

## RESEARCH NOTES

### THE DEVELOPMENT OF PLANTAIN FLAKES<sup>1</sup>

Plantain flakes suitable for consumption as a breakfast cereal were developed. The flakes were made from plantain flour prepared from entire green plantains according to the method developed by Rahman.<sup>2</sup> About 5 parts of water are added to 1 part of the flour and blended to form a slurry. The slurry is fed to the steam-heated rotating drums of a drum dryer, forming a dry film which is scraped from the drums by doctor blades. The film is crushed to form flakes similar in size to some cereal flakes, such as corn or bran.

Analysis of the plantain flour gave the following results in percentage: Moisture 11.87, protein 2.8, starch 70.4, alcohol-insoluble solids 86.8, total sugars 0.18, and crude fiber 1.08. The mineral content was 1.61 and 0.07 percent, respectively, for potassium and phosphorus, with 6 mg./100 gm. of sodium and, in parts per million, calcium 643, magnesium 1,414, manganese 10, and iron 15.

The thickness of the flakes can be adjusted as desired by regulating the temperature, speed, and distance of the drums, as well as the consistency of the slurry. Additives such as salt, sugar, powdered milk, yeast, vitamin C, and others can be incorporated into the slurry before dehydration in order to modify the flavor of the flakes and improve their nutritional value.

However, organoleptic appraisals of plantain flakes having no additive were conducted by experienced judges and showed a considerable degree of acceptance, when served with milk and sugar as are ordinary breakfast cereals.

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<sup>2</sup> Rahman, Abdul R., Economical method for the production of flour from green plantains, *J. Agr. Univ. P.R.* 47 (1) 1-10, 1963.