Figure S1. Scale to visually assess surface pitting: 0 = no pitting; 1 = light pitting; 2 = moderate pitting; 3 = severe pitting; and 4 = very severe pitting [45].

45. Param, N., & Zoffoli, J.P. (2016). Genotypic differences in sweet cherries are associated with the susceptibility to mechanical damage. Scientia Horticulturae, 211, 410–419. https://doi.org/10.1016/j.scienta.2016.09.027.

Table S1. Targeted and untargeted metabolites of sweet cherry fruit after induced surface pitting treated with melatonin and without melatonin (control) and stored at 1 °C and 95% RH for 0, 10, and 20 d.

	Control			Melatonin		
	0 d	10 d	20 d	0 d	10 d	20 d
Targeted metabolites (mg g^{-1})						
p-coumaric acid derivate 1	4.73	5.05	4.66	4.57	5.22	5.05
Chlorogenic acid	1.83	1.89	1.84	1.95	2.10	2.08
Rutin derivate 1	0.13	0.13	0.12	0.11	0.12	0.12
Rutin derivate 2	0.41	0.59	0.64	0.41	0.51	0.56
Chlorogenic acid derivate	0.08	0.12	0.12	0.07	0.10	0.10
2-Hydroxycinnamic-O-coumaric acid	0.01	0.02	0.01	0.02	0.02	0.01
Ceffeic acid, expressed as 2-hydroxycinnamic acid	0.13	0.15	0.15	0.13	0.15	0.16
Untargeted metabolites (relative abundance)						
Cyanidin 3-glucoside	50.5	57.6	94.7	74.8	71.5	92.3
Benzene	21.4	8.9	11.5	4.3	2.9	3.7
L-Serine	8.0	6.6	7.0	9.4	5.4	8.5
L-Threonine	9.0	6.8	7.9	8.5	4.2	11.1
L-Aspartic acid	7.6	6.2	6.2	10.5	7.6	6.5
Mannobiose	7.5	5.2	4.9	1.8	3.2	0.6
Butylphosphonic acid	11.0	6.7	9.1	6.1	6.0	5.3
Palmitic Acid	8.3	7.3	7.4	8.3	7.9	8.1
Myo-Inositol	8.9	9.0	9.2	9.6	6.9	6.8
Caffeic acid	8.5	10.2	8.4	9.7	7.9	7.7
D-Allose	8.9	9.4	8.4	10.6	9.0	7.7
Silane	10.7	11.1	8.5	14.1	5.7	5.5
D-mannose	10.0	6.3	7.8	7.6	6.5	12.4
Beta-D-Glucopyranuronic acid	8.6	8.7	8.7	10.2	9.0	7.6
1-Tetradecanol	9.3	8.5	9.2	9.9	7.7	8.5
Sucrose	8.6	7.5	7.9	6.6	9.1	8.4
Pyrocatechol	8.0	8.7	9.4	9.7	9.2	6.8
D-cellobiose	8.8	9.1	8.9	9.1	7.2	6.7
Galactitol	7.4	8.6	9.2	12.4	6.7	4.7
benzenamine	7.4	7.6	7.1	10.1	8.1	8.6
3-O-Coumaroyl-D-quinic acid	9.0	12.2	8.4	19.9	13.1	12.1
Melibiose	6.8	8.9	7.1	11.1	9.5	8.7
Sitosterol	8.2	8.3	8.7	8.9	7.3	7.7
L-Proline	8.5	6.7	5.2	13.3	4.5	4.3
Malic acid	8.1	7.2	8.0	8.7	8.0	8.0

Asparagine	7.8	6.0	5.0	8.2	6.5	9.4
D-Fructose	8.3	8.2	8.3	9.2	7.8	7.9
Beta-D-Glucose	1.4	11.1	7.7	11.1	7.2	5.3
Glucose	8.5	8.3	8.4	9.3	7.9	7.9
D-Glucitol	8.3	7.9	8.3	9.4	7.9	7.7
Maltose	6.2	7.1	8.4	9.3	7.4	6.4
Allose	1.6	10.	7.7	10.5	7.1	5.3
Methyl galactoside	7.7	5.0	5.2	9.4	8.6	7.8
d-Xylose	7.4	8.0	7.8	11.4	7.4	5.2
2-aminobutanoic acid	6.9	7.4	6.6	9.8	6.4	11.2
Pipecolic acid	8.3	6.5	7.2	8.7	6.7	7.1
Glyceric acid	8.7	7.9	9.1	8.7	8.3	8.4

Table S2. Metabolic pathways and regulation that showed significance at 0, 10, and 20 days of cold storage in sweet cherry with induced mechanical damage.

Time of cold storage	Metabolic pathway	Regulation*	P value	FDR
0 d	Phenylpropanoid biosynthesis	Up	0.009	0.32
	Stilbenoid, diarylheptanoid and gingerol biosynthesis	Up	0.045	0.50
	Flavonoid biosynthesis	Up	0.045	0.50
	Anthocyanin biosynthesis	Up	0.053	0.50
10 d	Sphingolipid metabolism	Up	0.028	0.50
	Sulfur metabolism	Up	0.280	0.50
20 d	Amino sugar and nucleotide sugar metabolism	Down	0.050	0.48

* Up and down are referred to the metabolites involved in that pathways are up- or down-regulated after to melatonin treatment compared to the control.