

Appendix B

We performed a Horn's parallel analysis (Horn 1965) with functions from paran library (Dinno 2018) to evaluate the number of axes to retain for the best representation of the weed composition across plots.

As expected, due to the large geographic extent of the study, a high number of axes (24) were deemed to be significant ($P < 0.05$). However, we wanted to avoid including too many explanatory variables in the subsequent analyses. Thus, we proceeded to select a smaller subset of axes that could also be related to our measures of crop grain quality. To do so we fitted models for protein content with combinations of the first ten axes (site-focused scaled scores; accounting for 65% of the cumulative variance) as the independent variables and with field and variety as random factors. Then, for the subset of models $\Delta AIC_c \leq 2$, we computed the importance of the different variables as well as the confidence intervals using functions from library MuMIN (Bartoń 2016). Axes PCA1, PCA3 and PCA5 had an importance higher than 80% for explaining protein content in crop grains and their confidence intervals did not include zero. We proceeded in a similar manner in the case of glutenin-gliadin ratio. The axis PCA3 was the one with the highest importance (0.48) to explain this ratio though the confidence interval of its estimate included the zero.

References:

- 46.- Dinno, A., 2018. paran: Horn's Test of Principal Components/Factors. R package version 1.5.2 .
47.- Horn, J.L., 1965. A rationale and a test for the number of factors in factor analysis. Psychometrika 30, 179–185.

PCA analyses of weed community composition

A PCA was performed on Hellinger transformed weed abundance data.

Total inertia: 0.814

Eigenvalues for the first 10 unconstrained axes:

PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
0.13309	0.08900	0.06302	0.05642	0.04380	0.04022	0.03443	0.02556	0.02440	0.02272

Species scores for the first ten axes (see below)

Linear mixed-effect models to select axes representing community composition across plots. To be used in subsequent analyses.

We fitted models for protein content and the glutenin to gliadin ratio as dependent variables and combinations of the first ten axes (site-focused scaled scores) as the independent variables. Field and wheat variety were included as random factors.

For each response variable (total protein concentration and glutenin to gliadin ratio) we obtained a subset of models $\Delta AIC_c \leq 2$. We computed the average coefficients for the variables (PCA axes) included in the subset, as well as the confidence interval of the estimates and the variable importance. Using this information we selected the PCA axes to be used as a representation of weed community composition across plots in subsequent analyses.

Response variable: total protein concentration

Subset of models with $\Delta AIC_c \leq 2$

	(Intercept)	PC1	PC10	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	df	logLik	AICc	delta	weight
M1	1.10	-0.12			0.29		0.24		-0.22	0.20		9	431.85	-844.96	0.00	0.03
M2	1.10	-0.13			0.26		0.26		-0.22			8	430.41	-844.24	0.73	0.02
M3	1.10	-0.14			0.31		0.24			0.21		8	430.10	-843.63	1.34	0.02
M4	1.10	-0.14		0.07	0.25		0.23		-0.23	0.20		10	432.25	-843.61	1.36	0.02
M5	1.10	-0.12			0.27	-0.09	0.26		-0.23	0.18		10	432.24	-843.58	1.38	0.01
M6	1.10	-0.13			0.23	-0.12	0.29		-0.24			9	431.09	-843.46	1.51	0.01
M7	1.10	-0.08			0.32				-0.23	0.23		8	429.93	-843.27	1.69	0.01
M8	1.10	-0.14			0.27		0.28		-0.18		0.11	9	430.92	-843.12	1.84	0.01
M9	1.10	-0.16			0.28		0.29				0.17	8	429.83	-843.08	1.89	0.01
M10	1.10	-0.13			0.29		0.25		-0.20	0.18	0.06	10	431.97	-843.04	1.92	0.01
M11	1.10	-0.15		0.08	0.22		0.25		-0.24			9	430.87	-843.00	1.96	0.01

Estimates (averaged across models with $\Delta AIC_c \leq 2$)

(Intercept)	PC1	PC3	PC5	PC7	PC8	PC2	PC4	PC9
1.10	-0.13	0.27	0.24	-0.19	0.12	0.01	-0.02	0.02

Confidence intervals of the estimates (averaged across models with $\Delta AIC_c \leq 2$)

	2.5%	97.5%
(Intercept)	1.06	1.14
PC1	-0.24	-0.02
PC3	0.07	0.48
PC5	0.02	0.50
PC7	-0.46	0.01
PC8	-0.04	0.44
PC2	-0.08	0.24
PC4	-0.31	0.10
PC9	-0.13	0.35

Variable importance (the sum of model weights over all models including each explanatory variable).

	PC1	PC3	PC5	PC7	PC8	PC9	PC4	PC2
Importance	1	1	0.92	0.84	0.59	0.21	0.17	0.16
# containing models	11	11	10	9	6	3	2	2

Response variable: glutenin to gliadin ratio

Subset of models with $\Delta AIC_c \leq 2$

	(Intercept)	PC1	PC10	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	df	logLik	AICc	delta	weight
M1	0.58				0.48							5	141.82	-273.39	0.000	0.013
M2	0.59											4	140.52	-272.87	0.521	0.010
M3	0.60					-0.42			-0.52			6	142.54	-272.74	0.648	0.009
M4	0.60								-0.47			5	141.42	-272.61	0.785	0.009
M5	0.59					-0.38						5	141.42	-272.59	0.802	0.009
M6	0.59				0.42				-0.39			6	142.42	-272.49	0.901	0.008
M7	0.58				0.53		-0.36					6	142.38	-272.43	0.968	0.008
M8	0.59				0.41	-0.30						6	142.33	-272.32	1.070	0.008
M9	0.58		0.30		0.48							6	142.21	-272.08	1.314	0.007
M10	0.58				0.48						0.23	6	142.08	-271.83	1.567	0.006
M11	0.59				0.33	-0.34			-0.45			7	143.12	-271.79	1.603	0.006
M12	0.59				0.44			0.20				6	142.04	-271.73	1.661	0.006
M13	0.59			0.19								5	140.98	-271.73	1.667	0.006
M14	0.60			0.22					-0.51			6	142.03	-271.72	1.671	0.006
M15	0.60			0.20		-0.40			-0.55			7	143.07	-271.68	1.714	0.005
M16	0.59							0.27				5	140.93	-271.62	1.776	0.005
M17	0.59				0.45					-0.20		6	141.98	-271.61	1.778	0.005
M18	0.60					-0.44			-0.53	-0.34		7	143.03	-271.6	1.789	0.005
M19	0.59		0.29									5	140.89	-271.54	1.857	0.005
M20	0.59			0.09	0.43							6	141.91	-271.48	1.908	0.005
M21	0.59									-0.29		5	140.86	-271.48	1.916	0.005
M22	0.58	-0.06			0.46							6	141.9	-271.46	1.934	0.005
M23	0.59					-0.39		0.28				6	141.89	-271.44	1.954	0.005
M24	0.59					-0.40				-0.33		6	141.87	-271.41	1.986	0.005

Estimates (averaged across models with $\Delta AIC_c \leq 2$)

(Intercept)	PC3	PC4	PC7	PC5	PC10	PC9	PC6	PC2	PC8	PC1
0.590	0.213	-0.124	-0.147	-0.018	0.022	0.008	0.025	0.024	-0.036	-0.002
0.590	0.449	-0.381	-0.484	-0.364	0.293	0.229	0.248	0.179	-0.286	-0.058

Confidence intervals of the estimates

	2.5%	97.5%
(Intercept)	0.521	0.660
PC3	-0.119	1.017
PC4	-0.937	0.174
PC7	-1.155	0.186
PC5	-1.009	0.281
PC10	-0.357	0.943
PC9	-0.387	0.846
PC6	-0.333	0.829
PC2	-0.224	0.583
PC8	-0.969	0.397
PC1	-0.340	0.224

Variable importance (the sum of model weights over all models including each explanatory variable).

	PC3	PC4	PC7	PC2	PC8	PC6	PC10	PC5	PC9	PC1
Importance:	0.48	0.32	0.3	0.14	0.13	0.1	0.07	0.05	0.04	0.03
# containing models:	11	8	7	4	4	3	2	1	1	1

Species scores (site scaled) for the first ten axes (65% cumulative variance)

Species name	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
<i>Anacyclus clavatus</i> (Desf.) Pers.	0.21	-0.15	0.38	-0.36	0.05	-0.46	0.18	0.37	-2.15	0.70
<i>Anacyclus radiatus</i> Loisel.	-0.02	0.04	-0.14	-0.09	0.05	0.02	-0.06	0.02	-0.08	0.00
<i>Anagallis arvensis</i> L.	-0.52	0.37	-1.10	-0.44	0.61	-0.01	0.71	0.62	-0.61	-0.90
<i>Anchusa azurea</i> Mill.	-0.02	0.04	-0.13	-0.03	-0.02	0.04	-0.01	0.14	0.02	-0.04
<i>Andryala laxiflora</i> DC.	0.00	0.01	0.00	0.01	0.00	-0.01	-0.01	0.00	0.01	0.01
<i>Asperugo procumbens</i> L.	-0.01	-0.23	-0.06	0.03	-0.06	-0.16	0.01	-0.05	-0.15	0.22
<i>Atriplex patula</i> L.	0.04	0.00	0.00	0.00	0.01	0.00	0.00	-0.02	0.01	0.00
<i>Atriplex prostrata</i> DC.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Avena sterilis</i> L.	-0.41	-0.11	0.76	1.07	0.61	1.92	-1.59	0.23	0.22	0.05
<i>Brassica barrelieri</i> (L.) Janka.	0.00	0.00	0.01	-0.01	-0.02	0.00	-0.01	-0.01	0.00	-0.03
<i>Borago officinalis</i> L.	-0.22	0.04	0.37	-0.55	0.66	0.39	1.83	-1.43	1.26	0.78
<i>Bromus diandrus</i> Roth.	0.09	-0.01	0.04	-0.02	-0.10	0.04	-0.04	-0.18	-0.05	-0.26
<i>Bromus matritensis</i> L.	0.00	0.00	0.00	0.00	-0.01	0.01	0.00	0.01	0.01	0.03
<i>Calendula arvensis</i> L.	0.00	0.03	-0.13	-0.07	0.05	-0.02	-0.10	0.03	-0.07	-0.02
<i>Campanula erinus</i> L.	-0.18	0.36	-0.68	-0.37	0.36	0.11	-0.14	-0.19	0.35	-0.09
<i>Capsella bursa-pastoris</i> (L.) Medik.	0.02	-0.08	0.09	-0.14	0.05	-0.11	-0.03	-0.01	-1.16	0.14
<i>Cardaria draba</i> (L.) Desv.	-0.03	-0.06	0.00	-0.02	-0.03	-0.03	0.00	-0.08	-0.08	0.17
<i>Cardamine hirsuta</i> L.	0.02	0.00	0.01	-0.01	0.00	-0.02	-0.01	0.00	0.01	-0.01
<i>Carduus pycnocephalus</i> L.	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.01
<i>Catapodium rigidum</i> (L.) C. E. Hubb.	0.01	0.02	-0.05	0.08	-0.22	0.08	0.01	0.13	0.09	0.17
<i>Centaurea diluta</i> Aiton	-0.02	0.04	-0.01	0.04	-0.01	-0.07	-0.01	-0.04	0.02	0.01
<i>Centaurea eriophora</i> L.	0.01	0.01	-0.02	0.02	-0.06	0.03	-0.01	0.06	0.04	0.10
<i>Centaurea melitensis</i> L.	0.00	-0.15	-0.05	0.06	0.02	-0.07	0.07	0.00	0.09	-0.13
<i>Centaurea pullata</i> L.	0.00	0.01	-0.02	-0.01	0.01	0.00	-0.01	-0.01	0.02	0.00
<i>Cerastium glomeratum</i> Thuill.	-0.06	0.12	0.44	0.00	0.11	-0.55	0.01	0.33	-0.96	-0.02
<i>Chamaemelum mixtum</i> (L.) All.	0.04	0.00	0.23	-0.25	-0.12	-0.18	-0.11	0.26	0.14	-0.03
<i>Chenopodium album</i> L.	-0.13	-0.14	0.24	0.27	0.59	0.79	-0.40	0.01	-0.01	-0.01
<i>Chrysanthemum coronarium</i> L.	0.09	0.11	-0.17	0.11	-0.20	0.22	-0.07	0.22	0.09	0.15
<i>Chrysanthemum segetum</i> L.	-0.09	0.04	-0.16	-0.15	0.16	0.13	0.36	0.34	-0.01	-0.15
<i>Chrozophora tinctoria</i> (L.) Raf.	0.00	0.02	-0.04	0.00	0.01	-0.01	-0.01	0.00	0.00	-0.02
<i>Cichorium intybus</i> L.	-0.16	0.43	-0.96	-0.50	0.36	0.13	-0.65	-0.38	0.13	-0.18
<i>Convolvulus arvensis</i> L.	-0.37	0.73	-1.57	-0.42	-0.05	0.60	-0.09	1.80	0.45	0.24
<i>Conyza bonariensis</i> (L.) Cronq.	-0.02	-0.01	0.05	-0.06	-0.01	0.02	0.00	-0.01	0.07	-0.06
<i>Conyza canadensis</i> (L.) Cronq.	-0.01	0.00	0.01	-0.01	0.02	0.01	0.05	-0.05	0.04	0.03
<i>Conyza sumatrensis</i> (Retz.) E. Walker.	0.00	0.00	0.02	-0.03	-0.03	-0.01	-0.02	-0.01	0.01	-0.03
<i>Cynodon dactylon</i> (L.) Pers.	-0.19	0.25	-0.41	-0.74	0.11	0.09	-0.87	-1.51	-0.49	-0.90
<i>Cynoglossum creticum</i> Mill.	0.01	0.02	-0.04	0.06	-0.17	0.06	0.01	0.11	0.07	0.14
<i>Daucus carota</i> L.	0.00	0.00	0.00	0.01	-0.02	0.00	0.00	0.01	0.01	0.01
<i>Daucus crinitus</i> Desf.	0.00	0.01	0.00	0.01	-0.04	0.02	0.01	0.01	0.00	-0.01
<i>Descurainia sophia</i> (L.) Prantl.	0.02	-0.12	-0.04	0.03	-0.02	-0.09	0.01	-0.03	-0.06	0.11
<i>Diplotaxis erucoides</i> (L.) DC.	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	-0.01
<i>Diplotaxis virgata</i> (Cav.) DC.	0.00	0.00	-0.05	0.00	0.08	0.10	0.09	0.12	-0.03	-0.13
<i>Erophila verna</i> (L.) Chevall.	0.00	0.00	0.00	-0.01	-0.01	0.00	-0.02	-0.01	0.00	-0.01
<i>Eryngium campestre</i> L.	-0.02	0.01	-0.04	-0.03	-0.02	0.05	0.07	0.09	0.02	0.05
<i>Euphorbia exigua</i> L.	0.00	0.00	0.00	0.00	-0.02	0.01	0.01	0.00	0.00	-0.01
<i>Euphorbia falcata</i> L.	-0.01	0.03	-0.08	-0.04	0.02	0.03	-0.04	0.05	0.01	0.02
<i>Euphorbia serrata</i> L.	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.02	0.00
<i>Filago pyramidata</i> L.	0.01	0.03	0.12	-0.10	-0.33	0.00	-0.07	0.21	0.01	0.06

Species name	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
<i>Foeniculum vulgare</i> Mill.	-0.06	0.15	0.09	0.31	-0.12	-0.09	0.07	0.22	0.02	0.02
<i>Fumaria officinalis</i> L.	-0.14	-0.15	0.11	0.12	0.25	0.44	-0.16	0.10	-0.10	0.12
<i>Fumaria parviflora</i> Lam.	-0.01	-0.06	-0.02	0.02	-0.04	0.01	0.05	0.02	-0.03	-0.01
<i>Galium aparine</i> L.	-0.14	-0.15	0.60	0.79	0.75	0.69	-0.57	0.42	-0.16	-0.11
<i>Galium parisiense</i> L.	-0.06	-0.41	-0.09	0.11	0.09	-0.02	0.28	-0.18	0.06	-0.74
<i>Galium tricornutum</i> Dandy.	0.12	0.03	-0.25	-0.06	-1.10	0.41	-0.08	-0.21	0.03	2.43
<i>Galium verrucosum</i> Huds	0.00	0.01	0.00	0.01	-0.06	0.02	0.02	0.00	0.00	-0.01
<i>Geranium molle</i> L.	0.04	0.00	0.00	0.01	-0.01	0.02	0.01	-0.02	0.01	-0.05
<i>Hedypnois cretica</i> (L.) Dum.–Cours.	-0.01	0.05	-0.09	-0.05	0.03	0.02	-0.04	-0.03	0.00	-0.05
<i>Helianthus annuus</i> L.	-0.07	-0.07	0.07	0.11	0.12	0.15	-0.11	-0.02	-0.03	0.02
<i>Heliotropium europaeum</i> L.	-0.01	-0.01	0.00	0.00	0.01	0.02	0.00	-0.01	0.00	-0.02
<i>Herniaria cinerea</i> DC.	0.00	0.00	0.01	-0.01	0.02	0.00	0.04	-0.03	0.00	0.01
<i>Herniaria hirsuta</i> L.	-0.01	0.00	-0.01	-0.01	0.01	0.01	0.02	0.03	-0.01	-0.01
<i>Herniaria lusitanica</i> Chaudhri.	-0.08	0.01	0.39	-0.32	0.06	-0.22	0.08	0.41	-0.55	0.30
<i>Hordeum vulgare</i> L.	-0.02	0.12	-0.21	-0.10	0.08	0.01	-0.20	0.01	0.09	0.08
<i>Hypecoum imberbe</i> Sm.	-0.02	-0.10	-0.01	-0.01	-0.04	-0.08	-0.02	-0.02	-0.09	0.06
<i>Juncus bufonius</i> L.	0.00	0.02	1.59	-1.82	-0.44	-1.00	-1.00	1.14	1.55	-0.28
<i>Kickxia elatine</i> (L.) Dumort.	-0.02	0.07	0.07	0.14	0.05	-0.11	0.04	0.08	-0.03	-0.04
<i>Kickxia spuria</i> (L.) Dumort.	-0.13	0.32	-0.57	-0.20	0.18	-0.04	-0.38	-0.12	0.15	0.00
<i>Lactuca serriola</i> L.	-0.05	0.01	0.02	0.07	-0.09	-0.02	0.01	-0.09	-0.51	0.07
<i>Lamium amplexicaule</i> L.	0.04	-0.11	-0.01	-0.02	-0.05	0.01	-0.02	-0.17	-0.47	0.84
<i>Lathyrus clymenum</i> L.	0.00	0.02	-0.03	-0.01	0.01	0.00	-0.02	-0.04	0.02	-0.01
<i>Lathyrus ochrus</i> (L.) DC.	0.03	0.01	-0.01	0.01	0.01	0.00	-0.01	-0.03	0.02	-0.01
<i>Lens culinaris</i> Medik.	0.02	0.00	-0.01	0.02	-0.04	0.02	0.00	0.02	0.02	0.02
<i>Linaria hirta</i> (L.) Moench.	-0.01	0.02	0.01	0.03	-0.08	0.04	0.01	0.01	0.01	-0.02
<i>Lolium rigidum</i> Gaudin.	3.45	0.12	-0.47	0.70	0.37	-0.25	0.00	0.25	0.39	-0.39
<i>Lythrum hyssopifolia</i> L.	-0.03	0.01	0.11	-0.09	0.06	0.02	0.22	-0.09	0.10	0.09
<i>Malva nicaensis</i> All.	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
<i>Malva sylvestris</i> L.	0.01	0.00	0.00	0.00	0.00	0.00	0.01	-0.01	0.01	-0.01
<i>Medicago orbicularis</i> (L.) Bartal.	0.01	0.00	-0.01	0.01	-0.02	0.01	-0.01	0.02	0.02	0.04
<i>Medicago polymorpha</i> L.	0.06	0.33	0.20	0.17	-2.60	1.34	0.67	-0.23	-0.19	-1.33
<i>Medicago truncatula</i> Gaertn.	-0.01	0.01	-0.02	-0.03	0.02	0.00	-0.02	-0.07	-0.03	-0.03
<i>Melilotus indicus</i> (L.) All.	-0.01	0.02	-0.03	-0.04	0.02	0.02	-0.05	-0.10	-0.03	-0.05
<i>Misopates orontium</i> (L.) Raf.	-0.01	0.08	0.04	0.05	0.05	-0.12	-0.03	0.10	-0.08	-0.02
<i>Papaver hybridum</i> L.	-0.04	-0.11	-0.08	0.01	-0.07	-0.05	-0.01	0.01	0.01	0.07
<i>Papaver rhoeas</i> L.	-0.66	-3.00	-1.10	0.81	-0.44	-0.90	-0.16	0.23	0.54	-0.25
<i>Phalaris brachystachys</i> Link	-0.02	0.00	-0.01	-0.03	0.02	0.01	0.04	-0.03	-0.05	-0.07
<i>Phalaris minor</i> Retz.	0.03	-0.02	0.01	0.01	-0.11	0.04	0.09	0.11	0.01	-0.18
<i>Phalaris paradoxa</i> L.	-0.13	0.21	-0.15	-0.13	0.22	-0.03	0.23	-0.44	0.32	0.16
<i>Picris echioides</i> L.	-0.36	0.46	0.50	0.64	0.04	-0.54	0.36	0.73	-0.12	-0.18
<i>Plantago afra</i> L.	0.00	0.01	0.00	0.02	-0.09	0.04	0.02	0.02	0.01	-0.02
<i>Plantago lagopus</i> L.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Poa annua</i> L.	0.01	0.01	0.01	0.02	0.02	-0.01	0.02	-0.01	0.00	-0.01
<i>Polycarpon tetraphyllum</i> (L.) L.	-0.06	0.02	0.28	-0.27	0.03	-0.18	0.01	0.32	-0.27	0.19
<i>Polygonum aviculare</i> L.	-0.28	-0.22	1.08	0.36	1.05	0.33	1.18	0.21	0.14	-0.58
<i>Polygonum bellardii</i> All.	-0.24	0.50	-0.56	0.02	0.12	-0.41	-0.37	-0.44	0.12	0.01
<i>Polygonum convolvulus</i> L.	0.17	0.00	0.02	0.07	0.06	0.06	0.04	-0.06	0.07	-0.16
<i>Pulicaria paludosa</i> Link.	-0.07	-0.05	-0.10	-0.07	0.10	0.03	0.01	-0.20	-0.17	-0.28

Species name	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
<i>Raphanus raphanistrum</i> L.	-0.24	0.07	-0.17	-0.30	0.18	0.43	1.21	1.06	-0.19	-0.57
<i>Rapistrum rugosum</i> (L.) All.	-0.01	0.03	-0.06	-0.03	0.02	0.01	-0.04	0.00	0.04	0.02
<i>Retama sphaerocarpa</i> (L.) Boiss.	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	-0.02	-0.01	-0.01
<i>Ridolfia segetum</i> (L.) Moris.	-0.10	0.18	-0.17	0.03	0.03	-0.17	-0.13	-0.21	0.00	-0.02
<i>Roemeria hybrida</i> (L.) DC.	-0.01	-0.03	-0.01	0.01	-0.01	-0.02	0.00	-0.01	0.00	0.03
<i>Rumex pulcher</i> L.	-0.08	0.24	-0.58	-0.24	0.21	0.18	-0.31	0.46	0.17	0.25
<i>Sagina apetala</i> Ard.	0.01	-0.01	0.00	-0.01	0.00	-0.03	0.00	0.00	-0.08	0.01
<i>Scandix pecten-veneris</i> L.	0.00	-0.02	0.02	0.03	0.04	0.05	-0.04	0.01	0.01	-0.01
<i>Scolymus hispanicus</i> L.	-0.04	0.07	-0.15	-0.11	0.07	0.02	-0.11	-0.14	-0.04	-0.07
<i>Scolymus maculatus</i> L.	-0.03	0.05	-0.09	-0.03	0.02	-0.01	-0.05	0.01	0.01	0.00
<i>Scorpiurus muricatus</i> L.	-0.01	0.12	-0.09	0.23	-1.06	0.51	0.20	0.32	0.16	0.22
<i>Scorpiurus sulcatus</i> L.	-0.02	0.06	-0.12	-0.06	0.03	0.04	-0.05	0.10	0.06	0.09
<i>Senecio vulgaris</i> L.	-0.01	0.02	-0.04	-0.03	0.01	0.00	-0.03	-0.07	-0.02	-0.03
<i>Sherardia arvensis</i> L.	-0.04	-0.02	-0.10	0.05	-0.27	0.10	0.13	0.04	0.02	-0.22
<i>Silene gallica</i> L.	0.00	0.02	-0.03	-0.02	0.02	0.01	-0.03	-0.04	-0.02	-0.03
<i>Silybum marianum</i> (L.) Gaertn.	-0.02	-0.06	0.00	-0.02	0.05	0.00	0.18	-0.12	0.08	-0.05
<i>Silene muscipula</i> L.	0.00	0.00	-0.01	0.01	-0.02	0.00	0.00	0.01	0.01	0.02
<i>Sinapis alba</i> L.	0.00	0.01	0.00	0.01	-0.01	0.00	0.00	0.01	0.01	-0.01
<i>Sinapis arvensis</i> L.	-0.86	1.65	0.11	2.11	-0.44	-1.72	-0.12	-0.20	0.49	-0.10
<i>Sonchus asper</i> (L.) Hill	-0.05	0.16	-0.27	-0.08	0.08	0.01	-0.17	0.04	0.15	0.10
<i>Sonchus oleraceus</i> L.	-0.18	0.35	-0.51	-0.16	0.20	-0.14	-0.39	-0.53	-0.12	-0.18
<i>Spergula arvensis</i> L.	0.01	0.00	0.03	-0.04	-0.01	-0.04	-0.03	0.04	0.03	0.00
<i>Spergularia rubra</i> (L.) J. Presl & C. Presl.	0.01	-0.02	0.12	-0.18	0.00	-0.16	-0.03	0.15	-0.33	0.04
<i>Stachys arvensis</i> (L.) L.	-0.03	0.01	0.06	-0.06	0.05	0.08	0.27	-0.21	0.17	0.10
<i>Stellaria media</i> (L.) Vill.	0.03	0.00	0.03	0.03	0.02	0.09	-0.02	0.03	-0.07	0.00
<i>Thymelaea sanamunda</i> All.	0.01	0.00	0.02	-0.03	0.00	-0.02	-0.01	0.02	0.04	0.00
<i>Torilis arvensis</i> (Huds.) Link.	-0.03	0.06	0.08	0.21	0.06	0.04	-0.02	0.05	-0.07	-0.16
<i>Trifolium glomeratum</i> L.	0.00	0.01	-0.01	-0.01	0.00	0.00	-0.01	-0.03	-0.01	0.00
<i>Trigonella polyceratia</i> L.	-0.01	-0.02	-0.01	0.00	-0.01	-0.01	0.00	0.00	0.01	0.01
<i>Trifolium squarrosum</i> L.	0.01	-0.01	-0.01	-0.01	0.00	-0.02	0.00	0.00	-0.07	0.01
<i>Urospermum picroides</i> (L.) F. W. Schmidt.	0.00	0.00	-0.01	-0.01	0.01	0.00	-0.01	-0.03	-0.01	-0.01
<i>Urtica dioica</i> L.	0.02	0.00	0.01	0.01	0.01	0.03	0.02	0.01	-0.03	-0.02
<i>Urtica urens</i> L.	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	-0.01
<i>Vaccaria hispanica</i> (Mill.) Rauschert.	0.00	0.01	-0.02	0.00	0.01	0.00	-0.02	0.00	0.02	0.01
<i>Verbena officinalis</i> L.	-0.01	-0.02	0.01	0.00	0.02	0.00	0.03	-0.01	0.00	-0.05
<i>Veronica arvensis</i> L.	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	-0.01	-0.01
<i>Veronica hederifolia</i> L.	-0.01	-0.21	-0.01	0.06	-0.03	0.01	-0.08	-0.13	-0.01	0.04
<i>Veronica persica</i> Poir.	-0.03	-0.05	0.05	0.05	0.07	0.11	-0.07	0.00	-0.02	0.01
<i>Veronica polita</i> Fr.	0.08	-0.16	0.44	-0.65	-0.51	-0.27	-0.76	-0.71	-0.51	-0.85
<i>Vicia faba</i> L.	-0.02	0.03	0.00	0.03	0.02	-0.01	-0.03	0.01	0.02	0.01
<i>Vicia sativa</i> L.	0.03	-0.02	-0.03	0.05	-0.23	0.05	-0.01	0.11	0.07	0.07
<i>Viola arvensis</i> Murray.	-0.01	-0.06	0.04	0.07	0.08	0.10	-0.08	0.03	0.02	-0.01