Table S1. Correlation analysis for force dependent variable of surface and rotation speeds.

		Initial Rotation Speed	Rotation Decrease	Force	Surface
Miscanthus × giganteus	Initial rotation speed	1.0000	0.8067	0.1945	0.0100
	Rotation decrease	0.8067	1.0000	−0.3762	−0.5166
	Force	0.1945	−0.3762	1.0000	0.8821
	Surface	0.0100	−0.5166	0.8821	1.0000
Rosa multiflora	Initial rotation speed	1.0000	0.7032	0.0126	−0.0424
	Rotation decrease	0.7032	1.0000	−0.6364	−0.5331
	Force	0.0126	−0.6364	1.0000	0.7523
	Surface	−0.0424	−0.5331	0.7523	1.0000
Salix viminalis	Initial rotation speed	1.0000	0.6865	0.1723	0.2019
	Rotation decrease	0.6865	1.0000	−0.3441	−0.0119
	Force	0.1723	−0.3441	1.0000	0.5468
	Surface	0.010015	−0.0119	0.5468	1.0000
		$p < 0.0500$, N = 33			

p – Probability, N – Sample size

Table S2. Correlation analysis for cutting resistance dependent variable of surface and rotation speeds.

		Initial Rotation Speed	Rotation Decrease	Surface	Cutting Resistance
Misca1nthus × giganteus	Initial rotation speed	1.0000	0.8067	0.0100	0.4084
	Rotation decrease	0.8067	1.0000	−0.5166	0.5449
	Surface	0.0100	−0.5166	1.0000	−0.5916
	Cutting resistance	0.4084	0.5449	−0.5916	1.0000
Rosa multiflora	Initial rotation speed	1.0000	−0.7032	−0.0424	0.0802
	Rotation decrease	−0.7032	1.0000	−0.5331	−0.2510
	Surface	−0.0424	−0.5331	1.0000	−0.1703
	Cutting resistance	0.0802	−0.2510	−0.1703	1.0000
Salix viminalis	Initial rotation speed	1.0000	0.6865	0.2019	0.0551
	Rotation decrease	0.6865	1.0000	−0.0119	−0.3366
	Surface	0.2019	−0.0119	1.0000	−0.1411
	Cutting resistance	0.0551	−0.3366	−0.1411	1.0000
		$p < 0.0500$, N = 33			

p – Probability, N – Sample size

Table S3. Analysis of the force dependent variable from rotation speed and rotation decrease.

		SS Effect	Df	MS	SS Error	Df Error	MS Error	F	p
Miscanthus × giganteus		4133.8670	26.0000	158.9949	218.1249	9.0000	24.2361	6.5603	0.0029
Rosa multiflora	Force	9238.9230	30.0000	307.9641	374.2207	5.0000	74.8441	4.1147	0.0599
Salix viminalis		7064.5890	23.0000	307.1560	826.2832	9.0000	91.8092	3.3456	0.0324

SS Effect – Sum of squares deviations effect; Df – Number of degrees of freedom; MS – Mean square of deviations; SS Error – Sum of squares deviations error; Df Error – Number of degrees of freedom error; MS Error – Mean square of deviations error; F – Result of variance analysis; p – Probability

Table S4. Analysis of the cutting resistance dependent variable from initial rotation speed and rotation decrease.

		SS Effect	Df	MS	SS Error	Df Error	MS Error	F	p
Miscanthus × giganteus		0.0391	26.0000	0.0015	0.0032	9.0000	0.0004	4.1926	0.0149
Rosa multiflora	Cutting resistance	0.0393	30.0000	0.0013	0.0118	5.0000	0.0024	0.5531	0.8586
Salix viminalis		0.1062	23.0000	0.0046	0.0233	9.0000	0.0026	1.7835	0.1854

SS Effect – Sum of squares deviations effect; Df – Number of degrees of freedom; MS – Mean square of deviations; SS Error – Sum of squares deviations error; Df Error – Number of degrees of freedom error; MS Error – Mean square of deviations error; F – Result of variance analysis; p – Probability

Table S5. Multivariate analysis of variance for the impact strength dependent variable from the surface independent variable.

	Average	SD	Diff.	SD Diff	t	Df	p	CI(−95%)	CI(+95%)
Miscanthus × giganteus									
Impact strength	0.2133	0.0637							
Surface	69.4500	25.8419	−69.2367	25.7874	−6.5766	5	0.0012	−96.2989	−42.1744
Rosa multiflora									
Impact strength	34.1817	52.1457							
Surface	0.6283	0.1074	33.5533	1.5786	1.5786	5	0.1752	−21.0836	88.1902

SD – Standard deviation; Diff. – Difference; SD Diff – Standard deviation difference; t – Student's t result; Df – Number of degrees of freedom; p – Probability; CI – Confidence interval

Table S6. Correlation between stiffness, diameter and measuring speed for each of the plants concerned.

		Bending Stiffness	Diameter	Speed	Zone
Miscanthus × giganteus	Bending stiffness	1.0000	0.0352	0.1520	−0.1238
	Diameter	0.0352	1.0000	−0.0224	−0.1810
	Speed	0.1520	−0.0223	1.0000	0.0984
	Zone	−0.1238	−0.1810	0.0985	1.0000
Rosa multiflora	Bending stiffness	1.0000	0.8172	0.0742	−0.1961
	Diameter	0.8172	1.0000	0.0263	−0.1961
	Speed	0.0742	0.0263	1.0000	0.0000
	Zone	−0.1961	−0.1961	0.0000	1.0000
Salix viminalis	Bending stiffness	1.0000	0.9494	0.1548	−0.2328

Diameter	0.9494	1.0000	0.0852	−0.2055
Speed	0.1548	0.0852	1.0000	0.0000
Zone	−0.2328	−0.2055	0.0000	1.0000

Table S7. Bending stiffness variance analysis for speed and zone.

		SS Effect	Df Effect	MS Effect	SS Error	Df Error	MS Error	F	p
Miscanthus × giganteus		2.0689	8.0000	0.2976	1.1954	36.0000	0.0326	5.4963	0.000001
Rosa multiflora	Bending stiffness	2.4098	8.0000	0.3012	1.2059	36.0000	0.0335	8.9924	0.000001
Salix viminalis		4.3400	8.0000	0.5424	1.2698	36.0000	0.0353	15.3806	0.000000
	p < 0.0500								

SS Effect – Sum of squares deviations effect; Df – Number of degrees of freedom effect; MS Effect– Mean square of deviations effect; SS Error – Sum of squares deviations error; Df Error – Number of degrees of freedom error; MS Error – Mean square of deviations error; F – Result of variance analysis; p – Probability