standard temperature represented the critical temperature in Fahrenheit (the lowest temperature that can be endured for 30 minutes without damage). In addition, the chart shows the temperature at which 10 % and 90 % of normal buds will be killed. These numbers were taken from Washington (WSU), and Michigan (MSU) Extension Bulletins. Apple - WSU EB0913, Pears - WSU EB0978, Sweet Cherries - WSU EB1128, Peaches - WSU EB0914, Apricots - WSU EB1240, Tart Cherries - MSU Research. Rpt. 220

See Picture Table of Fruit Freeze Damage Thresholds (pdf)

Data Compiled by Mark Longstroth MSUE