

Canadian AgriFood Exports Project Final Report:

**“Exporting Canadian Pumpkin Seeds to Nepal”**

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## **Introduction**

Nepal is a small country located in Southeast Asia, which is bordered by China to the North and India to the South, West, and East. Nepal is land locked and as a result transporting goods in and out of the country can sometimes be challenging because there is no direct access to freight shipping channels. Covering 140, 800 square kilometers of land Nepal is comparable in size to Arkansas (Encyclopedia of the Nations, 2014). Nepal consists of five different regions, those regions being the Eastern region, Central region, Western region, Mid-Western region, and the Far-Western region. It can also be divided into three regions using land type and those regions are the mountain region, hills region, and terai region (Naturally Nepal, 2012). Population wise, Nepal is home to 27.80 million people, 86% of the population lives in rural areas throughout Nepal while the other 14% reside within urban centers, mostly the capital city of Kathmandu. In 2013 the gross domestic product for Nepal was 19.26 billion American dollars, and this means that Nepal is considered a low-income country on the global scale (The World Bank, 2014).

One of the most important industries in Nepal is the agriculture industry. In Nepal they practice subsistence farming. This is considered self-sufficiency farming meaning that farmers focus mainly on producing enough food to feed themselves, and their families (US Agency for International Development, 2014). A major portion, 41% to be exact, of Nepal's gross domestic product comes exclusively from its agriculture industry. With that in mind statistics show that over 80% of the people in Nepal are directly involved in the agriculture industry (US Agency for

International Development, 2014). In 2010 the United Nations reported that the average farm size in Nepal was a tiny 0.7 hectares, and with this they went on to say that even though the percentage of people living below the poverty line in Nepal has decreased over time, the percentage of those involved in the self-employed agriculture industry living below the poverty line has increased by almost 10 percent (UN Humanitarian News and Analysis, 2013).

As a result of the farms in Nepal being so small it is not cost effective, or practical, to have machinery on the farm, which means that the vast majority of the work on the farm is done by hand, and using strictly physical labor. This means that it is up to the farmer, and family to do all the work of the farm, which included but is not limited to planting, weeding, and harvesting (Encyclopedia of the Nations, 2014). It is quite common for farmers in Nepal to plant a wide variety of crops on their land. This is because they supply almost all the food their family eats throughout the year as a result they need to plant a variety of crops so that they have a variety to eat. Some of the most common crops in Nepal are pulses, rice, corn, wheat, sugarcane, jute, and root crops (New Agriculturist, 2009).

Doing all of the work on the farm by mostly physical labor for people in Nepal can be extremely time consuming, and have many long-term negative effects on the people doing the work (New Agriculturist, 2009). To help deal with this problem, and reduce the amount of physical labor required by the Nepalese farmers, I have come up with a Canadian export that has many benefits to the people of Nepal as well as Canada. My export idea is Canadian pumpkin seeds of the Howden variety. This variety has many favorable traits that Nepalese farmers

would be able to utilize to reduce the amount of labor required on the farm. The seeds, which are a by-product of the pumpkin, have many nutritional benefits that could also be utilized by the people of Nepal. Throughout this report the export potential of the Howden variety of Canadian pumpkin seeds is going to be looked at in depth.

## **Part 1: Product Information**

### **Product Description**

The product that I am proposing Canada export to Nepal is Canadian pumpkin seed of the Howden variety. The Howden variety of pumpkin is a very versatile pumpkin variety, and commercially can be used for everything from Halloween decorations to baking. Size wise this variety of pumpkin plant fully grown weights in at about 25 pounds, or 11 kilograms (Stokes Seeds, 2014). The fruit itself is tolerant to the common pumpkin disease black rot, and is known for its ridged orange skin and thick flesh, which is high in vitamin A. In terms of the seed, it does not contain any neonicotinoids and is in no way genetically modified (Stokes Seeds, 2014). The time period from when the farmer would sow the seeds to when the plants are ready for harvest is typically about 115 days. Pumpkins need to be planted with lots of space for their sprawling, long vines to grow. They also love sunlight so it is extremely important that they be planted in an area in that gets lots of sunlight (The Old Farmer's Almanac, 2014).

At the ends of their long vines this variety of pumpkin plant grows large, broad green leaves. These leaves have weed suppression properties, and these weed suppression properties would benefit Nepal. By planting Howden pumpkins among other

crops, such as maize, the vines of the pumpkin plants would grow into the maize and the leaves on the pumpkin vines would reduce the amount of light that is available to the weeds below. Essentially by reducing the amount of sunlight available to the weeds they are no longer able to photosynthesize, this would reduce their food production, which would ultimately cause them to die. In conclusion planting pumpkins beside maize cultivars would mean the pumpkin plants would grow into the maize crop, and from there the pumpkin plants' leaves would reduce the number of weeds in the cultivar by reducing the amount of sunlight available to the weeds (Li, Tilman, Lambers, & Zhang, 2014).

**Figure 1.** A Howden Pumpkin on the Vine



(Sonoma Garden Girl, 2014)

## **Producers**

After doing some extensive of research I feel that the best Canadian Company to source these Howden variety Pumpkin seeds from is Stokes Seeds Ltd. Table 1. below compares Stokes Seeds Ltd. to two other Canadian companies that produce and market Howden variety pumpkin seeds. Stokes Seeds Ltd. is a Canadian company that was

founded in 1881 and is based out of Thorold, Ontario. Stokes Seeds Ltd. produce and market hundreds of vegetables, and flower seeds to consumers all across the globe. Stokes currently employs a hundred plus Canadian employees, most of whom live within the Thorold area (Stokes Seeds, 2014). I feel that sourcing these seeds from Stokes Seeds Ltd. makes the most sense because they are already a major player on the global vegetable seed market, and are well established within the industry. Stokes Seeds Ltd. source the Howden Variety of pumpkin seeds from America, but due to legal obligations on their end, they were not allowed to disclose where in America the seeds come from (D. Confidential, personal communication, 2014). In the Stokes Seeds online catalog the Howden variety of pumpkin is numbers as 247H. Donna, who has asked her last name be kept confidential, is a sales rep at Stokes Seeds and would be happy to answer anymore question that may arise. She can be reached at 1-905-688-4300 (Stokes Seeds, 2014).

**Table 1.** Comparing Companies that Sale Howden Pumpkin Seeds

<b>Company</b>	<b>Location</b>	<b>Contact Phone Number</b>	<b>Price for 25lbs</b>	<b>Source Location</b>	<b>References</b>
Stokes Seeds Ltd.	Thorold, Ontario	1-800-272-5560	\$782.00	America	(Stokes Seeds, 2014)
Vessey Seeds	York, Prince Edward Island	1-800-363-7333	\$711.85	Would Not Disclose	(Vessey Seeds, 2014)
West Coast Seeds	Ladner, British Columbia	1-888-804-8820	\$1333.77	On Site	( West Coast Seeds, 2013)

When looking at the table even though Vessey Seeds were cheaper in cost, I opted not to use the company because it was not very helpful in answering my questions. Also, it was much more expensive to ship the seeds internationally from the East Coast

of Canada, compared to shipping them from Central Ontario, which is where Stokes Seeds is located. In conclusion Stokes Seeds Ltd located in Thorold, Ontario is the company that I feel would be the best fit to export the Howden variety of pumpkin seeds to Nepal.

### **Health and Nutritional Information**

Pumpkin seeds are rich in many essential nutrients and vitamins that the human body needs to function (World Health Organization, 2014). A few of the main and most abundant nutrients found in pumpkin seeds are zinc, vitamin E, and vitamin A. The World Health Organization reports that pumpkin seeds are one of the best ways to obtain the three above nutrients (World Health Organization, 2014). Besides providing from a way to obtain essential vitamin and minerals pumpkin seeds also have a few health benefits. Pumpkin seeds are great for antioxidant support because they contain tocopherol-gamma. Tocopherol-gamma is a very strong lipid soluble antioxidant that has properties that help preserve mucus membranes and skin by shielding them from oxygen free radicals (Stevenson et al., 2007). Another great health benefit of pumpkin seeds is that the kernels of the seeds are high in mono unsaturated fats that help the body regulate and control LDL (good) and HDL (bad) cholesterol levels in the blood. This property of the seeds can help prevent and reduce the chances of heart attack or stroke because by helping control cholesterol levels they help maintain healthy blood vessels in the circulatory system (Stevenson et al., 2007). Research is currently being done that shows that at a cellular level pumpkin seeds contain DHEA (Di-hydro-epi-androstenedione), which is a hormone that performs blocking actions towards cell receptors in the human prostate and ovaries. This means that scientists believe that pumpkin seeds have

properties that reduce the risk of ovarian and prostate cancer in men and women (Xanthopoulou, 2009).

### **Market Opportunities**

The market in Nepal for Howden variety pumpkin seeds would be considered a niche market because it is a product that would be only of interest to the agricultural industry. But with saying that as mentioned above over 80% of Nepalese people are involved in the agriculture industry, so it does have the potential to benefit a large population in Nepal (US Agency for International Development, 2014). Pumpkin seeds would be considered a niche product because it would only be of interest to farmers. Farmers would use this product to practice intercropping. Intercropping is when a producer grows two or more crops in the same space. The best type of intercropping is when the two crops have a mutually beneficial relationship that is a result of growing in the same area (Vandermeer JH, 1992). Overall I feel that the Howden variety pumpkin seeds in Nepal would be considered a niche product within the agricultural industry, which account for majority of the Nepalese population.

### **Benefits to Canada**

There are many different ways that Canada would benefit from exporting Howden variety pumpkin seeds to Nepal. The most obvious and main benefit of exporting these seeds to Nepal from Canada is the economic boost that Canada would

experience. Sending these seeds overseas would increase revenue being brought into Canada, which would overall give Canada an economic boost. This is especially true in the Southern Ontario region where Stokes is located because that is where the revenue would be brought directly into.

Also, because Stokes Seeds Ltd. imports the seeds from America it could potentially increase the amount of seeds of being imported from the states into Canada. This could strengthen the trade relationship between America and Canada. Another benefit of this export would be that as Stokes Seeds gets busier from the increase in business they would have to increase their number of staff. This means that potentially a benefit from this export could be the creation of new jobs for Canadians both directly at Stokes Seeds, and indirectly with middleman companies. For example Canadian shipping companies may have to increase staff to both bring the product into Canada from America, and to ship it to Nepal.

Besides increasing and strengthening the trade relationship between Canada and America, exporting this product to Nepal could also have other benefits for Canada on the international scale. This export would increase, and create new trading relationships with Nepal, which could be extremely beneficial to Canada. By expanding its export horizon to Nepal, Canada would become a bigger player on the international trade playing field. Overall, exporting pumpkin seeds from Canada to Nepal would have many benefits to Canada, the main ones being the economic boost, the creation of new jobs in Canada, and the expanding of Canada's international trade market.

## **Part 2: Export Potential to Nepal**

### **Transportation/Distribution Logistics**

The best and most cost efficient way to ship the Howden variety pumpkin seed to Nepal from Canada is by air. Stokes Seeds would not share with me how the seeds get to them, only that they come from the States, but I would assume they either come by ground transport like a truck, or by air. I propose that once the seeds are in Stokes' distribution warehouse, in Thorold, Ontario, a shipping company takes them by ground transport to Toronto Pearson International Airport. From the airport the seeds would be shipped via air transport, by the same shipping company, to Katmandu, Nepal. There are three different shipping companies that I have priced out to ship the product from Thorold, Ontario, Canada to Kathmandu, Nepal. Those three shipping companies are UPS, Purolator, and FedEx. Table 2 compares and contrasts the three shipping companies. As you can see in the table below FedEx appears to be the most cost effective company to ship the seeds from Thorold, Ontario to Kathmandu, Nepal.

**Table 2.** Comparing Shipping Prices from Thorold, Ontario to Kathmandu, Nepal

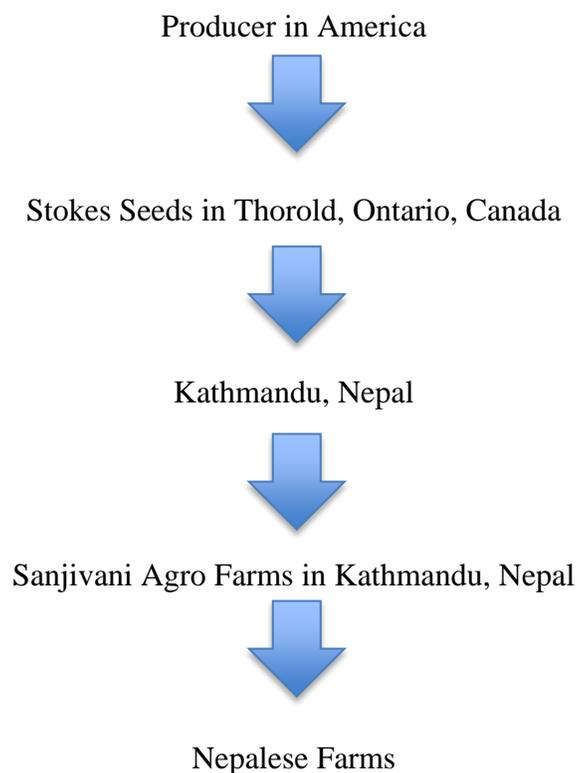
<b>Company</b>	<b>Price to Ship 20lbs</b>	<b>Contact Phone Number</b>	<b>Reference</b>
UPS	\$575.06	1-800-742-5877	(UPS, 2014)
Purolator	\$606.26	1-888-744-7123	(Purolator, 2014)
FedEx	\$526.67	1-800-463-3339	(FedEx, 2014)

Once in Nepal I think that the best way to market and distribute the seeds is through an already established Nepalese agricultural seed distribution company. An example of one of these companies is Sanjivani Agro Farm. Sanjivani Agro Farm is an agricultural company located in Kathmandu, Nepal. This company sells and markets agricultural products to farmers all across Nepal (Sanjivani Agro Farm, 2014). This

company can be contacted at 00977-9849-390830 (Sanjivani Agro Farm, 2014). I think that this company would make a good distributor for this product because they are already a player in the agricultural industry in Nepal. This means that they already have the client base, and connections in Nepal to distribute and market the product to.

In conclusion, the transportation logistics behind getting the pumpkin seeds to Nepal would be to ground transport them from the Stokes warehouse in Thorold, Ontario to Toronto Pearson International. From there they would be shipped by air to Kathmandu, Nepal. Once in Nepal the seeds would be distributed and sold by the Nepalese Agriculture company Sanjivani Agro Farms.

**Figure 2.** A Flow Chart Showing the Transportation Logistics



## **Cost Analysis**

As mentioned above the cost for 20 pounds of Howden variety pumpkin seeds is \$782.00, and when you add the shipping, which is \$526.67, that means the total cost of the seeds would be \$1,308.67. According to Stokes website in 1 pound there are 2500 seeds, so if we were to send 20 pounds of pumpkin seeds that means we would be sending 50,000 seeds to Nepal (Stokes Seeds, 2014). When you divide the total price of this export by the total number of seeds it comes out to each seed would cost 3 cents Canadian. To achieve profitability the distributor could sell a single seed for 5 cents Canadian. When you convert this into Nepalese Rupees each seed would cost 4.41 Rupees. On average according to Stokes the planting ratio is 1 to 1, which means that one seed equals one plant. Another thing is that farmers could consider this a one-time investment because the mature pumpkins are full of seeds that can be dried out and planted in the next growing season.

Overall, when breaking down the cost of exporting these seeds to Nepal the price point is very realistic. As mentioned above to achieve profitability the Nepalese distributor could sell the seeds 4.41 Rupees per seed. This is a realistic price point because in 2013 the GDP per capita for Nepal was \$700 USD (The World Bank, 2014). When this is converted into Rupees its equal to 69, 727 Rupees, and with this GDP I think that 4.41 Rupees per seed is an extremely realistic price point. Especially when the seeds can be considered an investment as the seeds that are collected from the mature harvested plants can be used in the next growing season rather than buying new seeds each year.

## **Benefits to Nepal**

Farms in Nepal are typically small subsistence farms that are solely family owned and operated. In subsistence farming modern world technologies are not often utilized due to the costs, and farm size. This means almost of all the work done on the farm is done by hand (Paudyal et al, 2001). This includes the task of weeding the maize cultivars by hand, which is extremely time consuming and can take a toll on the body. Planting Howden variety pumpkin plants beside maize cultivars would have several benefits for Nepalese farmers because it would reduce the number of weeds in the maize cultivars. With a lower number of weeds present in the maize cultivars yields would increase, and the amount of physical labor required to tend the maize cultivars would decrease (Mashingaidze, 2004). Another benefit of exporting Canadian pumpkin seeds to Nepal would be the nutritional aspect of the ripe pumpkin vegetable. Certain regions in Nepal are known to have vitamin A deficiencies in children and pregnant women, which can often lead to blindness, and sometimes death (West, 2002). Pumpkin is rich in vitamin A, so another benefit to Nepalese people would be increased vitamin A in their diet (West, 2002). There is really nobody that exporting this product to Nepal would hurt expect maybe any existing companies or people in Nepal that sell or market these seeds currently. With that in mind I have not found any companies in Nepal currently selling this product. In general, pumpkins seeds in Nepal would benefit the Nepalese by reducing the amount of physical labor required to tend their crops. Also, this export would help improve the health of children and pregnant women by increasing their vitamin A intake.

**Figure 3.** An Example of Maize and Pumpkin Intercropping



(Kusamala, 2013)

### Comparing Products Available from Other Nations

Table 3 compares and contrasts other companies that produce pumpkin seeds from other nations closer to Nepal with the Canadian export.

**Table 3.** Comparing and Contrasting Products Available from Other Nations

Company	Location	Price Point	Contact Info.	Reference
Stokes Seeds	Canada	\$782.00 CAD for 25 lbs.	1-800-272-5560	(Stokes Seeds, 2014)
Rizhao Golden Nut Group Company	China	\$287.75 USD for 25 lbs.	86-15-065596273	(Alibaba.com, 2014)
JIYA AGRO PVT. LTD.	India	Inquired regarding price point never heard back	91-11-40817523	(Jiya Agro Pvt. Ltd, 2013)

As seen in the above table the product is much cheaper in China compared to the cost of the product in Canada. The company from India never got back to me regarding a price point. These prices do not include shipping costs, but I think that it would be safe to

assume importing the product from China or India would be cheaper than importing it from Canada because India and China directly border Nepal.

### **Unknowns and Next Steps**

Due to the nature of this report there are many unknowns associated with exporting Howden variety pumpkin seeds. The main unknowns that I came across when researching this export were the legal implications surrounding the export. What I mean by legal implications are things like the trade/subsidy barriers, documents required to import/export the seeds, and only loan or grants projects available to get the project started. I emailed the Department of Customs, and the Department of Agriculture in both Canada, and Nepal several times and never heard back from them regarding the rules and regulations round exporting/ importing pumpkin seeds to Nepal. Due to the lack of information that could be found regarding the legal implications surrounding this export is why they were not discussed in the report.

Taking into account the above unknowns, and all the other information presented throughout this report there are a couple next steps that should be taken to improve this export for both countries involved. The most important next step that needs to be taken to improve this export is a reduction in the cost of the product. As seen in Table 3, the seeds from Canada are extremely expensive compared to the seeds from China. Canadian distributors will have to lower their price if they want to be viewed as a competitive player on the market in Nepal. This could also be something that the Canadian Government could look into help subsidizing. Another next step that should be taken before this export takes place is determining the legal implications that I was not successful in finding, and analyzing them.

In conclusion, the unknowns surrounding this export are mostly just the legal implications regarding importing/exporting the seeds from/to the respective countries. The next steps in determining the overall export potential of the pumpkin seeds are to find and analyze the legal implications regarding this export. As well as, reducing the cost of the seeds so that Canada can compete with other countries, like China, in the Nepalese agriculture market.

### **Conclusion**

Overall, I feel that exporting Howden variety pumpkin seeds to Nepal could be extremely beneficial to both Canada and Nepal. The export would benefit Canada by giving it an economic boost, creating new jobs, and expanding Canada's international trade market. The Nepalese would benefit from the pumpkin seeds because the seeds would reduce the amount of physical labor required to tend crops on the farm, and the nutritional aspect of the seeds would improve the health of children and pregnant women, who commonly have vitamin A deficiencies (West, 2002).

I have full faith that this export could be extremely successful in the agriculture industry in Nepal, but I do have a couple of recommendations. My main recommendation is regarding the cost of the product. Right now the price point of the product in Canada compared to the price point in other countries is a bit high, which may make the Canada product less appealing. Another thing is that the seeds from Stokes are source from America, but Canada would benefit more if the seeds were actually sourced from within Canada. So, I would recommend that to make sure that this export reaches it full potential the price and the source of the seeds is explored in more detail.

Besides the above recommendations I personally feel that this export has amazing potential to improve agriculture in Nepal. The pumpkin seeds are perfect because they would have a large impact on Nepalese farmers and are extremely easy to use. Farmers just plant them and as the plant mature they do the rest. They are environmental friendly, and the seeds have the ability to be used year after year. In closing, exporting Stokes' Seeds Howden variety of pumpkin seeds to Nepal is a new and exciting export idea that would be mutually beneficial to both countries involved, and is something that should be seriously considered.

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