



Estimated Cost of Production Equipment

Process	Capacity	Price (USD)
Puffing Machine	60-90 kg per hr	2,500
Sugar Boiler	100 L	2,950
Mixing Machine	50 R/min	2,060
Forming Machine	150-300 pc/min	14,080
Packaging Machine	30-280 bag/min	7,380
<b>Total</b>		<b>28,970</b>

Production Ability- Projection

Material	Quantity	Unit Cost (GYD)	Expense (GYD)
White Rice	50 kg	\$6500	\$6500
White Sugar	25kg	\$691/kg	\$17,275
Salt	5kg	\$500	\$2500
Oil	5 L	\$500	\$2500
Water	15L Approx	\$500	\$500
Packaging Film	1 roll	\$4000	\$4000
Power	16.35	\$58	\$948.3
Labour	4	\$625/hr	\$2500
<b>Total</b>			<b>\$ 36,723</b>

The ingredients in the table above would produce approximately 90kg of the bar type rice cake. With an average weight of one bar approximately 50grams; 90kg would yield 1800 bars. The bars are usually sold in boxes of 6 bars per box. This would yield approximately 300boxes of puffed rice cakes. The price per box is quoted on <http://www.amazon.com> on the 28th February, 2013 at US \$20 per box of 6. The price may vary depending on additional ingredients used. US \$20 dollars converted with a rate of 1 to 200 GYD is equivalent to \$4,000 GYD.

300boxes x 4000per box = 1,200,000.....works out to \$666 /bar

300boxes x 1000per box= 300,000.....works out to \$166/bar

300 box x 500 per box = 150,000.....works out to \$83/bar



Conclusion

The price of \$83 per bar appears more realistic when considering the local market, and it may be that even this is too high. However considering the estimated cost of production for one bar is approximately \$20, and with additional ingredients and packaging even if the cost move to \$40-50, selling at \$83 would still yield relatively reasonable profit. Key to the success of this venture would be the marketing, where the brand, design and quality of packaging would be important.

**GUYANA RICE DEVELOPMENT BOARD  
POSTHARVEST DEPARTMENT**



*Manufacturing Rice Snacks  
Rice Cake- Snack Bars*

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## Introduction

Rice snacks are based on rice, offer great variation in taste and form, have a low fat percentage and are easy to digest. The puff rice cake production line's primary output is puffed rice cakes. These can be in various forms such as bar, cake, ball and round. Rice cakes are made with either brown or white rice and are popular because they provide fiber (brown rice cake), energy and are low in calories.

## Production Line

The production line consists of:

- Puffing machine
- Sugar Boiler
- Mixing Machine
- Automatic Forming Machine
- Packaging Machine

The operation of the line is simple and straight forward where the rice is puffed in the puffing machine, the syrup is boiled in the sugar boiler, both puffed rice and syrup is mixed in the mixing machine from where it goes to the forming machine to be shaped into bar, cake, ball or round depending on the mould used after which it is packaged.

## Equipment

### *Puffing machine*

Power : 0.75kw

Output: 60-90kg/h  
Voltage:380v/50Hz

Dimension: 1650\*800\*1350mm

Weight: 380kg



### *Sugar boiler*

Power : 7.5kw ,Volume:100L

Voltage: 380v/50Hz

Dimension: 1000\*1000\*800mm

Weight: 150kg



### *Mixing machine*

Power: 3kw Mixing speed: 50r/min

Voltage: 380v/50Hz

Dimension: 750\*550\*950mm

Weight: 200kg



### *Automatic forming machine*

Output: 150-300pcs/min

Power: 2.5K w, Voltage: 380v/50Hz

Dimension: 5600\*850\*1400mm

Weight: 1100kg



### *Packing machine*

Packing speed: 30-280bag/min

Power: 2.6K w, Voltage: 220v/50Hz

Dimension: 4000\*900\*1500mm

Weight: 500kg



## Products

Rice cake is the primary product of this line. Product variation can come in the form of ingredients used. The type of rice used; brown or white can differentiate the product into high or low fiber cakes. The syrup is the second point where variation can be introduced in the product line. This point offers more opportunity for variation since it determines the flavour of the cake, cakes can be sweet using sugar, chocolate or caramel syrup among others, or salty using salt based syrup.



Other products that can be made from this line are the puffed rice snacks. These can be puffed rice candy or spicy puffed rice snack. For puffed rice candy, the process is similar to that of rice cake, except the mixture does not go into the forming machine. The rice is puffed and mixed with the syrup in the mixing machine until the syrup is dried and hardened on the surface of the puffed rice. The continuous mixing makes the puffed rice loose. Different coloring and flavorings can be used to add variety.



Candy Warehouse