SUPPLEMENTARY TABLES

Supplementary Table S1. Meteorological conditions at Rimski šančevi

Season	Month	MDT (°C)	MDM min (°C)	MDM max (°C)	RH (%)	PR (mm)
2015/2016	I	1.3	-2.4	5.1	86	51.3
	II	7.5	2.9	12.5	81	49.2
	III	7.8	3.6	12.7	79	65.5
	IV	14.2	8.2	20.7	68	74.5
	V	16.9	11.1	22.5	72	85.0
	Mean	9.54	4.68	14.7	77.2	Σ 325.5
2016/2017	I	-4.9	-8.8	-1.6	79	18.5
	II	1.2	0.3	9.1	70	20.1
	III	9.9	4.0	16.0	53	30.5
	IV	11.4	5.1	17.5	57	57.0
	V	17.6	11.7	23.3	54	82.9
	Mean	7.04	2.46	12.86	62.6	Σ 209.0
2017/2018	I	4.3	0.8	7.9	87	47.5
	II	1.2	-1.1	5.5	91	81.9
	III	5.0	0.9	8.5	88	60.6
	IV	17.2	10.7	13.0	74	49.0
	V	20.4	14.3	12.5	79	64.2
	Mean	9.62	5.12	9.48	83.8	Σ 303.2
LTA	I	0.2	-3.1	3.7	85	39.1
	II	1.6	-2.4	6.1	79	31.4
	III	6.4	1.5	12.0	71	42.5
	IV	11.8	6.2	17.7	67	49.2
	V	17.3	11.3	23.0	66	63.0
	Mean	7.46	2.7	12.5	73.6	Σ 225.2

LTA - long-term average (1981 - 2010), MDT- mean daily temperature, MDM min -mean daily minimum temperature, MDM max -mean daily maximum temperature, RH - relative humidity, PR - precipitation

Supplementary Table S2. Microsatellite markers, their primer sequences, associated traits, mapped gene or quantitative trait locus, marker distance from the gene or position of the marker on the consensus genetic map and reference

Marker	Forward and reverse primer sequence	Trait	Gene/QTL	Distance/Position	Reference
gpw3017	GTTTGTCGGTCGTGAAGGTT TGCGTTGGTTTGTCTACTGG	PH	*Rht-dp* (*Rht-B1b*)	0.5 cM	KANG *et al.* (2012)
gwm261	CTCCCTGTACGCCTAAGGC	PH	*Rht8*	0.6 cM	KORZUN *et al.* (1998)
	CTCGCGCTACTAGCCATTG	PH	*QTL_height-2B-1*	42 cM	GRIFFITHS *et al.* (2012)
		FT	*QFlw.nau-2D*	22 cM	JIA *et al.* (2013)
gwm291	CATCCCTACGCCACTCTGC	PH	*Rht12*	5.4 cM	KORZUN *et al.* (1997)
	AATGGTATCTATTCCGACCCG	HT	*metaQTL*	163 cM	GRIFFITHS *et al.* (2009)
gwm296	AATTCAACCTACCAATCTCTG	PH	*Rht8*	0.7 cM	KORZUN *et al.* (1998)
	GCCTAATAAACTGAAAACGAG	PH	*MQTL*	34 cM	MAO *et al.* (2010)
gwm495	GAGAGCCTCGCGAAATATAGG	PH	*Rht-Ai123*	13 cM	MENG *et al.* (2013)
	TGCTTCTGGTGTTCCTTCG	PH	*QPh.nau-4B.1*	33 cM	JIA *et al.* (2013)
gwm639	CTCTCTCCATTCGGTTTTCC CATGCCCCCCTTTTCTG	PH	*QHt.ihar-5A.2*	64 cM	CZEMBOR *et al.* (2019)
wmc125	ATACCACCATGCATGTGGAAGT ACCGCTTGTCATTTCCTTCTGT	PH	*Rht-B1c* (*Rht3*)	14.4 cM	NAVARRO *et al.* (2013)
wmc25	TCTGGCCAGGATCAATATTACT	PH	*QPh_MS_F2*	16 cM	ZHANG *et al.* (2015)
	TAAGATACATAGATCCAACACC	PH	*MQTL*	23.2 cM	MAO *et al.* (2010)
		FT	*Lr-16*	-	ROY *et al.* (2006)
wmc617	CCACTAGGAAGAAGGGGAAACT	PH	*RhtD1c*	1 cM	CAO *et al.* (2009)
	ATCTGGATTACTGGCCAACTGT	PH	*RhtD1b*	12 cM	SOMERS *et al.* (2004)
		PH	*QTL-height-4B-1*	42 cM	GRIFFITHS *et al.* (2009)
		HT	*QHdeliteDP2014-4A*	79 cM	MACCAFERRI *et al.* (2014)

PH- plant height, HT - number of days to heading, FT - number of days to flowering

Supplementary Table S3. The most frequent alleles by wheat groups and their frequencies

Locus/Groups		America	Asia	Russia	SSE	WCE	Spelt	TP
Xgpw3017-4BS	MFA	289	289	289	289	285	319	285
	freq.	0.556	0.750	0.792	0.525	0.486	0.857	0.333
Xgwm261-2DS	MFA	174	192	192	192	174	205	-
	freq.	0.737	0.667	0.667	0.730	0.625	0.714	
Xgwm291-5AL	MFA	109	103	109	109	103	115	115
	freq.	0.389	0.750	0.500	0.540	0.648	0.714	0.667
Xgwm296-2AS	MFA	134	134	134	134	138	132	138
	freq.	0.625	1.000	0.636	0.736	0.708	0.571	1.000
Xgwm296-2DS	MFA	164	168	168	168	158	164	-
	freq.	0.389	0.727	0.583	0.590	0.358	0.750	
Xgwm296-7DS	MFA	176	178	184	182	172	174	-
	freq.	0.778	0.455	0.583	0.393	0.600	0.714	
Xgwm495-4BS	MFA	174	158	174	174	174	172	174
	freq.	0.421	0.583	0.917	0.653	0.650	1.000	0.667
Xgwm639-5AL	MFA	135	133	135	135	135	133	133
	freq.	0.500	0.750	0.750	0.717	0.565	1.000	0.800
Xgwm639-5BL	MFA	141	149	145	145	143	141/143	141
	freq.	0.658	0.833	0.778	0.683	0.535	0.429	1.000
Xgwm639-5DL	MFA	151	173	155	155	155	151	-
	freq.	0.737	0.917	0.727	0.417	0.851	1.000	
Xwmc25-2BS	MFA	166	170	166/170	170	166	166	166
	freq.	0.588	1.000	0.500	0.677	0.662	0.571	1.000
Xwmc25-2DS	MFA	218	190	190	190	210	214	-
	freq.	0.333	0.417	0.917	0.365	0.465	0.857	
Xwmc125-4BS	MFA	242	244	244	244	246	198	182
	freq.	0.500	0.458	0.875	0.722	0.746	0.714	0.500
Xwmc617-4AS	MFA	190/204	188	204	204	190	202	206
	freq.	0.222	0.500	0.455	0.480	0.712	0.857	0.667
Xwmc617-4BS	MFA	202/216	204	210	202	204	224	226
	freq.	0.188	0.700	0.500	0.290	0.423	0.667	0.600
Xwmc617-4DS	MFA	224	272	238	238	226	244	-
	freq.	0.385	0.625	0.300	0.490	0.167	0.667	

SSE - South and Southeast Europe, WCE - West and Central Europe, TP - tetraploid wheat, MFA - the most frequent allele, freq. - frequency