# Exporting Glass Canning Jars from Canada to Nepal Cherice Jones

AGR\*1110 Section 103 (Tues- 2:30pm)

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#### **BACKGROUND ON NEPAL**

Nepal is a country suffering devastating losses however has the power of potential. With 30 million people. Nepal is the most populated mountainous nation and is a country that borders China to the North and India to the South (Dixit, 2013). "Agriculture in Nepal makes up approximately 65% of the total national revenue and employs 94.4% of Nepal's labour force" (Shrestha, 1982). With a country dependent on agriculture as their main source of livelihood, it is evident that innovation in the agricultural sector could be highly beneficial to the Nepalese population. "Nepal's different topographical regions include mountain, (25 % total land area of Nepal, 3.4% total cultivation area), hill (most populated and most land area- 47% total land area; 22.3% under cultivation) and Tarai regions (plains- account for 28% total land area, 72 % total cultivated land)" (Shrestha, 1982). As displayed by these statistics, land resources and population needs are not measuring up. Where there is a lower carrying capacity due to the amount of agricultural resources available, regions, such as mountain and hill, are overpopulated, while Tarai regions where carrying capacity is higher (the most cultivated land area and resource abundance) is under populated (Shrestha, 1982). As Canadians, it is our role to ask ourselves, how can we be a support?

Understanding the complexity of these regions is important as we recognize and evaluate the resources that Nepal has to offer. "Population growth in Tarai regions could benefit Nepal by increasing the labour force and in turn, land productivity, total production and decrease the population pressures of other regions" (Shrestha, 1982). According to Shrestha (1982), "85% of Nepal's total agricultural production and exports are from cereal crops (rice, maize, wheat, barley, millet); 15% are from cash crops (sugarcane, jute, oilseed, tobacco potatoes)". Also, the majority of agriculture in Nepal is characterized by subsistence agriculture, which displays

Nepal's poor economic state. With the imbalance of population pressures and land capacity/ available resources, innovative strategies of reducing these issues are needed (Shrestha, 1982).

Before 1950, Nepal had a very strict trading regime that was held solely with the United Kingdom and India, however, since 1950, Nepal started to sign bilateral treaties with for trade with other countries and once "Nepal's Export Import Act of 1957" was passed, Article XVIII of GATT legalized Nepal to balance imports with its developmental needs (Ramesh, 2005).

## **GLASS CANNING JARS**

One strategy of benefiting the agriculture industry in Nepal, while also improving Canada's economy, is to produce canning jars that are distributed by a Canadian company to be exported to Nepal with the goal of helping improve food security and the economy in Nepal (Pennington, 2013). This is possible by equipping the Nepalese population with the proper materials to do so. "Glass canning jars are used to preserve many foods including: fruits, vegetables, meat, sauces, salsas, jams and more" (pictured in **Figure 1.** below) (Dr. enterprises, 2013, ULINE, n.d.).



**Figure 1.** Uline Canada's Glass Canning Jars in Various Sizes Offered (ULINE, n.d.)

#### **BENEFITS TO NEPAL**

## **Reducing Malnourished Populations**

The preservation of food can provide additional nutrients to Nepal's high percentage of malnourished populations (especially children) by adding a variety of nutrients to a diet rich in cereal grains while reducing food waste and the need for public food storage (Thapa, 2015). Home preservation also provides food to families free of food borne illnesses and food additives therefore optimizing nutrition ((Dr. enterprises, 2013, Pennington, 2013).

## **Market Opportunities in Nepal**

As described previously, the imbalance of population pressures in different regions of Nepal present the benefit of exporting glass canning jars to areas of the Tarai region where the highest percentage of cultivated land is therefore providing access to produce needed (Shrestha, 1982). However, in order to meet the needs of a malnourished population in the highest demand by preserving food, the jars need to be exported to the most malnourished area- the region that currently has the most population pressure on its carrying capacity; hill and mountain regions. Another alternative is to export jars to a viable business on the outskirts of the Tarai region where populations would be attracted to the business market while using the abundance of resources in the Tarai regions, decreasing the population pressures of the other regions and benefitting the Nepalese populations in the regions where malnourishment is most prevalent.

Canning jars can benefit Nepal's economy by providing an additional product of preserves to their tourism industry. Also, these jars can provide employment for both businesses and sales representatives who are selling canning jars or preserves and employment for those who do the canning.

Although Canadians currently use canning jars to make preserves, these jars are also popular on the market as niche products sold for food storage containers, beverage glasses, craft making and decorating.

Similarly, this product can stimulate entrepreneurs in Nepal to establish businesses in which glass canning jars could be sold for other purposes as described above. The innovation of this product can expand into other agricultural industries to sell niche products such as honey, candles, oils, nut butters, and various other agricultural products that mainly market towards Nepal's tourism industry.

By improving the tourism industry, the gender imbalance of women is also improved by giving women new assets to increase their value in society (Lama, 1999). The act of canning can also improve the confidence of women by fostering a sense of accomplishment and empowerment within them through their ability to provide for their families through the preservation of food for long durations (Pennington, 2013).

## **Improving Nepal's Agricultural Industries**

Nepal has great potential within the honey industry in Terai regions where the warm climate allows Nepal's exotic honey bee, A. *mellifera* to thrive year round (Neupane, Woyke, & Wilde, 2013). Currently, honey production in Nepal's Terai regions yields an average of 25 Kg of honey however, by adapting different colony sizes to different management practices, yields could be significantly increased (Neupane, Woyke, & Wilde, 2013). Since honey production is increasing in Nepal, it has potential to develop as a product sold within businesses in Nepal, which requires containers to sell the honey within thus provides a use for glass canning jars. Also, beeswax from the beekeeping industry can be used to make beeswax candles, which could be also sold within various sizes of glass canning jars. Although these products are not

necessarily nutritional necessities, these examples alone show the potential of canning jars to be used within various different agricultural industries and provide opportunities for entrepreneurs within Nepal to develop their own businesses selling these niche products.

A general goal of exporting this product to Nepal is to enable Nepalese entrepreneurs to further develop Nepal's agricultural industries and provide Nepal's malnourished regions with freshly sourced produce that ensures food security by enabling families to sustainably support themselves while supporting their local farmers. This product could develop several areas of entrepreneurial opportunities for Nepalese populations through the development of products to further support agricultural needs in Nepal (fertilizers, agricultural equipment, seeds) and processing materials required to preserve fresh produce and meat. Other entrepreneurial opportunities are in the development of businesses that will sell processing equipment for food preservation (canning equipment and canning jars) to Nepalese families or community shares, businesses that sell these preserves directly to local families that cannot afford home preservation processes and businesses within more developed areas of Nepal that can sell authentic Nepalese preserves within the tourism industry.

## **Improving Environmental Conditions and Practices**

Environmental benefits of the glass canning jars used in Nepal include reduced food waste by improving preventative measures for food spoilage as fresh produce can be preserved for long periods of time. Food preservation using these jars can also help decrease gaseous emissions into the atmosphere by reducing the use of cooking fuel and energy long term due to the lack of cooking and storage required for the food after it is preserved. The jars can also support the local food economy as well as farmers by directly reaping the benefits of their harvest and increasing the awareness of challenges associated with agriculture and the

importance of associated practices. By understanding the significance of agriculture and how it directly impacts people, the value of agriculture in society can increase, and ways the surrounding community can help support local farmers through their own improved environmental practices can be initiated (Pennington, 2013).

## A CANADIAN SUPPLIER

A Canadian company that supplies and distributes glass canning jars is Uline Canada with two locations of distribution centers and warehouses in Canada: Toronto, ON (Address: 60 Hereford St., Brampton, ON, L6Y 0N3, Phone: 1-800-295-5510) and Edmonton, AB (Address: 11554 – 186 Street NW, Edmonton, Alberta, T5S 0J1, Phone: 1-800-295-5510) (ULINE, n.d). Uline's glass canning jars "withstand temperatures up to 250°F with both tin-plated and vacuum sealed lids that allow food to stay fresh over long time periods" (ULINE, n.d.). These jars are also offered with two types of mouths; regular (2.5" diameter) and wide (3" diameter) and in a variety of sizes with different costs associated with each (refer to **Table 1.**, various sizes of jars shown in **Figure 1.**, different mouth sizes shown in **Figure 2.**) (ULINE, n.d.). Larger widemouthed jars are often used to preserve foods whole, whereas smaller regular-mouthed jars are used to preserve smaller quantities of preserves and sauces, such as jams, salsas, etc. (Vellend, 2006).



**Figure 2.** Uline Canada's Different Sizes of Mouths Offered on All Sizes of Glass Canning Jars Sold (Regular Mouth- 2.5 " and Wide Mouth- 3 ") (ULINE, n.d.)

## COSTS ASSOCIATED WITH PRODUCT

The glass canning jars are available for purchasing in both skid lots and case quantities, however for exporting purposes where large quantities are needed for business reasons, purchasing in skid lots is more economical with prices up to 26% cheaper than those sold in case quantities (as displayed by **Table 1.**) (ULINE, n.d.).

**Table 1.** Purchasing Information of Glass Canning Jars (ULINE, n.d.)

Size	case quant				
	Capacity	Opening	QTY./	Price/ Jar (\$)	
		(inner dia.)	Case	1 Case	3+ Cases
Quarter Pint	4 oz.	2.5 "	12	1.35	1.25
Half Pint	8 oz.			1.35	1.25
Pint	16 oz.			1.55	1.40
Quart	32 oz.			1.75	1.60
(sold in ca	ase quantitie	es)			
Half Pint	8 oz.	3 "	12	1.65	1.50
Pint	16 oz.			1.75	1.60
Quart	32 oz.			1.95	1.75
Half Gallon	64 oz.		6	3.40	3.10
Regular Mouth (sold in skid lots)			QTY/ skid	Price/ Jar (\$)	
Quarter Pint	4 oz.	2.5 "	996	1.05	
Half Pint	8 oz.		1,020	1.05	
Pint	16 oz.		900	1.15	
Quart	32 oz.		720	1.35	
(sold in sk	kid lots)				
Half Pint	8 oz.	3 "	996	\$1.25	
Pint	16 oz.		1,056	1.30	
Quart	32 oz.		720	1.50	
Half Gallon	64 oz.		312	2.65	
Lids					
S-17493 Description  Regular Mouth Lids		Quantity/ Box		Price/ Box (\$) 2 Boxes 6 + Boxes	
					3.25
Regular Mouth Lids		+ * <del>*</del>		7.55	6.75
	Pint Half Pint Pint Quart (sold in catalf Pint Pint Quart Half Pint Gallon Ith (sold in Half Pint Pint Quart Half Pint Pint Quart (sold in sl Half Pint Pint Quart Half Gallon E Lids	A oz.	Quarter Pint       4 oz.         Half Pint       8 oz.         Quart       32 oz.         (sold in case quantities)         Half Pint       8 oz.         Pint       16 oz.         Quart       32 oz.         Half       64 oz.         Pint       4 oz.         Pint       8 oz.         Pint       16 oz.         Quart       32 oz.         (sold in skid lots)         Half Pint       8 oz.         Pint       16 oz.         Quart       32 oz.         Half       64 oz.         Half       64 oz.         Half       64 oz.         Pescription       Quantity/	Quarter Pint       4 oz.       2.5 "       12         Half Pint       8 oz.       2.5 "       12         Pint       16 oz.       3 "       12         Quart       32 oz.       3 "       12         Pint       16 oz.       6       6         Quart       32 oz.       6       6         Half Gallon       4 oz.       996       1,020         Pint       16 oz.       900       900         Quart       32 oz.       720       1,056         Quart       32 oz.       3"       996         Half Pint       8 oz.       3 "       996         Int       16 oz.       20       1,056         Quart       32 oz.       720         Half       64 oz.       312         Elids       Quantity/ Box	Duarter

	w/Bands			
S-19405	Wide Mouth Lids	12	5.25	4.80
<u>S-19406</u>	Wide Mouth Lids w/Bands		10.10	9.25

#### A NEPALESE COMPANY

A potential Nepalese buyer of this product is a company called Ag- en Plus Pvt. Ltd (Address: Satdobato, Lalitpur, Nepal- Phone: +977-1-5151186, Email: agenplus@gmail.com) that was established in 2012 by agricultural engineers in Nepal (Ag-en Plus Pvt. Ltd. 2016). This company is a supplier and exporter of Himalayan products, and produces, processes, manufactures, sells, distributes, exports and imports mainly organic agricultural and animal products. The goal of this company is to provide farmers with innovative ways using green technology to help improve agricultural processes and reduce their impact on the environment. They do this through partnerships with several agricultural companies in which they carry out specific projects using biodynamic technology and products that are imported or manufactured by the company (Ag-en Plus Pvt. Ltd, 2016). This buyer would import the glass canning jars to be sold directly from the company to local homes and community shares. Another option is that Ag-en Plus Pvt. Ltd indirectly distributes these jars to farms, other businesses that will sell the jars, or partner with local farms to acquire produce which is then processed and sold amongst other businesses as preserves (as displayed by Transportation and Distribution of Glass Canning Jars Flowchart, Figure 3).

#### **BENEFITS TO CANADA**

In addition to the benefits towards Nepal's economy and agriculture industry, Canada is benefitted by increasing Canada's exports with other countries, improving Canada's reputation with other countries, and increasing Canada's GDP long term. Canada's economy is benefitted by providing employment for people at the company these canning jars will be distributed from (ULINE, n.d.). Uline has several different roles/ teams required within their distribution centers. Employment opportunities include roles in: "administration, circulation/ database marketing, creative, customer service, finance, human resources, information technology, inside sales/ quotes, internet, merchandising, purchases, sales and warehousing" (ULINE, n.d.). Uline also creates opportunities for summer interns in the merchandising, purchasing, customer service, and distribution sectors where students are able to gain transferrable experience to improve their employment opportunities in the future (ULINE, n.d.). Since employees of Uline also receive benefits including health care plans, which provide complete health insurance (medical, dental and vision, long and short term disability coverage, and life insurance), it is implied that employees will use these benefits and therefore support health care professionals in Canada as well (ULINE, n.d.).

## TRANSPORTING THE GLASS CANNING JARS FROM CANADA TO NEPAL

The transportation of this product/ exporting process also provides employment through many Canadian Companies. Since Uline Canada does not ship products internationally, the glass canning jars will have to be shipped to Nepal indirectly. Required in this process is for a storage area for the jars to be shipped to from Uline's distribution center in Toronto. A Canadian company that provides storage very close to this distribution center (minimizing shipping costs from Uline) is "Access Storage which provides safe storage for commercial items with 24 hour video surveillance, a fully fenced perimeter and key-pad entry, parcel receiving and storage directly in a storage unit" (Access Storage, n.d.). Storage through Access Storage is provided

with "small, medium and large areas with corresponding costs of \$69/4 weeks, \$169/4 weeks, \$299/4 weeks" (Access Storage, n.d.). The storage area is located in West Mississauga (2480 Argentia Rd. Mississauga, ON L5N 5Z7) where the skid lots will be transported to by motor freight (Access Storage, n.d., ULINE, n.d.). From the Access Storage location in Toronto, the skids of canning jars will be shipped to Ag-en Pvt. Ltd in Satdobato, Lalitpur, Nepal by FedEx Canada's "Door- to- Door services at their International Economy Freight Export Rates (Freight Service Center Location- West Toronto: 5919 Shawson Drive, Mississauga, ON- L4W 3Y2)" (Pay Rate/ pound as well as other special handling fees displayed by **Table 2.** and **Table 3.**) (FedEx, n.d., Ag-en Pvt. Ltd, 2016). However, due to the geographic location of Nepal, additional shipping services by ship are required to transport the product overseas in which costs of transport are unknown (refer to Transportation and Distribution Flow Chart displayed in **Figure 3.**).

Glass Canning Jars at Uline Canda's Distribution Center in Toronto - 60 Hereford St., Brampton, ON, L6Y 0N3										
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FedEx Moto	r Freight Int	ternational Ser	vices (5919 S	Shawson Drive	. Mississauga.	ON- L4W 3Y2)	Picks up Gl	ass Canning		
	<b>g</b>			Access Storag			<b>r</b>	<b>g</b>		
		Fed	Ex Ships Jai	rs to Overseas	s Shipping Ser	vice				
	Overs	eas Shipping S	ervice Ships	to FedEx Mo <b>↓</b>	tor Freight Se	rvice Center in	India			
	FedEx Int	ternational Mo	tor Freight S	Services Ship	Jars from Ind	ia to Ag-en Plu	s Pvt. Ltd			
			-Satde	obato, Lalitpui	r, Nepal					
	ullet				•					
Jars Sold to:			Ag-	Ag-en Plus Pvt. Ltd Distributes to Other Agricultural Industries						
		Community			Jars	Sold to:				
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to Sell	Family	Localized		_		ran	1113			
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ie. Honey,	Resources	Collect and	Use Jars Use Jars Farms Harvest Fresh Produce and Sell to			l Sell to:				
Candles,	Needed in	Share	to Make to Make							
etc.	Order to	Resources	Preserves Preserves							
Cic.	Can Fresh	Needed to	and Sell to be Sold							
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	and Store	within		<b>V</b>						
	Products	Homes and		Businesses	Food	Keep	Families	Community		
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	Necded	Needed		for Profit		their own	Family	Localized		
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**Figure 3.** Transportation and Distribution Process Flowchart- Steps of Exporting Glass Canning Jars from Canada to Nepal

#### COST ANALYSIS OF ACHIEVING PROFITABILITY IN NEPAL

The currency in Nepal is the Nepalese Rupee (NPR) (XE Currency Converter: CAD to NPR, 2016). The Canadian Dollar is equivalent to 81.31 Nepalese Rupees (NPR) (XE Currency Converter: CAD to NPR, 2016). According Uline's glass canning jar costs (as displayed by **Table 1.**), purchasing costs of one skit lot in each size available (a total of 6, 720 jars) amount to a total of approximately 8, 648.40 Canadian dollars (ULINE, n.d.). However, with FedEx Canada's "Door- to- Door services at their International Economy Freight Export Rates", approximate shipping costs add approximately \$128, 956.8 as well as an additional \$11, 550.9 in special handling fees (Pay Rate/ Pound and Special Handling Fees displayed by Table 2. and **Table 3.**) (FedEx, n.d.). Without taxes and additional shipping costs of transporting the product overseas known, the total cost of export to Nepal is already approximately \$149, 156.10 for a total of 6, 720 jars which is equivalent to 12, 127, 882.49 Nepalese Rupees (XE Currency Converter: CAD to NPR, 2016). If each jar were sold in Nepal to Nepalese farmers for approximately 162.62 Nepalese rupees (about \$2.00 Canadian), total revenue would amount to about \$13, 440.00 Canadian dollars, which puts Nepalese businesses at least 135, 716.10 Canadian dollars in debt (still does not include debt from costs of transporting goods overseas) and does not directly benefit the Nepalese economy (XE Currency Converter: CAD to NPR, 2016).

However, indirect benefits without considering initial produce production costs include profitability for Nepalese farmers who then fill the canning jars with preserves to be sold. If the preserves were sold from farmers for an average of \$8.00 CAD/ jar, they would gain revenue of about \$53, 760 CAD and make \$40, 320 CAD in profit. Since those estimates were made disregarding production costs, the profit of this product to Nepalese farmers would be

substantially less and even if farmers gave back a portion of their earnings from the preserves to Nepalese businesses who sold the cans, Nepalese businesses would still be left in extensive amounts of debt and the profitability of the preserves in Nepal would be minimal. Despite the profitability of the product to Nepalese farmers, the efforts of reducing malnourishment problems by providing access to food over long durations is likely unrealistic due to the unaffordability of the preserves for purchase by local impoverished families. Although the canning process and inputs required are relatively cheap and easy in Canada, the price point needed to support Nepalese farmers would not be conducive to the original purposes of exporting this product and would likely cause more harm to the Nepalese economy (Dr. Enterprises, 2013).

**Table 2.** Shipping and Handling Fees of International Economy Freight Shipping Services (FedEx, n.d.)

Weight	Rate/ lb (\$) (multiply total pound weight
	by this rate)
151 to 299 lbs.	19.19
300 to 499	
500 to 999	
1000 to 1999	
2000 or more	
Minimum Charge	1,884.00

**Table 3.** Special Handling Fees of International Economy Freight Shipping Services (FedEx. n.d.)

Special Handling Fees	Charges
Additional Handling Surcharge- Non-	\$185.00/ shipment
stackable	•
Address Correction Fee	\$11.50/ shipment
Broker Routing Fee	\$15.00 + \$0.75/ lb after 20 lbs
Dangerous Goods Fee	\$50.00 or \$0.50/ lb
Delivery Area Surcharge	\$20.00/ shipment
Extended Service Area Surcharge	\$30.00 or \$0.40/1b
FedEx Email Return Label Surcharge	\$1.40/ shipment
Fuel Surcharge	Charges vary on monthly basis
Invoice & Air Waybill Duplicate Copy Fee	\$25.00/ copy
Missing/ Invalid Account Numbers Fee	\$11.50/ shipment
Payor Rebilling Fee	\$8.50/ shipment
Residential Delivery Surcharge	\$50.00/ shipment
Saturday Pickup and Delivery Surcharge	\$150.00/ shipment
Ancillary Clearance Service Fees	Charges vary
Declared Value- International Shipments	
Dimensional Weight	
Goods and Services Tax (GST)	Varies by province/ territory
Harmonized Sales Tax (HST)	
Package Size and Weights	Charges vary

### OTHER BARRIERS OF TRADE

Although there are many benefits towards exporting glass canning jars to Nepal, there are other issues/ barriers associated with the exporting processes as well. In order for the glass canning jars to improve the effects of malnutrition on the Nepalese population, there must be areas of cultivated land and fresh produce available/ harvested to preserve (Shrestha, 1982). This requires the "evaluation of the proper growing season for products and a canning schedule to be produced" (Vellend, 2006).

Additionally, specific documentation required in the selling of preserves for business purposes include: hygiene and health inspection of processes used to create products as well as

the products themselves by the local health department, compliance to fire and safety codes, food handler's licenses and liability insurance (Featherstone, 2015).

Another issue associated with the processes of canning is the excess materials/
environments needed in order to preserve food in glass canning jars properly and safely with
"processes that kill food-spoiling enzymes and micro-organisms" (Pennington, 2013, Vellend,
2006). Some of the logistics needed are areas to wash the jars before using, heavy- bottomed
canning pots (often recommended to have a fitted rack that has capacity for 7 jars- used for
sterilization) (Vellend, 2006), stovetops for boiling canning jars with the food in it to sterilize the
food, proper cooling afterwards to maintain a vacuum seal (Dr. enterprises, 2013, Pennington,
2013), and storage in a cool dark place (Kalina, 2001). With these other inputs required, the need
for storage areas and extra special handling fees associated with shipping skids via FedEx

Canada and shipping overseas (since Uline Canada is unable to ship internationally), costs of the
operation increase substantially (Access Storage, n.d., FedEx, n.d.). Therefore, by evaluating the
costs required in order for Nepalese people to use this product, the benefits of exporting this
product to Nepal would be outweighed and glass canning jars would be an unrealistic product for
export from Canada to Nepal.

## FINANCIAL ASSISTANCE OFFERED BY CANADIAN INTERNATIONAL LOAN/ GRANT PROGRAM

Despite the lack of profitability of this product in Nepal, the Canadian government provides subsidy programs such as the Agri-marketing Program for Small and Medium-sized Enterprises (AAFC, n.d.). This program supports the agriculture industry in developing Canada's exporting relations by providing funding streams that support industry-led projects. According to

Agriculture and Agri-Food Canada (AAFC, n.d.), some of these projects include "breaking down trade barriers, developing market success, and assurance programs to help the agri- based product's sector in competitiveness in domestic and international markets". The maximum funding/ applicant expected is \$250 000 over the span of 5 years (AAFC, n.d.). This type of subsidy program is useful in helping start projects such as the current project of exporting to Nepal that is being evaluated.

#### REGIONAL AND GLOBAL COMPETITION

Currently, Nepal's trade with other countries is made up of 69% imports with 43% of its imports coming from India (Beadle, 2004). The US only makes up 2% of Nepal's imports (Beadle, 2004). Since Nepal is a landlocked country, by both China and India, and India has been Nepal's main trade partner in the past, it is important to evaluate the potential that other countries have to export this product to Nepal at a more economical rate as well as the potential global competition this product would have as an export from Canada, and within Nepal.

Currently, China is a major competitor when faced with the export potential of this product to Nepal due to their many companies that are glass manufacturers. Zibo Nedsun Glassware Co. Ltd. is major supplier of wholesale glass canning jars in various sizes ranging from \$0.14-1.35 CAD/ jar which is very similar, and cheaper than some jars sold by Uline (Alibaba.com, 2016, ULINE, n.d.). Most jars are sold in case quantities of 10, 000 jars and originate in Shandong, China (mainland). Shipping by motor freight via Alibaba over a 3-6 day time period is estimated to cost approximately \$135,112.65 CAD as well as the cost of the product itself, approximately \$13, 500 CAD quickly adds to a total of about \$148, 612.65 CAD. Despite the similarity of the cost of export from China compared with Canada to Nepal, this

similarity does not include extra shipping costs of the product overseas. Therefore, although current calculations show that shipping from China is only slightly cheaper, saving approximately \$543.45 CAD, shipping costs from China would be considerably different than those from Canada with the full shipping costs from Canada (shipping overseas) taken into account. Zibo Nedsun Glassware Co. Ltd. is not currently exporting to Nepal, however is already exporting this product to several other countries and would be more reasonable in terms of economic value (including shipping costs) to export this product from China rather than Canada (Alibaba.com, 2016, ULINE, n.d.).

The United States is another competitor with glass canning jars supplied by Country Harvest Company in various sizes at prices between \$0.62- 0.82 CAD/ jar however are manufactured in China and is unlikely to reduce exporting costs due to its close proximity with Canada (no reduced shipping costs) and ability to simply export the canning jars directly from China to Nepal (Alibaba.com, 2016).

However, since the Canadian dollar is equivalent to 5.13 CNY (XE Currency Converter: CAD to CNY, 2016), which is the Chinese currency, namely, the Chinese Yuan Renmindi, and one CNY is equivalent to 15.90 Nepalese Rupees (XE Currency Converter: CNY to NPR, 2016), exchange rates between China and Nepal still cause increased prices for Nepalese importers of the product. Therefore, relative costs of exporting the product from other countries surrounding Nepal are not necessarily substantially more economical and the global competition of exporting the product from Canada would not significantly hinder the success of this product in Nepal.

## RECOMMENDATIONS TO CANADIANS AND NEPALESE TO HELP SIEZE EXPORTING OPPORTUNITIES

Therefore, as demonstrated through the various agricultural sectors that this product could develop, this product has a vast marketability across various agricultural industries and is required by a large population of Nepal, especially the high percentage experiencing malnourishment. However, due to the expense of the products themselves; shipment and various other required materials, which are not as suitable for the profitability of this product in Nepal, improved innovation within the manufacturing of this product is recommended. An option to make this product more suitable for exporting to Nepal is to manufacture this product differently with fewer materials, machines and expenses involved and in a more sustainable way, perhaps using recycled materials to produce the jars in efforts of reducing production costs. Also, since this product is not manufactured in Canada, it has the potential to be developed in Canada as an improved product compared to the way it is manufactured in the United States. However, if Nepal were able to manufacture these canning jars themselves, this would eventually become much more cost effective and improve Nepal's economy by providing employment for large populations, support various industries within and outside of agriculture, and meet the ultimate goal of reducing malnourishment within Nepal.

## FUTURE STUDIES REQUIRED TO EVALUATE EXPORT POTENTIAL OF THIS PRODUCT TO NEPAL

Although there is great potential for Canadian export to Nepal and to benefit both countries substantially, there are still many unknown factors in the execution of this project.

Some of the unknown factors are: current food preservation methods in Nepal, further evaluation

of competition of this product between thriving businesses in Nepal, the environmental sustainability of the exportation and processing of the glass canning jars in Canada and Nepal, creative real world sales/ marketing strategies to sell the jars in Nepal, machinery required to distribute product and costs associated, further patent/ intellectual property constraints in Canada and Nepal, and an actualized business plan for execution of the export of this product with all the inputs and costs required put in place.

In conclusion, although Canada's ability to support Nepal has many complex factors involved, the potential benefits of the exportation of glass canning jars to Nepal is worth the investment and will be continually investigated and evaluated in further studies.

### References

- (n.a). (2016). Ag-en Plus Pvt. Ltd. Retrieved from http://www.agrotechnepal.com/index.h
- Applicant Guide Small and Medium-sized Enterprise Component AgriMarketing

  Program Agriculture and Agri-Food Canada (AAFC). (n.d.). Retrieved from

  http://www.agr.gc.ca/eng/?id=1357941192614
- Beadle, S. (2004). Choosing the Correct Currency Anchor for a Small Economy: The Case of Nepal. *IMF Working Papers*, 2004(142), 15.
- Country Harvest Mason Jars Home Canning Jars 16oz Regular Mouth- Alibaba.com. (2016).

  Retrieved from https://www.alibaba.com/product-detail/Country-Harvest-Mason-Jars-Home-Canning\_50007698921.html
- Dixit, K. (2013). Nepal: Dictated By Geography. World Policy Journal, 30(4), 36-40.
- Dr enterprises, L.l.c.; "integrated lid for canning jar" in patent application approval process. (2013). *Politics & Government Week*, , 1352.
- Featherstone, S. (2015). A complete course in canning and related processes. Volume 1, Fundamental information on canning. Elsevier Ltd.
- FedEx Express Rates. (n.d.). Retrieved from http://www.fedex.com/ca english/
- Glass Canning Jars, Ball Canning Jars in Stock ULINE.ca. (n.d.). Retrieved October 16, 2016, from https://www.uline.ca/BL 8192/Canning-Jars
- Kalina, L. (2001, Aug 8, 2001). Canning fruits and vegetables takes stress out of harvest. *Kamloops Daily News*, pp. B.2-B2.
- Lama, W. B. (1999, Jul 31, 1999). Valuing women as assets to community-based tourism in nepal. *Cultural Survival Quarterly*, 23, 45.

- Neupane, K., Woyke, J. & Wilde, J. (2013). Effect of Initial Strength of Honey Bee Colonies (Apis mellifera) Supered in Different Ways on Maximizing Honey Production in Nepal. *Journal of Apicultural Science*, 56(2), pp. 71-81.
- Pennington, P. S. (2013). Making sense of mason jars: A qualitative exploration of contemporary home canning. (Ph.D., State University of New York at Albany). *ProQuest Dissertations and Theses*,
- Pyakuryal, B., Roy, D., & Thapa, Y. (2010). Trade liberalization and food security in nepal. *Food Policy*, 35(1), 20.
- Ramesh, B. K. (2005). A comprehensive survey of nepalese legislation affecting foreign trade in goods. *Journal of World Trade*, *39*(6), 1119-1134. Retrieved from http://sfx.scholarsportal.info/guelph/docview/217542613?accountid=11233
- Self Storage Mississauga West Ontario. (n.d.). Retrieved from http://www.accessstorage.ca/en/self-storage-mississauga-west
- Shrestha, N. R. (1982). A preliminary report on population pressure and land resources in nepal. *The Journal of Developing Areas*, *16*(2), 197.
- Thapa, G. (2015). Economic development and child nutrition in nepal. (Ph.D., Purdue University). *ProQuest Dissertations and Theses*,
- Vellend, E. (2006, Sep 13, 2006). Home canning 101; it's easier than you think to preserve summer in a jar. A chef tells you how to make jams and pickles. *Toronto Star*, pp. C.1-C1.
- Wholesale glass mason canning jar with screw lid: Zibo Nedsun Glassware Co. Ltd.-Alibaba.com. (2016). Retrieved from https://nedsun.en.alibaba.com/product/603
  99562429-802416812/Wholesale glass mason canning jar with screw lid.html

- (n.a.) (2016). XE Currency Converter: CAD to CNY. Retrieved from http://www.xe.com/ currencyconverter/convert/?Amoun t=1&From=CAD&To=NPR
- (n.a.) (2016). *XE Currency Converter: CAD to NPR*. Retrieved from http://www.xe.com/currencyconverter/convert/?Amoun t=1&From=CAD&To=NPR
- (n.a.) (2016). XE Currency Converter: CNY to NPR. Retrieved from http://www.xe.com/c urrencyconverter/convert/?Amount=1&From=CNY&To=NPR