

Effect of Maize Fermentation on Some Physico-Chemical Properties of 'Ógi'.

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Abstract:

The effect of fermentation or souring period on some physico-chemical properties of ogi, manufactured by the wet- and dry-milling processes from downy mildew resistant white maize variety (DMR white) were evaluated. Determinations were carried out for titratable acidity, starch, diastatic activity, damaged starch, reducing and non-reducing sugars, liquefaction number, Brabender amylograph pasting characteristics and Adam's consistometer value.

The results showed that titratable acidity increased from 0.18% to 0.37% lactic acid, while starch content was reduced from 89.2 to 70.5% with period of fermentation, although souring did not produce any appreciable change in starch content. Similarly, there was no appreciable change in diastatic activity, damaged starch and reducing and non-reducing sugars, except for samples fermented or soured for six days. Amylograph peak viscosity was higher for wet-milled ogi than dry-milled ogi being in the range of 1030 to 1250 B.U. and 210 to 960 B.U. respectively. Peak viscosity was observed to increase with souring period of maize flour. Set-back value, index of gelatinization and Adam's consistometer value were observed to decrease with either fermentation or souring period. The use of souring water in preparing ogi porridge, appreciably increased its titratable acidity, but produced ogi of poorer pasting viscosity.

Keywords: Fermentation/ Maize fermentation/ ogi/ milling process

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