

# Curb Postharvest Losses to Overcome Population Food Imbalance

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After months working in the fields, farmers have bountiful harvests of beautiful fruits and vegetables; and want to ensure that their customers also enjoy the healthy harvests.

Unfortunately this is not always the case as large volumes of these harvests are lost between the farm gate and the consumer. While trying to provide more nutritious food, we often neglect prevention of losses between harvest and consumption. Global human population is projected to increase by 35% to 7.7 billion by 2020; which creates higher demand for food. As we try to solve the problem of population food imbalance, our focus has been on two approaches:

- Increasing the food supply

by increasing production area; and by breeding higher yielding varieties.

- Advocacy of family planning so as to limit population growth.

While focusing on the above two approaches, a 3rd approach, which might be the most sustainable in solving the problem of population food imbalance is often ignored.

This is: Reduction in food losses at all levels where they may occur (at production, harvesting and marketing processes).

Where efforts are made to reduce losses, it is only limited to the production stage; while ignoring those encountered at harvesting and marketing. Although some progress has been recorded in increasing yields and productivity, it is important to note that it (increase in yield and productivity) significantly falls short of the increase in world population and the

nutritional requirements.

## POSTHARVEST LOSSES:

Postharvest commences the moment the plant/plant organ is separated from the mother plant or growth medium; and ends when the food enters into the process of being prepared for final consumption. The problem of postharvest losses is a major stumbling block in achieving sustainable food and nutritional security. These losses vary greatly among commodities and

production areas and seasons; and might occur at any point along the postharvest chain; i.e. at harvesting, during packing, transportation, in both wholesale and retail markets and in case of delay at different points between harvest and consumption. Such losses are much higher in fruits and vegetables. Postharvest losses reduce farmers' incomes in addition to affecting food supply.

It is not enough just to







produce more food of high quality. This food must be available to the consumer without loss in quantity and quality along the postharvest chain. Not only does physical loss in quantity occur, but there are also highly significant losses in essential nutrients (vitamins and minerals) and overall quality. The problem is universal, affecting both developed and developing countries; though the magnitude and prevalence is higher in developing countries. Crop postharvest losses in developing countries are believed to be between 30 – 40%. These losses are due to spoilage, waste etc. With respect to fresh fruits and vegetables, postharvest losses are estimated at 5 – 25% and 20 – 50% in developed and developing countries respectively. Generally, approximately one third of the total worldwide horticultural production is never consumed by humans!

#### MAJOR CAUSES OF POSTHARVEST LOSSES:

The major causes of postharvest losses (physical and quality) in Kenya are rough handling, poor quality packaging material and inadequate cooling and temperature management. The problem is further compounded by lack of sorting to remove damaged or defect produce before storage. In addition, most stakeholders generally lack education on appropriate postharvest handling techniques along the

postharvest chain. By minimizing rough handling, removing damaged and diseased produce together with temperature management, it will be possible to considerably reduce storage losses and maintain product quality. Postharvest food loss experienced in Africa is of a higher magnitude. This is partly because of limited use of loss-saving postharvest handling technologies as well as limited market opportunities for the millions of small-scale farmers.

#### CURBING POSTHARVEST LOSSES:

Increasing food availability to the growing world population can be achieved through reduction of postharvest losses. By so doing, the production area needed will be reduced and natural resources conserved. Appropriate approaches for reducing postharvest losses include:

- Using genotypes having longer postharvest life;
- Adoption of integrated crop management (ICM) systems and good agricultural practices (GAP) that enhance good keeping quality; and
- Application of appropriate postharvest handling practices with an aim of maintaining the quality of fresh fruits and vegetables.

It is more sustainable to minimize postharvest losses of already produced food than to increase production to compensate for these

(postharvest losses). Despite this fact being widely acknowledged, less than 5% funding of agricultural research and extension programs worldwide is devoted to postharvest handling activities research. If we are to achieve a significant reduction in postharvest losses of horticultural perishables, then this situation must change.

Increasing yield and productivity alone without reducing postharvest losses will not adequately address the problem of food and nutritional security. There's need to enhance Postharvest Technology training and research. Postharvest technology is important in that it has the capacity of meeting the food needs of the growing world population. This is because postharvest technology can eliminate avoidable food losses; thereby availing nutritive food by proper processing, storage, packaging, transport and marketing. Hence, reducing postharvest losses is a reasonable and economically viable approach in the global fight against population food imbalance.

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