Supplementary Fig. 1. PCR products at the locus RM3735 on chromosome 4 were detected in BC$_3$ population of OM5930/N22//4*OM5930.

Supplementary Fig. 2. PCR products at the locus RM3735 on chromosome 4 were detected in BC$_3$ population of Gayabeyo/N22//4*Gayabyeo.
Supplementary Fig. 3. PCR products at the locus RM3687 on chromosome 4 were detected in BC₃ populations of OM5930/N22//4*OM5930.

Supplementary Fig. 4. PCR products at the locus RM3687 on chromosome 4 were detected in BC₃ population of Gayabeyo/N22/*4Gayabyeo.
**Supplementary Fig. 5.** PCR products at the locus RM3471 (200-215 bp) on chromosome 4 were detected in BC$_4$F$_2$ population of Gayabeyo/N22//4*Gayabyeo.

**Supplementary Fig. 6.** PCR products at the locus RM3586 on chromosome 3 in BC$_2$F$_2$ population of AS996/N22//4*AS996.
**Supplementary Fig. 7.** PCR products at the locus RM3586 on chromosome 3 in BC\textsubscript{2}F\textsubscript{2} population of AS996/Dular/4*AS996.

**Supplementary Fig. 8.** PCR products at the locus RM160 on chromosome 3 in BC\textsubscript{2}F\textsubscript{2} of AS996/N22/4*AS996.
Supplementary Fig. 9. PCR products at the locus RM160 on chromosome 3 in BC₄F₂ population of AS996/Dular//4*AS996.