

Name: *jointless 2 (j2)*

Accessions: Flo8

Gene ID:

Map position: chromosome 12

Gene function:

Gene effect: mutated allele suppresses the formation of pedicel abscission zones.

Phenotypes: MT-*j2* presents jointless elongate pedicel, teratological calyx, proliferated inflorescence and elongate fruit.

Comments: *j2* is a natural genetic variation discovered in *S. cheemaniae*. The *sp* allele is somewhat epistatic to *j2*. Thus, the effect of *j2* is best observed in MT plants harboring the wild type *Sp* allele (the double mutant MT-*Sp-j2*). The mutation *j2* is often used in processing tomato varieties to improve mechanical harvesting and the further use to produce sauces and ketchups. This is because the mutation eliminates the presence of the undesired calyx in the harvested fruits, preventing thus the incorporation of the bitter calyx in the ketchups.

Description of accessions available: MT-*j2* is a BC6Fn introgressed from cv IPA6.

Figures:



MT-*Sp-j2* showing pedicels without abscission layers.

Bibliography

Budiman MA, Chang SB, Lee S, Yang TJ, Zhang HB, de Jong H, Wing RA (2004) Localization of *jointless-2* gene in the centromeric region of tomato chromosome 12 based on high resolution genetic and physical mapping. *Theoretical and Applied Genetics* 108:190-196.