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Canadian Agri-Food Exports to Nepal - Final Project

PART I - Product Information

Introduction to the Product

The Apple Cider Press and Fruit Press and Grinder is a device designed to both press and grind a variety of fruits, including pears, grapes and apples (Berry Hill Limited, 2014). The frame of the appliance is made of kiln dried wood and consists of three main components; centre posts (four by four inches), leg braces (two by four inches), and headers (six by six inches) located at the bottom and the top of the frame. The joints of the frame are cross-bolted and dowelled to provide added strength. Upon assembly, the frame is approximately thirty-six inches in height. The next component, bolted to the top header of the frame, is the fruit grinder. This half-inch plastic tub with stainless steel screws, is designed to shred apart fruit, thus maximizing the juice yield. The pressing screw is one inch in diameter and has an Acme machined thread to ensure non-binding cranking. The cross handle of the pressing screw is twelve inches in length and is also made entirely of steel. To ensure food safety, the grinder itself does not contain any wooden components as wood has a tendency to absorb bacteria and odours (Berry Hill Limited, 2014).

Directly below the fruit grinder is the pressing table and tub (Berry Hill Limited, 2014). The tub is twelve inches in diameter and is made of slats of hardwood with stainless steel bands (Berry Hill Limited, 2014). It is important to note that the tub is comprised of wood and as a result, will require regular cleaning (K. Fox, personal communication, November 8, 2014).

Within the tub is a pressing bag made of a nylon mesh that filters the pulp (Berry Hill Limited, 2014). Directly beneath the tub is a plastic collection tray with a hole, that enables the juice to be collected in some sort of bucket (K. Fox, personal communication, November 8, 2014). Since the tray is made of plastic it will not collect bacteria or rot (Berry Hill Limited, 2014). The Apple

Cider Press and Fruit Press and Grinder has a one year warranty (K. Fox, personal communication, November 4, 2014).

About the Company and Its Product

The Apple Cider Press & Fruit Press and Grinder is sold by Berry Hill Limited, commonly referred to as Berry Hill (Berry Hill Limited, 2014). Berry Hill, established in 1946, is a family owned business that markets a wide range of unique products (Berry Hill Limited, 2014). The current owner is Mr. Ken Fox (K. Fox, personal communication, November 4, 2014). The company serves its cliental through both retail sales and mail orders (Berry Hill Limited, 2014). The store and head office are located in St. Thomas, Ontario; however, the company serves cliental on an international level (Berry Hill Limited, 2014). Berry Hill Limited developed the design for the Apple Cider Press and Fruit Press and Grinder and is responsible for the assembly, but the individual components of the press are sourced in from seven Canadian companies (K. Fox, personal communication, November 4, 2014). Names of the specific companies cannot be disclosed for confidentiality reasons (K. Fox, personal communication, November 4, 2014).

Market opportunity

The demand for fruit crops in Nepal is rising significantly as many Nepalese have changed their consumption patterns, due to an increased knowledge of the necessity of a balanced diet (Devkota, 1999).

Apples, like other deciduous fruit crops, are grown for personal consumption as well as sales at the markets (R. Khanal, personal communication, October 9 - November 7, 2014). There is a substantial market for apples grown in Nepal; however, Nepalese farmers are faced with a challenge, as the cost to transport their apples to the market is high. Nepalese farmers cannot

compete with the prices of imported apples, such as those brought in from China. Selling apple alternatives, such as juice, may be profitable for Nepalese farmers as the cost of transportation would be reduced, based on the relative weight of juice in comparison to the weight of fresh apples (R. Khanal, personal communication, October 9 - November 7, 2014).

A market opportunity for fruit presses seems to exist in Nepal; however, the market for fresh apples still remains despite the availability of processed apple products (R. Khanal, personal communication, October 9, 2014). Furthermore, there are several fruit and vegetable processing facilities in the hills region of Nepal (Devkota, 1999). Apples pressed into juice by farmers, may face competition from goods produced in processing facilities. The market for apple processing devices appears to exist; however, it may not be large at this time.

Potential Competition

During research, no other Canadian companies were found that manufacture apple or fruit presses. However, there are a number of companies, including those outside of Canada, that supply apple and fruit presses. One such company is Pleasant Hill Grain, out of Nebraska, USA (Pleasant Hill Grain, 2014). This company sells several different models of fruit presses and grinders, such as the Maximizer Fruit Grinder and Maximizer Fruit Press with GSAM (Pleasant Hill Grain, 2014). These particular models are manufactured by a company in China whose name cannot be disclosed for confidentiality reasons (L. Knudsen, personal communication, November 11, 2014). There may be a possibility that the Chinese company could export its products directly from China to Nepal, rather than sending the goods to the United States and then to Nepal. This may help reduce the costs incurred by the Nepalese, as shipping goods from China to Nepal would likely be less expensive than shipment overseas.

Another company that supplies several models of fruit presses is Suzhou Kingstar Tools Co., Ltd (V. Lu, personal communication, November 17, 2014). An example, is the Fruit Presser, 18L model (V. Lu, personal communication, November 17, 2014). The price of the Fruit presser, supplied from China, is significantly lower than the prices of the devices in North America (outlined in Table 2). Additionally, one can infer that the costs associated with the shipment of the goods from China to Nepal would be significantly lower than the costs associated with the shipment from Canada to Nepal. However, a factor that must be taken into consideration is that the supplier of the Fruit Presser has specified that a minimum of eight hundred and forty pieces must be ordered (V. Lu, personal communication, November 17, 2014). A quantity that size may be too large in comparison to the market for these devices in Nepal. There may be a possibility to negotiate prices and minimum order quantities, but it is necessary to contact a supplier representative, such as Ms. Nancy Liu or Ms. Vivian Lu.

There is also a company in India that supplies fruit presses. Pilots Smith (India) Pvt. Ltd., manufactures and supplies a model known as the Pilot Squeezer (Fruit Press), (Pilots Smith (India) Pvt. Ltd., 2012-2013). In order to access information regarding the price of each press, as well as a number of specific details about the model, it is necessary to contact the Production Manager, Mr. Shil Augustine (Pilots Smith (India) Pvt. Ltd., 2012-2013). Contact with the Production Manager has not been possible thus far. The price of the Indian made fruit press is unknown; however, one can infer that the costs associated with the shipment of the goods from India to Nepal would be lower than the costs associated with the shipment from Canada to Nepal. Further information regarding the companies and the products are provided in Table 1 and a comparison of attributes of the fruit presses is provided in Table 2.

Table 1: Company and Product Information

About the Company	Product Description
<p>Berry Hill Limited - Apple Cider Press and Fruit Press and Grinder</p> <p>Berry Hill Limited was established in 1946 (Berry Hill Limited, 2014). It is a family owned business that markets a wide range of unique products. The company serves its cliental through both retail sales and mail orders. The store and head office are located in St. Thomas, Ontario; however, the company serves cliental on an international level (Berry Hill Limited, 2014).</p> <p><u>Company Contact:</u> Ken Fox - Owner Phone Number (Berry Hill Limited): 800-668-3072</p>	<p>The frame of the appliance is made of kiln dried wood (Berry Hill Limited, 2014). The joints of the frame are cross-bolted and dowelled to provide additional strength. The fruit grinder, a plastic tub with stainless steel screws, is bolted to the top header of the frame. The pressing screw is one inch in diameter and has an Acme machined thread to ensure non-binding cranking. The cross handle of the pressing screw is twelve inches in length and is also made entirely of steel. Beneath the fruit grinder is a pressing tub made of slats of hardwood and stainless steel bands. Within the tub is a pressing bag made of a nylon mesh that filters the pulp (Berry Hill Limited, 2014).</p> <p>Directly beneath the tub is a plastic collection tray with a hole, that enables the juice to be collected in some sort of bucket (K. Fox, personal communication, November 8, 2014).</p>
<p>Pleasant Hill Grain- Maximizer Fruit Grinder and Maximizer Apple Press with GSAM</p> <p>The origins of Pleasant Hill Grain stem from a third generation farm on the plains of Nebraska (Pleasant Hill Grain, 2014). The farm produces large quantities of soybeans and corn on an annual basis; however, these goods are not sold online. The company has been growing and in 2008, the warehouse for the kitchen products relocated to Hampton, Nebraska. Pleasant Hill Grain is a dealer of a variety of brands and products for the home and stocks nearly all of their merchandise in Nebraska (Pleasant Hill Grain, 2014).</p> <p><u>Company Contact:</u> Customer Service Representatives Phone Number (Pleasant Hill Grain): 1-402-725-3829</p>	<p>The body of the Maximizer Fruit Grinder is made of strong cast iron (Pleasant Hill Grain, 2014). Attached to the body is a large, weighty flywheel. The flywheel has a wooden handle for comfort and is designed to rotate smoothly. The grinder of the Maximizer Fruit Grinder is a large drum made of hardwood, that is filled with stainless steel teeth. The grinder also has a plate and holes that enable the user to mount it on a support, such as a sawhorse. A potential means for mounting the grinder may include attaching the grinder directly to the Maximizer Fruit Press with GSAM (Grinder Swing Arm Mount). This fruit press has a swinging arm that acts as a mount for the Maximizer grinder. Apples can be ground directly above the press and when grinding is complete the arm swings to the side. The frame of the press is made of steel tubing, with an approximate thickness of three sixteenths of an inch. The pressing basket is made of solid oak and the pan is made of stainless steel, and has a drain pipe that is one inch in diameter. The forcing screw of the press is one inch in diameter and is acme-threaded. The press generates high pressures, which are withstood by the frame, that help to increase the juice yields. When the Maximizer Grinder is attached to the Maximizer Press it is important that the press is secured down to prevent the device from tipping. The device is easily cleaned with water (Pleasant Hill Grain, 2014).</p> <p>An optional component of the appliance is the Hopper Extension (Pleasant Hill Grain, 2014). This apparatus enables the user to load the Maximizer with a larger number of apples, approximately twelve to twenty, that will then self feed into the grinder (Anna, personal communication, November 18, 2014).</p>
<p>Suzhou Kingstar Tools Co., Ltd. - Fruit Presser, 18L model</p> <p>Suzhou Kingstar Tools Co., Ltd., is a company that specializes in manufacturing and trade, with an export percentage of nearly one hundred (Alibaba Group, 1999-2014). The company, established in 2002, is located in Jiangsu, China, and is heavily engaged with markets the Mid East, Western Europe, North America and Eastern Asia (Alibaba Group, 1999-2014).</p> <p><u>Company Contact:</u> Ms. Vivian Lu - Supplier Email: vivian@kingstartools.com Ms. Nancy Liu - Supplier Email: nancy@kingstar.com</p>	<p>In regards to the design of the appliance, the basket of the fruit press is made of solid wood (V. Lu, personal communication, November 17, 2014). The surface treatment used is environmentally friendly. The appliance requires thread type pressing and has a handle made of cast iron. The total weight of the largest fruit press is approximately thirteen kilograms and total capacity is eighteen litres (V. Lu, personal communication, November 17, 2014).</p>

<p>Pilots Smith (India) Pvt. Ltd - Pilot Squeezer (Fruit Press) Pilots Smith (India) Pvt. Ltd, manufactures, supplies and exports a wide range of equipment for industrial processing purposes (Pilots Smith (India) Pvt. Ltd., 2012-2013). The company is located in Kerala, India (Pilots Smith (India) Pvt. Ltd., 2012-2013).</p> <p><u>Company Contact:</u> Mr. Shil Augustine - Production Manager Direct Contact (Email/Phone Call) via product webpage URL: http://pilotsmith.tradeindia.com/fruit-squeezer-676461.html#</p>	<p>The pilot squeezer is designed to remove juice from fruits, among other products (Pilots Smith (India) Pvt. Ltd.,2012-2013). In regards to the design, the Pilot Squeezer is comprised of a vessel, a collection tray and an external guard. The shaft of the device is threaded. The Pilot Squeezer comes in a variety of models, each associated with a different capacity. The largest model has a capacity of thirty litres (Pilots Smith (India) Pvt. Ltd., 2012-2013).</p>
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Table 2: Comparisons of Attributes of Various Fruit Pressing Devices

Company (Retailer) and Location	Berry Hill Ltd. St. Thomas, Canada (Berry Hill Limited, 2014)	Pleasant Hill Grain Nebraska, USA (Pleasant Hill Grain, 2014)	Suzhou Kingstar Tools Co., Ltd. Jiangsu, China (Alibaba Group, 1999-2014)	Pilots Smith (India) Pvt. Ltd. Kerala, India (Pilots Smith (India) Pvt. Ltd., 2012-2013)
Name of Fruit Press	Apple Cider Press and Fruit Press and Grinder (Berry Hill Limited, 2014)	Maximizer Fruit Grinder and Maximizer Fruit Press with GSAM (Pleasant Hill Grain, 2014)	Fruit Presser, 18L model (V. Lu, personal communication, November 17, 2014)	Pilot Squeezer (Fruit Press) (Pilots Smith (India) Pvt. Ltd., 2012-2013)
Country of Manufacture	Canada (K. Fox, personal communication, November 4, 2014)	China (Pleasant Hill Grain, 2014)	China (Alibaba Group, 1999-2014)	India (Pilots Smith (India) Pvt. Ltd., 2012-2013)
Price	\$899.99 CND, shipping not included (Berry Hill Limited, 2014)	Total without Hopper Extension - \$ 759.99 US Total with Hopper Extension - \$799.99 US (Anna, personal communication, November 18, 2014)	\$49.99 US for largest fruit press (V. Lu, personal communication, November 17, 2014)	- Not specified
Warranty	One year (K. Fox, personal communication, November 4, 2014)	One year for the Maximizer Fruit Press with GSAM (Pleasant Hill Grain, 2014)	One year (V. Lu, personal communication, November 18, 2014)	- Not specified
Assembly Required	Some assembly required (Berry Hill Limited, 2014)	Some assembly required (Pleasant Hill Grain, 2014)	Some assembly required (V. Lu, personal communication, November 18, 2014)	- Not specified
Dimensions (LxWxH)	36 inches in height (Berry Hill Limited, 2014) Dimensions for length and width are unknown	14x14x14 inches for Maximizer Apple Grinder (L. Knudsen, personal communication, November 11, 2014). 15.25x19.5 inches (LxW) for Maximizer Fruit Press with GSAM (Pleasant Hill Grain, 2014) 11.8x11.8x8 inches for the Hopper Extension (Pleasant Hill Grain, 2014)	40x39x23 cm (V. Lu, personal communication, November 17, 2014)	- Not specified
Volume/Capacity	- One bushel of apples (K. Fox, personal communication, November 17, 2014)	- Hopper Extension holds 12-20 apples and the press has a volume of 9.5 gallons (Anna, personal	18 litres (V. Lu, personal communication, November 17, 2014)	30 litres, maximum capacity with largest model (Pilots Smith (India) Pvt. Ltd.,

		communication, November 18, 2014)		2012-2013)
Required Order Size	Any Quantity (K. Fox, personal communication, November 4, 2014)	Any quantity, but currently only twenty are in stock (Anna, personal communication, November 18, 2014)	Minimum of 840 pieces (V. Lu, personal communication, November 17, 2014)	- Not specified
Product Identification	Product Code: FP3 (Berry Hill Limited, 2014)	- Not specified	Item Number: FP18 (V. Lu, personal communication, November 17, 2014)	Model PSM-30(SS) (Pilots Smith (India) Pvt. Ltd., 2012-2013)

Benefits to Canada

Exporting the Apple Cider Press & Fruit Press and Grinder has the potential to benefit Canadians. Berry Hill Limited would benefit due to increased revenue from direct sales, and the companies from which the components are sourced would benefit from increased sales of the parts to Berry Hill Limited. Courier and Freight services would also generate higher revenues, as their services would be required to transport the goods. The owner of Berry Hill Limited stated that a significant increase in the sale of the good would enable him to hire more employees (K. Fox, personal communication, November 4, 2014), as would likely be the case with the other companies involved. Exporting this appliance to Nepal has the potential to increase employment opportunities for Canadian citizens. Additionally, exporting fruit presses may help to expand trade between Canada and Nepal. Canada and Nepal have established mutual relations, but trading remains relatively low (Government of Canada, 2014). Furthermore, in recent years, Canada imported a larger worth from Nepal, in terms of dollar value, than it exported to Nepal (Government of Canada, 2014). Exporting these fruit presses from Canada may help to broaden and reinforce trade relations, while contributing to an increase in Canada's net exports to Nepal.

PART II - Export Potential to Nepal

Introduction to Nepal

Nepal is a small, land-locked country in South Asia (Devkota, 1999). India surrounds

Nepal to the West, South and East, and North of Nepal is the Tibetan region of China. Nepal is a mountainous country, but there is significant deviation in altitude (Devkota, 1999).

Nepal can be separated into three agro-ecological areas; the Terai, the Hills and the Mountains (Pariyar, 1998). The Terai region is a plain in the southern portion of the country. It spans from the West to the East with an elevation ranging from approximately sixty metres to three hundred metres. The climate of the Terai region is mainly sub-tropical to tropical with drier regions in the western portion of the country. The hill region is situated in the middle portion of Nepal and spans the country from the West to the East. The elevation of this region is higher than that of the Terai region, ranging from approximately three hundred metres to two thousand metres. The hills region generally has cooler daily temperature ranges than those associated with the Terai region, and also receives more rainfall. The third region of country is the mountain region. Elevations in the mountain region exceed two thousand metres. Southerly portions of the mountains and the inner Himalaya valleys are areas that are typically cultivated. The climate of the inner Himalayas is cool and dry (Pariyar, 1998).

The country is largely agricultural with roughly three quarters of the population relying on agriculture as a source of employment (Devkota, 1999).

Apple Crops and Harvesting in Nepal

In Nepal, the commercial growth of deciduous fruits is not customary (Devkota, 1999). Deciduous fruits are often limited to growth in gardens and are mainly consumed domestically (Devkota, 1999). However, there is potential to grow deciduous fruits in Nepal (Devkota, 1999), and there is a significant market for apples (R. Khanal, personal communication, November 3, 2014). Numerous cultivars of a variety of deciduous fruits were introduced to Nepal, imported from countries such as Italy, Japan, the United Kingdom, Israel, India and the United States

(Devkota, 1999). The cultivars were planted at horticultural stations and those that were suitable were grown prolifically and were allocated to farmers (Devkota, 1999).

One of the types of deciduous fruits in Nepal is apples (Devkota, 1999). Suitable regions for the growth of apples are outlined in Figure 1.

Figure 1: Potential Districts for Commercial Production of Apple Crops

Fruit	Major District
Apple	Darchula
Apple	Bajura
Apple	Baitadi
Apple	Dolpa
Apple	Rolpa
Apple	Bajhang
Apple	Rukum
Apple	Mustang
Apple	Kalikot
Apple	Humla
Apple	Jumla

Adapted from Devkota (1999).

In Nepal, low, mid and high chilling cultivars of apples are grown (Devkota, 1999). Elevations of one thousand two hundred metres above sea level and higher, are suitable for the growth of low chilling cultivars. The growth of mid and high chilling cultivars typically occurs in elevations in the range of one thousand eight hundred metres to two thousand eight hundred meters above sea level. Apples can be grown successfully in the mid and high mountainous areas across the country, but the highest quality apples are produced in the drier western area. Many types of deciduous fruits are grown in Nepal; however, apple crops occupy the greatest area and produce some of the largest yields (Devkota, 1999), as outlined in Table 3.

Table 3: Area, Production and Productivity of Deciduous Fruit in Nepal (1997)

Fruit	Total Area (ha)	Productive Area (ha)	Production (Mt/ha)	Yield (Mt/ha)
Apple	4652	3006	28595	9.51
Pear	3049	2381	27339	11.48
Peach	2143	1765	12819	7.26
Plum	1441	1179	8294	7.03
Apricot	97	63	431	6.84
Persimmon	71	45	328	7.29
Total	11392	8439	77806	

Reprinted from Devkota (1999).

The harvesting of deciduous fruits is done by hand, and fruits are either picked or beaten off with sticks (Devkota, 1999). Fruits that are damaged during the harvesting process or damaged by disease and pests are sorted out. Growth on nutrient deficient, un-pruned trees can also result in poor quality fruit as well as reduced yields. Fruit farmers in Nepal are faced with a number of agronomic challenges that reduce both quality and yield. After harvesting, fruits are transported to the markets, where they are sold to middlemen or wholesalers (Devkota, 1999).

Marketing Strategy

The government in Nepal has developed a strategy that may help employ an initiative known as the Agriculture Prospective Plan (Sharma, 2001). The Agriculture Prospective Plan (APP), approved in 1995 and currently supported by the Food and Agriculture Organization of the United Nations (Food and Agriculture Organization of the United Nations, n.d.), is a twenty year plan that seeks to make use of farmers groups and production pockets, which may promote commercialization (Sharma, 2001). The idea is such that pockets of practical, commercial goods are developed, and appropriate technologies provided (Sharma, 2001).

The goals of the APP involve increasing the growth rate of the GDP in the agricultural sector and reducing poverty in Nepal (Sharma, 2001). There are several strategies related to the success of the APP. After the establishment of pocket areas, farmer groups consisting of women and men, as well as groups consisting solely of women, are formed. The creation of cooperatives

is encouraged to help promote the independence of the farmers groups. Group meetings help to identify specific needs of the farmers, and farmers should be actively engaging in training, workshops and demonstrations to encourage them to market their goods. Farmers are gaining access to input services, technical services and credit services (Sharma, 2001).

Continuing to implement and enforce elements outlined in the APP, such as training sessions and workshops, may provide opportunities for farmers to be made aware of the product, the Apple Cider Press and Fruit Press and Grinder. Farmers could be informed about the potential use of the product and the economic benefits that may be associated with its use. Additionally, during training sessions, farmers could be instructed on assembly, proper use and proper maintenance, such as cleaning the device.

Cost analysis

The Apple Cider Press and Fruit Press and Grinder is valued just under nine hundred dollars (\$899.99), without taking into account the additional costs of shipment (Berry Hill Limited, 2014). Globally, Nepal is one of the poorest countries, and a significant proportion of the population lives under the line of poverty (Jull, 2006). Based on American currency, the per capita income is less than three hundred dollars (Jull, 2006). Based solely on the price, this export idea would not be affordable for Nepalese farmers unless a village or cooperative were to purchase a single fruit press.

Transportation from Canada to Nepal and Associated Costs

An element that must be considered when evaluating the export potential of a Canadian good to Nepal, is the transportation and the associated costs. One method of shipment from Canada to Nepal involves transporting the goods via airplane, and this means of transportation reduces the shipment time (K. Fox, personal communication, November 4, 2014). To ship the

apple presses via airplane, the first element of transportation would be the shipment of the goods from the supplier to the airport. Mr. Ken Fox, the owner of Berry Hill Limited, stated that he would rely on courier service from UPS of Canpar to ship his merchandise to an airport terminal, from his store in St. Thomas, Ontario (personal communication, November 14, 2014). The individual fruit presses are shipped in two separate boxes (K. Fox, personal communication, November 14, 2014). Rough quotes of the costs associated with the shipment of the goods via UPS trucks are outlined in Table 4.

Table 4: UPS Shipment Quotes From Berry Hill (St. Thomas, ON N5P 3R5) to YYZ-Pearson Airport (Mississauga, ON L5P 1B2)

Approximate Box Dimensions (cm) and Weight (kg)	61x15x92 cm (24x6x36") 17 kg (K. Fox, personal communication, November 14, 2014).	80x33x51 cm (31.5x13x20") 18.5 kg (K. Fox, personal communication, November 14, 2014).
Quantity Shipped	20 presses	20 presses
UPS Express Early A.M. Service - Cost and Shipping Time	1, 157. 63 \$ CAD	1, 838.59 \$ CAD
UPS Express - Cost and Shipping Time	856.80 \$ CAD	1, 360.80 \$ CAD
UPS Express Saver - Cost and Shipping Time	788.26 \$ CAD	1, 251.94 \$ CAD
UPS Expedited - Cost and Shipping Time	773. 02 \$ CAD	1, 227.74 \$ CAD
UPS Standard - Cost and Shipping Time	793.73 \$ CAD	1, 050.53 \$ CAD
Estimated Time of Delivery	1 Business day (Guaranteed)	1 Business days (Guaranteed)

Adapted from UPS (1994-2014).

A1 Freight Forwarding, the company that would be shipping the goods overseas, provides a drop-off address once a shipment has been booked (A. Gavigan, personal communication, November 10, 2014). If freight has been booked in advance, A1 Freight Forwarding will provide a drop-off day as well as a recommended time frame for drop off. If the goods to be shipped are dropped off earlier than the scheduled drop-off period, storage fees may be applicable. In this situation, the goods would be shipped to a drop-off location in Mississauga,

Ontario. Upon arrival at the airport, the goods would be shipped to Nepal on the next available flight. The fruit presses would be shipped to Nepal from YYZ- Pearson Airport (A. Gavigan, personal communication, November 10, 2014). The costs associated with shipment overseas are outlined in Table 5.

Table 5: Shipment Quotes from Canada to Nepal for A1 Freight Forwarding

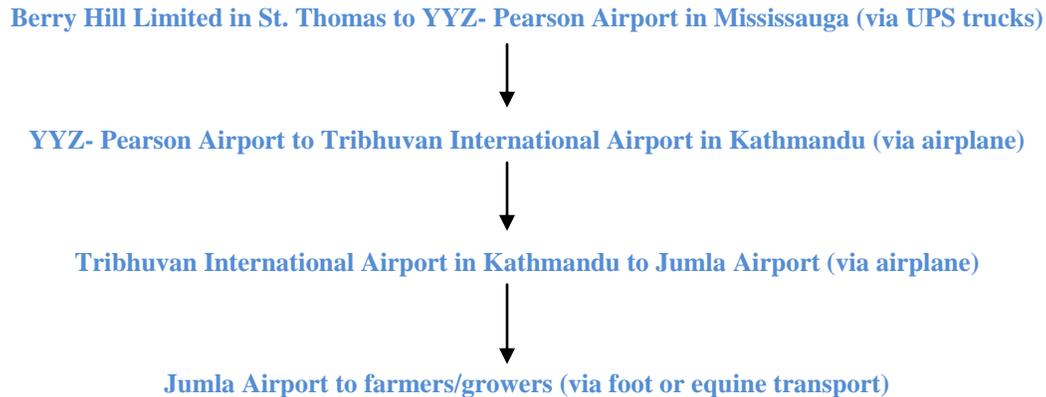
	Quantity of 20 Presses (40 Boxes in Total) Box 1: 6x24x36" (17 kg) Box 2: 13x32x20" (19 kg)
Air Freight Rate	3.15 \$ CAD/KG ALL IN
Actual Weight	720.00 KG
Volume Weight	737.63 KG
Chargeable Weight	737.63 KG
Air Freight	2323.54
Terminal and Screening Fee	192.53
Processing Fee	75.00
Export Declaration	0.00
Surcharges	0.00
Total	2591.07 \$ CAD
Time frame for Air Freight Shipment	Approximately 5-7 Business Days

Data in table adapted from Gavigan (2014).

After shipment overseas, the goods would arrive in Kathmandu, Nepal, at the Tribhuvan International Airport (A. Gavigan, personal communication, November 10, 2014). A1 Freight Forwarding does not cover destination customs, fees, taxes and duties that are due upon the arrival in Nepal (A. Gavigan, personal communication, November 10, 2014). Further investigation into these elements is necessary, as these aspects are handled by Nepal customs (A. Gavigan, personal communication, November 10, 2014). After arrival at Tribhuvan International Airport, the fruit presses would be shipped, via airplane, to Jumla Airport in the hill region of Nepal (R. Khanal, personal communication, November 11-November 18, 2014). From Jumla Airport, the fruit presses could be distributed to farmers or growers by transportation on foot, or equine transport (R. Khanal, personal communication, November 11-November 18, 2014).

Figure 2 provides an overview of the transportation from Canada to Nepal.

Figure 2: Graphic Representation of Transportation from Canada to Nepal



Further investigation into costs associated with shipment from Tribhuvan International Airport to Jumla Airport is required, as the information is inaccessible at this time.

Import and Export Documentation

In order to ship goods from Canada to Nepal, there are certain documentations that would be required. In this case, the good being shipped, the Apple Cider Press and Fruit Press and Grinder, would not be considered a restricted good (Laura, personal communication, November 17, 2014). Non-restricted commercial goods that are shipped to destinations other than the United States require export declaration if the value of the goods is two-thousand dollars or greater (Canada Border Services Agency, 2014). The shipment of twenty units of the Apple Cider Press and Fruit Press and Grinder would exceed a value of two-thousand dollars as each individual press is valued at approximately nine-hundred dollars (Berry Hill Limited, 2014).

Since exportation of Canadian goods valued at over two-thousand dollars to an international destination would be occurring, an B13A Export Declaration form would be required (Laura, personal communication, November 17, 2014). There are different means by which to obtain a B13A form for exportation. One method involves applying for the software online on the Statistics Canada website, www.statcan.gc.ca/exp. Only registered companies and service providers acting on behalf of individuals are eligible to apply for the software online.

Another means of obtaining the B13A form involves accessing the website for the Canada Border Services Agency, www.cbsa.gc.ca. The website provides access to a number of forms, listed under the Publications tab, one of which is the B13A Export Declaration form. The form can be printed off and in order to be stamped at Customs, three completed copies must be provided (Laura, personal communication, November 17, 2014).

The requirements for importing goods in Nepal is slightly more detailed. Upon the arrival of the imported goods at the Tribhuvan International Airport in Kathmandu, a registered company or firm is required to provide a number of documents in order for the goods to achieve clearance at Customs (Speedway Cargo Pvt. Ltd., 2011). The required documents are outlined in Table 6.

Table 6: Documents Required for Import into Nepal

Documents Required for Import into Nepal
Nepal custom import declaration form
Latter of authority for clearing Agents to act on behalf of the importer
Air way bill
Performa Invoice
Packing list
Certificate of origin (this is required only for tariff concession for goods originating in Tibet Autonomous Region of People's Republic of China, SAPTA member countries and MFN Rate of countries having bilateral agreements with Nepal)
Certificate of Insurance Policy
Foreign Exchange Declaration Form of Nepal Rastra Bank
Certified copy of L/C
Company Registration Certificate
VAT/PAN registration certificate
Permission from Plant Quarantine Section of Department of Agriculture for import of plants and plants products including fruits leaves & seeds
Import license if applicable (Not needed)

Adapted from list produced by Speedway Cargo Pvt. Ltd. (2011).

Further research is necessary to access the procedures that must be followed in order to obtain the proper import documentation in Nepal.

Benefits for the Nepalese

The Apple Cider Press and Fruit Press and Grinder is a device that might be beneficial for

the Nepalese. In Nepal, deciduous fruits are harvested by hand, and they are occasionally damaged during the harvesting process (Devkota, 1999). These fruits, along with fruits damaged by diseases and pests are sorted out (Devkota, 1999). Trees that lack nutrients and that remain unpruned while growing can also result in fruits of a reduced quality (Devkota, 1999). A potential method for dealing with damaged, or low quality fruits, specifically apples, rather than sorting them out, would be further processing, such as pressing into juice. Since the purchasing of deciduous fruit is done on the basis of weight or as a basket load (Devkota, 1999), yields reduced by damage or poor quality could result in lower incomes derived from the sale at markets. Nepalese farmers already struggle to compete in the market place as they cannot compete with the low prices of apples imported from China (R. Khanal, personal communication, November 3, 2014). Pressing the fruit would help reduce food waste and may benefit farmers by providing additional income if the juice were to be sold in the market place. Also, it is important to note that the cost farmers would face for the transportation of juice would be lower than that of the transportation of whole apples (R. Khanal, personal communication, November 7, 2014). Due to the high price and shipment costs of the Canadian made Apple Cider Press and Fruit Press and Grinder, it is likely that either a village or cooperative would need to purchase the product. The use of small scale processing equipment may provide an opportunity for farmers to process their own apple crops, thus receiving the direct benefits. Communal access to a fruit processing appliance may help to improve the livelihood of a significant number of farmers.

Storage and refrigeration

The Apple Cider Press and Fruit Press and Grinder is built with high durability so as to

last for many years of use (Berry Hill Limited, 2014). There are no specified requirements in terms of its storage (Bonnie, personal communication, November 20, 2014). However, one aspect that should be taken into consideration is the storage and treatment of juice, the product of the apples processed by this device.

In many cases, specifically in Canada, fruit juice that is sold commercially is pasteurized (Government of Canada, 2013). Pasteurization refers to a procedure by which disease causing organisms that may exist in juice are eliminated with the use of ultraviolet light or heat. The nutritional value of the product is maintained and the juice is considered safe if consumed. Most producers are known to pasteurize their juice; however, certain venues, such as farmers' markets and roadside stands provide unpasteurized products. Pasteurized juices can exist as shelf-stable products, meaning that they are unrefrigerated, whereas unpasteurized products should be refrigerated (Government of Canada, 2013). Research regarding standards for food safety in Nepal is required in order to determine the necessary treatment and storage of the apple juice produced.

Unknowns

Several components will require additional research in order to accurately evaluate the benefits and opportunities associated with the export of The Apple Cider Press and Fruit Press and Grinder to Nepal. Further information regarding the transportation costs for the fruit presses upon arrival in Nepal will provide a better estimate of the total cost of shipment. This information will influence the final cost incurred by Nepalese farmers. Opportunities such as potential international loan grants, or grant programs within Canada may help reduce the resultant cost for farmers; however, it is necessary to investigate whether or not such grants would be available or applicable in the context of exporting the Apple Cider Press and Fruit

Press and Grinder to Nepal. Another area that requires further research is the type of containers that Nepalese farmers would use to store and transport their juice after pressing the apples. In addition, there would likely be a monetary cost in order to obtain appropriate containers, and this cost would need to be calculated. Nepal possesses one of the most trade dependent and open economies in South Asia (The World Bank, 2013), but further investigation into the existence of trade barriers, subsidies and tariffs may be beneficial. Incorporation of these unknown factors into the overall evaluation of the export potential is necessary.

Critical summary and Future Recommendations

The Apple Cider Press and Fruit Press and Grinder has the potential to benefit Nepalese farmers; however, the price and costs of transportation from Canada to Nepal are very high. At the current price point, the only feasible option would be for a village or cooperative to purchase the device, requiring the farmers to share it amongst themselves. This may not be practical as sharing the device would require a single fruit press to process larger volumes of apples, thus decreasing the rate at which the fruit is processed. Based on the current price point it is not recommended that the Apple Cider Press and Fruit Press and Grinder is exported to Nepal. Potential options to combat the issues associated with the good involve a reduction in the current price of the Apple Cider Press and Fruit Press and Grinder, the fabrication of less expensive Canadian models, or the import of less expensive models into Nepal from neighbouring countries, such as China. Lower priced appliances would be more affordable and may enable a greater number of farmers, or rather groups of farmers, to purchase fruit presses. This would be beneficial as it would increase the number of fruit presses sold, while increasing the processing capacity for converting apples into juice, which may ultimately provide income for the Nepalese.

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