

Factors influencing post-harvest losses of apples among growers in Paktia, Afghanistan

ABSTRACT

Postharvest losses have been highlighted as one of the determinants in fresh crop production in most developing countries. Losses in agricultural sector in the province of Paktia are largely due to the perishable quality of the produce and ineffective management of post-harvest. Many post-harvest losses are direct result of factors such as harvesting, sorting, grading, packaging, storage, transportation and marketing. Thus, it is important to identify factors related to postharvest losses of apples among the growers in Paktia, Afghanistan. Survey of three districts, namely Gardiz, Ahamdaba, and Saidkaram was conducted with 279 apple growers that were selected using systematic random sampling. Data were collected using structured questionnaires via face to face interview. Data collected were then analyzed using descriptive analysis, chi-square analysis and factor analysis. The finding of descriptive analysis showed that among all the post-harvest activities based on the percentage ranking, all apple growers (100%) were involved in the marketing of apples in search of both direct or indirect channels to sell their produce to reduce the losses. This means in order to reduce apples losses, it is important to find a market for their products. From the Chi-square analysis results, there was a significant association between education level ($P=0.046$), farm size ($P=0.000$), farm experience ($P=0.019$), yield ($P=0.000$) and post-harvest losses. Moreover, the factor analysis results revealed seven factors that influenced post-harvest losses of apples namely harvesting, sorting, grading, packaging, storage, transportation and marketing. Therefore, establishing proper storages and packaging facilities will reduce apple grower's losses, and enable easier marketing of their produce in different season throughout the year. Furthermore, sorting and grading will raise the value of apple products for a better marketing. Meanwhile, road transport and transportation system also have a significant impact on distribution of apple products in the study area. Therefore, it can be concluded that road transport and transportation system should be improved in order to reduce the losses of apple production.

Keyword: Post-harvest activities; Post-harvest losses; Apple growers; Chi-square analysis; Factor analysis