

Reduction of Fruit Ripening in Mangoes

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Article History

Received: 2.06.2021

Revised: 10.06.2021

Accepted: 16.06.2021

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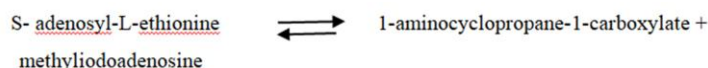
INTRODUCTION

In the prevailing pandemic situation we are able to see farmers getting losses not due to inability to produce crops but due to inability of marketing. Fruits in particular have a lesser shelf life period within which they should be sold or dumped as waste. Mangoes to be noted are highly nutritious fruits containing a huge amount of VITAMIN –A. It is also rich in vitamin C and is filled with polyphenols that acts as antioxidants. They also have a huge industrial value, since it is being processed into various products such as juices, pickles, candies etc. Now a days requirement of these fresh mangoes are in demand just because of the export issues we face during these pandemic situations. This article deals with an idea to increase the shelf life of mangoes.

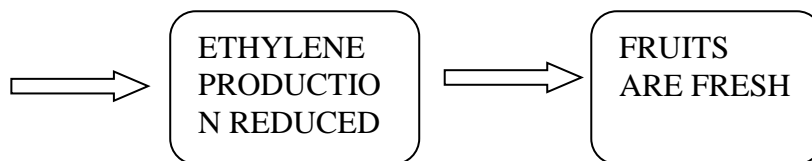
PRODUCTION (2020-21)	PRODUCTIVITY (2020-21)
21.12 MT	8.5 MT

ETHYLENE PRODUCTION AND MANGO RIPENING:

We know that most fruits ripen due to the production of ethylene, a gaseous hormone produced by plant tissues. The expression of 1-aminocyclopropane-1-carboxylate (ACC) synthase and ACC oxidase are responsible for ethylene production.



ACC synthase is an enzyme belonging to the family lyases. This enzyme that produces ethylene is the key component for mango ripening.



GENE SEQUENCING AND SILENCING:

It is first necessary to sequence the genes of this crop. We have to analyze and find out the gene responsible for ACC synthase. There are several procedures to either reduce the expression of that particular gene or to completely remove it. One of the famous techniques used is gene silencing. Gene silencing refers to the way of controlling the expression of gene. There are procedures to be followed to silence a gene. By silencing this particular gene it is possible to reduce the

ethylene production to the maximum and so the ripening too.

CONCLUSION

Mango being an important fruit crop with a high yield and good market value it is necessary to preserve it still it reaches the end desire end. This idea of controlling the ethylene production in fruits can be implemented thus helping the farmers to increase the shelf life and increasing the overall economic condition of the nation.