Wang X., Meng L., Wei H., 2022. Biomass, carbohydrate, and leakage conductance in buds of six ornamental tree species subjected to a "false spring" in Northeast China. Ann. For. Res. 65(2): 15-30. https://doi.org/10.15287/afr.2022.2241

Table S1. Pearson correlations between bud variables (biomass, soluble sugar content, starch content, non-structural carbohydrates content, and relative conductance) in black pine (*Pinus tabuliformis* var. *mukdensis*) trees and key temperature parameters that can impose effect on late-spring frost in Changchun, Northeast China, across four investigating days in April of 2017.

Temperature parameters	Coefficient	Tree-bud variables				
		Biomass	Sugar	Starch	NSC [1]	RC [2]
ChT [3]	*R* [4]	0.371	-0.578	0.974	0.988	-0.810
	P [5]	0.629	0.422	0.026	0.012	0.190
CaT [7]	*R*	0.385	-0.591	0.976	0.986	-0.811
	P	0.615	0.409	0.024	0.014	0.189
ClT [8]	*R*	0.436	-0.649	0.961	0.951	-0.761
	P	0.564	0.351	0.039	0.049	0.239
CDo0 [9]	*R*	0.383	-0.591	0.975	0.985	-0.806
	P	0.617	0.409	0.025	0.015	0.194
CDo12 [10]	*R*	0.436	-0.648	0.964	0.955	-0.768
	P	0.564	0.352	0.036	0.045	0.232
CDo20 [11]	*R*	0.456	-0.664	0.968	0.954	-0.778
	P	0.544	0.336	0.032	0.046	0.222
CDb0 [12]	*R*	0.198	-0.410	0.928	0.983	-0.770
	P	0.802	0.590	0.072	0.017	0.230
DrTup [13]	*R*	-0.283	0.446	-0.935	-0.981	0.881
	P	0.717	0.554	0.065	0.019	0.120
CDrTup [15]	*R*	0.265	-0.476	0.950	0.990	-0.787
	P	0.735	0.524	0.050	0.010	0.213
RhT [16]	*R*	0.983	-0.900	0.431	0.242	-0.607
	P	0.017	0.100	0.570	0.758	0.393
DrTd [17]	*R*	-0.508	0.548	-0.042	0.115	-0.150
	P	0.492	0.452	0.958	0.885	0.850
CDrTd [18]	*R*	0.319	-0.507	0.965	0.999	-0.856
	P	0.681	0.493	0.035	0.002	0.144
RlT [19]	*R*	0.917	-0.990	0.796	0.651	-0.761
	P	0.084	0.010	0.205	0.349	0.239

Note: [1] NSC, non-structural carbohydrates; [2] RC, relative conductance; [3] ChT, cumulative highest daily temperature up to the investigating day; [4] R, correlation coefficient; [5] P, probability of correlation; [6] values with light-gray background indicate significant positive correlations; [7] CaT, accumulative average daily temperature; [8] ClT, cumulative lowest daily temperature; 9,10,11 CDo0/12/20, accumulative number of days with lowest daily temperature over 0/12/20°C; [12] CDb0, cumulative number of days with lowest daily temperature below 0°C; [13] DrTup, days of recent rising-up temperature prior to the investigating date; [14] values with darkened background indicate significant negative correlation; [15] CDrTup, cumulative days of recent rising-up temperature prior to the investigating date; [16] RhT, recent highest temperature prior to the investigating date; [17] DrTd, days of recent declining-down temperature prior to the investigating date;[18] CDrTd, cumulative days of recent declining-down temperature prior to the investigating date; [19] Rlt, recent lowest temperature prior to the investigating date. The same below.

Table S2. Pearson correlations between bud variables (biomass, soluble sugar content, starch content, non-structural carbohydrates content, and relative conductance) in sorbus (*Sorbus pohuashanensis* [Hance] Hedl.) trees and key temperature parameters that can impose effect on late-spring frost in Changchun, Northeast China, across four investigating days in April of 2017.

Temperature parameters	Coefficient	Tree-bud variables				
		Biomass	Sugar	Starch	NSC	RC
ChT	*R*	0.719	0.026	0.835	0.949	-0.954
	P	0.281	0.974	0.165	0.051	0.046
CaT	*R*	0.729	0.019	0.838	0.946	-0.953
	P	0.271	0.981	0.162	0.054	0.048
ClT	*R*	0.752	0.055	0.800	0.936	-0.957
	P	0.248	0.945	0.200	0.064	0.043
CDo0	*R*	0.727	0.027	0.833	0.948	-0.955
	P	0.273	0.973	0.167	0.052	0.045
CDo12	*R*	0.754	0.047	0.806	0.936	-0.956
	P	0.246	0.953	0.194	0.064	0.044
CDo20	*R*	0.768	0.027	0.816	0.928	-0.949
	P	0.232	0.973	0.184	0.072	0.051
CDb0	*R*	0.587	0.104	0.782	0.962	-0.947
	P	0.413	0.896	0.218	0.038	0.053
DrTup	*R*	-0.647	0.116	-0.876	-0.864	0.841
	P	0.353	0.884	0.124	0.136	0.159
CDrTup	*R*	0.640	0.078	0.805	0.963	-0.956
	P	0.360	0.922	0.195	0.037	0.044
RhT	*R*	0.841	-0.833	0.631	-0.069	0.006
	P	0.159	0.167	0.369	0.931	0.994
DrTd	*R*	-0.336	-0.070	0.068	0.013	0.085
	P	0.664	0.930	0.932	0.987	0.915
CDrTd	*R*	0.683	-0.042	0.865	0.920	-0.909
	P	0.317	0.958	0.135	0.080	0.091
RlT	*R*	0.977	-0.463	0.811	0.471	-0.536
	P	0.024	0.537	0.189	0.529	0.464

Table S3. Pearson correlations between bud variables (biomass, soluble sugar content, starch content, non-structural carbohydrates content, and relative conductance) in peach (*Prunus persica* L. var. *persica* f. *rubro-plena* Schneid.) trees and key temperature parameters that can impose effect on late-spring frost in Changchun, Northeast China, across four investigating days in April of 2017.

Temperature parameters	Coefficient	Tree-bud variables				
		Biomass	Sugar	Starch	NSC	RC
ChT	*R*	0.696	-0.886	-0.140	-0.484	0.538
	P	0.304	0.114	0.860	0.516	0.462
CaT	*R*	0.708	-0.889	-0.155	-0.495	0.544
	P	0.292	0.111	0.845	0.505	0.456
ClT	*R*	0.777	-0.859	-0.212	-0.523	0.645
	P	0.223	0.141	0.788	0.477	0.355
CDo0	*R*	0.709	-0.885	-0.153	-0.493	0.552
	P	0.291	0.115	0.847	0.508	0.448
CDo12	*R*	0.774	-0.865	-0.212	-0.526	0.635
	P	0.226	0.135	0.788	0.474	0.365
CDo20	*R*	0.786	-0.873	-0.233	-0.544	0.627
	P	0.214	0.127	0.767	0.456	0.373
CDb0	*R*	0.534	-0.831	0.038	-0.333	0.463
	P	0.466	0.169	0.962	0.667	0.537
DrTup	*R*	-0.518	0.900	0.064	0.435	-0.241
	P	0.482	0.100	0.936	0.565	0.759
CDrTup	*R*	0.599	-0.855	-0.029	-0.391	0.497
	P	0.401	0.145	0.971	0.609	0.503
RhT	*R*	0.775	-0.592	-0.991	-0.962	-0.096
	P	0.225	0.408	0.009	0.038	0.904
DrTd	*R*	-0.598	-0.020	0.531	0.370	-0.636
	P	0.402	0.980	0.469	0.630	0.364
CDrTd	*R*	0.603	-0.902	-0.091	-0.456	0.387
	P	0.397	0.098	0.909	0.545	0.613
RlT	*R*	0.992	-0.827	-0.801	-0.929	0.399
	P	0.008	0.173	0.199	0.071	0.601

Table S4. Pearson correlations between bud variables (biomass, soluble sugar content, starch content, non-structural carbohydrates content, and relative conductance) in willow (*Salix babylonica* L.) trees and key temperature parameters that can impose effect on late-spring frost in Changchun, Northeast China, across four investigating days in April of 2017.

Temperature parameters	Coefficient	Tree-bud variables				
		Biomass	Sugar	Starch	NSC	RC
ChT	*R*	0.951	-0.250	-0.141	-0.156	0.141
	P	0.049	0.750	0.859	0.844	0.859
CaT	*R*	0.951	-0.243	-0.156	-0.171	0.154
	P	0.049	0.757	0.844	0.829	0.846
ClT	*R*	0.910	-0.108	-0.225	-0.231	0.304
	P	0.090	0.892	0.775	0.769	0.696
CDo0	*R*	0.948	-0.233	-0.155	-0.169	0.163
	P	0.052	0.767	0.845	0.831	0.837
CDo12	*R*	0.915	-0.122	-0.224	-0.231	0.292
	P	0.085	0.878	0.776	0.769	0.708
CDo20	*R*	0.919	-0.128	-0.244	-0.251	0.295
	P	0.081	0.872	0.756	0.749	0.705
CDb0	*R*	0.929	-0.332	0.045	0.024	-0.024
	P	0.071	0.668	0.955	0.976	0.976
DrTup	*R*	-0.970	0.548	0.037	0.071	0.198
	P	0.030	0.452	0.963	0.929	0.802
CDrTup	*R*	0.941	-0.299	-0.025	-0.044	0.042
	P	0.059	0.701	0.975	0.956	0.958
RhT	*R*	0.404	-0.243	-0.979	-0.990	0.285
	P	0.596	0.757	0.021	0.011	0.715
DrTd	*R*	0.118	-0.762	0.600	0.550	-0.973
	P	0.882	0.239	0.400	0.450	0.027
CDrTd	*R*	0.974	-0.414	-0.077	-0.102	-0.044
	P	0.027	0.586	0.923	0.898	0.956
RlT	*R*	0.726	-0.084	-0.813	-0.814	0.497
	P	0.274	0.916	0.187	0.186	0.503

Table S5. Pearson correlations between bud variables (biomass, soluble sugar content, starch content, non-structural carbohydrates content, and relative conductance) in apricot (*Prunus sibirica* L.) trees and key temperature parameters that can impose effect on late-spring frost in Changchun, Northeast China, across four investigating days in April of 2017 .

Temperature parameters	Coefficient	Tree-bud variables				
		Biomass	Sugar	Starch	NSC	RC
ChT	*R*	0.958	-0.265	0.286	-0.253	-0.617
	P	0.042	0.735	0.714	0.747	0.383
CaT	*R*	0.960	-0.280	0.298	-0.268	-0.604
	P	0.040	0.720	0.702	0.732	0.396
ClT	*R*	0.943	-0.360	0.329	-0.361	-0.498
	P	0.057	0.640	0.672	0.639	0.502
CDo0	*R*	0.958	-0.280	0.295	-0.270	-0.601
	P	0.042	0.720	0.705	0.730	0.399
CDo12	*R*	0.946	-0.358	0.331	-0.358	-0.505
	P	0.054	0.642	0.669	0.642	0.495
CDo20	*R*	0.951	-0.377	0.351	-0.376	-0.492
	P	0.049	0.623	0.649	0.625	0.508
CDb0	*R*	0.908	-0.071	0.129	-0.053	-0.767
	P	0.093	0.929	0.871	0.947	0.233
DrTup	*R*	-0.929	0.119	-0.255	0.077	0.759
	P	0.071	0.881	0.745	0.923	0.241
CDrTup	*R*	0.931	-0.145	0.188	-0.130	-0.713
	P	0.069	0.855	0.812	0.870	0.287
RhT	*R*	0.478	-0.955	0.997	-0.922	0.476
	P	0.523	0.045	0.003	0.078	0.524
DrTd	*R*	-0.035	0.675	-0.380	0.744	-0.688
	P	0.965	0.325	0.620	0.256	0.312
CDrTd	*R*	0.950	-0.179	0.263	-0.152	-0.710
	P	0.056	0.821	0.737	0.848	0.290
RlT	*R*	0.813	-0.885	0.845	-0.876	0.125
	P	0.187	0.115	0.155	0.124	0.875

Table S6. Pearson correlations between bud variables (biomass, soluble sugar content, starch content, non-structural carbohydrates content, and relative conductance) in chokecherry (*Padus virginiana* 'Canada Red') trees and key temperature parameters that can impose effect on late-spring frost in Changchun, Northeast China, across four investigating days in April of 2017.

Temperature parameters	Coefficient	Tree-bud variables				
		Biomass	Sugar	Starch	NSC	RC
ChT	*R*	0.987	0.616	0.283	0.308	-0.681
	P	0.013	0.384	0.718	0.692	0.319
CaT	*R*	0.984	0.614	0.280	0.305	-0.673
	P	0.016	0.386	0.720	0.695	0.327
ClT	*R*	0.946	0.657	0.174	0.199	-0.554
	P	0.054	0.343	0.826	0.801	0.446
CDo0	*R*	0.983	0.620	0.270	0.296	-0.666
	P	0.017	0.380	0.730	0.704	0.334
CDo12	*R*	0.950	0.650	0.187	0.212	-0.565
	P	0.050	0.350	0.813	0.788	0.435
CDo20	*R*	0.949	0.635	0.199	0.224	-0.565
	P	0.051	0.365	0.801	0.776	0.435
CDb0	*R*	0.524	0.633	0.303	0.329	-0.765
	P	0.476	0.367	0.698	0.671	0.235
DrTup	*R*	-0.983	-0.422	-0.531	-0.554	0.889
	P	0.017	0.579	0.469	0.446	0.111
CDrTup	*R*	0.533	0.632	0.293	0.319	-0.735
	P	0.467	0.368	0.707	0.681	0.265
RhT	*R*	0.199	-0.426	0.990	0.520	-0.110
	P	0.801	0.574	0.010	0.480	0.890
DrTd	*R*	0.140	-0.225	0.993	0.535	-0.664
	P	0.860	0.775	0.007	0.465	0.336
CDrTd	*R*	1.000	0.525	0.417	0.441	-0.805
	P	0.000	0.475	0.583	0.559	0.195
RlT	*R*	0.618	0.140	0.327	0.338	-0.264
	P	0.382	0.861	0.673	0.662	0.736