

Nutritional assessment of a jackfruit (*Artocarpus heterophyllus*) meal

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Abstract

Objectives The mature jackfruit (*Artocarpus heterophyllus*) is consumed in Sri Lanka either as a main meal or a meal accompaniment. However, there is no scientific data on the nutrient compositions of cooked jackfruit meals. Thus, the objective of the study was to carry out a nutritional assessment of a composite jackfruit breakfast meal comprising seeds and flesh.

Design A jackfruit meal comprising of flesh (80% available carbohydrate) and seeds (20% available carbohydrate) was included in the study. The study was carried out in a random cross over design.

Setting University of Sri Jayewardenepura.

Study participants Healthy individuals (n=10, age: 20-30 yrs).

Measurements The macronutrient contents, rapidly and slowly available glucose (SAG) contents, water solubility index of the jackfruit meal were determined according to standard methods. The GI of the meal was calculated according to FAO/WHO guidelines.

Results The moisture content of the boiled jackfruit flesh was high (82% FW). Jack seeds contained 4.7% protein (FW), 11.1% total dietary fibre (FW) and 8% resistant starch (FW). Jackfruit meal elicited a GI of 75. The

Glycaemic Load (GL) of the normal serving size of the meal is medium. The slowly available glucose (SAG) percentage of jackfruit meal (30%) was twice that of the standard. The boiled jackfruit flesh contained disintegrated starch granules while seeds contained intact swollen and disintegrated granules.

Conclusions The jackfruit seeds are a good source of starch (22%) and dietary fibre. The meal is categorized as a low GI meal. The low GI could be due to the collective contributions from dietary fibre, slowly available glucose and un-gelatinised (intact) starch granules in the seeds.

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Introduction

Jackfruit (*Artocarpus heterophyllus*) is reported to have originated in India and Malaysia [1]. The jackfruit is a species of the mulberry family (*Moraceae*) [1]. In Sri Lanka it is known as "*Kos*" (Sinhala) and "*Pala*" (Tamil).

The fruit contains fleshy bulbs and starchy seeds both of which are used as foods in Sri Lanka. The mature jackfruit is consumed either as a main meal or a meal accompaniment with rice and the ripe flesh as a fruit. Jackfruit is reported to possess many medicinal properties. The phenolic compounds isolated from jackfruit are

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