CANADIAN WOOD PALLETS: IS IT A GOOD DEAL, EH? AN UNDERGRADUATE CASE IN COST ACCOUNTING

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Learning Outcome Statement (Abstract)

At the completion of this case learners should be able to demonstrate their ability to build a volume-based income statement by applying concepts, such as, the calculation of a manufacturing overhead using direct labour costs, machine hours and direct labour hours. In addition, learners should be able to apply the direct method in the allocation of service department expenses over multiple profit centers. Students should also be able to demonstrate their understanding of activity-based costing (ABC) in the analysis of an organization's costs. Finally, learners should be able to apply the analytical concepts of differential analysis to a

business decision. This case is intended as an integrated final case in the fundamentals of cost accounting.

Keywords: Cost Accounting, Case Method in Accounting, Applied Learning, Activity Based Costing, Cost-Volume-Profit, Cost Accounting

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INTRODUCTION

You are at your desk on a bright sunny morning contemplating the upcoming challenges of your new job as cost accountant for Canadian Wood Pallets (CWP). You were appointed to the role after the now former cost accountant was terminated. The first challenge in your new role is to pick up where your predecessor left off. Unfortunately, he did not get a chance to complete the last period's income statement. You must complete this as soon as possible because management needs to know where the company stands financially. You collected the following notes from various meetings you attended yesterday.

BACKGROUND TO CANADIAN WOOD PALLETS (CWP)

CWP was founded in the mid-1970's by its owner who, at that time, had 15 years' experience in what would be referred to contemporaneously as supply chain management. At the time, the founder realized that there was a shortage of local producers of wood pallets, used in the shipment and storage of retail and wholesale goods.

Wood pallets are used in a wide variety of product industries including retail food and beverage, chemical and electronics industries, as well as, the shipping of wholesale and industrial goods, such as, car parts.

Given the low barriers to entry into the industry, the production of wood pallets is very competitive. There is also a new substitute product

making its way into the market – injection molded plastic pallets. Plastic pallets require less maintenance, and can be used for longer periods of time, resulting less need for recycling, lower costs for pallet users, and reduced environmental impact.

Competitors tend to be small family-owned businesses, similar to CWP. Given the competitive nature of the business, and increasing competition from substitute products, cost management is the key success factor in the industry.

CWP Current Product Mix¹

The company sells two types of wood pallets to a variety of customers. CWP currently produces two models of wood pallets. The CWP-1070 and the CWP-850. Both models are similar in their construction and weight bearing capacity of up to 2,500 lbs. However, the CWP-850 is constructed of recycled wood pallets. The CWP-1070 is made from newly harvested wood (**Table 1**).

Last Periods' Sales

During the last period, sales were strong with the New Wood division selling 450,000 pallets at an average price of \$26 per pallet. The company's Recycled Pallet division sold 400,000 units at an average price of \$20 per unit.

Direct Materials and CWP's Production Process

CWP's main cost of goods sold are direct materials in the form of either new or recycled wood. To understand CWP's cost of goods sold you need to understand the construction of wood pallets. Each pallet is made up of 7 top boards, 3 bottom boards and 8 support blocks (**refer to figure one**).

The Production of New Wood Pallets

Top and bottom boards cost \$1.50 each and support blocks cost \$.50 per block. The boards are cut into 3' sections and the blocks into smaller

pieces which are then batched together so as to have enough boards and blocks to create a single pallet. Once batched together, the pieces are moved to the assembly stage where assemblers, using air-powered nail guns, assembly the pallets. Currently, industry standards require that each 48"x40" pallet be made of up of 7 top boards, 3 bottom boards and 8 blocks.

When 10 pallets and 8 blocks are assembled they are moved to the final stage of production, wood treatment, where new pallets are sprayed with an environmentally friendly foam that protects the wood from harmful pests. The pallets are then loaded onto trucks by the wood treating department for delivery to customers (**Table 2**).

The Production of Recycled Wood Pallets

The assembly of wood pallets from recycled wood is much the same procedure as new wood pallets. However, recycled pallets are not treated with protective foams since the recycled wood has already been treated. Costs for recycled direct materials (top and bottom boards, and support blocks) are the lower given that they have been cut and treated prior to their recycling (**Table 2**).

Fixed Manufacturing and Other Overhead

Manufacturing Overhead is allocated to CWP's three production departments on the basis of either machine hours or direct labour costs. Manufacturing overhead was budgeted by senior management at a total of \$950,000 for the period. This did not include a separate budget related to CWP's two service departments (administration and information systems) (**Table 3**).

PREVIEW COMPLETE

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CITATION INFORMATION

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WEB APPENDIX

A web appendix for this case is available at: <https://dx.doi.org/10.15239/j.brcadvje.2020.04.01.wa07>

NOTES

1. <https://www.ic.gc.ca/eic/site/icgc.nsf/eng/home> (February, 2019)