

Title Appropriate engineering and technology interventions in horticulture for enhanced profitability and reduction in postharvest losses

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Abstract

The post production losses are enormous in horticultural crops due to their perishable nature. Since the fruits and vegetables are handled in the raw form in more than one stage, it leads to losses due to improper handling and storage. This happens due to huge shortage of cold stores and processing facilities in catchment areas. The establishment of modern agro processing industries can be achieved if appropriate and affordable cool storages and processing equipment and methods are developed. The adoption of processing technologies by entrepreneurs depends mainly on availability of raw materials, availability of technology, availability of skills and ease of implementation. Since no technology available in developed countries would meet the criteria or strategies mentioned above, the onus of developing the suitable technology in India is on the Central Institute of Post Harvest Engineering and Technology and its All India Coordinated Projects spread over 42 centers. The technologies developed for horticultural crops include Pomegranate Jelly and Granadine process, Process technology for Anardana and its powder, Tomato Grader, Process of Manufacturing Ready to Constitute Makhana (*Euryale ferox*) Kheer and Sarson (Mustard) ka saag, Non destructive technique to determine maturity of mango in tree, Low cost polyhouse, Hand tool and motorized unit for easy separation of arils from pomegranate, Porous Bricks for cool chamber, Low Cost Technique for Enhancement of Shelf Life of Tomato, Strawberry harvester cum holding tool, Beet root powdering technology, Hydro cooler cum washer for fruits, Basket centrifuge for minimal processing of vegetables, Evaporative cooled structures for storage of fruits and vegetables, Dehydration and powdering technologies for fruits and vegetables, CIPHET Banana-Comb/hand Cutter, Fruit saver for safe harvesting and handling of fruits, Mobile Cool Chamber (Transportation Rickshaw), Two stage Evaporative Cooler and Technologies for value added products from anola, pomegranate, ber (*Zizyphus mauritiana* Lamk) and guava. Based on these technologies developed entrepreneurship development programmes are offered so that upcoming entrepreneurs can get hands on experience on modern technologies. In this paper all these technologies, efforts in entrepreneurship development based on them for reduction in post harvest losses and increased profitability of farmers are discussed.