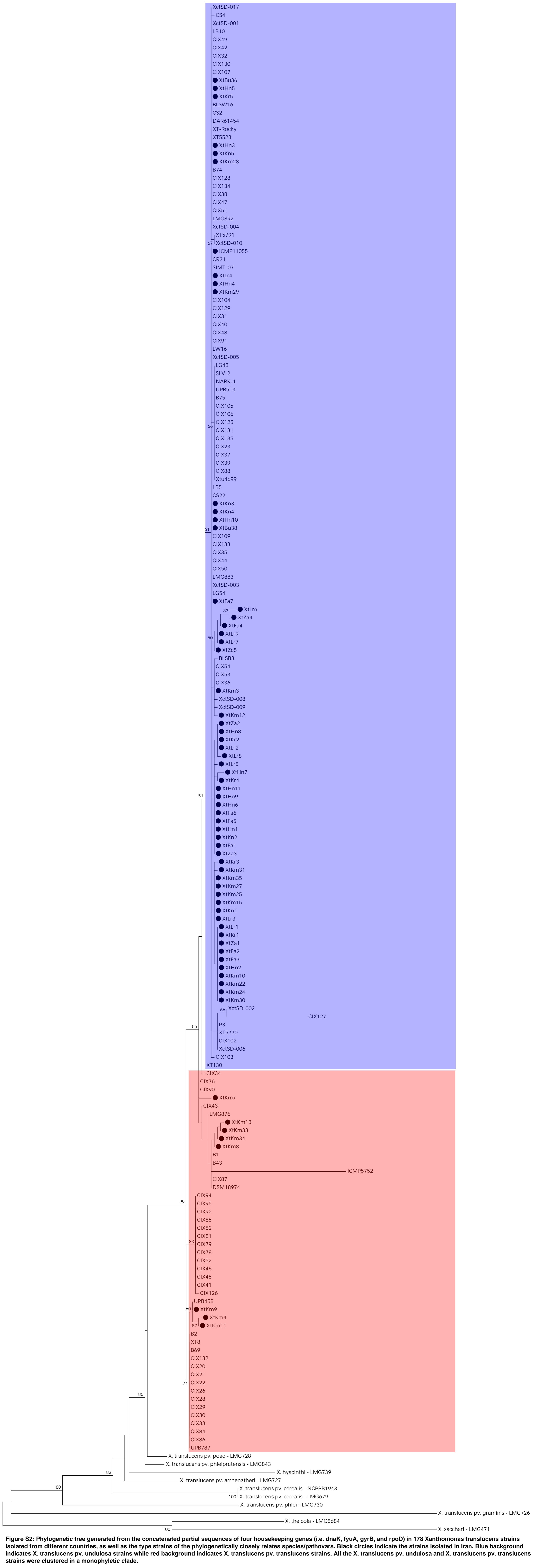




Figure S1: Distribution if *Xanthomonas translucens* strains isolated in this study across the wheat and barley growing areas in Iran. Each bacterial strain in Table 1 is represented by one circle on the map. Yellow circles indicate *X. translucens* pv. *undulosa* strains while red circles indicate *X. translucens* pv. *translucens* strains.

The source map is from https://commons.wikimedia.org/wiki/File:Iran_location_map.svg



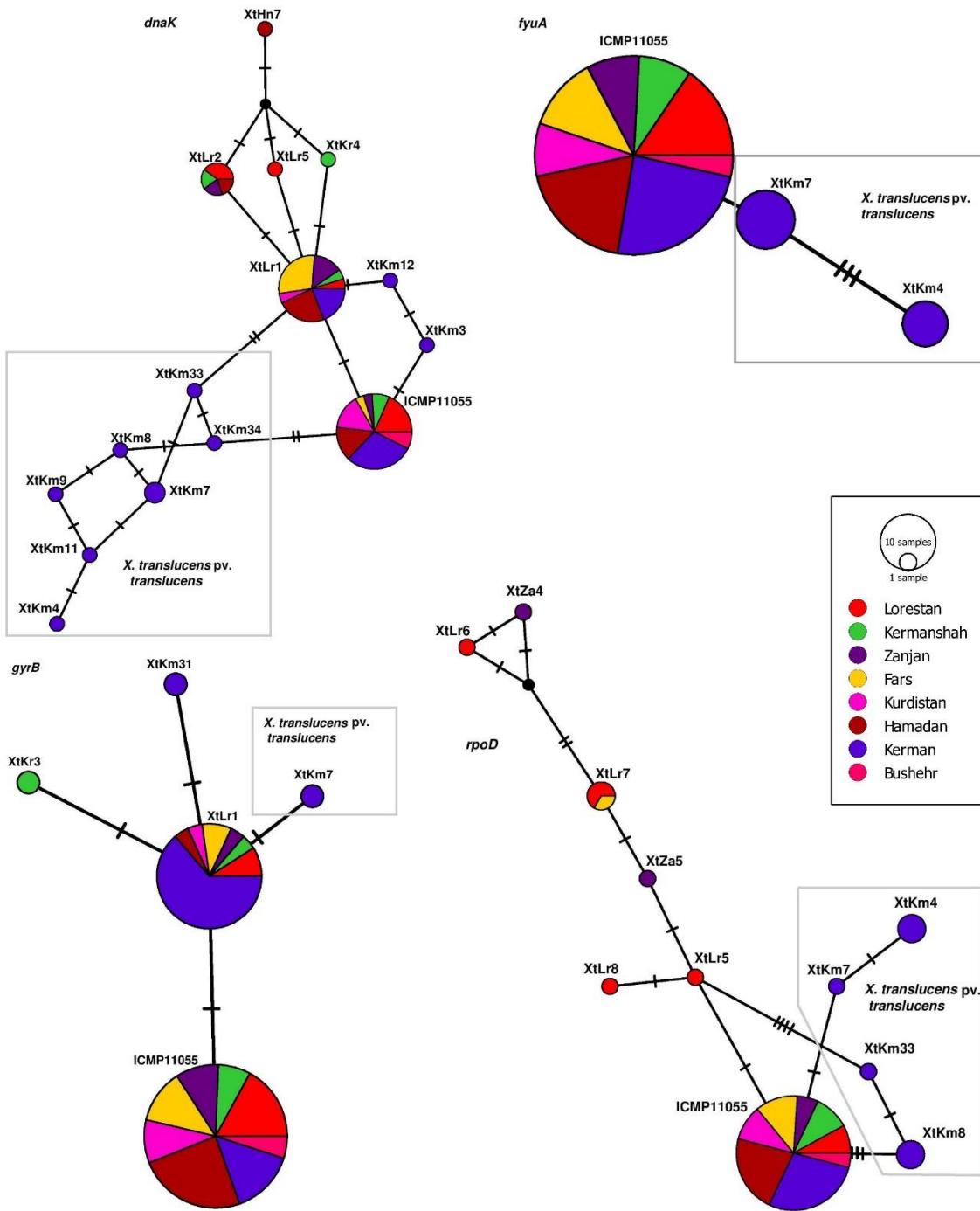


Figure S3: TCS haplotype network generated using POPArt program from the partial sequences of four housekeeping genes *dnak*, *fyuA*, *gyrB*, and *rpoD* in 66 *Xanthomonas translucens* strains isolated in Iran. The size of the circles indicates the relative frequency of sequences belonging to a particular haplotype. Hatch marks along the branches indicate the number of mutations. Each color indicates a different geographic location (province) in Iran. *X. translucens* pv. *translucens* strains possessing unique ST and differing from the *X. translucens* pv. *undulosa* strains are framed by a grey box.

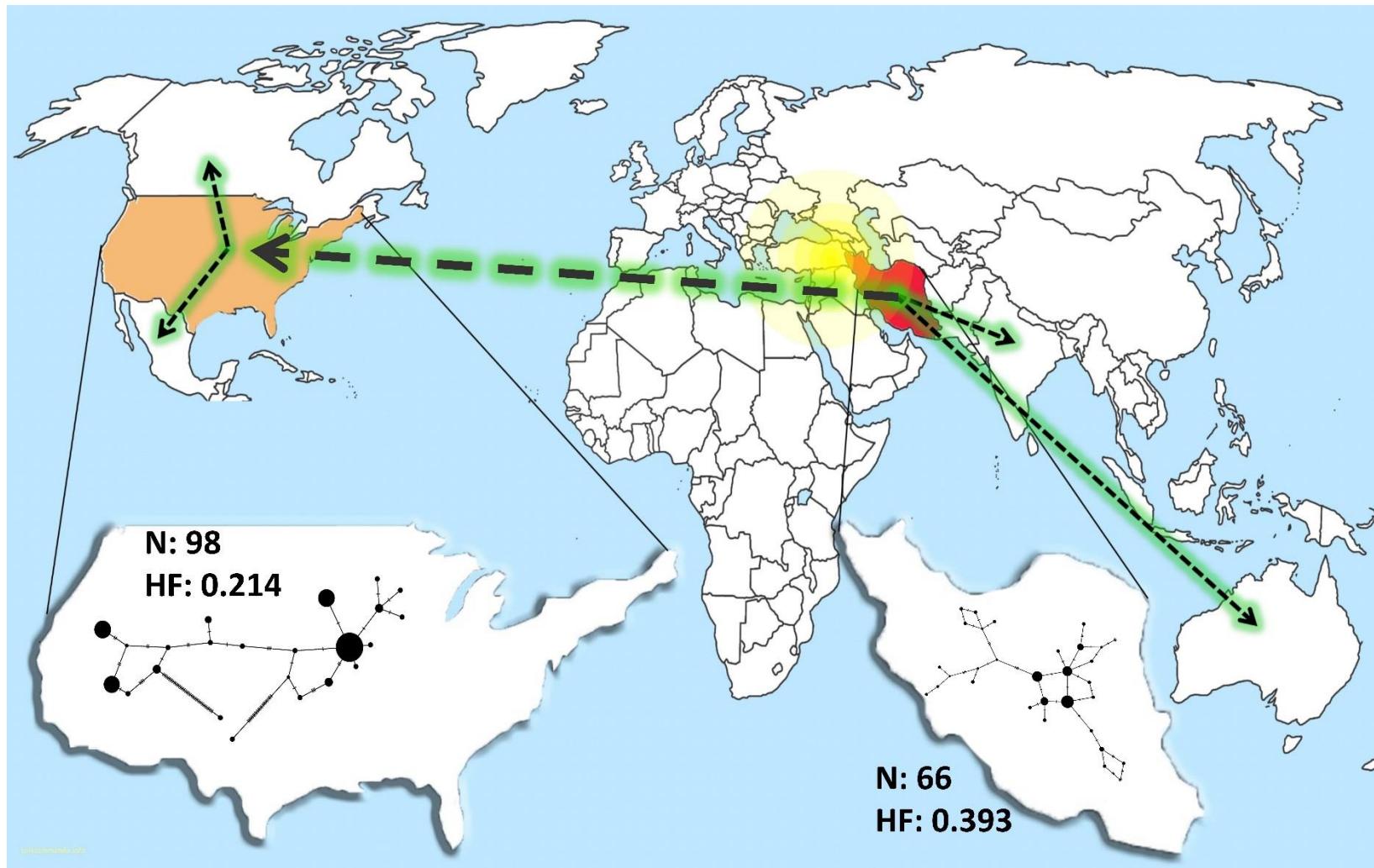


Figure S4: Worldwide distribution of *Xanthomonas translucens*, the causal agent of bacterial leaf streak on small-grain cereals. The center of origin of cultivated wheat in southern Turkey is marked by yellow concentric circles. Dashed arrows show the hypothetical transmission routes of *X. translucens* across the nations. TCS networks inside the zoomed-in map of Iran and the USA show MHs of the bacterial strains isolated in each country. Considering the higher haplotype frequency and richness in Iran, the Iranian plateau can be considered as the center of diversity of *X. translucens*. N: number of strains; HF: haplotype frequency.

The source map is from https://commons.wikimedia.org/wiki/File:A_large_blank_world_map_with_oceans_marked_in_blue.PNG

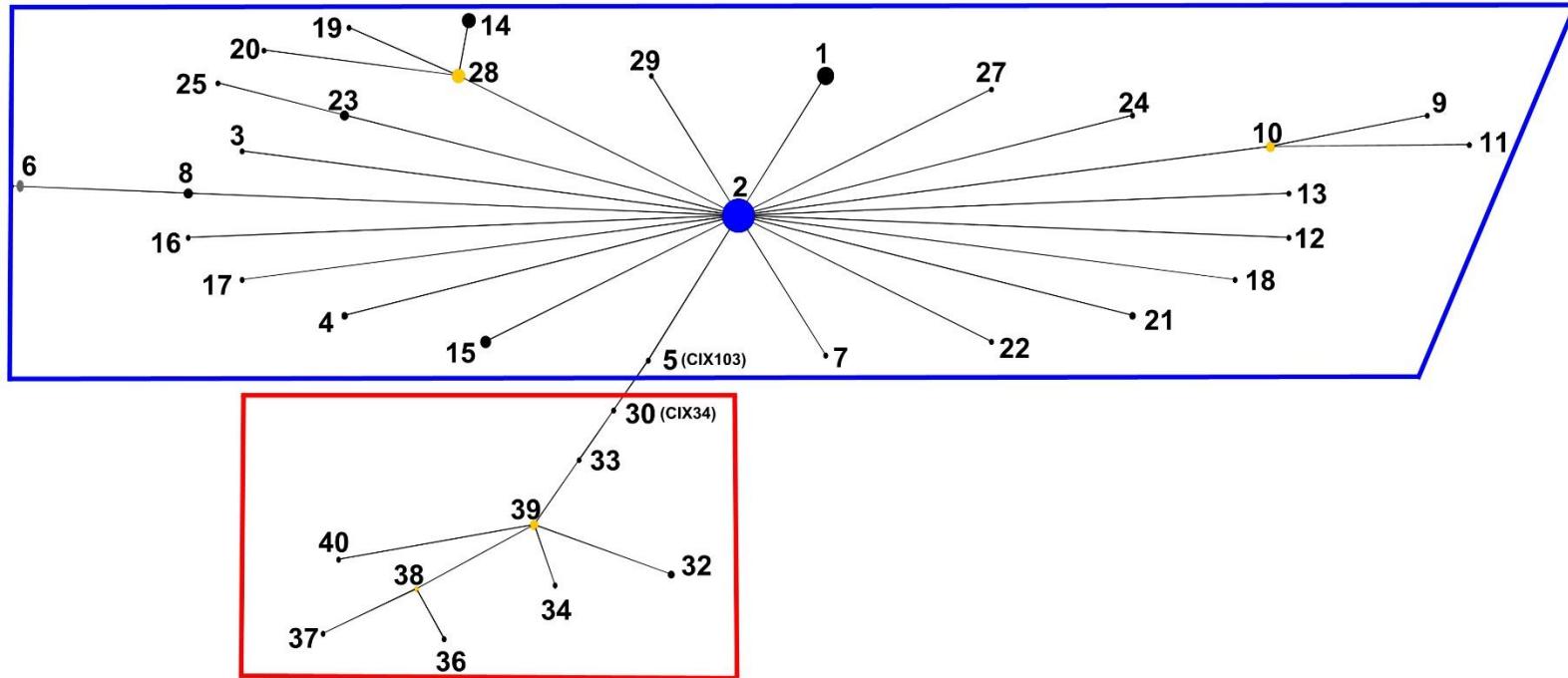


Figure S5: Analysis of worldwide collection of 178 *Xanthomonas translucens* strains using eBURST with the stringent (default) group definition in which, MHS are included within the same clonal complex only if they share identical alleles at three or four of the four MLST loci with at least one other MH in the population. The predicted primary founder of *X. translucens* pv. *undulosa*, MH2 (bootstrap confidence value of 99%) is shown as a blue circle while the descendent subgroups are shown as yellow circles. Numbers in the eBURST diagram correspond to MHS as shown in Table S1. The diameter of each circle corresponds to the abundance of the strains of the corresponding MH in the input data. *Xanthomonas translucens* pv. *translucens* (CIX34) and *X. translucens* pv. *undulosa* (CIX103) strains, which are single-locus variants, are specified in the diagram.

Table S1: *Xanthomonas translucens* strains of worldwide origin that were used in this study, their host plant, geographic area and date of isolation, as well as their Multilocus Haplotypes (MHs) and Sequence Types (STs) based on the partial sequences of four housekeeping genes (*i.e.* *dnaK*, *fyuA*, *gyrB*, and *rpoD*).

Multilocus haplotype (MH)	Strain	Country	Year	Host	Sequence types (ST)				Accession numbers			
					<i>dnaK</i>	<i>fyuA</i>	<i>gyrB</i>	<i>rpoD</i>	<i>dnaK</i>	<i>fyuA</i>	<i>gyrB</i>	<i>rpoD</i>
14	XtLr1	Iran	2017	Wheat	8	1	6	4	MK622011	MK622076	MK622141	MK622206
23	XtLr2	Iran	2017	Wheat	9	1	1	4	MK622012	MK622077	MK622142	MK622207
15	XtLr3	Iran	2017	Wheat	1	1	6	4	MK622013	MK622078	MK622143	MK622208
2	XtLr4	Iran	2016	Wheat	1	1	1	4	MK622014	MK622079	MK622144	MK622209
26	XtLr5	Iran	2016	Wheat	10	1	1	5	MK622015	MK622080	MK622145	MK622210
18	XtLr6	Iran	2016	Wheat	1	1	1	8	MK622016	MK622081	MK622146	MK622211
21	XtLr7	Iran	2017	Barley	1	1	1	10	MK622017	MK622082	MK622147	MK622212
25	XtLr8	Iran	2016	Wheat	9	1	1	6	MK622018	MK622083	MK622148	MK622213
21	XtLr9	Iran	2017	Barley	1	1	1	10	MK622019	MK622084	MK622149	MK622214
14	XtKr1	Iran	2016	Wheat	8	1	6	4	MK622020	MK622085	MK622150	MK622215
23	XtKr2	Iran	2016	Wheat	9	1	1	4	MK622021	MK622086	MK622151	MK622216
16	XtKr3	Iran	2016	Wheat	1	1	3	4	MK622022	MK622087	MK622152	MK622217
27	XtKr4	Iran	2016	Wheat	11	1	1	4	MK622023	MK622088	MK622153	MK622218
2	XtKr5	Iran	2016	Wheat	1	1	1	4	MK622024	MK622089	MK622154	MK622219
14	XtZa1	Iran	2016	Wheat	8	1	6	4	MK622025	MK622090	MK622155	MK622220
23	XtZa2	Iran	2016	Wheat	9	1	1	4	MK622026	MK622091	MK622156	MK622221
28	XtZa3	Iran	2016	Wheat	8	1	1	4	MK622027	MK622092	MK622157	MK622222
19	XtZa4	Iran	2016	Wheat	8	1	1	9	MK622028	MK622093	MK622158	MK622223
22	XtZa5	Iran	2016	Wheat	1	1	1	7	MK622029	MK622094	MK622159	MK622224
28	XtFa1	Iran	2016	Wheat	8	1	1	4	MK622030	MK622095	MK622160	MK622225
14	XtFa2	Iran	2016	Wheat	8	1	6	4	MK622031	MK622096	MK622161	MK622226
14	XtFa3	Iran	2016	Wheat	8	1	6	4	MK622032	MK622097	MK622162	MK622227
20	XtFa4	Iran	2016	Wheat	8	1	1	10	MK622033	MK622098	MK622163	MK622228
28	XtFa5	Iran	2016	Wheat	8	1	1	4	MK622034	MK622099	MK622164	MK622229
28	XtFa6	Iran	2016	Wheat	8	1	1	4	MK622035	MK622100	MK622165	MK622230
2	XtFa7	Iran	2016	Wheat	1	1	1	4	MK622036	MK622101	MK622166	MK622231
15	XtKn1	Iran	2016	Wheat	1	1	6	4	MK622037	MK622102	MK622167	MK622232
28	XtKn2	Iran	2016	Wheat	8	1	1	4	MK622038	MK622103	MK622168	MK622233
2	XtKn3	Iran	2016	Wheat	1	1	1	4	MK622039	MK622104	MK622169	MK622234

2	XtKn4	Iran	2016	Wheat	1	1	1	4	MK622040	MK622105	MK622170	MK622235
2	XtKn5	Iran	2016	Wheat	1	1	1	4	MK622041	MK622106	MK622171	MK622236
28	XtHn1	Iran	2017	Wheat	8	1	1	4	MK622042	MK622107	MK622172	MK622237
14	XtHn2	Iran	2017	Wheat	8	1	6	4	MK622043	MK622108	MK622173	MK622238
2	XtHn3	Iran	2017	Wheat	1	1	1	4	MK622044	MK622109	MK622174	MK622239
2	XtHn4	Iran	2016	Wheat	1	1	1	4	MK622045	MK622110	MK622175	MK622240
2	XtHn5	Iran	2016	Wheat	1	1	1	4	MK622046	MK622111	MK622176	MK622241
28	XtHn6	Iran	2016	Wheat	8	1	1	4	MK622047	MK622112	MK622177	MK622242
24	XtHn7	Iran	2016	Wheat	12	1	1	4	MK622048	MK622113	MK622178	MK622243
23	XtHn8	Iran	2016	Wheat	9	1	1	4	MK622049	MK622114	MK622179	MK622244
28	XtHn9	Iran	2017	Barley	8	1	1	4	MK622050	MK622115	MK622180	MK622245
2	XtHn10	Iran	2017	Barley	1	1	1	4	MK622051	MK622116	MK622181	MK622246
28	XtHn11	Iran	2017	Barley	8	1	1	4	MK622052	MK622117	MK622182	MK622247
10	XtKm3	Iran	2015	Rye	5	1	1	4	MK622053	MK622118	MK622183	MK622248
44	XtKm4	Iran	2015	Barley	16	3	6	2	MK622054	MK622119	MK622184	MK622249
31	XtKm7	Iran	2014	Barley	18	2	4	1	MK622055	MK622120	MK622185	MK622250
38	XtKm8	Iran	2014	Barley	15	2	6	13	MK622056	MK622121	MK622186	MK622251
43	XtKm9	Iran	2015	Barley	20	3	1	2	MK622057	MK622122	MK622187	MK622252
14	XtKm10	Iran	2015	Barley	8	1	6	4	MK622058	MK622123	MK622188	MK622253
45	XtKm11	Iran	2015	Barley	17	3	6	2	MK622059	MK622124	MK622189	MK622254
13	XtKm12	Iran	2015	Wheat	7	1	1	4	MK622060	MK622125	MK622190	MK622255
15	XtKm15	Iran	2015	Ryegrass	1	1	6	4	MK622061	MK622126	MK622191	MK622256
37	XtKm18	Iran	2015	Barley	18	2	6	13	MK622062	MK622127	MK622192	MK622257
14	XtKm22	Iran	2008	Wheat	8	1	6	4	MK622063	MK622128	MK622193	MK622258
14	XtKm24	Iran	2008	Wheat	8	1	6	4	MK622064	MK622129	MK622194	MK622259
15	XtKm25	Iran	2015	Wheat	1	1	6	4	MK622065	MK622130	MK622195	MK622260
15	XtKm27	Iran	2015	Wheat	1	1	6	4	MK622066	MK622131	MK622196	MK622261
2	XtKm28	Iran	2009	Wheat	1	1	1	4	MK622067	MK622132	MK622197	MK622262
2	XtKm29	Iran	2015	Wheat	1	1	1	4	MK622068	MK622133	MK622198	MK622263
14	XtKm30	Iran	2015	Wheat	8	1	6	4	MK622069	MK622134	MK622199	MK622264
17	XtKm31	Iran	2015	Wheat	1	1	5	4	MK622070	MK622135	MK622200	MK622265
35	XtKm33	Iran	2009	Barley	14	2	6	12	MK622071	MK622136	MK622201	MK622266
36	XtKm34	Iran	2015	Barley	13	2	6	13	MK622072	MK622137	MK622202	MK622267
15	XtKm35	Iran	2015	Wheat	1	1	6	4	MK622073	MK622138	MK622203	MK622268
2	XtBu36	Iran	2017	Wheat	1	1	1	4	MK622074	MK622139	MK622204	MK622269
2	XtBu38	Iran	2017	Wheat	1	1	1	4	MK622075	MK622140	MK622205	MK622270
2	ICMP	Iran	1983	Wheat	1	1	1	4				
	11055								CP009750	CP009750	CP009750	CP009750
40	ICMP	USA	ND	Barley	21	2	1	13	PRJEB647	PRJEB647	PRJEB647	PRJEB647

5752												
39	B1	USA	2013	Barley	15	2	1	13	KY801632	KY814472	KY801435	KY801336
46	B2	USA	2013	Barley	20	3	1	1	LNSZ000000000	LNSZ000000000	LNSZ000000000	LNSZ000000000
39	B43	ND	2006	Rye	15	2	1	13	KY801631	KY814471	KY801436	KY801337
46	B69	USA	2010	Barley	20	3	1	1	KY801629	KY814469	KY801438	KY801339
2	B74	USA	2007	Barley	1	1	1	4	KY801628	KY814468	KY801439	KY801340
1	B75	USA	2010	Wheat	4	1	1	4	KY801627	KY814467	KY801440	KY801341
9	BLSB3	USA	ND	Barley	5	1	1	3	MADS000000000	MADS000000000	MADS000000000	MADS000000000
2	BLSW16	USA	2008	Wheat	1	1	1	4	MADU000000000	MADU000000000	MADU000000000	MADU000000000
46	CIX20	USA	2010	Barley	20	3	1	1	KY801624	KY814464	KY801443	KY801344
46	CIX21	USA	2010	Barley	20	3	1	1	KY801623	KY814463	KY801444	KY801345
46	CIX22	USA	2010	Barley	20	3	1	1	KY801622	KY814462	KY801445	KY801346
1	CIX23	USA	2010	Wheat	4	1	1	4	KY801621	KY814461	KY801446	KY801347
46	CIX26	USA	2010	Barley	20	3	1	1	KY801620	KY814460	KY801447	KY801348
46	CIX28	USA	2010	Barley	20	3	1	1	KY801619	KY814459	KY801448	KY801349
46	CIX29	USA	2010	Barley	20	3	1	1	KY801618	KY814458	KY801449	KY801350
46	CIX30	USA	2010	Barley	20	3	1	1	KY801617	KY814457	KY801450	KY801351
2	CIX31	USA	2010	Wheat	1	1	1	4	KY801616	KY814456	KY801451	KY801352
2	CIX32	USA	2010	Barley	1	1	1	4	KY801615	KY814455	KY801452	KY801353
46	CIX33	USA	2010	Wheat	20	3	1	1	KY801614	KY814454	KY801453	KY801354
30	CIX34	USA	2010	Barley	15	1	1	11	KY801613	KY814453	KY801454	KY801355
2	CIX35	USA	2010	Wheat	1	1	1	4	KY801612	KY814452	KY801455	KY801356
10	CIX36	USA	2010	Wheat	5	1	1	4	KY801611	KY814451	KY801456	KY801357
1	CIX37	USA	2010	Wheat	4	1	1	4	KY801610	KY814450	KY801457	KY801358
2	CIX38	USA	2010	Wheat	1	1	1	4	KY801609	KY814449	KY801458	KY801359
1	CIX39	USA	2010	Wheat	4	1	1	4	KY801608	KY814448	KY801459	KY801360
2	CIX40	USA	2010	Wheat	1	1	1	4	KY801607	KY814447	KY801460	KY801361
41	CIX41	USA	2009	Barley	20	3	1	14	KY801606	KY814446	KY801461	KY801362
2	CIX42	USA	2009	Wheat	1	1	1	4	KY801605	KY814445	KY801462	KY801363
33	CIX43	USA	2009	Barley	15	2	1	11	KY801604	KY814444	KY801463	KY801364
2	CIX44	USA	2009	Wheat	1	1	1	4	KY801603	KY814443	KY801464	KY801365
41	CIX45	USA	2009	Barley	20	3	1	14	KY801602	KY814442	KY801465	KY801366
41	CIX46	USA	2009	Barley	20	3	1	14	KY801601	KY814441	Y801466	KY801367
2	CIX47	USA	2009	Wheat	1	1	1	4	KY801600	KY814440	KY801467	KY801368
2	CIX48	USA	2009	Wheat	1	1	1	4	KY801599	KY814439	KY801468	KY801369
2	CIX49	USA	2009	Wheat	1	1	1	4	KY801598	KY814438	KY801469	KY801370
2	CIX50	USA	2009	Wheat	1	1	1	4	KY801597	KY814437	KY801470	KY801371
2	CIX51	USA	2009	Wheat	1	1	1	4	KY801596	KY814436	KY801471	KY801372
41	CIX52	USA	2009	Barley	20	3	1	14	KY801595	KY814435	KY801472	KY801373

10	CIX53	USA	2010	Wheat	5	1	1	4	KY801594	KY814434	KY801473	KY801374
10	CIX54	USA	2010	Wheat	5	1	1	4	KY801593	KY814433	KY801474	KY801375
32	CIX76	USA	2011	Barley	15	2	1	4	KY801592	KY814432	KY801475	KY801376
41	CIX78	USA	2011	Barley	20	3	1	14	KY801591	KY814431	KY801476	KY801377
41	CIX79	USA	2011	Barley	20	3	1	14	KY801590	KY814430	KY801477	KY801378
41	CIX81	USA	2011	Barley	20	3	1	14	KY801589	KY814429	KY801478	KY801379
41	CIX82	USA	2011	Barley	20	3	1	14	KY801588	KY814428	KY801479	KY801380
46	CIX84	USA	2011	Barley	20	3	1	1	KY801587	KY814427	KY801480	KY801381
41	CIX85	USA	2011	Barley	20	3	1	14	KY801586	KY814426	KY801481	KY801382
46	CIX86	USA	2011	Barley	20	3	1	1	KY801585	KY814425	KY801482	KY801383
39	CIX87	USA	2011	Barley	15	2	1	13	KY801584	KY814424	KY801483	KY801384
1	CIX88	USA	2011	Wheat	4	1	1	4	KY801583	KY814423	KY801484	KY801385
32	CIX90	USA	2011	Barley	15	2	1	4	KY801582	KY814422	KY801485	KY801386
2	CIX91	USA	2011	Wheat	1	1	1	4	KY801581	KY814421	KY801486	KY801387
41	CIX92	USA	2011	Barley	20	3	1	14	KY801580	KY814420	KY801487	KY801388
41	CIX94	USA	2011	Barley	20	3	1	14	KY801579	KY814419	KY801488	KY801389
41	CIX95	USA	2011	Barley	20	3	1	14	KY801578	KY814418	KY801489	KY801390
8	CIX102	USA	2011	Wheat	3	1	1	4	KY801576	KY814416	KY801491	KY801392
5	CIX103	USA	2011	Wheat	1	1	1	11	KY801575	KY814415	KY801492	KY801393
2	CIX104	USA	2011	Wheat	1	1	1	4	KY801574	KY814414	KY801493	KY801394
1	CIX105	USA	2011	Wheat	4	1	1	4	KY801573	KY814413	KY801494	KY801395
1	CIX106	USA	2011	Wheat	4	1	1	4	KY801572	KY814412	KY801495	KY801396
2	CIX107	USA	2011	Wheat	1	1	1	4	KY801571	KY814411	KY801496	KY801397
2	CIX109	USA	2011	Wheat	1	1	1	4	KY801570	KY814410	KY801497	KY801398
1	CIX125	USA	2011	Wheat	4	1	1	4	KY801568	KY814408	KY801499	KY801400
42	CIX126	USA	2013	Wheat	20	3	1	13	KY801567	KY814407	KY801500	KY801401
7	CIX127	USA	2013	Wheat	1	1	1	15	KY801566	KY814406	KY801501	KY801402
2	CIX128	USA	2013	Wheat	1	1	1	4	KY801565	KY814405	KY801502	KY801403
2	CIX129	USA	2013	Wheat	1	1	1	4	KY801564	KY814404	KY801503	KY801404
2	CIX130	USA	2013	Wheat	1	1	1	4	KY801563	KY814403	KY801504	KY801405
1	CIX131	USA	2011	Wheat	4	1	1	4	KY801562	KY814402	KY801505	KY801406
46	CIX132	USA	2013	Barley	20	3	1	1	KY801561	KY814401	KY801506	KY801407
2				<i>Thinopyru</i>	1	1	1	4				
				<i>m</i>								
				<i>intermediu</i>								
2	CIX133	USA	2012	<i>m</i>					KY801560	KY814400	KY801507	KY801408
				<i>Thinopyru</i>	1	1	1	4				
				<i>m</i>								
				<i>intermediu</i>								
	CIX134	USA	2013	<i>Thinopyru</i>	1				KY801559	KY814399	KY801508	KY801409

1	<i>m</i>											
	<i>Thinopyru</i> 4				1	1	4					
	<i>m</i> <i>intermediu</i>											
	CIX135	USA	2012	<i>m</i>				KY801558	KY814398	KY801509	KY801410	
2	CR31	USA	2009	Wheat	1	1	4	LNVJ00000000	LNVJ00000000	LNVJ00000000	LNVJ00000000	
2	CS2	USA	2009	Wheat	1	1	4	LNVK00000000	LNVK00000000	LNVK00000000	LNVK00000000	
2	CS22	USA	2009	Wheat	1	1	4	LNVL00000000	LNVL00000000	LNVL00000000	LNVL00000000	
3	CS4	USA	2009	Wheat	2	1	4	LNVM00000000	LNVM00000000	LNVM00000000	LNVM00000000	
2	LB10	USA	2009	Wheat	1	1	4	KY801557	KY814397	KY801510	KY801411	
2	LB5	USA	2009	Wheat	1	1	4	LNSS00000000	LNSS00000000	LNSS00000000	LNSS00000000	
1	LG48	USA	2009	Wheat	4	1	4	LNVO00000000	LNVO00000000	LNVO00000000	LNVO00000000	
34	LMG876	USA	1933	Barley	15	2	1	14	KY801548	KY814388	KY801519	KY801420
2	LW16	USA	2009	Wheat	1	1	4	KY801544	KY814384	KY801523	KY801424	
1	NARK-1	USA	2010	Wheat	4	1	1	4	MADT00000000	MADT00000000	MADT00000000	MADT00000000
8	P3	USA	2009	Wheat	3	1	4	LNVR00000000	LNVR00000000	LNVR00000000	LNVR00000000	
2	SIMT-07	USA	2007	Barley	1	1	4	MADQ00000000	MADQ00000000	MADQ00000000	MADQ00000000	
1	SLV-2	USA	2010	Barley	4	1	1	4	MADR00000000	MADR00000000	MADR00000000	MADR00000000
2	XctSD-		2008	Wheat	1	1	1	4				
	001	USA						KY801543	KY814383	KY801524	KY801425	
6	XctSD-		2008	Wheat	3	1	1	14	KY801542	KY814382	KY801525	KY801426
2	XctSD-		2008	Wheat	1	1	1	4	KY801541	KY814381	KY801526	KY801427
2	XctSD-		2008	Wheat	1	1	1	4	KY801540	KY814380	KY801527	KY801428
2	XctSD-		2008	Wheat	1	1	1	4	KY801539	KY814379	KY801528	KY801429
8	XctSD-		2008	Wheat	3	1	1	4	KY801538	KY814378	KY801529	KY801430
11	XctSD-		2009	Wheat	5	1	1	1	KY801537	KY814377	KY801530	KY801431
12	XctSD-		2009	Wheat	6	1	1	4	KY801536	KY814376	KY801531	KY801432
4	XctSD-		2009	Wheat	1	1	2	4	KY801535	KY814375	KY801532	KY801433
2	XctSD-		2008	Wheat	1	1	1	4	KY801534	KY814374.1	KY801533	KY801434
2	XT-Rocky	USA	2009	Wheat	1	1	1	4	LNST00000000	LNST00000000	LNST00000000	LNST00000000

2	DAR6145		1988	Wheat	1	1	1	4	AMXY00000000	AMXY00000000	AMXY00000000	AMXY00000000
2	4	Australia										
2	LMG883	Canada	1966	Rye	1	1	1	4	KY801547	KY814387	KY801520	KY801421
2			1966	Khorasan	1	1	1	4				
	LMG892	Canada		wheat					KY801546	KY814386	KY801521	KY801422
2	XT5523	Canada	1966	1999	1	1	1	4	LNVT00000000	LNVT00000000	LNVT00000000	LNVT00000000
8	XT5770	Canada	ND	ND	3	1	1	4	LNVU00000000	LNVU00000000	LNVU00000000	LNVU00000000
4	XT5791	Canada	1969	Wheat	1	1	2	4	LNVV00000000	LNVV00000000	LNVV00000000	LNVV00000000
46	XT8	Canada	1942	Barley	20	3	1	1	LNWW00000000	LNWW00000000	LNWW00000000	LNWW00000000
43	UPB458	India	1970	Barley	20	3	1	2	LWSV00000000	LWSV00000000	LWSV00000000	LWSV00000000
1	UPB513	Mexico	1987	Wheat	4	1	1	4	MADV00000000	MADV00000000	MADV00000000	MADV00000000
39	DSM1897		1933	Barley	15	2	1	13				
	4	USA							CAPJ01000000	CAPJ01000000	CAPJ01000000	CAPJ01000000
2	LG54	USA	2009	Wheat	1	1	1	4	LNVP00000000	LNVP00000000	LNVP00000000	LNVP00000000
46	UPB787	Paraguay	1990	Barley	20	3	1	1	JTEM00000000	JTEM00000000	JTEM00000000	JTEM00000000
29	XT130	Canada	1939	ND	13	1	1	4	LNVS00000000	LNVS00000000	LNVS00000000	LNVS00000000
1	Xtu4699	USA	1999	Wheat	4	1	1	4	CP008714	CP008714	CP008714	CP008714
47			1978	Rough	19	4	7	4				
	LMG728	Switzerland		bluegrass					KY801552	KY814392	KY801515	KY801416

The MH numbering in this Table is the same as in Figure 2 and Figure S5.