EVERYORCHARD · FREE PRINTABLE

Tart Cherry Frost Damage Chart

Critical spring temperatures by bud stage, from Michigan State University Extension's compilation of the WSU and MSU bulletins.

The temperature that kills 10% and 90% of tart cherry buds after 30 minutes, by bud stage. Buds grow more tender as they open, so the same frost does more harm later in spring.

Bud stage	10% killed	90% killed	Between 90% and 10% killed	Date reached this year
Bud swell	15°F (−9°C)	0°F (−18°C)		
Side green	24°F (−4°C)	10°F (−12°C)		
Green tip	26°F (−3°C)	22°F (−6°C)		
Tight cluster	26°F (−3°C)	24°F (−4°C)		
Open cluster	28°F (−2°C)	24°F (−4°C)		
First white	28°F (−2°C)	24°F (−4°C)		
First bloom	28°F (−2°C)	24°F (−4°C)		
Full bloom	28°F (−2°C)	24°F (−4°C)		



Reading the chart. At the 10% figure about one bud in ten is killed after 30 minutes of cold; at the 90% figure, about nine in ten. A blank cell (—) means the published table gives no figure for that stage. °C figures are conversions, rounded.

Cold-night log

Date	Low (°F)	Bud stage	What you saw afterwards

Source: Michigan State University Extension compilation of the WSU and MSU critical-temperature bulletins

Data as of 15 Nov 2026