

DIFFERENTIAL GENE EXPRESSION ON BANANAS SUBMITTED TO THE STORAGE AT LOW TEMPERATURE.

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Low temperatures are often used for the storage and transport of bananas as for internal market as for exportation. In spite of the benefits on the shelf-life of the fruit, it has been reported a decrease in the fruit quality, mainly for the flavor and texture, as well as losses due to damages by chilling injury, that makes unfeasible the fruit commercialization. In this context, the aim of this work was to identify genes with changes in expression in bananas submitted to the storage at 13°C for 14 days, and compared to patterns of fruits normally ripened at 18°C (control group). The sampling was done based on the respiration profiles, ethylene production, starch degradation and synthesis of soluble sugars. The samples were collected in three points for each one of the treatments. Using the cDNA-AFLP technique, panels of gene expression were obtained and were isolated twenty transcript derived fragments (TDFs) with marked differential expression. The fragments were sequenced and analyzed for similarity with known genes. The TDFs presented similarity to genes of the carbohydrates metabolism, cell wall processing, protein degradation among others. The results could serve as base for the identification of changes in the activity of metabolic pathways associated to quality of banana fruit and the effect of the storage at low temperature on these.

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