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Anchovy Processing in Ghana: Describing Quality and Food Safety Parameters in the Processing Chain

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Abstract

Sufficiently nutritious and safe food is not yet generally accessible for everyone in some parts of Africa. Both, nutritional quality of food and food safety are important aspects that play a role in food security. As a source of suitable nutrients for a balanced diet, small fish species like European anchovy (*Engraulis encrasicolus*) can contribute towards nutrition security. At the same time, fish is considered as highly perishable and different processing techniques are used to prevent spoilage and for preservation. In certain parts of Africa, infrastructure does not support freezing or canning of the fish to increase its shelf life. In such circumstances, low cost traditional methods such as smoking, drying, frying, fermentation or a combination of salting and drying are usually applied. Nonetheless, smoking and drying not only allow longer storage time of the fish, but also address consumers' food preferences and traditional heritage.

Smoking in Chorkor or Ahotor ovens, sun drying on the floor or on elevated racks are the four main processing techniques used to preserve European anchovy in Ghana. Questionnaires were conducted with individual experienced processors to gain in-depth knowledge of the different steps of the processing procedure. The information collected covers the source of fresh fish, personnel, processing techniques and equipment, type of storage materials, storage period as well as how to assess the quality of a product. Process flow descriptions were generated with focus on the quality parameters applied.

The aim of this work was to identify critical points along the processing value chain and to develop improved processing practices for the production of higher quality, safer and nutritious anchovies.

Keywords: Ahotor oven, Chorkor smoker, food processing, small fish, sun-drying