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**DEVELOPMENT OF FROZEN "Pollos" (*Artocarpus heterophyllus*)**

**FOR THE EXPORT MARKET**

A PROJECT REPORT PRESENTED BY

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to the Board of Study in Plant Sciences of the

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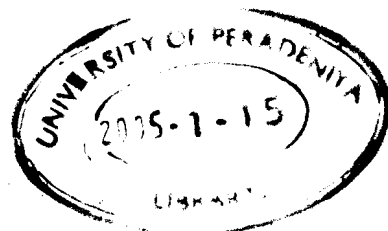
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# DEVELOPMENT OF FROZEN 'POLLOS' (*Artocarpus heterophyllus*) FOR THE EXPORT MARKET

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Blast frozen fruits and vegetables are commonly used in developed countries. However it is a new technology introduced to Sri Lanka. Freezing indigenous vegetables has the potential to create an expanding export market, earning much needed foreign exchange while contributing to reduce post harvest losses of fruits and vegetables.

The current research was based on developing of frozen young *Artocarpus heterophyllus* ('Pollos' – the young stage of jack fruit), a common vegetable produced on large trees in Sri Lanka. The experimented technology was extended to a few selected vegetables, viz; drum sticks, tapioca, kiriala, bread fruit and mature jack fruit.

Cleaned, washed and cut segments of 'pollos', were dipped in a 0.5% citric acid solution and packed using, nylon mixed low density poly ethylene (LDPE), which is recommended for the freezing methodology applied, to overcome freezing originated quality losses and also extend the storage life.

The packages were sealed under vacuum and blast frozen for 90 minutes at  $-29^{\circ}\text{C}$ . This product was of acceptable quality even after three months of storage at  $-18^{\circ}\text{C}$ . The quality of the frozen product was screened by standard analytical procedures for important quality parameters, such as browning intensity, moisture and ash content, presence of microbes and sensory properties, such as color, flavor and texture. The developed frozen product did not show any significant difference when compared to the fresh product for any of the parameters assessed.

The approximate cost of production of 1kg of 'pollos' was Rs.87/- inclusive of Rs. 25/- per kg for purchase of raw 'pollos'. With further development to the blast frozen product of 'pollos', including marketing, the blast frozen *A.heterophyllus* ('pollos') possibly could be a competitive freeze processed vegetable product which would be of high demand, specially in countries where there is a concentration of Sri Lankan and Indian populations.