

Method of Increasing Growth and Yield in Plants (Cyclin)

Inventors:

Christopher Lamb, Peter Doerner

Applications:

Plant Biology, Agriculture, Horticulture, Forestry

CYC1 Cyclin gene, which promotes increased root mass, shoot and fruit growth

The invention provides a method of producing a genetically modified plant characterized as having increased growth and yield compared to the corresponding wild-type plant. The method comprises contacting plant cells with nucleic acid encoding a cyclin protein, to obtain transformed plant cells; producing plants from the transformed plant cells; and selecting a plant exhibiting increased yield. The cyclin-encoding nucleic acid encodes the cyclin cyc1aAt. Modified expression of the CYC1 gene has been shown to enhance plant growth through accelerating development. By providing a larger root mass, the CYC1 gene can accelerate the overall growth of plants, as in the case of trees grown under water-limiting conditions. In addition, the CYC1 gene can be selectively targeted to other plant organs such as fruit, to increase sink strength and hence fruit yield. The manipulation of this gene has broad applications to a variety of markets, such as the forest product industry as well as cereal, fruit and vegetable production.

References:

Nature 380(6574):520-3 (April 1996)

Patent Status:

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License Terms:

Non-exclusive and Exclusive in Field of Use Licenses Negotiable

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Contact: Michael White, Ph.D., Senior Licensing Executive, 858.453.4100 x1703, mwhite@salk.edu