

Table S1. The locations where the wheat genotypes used in the study were collected.

No	Latitude and longitude	No	Latitude and longitude	No	Latitude and longitude
1	38°02'35.0"N 40°03'54.2"E	21	40°36'12.6"N 43°01'31.7"E	41	37°51'29.9"N 38°18'55.5"E
2	38°17'07.5"N 35°35'10.7"E	22	39°42'10.7"N 39°23'15.4"E	42	39°15'25.5"N 37°23'16.5"E
3	40°44'16.4"N 43°25'27.1"E	23	40°45'10.5"N 43°24'26.2"E	43	39°57'49.4"N 37°40'11.0"E
4	38°12'50.6"N 37°15'33.4"E	24	38°15'35.5"N 35°37'30.8"E	44	41°21'31.2"N 32°48'59.2"E
5	41°23'28.1"N 33°43'17.3"E	25	40°36'43.2"N 43°07'47.2"E	45	39°52'52.0"N 36°36'01.7"E
6	37°44'48.3"N 32°23'54.0"E	26	41°41'24.9"N 33°38'29.0"E	46	40°50'05.8"N 43°15'05.4"E
7	41°20'46.7"N 33°47'11.2"E	27	41°22'46.6"N 33°50'45.9"E	47	37°13'49.7"N 34°41'26.8"E
8	38°17'25.2"N 33°51'13.8"E	28	40°44'56.6"N 43°23'53.6"E	48	41°30'44.0"N 34°13'14.3"E
9	38°36'11.3"N 43°29'18.5"E	29	40°05'27.3"N 33°26'10.1"E	49	40°00'20.2"N 44°18'17.9"E
10	41°27'15.7"N 33°24'31.6"E	30	38°17'16.4"N 35°35'35.9"E	50	37°13'00.5"N 38°48'19.4"E
11	38°06'05.2"N 35°39'34.7"E	31	38°07'56.4"N 34°40'51.5"E	51	38°33'42.7"N 43°30'08.0"E
12	38°36'00.9"N 36°13'19.9"E	32	40°46'32.4"N 43°31'20.0"E	52	36°44'21.5"N 33°53'07.8"E
13	41°26'06.7"N 33°49'20.9"E	33	40°45'51.7"N 43°24'27.8"E	53	37°45'25.5"N 32°33'24.6"E
14	38°11'17.1"N 35°40'16.6"E	34	41°01'30.4"N 34°04'19.4"E	54	40°43'36.5"N 43°30'32.3"E
15	36°33'30.4"N 33°46'04.0"E	35	40°46'26.3"N 43°30'56.6"E	55	Bahri Dagdas IARI <sup>1</sup>
16	38°22'28.7"N 35°27'12.7"E	36	37°26'26.3"N 40°41'04.8"E	56	GAP IARTC <sup>2</sup>
17	39°49'50.7"N 43°47'52.8"E	37	39°47'54.4"N 35°09'51.9"E	57	GAP IARTC
18	40°46'09.6"N 43°31'28.7"E	38	38°52'57.2"N 35°14'20.5"E	58	GAP IARTC
19	38°36'29.4"N 43°36'48.9"E	39	39°27'50.8"N 36°40'05.3"E		
20	41°18'38.7"N 33°22'47.0"E	40	38°14'14.9"N 32°12'16.4"E		

<sup>1</sup>IARI International Agricultural Research Institute, <sup>2</sup>IARTC International Agricultural Research and Training Center.