

Transcription Factors Associated with Flowering and Fruit Ripening in Coffee Plants

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SUMMARY

The completion of the Brazilian coffee genome project in addition to new developed technologies, such as transcriptomics, can be used to identify and to investigate genes associated with key events during coffee plant development. One of the main problems in coffee plant is the unsynchronized flowering causing an uneven fruit ripening, leading to more difficult harvesting, and reducing the quality of the final product. Transcription factors play important roles in various developmental processes controlling the expression of important genes. To understand the mechanisms involved during flowering and fruit ripening, it is necessary to analyze the cellular behavior at various stages of such processes which can unravel the molecular genetic mechanisms underlying them. These mechanisms are complex network of factors interacting during flowering and fruit ripening controlling these two processes in an activation or suppression way. Thus, this work aims to study the transcription factors associated with coffee flowering and fruit ripening. Therefore, various stages during flower development and fruit ripening will be used for RNA extraction. RNAs will be converted to radioactively labeled cDNAs and hybridized against a macroarray made with genes from the Brazilian Coffee EST project.