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Author Correction: Molecular marker assisted breeding and genome composition analysis of Zhengmai 7698, an elite winter wheat cultivar

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This Article contains errors in Table 1. In the HTML and PDF versions of this Article, the denotation of the genes used in F_3-F_6 generations, and F_7 and subsequent stable generations is incorrect.

Additionally, the legend of Table 1 is incorrect:

"**Table 1**. Names and their primer sequences of markers used in the marker assisted selection of Zhengmai 7698 (the label √ means the existence of that gene)."

should read:

"**Table 1**. Names and their primer sequences of markers used in the marker assisted selection of Zhengmai 7698. *: genes used in F_3-F_6 generations; **: genes used in F_7 and subsequent stable generations; √: the existence of that gene. The primers of markers Pm2, Pm4b and Pm8 were presented, respectively, in Mohler et al. Theor Appl Genet 93: 1078–1082 (1996), Ma et al. Theor Appl Genet 109: 140–145 (2004) and Wang et al. Acta Genetica Sinica 28(7), 640–646 (2001)."

The correct Table 1 and its accompanying legend appears below.

This Article contains errors in the Results section under subheading 'Molecular markers for Zhengmei 7698'.

"In the F_3–F_6 generations of the selection processes, seven superior genetic markers in the parents were used (genes underlined by straight line in Table 1) to monitor the progress of gene pyramiding in hybrid offspring (e.g., single plant and line), and in the F7 and subsequent stable generations, and 19 newly developed genetic markers were progressively added (genes underlined by wavy line in Table 1)."

should read:

"In the F_3–F_6 generations of the selection processes, seven superior genetic markers in the parents were used (genes denoted with an * in Table 1) to monitor the progress of gene pyramiding in hybrid offspring (e.g., single plant and line), and in the F_7 and subsequent stable generations, and 19 newly developed genetic markers were progressively added (genes denoted with an ** in Table 1)."

Furthermore, this Article contains errors in the Reference list. References 15, 18, 22 and 23 are incorrectly given as follows:

'Geng, H. W., He, Z. H., Zhang, L. P., Qu, Y. Y. & Xia, X. C. Development of functional markers for a lipoxygenase gene on chromosome 4BS in common wheat. *Crop* Sci. **52**, 568–576 (2012).'

Traits		Gene	Zhengmai 7698	Parents			Markers and their primers			Reference
Superior traits	High quality gene			4B269	Zhengmai 9405	Zhoumai 16	Marker	Forward primers (5′ - 3′)	Reverse primers (5′ - 3′)	
High molecular weight glutenin subunits		***Ax1*****	√	√			UMN19	CGAGACAATATGAGCAGCAAG	CTGCCATGGAGAAGTTGGA	10
		*Ax-null***			√	√	UMN19	CGAGACAATATGAGCAGCAAG	CTGCCATGGAGAAGTTGGA	10
	Bx7*	***Bx7****	√	√	√	√	Bx7	CACTGAGATGGCTAAGCGCC	GCCTTGGACGGCACCACAGG	11
	By8*	***By8****		√	√		ZSBy8	TTAGCGCTAAGTGCCGTCT	TTGTCCTATTTGCTGCCCTT	12
		*By9***	√			√	ZSBy9a	TTCTCTGCATCAGTCAGGA	AGAGAAGCTGTGTAATGCC	12
		*Dx2***				√	UMN25	GGGACAATACGAGCAGCAAA	CTTGTTCCGGTTGTTGCCA	10
	Dx5*	***Dx5****	√	√	√		Dx5	CGTCCCTATAAAAGCCTAGC	AGTATGAAACCTGCTGCGGAC	13
	Dy10*	***Dy10****	√	√	√		UMN26	CGCAAGACAATATGAGCAAACT	TTGCCTTTGTCCTGTGTGC	10
		*Dy12***				√	UMN26	CGCAAGACAATATGAGCAAACT	TTGCCTTTGTCCTGTGTGC	10
Grain hardness		*Pinb-D1a**	√	√	√		Pinb-D1a	ATGAAGACCTTATTCCTCCTA	CTCATGCTCACAGCCGCC	14
		*Pinb-D1b**				√	Pinb-D1b	ATGAAGACCTTATTCCTCCTA	CTCATGCTCACAGCCGCT	14
Lipoxygenase		*TaLox-B1a*	√		√		LOX16	CCATGACCTGATCCTTCCCTT	GCGCGGATAGGGGTGGT	15
		TaLox-B1b		√		√	LOX18	ACGATGTGAGTTGTGACTTGTGA	GCGCGGATAGGGGTGC	15
Yellow pigment content		*Psy-A1a***				√	YP7A	GGACCTTGCTGATGACCGAG	TGACGGTCTGAAGTGAGAATGA	16
	Psy-A1b*	***Psy-A1b****	√	√	√		YP7A	GGACCTTGCTGATGACCGAG	TGACGGTCTGAAGTGAGAATGA	16
		*Psy-B1a***	√		√	√	YP7B-1	GCCACAACTTGAATGTGAAAC	ACTTCTTCCATTTGAACCCC	17
	Psy-B1b*	***Psy-B1b****		√			YP7B-1	GCCACAACTTGAATGTGAAAC	ACTTCTTCCATTTGAACCCC	17
		Psy1-D1g		√	√		YP7D-1	TCCGACACCATCACCAAGTTCC	CGTTGTAGGTTTGTGGGAGT	18
Polyphenol oxidase activity		*PPO-A1a***		√		√	PPO18	AACTGCTGGCTCTTCTTCCCA	AAGAAGTTGCCCATGTCCGC	19
	PPO-A1b*	***PPO-A1b****	√		√		PPO18	AACTGCTGGCTCTTCTTCCCA	AAGAAGTTGCCCATGTCCGC	19
	PPO-D1a*	***PPO-D1a****	√			√	PPO16	TGCTGACCGACCTTGACTCC	CTCGTCACCGTCACCCGTAT	20
		*PPO-D1b***		√	√		PPO29	TGAAGCTGCCGGTCATCTAC	AAGTTGCCCATGTCCTCGCC	20
Powdery mildew resistant		*Pm2**	√	√	√	√	Pm2	AGCTGTTTGGGTACAAGGTG	GCCATCGTTTTCTACTAG	21
		*Pm4b**	√		√	√	Pm4b	GTGGTGTATCAAATGTCATCA GTACTAC	TCCAGTGACCCCATCTGCTCATAC	21
		*Pm8**	√	√	√	√	Pm8	GGAGACATCATGAAACATTTG	CTGTTGTTGGGCAGAAAG	21
Yellow rust resistant		*Yr9***	√	√		√	Xgwm582	AAGCACTACGAAAATATGAC	TCTTAAGGGGTGTTATCATA	22
		*YrZH84***	√		√		Xcfa2040	TCAAATGATTTCAGGTAACCACT	TTCCTGATCCCACCAAACAT	23
Pre-harvest sprouting resistant		*PHS1***	√	√		√	PHS1	GGTGGAACAGATGCAACTAAAGG/ GGTGGAACAGATGCAACTAAAGA	GTGAGTGTTATATGAAACTAATG ATCCATT	24
		*PHS-4AL***	√	√			PHS-4AL	TGGAGTCTGAAAGCATTCGA/ TGGAGTCTGAAAGCATTCGG	TCCATGCATCATAGGAAAACA	25

Table 1. Names and their primer sequences of markers used in the marker assisted selection of Zhengmai 7698. *: genes used in F_3-F_6 generations; **: genes used in F_7 and subsequent stable generations; √: the existence of that gene. The primers of markers Pm2, Pm4b and Pm8 were presented, respectively, in Mohler et al. Theor Appl Genet 93: 1078–1082 (1996), Ma et al. Theor Appl Genet 109: 140–145 (2004) and Wang et al. Acta Genetica Sinica 28(7), 640–646 (2001).

'Wang, L. H. *et al*. Characterization of low-molecular-weight glutenin subunit *Glu-B3* genes and development of STS markers in common wheat (*Triticum aestivum* L.). *Theor. Appl. Genet*. **118**, 525–539 (2009).'

'Weng, D. X. *et al*. Microsatellite marker linked with stripe rust resistant gene *Yr9* in wheat. *Acta Genetica Sinica* **32**, 937–941 (2009).'

'Li, Z. F. *et al*. Molecular tagging of stripe rust resistance gene. *YrZH8425B. Theor. Appl. Genet*. **112**, 1098–1103 (2006).'

The correct references 15, 18, 22 and 23 appear below as references 1–4.

References

1. Geng, H. W., He, Z. H., Zhang, L. P., Qu, Y. Y. & Xia, X. C. Development of functional markers for a lipoxygenase gene TaLox-B1 on chromosome 4BS in common wheat. *Crop Sci* **52**, 568–576 (2012).
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3. Weng, D. X. *et al*. Microsatellite marker linked with stripe rust resistant gene *Yr9* in wheat. *Acta Genetica Sinica* **32**, 937–941 (2005).
4. Li, Z. F. *et al*. Molecular tagging of stripe rust resistance gene *YrZH84* in Chinese wheat line Zhou 8425B. *Theor. Appl. Genet*. **112**, 1098–1103 (2006).