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REDUCING LOSSES ADDING VALUE

Reduction of Post Harvest Losses and Value Addition in East African Food Value Chains

Supply Chain Management Approach to reduce food losses, an empirical review of selected food commodities in Ethiopia

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Introduction

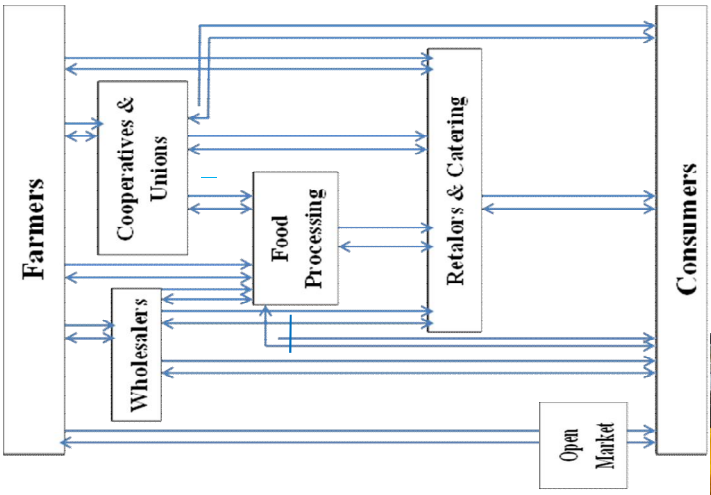
Food production increase of 70% from the current situation is required if the world has to feed expected 9 billion hungry mouths by 2050 (Godfray et al. 2010; Parfitt et al., 2010; Isobel Tomlinson, 2013). On the other hand, significant amount of food which was produced with the precious resources are lost. Kummu et. al. 2012 noted that 25% of the food produced is lost within the food supply chain before consumption. Godfray et al., 2010, estimated global food loss to be between 30% and 40%. A.A. Kader (2005) estimated the food losses for fresh produces as high as 70% in developing countries. Food loss has become one of the major variable in food security equation next to production and population parameters. This study was designed to address this food loss issues for selected major food commodities in Ethiopia namely: Teff, Wheat, Enset, and Dairy products. The major objective is to indicate efficient and effective supply chain management system that reduce post-harvest losses of these food commodities.

Material & Methods

- **Sampling:** For farmers we have used simple random sampling technique with sampling formula., Accordingly survey was made on about 1112 farmers. The other institutional chain actors such as cooperatives and processors were included census based to get a proper image of the situation. Traders, Logistics service providers, experts in Woreda and zonal agricultural offices were purposively selected and included to the study,
- **Data and Collection tools:** Primary, secondary, quantitative and qualitative data were collected; Consultative workshops, Pilot study, Structured survey questionnaire translated to local language, Survey, Observation, Samples for laboratory tests were employed,
- **Data Analysis:** Descriptive statistics, Tobit/Probit model, factor analysis(significance, level of losses, etc), Value chain mapping & characterizations, Laboratory analysis (milk), Structure-Conduct-Performance (S-C-P) model for market performance, Supply Chain performance measures, Logistics performances, Loss was estimated based on self assessment by the chain actors.

Results & Discussion

Mapping and Characterization of selected food commodities supply and marketing chain:



- For all the four commodities the link is more or less the same, except that for Enset, there were only weak cooperatives and no union. The food commodities reach consumers in a number of possibilities from direct source/farmers to consumers in an open market to a multi stage intermediaries that include: cooperatives, wholesale and retail traders, processors, and catering institutions.

- **Losses and factors behind:** it was found that there is significant amount of losses particularly at post harvest. For wheat the total postharvest loss reported was 27.34% of which the major loss 77% of the total loss or 21% loss happen at farm level. For Teff, the result is similar but slightly lower than wheat, 24% loss was reported majority of which happen during the threshing process. For dairy about 8.39% of milk losses was reported for the whole chain actors and most of these loss happen at union level (2.95%) next to that is at farm level(1.95%). For Milk lack of cooling facilities and immediate market were identified as a major causes of milk loss.

- Overall, logistics problems and not well functioning supply chain management system were identified as major factors causing food losses for selected food commodities in Ethiopia. Therefore, improvements in logistics practices and infrastructure and new supply chain management system could reduce food losses for these commodities in Ethiopia.

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