

Potential of Dehydrated Vegetable Production in Strengthening the Sustainability of Smallholder Vegetable Supply Chains in Northern Mindanao, Philippines

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Abstract

High postharvest losses and unpredictable price fluctuations continue to challenge the Northern Mindanao vegetable industry. This project proposed dehydration of selected vegetables as a means of minimizing these losses and providing farmers an alternative market for their fresh produce, particularly during peak production periods. It involved the development and evaluation of a prototype heat pump drying system, assessment of the physico-chemical characteristics of dehydrated vegetables, and development and evaluation of dehydrated vegetable-supplemented food products. In-depth interviews with selected food manufacturers were conducted to assess the market potential of dehydrated vegetables while consumer tests and focus group discussions were done to assess the acceptability of selected dehydrated vegetable-supplemented food products. Preliminary results demonstrated the feasibility of developing a vegetable drying system using locally available resources and indicated a potential market for dehydrated vegetables. Dehydrated cabbage, carrot, and squash, for example, can be used in noodle production as raw materials or as condiments. These dehydrated vegetables, however, need to be further tested to meet industry requirements. Dehydrated vegetable-supplemented food products, such as soups, cookies, bread, and instant noodles, were developed. Although further product enhancements need to be done, some of these products were evaluated as acceptable by selected institutional users and consumers.