

Alicia Wong

Alicia Wong, Corporate Supply Manager, Thain Foods Limited, wanted to prepare a proposal to manufacture mustard in-house. Mustard, an important ingredient in many of the company's products, was currently purchased from an outside supplier. She hoped a comprehensive proposal could be prepared in one-month's time for the CEO's approval.

GENERAL COMPANY BACKGROUND

Thain Foods Limited (TFL) had been in business for more than 30 years. Its products included a wide range of syrups, fudges, cone dips, sauces, mayonnaise, and salad

dressings. Its customers were major food chains, hotels, and restaurants in North America and Europe.

TFL believed in continuous improvement to its operations. Over the last two years, it invested more than \$2 million in plant facilities, the bulk of it new, state-of-the-art process equipment and process control. All production and process control functions were computerized for maximum efficiency.

TFL employed about 120 people. It had a corporate structure of CEO; president; executive vice president, domestic sales; and national account manager and used a network of food brokers who sold and promoted its products.

THE SUPPLY AREA

Alicia was responsible for supply and reported directly to the CEO. She had an inventory control officer, a buyer and a receiver under her supervision. Purchases could be classified into five different types: labels, packaging, raw materials, commodities and MRO supplies. Mustard was an important raw material used in many of TFL's products.

CURRENT PRACTICE: PURCHASING MUSTARD EXTERNALLY

Whenever mustard was required, the buyer e-mailed the supplier and requested that it prepare the appropriate amount to be picked up by a truck from TFL. The purchase order would be prepared before the truck left for the supplier, normally the next day. The mustard supplier used mustard seed as its raw material and blended in the other ingredients after the seed had been reduced to mustard flour. Every month TFL purchased 500 drums, or 100,000 liters, of mustard. The cost of the mustard itself was \$64 per drum. Freight costs were borne by TFL and amounted to about \$8 per drum. TFL operated three eight-hour shifts, five days a week. Each worker was paid about \$20 per hour. It took about 10 minutes of a worker's time to handle each drum. This included pouring the mustard into the processing kettle, making sure other added ingredients mixed well, and rinsing the drums. The drums were bulky and because they could not be used in the plant for other purposes, had to be rinsed for a contractor who took them away. The costs of disposing of the drums in this manner were negligible. Other costs and overhead of purchasing were \$0.02 per liter.

SUGGESTED CHANGE: MANUFACTURING MUSTARD IN-HOUSE

The mustard to be produced at TFL would be composed of roughly 60 percent solid, 20 percent water, and 20 percent

vinegar. The solid portion was a spice blend, consisting essentially of mustard flour, salt, and other spices that could be readily bought. Water was not a problem because the city provided a reliable supply. Vinegar was already a raw material that TFL ordered in bulk regularly from suppliers. Alicia therefore believed that it was a simple matter for TFL to make the mustard for its own use. TFL only needed to buy the spice blend and add water and vinegar in the right proportions. She approached a supplier who indicated that it could make the spice blend at a delivered price of \$0.15 per liter for TFL, including freight. However, it needed time for tests to ensure that the blend would be of the right quality for TFL's use. Vinegar cost TFL \$0.1875 per liter delivered in 15,000 liter lots. And TFL was paying \$0.025 per liter for water. Alicia also checked whether production had the time and equipment to make the mustard. Production felt that the change would not be too drastic and no additional workers would be necessary. However, it would use up more of the existing workers' time. Production calculated that the change would entail a total labor and overhead cost of about \$0.105 per liter of mustard using standard cost accounting for labor time and overhead charges.

Alicia organized an information gathering and discussion session involving supply, production, quality assurance, and distribution to discuss the proposed change. The workers were keen on the idea because this meant that they would no longer have to haul and rinse the bulky drums (water and vinegar could be easily channeled to the mixing containers using existing pipes). However, quality assurance expressed concern about the quality of mustard if produced in-house. Because the mustard was an ingredient in many of TFL's products, such a change might adversely affect the quality and taste of these products.

Alicia wanted her proposal for in-house manufacture of mustard to be in the company's best interest and wondered how to proceed next.