Table S1 Results of the Shapiro-Wilk and Levene's tests in the case of variables II (%), IH (%), BD (g.cm^{-3}), MC (%), PR (MPa), PD (cm)

	II[a)]		IH[b)]	
Shapiro-Wilk test (p-value)	0.44		0.04	
Levene`s test (p-value)	0.31		0.05	
	BD[c)]			
	51a	10	9b	59
Shapiro-Wilk test (p-value)	0.18	0.40	0.97	0.98
Levene`s test (p-value)	0.50	0.04	0.02	0.71
	MC[d)]			
	51a	10	9b	59
Shapiro-Wilk test (p-value)	0.00	0.00	0.71	0.00
Levene`s test (p-value)	0.21	0.11	0.24	0.01
	PR[e)]			
	51a	10	9b	59
Shapiro-Wilk test (p-value)	0.00	0.00	0.00	0.00
Levene`s test (p-value)	0.00	0.06	0.00	0.00
	PD[f)]			
	51a	10	9b	59
Shapiro-Wilk test (p-value)	0.00	0.00	0.00	0.00
Levene`s test (p-value)	0.01	0.00	0.00	0.00

II[a)] – intensity of injuries (%); IH[b)] – intensity of harvesting (%); BD[c)] – bulk density (g.cm^{-3}); MC[d)] – soil moisture (%); PR[e)] – penetration resistance (MPa); PD[f)] – penetration depth (cm)

Table S2: Comparison of BD from the same measurement locations in different stands via the multiple p-value comparisons

Stand	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (3, N= 60) = 10.51, p = 0.02			
	51a	10	9b	59
51a		1.00	1.00	0.01*
10	1.00		1.00	0.64
9b	1.00	1.00		0.14
59	0.01*	0.64	0.14	
Rut	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (3, N= 60) = 11.22, p = 0.01			
	51a	10	9b	59
51a		0.64	0.09	0.01*
10	0.64		1.00	0.78
9b	0.09	1.00		1.00
59	0.01*	0.78	1.00	
Centre	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (3, N= 60) = 0.82, p = 0.85			
	51a	10	9b	59
51a		1.00	1.00	1.00
10	1.00		1.00	1.00
9b	1.00	1.00		1.00
59	1.00	1.00	1.00	

**indicates significant differences with p < 0.05*

Table S3: Comparison of BD between different measurement locations in particular stands via the multiple p-value comparisons

51a	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (2, N= 42) = 6.91, p = 0.03		
	S[a]	R[b]	C[c]
S[a]		0.10	0.05*
R[b]	0.10		1.00
C[c]	0.05*	1.00	

51a	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (2, N= 42) = 6.91, p = 0.03		
	S^a	R^b	C^c
10	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (2, N= 42) = 7.15, p = 0.03		
	S	R	C
S		0.03*	0.20
R	0.03*		1.00
C	0.20	1.00	
9b	Multiple p-value comparisons for bulk density Kruskal-Wallis test: H (2, N= 42) = 16.33, p = 0.00		
	S	R	C
S		0.00*	0.04*
R	0.00*		0.37
C	0.04*	0.37	
59	Multiple p-value comparisons for bulk density Kruskal-Wallisův test: H (2, N= 54) =13.26, p = 0.00		
	S	R	C
S		0.00*	0.67
R	0.00*		0.05
C	0.67	0.05	

**indicates significant differences with p < 0.05; S^a – stand, R^b – rut, C^c – centre of the trail*

Table S4: Comparison of MC from the same measurement locations in different stands via the multiple p-value comparisons

Stand	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (3, N= 60) = 10.51, p = 0.02			
	51a	10	9b	59
51a		1.00	1.00	0.01*
10	1.00		1.00	0.64
9b	1.00	1.00		0.14
59	0.01*	0.64	0.14	
Rut	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (3, N= 60) = 11.22, p = 0.01			
	51a	10	9b	59
51a		0.64	0.09	0.01*
10	0.64		1.00	0.78
9b	0.09	1.00		1.00
59	0.01*	0.78	1.00	
Centre	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (3, N = 60) = 0.82, p = 0.85			
	51a	10	9b	59
51a		1.00	1.00	1.00
10	1.00		1.00	1.00
9b	1.00	1.00		1.00
59	1.00	1.00	1.00	

**indicates significant differences with p < 0.05*

Table S5: Comparison of MC between different measurement locations in particular stands via the multiple p-value comparisons

51	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (2, N= 41) = 10.68, p = 0.01		
	S^a	R^b	C^c
S^a		0.00*	0.93
R^b	0.00*		0.08
C^c	0.93	0.08	
10	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (2, N= 42) =4.21, p = 0.12		

51	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (2, N= 41) = 10.68, p = 0.01		
	S^a	R^b	C^c
	S	R	C
S		0.17	1.00
R	0.17		0.33
C	1.00	0.33	
9b	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (2, N= 42) = 3.96, p = 0.14		
	S	R	C
S		0.15	1.00
R	0.15		0.67
C	1.00	0.67	
59	Multiple p-value comparisons for soil moisture Kruskal-Wallis test: H (2, N= 54) = 5.52, p = 0.06		
	S	R	C
S		0.06	0.47
R	0.06		1.00
C	0.47	1.00	

**indicates significant differences with p < 0.05; S^a – stand, R^b – rut, C^c – centre of the trail*

Table S6: Comparison of PR from the same measurement locations in different stands via the multiple p-value comparisons

Stand	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (3, N= 1827) = 3.32, p = 0.34			
	51a	10	9b	59
51a		0.43	1.00	1.00
10	0.43		1.00	1.00
9b	1.00	1.00		1.00
59	1.00	1.00	1.00	
Rut	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (3, N= 1558) = 139.01, p = 0.00			
	51a	10	9b	59
51a		0.00*	0.00*	0.00*
10	0.00*		1.00	0.00*
9b	0.00*	1.00		0.00*
59	0.00*	0.00*	0.00*	
Centre	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (3, N= 1924) = 107.32, p = 0.00			
	51a	10	9b	59
51a		0.74	0.25	0.00*
10	0.74		1.00	0.00*
9b	0.25	1.00		0.00*
59	0.00*	0.00*	0.00*	

**indicates significant differences with p < 0.05*

Table S7: Comparison of PR between different measurement locations in particular stands via the multiple p-value comparisons

51a	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (2, N= 974) =11.63, p = 0.00		
	S^a	R^b	C^c
S^a		0.24	0.18
R^b	0.24		0.00*
C^c	0.18	0.00*	
10	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (2, N= 1096) = 13.77, p = 0.00		
	S	R	C

51a	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (2, N= 974) =11.63, p = 0.00		
	S^a	R^b	C^c
S		0.00*	0.06
R	0.00*		0.31
C	0.06	0.31	
9b	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (2, N= 1658) = 23.08, p = 0.00		
	S	R	C
S		0.00*	1.00
R	0.00*		0.00*
C	1.00	0.00*	
59	Multiple p-value comparisons for penetration resistance Kruskal-Wallis test: H (2, N= 1582) = 38.96, p = 0.00		
	S	R	C
S		0.00*	0.00*
R	0.00*		0.62
C	0.00*	0.62	

**indicates significant differences with p < 0.05; S^a – stand, R^b – rut, C^c – centre of the trail*

Table S8: Comparison of PD from the same measurement locations in different stands via the multiple p-value comparisons

Stand	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (3, N= 1827) = 172.36, p = 0.00			
	51a	10	9b	59
51a		1.00	0.00*	0.83
10	1.00		0.00*	0.18
9b	0.00*	0.00*		0.00*
59	0.83	0.18	0.00*	
Rut	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (3, N= 1559) =139.79, p =0.00			
	51a	10	9b	59
51a		0.00*	0.00*	0.00*
10	0.00*		1.00	0.00*
9b	0.00*	1.00		0.00*
59	0.00*	0.00*	0.00*	
Centre	Multiple p-value comparisons for penetration depth Kruskal-Wallisův test: H (3, N= 1924) =103.7, p = 0.00			
	51a	10	9b	59
51a		0.00*	0.00*	0.00*
10	0.00*		0.08	0.00*
9b	0.00*	0.08		0.27
59	0.00*	0.00*	0.27	

**indicates significant differences with p < 0.05*

Table S9: Comparison of PD between different measurement locations in particular stands via the multiple p-value comparisons

51a	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (2, N= 974) = 5.41, p = 0.07		
	S^a	R^b	C^c
S^a		0.12	0.19
R^b	0.12		1.00
C^c	0.19	1.00	
10	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (2, N= 1096) =42.71 p = 0.00		
	S	R	C
S		0.00*	0.00*

51a	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (2, N= 974) = 5.41, p = 0.07		
	S^a	R^b	C^c
R	0.00*		0.00*
C	0.00*	0.00*	
9b	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (2, N= 1658) = 8.12 p = 0.02		
	S	R	C
S		1.00	0.01*
R	1.00		0.22
C	0.01*	0.22	
59	Multiple p-value comparisons for penetration depth Kruskal-Wallis test: H (2, N= 1582) = 103.28 p = 0.00		
	S	R	C
S		0.00*	0.00*
R	0.00*		0.00*
C	0.00*	0.00*	

**indicates significant differences with $p < 0.05$; S^a – stand, R^b – rut, C^c – centre of the trail*