

## SUPPLEMENTARY MATERIAL

### Changes in diversity of vascular flora accompanying *Salix viminalis* L. plantations over time

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**Table S1.** Weather conditions in 2011–2015, 2018 and 1990–2010

Month	Value in the year						
	2011	2012	2013	2014	2015	2018	1990–2010
	<b>Average monthly air temperature (°C)</b>						
Apr	10.5	9.5	7.7	10.3	8.2	13.2	8.6
May	14.4	15.6	14.6	14.0	13.0	17.0	14.1
Jun	18.6	17.4	18.1	16.3	17.0	18.7	17.3
Jul	18.0	20.7	19.9	20.8	19.7	20.6	19.5
Aug	18.5	19.0	19.0	17.8	21.5	20.3	18.6
Sep	15.1	14.5	11.8	14.4	14.6	15.3	13.6
Oct	8.7	8.1	9.8	9.2	6.7	9.7	8.4
Apr–Oct	14.8	15.0	14.4	14.7	14.4	16.4	14.3
Jan–Dec	9.0	8.8	8.4	9.5	9.8	9.9	8.7
	<b>Sum of monthly precipitation (mm)</b>						
Apr	80.5	52.6	49.5	49.8	47.7	28.0	40.5
May	38.8	21.3	127.3	92.6	35.6	53.5	56.3
Jun	106.1	57.6	149.3	59.9	40.5	25.2	58.0
Jul	203.3	71.1	17.7	82.8	43.5	148.4	78.5
Aug	88.6	64.3	38.0	80.9	18.1	42.2	51.3
Sep	11.9	35.2	60.1	32.7	29.3	66.6	48.7
Oct	10.5	48.9	32.5	7.6	55.3	45.7	33.0
Apr–Oct	539.7	351.0	474.4	406.3	270.0	409.6	366.3
Jan–Dec	653.4	500.7	650.5	581.5	423	535.9	532.1

Source: own elaboration on the basis of Meteorological Station of the Institute of Meteorology and Water Management – National Research Institute in Skierniewice.

**Table S2.** Characteristics of plant species occurring in energy willow plantations

No.	Name of species	Botanical family	Geographical and historical groups	Origin of apophytes	Biological stability	Life form	Botanical class	Phytosociological class
1	2	3	4	5	6	7	8	9
1	<i>Acer platanoides</i> L.	<i>Aceraceae</i>	A	L	W	M	D	t
2	<i>Acer pseudoplatanus</i> L.	<i>Aceraceae</i>	A	L	W	M	D	t
3	<i>Achillea millefolium</i> L.s.str.	<i>Asteraceae</i>	A	Ł	W	H	D	M
4	<i>Agrostemma githago</i> L.	<i>Caryophyllaceae</i>	An	–	K	T	D	S
5	<i>Agrostis canina</i> L.	<i>Poaceae</i>	A	O	W	H	J	SCH
6	<i>Agrostis capillaris</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	T
7	<i>Agrostis gigantea</i> Roth	<i>Poaceae</i>	A	Ł	W	H	J	M
8	<i>Alisma plantago-aquatica</i> L.	<i>Alismataceae</i>	A	NW	W	Hy	J	P
9	<i>Alnus glutinosa</i> (L.) Gaertn.	<i>Betulaceae</i>	A	L	W	M	D	t
10	<i>Alopecurus pratensis</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	M
11	<i>Anchusa arvensis</i> (L.) M. Bieb.	<i>Boraginaceae</i>	An	–	K	T, H	D	S
12	<i>Anthemis arvensis</i> L.	<i>Asteraceae</i>	An	–	K	T	D	S
13	<i>Anthoxanthum aristatum</i> Boiss.	<i>Poaceae</i>	An	–	K	T	J	S
14	<i>Anthoxanthum odoratum</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	t
15	<i>Anthriscus sylvestris</i> (L.) Hoffm.	<i>Apiaceae</i>	A	L	W	H	D	A
16	<i>Apera spica-venti</i> (L.) P. Beauv.	<i>Poaceae</i>	An	–	K	T	J	S
17	<i>Arctium minus</i> (Hill) Bernh.	<i>Asteraceae</i>	A	L	K	H	D	A
18	<i>Arctium tomentosum</i> Mill.	<i>Asteraceae</i>	A	L	K	H	D	A

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19	<i>Arenaria serpyllifolia</i> L.	<i>Caryophyllaceae</i>	A	MK	K	T	D	t
20	<i>Arrhenatherum elatius</i> (L.) P. Beauv. ex J. Presl & C. Presl	<i>Poaceae</i>	A	Ł	W	H	J	M
21	<i>Artemisia absinthium</i> L.	<i>Asteraceae</i>	A	NS	W	C	D	A
22	<i>Artemisia campestris</i> L.	<i>Asteraceae</i>	A	P	W	Ch	D	F
23	<i>Artemisia vulgaris</i> L.	<i>Asteraceae</i>	A	L	W	C	D	A
24	<i>Astragalus glycyphyllos</i> L.	<i>Fabaceae</i>	A	L	W	H	D	T
25	<i>Berteroa incana</i> (L.)DC	<i>Brassicaceae</i>	A	MK	K	T,H	D	A
26	<i>Betula pendula</i> Roth	<i>Betulaceae</i>	A	L	W	M	D	t
27	<i>Betula pubescens</i> Ehrh.	<i>Betulaceae</i>	A	L	W	M	D	t
28	<i>Bromus hordeaceus</i> L.	<i>Poaceae</i>	A	Ł	K	H,T	J	M
29	<i>Bromus inermis</i> Leyss.	<i>Poaceae</i>	A	MK	W	H	J	F
30	<i>Bromus secalinus</i> L.	<i>Poaceae</i>	An	–	K	T,H	J	S
31	<i>Calamagrostis epigejos</i> (L.) Roth	<i>Poaceae</i>	A	L	W	G	J	E
32	<i>Calystegia sepium</i> (L.) R.Br.	<i>Convolvulaceae</i>	A	L	W	H	D	A
33	<i>Capsella bursa - pastoris</i> (L.) Medik.	<i>Brassicaceae</i>	An		K	T,H	D	S
34	<i>Cardaminopsis arenosa</i> (L.) Hayek	<i>Brassicaceae</i>	A	P	K	H,T	D	t
35	<i>Carduus acanthoides</i> L.	<i>Asteraceae</i>	An		K	H	D	A
36	<i>Carex hirta</i> L.	<i>Cyperaceae</i>	A	Ł	W	G	J	M
37	<i>Carex ovalis</i> Gooden.	<i>Cyperaceae</i>	A	Ł	W	H	J	t

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38	<i>Carex vulpina</i> L.	Cyperaceae	A	O	W	H(G)	J	P
39	<i>Centaurea jacea</i> L.	Asteraceae	A	Ł	W	H	D	M
40	<i>Cerastium arvense</i> L.	Caryophyllaceae	A	P	W	Ch	D	AIR
41	<i>Cerastium holosteoides</i> Fr. emend. Hyl.	Caryophyllaceae	A	Ł	K-W	T, Ch	D	M
42	<i>Chelidonium majus</i> L.	Papaveraceae	A	L	W	H	D	A
43	<i>Chenopodium album</i> L.	Chenopodiaceae	A	NW	K	T	D	S
44	<i>Chenopodium polyspermum</i> L.	Chenopodiaceae	A	NW	K	T	D	S
45	<i>Cichorium intybus</i> L.	Asteraceae	An	–	W	H	D	A
46	<i>Cirsium arvense</i> (L.) Scop.	Asteraceae	A	L	W	G	D	A
47	<i>Cirsium palustre</i> (L.) Scop.	Asteraceae	A	Ł	K	H	D	M
48	<i>Conium maculatum</i> L.	Apiaceae	An	–	K	T, H	D	A
49	<i>Convolvulus arvensis</i> L.	Convolvulaceae	A	MK	W	H (G)	D	AIR
50	<i>Conyza canadensis</i> (L.) Cronquist	Asteraceae	An	–	K	T, H	D	S
51	<i>Coronilla varia</i> L.	Fabaceae	A	MK	W	H	D	T
52	<i>Crataegus monogyna</i> Jacq.	Rosaceae	A	L	W	N/M	D	R
53	<i>Crepis biennis</i> L.	Asteraceae	A	Ł	K	H	D	M
54	<i>Crepis capillaris</i> (L.) Wallr.	Asteraceae	A	Ł	K	H, T	D	M
55	<i>Dactylis glomerata</i> L.	Poaceae	A	Ł	W	H	J	M
56	<i>Daucus carota</i> L.	Apiaceae	A	Ł	K	H	D	M

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57	<i>Deschampsia caespitosa</i> (L.) P. Beauv.	<i>Poaceae</i>	A	Ł	W	H	j	M
58	<i>Digitaria ischaemum</i> (Schreb.) H. L. Mühl.	<i>Poaceae</i>	An	–	K	T	J	S
59	<i>Dryopteris carthusiana</i> (Vill.) H.P.Fuchs	<i>Dryopteridaceae</i>	A	O	W	H	<i>Polypodiopsida</i>	VA
60	<i>Echinocystis lobata</i> (F. Michx.) Torr. & A. Gray	<i>Cucurbitaceae</i>	An	–	K	T, L	D	t
61	<i>Elymus repens</i> (L.) Gould	<i>Poaceae</i>	A	NW	W	G	J	AIR
62	<i>Epilobium hirsutum</i> L.	<i>Onagraceae</i>	A	NW	W	H	D	A
63	<i>Epilobium palustre</i> L.	<i>Onagraceae</i>	A	NW	W	H	D	M
64	<i>Epilobium roseum</i> Schreb.	<i>Onagraceae</i>	A	NW	W	H	D	A
65	<i>Equisetum arvense</i> L.	<i>Equisetaceae</i>	A	Ł	W	G	<i>Equisetopsida</i>	AIR
66	<i>Equisetum palustre</i> L.	<i>Equisetaceae</i>	A	Ł	W	G	<i>Equisetopsida</i>	M
67	<i>Erigeron acris</i> L.	<i>Asteraceae</i>	A	P	K-W	H (T)	D	t
68	<i>Erigeron annuus</i> (L.) Pers.	<i>Asteraceae</i>	An	–	K-W	H	D	t
69	<i>Euonymus europea</i> L.	<i>Celastraceae</i>	A	O	W	N	D	R
70	<i>Eupatorium cannabinum</i> L.	<i>Asteraceae</i>	A	Ł	W	H	D	A
71	<i>Fallopia convolvulus</i> (L.) Á. Löve	<i>Polygonaceae</i>	An	–	K	T	D	S
72	<i>Festuca pratensis</i> Huds.	<i>Poaceae</i>	A	Ł	W	H	J	M
73	<i>Festuca rubra</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	M
74	<i>Filipendula ulmaria</i> (L.) Maxim.	<i>Rosaceae</i>	A	Ł	W	H	D	M
75	<i>Fragaria xananassa</i> Duchesne	<i>Rosaceae</i>	An	–	W	H	D	t

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76	<i>Fragaria vesca</i> L.	Rosaceae	A	L	W	H	D	E
77	<i>Frangula alnus</i> Mill.	Rhamnaceae	A	L	W	N	D	t
78	<i>Fraxinus excelsior</i> L.	Oleaceae	A	L	W	M	D	t
79	<i>Galeopsis bifida</i> Boenn.	Lamiaceae	A	L	K	T	D	t
80	<i>Galeopsis ladanum</i> L.	Lamiaceae	An	–	K	T	D	TH
81	<i>Galeopsis tetrahit</i> L.	Lamiaceae	A	L	K	T	D	S
82	<i>Galinsoga ciliata</i> (Raf.) S. F. Blake	Asteraceae	An	–	K	T	D	S
83	<i>Galinsoga parviflora</i> Cav.	Asteraceae	An	–	K	T	D	S
84	<i>Galium aparine</i> L.	Rubiaceae	A	L	K	T	D	A
85	<i>Galium mollugo</i> L.	Rubiaceae	A	Ł	W	H	D	M
86	<i>Galium spurium</i> L.	Rubiaceae	An	–	K	T	D	t
87	<i>Geum urbanum</i> L.	Rosaceae	A	L	W	H	D	A
88	<i>Glechoma hederacea</i> L.	Lamiaceae	A	L	W	G, H	D	A
89	<i>Gnaphalium luteo-album</i> L.	Asteraceae	A	NW	K	T	D	I
90	<i>Gnaphalium sylvaticum</i> L.	Asteraceae	A	L	W	H	D	E
91	<i>Helichrysum arenarium</i> (L.) Moench	Asteraceae	A	P	W	H	D	K
92	<i>Heracleum sphondylium</i> L.	Apiaceae	A	Ł	K-W	H	D	TH
93	<i>Hieracium pilosella</i> L.	Asteraceae	A	P	W	H	D	N
94	<i>Holcus lanatus</i> L.	Poaceae	A	Ł	W	H	J	M

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95	<i>Humulus lupulus</i> L.	<i>Cannabaceae</i>	A	L	W	H	D	t
96	<i>Hypericum perforatum</i> L.	<i>Hypericaceae</i>	A	Ł	W	H	D	t
97	<i>Hypochoeris radicata</i> L.	<i>Asteraceae</i>	A	Ł	W	H	D	K
98	<i>Jasione montana</i> L.	<i>Campanulaceae</i>	A	P	K	H	D	K
99	<i>Juncus bufonius</i> L.	<i>Juncaceae</i>	A	NW	K	T	J	I
100	<i>Juncus conglomeratus</i> L. emend. Leers	<i>Juncaceae</i>	A	NW	W	H	J	M
101	<i>Juncus effusus</i> L.	<i>Juncaceae</i>	A	Ł	W	H	J	M
102	<i>Knautia arvensis</i> (L.) J. M. Coult.	<i>Dipsacaceae</i>	A	Ł	W	H	D	M
103	<i>Lactuca serriola</i> L.	<i>Asteraceae</i>	An	–	K	H	D	S
104	<i>Leontodon autumnalis</i> L.	<i>Asteraceae</i>	A	Ł	W	H	D	M
105	<i>Leonurus cardiaca</i> L.	<i>Lamiaceae</i>	An	–	W	H	D	A
106	<i>Linaria vulgaris</i> Mill.	<i>Scrophulariaceae</i>	A	P	W	G	D	A
107	<i>Lotus corniculatus</i> L.	<i>Fabaceae</i>	A	Ł	W	H	D	M
108	<i>Lychnis flos-cuculi</i> L.	<i>Caryophyllaceae</i>	A	Ł	W	H	D	M
109	<i>Lysimachia nummularia</i> L.	<i>Primulaceae</i>	A	L	W	C	D	M
110	<i>Lythrum salicaria</i> L.	<i>Lythraceae</i>	A	Ł	W	H	D	M
111	<i>Matricaria maritima</i> subsp. <i>inodora</i> (L.) Dostál	<i>Asteraceae</i>	An	–	K-W	T, H	D	S
112	<i>Medicago lupulina</i> L.	<i>Fabaceae</i>	A	MK	K	T, H	D	t
113	<i>Melandrium album</i> (Mill.) Garcke	<i>Caryophyllaceae</i>	A	Ł	K	T	D	A

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114	<i>Melilotus alba</i> Medik.	<i>Fabaceae</i>	A	MK	K	T	D	A
115	<i>Mentha arvensis</i> L.	<i>Lamiaceae</i>	A	NW	W	H, C	D	t
116	<i>Myosotis arvensis</i> (L.) Hill	<i>Boraginaceae</i>	An	–	K	T, H	D	S
117	<i>Oenothera biennis</i> L.	<i>Onagraceae</i>	A	P	K	H	D	A
118	<i>Padus avium</i> Mill.	<i>Rosaceae</i>	A	L	W	M, N	D	Q
119	<i>Padus serotina</i> (Ehrh.) Borkh.	<i>Rosaceae</i>	An	–	W	M	D	t
120	<i>Phalaris arundinacea</i> L.	<i>Poaceae</i>	A	NW	W	Hy, G	J	P
121	<i>Phleum pratense</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	M
122	<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	<i>Poaceae</i>	A	NW	W	G, Hy	J	P
123	<i>Pinus sylvestris</i> L.	<i>Pinaceae</i>	A	L	W	M	<i>Pinopsida</i>	t
124	<i>Plantago lanceolata</i> L.	<i>Plantaginaceae</i>	A	Ł	W	H	D	M
125	<i>Plantago major</i> L.	<i>Plantaginaceae</i>	A	L	K-W	H	D	M
126	<i>Plantago media</i> L.	<i>Plantaginaceae</i>	A	Ł	W	H	D	F
127	<i>Poa annua</i> L.	<i>Poaceae</i>	A	Ł	K-W	T, H	J	A
128	<i>Poa pratensis</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	M
129	<i>Poa trivialis</i> L.	<i>Poaceae</i>	A	Ł	W	H	J	M
130	<i>Polygonum aviculare</i> L.	<i>Polygonaceae</i>	A	NW	K	T	D	S
131	<i>Polygonum hydropiper</i> L.	<i>Polygonaceae</i>	A	NW	K	T	D	B
132	<i>Polygonum lapathifolium</i> L.	<i>Polygonaceae</i>	A	NW	K	T	D	B



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133	<i>Polygonum minus</i> Huds.	<i>Polygonaceae</i>	A	NW	K	T	D	B
134	<i>Polygonum mite</i> Schrank	<i>Polygonaceae</i>	A	NW	K	T	D	B
135	<i>Polygonum persicaria</i> L.	<i>Polygonaceae</i>	A	NW	K	T	D	t
136	<i>Populus nigra</i> L.	<i>Salicaceae</i>	A	L	W	M	D	t
137	<i>Populus tremula</i> L.	<i>Salicaceae</i>	A	L	W	M	D	t
138	<i>Potentilla anserina</i> L.	<i>Rosaceae</i>	A	Ł	W	H	D	M
139	<i>Potentilla argentea</i> L.	<i>Rosaceae</i>	A	MK	W	H	D	K
140	<i>Potentilla erecta</i> (L.) Raeusch.	<i>Rosaceae</i>	A	L	W	H	D	N
141	<i>Potentilla reptans</i> L.	<i>Rosaceae</i>	A	Ł	W	H	D	M
142	<i>Potentilla supina</i> L.	<i>Rosaceae</i>	A	O	K	T, H	D	I
143	<i>Prunella vulgaris</i> L.	<i>Lamiaceae</i>	A	Ł	W	H	D	M
144	<i>Prunus cerasifera</i> Ehrh.	<i>Rosaceae</i>	An	–	W	N/M	D	t
145	<i>Pyrus pyraster</i> (L.) Burgsd.	<i>Rosaceae</i>	An	–	W	M	D	t
146	<i>Quercus petraea</i> (Matt.) Liebl.	<i>Fagaceae</i>	A	L	W	M	D	t
147	<i>Quercus robur</i> L.	<i>Fagaceae</i>	A	L	W	M	D	t
148	<i>Ranunculus repens</i> L.	<i>Ranunculaceae</i>	A	L	W	H, Hy	D	M
149	<i>Rosa canina</i> L.	<i>Rosaceae</i>	A	L	W	N	D	R
150	<i>Rubus caesius</i> L.	<i>Rosaceae</i>	A	L	W	N	D	A
151	<i>Rumex acetosa</i> L.	<i>Polygonaceae</i>	A	Ł	W	H	D	M

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152	<i>Rumex acetosella</i> L.	<i>Polygonaceae</i>	A	P	W	G, H	D	S
153	<i>Rumex obtusifolius</i> L.	<i>Polygonaceae</i>	A	L	W	H	D	A
154	<i>Sambucus nigra</i> L.	<i>Caprifoliaceae</i>	A	L	W	N, M	D	E
155	<i>Senecio jacobaea</i> L.	<i>Asteraceae</i>	A	L	K-W	H	D	t
156	<i>Setaria pumila</i> (Poir.) Roem. & Schult.	<i>Poaceae</i>	An	–	K	T	J	S
157	<i>Setaria viridis</i> (L.) P. Beauv.	<i>Poaceae</i>	An	–	K	T	J	S
158	<i>Solanum dulcamara</i> L.	<i>Solanaceae</i>	A	L	W	Ch, L	D	AG
159	<i>Solidago canadensis</i> L.	<i>Asteraceae</i>	An	–	W	H, G	D	A
160	<i>Solidago gigantea</i> Aiton	<i>Asteraceae</i>	An	–	W	H, G	D	A
161	<i>Sonchus arvensis</i> L.	<i>Asteraceae</i>	A	NW	W	H (G)	D	S
162	<i>Sonchus asper</i> (L.) Hill	<i>Asteraceae</i>	An	–	K	T	D	S
163	<i>Sonchus oleraceus</i> L.	<i>Asteraceae</i>	An	–	K	T, H	D	S
164	<i>Sorbus aucuparia</i> L. emend. Hedl.	<i>Rosaceae</i>	A	L	W	M	D	t
165	<i>Stachys palustris</i> L.	<i>Lamiaceae</i>	A	Ł	W	G	D	M
166	<i>Stellaria graminea</i> L.	<i>Caryophyllaceae</i>	A	Ł	W	H	D	t
167	<i>Stellaria holostea</i> L.	<i>Caryophyllaceae</i>	A	O	W	Ch	D	Q
168	<i>Stellaria media</i> (L.) Vill.	<i>Caryophyllaceae</i>	A	Ł	K	T	D	S
169	<i>Symphytum officinale</i> L.	<i>Boraginaceae</i>	A	NW	W	H	D	t
170	<i>Tanacetum vulgare</i> L.	<i>Asteraceae</i>	A	L	W	H	D	A

No.	Name of species	Botanical family	Geographical and historical groups	Origin of apophytes	Biological stability	Life form	Botanical class	Phytosociological class
171	<i>Taraxacum officinale</i> F. H. Wigg.	<i>Asteraceae</i>	A	Ł	W	H	D	M
172	<i>Thlaspi arvense</i> L.	<i>Brassicaceae</i>	An	–	K	T	D	S
173	<i>Tilia platyphyllos</i> Scop.	<i>Tiliaceae</i>	A	L	W	M	D	t
174	<i>Torilis japonica</i> (Houtt.) DC.	<i>Apiaceae</i>	A	L	K	T, H	D	A
175	<i>Tragopogon pratensis</i> L.	<i>Asteraceae</i>	A	Ł	K	H	D	M
176	<i>Trifolium arvense</i> L.	<i>Fabaceae</i>	A	P	K	T	D	K
177	<i>Trifolium pratense</i> L.	<i>Fabaceae</i>	A	Ł	W	H	D	M
178	<i>Trifolium repens</i> L.	<i>Fabaceae</i>	A	Ł	W	H	D	M
179	<i>Tussilago farfara</i> L.	<i>Asteraceae</i>	A	L	W	G (H)	D	S
180	<i>Urtica dioica</i> L.	<i>Urticaceae</i>	A	L	W	H	D	A
181	<i>Verbascum densiflorum</i> Bertol.	<i>Scrophulariaceae</i>	A	MK	K	H	D	A
182	<i>Veronica arvensis</i> L.	<i>Scrophulariaceae</i>	An	–	K	T	D	t
183	<i>Veronica chamaedrys</i> L.	<i>Scrophulariaceae</i>	A	Ł	W	C	D	t
184	<i>Veronica officinalis</i> Poir.	<i>Scrophulariaceae</i>	A	O	W	C	D	N
185	<i>Veronica persica</i> L.	<i>Scrophulariaceae</i>	An	–	K	T	D	S
186	<i>Veronica serpyllifolia</i> L.	<i>Scrophulariaceae</i>	A	Ł	W	H	D	M
187	<i>Vicia angustifolia</i> L.	<i>Fabaceae</i>	An	–	K	T	D	S
188	<i>Vicia cracca</i> L.	<i>Fabaceae</i>	A	Ł	W	H	D	M
189	<i>Vicia hirsuta</i> (L.) Gray	<i>Fabaceae</i>	An	–	K	T	D	S

No.	Name of species	Botanical family	Geographical and historical groups	Origin of apophytes	Biological stability	Life form	Botanical class	Phytosociological class
190	<i>Vicia tetrasperma</i> (L.) Schreb.	<i>Fabaceae</i>	An	–	K	T	D	S
191	<i>Vicia villosa</i> Roth	<i>Fabaceae</i>	An	–	K	T (H)	D	S
192	<i>Viola arvensis</i> Murray	<i>Violaceae</i>	An	–	K-W	T	D	S
193	<i>Viola tricolor</i> L.	<i>Violaceae</i>	A	P	K	T	D	K

Explanations: geographical and historical groups (A = apophytes, An = anthropophytes), origin of apophytes (L = woodland-shrub, Ł = meadow, MK = xerothermic grasslands, NS = rocky, NW = waterside and wetland, P = sandy, O = other), biological stability (K = short-lived, K-W = short-lived-perennial, W = perennial), life forms (C = Herbaceous Chamephytes, Ch = Woody Chamephytes, G = Geophytes, H = Hemicryptophytes, Hy = Hydrophytes, Helophytes, L = Liana, Creeper, M = Megaphanerophytes, N = Nanofanerophytes, T = Therophytes), botanical classes (D = Dicotyledones, J = Monocotyledones), phytosociological classes (A = *Artemisietea vulgaris*, AG = *Alnetea glutinosae*, AIR = *Agropyretea intermedio-repentis*, B = *Bidentetea tripartiti*, E = *Epilobietea angustifolii*, F = *Festuco-Brometea*, I = *Isoëto-Nanojuncetea*, K = *Koelerio glaucae-Corynephoretea canescentis*, M = *Molinio-Arrhenatheretea*, N = *Nardo-Callunetea*, P = *Phragmitea*, Q = *Quercu-Fagetea*, R = *Rhamno-Prunetea*, S = *Stellarietea mediae*, SCH = *Scheuzerio-Caricetea nigrae*, t = accompanying species, T = *Trifolio-Geranietea sanguinei*, TH = *Thlaspietea*, VA = *Vaccinio-Picetea*).

Source: own elaboration on the basis of Anioł-Kwiatkowska (1974), Szafer, Kulczyński and Pawłowski (1986), Korniak (1992), Zajac and Zajac (1992), Rutkowski (2008), Mirek *et al.* (2020).

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**Table S3.** Analysis of variance according to the linear mixed model for the total coverage of species of the *Salix viminalis* L. plantation depending on the considered factors

Source	Sum of squares	Mean squares	df	df of error	F	P
<b>Poaceae family</b>						
Age <sup>1)</sup>	0.20	0.20	1	128.29	5.19	0.024*
Forecrop	0.27	0.14	2	171.92	3.59	0.030*
Soil agriculture complex	1.44	0.24	6	94.67	6.34	<0.001***
Age × forecrop	0.22	0.11	2	171.48	2.95	0.055
<b>Asteraceae family</b>						
Age	0.006	0.006	1	173.52	0.26	0.613
Forecrop	0.015	0.007	2	172.71	0.30	0.739
Soil agriculture complex	0.535	0.089	6	95.60	3.62	0.0033**
Age × forecrop	0.016	0.008	2	180.21	0.32	0.725
<b>Molinio-Arrhenatheretea class</b>						
Age	0.35	0.35	1	105.67	9.54	0.003**
Forecrop	0.13	0.07	2	101.52	1.80	0.171
Soil agriculture complex	0.49	0.08	6	79.18	2.22	0.050*
Age × forecrop	0.34	0.17	2	109.58	4.64	0.012*
<b>Artemisietea vulgaris class</b>						
Age	0.33	0.33	1	199.18	11.93	<0.001***
Forecrop	0.25	0.13	2	184.86	4.57	0.012*
Soil agriculture complex	2.32	0.39	6	84.05	14.03	<0.001***
Age × forecrop	0.29	0.15	2	194.87	5.32	0.006**
<b>Geophytes</b>						
Age	0.008	0.008	1	155.02	0.27	0.606
Forecrop	0.138	0.069	2	165.78	2.44	0.090
Soil agriculture complex	0.151	0.025	6	85.96	0.89	0.507
Age × forecrop	0.208	0.104	2	170.74	3.68	0.027*
<b>Hemicryptophytes</b>						
Age	0.038	0.038	1	165.99	1.04	0.310
Forecrop	0.012	0.006	2	168.69	0.16	0.849
Soil agriculture complex	0.348	0.058	6	86.55	1.58	0.163
Age × forecrop	0.047	0.023	2	175.01	0.65	0.525
<b>Mega and nanophanerophytes</b>						
Age	0.11	0.11	1	107.92	11.80	<0.001***
Forecrop	0.03	0.01	2	115.64	1.39	0.253
Soil agriculture complex	0.14	0.02	6	82.74	2.45	0.031*
Age × forecrop	0.07	0.03	2	119.10	3.69	0.028*

Source	Sum of squares	Mean squares	<i>df</i>	<i>df</i> of error	<i>F</i>	<i>P</i>
<b>Woody and shrub species</b>						
Age	0.66	0.66	1	117.63	26.69	<0.001 <sup>***</sup>
Forecrop	0.20	0.10	2	137.87	3.99	0.021 <sup>*</sup>
Soil agriculture complex	2.17	0.36	6	83.71	14.60	<0.001 <sup>***</sup>
Age × forecrop	0.42	0.21	2	141.91	8.54	<0.001 <sup>***</sup>
<b>Apophytes</b>						
Age	0.017	0.017	1	196.65	1.16	0.283
Forecrop	0.021	0.011	2	184.40	0.74	0.477
Soil agriculture complex	0.312	0.052	6	85.83	3.62	0.003 <sup>**</sup>
Age × forecrop	0.009	0.004	2	193.63	0.31	0.736

<sup>1)</sup> The impact of plantation age (from the establishment) was considered as an impact inversely proportional to the time expressed in years.

Explanations: *df* = degree of freedom; *F* = value of Fisher's statistic, *P* = assessment of the probability of a type I error, \* = significant at the level of 5%, \*\* = significant at the level of 1%, \*\*\* = significant at the level of 0.1%.

Source: own study.

**Table S4.** Mean relative coverage of apophytes (%) and anthropophytes (%) depending on the age of energy willow plantations

Age	Apophytes	Antropophytes
3	97	3
4	92	8
5	93	7
6	83	17
7	85	15
8	82	18
9	88	12
10	90	10
11	63	37
12	–	–
13	100	0
14	100	0

Source: own study.