
Agricultural Trades Canada to Nepal

An in-depth report on trading Canadian Carrot Seeds

Canadian Agrifood systems Trade Project

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Introduction

The act of trading goods has been a major part of human civilization for a quite some time. Trade has become one of greatest reasons why our world has become so much more advanced over the years. The act of trading is the process of buying, selling, or exchanging goods between two parties (Dictionary, 2015). Agriculture has been a major part of ancient civilization as well as trade, it only makes sense that these two practices would go hand-in-hand with one another. These two practices are prominent as ever in modern times and will likely never leave humankind because of its importance to society. Two countries that have large agricultural industries in the world today, are Canada and Nepal. The agricultural sector of Nepal makes approximately 35% of their economy and around 30% of Nepal's land is suitable for agriculture (World Fact book, 2015). Canada is one of the largest agricultural exporters in the world, exporting a wide variety of crops (Maps of the World, 2015). This report is an analysis of what would occur if Canada exported a specific agricultural product to Nepal for their own consumption or use. The product that was chosen was the Ontario Seed Company's carrot seeds. There are many possible benefits for the trade of these two nations on both sides. These benefits and possible draw backs will be assessed in this report as well as the potential for a real application in Nepal.

Section 1

Agriculture in Nepal

Nepal is a country located in Asian, neighbouring China and India (CIA, 2015). It has a population of approximate 28 million people (CIA, 2015). The total area of Nepal is 147 181 km² making it the 94th largest country in the world (CIA, 2015). Nepal has a per capita income of 700 USD and food insecurity is a prominent issue in rural areas of Nepal (CIA, 2015). Nepal has a varied climate because the country spans over different regions (CIA, 2015). The best region for agricultural practices is the Terai region (CIA, 2015). This region is located in southern Nepal neighbouring India (CIA, 2015).

Canadian Carrot Production

Daucus Carota also known as carrots are biennial plants but are grown annually and are harvested for their distinct taproot. In Canada carrots are grown for both their fresh market and processing industries. Carrots are an important crop in Canada and are consumed regularly by citizens.

| | |
|---|---|
| Canadian production (2012) ^{1,2} | 400,795 metric tonnes 8,610 hectares |
| Farm gate value (2012) ^{1,2} | \$87 million |
| Fresh carrots available for consumption in Canada 2012 ³ | 8.85 kg/ person |
| Export (2012) ³ | \$39 million |
| | 91,526 metric tonnes |
| Imports (2012) ³ | \$114 million |
| | 117,347 metric tonnes |

1 Statistics Canada. Table 001-0013 - Area, production and farm gate value of vegetables, annual CANSIM (database). (Accessed: 2014-05-13) 2 Includes baby carrots and regular carrots 3Agriculture and AgriFood Canada. Statistical Overview of the Canadian Vegetable Industry, 2012. AAFC no. 12162E-PDF

http://publications.gc.ca/collections/collection_2014/aac-aafc/A118-10-11-2014-eng.pdf

This diagram shows the production of carrots and its value to our economy in 2012

(Publications.gc, 2014). Carrots are grown in Canada because they are a cool season vegetable and they have adapted to long cool growing seasons (Publications.gc, 2014). Most of the carrot production happens in Ontario and Quebec (Publications.gc, 2014).

Product Information

The product that had been chosen is the OSC's "Nantes Coreless" carrot seeds. These seeds are not from Canada but rather sold by a Canadian company that has obtained them from growers around the world. The OSC's Nantes Coreless carrot seeds would be a great product for

the agriculture industry in Nepal because they are relatively cheap and grow in conditions that can be easily achieved in Nepal. They have a relative shelf life of 3 years (Seed Savers, 2015).

The seeds will grow twice a year in any well in any well maintained soil. Ideal conditions consists of preparing the seeds by mixing them with some sand while sowing, soil temperatures above 7.5 C , and sowing seeds for 7-15mm in rows spaced apart 45-60cm. It is best to keep the carrot seeds weed free, watered, and to avoid fertilizers with high nitrogen levels, harvest when roots are a healthy colour (approximately 70 days) (OSC, 2015). The seeds can be purchased in five different quantities which will be addressed in the costs section of this report (OSC, 2015).

The seeds grow a bright orange cylindrical, blunt ended carrot that are coreless which means that these carrots can be enjoyed even if harvested later than they should be (OSC, 2015). Carrots with cores often are harvested late and need to have their cores removed before enjoyable consumption (Illinois Edu, 2015).



<http://www.oscseeds.com/ecommerce/-vegetable/-carrots-/NANTES-CORELESS.htm>

Why Carrot Seeds?

Carrots are great vegetables because of their uniquely high levels of vitamin A (Medical News Today, 2015). Vitamin A has been proven to prevent eye damage from vitamin A deficiency which is a common issue in developing countries such as Nepal (Medical News Today, 2015). Vitamin A also has many other health benefits such as improved immune system functionality and it is also a great antioxidant (Medical News Today, 2015). The nutritional value table below gives the nutritional values of a general carrot (Carrot Museum, 2015)

| Nutrition Facts | | | |
|---|----------------------|--------------|---------|
| Serving Size 7" long, 1¼" diam. (78g) | | | |
| Amount Per Serving | | | |
| Calories 30 | Calories from Fat 0 | | |
| % Daily Value* | | | |
| Total Fat 0g | 0% | | |
| Saturated Fat 0g | 0% | | |
| Trans Fat 0g | 0% | | |
| Cholesterol 0mg | 0% | | |
| Sodium 60mg | 3% | | |
| Total Carbohydrate 7g | 2% | | |
| Dietary Fiber 2g | 8% | | |
| Sugars 5g | | | |
| Protein 1g | | | |
| Vitamin A 110% | Vitamin C 10% | | |
| Calcium 2% | Iron 2% | | |
| * Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs: | | | |
| | Calories | 2,000 | 2,500 |
| Total Fat | Less Than | 65g | 80g |
| Saturated Fat | Less Than | 20g | 25g |
| Cholesterol | Less Than | 300mg | 300mg |
| Sodium | Less Than | 2,400mg | 2,400mg |
| Total Carbohydrate | | 300g | 375g |
| Dietary Fiber | | 25g | 30g |
| Calories per gram: | | | |
| Fat | 9 | Carbohydrate | 4 |
| | | Protein | 4 |

Source: <http://www.carrotmuseum.co.uk/nutrition3.html>

Carrots aren't foreign to Nepal as well, the Nepalese dish Gajar Ko Halwa also known as carrot pudding is made with 2 pounds of carrots (Nepal-Food, 2009). There are many other dishes where carrots can be introduced to make the meal more nutritious and flavourful.



<http://www.food-nepal.com/recipe/R024.htm>

Company Information

The Ontario Seed Company is a seed producing company headquartered in Kitchener Ontario, owned by a Canadian family that has been in business since the late 1800s (OSC, 2015). The company purchases seeds from around the globe and distributes their products online as well as instore.



<http://www.oscseeds.com/userContent/images/osc%20logo.jpg>

Labour Requirement and Cost Calculation

The labour required for growing this product is minimal and the cost of the seeds is very low. The labour would be mostly transporting the product to Nepal then the proper planting and harvest of the product done by the Nepalese citizens. There is also no machinery required for this product. The carrot seeds go for 48.50 CAD/kg on the OSC website, there are around 850 seeds per gram of the product (OSC, 2015). When the seed is purchased at this quantity the amount of seeds you get per dollar is approximately 17 526 seeds (OSC, 2015). This is approximate 220 seeds/NPR as of 2015-12-01 which is affordable for the average Nepalese citizen (The Money Converter, 2015). Note that the seeds can be purchased at lower quantities but would be less profitable. The product will be purchased in bulk at the OSC and distributed by BHAT-BHATENI (a supermarket in Kathmandu).

Preparations Instructions and Harvesting

Carrots are root vegetables that can be easily grown in a mixture of sand and soil. Carrots are versatile crops because they resist most pests and diseases they can also tolerate a small amount of frost, which is convenient because they are late season crops (almanac, 2015). Carrots require full sun exposure, soil free of stones and a neutral pH, 1 inch of watering per week at the very least and fertilizing after 5-6 weeks after sowing (low nitrogen content fertilizers) (almanac, 2015).

Harvesting carrots is simple especially the Nantes Coreless carrots because they can be harvested any time after maturity is reached (almanac, 2015). This is usually after two and a half months and ½ inch in diameter (almanac, 2015). Carrots can also be stored in the ground if the

ground does not freeze (almanac, 2015). If the ground does freeze then carrots can be stored by twisting off the tops and being washed under cold running water then being refrigerated (almanac, 2015).

Target Market

The target market is the Nepalese citizens as well as Nepalese farmers. The product is to be sold to the Nepalese super-market in Kathmandu BHAT-BHATENI Supermarket & Department Store (Travel. g.c, 2015). The product can also be introduced to smaller communities in smaller quantities if the product succeeds in major Nepal supermarkets.

Benefits and Environmental Sustainability

Exporting these seeds to Nepal can be very beneficial to Canadian farmers as well as Canadian agribusiness because of the jobs that would be created by this effort. Increasing the carrot yield in Canada would produce more carrot seeds which can be exported to Nepal. Canadian farmers would profit from the sales in Nepal and jobs would be created by the need for workers to harvest larger carrot yields. By expanding the OSC to Nepal the company will also be able to access seeds from Nepal as well and then expand their own collection of seeds. Trade relations are always beneficial and a strong trade relationship with Nepal can prove to be very beneficial for the OSC and Canada as a whole.

Environmental sustainability is an important topic in the present day because there are so many negative factors that change our environment. It is important to take care of the environment for the present as well as the future. Plants are a sustainable resource and can help sustain the environment because of their reproduction (BGCI, 2015). They sustain our air by recycling carbon dioxide and giving us oxygen to breathe (BGCI, 2015). Plants also regulate water by purifying it and they can also transport water from the soil into the earth's atmosphere via transpiration (BGCI, 2015). Plants are also important to ecosystems because they provide food and important minerals to animals that rely on particular substances to stay alive (BGCI, 2015). This is why it is important for Canada as well as Nepal to encourage plant production and trade, it will benefit both countries as well as the environment.

Section 2

Export Potential to Nepal and Benefits

There are many possible benefits that comes with the use of this product by the Nepalese farmers. As stated before, this product is relatively cheap and can be grown easily in Nepal (OSC, 2015). The carrots that will be produced can be nutritionally beneficial to the citizens of

Nepal because the carrot seeds are high quality Canadian carrot seeds that have been developed for many years (OSC, 2015). Having quality seeds would increase yield which is important to feed the local communities in Nepal (United Nations Millennium Development Goals, 2015). These seeds would help fight hunger while providing great nutritional value for the citizens of Nepal (United Nations Millennium Development Goals, 2015). If this product does succeed then there will be an economic boost for Nepal because these seeds are affordable to the average Nepalese citizen so these seeds should be available to almost everyone in Nepal once distributed properly.

Transportation Logistics and Storage Requirements

Transporting the product to Nepal is the most difficult part of this trade because of the distance between Canada and Nepal. At first, we won't be shipping much of the product to Nepal until it is well received. This is important because then we can decide the most effective way of transporting the seeds. The most efficient method to ship the products would be to be by airplane. Transportation by air is most effective because it's fast, and decently priced for smaller quantities. The company Air Freight is a great company for transporting goods and is priced at approximately \$4.00/kg (World Bank, 2015). This price is well worth it considering that the product will be shipped directly from Pearson International Airport in Toronto to Tribhuvan International Airport in Kathmandu Nepal.

Plan for Transportation

The seeds will be transported from Kitchener, Ontario to Toronto Ontario by transportation trucks. From Toronto Ontario the seeds will then be shipped to Kathmandu Nepal

by Airplane. The product will then be transported to the BHAT-BHATENI Supermarket & Department Store where it will be stored, sold, and assessed by customers.

Cost and Profit Analysis

The figures will be calculated in CAD and the exchange rate is 1 CAD = 79.91 NPR as of 2015-12-01 (Money Converter, 2015). The cost will be calculated by taking in the price of seeds, as well as expected prices for transportation.

| <u>Cost Component</u> | <u>Associated Price (CAD)</u> |
|-----------------------|---|
| Seed | $48.50 * 1.13 = 54.81/\text{kg}$ |
| Transportation Costs | Truck: Estimate \$100 in Canada & Nepal per trip. Airplane: \$4.00/kg |
| Total Costs | \$158.81/Kg |

The costs have large variables which makes it very hard to predict the actual price of the trade, also because I would want to market the seeds in small quantities and wait for them to be rated by consumers in Nepal. The transportation costs and prices can be determined easily but there are also labour costs storage costs as well as possible tariffs and taxes that would be charged.

Contact Information

Provided by OSC OSC HEAD OFFICE, PLANT and MAIL ORDER DIVISION

77 Wellington Street South

Kitchener, Ontario

Mail Order Hours

Monday to Friday 8:30 AM – 4:30 PM

P: (519) 886-0557 (answering machine after hours)

F: (519) 886-0605

seeds@oscseeds.com

OSC SEEDS RETAIL OUTLET

16 King Street South

Waterloo, Ontario

Store Hours Monday to Friday 8:30 AM - 6 PM

Saturday 8:30 AM - 5:30 PM

P: (519) 886-2990

Mailing Address

P.O. Box 7 Waterloo ON N2J 3Z6

Competitive Market

When beginning any trade or business, it is important to analyze the competition. The best way to overcome the competition is to look at your own shortcomings and try to combat that. In this case the main issue is the transportation of the seeds from Nepal. Canada is

significantly farther away from Nepal compared to countries such as India or China which would have cheaper transportation costs to Nepal. This could prove difficult to compete with (United Nations, 2015). China is also the world's largest exporter of carrots, exporting around 16 million tonnes in 2012 (Carrot Museum, 2012). The best strategy would to rely on the fact that these seeds are of high quality and have been effective in Canada for many years (OSC, 2015). The OSC claims to supply the best products and services to all of their customers as expediently and as reasonably priced as possible, so by using this as a basis for the project the Nepalese farmers know that they can get the best quality seeds from Canada (OSC, 2015). Not only does the OSC guarantee high quality products but so does the Canadian government. "The Canadian Food Inspection Agency is responsible for the administration of the Seeds Act and Seeds Regulations to help ensure that seeds exported from Canada meet established standards for quality and are labelled so that they are properly represented in the marketplace" (Inspection Canada, 2010).

Export Documentation and Tariffs

There are exporting taxes that would have to be taken into account when carrying out this trade. There are fees and regulations that have to be paid and followed for trade to be legal in both countries. There is a 10% tax charge when importing agricultural products into Nepal (Nations Encyclopedia, 2003). There is also a need for a phytosanitary certificate which is an official document issued by the plant protection organization of the exporting country (Inspection.gc, 2009). This certificate would have to be provided by the Canadian government. These taxes must

be taken into account when calculating the total cost of the export process. Some other barriers include social differences, language barriers, and price confirmation.

Grants

There is a possibility that the Canadian government's agricultural department can be contacted and be requested for a grant because of the increasing discussions about tariffs between Canada and the WTO (Inspection.gc, 2010). There are also a number of grants offered to small businesses in Ontario which could benefit the trade. Lastly, Nepal's agricultural sector offers grants but would be much harder to obtain.

Unknowns

There are many unknown variables when considering this trade and it is important to understand these variables when determining the viability of this product succeeding in Nepal. If I was given more time and resources to investigate the possibility of Nepalese consumers being interested in Canadian products there would be a lot of variables that could be taken care of.

Future Plans

If the product doesn't end up selling well in Nepal, this trade idea could be tried in other parts of the world. It would have a high chance of success in developing nations and regions. Countries in Africa could prove to be reliable trade partners because carrots aren't very popular in Africa. Seeds could potentially grow in South Africa because of its much lower temperatures.

Alternatively carrots could be shipped to different parts of Africa because it would be much more difficult to grow carrots in the hotter temperatures of northern and central Africa.

Conclusion

In conclusion, exporting agricultural products from Canada to Nepal can prove to be beneficial to not only both of the countries but the whole world. Canada can benefit by this trade because if it were to succeed there would be an economic boost in our agricultural industry, more money could be spent on research and development therefore producing higher quality products, jobs would be produced because of the need for workers to perform labour in Canada, and Canada would have a stronger trading relationship with Nepal. This trade can greatly benefit Nepal because the citizens would be getting high quality carrot seeds, carrots have great nutritional value, jobs would be created boosting the economy of Nepal, and Nepal would have a stronger relationship with Canada. There are also many other benefits of this trade, for example the environmental benefits. Plants are great for the ecosystem and by planting more carrots the earth will be a healthier place.

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