

Supplementary

Table S1. Accession numbers and basic characteristics of DNA barcodes used to create local reference database for grass pollen metabarcoding. * - the sequenced in this work

Binomial species name	MSU Herbarium voucher	GenBank accession	Length, bp	GC-content
trnL-F intergenic spacer				
<i>Alopecurus pratensis</i> *	MW0227587	MW392193	341	30%
<i>Alopecurus pratensis</i> *	MW0227686	MW392194	341	30%
<i>Arrhenatherum elatius</i> *	MW0200303	MW392195	336	31%
<i>Arrhenatherum elatius</i> *	MW0235748	MW392196	336	31%
<i>Briza media</i> *	MW0240831	MW392197	343	32%
<i>Briza media</i> *	MW0564129	MW392198	342	32%
<i>Bromus inermis</i> *	MW0252346	MW392199	362	29%
<i>Bromus inermis</i> *	MW0564336	MW392200	362	29%
<i>Calamagrostis epigeios</i> *	MW0232221	MW392201	340	32%
<i>Calamagrostis epigeios</i> *	MW0232325	MW392202	340	32%
<i>Dactylis glomerata</i> *	MW0241080	MW392203	352	31%
<i>Dactylis glomerata</i> *	MW0241082	MW392204	352	31%
<i>Elymus repens</i>		KP210964	350	29%
<i>Elymus repens</i> *	MW1072493	MW392205	342	30%
<i>Elymus repens</i> *	MW0200523	MW392207	324	29%
<i>Elymus repens</i> *	MW0564353	MW392206	308	30%
<i>Festuca pratensis</i> *	MW0249535	MW392208	342	32%
<i>Festuca pratensis</i> *	MW0564330	MW392209	342	32%
<i>Lolium perenne</i> *	MW0255247	MW392210	346	33%
<i>Lolium perenne</i> *	MW0564348	MW392211	347	32%
<i>Phleum pratense</i> *	MW1072502	MW392212	345	30%
<i>Phleum pratense</i> *	MW0226359	MW415936	345	30%
<i>Phleum pratense</i> *	MW0226397	MW392213	345	30%
<i>Poa annua</i> *	MW0242177	MW392214	340	29%
<i>Poa annua</i> *	MW0242179	MW392215	342	30%
<i>Poa pratensis</i>		KX522664	363	30%
<i>Poa pratensis</i> *	MW0564191	MW392216	363	30%
<i>Poa supina</i> *	MW0560039	MW392217	340	29%
<i>Poa supina</i> *	MW0560040	MW392218	340	29%
<i>Poa trivialis</i>		KX522672	307	29%
<i>Poa trivialis</i>		KX522673	307	29%
<i>Poa trivialis</i> *	MW0564230	MW392219	307	29%
<i>Poa trivialis</i> *	MW0564234	MW392220	307	29%
5'-ETS				

<i>Alopecurus pratensis</i>		KM523686	228	56%
<i>Alopecurus pratensis</i> *	MW0227587	MW392221	228	55%
<i>Alopecurus pratensis</i> *	MW0227686	MW392222	228	55%
<i>Arrhenatherum elatius</i>		KR052874	214	54%
<i>Arrhenatherum elatius</i>		KP325243	214	53%
<i>Arrhenatherum elatius</i> *	MW1072498	MW415938	214	54%
<i>Arrhenatherum elatius</i> *	MW0200303	MW392223	214	54%
<i>Arrhenatherum elatius</i> *	MW0235748	MW392224	214	54%
<i>Briza media</i>		KP325258	229	54%
<i>Briza media</i> *	MW1067092	MW415939	229	54%
<i>Briza media</i> *	MW0240831	MW392225	229	54%
<i>Briza media</i> *	MW0564129	MW392226	229	54%
<i>Bromus inermis</i>		KP996917	444	53%
<i>Bromus inermis</i>		KP996918	444	53%
<i>Bromus inermis</i>		KP996912	444	53%
<i>Bromus inermis</i>		KP996919	444	53%
<i>Bromus inermis</i>		KP996920	444	53%
<i>Bromus inermis</i>		KP996915	444	53%
<i>Bromus inermis</i>		KP996913	444	53%
<i>Bromus inermis</i>		KP996916	444	53%
<i>Bromus inermis</i>		KP996914	444	53%
<i>Bromus inermis</i>		KP996911	444	53%
<i>Bromus inermis</i>		KJ632440	444	53%
<i>Bromus inermis</i> *	MW0252346	MW392227	444	53%
<i>Bromus inermis</i> *	MW0564336	MW392228	444	53%
<i>Calamagrostis epigeios</i>		KX872343	176	54%
<i>Calamagrostis epigeios</i>		KX872344	176	54%
<i>Calamagrostis epigeios</i>		KX872345	176	54%
<i>Calamagrostis epigeios</i>		KX872342	176	54%
<i>Calamagrostis epigeios</i> *	MW1072496	MW415941	176	54%
<i>Calamagrostis epigeios</i> *	MW0232221	MW392229	175	54%
<i>Calamagrostis epigeios</i> *	MW0232325	MW392230	175	54%
<i>Dactylis glomerata</i>		KJ599050	228	54%
<i>Dactylis glomerata</i> *	MW0241080	MW392231	228	54%
<i>Dactylis glomerata</i> *	MW0241082	MW392232	228	54%
<i>Elymus repens</i>		KP325283	220	59%
<i>Elymus repens</i> *	MW1072493	MW415943	220	59%
<i>Elymus repens</i> *	MW0200523	MW392233	220	59%
<i>Elymus repens</i> *	MW0564353	MW392234	220	59%
<i>Festuca arundinacea</i>		KJ599100	230	53%
<i>Festuca arundinacea</i>		KJ599101	230	53%
<i>Festuca arundinacea</i>		KP325284	230	54%
<i>Festuca arundinacea</i>		KP997002	230	54%

	Fearu_2			
<i>Festuca arundinacea</i> *	(laboratory herbarium)	MW415944	230	53%
<i>Festuca pratensis</i>		KJ599105	230	50%
<i>Festuca pratensis</i>		JN187582	230	53%
<i>Festuca pratensis</i>		KP325293	230	53%
<i>Festuca pratensis</i> *	MW1072495	MW415945	230	53%
<i>Festuca pratensis</i> *	MW0249535	MW392235	230	53%
<i>Festuca pratensis</i> *	MW0564330	MW392236	230	53%
<i>Lolium perenne</i>		JN187583	230	54%
<i>Lolium perenne</i>		KP325315	230	54%
<i>Lolium perenne</i>		KJ599109	230	54%
<i>Lolium perenne</i> *	MW0255247	MW392237	232	53%
<i>Lolium perenne</i> *	MW0564348	MW392238	232	53%
<i>Phleum pratense</i>		KM523723	228	56%
<i>Phleum pratense</i>		GQ324284	228	56%
<i>Phleum pratense</i>		KM523722	228	56%
<i>Phleum pratense</i> *	MW1072502	MW392239	228	56%
<i>Phleum pratense</i> *	MW0226359	MW415937	228	56%
<i>Phleum pratense</i> *	MW0226397	MW392240	228	56%
<i>Poa annua</i> *	MW0242177	MW392241	492	56%
<i>Poa annua</i> *	MW0242179	MW392242	492	56%
<i>Poa palustris</i>		KY378822	231	55%
	Popal_2			
<i>Poa palustris</i> *	(laboratory herbarium)	MW415948	231	55%
<i>Poa pratensis</i>		KJ599036	233	52%
<i>Poa pratensis</i>		KP325350	233	53%
<i>Poa pratensis</i>		GQ324369	233	53%
<i>Poa pratensis</i> *	MW1072499	MW415949	233	52%
<i>Poa pratensis</i> *	MW0564191	MW392243	233	52%
<i>Poa supina</i> *	MW1070008	MW415950	509	55%
<i>Poa supina</i> *	MW0560039	MW392244	509	55%
<i>Poa supina</i> *	MW0560040	MW392245	509	55%
<i>Poa trivialis</i>		GQ324387	232	53%
<i>Poa trivialis</i> *	MW1070015	MW415951	232	53%
<i>Poa trivialis</i> *	MW0564230	MW392246	232	53%
<i>Poa trivialis</i> *	MW0564234	MW392247	232	53%
ITS1				
<i>Alopecurus pratensis</i>		HQ600523	202	62%
<i>Alopecurus pratensis</i>		KM523762	202	61%
<i>Alopecurus pratensis</i>		MK809298	201	61%
<i>Alopecurus pratensis</i>		MK809299	201	61%
<i>Alopecurus pratensis</i> *	MW0227587	MW390889	202	61%
<i>Alopecurus pratensis</i> *	MW0227686	MW390890	202	61%
<i>Arrhenatherum elatius</i>		AF019795	200	63%

<i>Arrhenatherum elatius</i>		AM049253	200	63%
<i>Arrhenatherum elatius</i>		DQ336821	200	63%
<i>Arrhenatherum elatius</i>		DQ995405	198	63%
<i>Arrhenatherum elatius</i>		FJ766147	200	65%
<i>Arrhenatherum elatius</i>		FM179388	200	63%
<i>Arrhenatherum elatius</i>		JF904803	200	63%
<i>Arrhenatherum elatius</i>		KP295984	200	63%
<i>Arrhenatherum elatius</i>		KU883487	200	63%
<i>Arrhenatherum elatius</i>		KX872932	200	63%
<i>Arrhenatherum elatius</i>		Z96878	197	61%
<i>Arrhenatherum elatius</i>		Z96880	201	61%
<i>Arrhenatherum elatius</i>		Z96882	200	61%
<i>Arrhenatherum elatius*</i>	MW0200303	MW390891	200	63%
<i>Arrhenatherum elatius*</i>	MW0235748	MW390892	200	63%
<i>Briza media</i>		DQ539583	200	62%
<i>Briza media</i>		FM179393	200	62%
<i>Briza media</i>		KP296001	200	62%
<i>Briza media</i>		KU883466	200	62%
<i>Briza media</i>		KU883467	200	63%
<i>Briza media</i>		KU883468	200	63%
<i>Briza media</i>		KU883469	200	62%
<i>Briza media</i>		KU883470	200	63%
<i>Briza media</i>		MT937109	200	63%
<i>Briza media*</i>	MW0240831	MW390893	200	61%
<i>Briza media*</i>	MW0564129	MW390894	200	61%
<i>Bromus inermis</i>		AY367915	200	55%
<i>Bromus inermis</i>		HQ600548	200	57%
<i>Bromus inermis</i>		KF713192	200	56%
<i>Bromus inermis</i>		KF713193	200	55%
<i>Bromus inermis</i>		KF713194	200	56%
<i>Bromus inermis</i>		KM077290	200	56%
<i>Bromus inermis</i>		KP987400	200	56%
<i>Bromus inermis</i>		KP987401	200	56%
<i>Bromus inermis</i>		KP987402	201	56%
<i>Bromus inermis</i>		KP987403	200	56%
<i>Bromus inermis</i>		KP987404	200	56%
<i>Bromus inermis</i>		KP987405	200	56%
<i>Bromus inermis</i>		KP987406	200	56%
<i>Bromus inermis</i>		KP987407	200	56%
<i>Bromus inermis</i>		KP987408	201	56%
<i>Bromus inermis</i>		KP987409	200	55%
<i>Bromus inermis</i>		MH808794	200	56%
<i>Bromus inermis</i>		MW270937	201	55%
<i>Bromus inermis</i>		MW349610	201	55%
<i>Bromus inermis*</i>	MW0252346	MW390895	200	55%
<i>Bromus inermis*</i>	MW0564336	MW390896	200	55%

<i>Calamagrostis epigeios</i>		AJ306448	200	66%
<i>Calamagrostis epigeios</i>		AJ306449	200	66%
<i>Calamagrostis epigeios</i>		FJ821781	200	67%
<i>Calamagrostis epigeios</i>		HQ600525	200	65%
<i>Calamagrostis epigeios</i>		KF713208	200	65%
<i>Calamagrostis epigeios</i>		KF713209	200	66%
<i>Calamagrostis epigeios</i>		KF713210	200	66%
<i>Calamagrostis epigeios</i>		KF713211	200	66%
<i>Calamagrostis epigeios</i>		KP711072	200	66%
<i>Calamagrostis epigeios</i>		KU883491	200	66%
<i>Calamagrostis epigeios</i>		KX872963	200	66%
<i>Calamagrostis epigeios</i>		KX872964	200	66%
<i>Calamagrostis epigeios</i>		KX872965	200	66%
<i>Calamagrostis epigeios</i>		KX872966	200	66%
<i>Calamagrostis epigeios</i>		MT396551	200	66%
<i>Calamagrostis epigeios</i>		MT937110	200	66%
<i>Calamagrostis epigeios</i> *	MW0232221	MW390897	200	65%
<i>Calamagrostis epigeios</i> *	MW0232325	MW390898	200	66%
<i>Dactylis glomerata</i>		AF393013	190	62%
<i>Dactylis glomerata</i>		HQ600543	194	63%
<i>Dactylis glomerata</i>		KF713212	194	63%
<i>Dactylis glomerata</i>		KF713213	194	63%
<i>Dactylis glomerata</i>		KF713214	194	63%
<i>Dactylis glomerata</i>		KF713215	194	63%
<i>Dactylis glomerata</i>		KF713216	194	63%
<i>Dactylis glomerata</i>		KJ598940	194	63%
<i>Dactylis glomerata</i>		KU883493	194	63%
<i>Dactylis glomerata</i>		MH808808	194	63%
<i>Dactylis glomerata</i>		MT784108	194	63%
<i>Dactylis glomerata</i>		MT796498	194	63%
<i>Dactylis glomerata</i> *	MW0241080	MW390899	194	63%
<i>Dactylis glomerata</i> *	MW0241082	MW390900	194	63%
<i>Elymus repens</i>		DQ859048	204	64%
<i>Elymus repens</i>		DQ859049	204	62%
<i>Elymus repens</i>		DQ859050	204	64%
<i>Elymus repens</i>		DQ859051	204	64%
<i>Elymus repens</i>		FJ793073	204	65%
<i>Elymus repens</i>		FJ793074	204	64%
<i>Elymus repens</i>		FJ793075	200	64%
<i>Elymus repens</i>		FJ793076	200	63%
<i>Elymus repens</i>		FJ793077	204	64%
<i>Elymus repens</i>		FJ793078	204	64%
<i>Elymus repens</i>		FJ793079	200	62%
<i>Elymus repens</i>		FJ793080	204	65%

<i>Elymus repens</i>		FJ793081	200	58%
<i>Elymus repens</i>		FJ793082	200	63%
<i>Elymus repens</i>		FJ793083	204	64%
<i>Elymus repens</i>		FJ793084	204	65%
<i>Elymus repens</i>		FJ793085	200	61%
<i>Elymus repens</i>		FJ793086	200	62%
<i>Elymus repens</i>		FJ793087	200	57%
<i>Elymus repens</i>		FJ793095	200	58%
<i>Elymus repens</i>		GQ365145	204	65%
<i>Elymus repens</i>		GQ373266	204	65%
<i>Elymus repens</i>		GQ373267	204	65%
<i>Elymus repens</i>		GQ373268	204	65%
<i>Elymus repens</i>		HE602426	200	63%
<i>Elymus repens</i>		HQ600529	204	65%
<i>Elymus repens</i>		JN009804	204	64%
<i>Elymus repens</i>		JN009831	205	64%
<i>Elymus repens</i>		KF713224	204	64%
<i>Elymus repens</i>		KF713225	204	64%
<i>Elymus repens</i>		KF713226	204	64%
<i>Elymus repens</i>		KF713227	204	64%
<i>Elymus repens</i>		KF713228	204	64%
<i>Elymus repens</i>		KF713229	204	64%
<i>Elymus repens</i>		KF713230	204	64%
<i>Elymus repens</i>		KF713231	204	65%
<i>Elymus repens</i>		KJ028268	204	64%
<i>Elymus repens</i>		KJ028269	204	64%
<i>Elymus repens</i>		KJ028270	204	65%
<i>Elymus repens</i>		KJ028271	204	64%
<i>Elymus repens</i>		KP296029	204	64%
<i>Elymus repens</i>		MF893160	200	63%
<i>Elymus repens</i>		MF893161	204	64%
<i>Elymus repens</i>		MH500773	204	65%
<i>Elymus repens</i> *	MW0200523	MW390901	204	65%
<i>Elymus repens</i> *	MW0564353	MW390902	200	63%
<i>Festuca pratensis</i>		AF171144	202	59%
<i>Festuca pratensis</i>		AF171178	202	59%
<i>Festuca pratensis</i>		AF171179	202	59%
<i>Festuca pratensis</i>		AF171180	202	59%
<i>Festuca pratensis</i>		AF171181	202	59%
<i>Festuca pratensis</i>		AF303421	202	59%
<i>Festuca pratensis</i>		AF532948	202	58%
<i>Festuca pratensis</i>		AJ240151	202	59%
<i>Festuca pratensis</i>		AJ240152	202	59%
<i>Festuca pratensis</i>		EF379042	202	59%
<i>Festuca pratensis</i>		EF379043	202	59%
<i>Festuca pratensis</i>		EF379044	202	59%

<i>Festuca pratensis</i>		EF379045	202	59%
<i>Festuca pratensis</i>		EF379046	202	60%
<i>Festuca pratensis</i>		EF379047	202	59%
<i>Festuca pratensis</i>		HM453173	202	59%
<i>Festuca pratensis</i>		HQ110717	202	59%
<i>Festuca pratensis</i>		JN187604	202	59%
<i>Festuca pratensis</i>		KF917345	202	59%
<i>Festuca pratensis</i>		KF917346	202	59%
<i>Festuca pratensis</i>		KF917347	202	59%
<i>Festuca pratensis</i>		KF917348	202	59%
<i>Festuca pratensis</i>		KF917349	202	59%
<i>Festuca pratensis</i>		KJ598995	202	59%
<i>Festuca pratensis</i>		KP296039	202	59%
<i>Festuca pratensis</i>		MT145299	202	59%
<i>Festuca pratensis</i> *	MW0249535	MW390903	202	59%
<i>Festuca pratensis</i> *	MW0564330	MW390904	202	59%
<i>Lolium perenne</i>		AF171143	202	59%
<i>Lolium perenne</i>		AF171171	202	59%
<i>Lolium perenne</i>		AF171172	202	59%
<i>Lolium perenne</i>		AF171173	202	59%
<i>Lolium perenne</i>		AF303401	202	59%
<i>Lolium perenne</i>		AJ240137	202	59%
<i>Lolium perenne</i>		AJ240138	202	59%
<i>Lolium perenne</i>		EF379073	202	59%
<i>Lolium perenne</i>		EF379074	202	59%
<i>Lolium perenne</i>		EF379075	202	59%
<i>Lolium perenne</i>		EU814797	202	59%
<i>Lolium perenne</i>		EU814813	202	59%
<i>Lolium perenne</i>		EU814814	202	59%
<i>Lolium perenne</i>		EU814815	202	59%
<i>Lolium perenne</i>		EU814816	202	59%
<i>Lolium perenne</i>		EU814817	202	59%
<i>Lolium perenne</i>		EU814818	202	59%
<i>Lolium perenne</i>		EU814819	202	59%
<i>Lolium perenne</i>		EU814824	202	59%
<i>Lolium perenne</i>		EU814825	202	59%
<i>Lolium perenne</i>		EU814826	202	59%
<i>Lolium perenne</i>		FJ766169	202	59%
<i>Lolium perenne</i>		HM453191	202	59%
<i>Lolium perenne</i>		JN187605	202	59%
<i>Lolium perenne</i>		KF454873	202	59%
<i>Lolium perenne</i>		KF713246	202	59%
<i>Lolium perenne</i>		KF713247	202	59%
<i>Lolium perenne</i>		KF713248	202	59%
<i>Lolium perenne</i>		KF713249	202	59%
<i>Lolium perenne</i>		KJ598999	202	58%

<i>Lolium perenne</i>		KP296068	202	58%
<i>Lolium perenne</i>		KP711088	202	59%
<i>Lolium perenne</i>		KU883513	202	59%
<i>Lolium perenne</i>		LC155933	202	59%
<i>Lolium perenne</i>		MT937119	202	59%
<i>Lolium perenne</i> *	MW0255247	MW390905	202	59%
<i>Lolium perenne</i> *	MW0564348	MW390906	202	59%
<i>Phleum pratense</i>		EU792341	199	60%
<i>Phleum pratense</i>		HQ600524	199	60%
<i>Phleum pratense</i>		KM523795	199	60%
<i>Phleum pratense</i>		KM523796	199	60%
<i>Phleum pratense</i>		KP711075	200	60%
<i>Phleum pratense</i>		KU883519	199	60%
<i>Phleum pratense</i>		MH500772	199	60%
<i>Phleum pratense</i>		MH628291	199	60%
<i>Phleum pratense</i>		MK050854	199	60%
<i>Phleum pratense</i>		MK050855	199	60%
<i>Phleum pratense</i>		MK804428	198	61%
<i>Phleum pratense</i>		MK804429	198	60%
<i>Phleum pratense</i>		MK804430	198	60%
<i>Phleum pratense</i>		MT796497	199	60%
<i>Phleum pratense</i> *	MW1072502	MW390907	199	60%
<i>Phleum pratense</i> *	MW0226359	MW406902	199	60%
<i>Phleum pratense</i> *	MW0226397	MW390908	199	60%
<i>Poa annua</i>		AF521901	199	59%
<i>Poa annua</i>		AY830447	199	59%
<i>Poa annua</i>		AY830448	199	59%
<i>Poa annua</i>		AY830449	199	59%
<i>Poa annua</i>		AY830450	199	59%
<i>Poa annua</i>		AY830451	199	59%
<i>Poa annua</i>		AY830452	199	59%
<i>Poa annua</i>		EU792386	199	59%
<i>Poa annua</i>		GQ324485	199	59%
<i>Poa annua</i>		JF904811	199	59%
<i>Poa annua</i>		KF713259	199	59%
<i>Poa annua</i>		KF713260	199	59%
<i>Poa annua</i>		KF713261	199	59%
<i>Poa annua</i>		KF713262	199	59%
<i>Poa annua</i>		KF713263	199	59%
<i>Poa annua</i>		KF713264	199	59%
<i>Poa annua</i>		KF713265	199	59%
<i>Poa annua</i>		KF713266	199	59%
<i>Poa annua</i>		KF954522	200	62%
<i>Poa annua</i>		KJ416942	199	59%
<i>Poa annua</i>		KJ599003	199	59%
<i>Poa annua</i>		KJ746813	199	59%

<i>Poa annua</i>		KP296093	199	59%
<i>Poa annua</i>		KP711086	199	59%
<i>Poa annua</i>		KU883520	199	59%
<i>Poa annua</i>		KU883521	199	59%
<i>Poa annua</i>		MF029728	199	58%
<i>Poa annua</i>		MF405479	199	59%
<i>Poa annua</i>		MH117657	199	59%
<i>Poa annua</i>		MH808877	199	58%
<i>Poa annua*</i>	MW0242177	MW390909	199	59%
<i>Poa annua*</i>	MW0242179	MW390910	199	59%
<i>Poa pratensis</i>		AF171182	200	62%
<i>Poa pratensis</i>		AF171183	200	62%
<i>Poa pratensis</i>		FJ766176	199	59%
<i>Poa pratensis</i>		GQ324542	200	62%
<i>Poa pratensis</i>		HQ600544	200	61%
<i>Poa pratensis</i>		JF786337	200	62%
<i>Poa pratensis</i>		JF904849	200	62%
<i>Poa pratensis</i>		KF713270	200	62%
<i>Poa pratensis</i>		KF713272	200	62%
<i>Poa pratensis</i>		KJ416938	200	62%
<i>Poa pratensis</i>		KJ434114	200	62%
<i>Poa pratensis</i>		KJ598924	200	62%
<i>Poa pratensis</i>		KP296101	200	62%
<i>Poa pratensis</i>		KP711077	200	62%
<i>Poa pratensis</i>		LC155929	200	62%
<i>Poa pratensis</i>		MF405470	200	62%
<i>Poa pratensis</i>		MH808884	200	62%
<i>Poa pratensis</i>		MH808885	200	62%
<i>Poa pratensis*</i>	MW0564191	MW390911	200	62%
<i>Poa supina</i>		EF165099	199	58%
<i>Poa supina</i>		EU792387	199	59%
<i>Poa supina</i>		MF405473	199	58%
<i>Poa supina</i>		MF405474	199	59%
<i>Poa supina</i>		MF405475	199	59%
<i>Poa supina*</i>	MW0560039	MW390912	199	58%
<i>Poa supina*</i>	MW0560040	MW390913	199	59%
<i>Poa trivialis</i>		AF171184	200	60%
<i>Poa trivialis</i>		AF171185	200	60%
<i>Poa trivialis</i>		AF171186	200	60%
<i>Poa trivialis</i>		AF532932	199	59%
<i>Poa trivialis</i>		AJ240161	199	59%
<i>Poa trivialis</i>		GQ324555	200	60%
<i>Poa trivialis</i>		KP296102	200	60%
<i>Poa trivialis</i>		MF405483	200	60%
<i>Poa trivialis</i>		MH117661	200	61%
<i>Poa trivialis</i>		MH117662	200	61%

<i>Poa trivialis</i> *	MW0564230	MW390914	200	60%
<i>Poa trivialis</i> *	MW0564234	MW390915	200	60%
ITS2				
<i>Alopecurus pratensis</i>		HQ600523	205	62%
<i>Alopecurus pratensis</i>		KM523762	205	62%
<i>Alopecurus pratensis</i>		MG216008	205	62%
<i>Alopecurus pratensis</i>		MK809298	205	62%
<i>Alopecurus pratensis</i>		MK809299	205	62%
<i>Alopecurus pratensis</i> *	MW0227587	MW390993	205	61%
<i>Alopecurus pratensis</i> *	MW0227686	MW390994	205	62%
<i>Arrhenatherum elatius</i>		AF019795	204	61%
<i>Arrhenatherum elatius</i>		AM049253	204	61%
<i>Arrhenatherum elatius</i>		DQ336821	204	61%
<i>Arrhenatherum elatius</i>		DQ995405	204	61%
<i>Arrhenatherum elatius</i>		FJ766147	202	69%
<i>Arrhenatherum elatius</i>		FM179388	204	61%
<i>Arrhenatherum elatius</i>		JF904803	204	60%
<i>Arrhenatherum elatius</i>		KP295984	204	61%
<i>Arrhenatherum elatius</i>		KU883487	204	60%
<i>Arrhenatherum elatius</i>		KX165768	204	61%
<i>Arrhenatherum elatius</i>		KX166153	204	61%
<i>Arrhenatherum elatius</i>		KX167459	204	61%
<i>Arrhenatherum elatius</i>		KX872932	204	61%
<i>Arrhenatherum elatius</i>		MG216613	204	61%
<i>Arrhenatherum elatius</i>		MK950949	204	61%
<i>Arrhenatherum elatius</i>		MK950973	200	63%
<i>Arrhenatherum elatius</i>		Z96879	204	60%
<i>Arrhenatherum elatius</i>		Z96881	204	60%
<i>Arrhenatherum elatius</i>		Z96883	204	60%
<i>Arrhenatherum elatius</i> *	MW0200303	MW390995	204	61%
<i>Arrhenatherum elatius</i> *	MW0235748	MW390996	204	61%
<i>Briza media</i>		DQ539583	204	63%
<i>Briza media</i>		EU395923	205	67%
<i>Briza media</i>		FM179393	204	63%
<i>Briza media</i>		KP296001	204	63%
<i>Briza media</i>		KU883467	204	63%
<i>Briza media</i>		KU883468	204	63%
<i>Briza media</i>		KU883469	204	65%
<i>Briza media</i>		KU883470	204	63%
<i>Briza media</i>		KX165760	204	63%
<i>Briza media</i>		MT937109	204	64%
<i>Briza media</i> *	MW0240831	MW390997	205	62%
<i>Briza media</i> *	MW0564129	MW390998	205	62%
<i>Bromus inermis</i>		AY367915	205	60%
<i>Bromus inermis</i>		HQ600548	206	56%
<i>Bromus inermis</i>		JN998985	205	60%

<i>Bromus inermis</i>		KF713192	205	60%
<i>Bromus inermis</i>		KF713193	205	60%
<i>Bromus inermis</i>		KF713194	205	60%
<i>Bromus inermis</i>		KM077290	205	60%
<i>Bromus inermis</i>		KP987400	205	60%
<i>Bromus inermis</i>		KP987401	206	60%
<i>Bromus inermis</i>		KP987402	205	60%
<i>Bromus inermis</i>		KP987403	205	60%
<i>Bromus inermis</i>		KP987404	205	60%
<i>Bromus inermis</i>		KP987405	205	60%
<i>Bromus inermis</i>		KP987406	205	60%
<i>Bromus inermis</i>		KP987407	205	60%
<i>Bromus inermis</i>		KP987408	205	60%
<i>Bromus inermis</i>		KP987409	205	60%
<i>Bromus inermis</i>		KT695169	205	60%
<i>Bromus inermis</i>		MG216247	205	60%
<i>Bromus inermis</i>		MG216270	205	60%
<i>Bromus inermis</i>		MG216772	205	60%
<i>Bromus inermis</i>		MH808794	205	59%
<i>Bromus inermis</i>		MW270937	205	60%
<i>Bromus inermis</i>		MW349610	205	60%
<i>Bromus inermis</i> *	MW0252346	MW390999	205	60%
<i>Bromus inermis</i> *	MW0564336	MW391000	205	60%
<i>Calamagrostis epigeios</i>		AJ306448	204	65%
<i>Calamagrostis epigeios</i>		AJ306449	204	65%
<i>Calamagrostis epigeios</i>		FJ821781	204	65%
<i>Calamagrostis epigeios</i>		HQ600525	204	65%
<i>Calamagrostis epigeios</i>		KF713208	204	65%
<i>Calamagrostis epigeios</i>		KF713209	204	65%
<i>Calamagrostis epigeios</i>		KF713210	204	65%
<i>Calamagrostis epigeios</i>		KF713211	205	65%
<i>Calamagrostis epigeios</i>		KP711072	205	65%
<i>Calamagrostis epigeios</i>		KU883491	204	65%
<i>Calamagrostis epigeios</i>		KX167057	204	65%
<i>Calamagrostis epigeios</i>		KX872963	204	65%
<i>Calamagrostis epigeios</i>		KX872964	204	65%
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<i>Calamagrostis epigeios</i>		KX872966	204	66%
<i>Calamagrostis epigeios</i>		MT396551	204	65%
<i>Calamagrostis epigeios</i>		MT937110	204	65%
<i>Calamagrostis epigeios</i> *	MW0232221	MW391001	203	68%
<i>Calamagrostis epigeios</i> *	MW0232325	MW391002	204	65%
<i>Dactylis glomerata</i>		AF393013	199	57%
<i>Dactylis glomerata</i>		AM503893	204	60%

<i>Dactylis glomerata</i>		HQ600543	204	60%
<i>Dactylis glomerata</i>		KF713212	204	60%
<i>Dactylis glomerata</i>		KF713213	204	60%
<i>Dactylis glomerata</i>		KF713214	204	60%
<i>Dactylis glomerata</i>		KF713215	204	60%
<i>Dactylis glomerata</i>		KF713216	205	60%
<i>Dactylis glomerata</i>		KJ598940	204	60%
<i>Dactylis glomerata</i>		KU883493	204	60%
<i>Dactylis glomerata</i>		KX165689	204	60%
<i>Dactylis glomerata</i>		KX166853	204	60%
<i>Dactylis glomerata</i>		KX167535	204	60%
<i>Dactylis glomerata</i>		MG216301	204	60%
<i>Dactylis glomerata</i>		MH808808	204	60%
<i>Dactylis glomerata</i>		MK950948	204	60%
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<i>Dactylis glomerata</i>		MK950965	204	58%
<i>Dactylis glomerata</i>		MK950970	198	60%
<i>Dactylis glomerata</i>		MK950972	204	55%
<i>Dactylis glomerata</i>		MK950975	204	58%
<i>Dactylis glomerata</i>		MK950976	204	59%
<i>Dactylis glomerata</i>		MK950981	204	56%
<i>Dactylis glomerata</i>		MK950983	204	59%
<i>Dactylis glomerata</i>		MK950989	205	59%
<i>Dactylis glomerata</i>		MK950992	205	57%
<i>Dactylis glomerata</i>		MK950994	204	58%
<i>Dactylis glomerata</i>		MK951000	204	54%
<i>Dactylis glomerata</i>		MK951001	197	59%
<i>Dactylis glomerata</i>		MK951003	204	55%
<i>Dactylis glomerata</i>		MT784108	204	60%
<i>Dactylis glomerata</i>		MT796498	204	60%
<i>Dactylis glomerata</i> *	MW0241080	MW391003	204	60%
<i>Dactylis glomerata</i> *	MW0241082	MW391004	204	60%
<i>Elymus repens</i>		DQ859048	206	63%
<i>Elymus repens</i>		DQ859049	206	63%
<i>Elymus repens</i>		DQ859050	206	63%
<i>Elymus repens</i>		DQ859051	206	63%
<i>Elymus repens</i>		FJ793073	206	63%
<i>Elymus repens</i>		FJ793074	206	63%
<i>Elymus repens</i>		FJ793075	207	59%
<i>Elymus repens</i>		FJ793076	207	61%
<i>Elymus repens</i>		FJ793077	206	63%
<i>Elymus repens</i>		FJ793078	206	63%
<i>Elymus repens</i>		FJ793079	207	61%
<i>Elymus repens</i>		FJ793080	206	63%
<i>Elymus repens</i>		FJ793081	207	60%
<i>Elymus repens</i>		FJ793082	207	61%

<i>Elymus repens</i>		FJ793083	206	63%
<i>Elymus repens</i>		FJ793084	206	63%
<i>Elymus repens</i>		FJ793085	206	63%
<i>Elymus repens</i>		FJ793086	207	61%
<i>Elymus repens</i>		FJ793087	207	58%
<i>Elymus repens</i>		FJ793089	207	57%
<i>Elymus repens</i>		FJ793091	207	58%
<i>Elymus repens</i>		FJ793092	205	59%
<i>Elymus repens</i>		FJ793093	206	57%
<i>Elymus repens</i>		FJ793094	205	60%
<i>Elymus repens</i>		FJ793095	204	58%
<i>Elymus repens</i>		GQ365145	206	63%
<i>Elymus repens</i>		GQ373266	206	63%
<i>Elymus repens</i>		GQ373267	206	63%
<i>Elymus repens</i>		GQ373268	206	63%
<i>Elymus repens</i>		HE602426	207	64%
<i>Elymus repens</i>		HQ600529	206	63%
<i>Elymus repens</i>		JN009804	206	63%
<i>Elymus repens</i>		JN009831	206	63%
<i>Elymus repens</i>		KF713224	206	63%
<i>Elymus repens</i>		KF713225	206	63%
<i>Elymus repens</i>		KF713226	206	63%
<i>Elymus repens</i>		KF713227	206	63%
<i>Elymus repens</i>		KF713228	206	63%
<i>Elymus repens</i>		KF713229	206	63%
<i>Elymus repens</i>		KF713230	206	63%
<i>Elymus repens</i>		KF713231	206	63%
<i>Elymus repens</i>		KP296029	206	63%
<i>Elymus repens</i>		KX165429	206	63%
<i>Elymus repens</i>		KX165922	206	63%
<i>Elymus repens</i>		KX166522	206	63%
<i>Elymus repens</i>		KX166523	206	63%
<i>Elymus repens</i>		MF893160	207	61%
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<i>Elymus repens</i>		MG215642	206	63%
<i>Elymus repens</i>		MG215738	206	63%
<i>Elymus repens</i>		MG215952	206	63%
<i>Elymus repens</i>		MG216383	206	63%
<i>Elymus repens</i>		MG216489	206	63%
<i>Elymus repens</i>		MG216711	206	63%
<i>Elymus repens</i>		MH500773	207	63%
<i>Elymus repens</i>		MW040314	206	62%
<i>Elymus repens*</i>	MW0200523	MW391005	206	63%
<i>Elymus repens*</i>	MW0564353	MW391006	207	65%
<i>Festuca pratensis</i>		AF171144	204	64%
<i>Festuca pratensis</i>		AF171178	204	64%

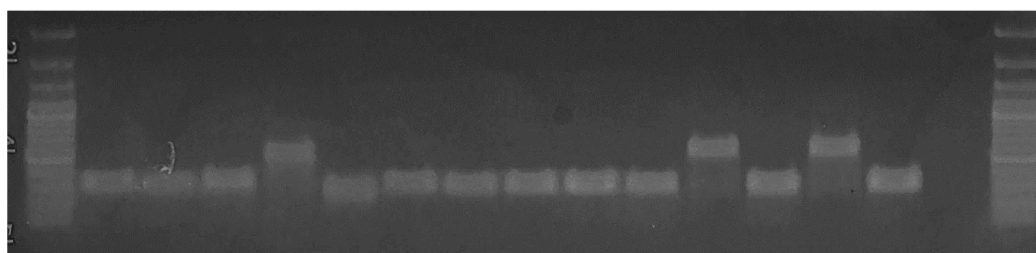
<i>Festuca pratensis</i>		AF171179	204	64%
<i>Festuca pratensis</i>		AF171180	204	65%
<i>Festuca pratensis</i>		AF171181	204	65%
<i>Festuca pratensis</i>		AF303421	204	65%
<i>Festuca pratensis</i>		AF532948	204	64%
<i>Festuca pratensis</i>		AJ240151	204	65%
<i>Festuca pratensis</i>		AJ240152	204	65%
<i>Festuca pratensis</i>		EF379042	204	65%
<i>Festuca pratensis</i>		EF379043	204	65%
<i>Festuca pratensis</i>		EF379044	204	65%
<i>Festuca pratensis</i>		EF379045	204	65%
<i>Festuca pratensis</i>		EF379046	204	64%
<i>Festuca pratensis</i>		EF379047	204	65%
<i>Festuca pratensis</i>		HM453173	204	65%
<i>Festuca pratensis</i>		HQ110717	204	65%
<i>Festuca pratensis</i>		JN187604	204	65%
<i>Festuca pratensis</i>		KF917345	204	65%
<i>Festuca pratensis</i>		KF917346	204	65%
<i>Festuca pratensis</i>		KF917347	204	64%
<i>Festuca pratensis</i>		KF917348	204	65%
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<i>Festuca pratensis</i>		KJ598995	204	65%
<i>Festuca pratensis</i>		KP296039	204	65%
<i>Festuca pratensis</i>		KX165839	204	65%
<i>Festuca pratensis</i>		KX166184	204	65%
<i>Festuca pratensis</i>		KX166353	204	65%
<i>Festuca pratensis</i>		MG216166	204	60%
<i>Festuca pratensis</i>		MK950955	204	65%
<i>Festuca pratensis</i>		MT145299	204	65%
<i>Festuca pratensis</i> *	MW0249535	MW391007	204	65%
<i>Festuca pratensis</i> *	MW0564330	MW391008	204	65%
<i>Lolium perenne</i>		AF171143	204	64%
<i>Lolium perenne</i>		AF171171	204	64%
<i>Lolium perenne</i>		AF171172	204	64%
<i>Lolium perenne</i>		AF171173	204	64%
<i>Lolium perenne</i>		AF303401	204	64%
<i>Lolium perenne</i>		AJ240137	204	64%
<i>Lolium perenne</i>		AJ240138	204	64%
<i>Lolium perenne</i>		EF379073	204	64%
<i>Lolium perenne</i>		EF379074	204	64%
<i>Lolium perenne</i>		EF379075	204	64%
<i>Lolium perenne</i>		FJ766169	204	64%
<i>Lolium perenne</i>		HM453191	204	64%
<i>Lolium perenne</i>		JN187605	204	64%
<i>Lolium perenne</i>		KC478378	204	63%
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<i>Lolium perenne</i>		KC478380	204	63%
<i>Lolium perenne</i>		KC478381	204	63%
<i>Lolium perenne</i>		KC478382	204	63%
<i>Lolium perenne</i>		KC478383	204	63%
<i>Lolium perenne</i>		KF454873	204	63%
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<i>Lolium perenne</i>		KJ598999	204	64%
<i>Lolium perenne</i>		KP205445	204	64%
<i>Lolium perenne</i>		KP296068	204	64%
<i>Lolium perenne</i>		KP711088	204	64%
<i>Lolium perenne</i>		KU883513	204	64%
<i>Lolium perenne</i>		KX167358	204	64%
<i>Lolium perenne</i>		MK950959	204	64%
<i>Lolium perenne</i>		MT937119	204	64%
<i>Lolium perenne</i> *	MW0255247	MW391009	204	64%
<i>Lolium perenne</i> *	MW0564348	MW391010	204	64%
<i>Phleum pratense</i>		EU792341	203	65%
<i>Phleum pratense</i>		HQ600524	203	65%
<i>Phleum pratense</i>		KM523795	203	65%
<i>Phleum pratense</i>		KM523796	203	65%
<i>Phleum pratense</i>		KP711075	203	65%
<i>Phleum pratense</i>		KT695278	203	65%
<i>Phleum pratense</i>		KU883519	203	65%
<i>Phleum pratense</i>		KX166532	203	65%
<i>Phleum pratense</i>		KX167871	203	65%
<i>Phleum pratense</i>		KX167988	203	65%
<i>Phleum pratense</i>		MG216334	203	65%
<i>Phleum pratense</i>		MH500772	203	65%
<i>Phleum pratense</i>		MH628291	204	64%
<i>Phleum pratense</i>		MK050854	204	64%
<i>Phleum pratense</i>		MK050855	203	65%
<i>Phleum pratense</i>		MK804428	203	65%
<i>Phleum pratense</i>		MK804429	203	65%
<i>Phleum pratense</i>		MK804430	203	65%
<i>Phleum pratense</i>		MK950961	203	65%
<i>Phleum pratense</i>		MT796497	203	65%
<i>Phleum pratense</i> *	MW1072502	MW391011	203	65%
<i>Phleum pratense</i> *	MW0226359	MW410924	203	65%
<i>Phleum pratense</i> *	MW0226397	MW391012	203	65%
<i>Poa annua</i>		AF521901	205	60%
<i>Poa annua</i>		AY830447	202	60%
<i>Poa annua</i>		AY830448	202	60%
<i>Poa annua</i>		AY830449	202	60%

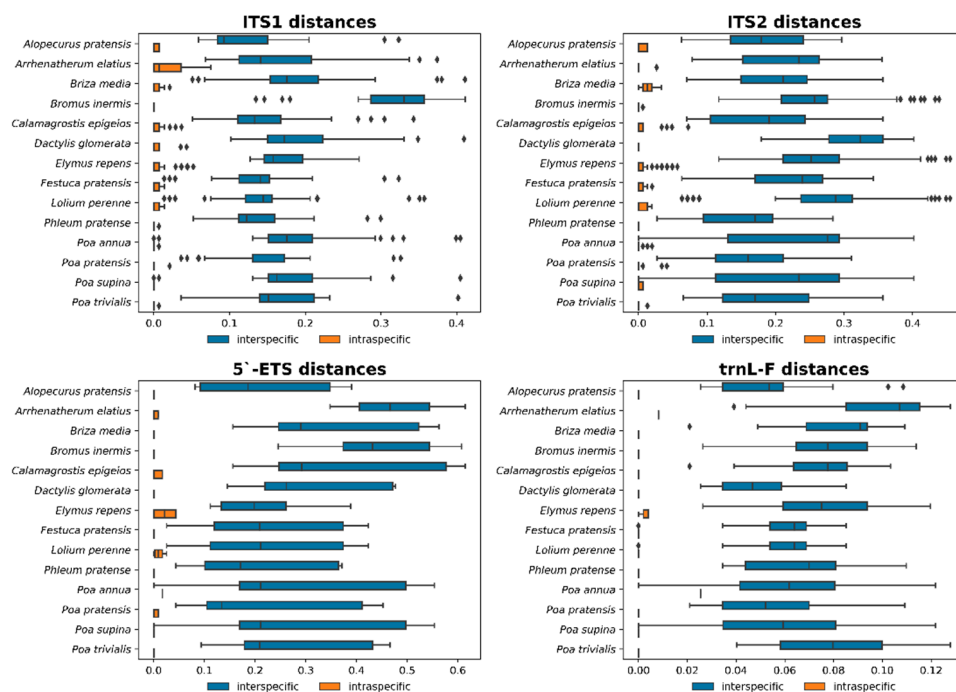
<i>Poa annua</i>		AY830450	202	60%
<i>Poa annua</i>		AY830451	202	60%
<i>Poa annua</i>		AY830452	202	60%
<i>Poa annua</i>		EU792386	202	60%
<i>Poa annua</i>		FM179428	202	60%
<i>Poa annua</i>		GQ324485	202	60%
<i>Poa annua</i>		JF904811	202	60%
<i>Poa annua</i>		KF713259	202	60%
<i>Poa annua</i>		KF713260	202	60%
<i>Poa annua</i>		KF713261	202	60%
<i>Poa annua</i>		KF713262	202	60%
<i>Poa annua</i>		KF713263	202	60%
<i>Poa annua</i>		KF713264	202	60%
<i>Poa annua</i>		KF713265	202	60%
<i>Poa annua</i>		KF713266	204	60%
<i>Poa annua</i>		KF954522	202	64%
<i>Poa annua</i>		KJ416942	202	60%
<i>Poa annua</i>		KJ599003	202	60%
<i>Poa annua</i>		KJ746813	202	60%
<i>Poa annua</i>		KP296093	202	60%
<i>Poa annua</i>		KP711086	202	60%
<i>Poa annua</i>		KT948634	202	60%
<i>Poa annua</i>		KU883520	202	60%
<i>Poa annua</i>		KU883521	202	60%
<i>Poa annua</i>		KX165956	202	60%
<i>Poa annua</i>		KX166730	202	60%
<i>Poa annua</i>		MF029728	202	59%
<i>Poa annua</i>		MF405479	202	60%
<i>Poa annua</i>		MG216458	202	60%
<i>Poa annua</i>		MH117657	202	60%
<i>Poa annua</i>		MH808877	202	60%
<i>Poa annua</i>		MN453601	202	64%
<i>Poa annua</i> *	MW0242177	MW391013	202	60%
<i>Poa annua</i> *	MW0242179	MW391014	202	60%
<i>Poa pratensis</i>		AF171182	202	65%
<i>Poa pratensis</i>		AF171183	202	65%
<i>Poa pratensis</i>		FJ766176	202	60%
<i>Poa pratensis</i>		GQ324542	202	64%
<i>Poa pratensis</i>		HQ600544	202	64%
<i>Poa pratensis</i>		JF786337	202	64%
<i>Poa pratensis</i>		JF904849	202	64%
<i>Poa pratensis</i>		JN999397	200	64%
<i>Poa pratensis</i>		KF713270	202	64%
<i>Poa pratensis</i>		KF713272	202	65%
<i>Poa pratensis</i>		KJ416938	202	64%
<i>Poa pratensis</i>		KJ434114	202	64%

<i>Poa pratensis</i>		KJ598924	202	65%
<i>Poa pratensis</i>		KJ598925	202	64%
<i>Poa pratensis</i>		KP296101	202	65%
<i>Poa pratensis</i>		KP711077	202	65%
<i>Poa pratensis</i>		KT960120	200	64%
<i>Poa pratensis</i>		KT960157	202	64%
<i>Poa pratensis</i>		KT960177	200	64%
<i>Poa pratensis</i>		KT960264	202	63%
<i>Poa pratensis</i>		KT960322	202	63%
<i>Poa pratensis</i>		KX166874	202	64%
<i>Poa pratensis</i>		KX166875	202	65%
<i>Poa pratensis</i>		KX166881	202	64%
<i>Poa pratensis</i>		KY460959	202	61%
<i>Poa pratensis</i>		MF405470	202	64%
<i>Poa pratensis</i>		MG216036	202	65%
<i>Poa pratensis</i>		MG216531	202	63%
<i>Poa pratensis</i>		MH808884	202	65%
<i>Poa pratensis</i>		MH808885	202	64%
<i>Poa pratensis</i>		MK950952	202	65%
<i>Poa pratensis</i>		MW112820	202	63%
<i>Poa pratensis</i>		MW112821	202	65%
<i>Poa pratensis</i>		MW112822	202	64%
<i>Poa pratensis</i>		MW112823	202	65%
<i>Poa pratensis</i>		MW112824	202	65%
<i>Poa pratensis</i>		MW112825	202	64%
<i>Poa pratensis</i>		MW112826	202	64%
<i>Poa pratensis</i>		MW112827	202	64%
<i>Poa pratensis</i>		MW112828	202	65%
<i>Poa pratensis</i>		MW112829	202	64%
<i>Poa pratensis</i> *	MW0564191	MW391015	202	65%
<i>Poa supina</i>		EF165099	202	60%
<i>Poa supina</i>		EU792387	202	61%
<i>Poa supina</i>		MF405473	202	60%
<i>Poa supina</i>		MF405474	202	60%
<i>Poa supina</i>		MF405475	202	60%
<i>Poa supina</i> *	MW0560039	MW391016	202	60%
<i>Poa supina</i> *	MW0560040	MW391017	202	60%
<i>Poa trivialis</i>		AF171184	202	63%
<i>Poa trivialis</i>		AF171185	202	63%
<i>Poa trivialis</i>		AF171186	202	63%
<i>Poa trivialis</i>		AF532932	199	63%
<i>Poa trivialis</i>		AJ240161	199	63%
<i>Poa trivialis</i>		GQ324555	202	62%
<i>Poa trivialis</i>		KP296102	202	63%
<i>Poa trivialis</i>		KX166151	202	63%
<i>Poa trivialis</i>		KX166877	202	63%

<i>Poa trivialis</i>		KX167368	202	63%
<i>Poa trivialis</i>		MF405483	202	63%
<i>Poa trivialis</i>		MH117661	202	64%
<i>Poa trivialis</i>		MH117662	202	64%
<i>Poa trivialis</i>		MK950950	202	63%
<i>Poa trivialis</i>		MK950997	193	64%
<i>Poa trivialis</i> *	MW0564230	MW391018	202	63%
<i>Poa trivialis</i> *	MW0564234	MW391019	202	63%



Supplementary Figure S1. PCR test results with primers ETS-Fmix + 18S_start_R; from left to right: GeneRuler 100bp Plus DNA Ladder (Thermo Scientific, USA), *Alopecurus pratensis* MW0227686, *Arrhenatherum elatius* MW0235748, *Briza media* MW0564129, *Bromus inermis* MW0564336, *Calamagrostis epigeios* MW0232325, *Dactylis glomerata* MW0241080, *Elymus repens* MW0564353, *Festuca pratensis* MW0564330, *Lolium perenne* MW0255247, *Phleum pratense* MW0226397, *Poa annua* MW0242177, *Poa pratensis* MW0564191, *Poa supina* MW0560039, *Poa trivialis* MW0564230, NTC;



Supplementary Figure S2. Barcodes' intra- and interspecific distances per species.