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MINIMUM LOSSES BY COMMODITY AND REGION: INSIGHTS FROM THE LITERATURE

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MINIMUM LOSSES BY COMMODITY AND REGION: INSIGHTS FROM THE LITERATURE

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Abstract

The reduction of agricultural losses, especially among smallholder farmers, should be an essential component of food security strategies in developing countries. The recognition of the importance of reducing food losses to achieve food security was the basis for the decision to include a dedicated target in the 2015 United Nations Sustainable Development Goals (SDG) agenda, with target 12.3 stating: “By 2030, to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses’’.

Loss reduction strategies should be informed by evidence on optimal loss levels, or the point below which loss reduction efforts become economically unviable, characterized by reduction costs greater than benefits. Information on minimum losses can help provide a benchmark for farm management, formulation of policies and investment decisions. When this information is connected to farming practices or production technologies, as done by the present study, it can also help in assessing the effectiveness of loss reduction practices and of the underlying policies and incentives that promote them.

While most empirical research and data collection activities on losses tend to focus on average losses, this paper provides evidence on minimum losses levels for a several commodities and regions of the world. Through a thorough meta-analysis, an original dataset has been compiled on minimum losses for a wide variety of activities, products and regions, reflecting the performance of the most efficient production systems. Following an adapted and replicable statistical methodology, minimum loss percentages have been calculated by commodity, commodity group and region to establish a benchmark to which average country results can be compared. One of the main findings of this meta-analysis – in line with other recent studies – is the clear split between commodity groups with oil crops, pulses and cereals on one end (with minimum losses of 2.0 percent, 4.0 percent and 4.2 percent, respectively) and fruits, roots and tubers, sugar crops and vegetables on the other end (17.1 percent, 18.4 percent, 18.5 percent and 20.7 percent, respectively). In some instances, the losses for some commodities fall below the documented minimum losses, and the results are therefore not conclusive. There is limited information on minimum losses and therefore only 48 studies were used in this meta-analysis; this work in progress and the quality of data is expected to improve as more research is conducted in this area.

This new and – to our knowledge – unique source of information constitutes a starting point in the establishment of optimal or minimum loss levels for a wider set of products, countries and regions, connecting losses to production practices or technologies

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