Table 1 Suppl. Description of PCR primer pairs for amplifying. The primers designed by [1] - Guzmán and Alvarez (2012), [2] - Shariflou and Sharp (1999), and [3] - Nakamura *et al.* (2002).

Primer	Sequence (5′ → 3′)
Wx1Fw [1]	TTGCTGCAGGTAGCCACACC
Wx2Fw [1]	ATGGTCATCTCCCCGCGCTA
Wx2Rv [1]	GTTGACGGCGAGGAACTTGT
Wx3Rv [1]	TTCTCTCTTCAGGGAGCGGC
SUN1R [2]	ATAGGCACAACCCCTAAC
AFC [3]	TCGTGTTCGTCGGCGCCGAGATGG
AR2 [3]	CCGCGCTTGTAGCAGTGGAAGTACC
BDFL [3]	CTGGCCTGCTACCTCAAGAGCAACT
BRD [3]	CTGACGTCCATGCCGTTGACGA
Wx-3º2Fw	CACCGGGAAGAAGAAGTTTG

Pair	PCR conditions		
	initial denaturation	35 cycles	final extension
Wx3º2Fw / SUN1R		45 s at 94 °C 30 s at 64 °C 1 min 40 s at 72 °C	
Wx2Fw / Wx2Rv		30 s at 94 °C 30 s at 66 °C 1 min 30 s at 72 °C	
Wx1Fw / Wx3Rv	3 min at 94 °C	50 s at 94 °C 50 s at 66 °C 3 min at 72 °C	5 min at 72 °C
AFC / AR2 BDFL / BRD		40 s at 94 °C 30 s at 66 °C 1 min 10 s at 72 °C	

Table 2 Suppl. The origin and characteristics of *Wx* alleles evaluated.

| Genes	Cultivar	NCBI accession	DNA size [bp] complete	coding	Deduced protein size [aa]	Mr [Da]	pI
Wx-A1a	Chinese Spring	AB019622	2781	1815	605	66.556	7.42
Wx-A1a′	Blanqueta	KJ185387	2781	1815	605	66.434	7.81
Wx-A1h	Astrodur	KJ185385	2780	1814	-	-	-
Wx-B1a	Chinese Spring	AB019623	2794	1818	606	66.345	7.39
Wx-B1e	Astrodur	KJ185386	2793	1818	606	66.313	7.39
Wx- B1e′	Lobeiro oscuro/ruivo	KJ185388	2804	1815	605	66.227	7.39
Wx-B1f	Mourisco	KJ185389	2793	1818	606	66.313	7.39
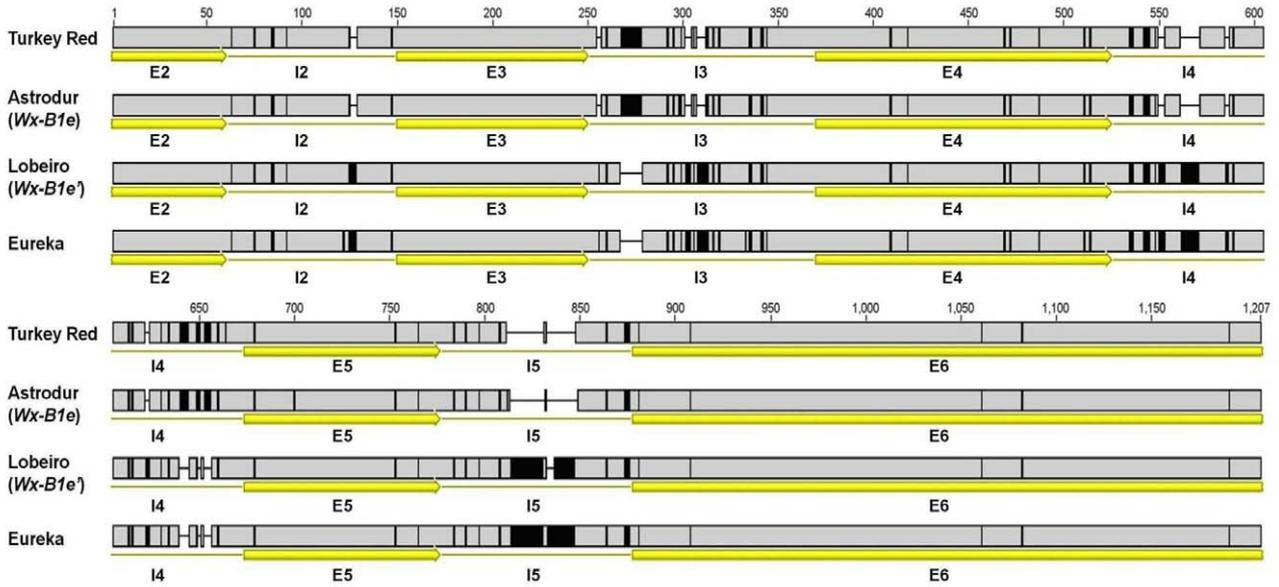
Fig. 1 Suppl. A schematic representation of the central region of *Wx-B1* gene among cvs. Turkey Red, Astrodur, Lobeiro, and Eureka. Alleles are not indicated in the case of partial sequences. The *grey bars* represent sequences; exons are indicated with "E" (the *yellow arrows*) and introns with "I" (the *yellow lines*) below the sequences. Nucleotide differences are highlighted *in black* and InDel events by the *hyphens*.
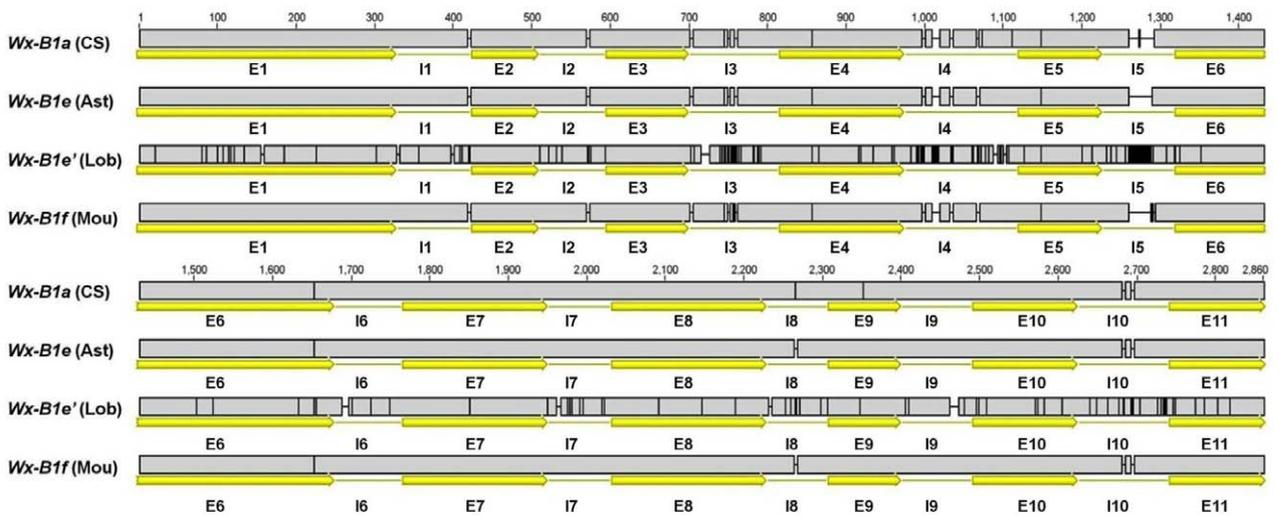

Fig. 2 Suppl. A schematic representation of the complete *Wx* gene and variability found among alleles *Wx-B1a* (CS, Chinese Spring)*, Wx-B1e* (Ast, Astrodur)*, Wx-B1e′* (Lob, Lobeiro) and *Wx-B1f* (Mou, Mourisco) analysed in this study. The *grey bars* represent sequences; exons are indicated with "E" (the *yellow arrows*) and introns with "I" (the *yellow lines*) below the sequences. Nucleotide differences are highlighted *in black* and InDel events by the *hyphens*.