

Supplementary

Table 1. List of latin names and abbreviations of plant species that occurred in trials with energy crops and agricultural crops according to Rutkowski [28].

No	Abbreviation of weed species name	Latin name of weed species
1.	Ach.mil	<i>Achillea millefolium</i> L.
2.	Aeg.pod	<i>Aegopodium podagraria</i> L.
4.	Agr.cap	<i>Agrostis capillaris</i> L.
4.	Ama.ret	<i>Amaranthus retroflexus</i> L.
5.	Ant.arv	<i>Anthemis arvensis</i> L.
6.	Ape.spi	<i>Apera spica-venti</i> L.
7.	Ara.tha	<i>Arabidopsis thaliana</i> (L.) Heynh.
8.	Arr.ela	<i>Arrhenatherum elatius</i> (L.) P. Beauv.
9.	Art.vul	<i>Artemisia vulgaris</i> L.
10.	Bra.nap	<i>Brassica napus</i> L.
11.	Bro.in	<i>Bromus inermis</i> Leyss.
12.	Cam.pat	<i>Campanula patula</i> L.
13.	Cap.bur	<i>Capsella bursa-pastoris</i> (L.) Medik
14.	Cen.cya	<i>Centaurea cyanus</i> L.
15.	Cer.arv	<i>Cerastium arvense</i> L.
16.	Chen.alb	<i>Chenopodium album</i> L.
17.	Cir.arv	<i>Cirsium arvense</i> (L.) Scop.
18.	Con.arv	<i>Convolvulus arvensis</i> L.
19.	Con.can	<i>Conyza canadensis</i> (L.) Cronquist
20.	Con.reg	<i>Consolida regalis</i> S.F. Gray
21.	Cre.tec	<i>Crepis tectorum</i> L.
22.	Dau.car	<i>Daucus carota</i> L.
23.	Des.sop	<i>Descurainia sophia</i> (L.) Webb ex Prantl
24.	Ech.cru	<i>Echinochloa crus-galli</i> (L.) P. Beaur.
25.	Ely.rep	<i>Elymus repens</i> (L.) Gould
26.	Epi.par	<i>Epilobium parviflorum</i> Schreb.
27.	Equ.arv	<i>Equisetum arvense</i> L.
28.	Eri.ann	<i>Erigeron annuus</i> L.
29.	Ero.cic	<i>Erodium cicutarium</i> (L.) L'Her
30.	Eup.hel	<i>Euphorbia helioscopia</i> L.
31.	Fal.con	<i>Fallopia convolvulus</i> (L.) Á. Löve
32.	Fes.ovi	<i>Festuca ovina</i> L.
33.	Fum.off	<i>Fumaria officinalis</i> L.
34.	Gal.apa	<i>Galium aparine</i> L.
35.	Gal.par	<i>Galinsoga parviflora</i> Cav.
36.	Gal.tet	<i>Galeopsis tetrahit</i> L.
37.	Ger.dis	<i>Geranium dissectum</i> L.
38.	Ger.pus	<i>Geranium pusillum</i> Burm. F. ex L.
39.	Geu.urb	<i>Geum urbanum</i> L.
40.	Gna.sil	<i>Gnaphalium silvaticum</i> L.
41.	Gna.uli	<i>Gnaphalium uliginosum</i> L.
42.	Hie.pil	<i>Hieracium pilosella</i> L.
43.	Jun.buf	<i>Juncus bufonius</i> L.
44.	Lac.ser	<i>Lactuca serriola</i> L.
45.	Lam.amp	<i>Lamium amplexicaule</i> L.
46.	Lam.pur	<i>Lamium purpureum</i> L.
47.	Lap.com	<i>Lapsana communis</i> L.
48.	Leo.his	<i>Leontodon hispidus</i> L.
49.	Lol.per	<i>Lolium perenne</i> L.

50.	Lyc.arv	<i>Lycopsis arvensis</i> L.
51.	Med.sat	<i>Medicago sativa</i> L.
52.	Mel.alb	<i>Melandrium album</i> (Mill.) Garcke
53.	Myo.arv	<i>Myosotis arvensis</i> (L.) Hill
54.	Myo.min	<i>Myosurus minimus</i> L.
55.	Pap.rho	<i>Papaver rhoeas</i> L.
56.	Pla.lan	<i>Plantago lanceolata</i> L.
57.	Pla.mai	<i>Plantago maior</i> L.
58.	Poa.ann	<i>Poa annua</i> L.
59.	Pol.avi	<i>Polygonum aviculare</i> L.
60.	Pol.lap	<i>Polygonum lapathifolium</i> ssp. <i>lapathifolium</i> L.
61.	Pol.per	<i>Polygonum persicaria</i> L.
62.	Pot.ans	<i>Potentilla anserina</i> L.
63.	Rap.rap	<i>Raphanus raphanistrum</i> L.
64.	Rum.ace	<i>Rumex acetosa</i> L.
65.	Rum.acet	<i>Rumex acetosella</i> L.
66.	Sam.nig	<i>Sambucus nigra</i> L.
67.	Scl.ann	<i>Scleranthus annuus</i> L.
68.	Sen.vul	<i>Senecio vulgaris</i> L.
69.	Sid.her	<i>Sida hermafrodita</i> (L.) Rusby
70.	Sin.arv	<i>Sinapis arvensis</i> L.
71.	Sis.loe	<i>Sisymbrium loeseli</i> L.
72.	Sol.gig	<i>Solidago gigantea</i> Aiton
73.	Sol.nig	<i>Solanum nigrum</i> L. emend. Mill.
74.	Son.arv	<i>Sonchus arvensis</i> L.
75.	Son.ole	<i>Sonchus oleraceus</i> L.
76.	Spe.arv	<i>Spergula arvensis</i> L.
77.	Ste.med	<i>Stellaria media</i> (L.) Vill.
78.	Tar.off	<i>Taraxacum officinale</i> Weber
79.	Thl.arv	<i>Thlaspi arvense</i> L.
80.	Tri.ino	<i>Tripleurospermum inodorum</i> (L.) Schultz-Bip.
81.	Tri.rep	<i>Trifolium repens</i> L.
82.	Urt.dio	<i>Urtica dioica</i> L.
83.	Ver.hed	<i>Veronica hederifolia</i> L.
84.	Ver.per	<i>Veronica persica</i> Poir.
85.	Vic.cra	<i>Vicia cracca</i> L.
86.	Vic.hir	<i>Vicia hirsuta</i> (L.) S.F.Gray
87.	Vio.arv	<i>Viola arvensis</i> Murray
88.	Vio.tri	<i>Viola tricolor</i> L.

Table S.2. Variability explained by the first 4 axes in ordination analysis DCA of weed communities in agricultural crops and plants cultivated for energy purposes

Parameters	Axes				Sum of all eigenvalues
	1	2	3	4	
Eigenvalue	0.254	0.131	0.083	0.010	1.097
Length of gradient	1.697	1.262	1.663	1.012	
Cumulative percentage variance of species data (%)	23.2	35.1	42.7	43.6	

Table S.3. Variability explained by the first 4 axes in canonical analysis RDA of weed communities in agricultural crops and plants cultivated for energy purposes

Parameters	Axes				Total variance
	1	2	3	4	
Eigenvalues	0.192	0.087	0.070	0.057	
Species-agrotechnical correlations	0.949	0.850	0.873	0.902	
Cumulative percentage variance of species data (%)	19.2	27.9	34.9	40.5	
Cumulative percentage variance of species-environment relation (%)	38.5	56.0	70.0	81.4	1.000
Sum of all eigenvalues		1.000			
Sum of all canonical eigenvalues		0.498			

Table S.4. Inter set correlations of agrotechnical variables with RDA axes in analysis of weed communities in different agricultural systems and energy crops

Variables		Axis I	Axis II	Axis III	Axis IV
Organic system (ORG)		0.3324	0.7226	0.4977	-0.0874
Integrated system (INT)		0.4817	-0.1050	-0.2521	-0.3654
Conventional system (CONW)		0.3560	-0.1034	-0.1353	0.1769
Wheat monoculture (MONO)		0.3963	-0.3255	-0.3071	0.1742
2010-2012	Trees and shrubs (T1)	-0.3205	-0.0121	-0.0818	-0.5587
	Dicotyledonous (D1)	-0.0104	0.0018	-0.0174	0.0598
	Grasses (G1)	-0.5064	0.3499	-0.5453	-0.0555
2013-2015	Trees and shrubs (T2)	-0.2391	-0.5801	0.4146	-0.2122
	Dicotyledonous (D2)	-0.1401	-0.1408	0.4682	0.1387
	Grasses (G2)	-0.2350	0.0128	-0.0322	0.7361