

The Effect of Foliar Fertilization on the Resistance of Pea (*Pisum sativum* L.) Seeds to Mechanical Damage

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Table S1. Average values of the destructive force (F_D) of pea seeds depending on the variety, fertilization method and years of research.

Cultivar	Year	F _D		
		Control	N1	N2
Akord	2015	299±45.7	355±37.5	342±60.3
	2016	309±42.9	374±34.4	359±35.7
	2017	299±30.6	346±29.4	340±18.0
	Mean	302±39.7	358±33.8	347±38.0
Batuta	2015	286±34.3	342±32.5	318±17.5
	2016	311±31.3	379±28.2	357±37.0
	2017	301±27.7	362±21.1	344±9.70
	Mean	299±31.1	361±27.3	399±21.4
Cysterski	2015	271±25.6	345±35.4	335±40.8
	2016	314±44.1	391±32.6	364±26.9
	2017	285±31.5	361±28.8	345±23.5
	Mean	290±33.7	365±32.3	348±30.4
Ezop	2015	290±26.5	364±39.4	319±37.0
	2016	314±37.3	362±27.4	350±29.1
	2017	298±27.6	362±20.4	351±29.4
	Mean	300±30.5	362±29.1	340±31.8
Lasso	2015	289±29.7	364±28.0	339±39.3
	2016	300±46.8	368±36.2	351±15.6
	2017	281±26.3	366±25.8	349±23.0
	Mean	290±34.3	366±30.0	346±26.0
Mecenas	2015	283±26.9	365±29.7	339±46.7
	2016	311±32.8	360±33.0	344±27.6
	2017	284±24.0	363±22.0	345±29.7
	Mean	292±27.9	362±28.2	342±34.7
Mentor	2015	279±28.9	368±25.5	338±44.3
	2016	307±39.2	373±28.7	355±26.6
	2017	286±30.7	363±25.8	349±15.2
	Mean	290±32.9	368±26.7	347±28.7
Tarchalska	2015	275±31.1	360±17.0	329±29.1
	2016	296±29.9	350±25.6	338±31.8
	2017	282±22.8	359±18.0	347±16.0
	Mean	284±27.9	356±20.2	338±25.6

Statistical data are expressed as means ± SD.

Table S2. Average values of deformation (D_R) of pea seeds depending on the variety, fertilization method and years of research.

Cultivar	Year	D_R		
		Control	N1	N2
Akord	2015	53.6±3.34	62.4±3.55	57.2±4.61
	2016	53.7±2.96	63.7±2.74	58.9±3.65
	2017	51.8±3.21	65.1±2.49	57.1±4.85
	Mean	53.0±3.17	63.7±2.92	57.7±4.37
Batuta	2015	54.6±3.22	64.5±5.90	60.0±4.34
	2016	54.6±2.21	65.4±3.86	57.3±4.98
	2017	53.4±2.93	65.4±3.33	59.4±3.53
	Mean	54.2±3.12	65.1±4.36	58.9±4.28
Cysterski	2015	51.5±3.06	62.6±3.48	56.6±3.32
	2016	55.0±3.04	65.2±1.86	61.1±4.06
	2017	53.4±2.78	64.2±2.42	58.8±4.49
	Mean	53.3±2.96	64.0±2.58	58.8±3.95
Ezop	2015	51.9±3.11	65.2±1.60	55.5±3.08
	2016	54.3±2.53	60.8±3.55	57.9±3.11
	2017	52.0±4.05	67.6±2.74	57.9±4.93
	Mean	52.7±3.23	64.5±2.63	58.8±3.70
Lasso	2015	52.6±2.61	61.6±3.66	59.1±2.85
	2016	53.3±2.83	63.2±2.89	59.1±3.66
	2017	51.0±1.74	65.7±3.41	58.5±4.75
	Mean	52.3±2.39	63.5±3.32	58.9±3.75
Mecenas	2015	52.5±2.30	63.4±2.43	57.4±3.10
	2016	54.8±3.18	64.6±3.00	60.4±3.71
	2017	52.1±2.06	65.3±3.14	59.6±2.90
	Mean	53.1±2.51	64.4±2.85	59.1±3.23
Mentor	2015	53.8±2.63	65.3±3.79	58.2±4.24
	2016	53.7±2.74	64.9±3.50	59.0±3.12
	2017	51.9±2.75	65.7±2.37	58.9±3.61
	Mean	53.1±2.70	65.3±3.22	58.7±3.65
Tarchalska	2015	54.4±2.57	64.5±2.53	59.5±3.62
	2016	53.0±3.71	59.6±2.42	56.6±3.06
	2017	52.3±2.52	64.6±2.55	59.4±3.83
	Mean	53.2±2.93	62.9±2.50	58.5±3.50

Statistical data are expressed as means ± SD.

Table S3. Average values of the energy (E_D) needed to destroy pea seeds depending on the variety, fertilization method and years of research.

Cultivar	Year	E_D		
		Control	N1	N2
Akord	2015	5.12±0.36	6.16±0.70	5.76±0.63
	2016	5.39±0.27	6.50±0.33	5.71±0.14
	2017	5.32±0.26	6.40±0.19	5.88±0.10
	Mean	5.27±0.29	6.35±0.40	5.78±0.29
Batuta	2015	5.38±0.38	6.35±0.72	5.81±0.51
	2016	5.50±0.27	6.46±0.19	5.88±0.27
	2017	5.59±0.29	6.52±0.24	6.05±0.26
	Mean	5.49±0.31	6.44±0.38	5.91±0.34
Cysterski	2015	5.14±0.29	6.34±0.37	5.58±0.42
	2016	5.55±0.23	6.65±0.22	6.07±0.29
	2017	5.57±0.21	6.51±0.23	5.97±0.17
	Mean	5.42±0.24	6.50±0.27	5.87±0.29
Ezop	2015	5.48±0.14	6.17±0.27	5.74±0.27
	2016	5.72±0.31	6.46±0.33	6.23±0.55
	2017	5.21±0.21	6.42±0.50	5.87±0.08
	Mean	5.47±0.22	6.35±0.36	5.94±0.30
Lasso	2015	5.59±0.15	6.65±0.21	6.25±0.26
	2016	5.55±0.26	6.57±0.49	5.85±0.22
	2017	5.44±0.21	6.58±0.43	5.95±0.29
	Mean	5.52±0.20	6.51±0.37	6.01±0.25
Mecenas	2015	5.27±0.29	6.45±0.46	5.69±0.17
	2016	5.32±0.10	6.20±0.55	5.78±0.09
	2017	5.66±0.17	6.51±0.33	6.10±0.27
	Mean	5.41±0.18	6.38±0.44	5.85±0.17
Mentor	2015	5.22±0.25	6.28±0.25	5.59±0.09
	2016	5.38±0.30	6.42±0.29	5.80±0.20
	2017	5.37±0.29	6.49±0.41	5.91±0.21
	Mean	5.32±0.28	6.39±0.31	5.76±0.16
Tarchalska	2015	5.37±0.33	6.55±0.31	5.81±0.23
	2016	5.21±0.27	6.46±0.28	5.66±0.09
	2017	5.44±0.29	6.49±0.31	5.93±0.27
	Mean	5.34±0.29	6.50±0.30	5.80±0.19

Statistical data are expressed as means ± SD.

Table S4. Average values of the analyzed mechanical properties of pea seeds depending on the variety, fertilization method and years of research.

Factor		F _D	E _D	D _R
Cultivar	Akord	336±27.4	58.2±4.93	5.80±0.48
	Batuta	333±20.1	59.4±4.81	5.95±0.42
	Cysterski	335±38.6	58.7±4.90	5.93±0.51
	Ezop	334±31.1	58.1±5.52	5.92±0.43
	Lasso	334±34.6	58.2±5.02	6.05±0.48
	Mecenas	333±32.3	58.9±5.05	5.89±0.46
	Mentor	335±35.7	59.0±5.31	5.83±0.48
	Tarchalska	326±33.1	58.2±4.54	5.88±0.51
Fertilization	Control	294±18.9	53.1±1.16	5.41±0.16
	N1	362±10.8	64.2±1.77	6.44±0.13
	N2	344±10.0	58.5±1.35	5.87±0.18
Years	2015	325±31.5	58.2±4.67	5.82±0.47
	2016	343±28.1	58.8±4.19	5.95±0.45
	2017	332±32.1	58.8±5.58	5.97±0.44
Mean		333±14.7	58.6±4.79	5.91±0.45

Statistical data are expressed as means ± SD.