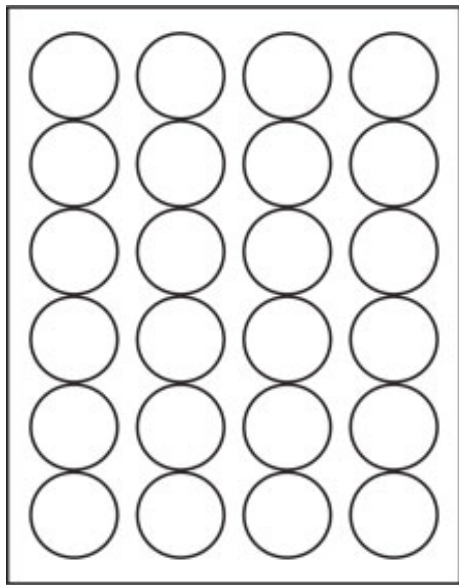


# Meat Production Improvement Idea for Nepal

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## Part 1 – Product Information

### Product Description



**Figure 1:** Labels (Canada Labels, 2016)

In Nepal, food safety is a predominant issue due to the lack of technological advancement in the food processing system. This can be easily improved with the use of weather resistant labels due to their resistance against their surrounding environment and simple application requirements.

One of the many Canadian companies that produce and sell weather resistant labels is Canada Labels (Canada Labels, general information, October 14, 2016). Canada Labels sells weather resistant labels with an adhesive underside for easy application (Canada Labels, general information, October 14, 2016). The labels are 1.625 inches in diameter and come in groups of 1000 sheets with each

sheet containing 24 labels (Canada Labels, general information, October 14, 2016). **Figure 1** shows one sheet of labels. The code for this product is L10WPM (Canada Labels, 2016). This code can be used when contacting Canada Labels to clarify what product is being inquired about.

The cost of these labels depends on the quantity bought; the more purchased the less it costs per unit. **Table 1** shows the price ranges per number of units. For converting Canadian dollars (CAD) and Nepalese Rupees (NPR) the conversion price was \$1 CAD= 81.1139 \$NPR and this was recorded on November 23<sup>rd</sup>, 2016 (“Convert Canadian dollars to Nepalese rupees”, 2016). Keep in mind, that currency prices tend to fluctuate. These prices are for the product alone without taxes or transportation costs. To contact Canada Labels refer to **Table 2**. They can be contacted for further product information, ordering and updated pricing.

Quantity	Price per Unit (CAD)	Price per Unit (NPR)
1-2 units	\$560.00	\$45,423.78
3-4 units	\$543.00	\$44,044.85
6-9 units	\$535.00	\$43,395.94
10 units	\$520.00	\$42,179.23

**Table 1:** Price of labels per unit (1000 sheets) in Canadian dollars and Nepalese Rupees (Canada Labels, 2016)

Email (emails received by Doug Percy)	label@canadalabels.com
Phone Number	1-888-840-5140
Mailing Address	640 Trudale Court Oakville, ON, Canada L6L 4H1

**Table 2:** Contact information for Canada Labels (Canada Labels, 2016)

### Labour and Shipping Requirements

In order to export adhesive labels to Nepal, some labour intensive, as well as, non-labour intensive jobs are required. The raw materials for these labels come from both Canada and the United States of America (USA). The raw adhesive materials are imported in large rolls from the USA and then processed in Mississauga, Ontario with the other materials coming from Canada. This means that the raw materials from the USA will have to be transported to Mississauga, most likely this will be done by truck because this will be the cheapest form of transportation. Transportation will provide jobs for trucking companies as well as gas stations and convenience food operations. There will also need to be staff hired to manage the shipping and receiving aspects of transporting the product. Once the processing is finished, the product will then need to be shipped to Kathmandu, which is the capital of Nepal.

One way to ship the product to Kathmandu, Nepal would be United Parcels services (UPS). UPS offers many different shipping options to the city centre in Kathmandu. The two most economically friendly are UPS worldwide shipping and DHL shipping. **Table 3** shows the base price for shipping one unit (1000 sheets) to the Kathmandu city centre in Nepal. There is no ban on importing printed material into Nepal unlike some items such as machinery and certain technologies that cannot be imported into the country (UPS, personal communication, November 25<sup>th</sup>, 2016). These prices do not include the security fee, which is \$3 CAN for every \$100 CAN

of value shipped, or customs on the product. [csd@customs.gob.np](mailto:csd@customs.gob.np) can be contacted by email to find out the landing cost. The landing cost is the price to import the product into the country. The shipping prices in **Table 3** are for an 8.5”x11”x4” box that weights 11,000g (11g per sheet).

Shipping Service	Base Cost of Shipping Service	Approximate time for Delivery
UPS Worldwide	\$223.33	3 days
DHL (A international shipping service)	\$198.34	6 days

**Table 3:** Base costs of offered shipping services and approximate time for delivery (UPS, personal communication, November 25<sup>th</sup>, 2016).

### **Market Opportunity**

There is a vast market opportunity for these adhesive labels in Nepal. Once the product is in Nepal, it can be shipped to two locations, the rural sector and the urban sector. Within in these sectors it can be used in agriculture, marketing, or product management. All of these areas focus on food production, making that the prime market for this product.

In rural areas, the labels can be sold to meat producers, such as chicken farmers, or small market vendors. Many of the human health issues in Nepal can be related back to the practices of meat production. Illness such as food poisoning can occur due to the lack of management in the slaughter sectors. Farmers could purchase these labels to add value to their meats. The labels are water-resistant so that they do not deteriorate when they get wet. Unlike other labels, these stickers can be attached to the packaging and can withstand the possibly harsh transportation conditions. The other possible purchasers of labels in the rural community are the small market vendors. By adding labels to their meat addressing items like origin and slaughter dates they would increase the value of their product. This value can be added without a substantial price increase to the vendor. A benefit to purchasing the labels from Canada Labels is that the stickers come in large quantities, which can lower the price per unit. In urban areas labels can be used in the markets. Like in the rural areas, market vendors can use the labels to increase the value and reliability of the product that they sell. This will make the product more appealing to the higher end market in Nepal and will appeal to tourists as well due to a higher quality source of food available.

### **Canada Labels Compared to Other Canadian Companies**

Some other Canadian companies that offer weather resistant labels are Uline and Ontario Labels. Like Canada Labels, they all have warehouses in Canada although not all of the products that they sell are manufactured in Canada. This is why Canada Labels was chosen, because their production occurs in Mississauga, Ontario. **Table 4** contains the pricing of products these companies sell that are similar to Canada Labels' weather resistant labels as well as the contact information to reach these 2 companies. The Uline product is plastic circular labels that are cheaper per unit but require something like a piece of string to attach the label to the product being labeled, which can be an issue because they have to be tied to something on the product being labeled and can easily fall off. The other problem with exporting these labels from Uline is that although it is through their Canadian website, the actual product is imported from another country (Uline customer service, personal communication, October 14<sup>th</sup>, 2016). Ontario labels sell a similar product but will not quote for labels when there is not a specific design to print (Ontario Labels, personal communication, November 25<sup>th</sup>, 2016). They also do not sell blank labels, which means that labels bought from Ontario Labels would have to be ordered for a very specific purpose, which would decrease the benefit to the Nepalese people and increase the price due to the extra processing.

Company	Email	Phone	Website	Pricing for Similar Product (per 1000 labels)
Uline	Customer.service@uline.ca	1-800-295-5510	<a href="https://www.uline.ca">https://www.uline.ca</a>	\$280
Ontario Labels	info@ontariolabels.com	1-855-216-5550	<a href="http://www.ontariolabels.ca">http://www.ontariolabels.ca</a>	N/A

**Table 4:** Contact information and pricing for other companies in Canada (“Ontario Labels”, 2016; “Uline”, 2016).

### Global Competition

Around the world, there are many producers of weather-resistant or waterproof labels but many companies require them to be custom printed. In Nepal, the labels will be going mainly to small businesses which results in the quantity needed being lower. Since they will not likely go

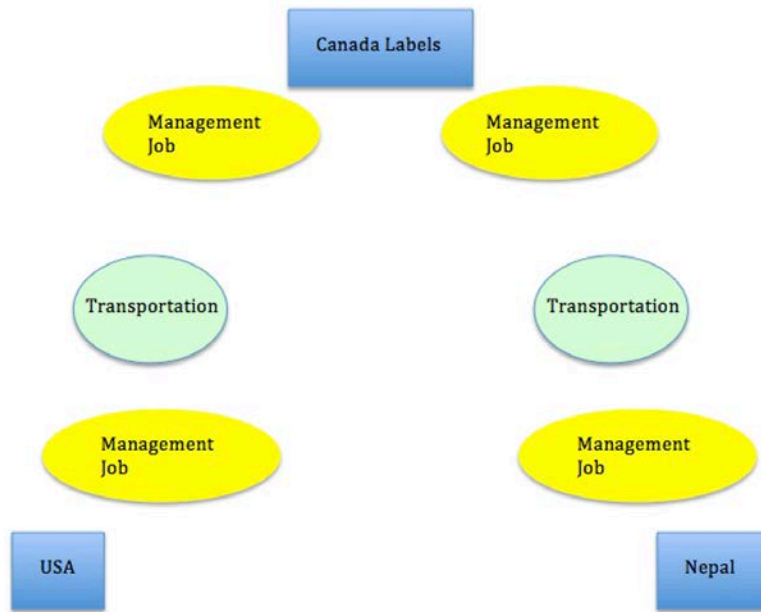
through a large quantity of labels, the more generic the labels, the better. Generic labels will appeal to more people because they can be used for so many different purposes. Also, custom printing adds unnecessary expense for the Nepalese people. **Table 5** contains the product information for two similar products that are produced outside of Canada. The ‘High Grade blank waterproof labels’ are sold in rolls of 1000 adhesive labels with each label being 3”x2” (D. Tam, personal communication, November 27<sup>th</sup>, 2016). There is a 2mm gap between labels (D. Tam, personal communication, November 27<sup>th</sup>, 2016). The ‘Waterproof Labels Vinyl Adhesive Product Label’ is available in both rolls and sheets, depending on the consumers use for the labels (W. Lu, personal communication, November 27<sup>th</sup>, 2016). They are blank white vinyl material and also have an adhesive underside. Both these products are produced in China and are therefore more cost effective as they are located closer to Nepal, which could lower transportation cost. Due to the mountainous landscape that is between China and Nepal, the product might still have to be transported by plane, unless there is a safe path through the mountains by truck. While the ‘High Grade blank waterproof labels’ could be the best product for the Nepalese people, they would have to be tested to make sure that the adhesive underside is strong enough. If the adhesive underside were not strong enough, then the other Chinese product may be the better choice.

Product	Country	Company/ Manufacturer	Model Number/Name	Type	Price for 1000 Labels
High Grade blank waterproof labels	China	Trading Company	Thermal Transfer Label	Adhesive Sticker	\$2 USD
Waterproof Labels Vinyl Adhesive Product Label	China	Guangzhou Kinmit Barcode Technology Co., Ltd	20622	Adhesive Sticker	\$75 USD

**Table 5:** Similar products that are produced globally (“Alibaba”, 2016)

### **Benefits to Canada**

Exporting weather resistant labels to Nepal from Canada Labels would benefit Canada in many ways. The greatest benefit to Canada would be seen in the employment sector. There would a need for management jobs, logistic jobs, gas stations, processing jobs and convenience food jobs in order to process and then ship these labels to Nepal. **Figure 2** shows how the transportation sector and management sectors will benefit with exporting to Nepal. Canada Labels will need to hire someone to manage the importing of raw materials into Canada and exporting the finished product to Nepal. The process of going from raw materials to finished products will require many different aspects of labour, as well as, machinery and infrastructure. The machinery that is used will also need someone available to service it if it were to break down. The process of transporting the product will also require gas stations to fill up the truck, someone to drive the truck, and convenience food operations for the drivers to stop at.



**Figure 2:** Transportation and Management Jobs involved in Exporting to Nepal

Another way that exporting labels to Nepal will benefit Canada is through opening this market to trade between countries. There are many other forms of labels and other similar printed materials that are produced in Canada and would benefit the citizens of Nepal. Since there is no ban on printed material in Nepal there is an opportunity to export many printed material products to Nepal to improve their economy.

## Part 2 – Export Potential to Nepal

### Introduction to Nepal

Nepal is a landlocked country located between China and India in South Central Asia (“Central Intelligence Agency”, 2016). The country can be divided up into 3 regions: mountains, hills, and terai. These 3 regions have a lot to do with the climate in Nepal, which can vary a lot.

In the Himalayas (mountain region) there are cool summers and severe winters, which with the steep landscape does not create good agricultural land (“Central Intelligence Agency”, 2016). This land is mostly unused with a small portion used for livestock. In the south, where the terai region is located, there are warm subtropical summers and mild winters (“Central Intelligence Agency”, 2016). This land is better for crop production, but is also better for diseases and pests to grow due to the warm climate. Overall, approximately 28.8% of land in Nepal is used for agricultural purposes (“Central Intelligence Agency”, 2016). It was estimated in July 2016 that there were around 29,033,914 people living in Nepal and out of this, approximately 47% live below the poverty line (“Central Intelligence Agency”, 2016; McMichael and Robinson, 2016). In Nepal, the life expectancy of the average male is 70 years and the life expectancy of the average female is 71 years (“Central Intelligence Agency”, 2016). The life expectancy has and will continue to improve due to the increase in technology and education in Nepal. As the country continues to become developed, trade will increase, which will improve the quality of life for the Nepalese people. Approximately 91.6% of the population now has an improved drinking water source, which limits the number of mortalities due to water borne diseases (“Central Intelligence Agency”, 2016).

In 2015, Nepal imported \$22,556,602 CAN worth of product from Canada and exported \$14,235,226 CAN worth of product to Canada (“Government of Canada”, 2016). The inflation rate, the rate at which the price of goods and services cost increases, has decreased 0.5% between 2014-2015 (“Central Intelligence Agency”, 2016). Hopefully this will make products more affordable in Nepal and increase trade between countries.

### **Meat Production/Consumption in Nepal**

The citizens of Nepal have many different eating habits due to the country’s multicultural and multi-religious population (Thapa, 2010). The most common religion in Nepal is Hinduism, which involves restraining from eating any part of the cow due beliefs that the cow is a sacred animal (“Ravenous for reform; Malnutrition in India”, 2015; Thapa, 2010). Aside from cattle, citizens of Nepal produce a lot of meat for domestic consumption. The scale of meat production in Nepal is due to their vast amounts of unproductive landscape for growing crops (T. Chapagain, lecture notes, AGR1110 Intro to Agri-Food Systems, September 16, 2016).

In Nepal, there is a high risk of getting sick from food and water (“Central Intelligence Agency”, 2016). Studies have shown that the growth of bacteria present in some meat for sale in the markets is not suitable for human consumption (Bhandari et al., 2013). A study done by Bhandari et al. (2013) specifically focused on broiler chicken meat, even though poultry only accounts for 6% of meat consumed in Nepal (Joshi, Maharjan, Johansen, Willingham, & Sharma, 2003; Bhandari et al., 2013). The number one meat in Nepal is buffalo at 64% of the total meat consumed and the second most consumed meat in Nepal is goat at 20% of meat consumed (Joshi et al., 2003). The reason that the pathogens found in chicken was chosen for study was due to the reason that all ethnic groups accept poultry and goat meat but that is not the case with buffalo (Joshi et al., 2003). Until recently, there were no regulations regarding the slaughter or processing of meat in Nepal (Joshi et al., 2003). This was causing food poisoning or disease in consumers that ate meat that deteriorated due to bacterial infection or contamination (Joshi et al., 2003).

### **Needs and Benefits to Nepal**

In Nepal, there are large quantities of meat spoilage due to mismanagement (Bhandari et al., 2013). This is one of the reasons that Nepal would benefit to weather resistant labels. With weather resistant labels, the people of Nepal can track where their meat came from and better manage the shelf life of the meat to try and reduce the amount of spoilage. Due to the lack of fridges the people of Nepal have to use other methods to preserve their meat, or else it will not keep long enough. In the Himalayas, there are three main steps in processing the meat traditionally: drying, smoking and fermentation of the meat (Oki, Rai, Sato, Watanabe & Tamang, 2011). If there is a mistake in one of these steps, then the meat can become spoiled without someone always realizing. By using the labels to track the processes and timing of preparing the meat, or using the labels to mark when the meat was processed, the instances of food poisoning due to issues in processing should go down. Labeling will improve the quality of meat as well as improve the health and lifestyle of the Nepalese people. This should increase their everyday production by helping families and workers maintain good health. The use of labels could also benefit the market vendors. Labeling their products with information about where it came from and how fresh it is would increase the value of their product without adding a substantial price increase. This would set them apart from competitors. It would be assumed



that they would begin to see more traffic and make a higher profit due to the good quality reputation they have built.

Nepal offers unique tourist attractions due to its vast landscape and mixed culture (Pagdin, 1995). Better food safety in meat production would lead to an increase in the economy indirectly through tourism. In many developing countries tourism accounts for a large amount of their income (Pagdin, 1995). Ecotourism benefits countries like Nepal by providing employment opportunities by lowering the unemployment rate and giving uneducated people jobs (Anup, Rijal & Sapkota, 2015). Ecotourism also benefits Nepal by providing unique and natural environments, cultures and adventure (Anup et al., 2015). Tourists will overlook the benefits for visiting Nepal if there is not an adequate food source for them there. This is why improved food safety and meat production would increase tourism, as there is a safer, higher quality food source available to tourists.

### **Transportation Logistics in Nepal**

Once the product has landed in Kathmandu, Nepal, someone will have to be employed to transport the product to the place of distribution. Then the product will have to be divided up and transported to different locations in Nepal. This will require someone to manage the orders, someone to physically transport the product and someone to deal with the financial aspects of this transaction. The most likely method of distributing the labels around Nepal will be to truck them there. This will depend on the sector that the labels are going too. Some places in the mountains are not always accessible by road. The cost of transporting the product by truck will involve the base fee of using the truck, the labour wages of the driver, and the cost of fuel for the truck. The price of diesel on November 21<sup>st</sup> 2016 was approximately \$73 NPR/L (“Global Petro Prices”, 2016). The price of gasoline on November 21<sup>st</sup> 2016 was approximately \$97 NPR/L (“Global Petro Prices”, 2016).

### **Import/Export Documentation**

In order to export labels, or any other product, to Nepal there are forms that should be filled out for insurance and management reasons. This will require both an employee in Nepal to fill out an international purchase order and an employee in Canada to fill out the export

documentation. The international purchase order and export documentation are used to make sure that there is an agreed upon price and quantity for a product (“Global Negotiator”, 2016). There must also be an Air Waybill (AWB), which is a non-negotiable transport document covering airport-to-airport transportation (“Global Negotiator”, 2016). Since the product is going to be first transported by truck, and then plane and then truck again it would be beneficial to fill out a multimodal bill of lading FBL as well (“Global Negotiator”, 2016). This is an international transport document covering what types of transport have been used (“Global Negotiator”, 2016). It can be used as a carriage contract and receipt that proves the goods have been received.

## **Discussion**

Another product that should be considered for export to Nepal along with the labels is permanent markers. Since the labels are blank the price is less, compared to customized labels however, there would need to be a way to write on them. Where as pencil and pen might work in the interim, it would probably wash off defeating the purpose of the tags. Permanent marker would be more resistant to the harsh conditions that the labels would be subjected to. Permanent markers would also be needed if the labels where exported from either another Canadian company or another international company. The waste removal system in Nepal would also need to be modified so that there is a safe way to dispose of used labels. Otherwise, there is a possibility for a negative impact to the environment.

Overall, these weatherproof labels from Canada Labels would be a beneficial product to export to Nepal but I believe that they are too expensive compared to the labels available from Alibaba (2016). While I think that citizens of Nepal could afford to buy the Canada Labels product, it would fanatically make more sense for them to purchase the labels at a less expensive price in a closer location. In order for Canadian label companies to compete with other global companies, they either need to have top quality or find a cheaper way to produce. One possible way that Canada Labels could lower their cost is by finding a more local source for the adhesive raw material. This would decrease that transportation cost and reduce the amount of taxes paid at borders. Labels would be beneficial to the communities of Nepal because depending on the cost of getting the product into the country; it is an affordable product for market vendors and

farmers. The labels would pay back quickly to market vendors and farmers because the price of each label is paid for upon the sale of meat. One unit of product (1000 labels) would also last the average market vendor for quite a while. It is important to keep in mind that even though the product makes sense from the view of the developed world, the citizen of Nepal might reject the idea for reason that are not aware of at this time. This is why I think that a sample unit of labels should be sent to Nepal to see what reaction the citizens have towards the labels, as well as, to see if the labels actually help to increase food safety and quality.

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