

جدول تکمیلی ۱- توده‌های بومی گندم نان مورد مطالعه  
Supplementary Table 1. The studied bread wheat landraces

No.	CIMMYT_NO	USDA_PI_NO	UT_PROVINCE	UT_CITY
1	CWI55925	620903	Azərbayjan-Gharbi	AZ-GH
2	CWI57018	621420	Hamadan	HAMADAN
3	CWI57019	621421	Hamadan	HAMADAN
4	CWI57240	621492	Bakhtaran	BAKHTARAN
5	CWI57495	621565	Hamadan	HAMADAN
6	CWI71852	621619	Kordestan	BIJAR
7	CWI74531	621650	Tehran	TEHRAN
8	CWI71888	621668	Tehran	TEHRAN
9	CWI74548	621669	Tehran	TEHRAN
10	CWI71907	621704	Gazvin	GHAZVIN
11	CWI71910	621706	Gazvin	GHAZVIN
12	CWI71923	621712	Gazvin	GHAZVIN
13	CWI71929	621716	Gazvin	GHAZVIN
14	CWI71931	621717	Gazvin	GHAZVIN
15	CWI71953	621735	Gazvin	GHAZVIN
16	CWI71954	621736	Gazvin	GHAZVIN
17	CWI72226	621869	Markazi	ARAK
18	CWI72271	621908	Markazi	ARAK
19	CWI72383	622063	Zanjan	ZANJAN
20	CWI72392	622084	Mazandaran	MAZANDARAN
21	CWI66864	622098	Gilan	GILAN
22	CWI66867	622099	Gilan	GILAN
23	CWI72397	622105	Gilan	GILAN
24	CWI72458	622247	Mazandaran	SARI
25	CWI49895	622264	Mazandaran	BABOL
26	CWI67063	622272	Mazandaran	AMOL
27	CWI72495	622311	Khorasan	MASHHAD
28	CWI67210	622379	Khorasan	MASHHAD
29	CWI67881	622894	Esfahan	ESFAHAN
30	CWI74680	623008	Esfahan	ESFAHAN
31	CWI73432	623069	Esfahan	ESFAHAN
32	CWI54471	623090	Bakhtaran	SHAH-ABAD
33	CWI70894	623091	Khorasan	MASHHAD
34	CWI54547	623109	Yazd	DASTJERD
35	CWI54661	623123	Fars	SHIRAZ
36	CWI54670	623125	Fars	SHIRAZ
37	CWI54672	623127	Fars	FASA
38	CWI54724	623136	Azərbayjan-Gharbi	MAHABAD
39	CWI54738	623139	Fars	SHIRAZ
40	CWI54849	623161	Azərbayjan-Gharbi	MAHABAD
41	CWI54851	623162	Azərbayjan-Gharbi	MAHABAD
42	CWI71025	623169	Gilan	ROUD-BAR
43	CWI54903	623176	Khorasan	BIRJAND
44	CWI55181	623266	Azərbayjan-Gharbi	REZAIIEH
45	CWI55234	623274	Bakhtaran	GILANE-GHARB
46	CWI55276	623291	Hamadan	TOYSERKAN
47	CWI71221	623318	Yazd	ARDAKAN
48	CWI74167	623338	Fars	SHIRAZ
49	CWI74186	623344	Bakhtaran	GILANE-GHARB
50	CWI74198	623345	Kordestan	BANEH
51	CWI74252	623377	Kerman	SOOFI-ABAD
52	CWI74254	623379	Kerman	JIROFT

Supplementary Table 1. Continued

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53	CWI74256	623382	Kerman	JIROFT
54	CWI71353	623417	Sistan-Balouchestan	ZABOL
55	CWI71373	623421	Azarbajjan-Shargi	TABRIZ
56	CWI55665	623428	Azarbajjan-Shargi	TABRIZ
57	CWI55891	623473	Ilam	ILAM
58	CWI55893	623475	Ilam	ILAM
59	CWI71582	623503	Ilam	ILAM
60	CWI71586	623506	Bakhtaran	KERMANSHAH
61	CWI55919	623507	Bakhtaran	KERMANSHAH
62	CWI55920	623508	Bakhtaran	KERMANSHAH
63	CWI55927	623510	Azarbajjan-Gharbi	AZ-GH
64	CWI71625	623905	Bakhtaran	KERMANSHAH
65	CWI56702	623908	Bakhtaran	KERMANSHAH
66	CWI56703	623909	Bakhtaran	KERMANSHAH
67	CWI56757	623953	Bakhtaran	GHASRE-SHIRIN
68	CWI56798	623980	Hamadan	TOYSERKAN
69	CWI57017	624215	Hamadan	HAMADAN
70	CWI57057	624240	Ilam	ILAM
71	CWI57068	624251	Ilam	ILAM
72	CWI57161	624315	Kordestan	KORDESTAN
73	CWI57242	624378	Bakhtaran	BAKHTARAN
74	CWI57247	624381	Bakhtaran	BAKHTARAN
75	CWI57455	624576	Hamadan	HAMADAN
76	CWI57460	624580	Hamadan	HAMADAN
77	CWI57463	624582	Hamadan	HAMADAN
78	CWI71781	624585	Hamadan	HAMADAN
79	CWI71789	624596	Hamadan	HAMADAN
80	CWI57692	624804	Bakhtaran	GHASRE-SHIRIN
81	CWI57693	624805	Bakhtaran	GHASRE-SHIRIN
82	CWI71841	624818	Ilam	ILAM
83	CWI57721	624837	Ilam	ILAM
84	CWI57722	624838	Ilam	ILAM
85	CWI57730	624846	Ilam	ILAM
86	CWI57733	624849	Ilam	ILAM
87	CWI57745	624861	Ilam	ILAM
88	CWI57746	624863	Ilam	ILAM
89	CWI57747	624864	Ilam	ILAM
90	CWI74495	624894	Kordestan	BIJAR
91	CWI71853	624900	Kordestan	BIJAR
92	CWI74501	624901	Kordestan	BIJAR
93	CWI74508	624910	Hamadan	NAHAVAND
94	CWI74509	624911	Hamadan	NAHAVAND
95	CWI71875	624925	Hamadan	MALAYER
96	CWI74537	624939	Tehran	TEHRAN
97	CWI74540	624941	Tehran	TEHRAN
98	CWI74544	624944	Tehran	TEHRAN
99	CWI74546	624946	Tehran	TEHRAN
100	CWI74547	624947	Tehran	TEHRAN
101	CWI71892	624956	Tehran	TEHRAN
102	CWI74564	624963	Tehran	TEHRAN
103	CWI71913	624980	Gazvin	GHAZVIN
104	CWI71916	624983	Gazvin	GHAZVIN
105	CWI71918	624985	Gazvin	GHAZVIN
106	CWI71938	624990	Gazvin	GHAZVIN

Supplementary Table 1. Continued			جدول تکمیلی ۱- ادامه	
107	CWI72063	625047	Markazi	SAVEH
108	CWI72118	625080	Markazi	SAVEH
109	CWI72119	625081	Markazi	SAVEH
110	CWI57793	625123	Markazi	KASHAN
111	CWI72194	625127	Markazi	KASHAN
112	CWI72197	625139	Markazi	ARAK
113	CWI66843	625263	Mazandaran	MAZANDARAN
114	CWI72398	625281	Gilan	GILAN
115	CWI72463	625362	Mazandaran	BABOL
116	CWI67144	625433	Khorasan	MASHHAD
117	CWI67524	625661	Khorasan	MASHHAD
118	CWI72729	625810	Khorasan	MASHHAD
119	CWI67670	626156	Kerman	KERMAN
120	CWI67672	626158	Kerman	KERMAN
121	CWI67751	626215	Kerman	KERMAN
122	CWI67758	626223	Sistan-Balouchestan	ZAHEDAN
123	CWI67761	626226	Sistan-Balouchestan	ZAHEDAN
124	CWI67769	626234	Sistan-Balouchestan	ZAHEDAN
125	CWI67794	626260	Sistan-Balouchestan	ZAHEDAN
126	CWI67795	626261	Sistan-Balouchestan	ZAHEDAN
127	CWI67880	626358	Esfahan	ESFAHAN
128	CWI67883	626360	Esfahan	ESFAHAN
129	CWI73421	626565	Esfahan	ESFAHAN
130	CWI73422	626566	Esfahan	ESFAHAN
131	CWI73433	626573	Esfahan	ESFAHAN
132	CWI54496	626699	Ilam	ILAM
133	CWI54502	626706	Hamadan	MALAYER
134	CWI70918	626736	Khorasan	SABZVAR
135	CWI54538	626747	Yazd	ARDAKAN
136	CWI70927	626764	Yazd	YAZD
137	CWI54569	626776	Khorasan	BIRJAND
138	CWI54602	626814	Esfahan	ESFAHAN
139	CWI54613	626825	Esfahan	SHAHREZA
140	CWI54636	626846	Yazd	YAZD
141	CWI54641	626855	Markazi	VARAMIN
142	CWI54656	626872	Fars	SHIRAZ
143	CWI54674	626881	Azərbayjan-Shargi	ARDABIL
144	CWI54676	626883	Fars	NIRIZ
145	CWI54690	626895	Azərbayjan-Shargi	MARAGHEH
146	CWI70970	626904	Azərbayjan-Shargi	MIANEH
147	CWI54704	626908	Kerman	SIRJAN
148	CWI70975	626923	Gilan	ASTARA
149	CWI70976	626924	Gilan	ASTARA
150	CWI54727	626932	Hormozgan	BANDAR-ABBAS
151	CWI54729	626933	Hormozgan	BANDAR-ABBAS
152	CWI54737	626943	Kerman	ZABOL
153	CWI54756	626958	Azərbayjan-Gharbi	REZAIIEH
154	CWI54778	626978	Esfahan	ESFAHAN
155	CWI71007	627036	Khouzestan	BROUJERD
156	CWI71008	627038	Khouzestan	BROUJERD
157	CWI54848	627043	Azərbayjan-Gharbi	REZAIIEH
158	CWI54857	627054	Gilan	ROUD-BAR
159	CWI54858	627055	Zanjan	ROUD-BAR
160	CWI71020	627057	Gilan	FOOMAN

Supplementary Table 1. Continued			جدول تکمیلی ۱- ادامه	
161	CWI71022	627061	Markazi	ARAK
162	CWI54866	627066	Kerman	RAFSANJAN
163	CWI54871	627072	Zanjan	ZANJAN
164	CWI54894	627099	Khouzestan	KHORAM-ABAD
165	CWI54897	627102	Zanjan	ROUD-BAR
166	CWI71040	627103	Mazandaran	GORGAN
167	CWI55011	627189	Khorasan	BOJNOURD
168	CWI74139	627236	Khorasan	GONABAD
169	CWI55130	627299	Yazd	DASTJERD
170	CWI55188	627356	Hormozgan	BANDAR-ABBAS
171	CWI55192	627359	Markazi	ARAK
172	CWI55193	627360	Kerman	RAFSANJAN
173	CWI55230	627385	Bakhtaran	GHASRE-SHIRIN
174	CWI71169	627399	Zanjan	MANJIL
175	CWI55256	627410	Azarbajjan-Shargi	MARAGHEH
176	CWI71177	627414	Bakhtaran	KANGAVAR
177	CWI71179	627416	Bakhtaran	SANJABI
178	CWI55260	627417	Bakhtaran	SANJABI
179	CWI55267	627423	Hamadan	HAMADAN
180	CWI71203	627460	Khorasan	SABZVAR
181	CWI74159	627484	Yazd	ARDAKAN
182	CWI74170	627551	Azarbajjan-Shargi	ARDABIL
183	CWI74193	627587	Kordestan	BANEH
184	CWI74214	627616	Esfahan	ESFAHAN
185	CWI55508	627688	Esfahan	NAEIN
186	CWI74261	627723	Yazd	YAZD
187	CWI74296	627760	Azarbajjan-Shargi	AZAR-SHAHR
188	CWI55542	627787	Azarbajjan-Shargi	TABRIZ
189	CWI71344	627842	Kerman	KERMAN
190	CWI74356	627845	Sistan-Balouchestan	ZABOL
191	CWI71348	627849	Sistan-Balouchestan	ZABOL
192	CWI71351	627852	Sistan-Balouchestan	ZABOL
193	CWI71352	627853	Sistan-Balouchestan	ZABOL
194	CWI71356	627856	Mazandaran	SARI
195	CWI55596	627873	Zanjan	GAZVIN
196	CWI71371	627881	Azarbajjan-Shargi	TABRIZ
197	CWI55600	627883	Azarbajjan-Shargi	TABRIZ
198	CWI71388	627905	Mazandaran	AMOL
199	CWI55610	627908	Markazi	ARAK
200	CWI71411	627948	Markazi	SAVEH
201	CWI55642	627963	Hamadan	HAMADAN
202	CWI55657	627987	Zanjan	GAZVIN
203	CWI55659	627990	Bakhtaran	BAKHTARAN
204	CWI55673	628012	Bakhtaran	BAKHTARAN
205	CWI55723	628084	Mazandaran	GORGAN
206	CWI55727	628088	Markazi	ARAK
207	CWI55746	628114	Esfahan	SHAHREZA
208	CWI55795	628189	Ilam	ILAM

جدول تکمیلی ۲- ارقام زراعی گندم نان مورد مطالعه

Supplementary Table 2. The studied bread wheat cultivars

No.	Genotype	Growth habit	Irrigated / Dryland	Pedigree
209	4820	Spring	Irrigated	No Information
210	ADL	Spring	Irrigated	TK/SHAHPASSAND
211	AFLAK	Spring	Irrigated	HD160/5/Tob/Cno/23854/3/Nai60//Tit/Son64/4/LR/Son64
212	AKBARI	Spring	Irrigated	1-63-31/3/12300/TOB//CNO67/SX
213	AKOVA	Winter	Irrigated	FN/MD//K117A/3/2*CLLF/4/SON64/KLRE/3/CNO//LR64*2/SON64
214	ALBORZ	Spring	Irrigated	HD2206/Hork//Bul/6/CMH80A.253/2/M2A/CML//Ald*4/5/BH1146/H56.71//BH1146/3/CMH78.390/4/Seri82/7/Hel/3 *Cno79/7/2*Seri 82
215	ALVAND	Facultative	Irrigated	GDOVZ469/3/JO_1//ND61.130/LDS
216	ARTA	Spring	Irrigated	PUNJAB-76/CHENAB-70
217	ARVAND	Spring	Irrigated	ZHONG ZUO/2*GREEN-3
218	ATRAK	Spring	Irrigated	ND/VG9144//KAL/BB/3/YACO/4/VEE#5
219	AZADI	Facultative	Irrigated	Attila 50Y//Attila/Bacanora
220	AZAR	Winter	Dryland	RSH/IRN 149(60-61)//C271
221	AZAR2	Winter	Dryland	MAYA'S/NAC
222	BAHAR	Spring	Irrigated	DASTJERDI
223	BAM	Spring	Irrigated	Capetiti
224	BAYAT	Spring	Irrigated	KVZ/BUHO//KAL/BB
225	BEZOSTAYA	Winter	Dryland	No Information
226	BISTON	Spring	Dryland	ND/VG9144//KAL/BB/3/YACO'S/4/VEE#5
227	CHAMRAN	Spring	Irrigated	RHS/5/WT/4/NOR10/K54*2//FN/3/PTR/6/OMID//KAL/BB
228	CHAMRAN2	Spring	Irrigated	A pure Line of Sardari
229	DARAB1	Spring	Irrigated	200H/VFN/RSH
230	DARAB2	Spring	Irrigated	FA//TH/MTA/3/OMI or FA//TH/MT/3/OMID
231	DARYA	Spring	Irrigated	DRC/MXP//ISWRN-297/3/NAI60
232	DASTJERDI	Spring	Irrigated	Triticum aestivum/Sprw "s"//CA8055/3/Baconora88
233	DAYHIM	Spring	Irrigated	No Information
234	DEZ	Spring	Irrigated	BB/RON//CNO67/TOTA/3/JAR
235	DN11	Unknown	Irrigated	TI/PCH/5/MT48/3/WTE*3/NAR59/TOTA63/4/MUS
236	FALAT	Spring	Irrigated	AVD/PCHU/5/N10/BR21.1C//KT54B/3/NAR59/1093/4/7C
237	FONG	Unknown	Irrigated	Barkat/90Zhong87
238	FONTANA	Unknown	Irrigated	LR/N10B//3*ANE
239	GAHAR	Spring	Dryland	LR64A/HUAR
240	Gascogne	Unknown	Irrigated	Luan/3/V763.23/V879.c8//Pvn/4/Picus/5/Opata
241	GHODS	Spring	Irrigated	MILAN/SHANGHAI-7
242	GOLESTAN	Spring	Irrigated	No Information
243	HAMOON	Spring	Irrigated	HYS/7C

Supplementary Table 2. Continued

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244	HOMA	Winter	Dryland	1-63-31/3/12300/TOB//CNO67/SX
245	INIA66	Spring	Irrigated	F134-71/CROW'S'
246	KARAJ1	Facultative	Irrigated	GF-gy54/Attila
247	KARAJ2	Winter	Irrigated	Selection in landraces
248	KARAJ3	Winter	Irrigated	No Information
249	KARIM	Spring	Dryland	Bkt/90Zhong87
250	KAVEH	Spring	Irrigated	RAYHANI
251	KAVIR	Spring	Irrigated	PATO/CAL/3/7C//BB/CNO/5/CAL//CNO/SN64/4/CNO//BAD/CHR/3/KL../6/SABALAN
252	KHAZAR1	Spring	Irrigated	No Information
253	KOONDASHT	Spring	Dryland	SEFIDAK
254	MAHDAVI	Spring	Irrigated	JO69/HAU
255	MAROON	Spring	Irrigated	SHAHI
256	MARVDASHT	Spring	Irrigated	SHAHPASSAND
257	MIHAN	Winter	Irrigated	PRL/2*PASTOR
258	MOGHAN1	Spring	Irrigated	Manning/Sdv1//Dogu88
259	MOGHAN2	Spring	Irrigated	SPN/MCD//CAM/3/NZR or SPN/MCD//CAMA/3/NZT
260	MOGHAN3	Spring	Irrigated	No Information
261	MORVARID	Spring	Irrigated	Alvand//Ns732/Her
262	MV17	Winter	Irrigated	130L1.11//F35.70/MO73/4/YMH/TOB//MCD/3/LIRA
263	NAVID1990	Facultative	Irrigated	NAI60/HVII//BUC/3/F59.71/GHK
264	NAZ	Spring	Irrigated	No Information
265	NEISHABOUR	Spring	Irrigated	LR64/SN64
266	NICKNEJAD	Spring	Irrigated	OASIS/SKAUZ//4*BCN/3/2*PASTOR
267	OFOGH	Spring	Irrigated	No Information
268	OHADI	Winter	Dryland	Kauz/Yaco//Kauz
269	PANJAMO62	Spring	Irrigated	RSH/3/MTA//KY/MAYO58
270	PARSI	Spring	Irrigated	SN64A//TZPP/NAI60
271	PISHGAM	Facultative	Irrigated	Landrace
272	PISHTAZ	Spring	Irrigated	No Information
273	QABOOS	Spring	Dryland	No Information
274	RASHID	Facultative	Dryland	P4160//SN64/LR64
275	RAYHANI	Spring	Irrigated	SABA,IRN
276	RIJAW	Facultative	Dryland	N.P.7881/AZAR 2/588
277	ROSHAN	Spring	Irrigated	(908//FN/A12)1-32-4382
278	SABALAN	Facultative	Dryland	JUP/BJY'S//URES
279	SEPAHAN	Spring	Irrigated	AZADI/5/L2453/1347/4/KAL//BB/KAL/3/Y50E/3*KAL
280	SHAHI	Winter	Irrigated	VEE#5/NAC//1-66-22 or VEERY/NACUZARI-76//1-66-22
281	SHAHPASSAND	Winter	Irrigated	SHWA/MALD//AAZ/3/SRN
282	SHAHRVAR	Winter	Irrigated	GV/D6301//ALD/3/AZADI or GAVILAN,MEX/D-630//((SIB)ALONDRA/3/AZADI or

Supplementary Table 2. Continued

جدول تکمیلی ۲- ادامه

283	SHANGHAI7	Spring	Irrigated	ALVAND//ALDAN/IAS 58
284	SHIRAZ	Spring	Irrigated	FALAT/RSH
285	SHIROODI	Spring	Irrigated	KAUZ*2//OPATA//KAUZ
286	SIOSSON	Unknown	Irrigated	ND/VG9144//KAL/BB/3/YACO/4/VEE#5
287	SIRVAN	Spring	Irrigated	HD2172/BLOUDAN//AZADI
288	SISTAN	Spring	Irrigated	TAN'S'/VEE'S'//OPATA
289	SIVAND	Spring	Irrigated	ND/VG9144//KAL/BB/3/YACO/4/VEE#5
290	TAJAN	Spring	Irrigated	BOW/NKT
291	TAKAB	Winter	Dryland	1-27-6275/CF 1770 or CF17170 1-22-11
292	TOBARI66	Spring	Irrigated	Stm/3/Kal//V543/Jit716 or SHORTIM/3/KALYANSONA//V-534/JIT-716
293	TOUS	Facultative	Irrigated	Dove"S"/Buc"S"//2*Darab1 or DOVE(SIB)/(SIB)BUCKBUCK(M-84-17)//2*DARAB
294	UROUM	Winter	Irrigated	Kauz"S"/Azd or KAUZ(SIB)/(AZD)AZADI
295	VEENAC	Spring	Irrigated	JORI"S"/ANHINGA"S"//FLAMINGO"S"
296	ZAGROS	Spring	Dryland	No Information
297	ZARE	Facultative	Irrigated	KVZ//TI//MAYA/26591-1T-7M-OY-115Y-OM/3/1-44-21863/4/ANZA/3/PI/NAR59//HYS or KAVKAZ/TANORI-71/3/MAYA-74(SIB)//BLUEBIRD/INIA/4/KARAJ-2/5/ANZA/3/PITIC-62/NDR//HYSLOP
298	ZARRIN	Facultative	Irrigated	KVZ//TI//MAYA/26591-1T-7M-OY-115Y-OM/3/SEFID