

Table S1. Trait values for species recorded along the 26 sampled fields. Data show species values for eight traits. Data Sources appear below

Scientific name	functional type	maximum height (cm)	life form	growth form	flowering onset (month, January=1)	flowering duration (months)	(#	SLA (mm ² /mg)	Seed weight (mg)
<i>Anacyclus clavatus</i> (Desf.) Pers.	forb	60 OCC	therophyte	erect	4 bast	3 bast			0.60
<i>Anacyclus radiatus</i> Loisel.	forb	50 OCC	therophyte	erect	4 bast	3 bast			0.60
<i>Anagallis arvensis</i> L.	forb	40 FI	therophyte	erect	3 bast	2 bast		29.7*a	0.50
<i>Anchusa azurea</i> Mill.	forb	180 FI	hemicryptophyte	erect	3 bast	5 bast		19.04*	11.10
<i>Andryala laxiflora</i> DC.	forb	80 OCC	therophyte	erect	6 bast	2 bast		24.12b	0.15
<i>Asperugo procumbens</i> L.	forb	60 FI	therophyte	climbing	4 bast	3 bast		69.86*	1.62
<i>Atriplex patula</i> L.	forb	120 FI	therophyte	erect	7 FI	3 FI		17.38*	1.28
<i>Atriplex prostrata</i> DC.	forb	120 FI	therophyte	erect	7 bast	5 bast		20.98*	0.86
<i>Avena sterilis</i> L.	grass	150 OCC	therophyte	erect	4 bast	2 bast		27.29*a	48.20
<i>Brassica barrelieri</i> (L.) Janka.	forb	80 FI	therophyte	erect	3 FI	4 FI			0.15
<i>Borago officinalis</i> L.	forb	70 FI	therophyte	erect	1 FI	7 FI		23.75*	16.90
<i>Bromus diandrus</i> Roth.	grass	110 OCC	therophyte	caespitose	4 bast	3 bast		35.8c	11.24
<i>Bromus matritensis</i> L.	grass	60 OCC	therophyte	caespitose	4 bast	3 bast		37.84*	3.33
<i>Calendula arvensis</i> L.	forb	60 OR	therophyte	creepy	1 bast	5 bast		23.7a	5.20
<i>Campanula erinus</i> L.	forb	35 FI	therophyte	erect	4 bast	2 bast		31.5ac	0.01
<i>Capsella bursa-pastoris</i> (L.) Medik.	forb	70 FI	therophyte	erect	2 bast	3 bast		30.02*	0.10
<i>Cardaria draba</i> (L.) Desv.	forb	50 FI	hemicryptophyte	erect	4 bast	3 bast		20.5*	2.15
<i>Cardamine hirsuta</i> L.	forb	25 FI	therophyte	erect	2 FI	4 FI		27.78*	0.12
<i>Carduus pycnocephalus</i> L.	forb	130 OCC	therophyte	erect	4 bast	3 bast		38d	5.29
<i>Catapodium rigidum</i> (L.) C. E. Hubb.	grass	40 OCC	therophyte	caespitose	4 bast	2 bast		19.68*	0.26
<i>Centaurea diluta</i> Aiton	forb	250 OCC	therophyte	erect	5 bast	2 bast			3.52
<i>Centaurea eriophora</i> L.	forb	70 OCC	therophyte	erect	5 OCC	2 OCC			8.90
<i>Centaurea melitensis</i> L.	forb	85 OCC	therophyte	erect	5 bast	3 bast		30.5e	1.40
<i>Centaurea pullata</i> L.	forb	60 OCC	hemicryptophyte	creepy	3 bast	3 bast			
<i>Cerastium glomeratum</i> Thuill.	forb	55 FI	therophyte	erect	2 bast	2 bast		21.75*	0.05
<i>Chamaemelum mixtum</i> (L.) All.	forb	50 OCC	therophyte	erect	4 bast	4 bast		32.22bd	0.14
<i>Chenopodium album</i> L.	forb	150 FI	therophyte	erect	4 bast	9 bast		41f	0.60
<i>Chrysanthemum coronarium</i> L.	forb	100 OCC	therophyte	erect	4 bast	3 bast			3.15
<i>Chrysanthemum segetum</i> L.	forb	50 OCC	therophyte	erect	4 bast	3 bast		28 T	
<i>Chrozophora tinctoria</i> (L.) Raf.	forb	40 FI	therophyte	erect	6 bast	3 bast			16.00
<i>Cichorium intybus</i> L.	forb	120 OCC	hemicryptophyte	erect	4 bast	4 bast		26.43*	5.50
<i>Convolvulus arvensis</i> L.	forb	200 OCC	geophyte	climbing	4 bast	6 bast		28.39*	15.10
<i>Conyza bonariensis</i> (L.) Cronq.	forb	60 OCC	therophyte	erect	5 bast	8 bast			0.10
<i>Conyza canadensis</i> (L.) Cronq.	forb	130 OCC	therophyte	erect	6 bast	5 bast		22.04*	0.08
<i>Conyza sumatrensis</i> (Retz.) E. Walker.	forb	300 OCC	therophyte	erect	6 bast	7 bast		13.9c	0.05
<i>Cynodon dactylon</i> (L.) Pers.	grass	50 OR	hemicryptophyte	rhizomatous	5 bast	6 bast		30.63*	0.20
<i>Cynoglossum creticum</i> Mill.	forb	70 FI	therophyte	erect	3 bast	3 bast			26.30
<i>Daucus carota</i> L.	forb	170 FI	hemicryptophyte	rosulate	5 bast	3 bast		19.62*	1.00
<i>Daucus crinitus</i> Desf.	forb	115 FI	hemicryptophyte	rosulate	4 FI	4 FI			2.17
<i>Descurainia sophia</i> (L.) Prantl.	forb	105 FI	therophyte	erect	4 bast	3 bast		26.69*	0.10
<i>Diplotaxis erucoides</i> (L.) DC.	forb	80 FI	therophyte	erect	1 bast	5 bast		24.8*a	0.20
<i>Diplotaxis virgata</i> (Cav.) DC.	forb	100 OCC	therophyte	erect	3 bast	2 bast			
<i>Erophila verna</i> (L.) Chevall.	forb	18 FI	therophyte	erect	2 FI	6 FI		27.2*	0.47
<i>Eryngium campestre</i> L.	forb	60 FI	hemicryptophyte	erect	4 bast	4 bast		9.22*	1.11
<i>Euphorbia exigua</i> L.	forb	30 FI	therophyte	erect	3 FI	5 FI		26.1*	0.35
<i>Euphorbia falcata</i> L.	forb	25 FI	therophyte	erect	5 bast	2 bast			3.20
<i>Euphorbia serrata</i> L.	forb	60 FI	chamaephyte	erect	2 FI	6 FI			7.60
<i>Filago pyramidata</i> L.	forb	44 OCC	therophyte	erect	4 bast	4 bast		30.56*ab	0.05
<i>Foeniculum vulgare</i> Mill.	forb	250 FI	hemicryptophyte	rosulate	6 bast	5 bast		8.6*	3.00
<i>Fumaria officinalis</i> L.	forb	80 OCC	therophyte	erect	3 bast	2 bast		28.54*	3.24
<i>Fumaria parviflora</i> Lam.	forb	50 OCC	therophyte	erect	3 bast	2 bast		25.9*	1.76
<i>Galium aparine</i> L.	forb	167 FI	therophyte	climbing	3 bast	4 bast		34.68*	8.70
<i>Galium parisiense</i> L.	forb	55 FI	therophyte	climbing	4 bast	3 bast		25.2*	0.20
<i>Galium tricomutum</i> Dandy.	forb	83 FI	therophyte	climbing	3 bast	4 bast		22.42*	10.49
<i>Galium verrucosum</i> Huds	forb	35 FI	therophyte	climbing	3 bast	3 bast		19.47*	15.49
<i>Geranium molle</i> L.	forb	45 FI	therophyte	erect	3 bast	3 bast		27.63*	1.08
<i>Hedypnois cretica</i> (L.) Dum.–Cours.	forb	40 OCC	therophyte	erect	3 bast	4 bast		37d	0.85
<i>Heliotropium europaeum</i> L.	forb	50 FI	therophyte	erect	6 bast	5 bast			1.10
<i>Hemiaria cinerea</i> DC.	forb	20 FI	therophyte	creepy	2 FI	6 FI		3g	0.22
<i>Hemiaria hirsuta</i> L.	forb	20 OR	therophyte	creepy	4 FI	6 FI		31.22T	0.19
<i>Hemiaria lusitanica</i> Chaudhri.	forb	21 FI	therophyte	creepy	4 OCC	4 OCC			
<i>Hordeum vulgare</i> L.	grass		therophyte	caespitose	5 bast	2 bast		21.75*	41.90
<i>Hypecoum imberbe</i> Sm.	forb	40 FI	therophyte	erect	3 bast	3 bast			0.09
<i>Juncus bufonius</i> L.	grass	45 FI	therophyte	caespitose	3 bast	2 bast		17.87*	0.02
<i>Kickxia elatine</i> (L.) Dumort.	forb	60 FI	therophyte	creepy	6 bast	3 bast		40.3*	0.23
<i>Kickxia spuria</i> (L.) Dumort.	forb	60 OCC	therophyte	creepy	6 bast	4 bast		29.03*	

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<i>Lactuca serriola</i> L.	forb	120 OCC	therophyte	erect	4 bast	4 bast		20.4bh	0.58
<i>Lamium amplexicaule</i> L.	forb	40 OCC	therophyte	erect	2 bast	2 bast		19.7*	0.60
<i>Lathyrus clymenum</i> L.	legume	100 FI	therophyte	climbing	3 bast	3 bast			88.23
<i>Lathyrus ochrus</i> (L.) DC.	legume	150 FI	therophyte	climbing	3 bast	3 bast		22.8a	96.23
<i>Lens culinaris</i> Medik.	legume	50 FI	therophyte	erect	3 bast	2 bast			35.20
<i>Linaria hirta</i> (L.) Moench.	forb	80 FI	therophyte	erect	4 bast	3 bast			
<i>Lolium rigidum</i> Gaudin.	grass	120 OCC	therophyte	caespitose	4 bast	3 bast		25.75*a	3.34
<i>Lythrum hyssopifolia</i> L.	forb	40 FI	therophyte	erect	5 bast	2 bast		24.03*	0.44
<i>Malva nicaensis</i> All.	forb	100 OCC	hemicryptophyte	erect	3 bast	4 bast			8.60
<i>Malva sylvestris</i> L.	forb	150 OCC	hemicryptophyte	erect				22.61*	5.40
<i>Medicago orbicularis</i> (L.) Bartal.	legume	60 FI	therophyte	creepy	3 bast	3 bast		24.5a	9.60
<i>Medicago polymorpha</i> L.	legume	90 FI	therophyte	creepy	3 bast	2 bast		20.13*	30.10
<i>Medicago truncatula</i> Gaertn.	legume	40 OCC	therophyte	creepy	3 bast	2 bast		19.8a	4.10
<i>Melilotus indicus</i> (L.) All.	legume	70 FI	therophyte	erect	3 bast	2 bast		20.6*	2.30
<i>Misopates orontium</i> (L.) Raf.	forb	70 FI	therophyte	erect	4 bast	2 bast		30.86*	0.13
<i>Papaver hybridum</i> L.	forb	35 FI	therophyte	erect	4 bast	2 bast		17.5i	0.12
<i>Papaver rhoeas</i> L.	forb	50 FI	therophyte	erect	4 bast	2 bast		33.07*	0.20
<i>Phalaris brachystachys</i> Link	grass	70 OCC	therophyte	caespitose	4 bast	3 bast		26.7a	1.92
<i>Phalaris minor</i> Retz.	grass	70 OCC	therophyte	caespitose	4 bast	3 bast		27jk	1.59
<i>Phalaris paradoxa</i> L.	grass	120 OCC	therophyte	caespitose	4 bast	3 bast			1.30
<i>Picris echioides</i> L.	forb	120 OCC	hemicryptophyte	erect	4 bast	3 bast		32.93*	1.31
<i>Plantago afra</i> L.	forb	35 FI	therophyte	erect	3 bast	3 bast		15.5a	0.98
<i>Plantago lagopus</i> L.	forb	15 OCC	hemicryptophyte	rosulate	3 bast	5 bast		21.3a	0.30
<i>Poa annua</i> L.	grass	50 OCC	therophyte	caespitose	1 bast	5 bast		36.43*	0.30
<i>Polycarpon tetraphyllum</i> (L.) L.	forb	35 FI	therophyte	creepy	2 bast	3 bast			0.05
<i>Polygonum aviculare</i> L.	forb	70 FI	therophyte	creepy	4 bast	3 bast		28.88*	1.30
<i>Polygonum bellardii</i> All.	forb	60 FI	therophyte	erect	4 bast	3 bast			1.55
<i>Polygonum convolvulus</i> L.	forb	100 OCC	therophyte	climbing	5 FI	6 FI		6.17*	6.90
<i>Pulicaria paludosa</i> Link.	forb	75 OCC	therophyte	erect	5 bast	8 bast			
<i>Raphanus raphanistrum</i> L.	forb	80 OCC	therophyte	erect	3 bast	3 bast		25.63*	23.65
<i>Rapistrum rugosum</i> (L.) All.	forb	150 OCC	therophyte	erect	4 bast	3 bast		20.15*a	2.90
<i>Ridolfia segetum</i> (L.) Moris.	forb	140 FI	therophyte	erect	6 bast	2 bast			0.60
<i>Roemeria hybrida</i> (L.) DC.	forb	40 FI	therophyte	erect	3 bast	3 bast		16i	0.20
<i>Rumex pulcher</i> L.	forb	60 FI	hemicryptophyte	rosulate	5 bast	2 bast		28n	2.10
<i>Sagina apetala</i> Ard.	forb	10 FI	therophyte	creepy	2 bast	3 bast		21.44*	0.01
<i>Scandix pecten-veneris</i> L.	forb	40 FI	therophyte	erect	3 bast	3 bast		18.39*	18.30
<i>Scolymus hispanicus</i> L.	forb	250 OCC	hemicryptophyte	erect	5 bast	3 bast			3.70
<i>Scolymus maculatus</i> L.	forb	100 OCC	therophyte	erect	5 bast	3 bast			1.55
<i>Scorpiurus muricatus</i> L.	legume	60 FI	therophyte	creepy	3 bast	3 bast		13.1a	8.70
<i>Scorpiurus sulcatus</i> L.	legume	40 FI	therophyte	creepy	3 bast	3 bast			10.70
<i>Senecio vulgaris</i> L.	forb	52 OCC	therophyte	erect	3 bast	4 bast		29.82b	0.23
<i>Sherardia arvensis</i> L.	forb	30 FI	therophyte	creepy	2 bast	4 bast		22.47*	1.76
<i>Silene gallica</i> L.	forb	80 FI	therophyte	erect	3 bast	3 bast		26.63*o	0.33
<i>Silybum marianum</i> (L.) Gaertn.	forb	250 FI	hemicryptophyte	erect	4 bast	2 bast		13.7a	24.30
<i>Silene muscipula</i> L.	forb	50 FI	therophyte	erect	5 FI	4 FI			0.33
<i>Sinapis alba</i> L.	forb	100 FI	therophyte	erect	4 bast	3 bast		21.65*a	5.30
<i>Sinapis arvensis</i> L.	forb	100 FI	therophyte	erect	3 bast	4 bast		37.19*a	1.90
<i>Sonchus asper</i> (L.) Hill	forb	120 OR	therophyte	erect	3 bast	4 bast		24.97*	0.28
<i>Sonchus oleraceus</i> L.	forb	60 OR	therophyte	erect	3 bast	4 bast		40.53*	0.30
<i>Spergula arvensis</i> L.	forb	70 FI	therophyte	erect	3 bast	3 bast		18.88*	0.30
<i>Spergularia rubra</i> (L.) J. Presl & C. Presl.	forb	45 FI	hemicryptophyte	erect	3 bast	4 bast		18.29*	0.07
<i>Stachys arvensis</i> (L.) L.	forb	45 FI	therophyte	erect	2 bast	3 bast		29.8*	0.70
<i>Stellaria media</i> (L.) Vill.	forb	20 FI	therophyte	erect	2 bast	4 bast		57.22*	0.40
<i>Thymelaea sanamunda</i> All.	forb	30 FI	chamaephyte	erect	5 FI	4 FI			
<i>Torilis arvensis</i> (Huds.) Link.	forb	200 FI	therophyte	erect	5 bast	3 bast		28.08*	2.10
<i>Trifolium glomeratum</i> L.	forb	40 FI	therophyte	erect	4 FI	3 bast		31.87b	0.40
<i>Trigonella polyceratia</i> L.	legume	40 FI	therophyte	erect	4 FI	4 FI		14.16T	
<i>Trifolium squarosum</i> L.	legume	80 FI	therophyte	erect	4 FI	4 FI			3.60
<i>Urospermum picroides</i> (L.) F. W. Schmidt.	forb	60 OCC	therophyte	erect	4 bast	3 bast		38.6c	1.60
<i>Urtica dioica</i> L.	forb	150 OCC	hemicryptophyte	erect	4 FI	6 FI		28.48*	0.20
<i>Urtica urens</i> L.	forb	80 FI	therophyte	erect	2 bast	3 bast		21*	0.52
<i>Vaccaria hispanica</i> (Mill.) Rauschert.	forb	65 FI	therophyte	erect	4 bast	2 bast		20.37*i	4.95
<i>Verbena officinalis</i> L.	forb	100 OCC	hemicryptophyte	erect	6 bast	5 bast		14.2*	0.30
<i>Veronica arvensis</i> L.	forb	40 FI	therophyte	creepy	2 FI	7 FI		25.75*	0.12
<i>Veronica hederifolia</i> L.	forb	35 FI	therophyte	creepy	1 FI	11 FI		28.24*	4.00
<i>Veronica persica</i> Poir.	forb	50 OCC	therophyte	creepy	3 bast	3 bast		39.6*	1.08
<i>Veronica polita</i> Fr.	forb	35 FI	therophyte	creepy	1 FI	11 FI		27.35*	0.36
<i>Vicia sativa</i> L.	legume	80 OCC	therophyte	climbing	3 FI	4 FI		22.86*	34.90
<i>Viola arvensis</i> Murray.	forb	30 FI	therophyte	erect	2 bast	3 bast		27.07*	0.52

Maximum height [FI,(Castroviejo, 1986-2012), OCC (Valdés et al., 1987), OR (Blanca et al., 2011)] Life form and growth form [(Blanca et al., 2011)] Flowering onset and flowering duration [bast (F. Bastida, University of Huelva, Spain, personal observation), FI (Castroviejo, 1986-2012), OCC (Valdés et al., 1987)] SLA [* (Kleyer et al., 2008) , a (May, 2013) , b (Guerrero, 2013) , c (Raevel et al., 2012) , d (Marañón and Grubb, 1993) , e (Moroney et al., 2013) , f (Haraguchi et al., 2009) , g (Baumann, 2009) , h (Zhang et al., 2007) , i (Saatkamp, 2009) , j (Salehian and Eshaghi, 2012) , k (Singh et al., 2013) , m (Pugnaire et al., 1996), n (Wardle et al., 1998) , o (Ferrerira de Castro, 2008) , T, (Kattge et al., 2011)] Seed weight (Seed Information Database (SID), retrieved in 2017)

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