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Conception of a Drier for the Semi-Industrial Production of Dried Cassava

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Abstract

Cassava is a crop that plays an important role in farmers' livelihood and in human nutrition in West Africa. During the last two years, cassava production has increased considerably due to government policy in Benin.

As cassava can not been stored for a prolonged period of time, post harvest losses can make up around 50% of total production. A cassava conservation method is drying. However, traditional drying methods are unsuitable for cassava conservation.

This work aims at evaluating farmers' needs for cassava drying and to conceive a capable cassava drier.

To reach this objective, 1000 commercials producers (man and women based on division of work) have been investigated in two departments of Benin by using questionnaires and focus group discussions. Drying tests have been done with a GEHO drier, a drier built in Hohenheim, which uses both solar and gas energy. Cassava samples were dried during the rainy season and the dry season. Data collected were analysed and will help to design an appropriate local dryer.

The investigation made clear that drying comes at second place among cassava production constraints, after the difficulties by the harvest. The results show that storekeepers and consumers have clear preferences for dried cassava, it got to have a white colour, and it should be very dry, non punched, unsweetened, without bugs, without powder and of a big size.

The work also shows that the maxima quantity of cassava to be dried per investigated farmer is around 7.5 tonnes per season. The dried cassava obtained by the drying tests was highly appreciated by storekeepers and consumers.

The construction of an appropriate drier will help farmers enormously in their cassava processing activities, will reduce post-harvest losses and will therefore help to ameliorate food security in Benin.

Keywords: Cassava, conception, drier, drying, food security,

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