

Title (en)

STRESS TOLERANCE IN PLANTS THROUGH SELECTIVE INHIBITION OF TREHALOSE-6-PHOSPHATE PHOSPHATASE

Title (de)

STRESSTOLERANZ BEI PFLANZEN DURCH SELEKTIVE HEMMUNG DER TREHALOSE-6-PHOSPHAT-PHOSPHATASE

Title (fr)

TOLERANCE AU STRESS CHEZ LES PLANTES VIA L'INHIBITION SELECTIVE DE LA TREHALOSE-6-PHOSPHATE PHOSPHATASE

Publication

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Application

EP 05849969 A 20051128

Priority

- US 2005043097 W 20051128
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Abstract (en)

[origin: WO2006060376A2] The present invention relates to transgenic plants comprising an isolated DNA molecule comprising a polynucleotide that encodes a nucleic acid that down-regulates an endogenous T6PP gene, wherein the polynucleotide is under the control of a promoter that is stress-inducible and is expressed predominantly in vegetative tissue. The promoter may also be developmentally expressed in maturing kernels. Expression of the polynucleotide results in the increased availability of carbon to developing florets/kernels when plants are subject to environmental stress, such as a water deficit. The DNA molecule of the invention thereby permits more photosynthate to be directed to the developing ovules/embryos resulting in stabilized yield in growing environments that are subject to periodic stress.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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- [A] SAKULSINGHARAJ C ET AL: "Engineering starch biosynthesis for increasing rice seed weight: the role of the cytoplasmic ADP-glucose pyrophosphorylase", PLANT SCIENCE, ELSEVIER IRELAND LTD, IE, vol. 167, no. 6, 1 December 2004 (2004-12-01), pages 1323 - 1333, XP004572687, ISSN: 0168-9452
- See references of WO 2006060376A2

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