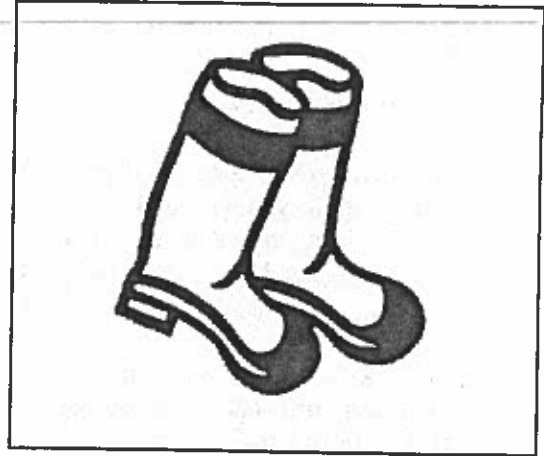


Billy Boot Garbage Bags (Part A)



Introduction

It was September 1991 and Christopher Hutton and his father Noel Hutton were in one of several meetings they were having to discuss the future direction of their company, East Coast Converters Limited (ECC), and diversification opportunities. Chris began, "we have excess capacity which likely won't be filled by our current product line. It's time to consider our options and seize any opportunities before they vanish."

"I agree, Chris," said Noel. "Why don't we look a little further into your idea of producing garbage bags. I hope you have been doing your homework!"

Background Information

East Coast Converters Limited (ECC) was a privately owned Newfoundland manufacturing and processing company located in Mount Pearl, Newfoundland. The company was incorporated in 1976 and was a member of a corporate group that included a cardboard packaging producer. At its modern plant and facilities in Donovan's Industrial Park, ECC produced plastic products from raw materials -- both virgin and recycled. Their product line included supermarket bags, bread and related product bags and all types of plastic packaging used in the fishing industry.

ECC produced plastic packaging by processing raw materials in the form of plastic pellets. Most of the pellets were imported from outside the province and the price fluctuated depending on world supply and demand for the pellets. The pellets were a product of the petro-chemical industry and their price was also affected by world oil prices. ECC had recently purchased a machine to recycle finished goods into pellets that could be used to produce different products. This equipment allowed ECC to recycle obsolete inventory, scrap, and unsuccessful product runs. Where possible, ECC produced their own recycled pellets; however, they did not have the inputs to produce enough to meet their total needs.

This case was prepared by David A. Howe for the P.J. Gardiner Institute as a basis for classroom discussion, and is not meant to illustrate either effective or ineffective management.

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The plastic pellets were basically heated, melted and shaped into plastic sheets and tubes (known as the extrusion process). Coloured bags were obtained by adding a specified percentage of coloured pellets. The products were then cut and before being packaged, printed graphics were added, when required; for example on bread bags. The nature of the heating and shaping process required that the equipment operate full time because shut-downs and restarts were very costly.

ECC held a strong position in the Newfoundland plastic packaging market, supplying major bakeries, fish plants and other industries throughout the province. The company exported limited quantities of product since mainland competition was tough.

ECC was currently faced with the eminent downturn in the local fishing industry, which historically accounted for a significant portion of the company's sales. The company had also been faced with strong mainland competition in the supermarket bag industry where price was the major determining factor for customers.

The Problem

Looking to the future, the Huttons realized they needed to take immediate action to stop the decline in revenues and activity at their plant before it was too late. They had unused capacity at their plant that could be utilized to produce new products. Because of the limited market opportunities of their product line, they realized they needed to consider new products. The Huttons felt that they needed to diversify - meaning they needed to produce new products to be sold in new markets while still producing and selling their current product lines. They felt they could apply their strengths and experience to new product lines and wanted to explore any export opportunities.

The Huttons were considering the introduction of a totally new line to their company, garbage bags. This introduction would represent horizontal integration to ECC as it was a new product but was at the same level of production as the other products of the company. The garbage bags would be produced from raw materials, both virgin and recycled (where possible), and would require skills, equipment and production steps similar to many of the company's current products. Also, the garbage bag market was a stable one where sales were not generally affected by economic conditions.

The Huttons proposed to introduce the garbage bags initially into the Newfoundland market and decided to add a Newfoundland flavour by using the name "Billy Boot Garbage Bags," and the slogan "some tick 'n tuff b'y." They hoped to capitalize on the idea of Newfoundland consumers buying locally made products and the resulting support of the local economy and local employment. This hope would be consistent with current Newfoundland government programs to promote buying locally - for example, the "Manufactured Right Here" program.

Billy Boot Garbage Bags (Part A)

The Huttons were afraid, however, of retaliation by mainland suppliers in a very competitive market who may see the introduction of the new product as a threat to their market position. They also saw potential difficulty in attracting brand-loyal customers and problems in getting their products into the stores.

In addition to the marketing factors, the Huttons had to consider financial factors in determining the feasibility of such an undertaking. They determined the "variable costs" by unit and related "fixed costs" that could be used to determine a minimum sales volume or minimum sales price (known as break-even analysis) (see Appendix 1).

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Study Questions

1. Why is it important for East Coast Converters Limited and other businesses to constantly look for diversification opportunities? Can you think of any other opportunities for diversification that the company should consider?
2. What were the opportunities and threats facing ECC in consideration of the introduction of the new product?
3. Using the cost information in Appendix 1 and the format in Appendix 2, what is the minimum sales volume (in packages of 10) that the new product would have to generate in order to be feasible if ECC sold the new product to retailers for \$1.00 ? (ie. what is the break-even sales volume?).
4. Using the format in Appendix 3, what is the minimum price that ECC could sell to retailers if the product's projected sales volume is expected to be 200,000 units (packages of 10)?
5. Using the format in Appendix 4, what is the total contribution to overhead and company profits (ie. gross profit) if sales volume of the new product reaches 500,000 units (packages of 10) at a price of \$0.95 ?

Billy Boot Garbage Bags (Part A)**Appendix 1
Cost Information**

1 unit = 10 bags in a package

Variable Costs

Raw materials:	Plastic pellets:	clear:	\$0.30/unit
		coloured:	\$0.10/unit
Direct labour:	Extrusion:		\$0.08 /Kg 0.50 Kg required per unit
	Bag making:		\$15.00 /hour 300 units produced/hour
Packaging:	Package, twist ties, & carton:		\$1.70 /carton 24 units /carton
Variable Overhead:			\$0.22 /unit

Fixed Costs

Supervisory labour:	\$40,000 /year
Sales labour:	\$30,000 /year
Repairs & maintenance:	\$10,000 /year

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Appendix 2 Formula for break-even number of units

Total variable costs per unit

Raw materials:		clear pellets:	\$ **	
		coloured pellets:	<u>**</u>	**
Direct labour:	Extrusion:	\$**/Kg X Kg/unit	**	
	Bag making:	\$**/hour / #/hour	<u>**</u>	**
Packaging:		\$**/carton / #units/carton	**	
Variable overhead:			<u>**</u>	
Total variable costs:				<u>\$ **</u>

Contribution margin

Sale price:	\$1.00
Less: total variable costs:	<u>**</u>
	<u>\$ **</u>

Break-even # units

$$\frac{\text{Total fixed costs}}{\text{Contribution margin}} = \# \text{ units} \quad \frac{\$ **}{\$ **} = \underline{\underline{** \text{ units}}}$$

Appendix 2
Formula for break-even number of units
(Continued)

Notes:

When considering the introduction of a new product, a company's management must review the relevant cost and market data to determine its viability -- ie. will it be profitable and therefore in the company's interest to proceed with the proposed new product.

By determining the expected sales price and the expected variable production costs, management is able to determine the direct profit per sales unit (in this case a package of 10 garbage bags) or what is known as the contribution margin.

Producing a product also involves certain fixed costs -- costs that do not change in total based on the number of units produced. To be profitable, the product must generate a total contribution margin greater than these fixed costs.

Once the expected contribution margin per unit and the total fixed costs are determined, management can determine the minimum sales volume required to ensure that the product will be profitable -- this is known as the break-even number of sales.

Appendix 3 Formula for break-even sales price

Total variable cost/unit per Appendix 2:	\$ **
Multiplied by: sales volume:	<u>**</u>
Total variable costs:	**
Add: total fixed costs:	<u>**</u>
Total cost of 200,000 units:	<u>\$ **</u>

Break-even sales price

$$\frac{\text{Total cost}}{\text{\# units sales}} = \frac{\$ **}{}$$

Notes:

To continue with the discussion in Appendix 2, a company may know it's cost to produce a product - both variable and fixed - and the expected sales volume, but management wishes to determine a minimum sales price per unit that needs to be charged so that the company does not lose money on the product.

By determining the total cost to produce the expected sales units, management can determine the minimum sales price that must be charged, known as the break-even sales price.

Appendix 4
Formula for total product contribution

Sales:	# units X \$**/ unit	<u>\$ **</u>
Less: Cost of Sales:		
	Variable: # units X \$** variable cost/ unit	**
	Fixed:	<u>**</u>
		<u>**</u>
Gross profit:		<u>\$ **</u>

Notes:

If management can estimate expected costs -- both variable and fixed -- and a sales price and expected sales volume, they are then able to determine the additional profit that particular product will add to the overall profitability of the company.



The following information is provided for your reference:
 The total number of pages in this document is 10.
 The document contains 5 sections.
 The first section is titled "Introduction".
 The second section is titled "Methodology".
 The third section is titled "Results".
 The fourth section is titled "Discussion".
 The fifth section is titled "Conclusion".

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