

STUDY ON THE EXPRESSION OF GENES
ASSOCIATED WITH CARBOHYDRATE
METABOLISM IN CHINESE CABBAGE

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The carbohydrate metabolism is important to plant growth, development and crop yield. Sucrose is the principal product and the major transport form of photosynthesis. We have cloned some genes that are related to sucrose metabolism from Chinese cabbage (*Brassica rapa* L. ssp. *pekinensis*): sucrose biosynthesis (*cytFBPase*, *SPS*), phloem transport (*SUT*), sink metabolism (*SSS*, *SBE*, *SuSy*, *GBSS*, *AGPase*, *PGM*), regulatory (*F2KPI*, *14-3-3*) and transport (*TPT*, *GlcT*) functions. The expression levels of most genes were high in photosynthetic leaves than in non-photosynthetic ones. Particularly, maximal levels of the *cytosolic FBPase*, *TPT*, *SSS*, *SuSy* and *SPS* transcripts were observed at 3: 00p.m. during a day, suggesting a diurnal cycle of their expression. However, no further oscillation was observed during the extend light or dark period. We will discuss expression characteristics of some genes in detail.

(This work was supported by a grant from BioGreen 21 Program, Rural Development Administration, Republic of Korea.)