

Molecular identification of yellow rust resistance genes in some wheat and triticale cultivars and their resistance to *Puccinia striiformis* f.sp. *tritici*

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Electronic Supplementary Material (ESM)

The authors are fully responsible for both the content and the formal aspects of the electronic supplementary material. No editorial adjustments were made.

Table S1. Names, pedigree/origin and the sources of bread wheat and triticale cultivars used in the study

Cultivar name	Synonym	Scientific name	Pedigree	Year of release	Origin
Al-Wand		<i>T. aestivum</i>	–	-	-
Sulaimani 2	Kauz*2	<i>T. aestivum</i>	Kauz × 2	2016	CIMMYT
Hawler 2	none	<i>T. aestivum</i>	Florkwa2/6/Sakers/5//YMH/TOB/4/BOWS-LC96-0180-030APS-2AP-DAPS-OPA	2018	CIMMYT
Hawler 4	none	<i>T. aestivum</i>	Baj#1/3/KirijAI/A × 2/PastorCMSSOY-OO288S-OS8-099Y-99M-099Y3M-OWGY	2018	CIMMYT
Azmar	Azmar 2	<i>T. aestivum</i>	CMH 83/ ELVIRA// CMH 79/ AGA/ INIA (Rad.)	2020	Iraq
Alaa	none	<i>T. aestivum</i>	ESDA/VEE × 10	2014	Iraq
Baraka	none	<i>T. aestivum</i>	IARI × STD	2013	Iraq
Charmo	none	<i>T. aestivum</i>	CMH79A/AGA/CNO67//INIA66/NAC/BA-BAX (Rad.)	2020	Iraq
Hsad	none	<i>T. aestivum</i>	SNB//CMH79A955/3 × CNO79/3/ATTILA	2014	Iraq
Fath 1	none	<i>T. aestivum</i>	CI8224/CI6833/Conz/7IIC/Top-Swm6328/9AP-OAP//Max.	2001	Iraq
Maarroof	none	<i>T. aestivum</i>	KTN M12/DAMAN × ADL//TAMUZ 2	2014	Iraq
Bura	none	<i>T. aestivum</i>	H31/Trapf21/Enesco	2014	Italy
Bhuth 10	none	<i>T. aestivum</i>	Iba'a95/Iba'a99	2013	Iraq
Faris 1	farris	<i>T. aestivum</i>	STAR/TR771773/SLM	2012	Iraq
Iba 99	farris	<i>T. aestivum</i>	Ures/Bow"s"/3/Jup/ Biy"s" //Ures	1997	CIMMYT
Bhuth 158	none	<i>T. aestivum</i>	118//S2/57-S2-CR7-S2	2012	Iraq
Babil 113	none	<i>T. aestivum</i>	Max./R23	2000	Iraq
Tamuz 2	none	<i>T. aestivum</i>	Sab./Max. (Rad.)	2012	Iraq
Bhuth 22		<i>T. aestivum</i>	CMSS96Yo3204F-PJN/Bow//OPATA	2011	CIMMYT
Al-Rashid	Al-Mansur Bellah	<i>T. aestivum</i>	Max. (Rad.)	2001	Iraq
Baghdad 3	none	<i>T. aestivum</i>	–	2014	Iraq
Iba 95	none	<i>T. aestivum</i>	Veery" S"	1995	CIMMYT
Adana	Adana 99	<i>T. aestivum</i>	PFAU/SERI-M-82/BOBWHITE	2012	Turkey
Wafia	none	<i>T. aestivum</i>	–	2015	France
Baghdad 1	none	<i>T. aestivum</i>	MX105-6MVL40/BNSN	2012	CIMMYT
Latifia	none	<i>T. aestivum</i>	Australian Line/Aras	1995	Iraq
Bengal	none	<i>T. aestivum</i>	BISU/3/YAV79/ALO1/ALTARS4/CD93683.7Y.040M-03OY-LPAP.B	2013	Spain
Abu Ghraib	none	<i>T. aestivum</i>	Ajeeba/Inia66/ Mexico24	1973	Iraq
Uruk	none	<i>T. aestivum</i>	Inia 66 (Rad.)	2013	Iraq
Cham 6	none	<i>T. aestivum</i>	PLC "S" – Ruff "S" × Gta "S" – RTTE Cm-12904-1M-3M-1Y-1Y-OSK-OAP.	2000	ICARDA
Al-Nur	none	<i>T. aestivum</i>	Car853/Coc/Vee/3/Bow	1997	ICARDA
Barcelona	none	<i>T. aestivum</i>	–	-	Spain
Tamuz 3	none	<i>T. aestivum</i>	Sab./Max. × AbuGh. (Rad.)	1992	Iraq
Iraq	AlKaed278	<i>T. aestivum</i>	Max. (Rad.)	1999	Iraq
Ashur	AlTahadi	<i>T. aestivum</i>	Sab./Max.	1992	Iraq
Al-Madaen	AlNeda'	<i>T. aestivum</i>	Sab./Max. (Rad.)	1992	Iraq
Al-Samawa	Al-Nakhwa	<i>T. aestivum</i>	SaberBeg/Maxipak (Rad.)	2000	Iraq
Kalar 1	none	<i>T. aestivum</i>	ID800994.W/VEE/5/CA8055/4/ROMTAST/BON/3DIBO//SU-	2018	Iraq

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Table S1 to be continued

Cultivar name	Synonym	Scientific name	Pedigree	Year of release	Origin
Kalar 2	non	<i>T. aestivum</i>	CH75479/SARDARI-HD74-	2018	Iraq
Iratom	Iratom 1	<i>T. aestivum</i>	Sab. (Rad.)	1992	Iraq
Rabiea	1610	<i>T. aestivum</i>	Sab./HD (Rad.)	1994	Iraq
Al-Eiz	Al-eiz 66	<i>T. aestivum</i>	Najah/Maxipak (Rad.)	1997	Iraq
Qandaharia	Qandeharia	<i>T. aestivum</i>	land race	n.a	Iraq
SaberBeg	Qandeharia	<i>T. aestivum</i>	land race	n.a	Iraq
Sarah	none	<i>Triticosecale</i>	ASAD/ELK54//ERIZO10/3/CHAKAL5/4/ARD1 /TOPO	2020	Iraq
Rezan	none	<i>Triticosecale</i>	MILAN/2 × ERIZO11/4/ERIZO9//TOPO1419/ARDI1/3/6HBIDA	2018	Iraq

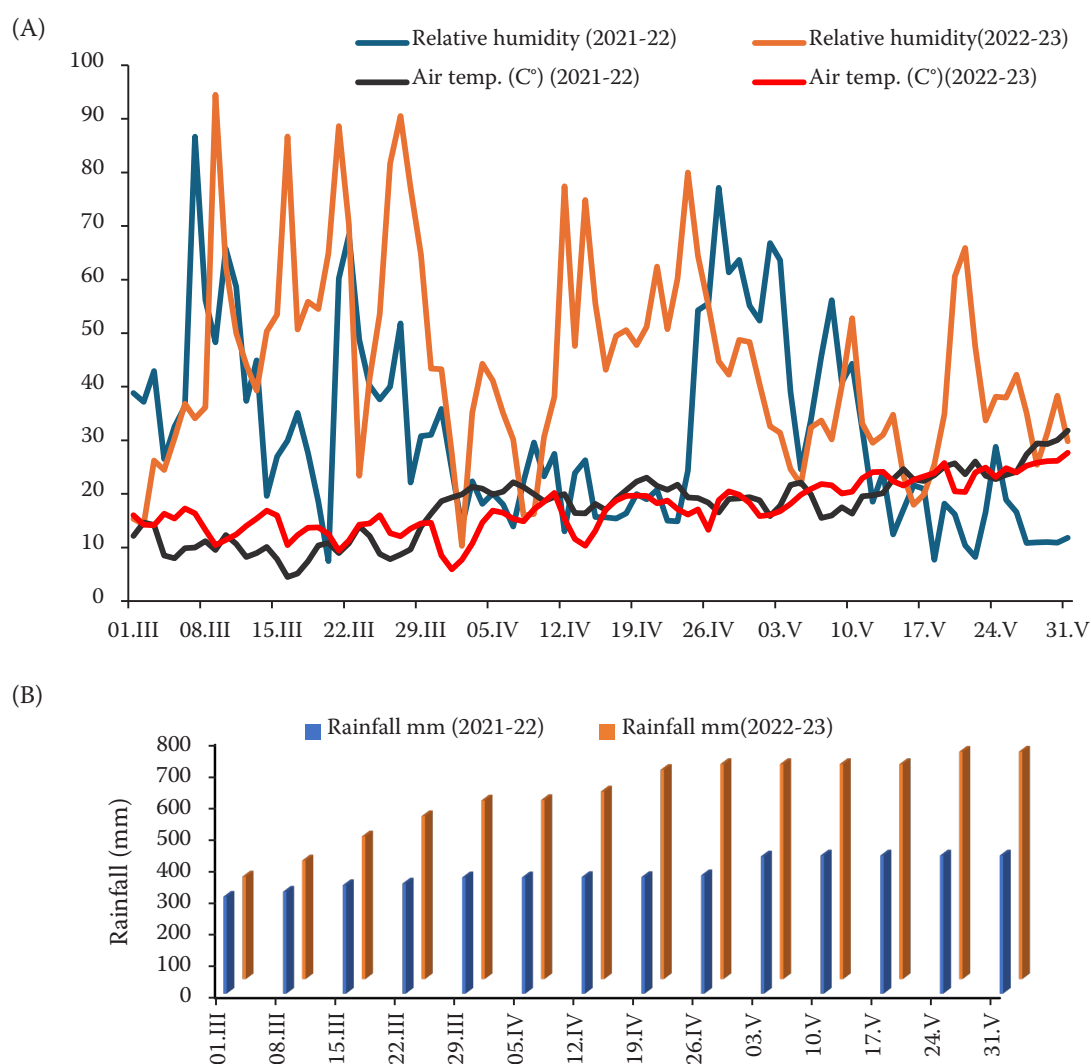


Figure S1. Relative humidity, air temperature (A), and precipitations (B) during the experiment period between November to May, 2021 to 2023 at Bakrajo, Sulaimani