

QUALITY ENHANCEMENT OF CEREAL GRUEL MEALS IN NIGERIA: A REVIEW

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ABSTRACT

The study examined the level at which cereals are utilized in Nigeria. Cereals are consumed in large quantities when compared to other food crops and it has important common features and this basis form the milling and processing operation. Cereals in Nigeria are locally produced. The major cereals in Nigeria consist of maize, sorghum, millet and rice. It is utilized in the production of ogi (gruel). Knowledge of cereal utilization in Nigeria will help to promote cereal usage among urban and rural dwellers by improving the nutritional composition, and functional properties that could help to promote human health by blending varieties of millet (pearl millet, finger millet and fonio millet), manipulation of some factors such as temperature, soaking duration and packaging materials to prolong the shelf life

Keywords: *Nigeria, cereals, fermentation, consumption, gruel*

1.0 INTRODUCTION

Gruel is a food consisting of some type e of cereals like oats, wheat, rice heated or boiled in water or milk. Ogi is a type of gruel prepared from fermented maize, sorghum or millet commonly consume in West Africa. It serves as a popular breakfast cereal and infant weaning food in Nigeria (Banigo and Muller, 1972a, b; Akingbala et al., 1981; Odunfa, 1985). It is a thin version of porridge that may be more often drank rather than eaten for breakfast. It is very smooth in texture and has a sour taste reminiscent of that of yoghurt. Ogi is used principally alone and may be fortified with legumes as weaning food (Ighedioh et al., 1996; Akinrele et al., 1970). The stiff gel ('Eko') can be eaten along with meat, stew, vegetable soup, steamed bean cake, and "-moin". According to Fashakin (1989), the low-income earners find ogi principally better alternative for infant food.

Cereals crops are the major dietary energy supplier all over the world and particularly which supplies about 80% of the energy requirements. Cereals have high level of utilization in Nigeria, which are mainly processed traditionally. It is the major functional food consumed in Nigeria due to its abundant availability and it is amenable to different processing technologies. Gruel is usually made from common cereals like Maize (*Zea mays*), Guinea corn (*Sorghum bicolor*), Millet (*Pennisetum glaucum*) Wheat (*Triticum aestivum*) and Rice (*Oryza sativa*) singly or in combinations with others. Some gruels are been enriched with other food products like soybeans, ginger and host of other (Khetarpaul et al., 2004).

2.0 Processing Method and Procedure for Quality Enhancement of Cereals Gruel

During production of gruels, the raw millet is graded, washed and soaked for 72 hours and the water decanted, some producers change the water daily that is after 24 hours while others leave it for that period of 72 hours fermentation. The fermented grains are then washed and wet milled in a clean grinding machine. The grain slurry is then filtered with muslin cloths and the filtrate is allowed to sediment and the water decanted. Then the slurry or gruel can be cooked and made into pap, (ogi in Yoruba, akamu in Igbo, kwokwo in Hausa) and host of other food products depending on the choice of the producers (Khetarpaul et al., 2004). The unit operations necessary in the production of Ogi is presented in Figure 1