

Horticultural crops - Post harvest losses and heat treatment- A Review

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India is blessed with variety of agro climatic condition favouring the production of varied fruits and vegetables. India has become the second largest producer of fruits and vegetables in the world. But the recent survey shows that in India, about 25-40 per cent of total fruits and vegetables produced annually are being lost due to poor post harvest practice, which causes reduction in net per capita availability of fruits. Hence, it may not be necessary to step up production of fruits with growing demand if post harvest loss is reduced to a great extent.

Post harvest decay is the major factor limiting the extension of storage life of fruits and vegetables. The use of chemical treatments for fruits and vegetables to control insects and diseases to extend storage life are potentially harmful to humans, so it has led interest in the use of alternative, non chemical treatments. Hence, there is a need to develop effective, non-destructive physical treatments for insect disinfestations and disease control in fresh horticultural produce. Heat treatment is one among the possibilities being explored. It is an

effective physical treatment for insect disinfestations and disease control in fresh fruits and vegetables.

Outcome of post harvest losses:

- Complete product losses
- High costs will be involved during production and low profits during sales
- Loss of market opportunities, may be domestic or international
- Low competitiveness

Post harvest loss occurs in terms of:

- Economical loss which refers to reduction in monetary value as a result of physical loss
- Quantitative loss which includes reduction in weight by moisture loss and loss of dry matter by respiration.
- Incidental loss in terms of quality of food.
- Qualitative loss which refers to loss of consumer appeal.
- Nutritive loss which includes loss in vitamins, minerals, sugars, etc.

Reasons for post harvest losses:

- Physiological processes
- Pathogens
- Insect infestation

These are the three main reasons causing post harvest losses among these insect and pathogen are the ones which cause serious losses.

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