

# Canada-Nepal Export Idea: Tree Fruit Picker

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## **Part 1 Product Information:**

### **Introduction of Product:**

The product of interest in this paper is the tree fruit picker. The tree fruit picker is a simple yet very effective tool that is used extensively by both large and small fruit producers. Fruit pickers are tools that are used by the producer to harvest different types of fruit from the higher limbs of fruit trees without having to use other props such as ladders and stools. The fruit picker is fitted with a handle that allows the producer to pick the fruit while standing on the ground. This reduces the risk of injury to both the farmer and the fruit tree. In this paper two different Canadian companies and their specific product will be analysed. The paper will cover the benefits of both the exporting country (Canada) and the importing country (Nepal) by giving a detailed analysis of costs and how this product might help benefit the agriculture sector of Nepal.

### **Description of Canadian Companies:**

Lee Valley and Gardena Canada are both companies that retail the tree fruit picker. Each company retails a different style and brand of fruit picker which will be covered in the paper. Both products have certain aspects that may be beneficial.

Lee Valley is a Canadian family owned business based out of Ottawa, Ontario (Lee Valley, 2015). Lee valley is a retail company that specializes in selling woodworking tools and gardening supplies to its customers (Lee Valley, 2015). Their line of woodworking tools are made by Veritas Tools Inc. while most of their gardening supplies and other tools are imported

from around the world. Lee valley was started in 1978 at a single location and has expanded to having 14 different store locations all over Canada (Lee Valley, 2015).

Gardena is a company based out of Germany which was founded in 1961 (Gardena Canada, 2015). Gardena prides itself in bringing high quality gardening tools and systems to their customers. Gardena is now represented in 80 different countries all over the world (Gardena Canada, 2015). They are also represented in Canada and can be found in Brampton, Ontario (Gardena Canada, 2015).

### **Description of products:**

Lee Valley offers a tree fruit picker as one of their retail items. The specific fruit picker is made up of a metal top with rounded tongs that are used to snag the fruit. There is a cotton bag that is attached to the bottom of the metal top so that once the fruit is plucked from the tree it falls into the bag reducing the bruising. The opening in the top of the fruit picker is a 4 inch opening which allows it to be used for many different types of fruit such as apples, pears, peaches, plums, etc. (Lee Valley, 2015). This fruit picker is manufactured with the ability to be attached to any regular broom handle but the product is not sold with the broom handle (Lee Valley, 2015). The fruit picker is manufactured in Germany and imported by Lee Valley (Linda Mac, Personal Communications, October 14, 2015). Lee valley then retails the fruit picker for a price of \$19.50 CDN which would include the metal top and the cotton bag (Lee Valley, 2015).

Gardena offers a combisystem fruit picker as one of their manufactured products. The combisystem fruit picker is a made up of a plastic top with rounded prongs to snag the fruit and pull it off of the tree. It has a cotton bag underneath to catch the fruit as it falls. The cotton bag

is removable so it can easily be washed to ensure cleanliness (Gardena Canada, 2015). The fruit picker is made to be fitted with a specific combisystem telescopic handle that is also retailed by Gardena. The combisystem telescopic handle is an adjustable handle that extends to a length of 5 meters (Gardena Canada, 2015). The retail price of the fruit picker and the cotton bag is \$37.99 CDN plus tax and the retail price of the telescopic handle is \$69.99 (Gardena Canada, personal communications, November 6, 2015).

	<b>Lee Valley Fruit Picker</b>	<b>Gardena Combisystem Fruit Picker</b>
<b>Products Needed</b>	Fruit Picker, Cotton Bag	Fruit Picker, Cotton Bag
	Broom Handle (optional since most Nepalese would have access already)	Telescopic Handle
<b>Price of Product (CAD)</b>	\$19.50 plus tax	\$37.99 plus tax
	\$0.00	\$69.99 plus tax
<b>Total Price (before shipping)</b>	\$19.50 plus tax	\$107.98 plus tax

**Figure 1:** A comparison of the products needed for each fruit picker and the price of the products. And the total price before shipping of the product.

When comparing the two products in **Figure 1**, it is easy to see that the Lee Valley picker is cheaper than the Gardena combisystem fruit picker. Now there are benefits to both products but the question is which will benefit the Nepalese people the most. The benefits of the Lee Valley fruit picker are that it is cheaper and can be fitted with any standard broom handle which also means that it could be fitted with any hand carved stick. This means that it could be more affordable to the lower income part of Nepal. The Gardena combisystem Fruit picker also has its benefits which include the angle of the picker to the handle can be adjusted making it easier to pick some fruit and its handle can be adjusted to the right height (Gardena Canada,

2015). The downside of Gardena's picker is the price. Since it is a tool that would only get used at harvest, this fruit picker may be too expensive for the average Nepalese to make it an efficient upgrade to his or her production system.

### **Brief Description of Fruit production in Canada:**

#### **Fruit Farm Cash Receipts by Province**

Province	2007	2008	2009	2010	2011	11/10
	\$ Thousand					
Newfoundland and Labrador	1,470	1,275	802	746	883	18.4%
Prince Edward Island	10,350	9,075	5,800	9,269	10,500	13.3%
Nova Scotia	48,590	47,038	35,516	43,087	43,966	2.0%
New Brunswick	36,308	30,616	18,133	27,191	31,957	17.5%
Quebec	141,507	182,045	155,355	120,452	170,172	41.3%
Ontario	232,622	232,831	216,882	207,615	203,197	-2.1%
Manitoba	1,820	1,470	1,832	X	X	X
Saskatchewan	1,310	1,315	1,545	X	X	X
Alberta	1,834	2,082	2,517	1,886	1,436	-23.9%
British Columbia	251,073	240,107	237,873	263,087	282,912	7.5%
<b>Canada</b>	<b>726,883</b>	<b>747,853</b>	<b>676,255</b>	<b>675,467</b>	<b>747,547</b>	<b>10.7%</b>

Note:

X: Suppressed to meet the confidentiality requirements of the Statistics Act.

Source: Statistics Canada (CANSIM Table no. 002-0001)

**Figure: 2** A table of the total fruit farm cash receipts from each province and a total of the fruit farm cash receipts in Canada per year from 2007-2011 (Statistics Canada, 2012).

Fruit production in Canada has done well and continues to grow. Most provinces, with the exception of Alberta and Ontario, have seen an increase in farm cash receipts in the year 2011 (Statistics Canada, 2012). The total fruit farm cash receipts in the year 2011 accumulated to be \$747.65 million (Statistics Canada, 2012). With an increase in production of fruit in Canada there was also an increase in the amount of fruit exported out of the country. The United States is the greatest importer of Canadian fruit and accounted for 59% of total fruit

exported in 2011 (Statistics Canada, 2012). Canada also imports a lot of fruit and about 49.5% of the total fruit imported was imported from the United States in 2011. Overall the import of fruit into Canada continues to grow and in 2011 imports increased by 10.59% (Statistics Canada, 2012).

### **Uses in Canada:**

In Canada the most common way of picking tree fruit is by hand and with the use of a ladder or by climbing the tree. People have always looked for a better way to get to the high branches of fruit trees and have tried to invent many different machines to harvest fruits such as apples. The tree fruit picker is a simple tool but, it is used by many producers both small and large scale operations. One Canadian Company that has benefited from the use of a fruit picker, is Applewood Farm and Winery, which is located in Stouffville, Ontario (Miller Sam, Personal Communications, November 27, 2015). Applewood Farm is a family owned and run company for forty years and allows people to harvest their own apples and they sell many of their own wines (Miller Sam, Personal Communications, November 27, 2015).

### **Manufacturing Information of the Product:**

From the current research that has been done, it has been concluded that the tree fruit picker is not manufactured in Canada by any companies. Lee valley's tree fruit picker is imported from Germany to Canada and retailed in Canada (Linda Mac, personal communications, October 14, 2015). Gardena's combisystem tree fruit picker and combisystem handle are both manufactured in Germany and imported to Canada by Gardena Canada

(Gardena Canada, personal communications, November 6, 2015). Both Lee Valley and Gardena Canada were unable to share information on the manufacturer for confidentiality reasons.

### **Inputs Required:**

The materials required to make the Lee Valley fruit picker would be cotton material to make the bag and chrome metal wire is used to make the top attachment (Currier Lindsay, personal communications, November 25, 2015). The machines that are needed to manufacture the fruit picker would be a simple wire bending machine to bend the chrome wire and a sewing machine to sew the cotton bag (Currier Lindsay, personal communications, November 25, 2015). There was not any information able to be given about the production of the Gardena combisystem fruit picker.

### **Market Opportunities and Benefits to Canada**

The manufacturing share in Canada has been in decline due to the steady regression in prices from relative items. Despite the decline in value of the manufacturing sector, it is still a very important part of the Canadian economy (Statistics Canada, 2012, Dec 19). This product is only manufactured in Germany but if it were to be exported to Nepal it could potentially open the opportunity to manufacture the product in Canada.

Some other benefits that it would have on the Canadian economy would be in areas such as, increasing the profit of the company, and increasing the amount of employees. It would also benefit the companies involved in transporting the item from in Canada to Nepal by creating

more job opportunities and profit. Overall there is not many potential benefits the product would have, therefore fruit pickers may not be in a high demand among Nepalese people.

## **PART II: EXPORT POTENTIAL TO NEPAL**

### **Brief Description of Nepal:**

Nepal is a country that is land locked between the borders of India and China. Nepal covers over 147,181 sq km of land (Leo E. Rose 2015). The capital city of Nepal is Kāthmāndu (Leo E. Rose 2015). Nepal has a very diverse climate and this is because it has the Himalayan Mountains that cross it. Nepal's land is split up into three different regions called the Tarai region, Hilly region, and the Mountainous region (Leo E. Rose 2015). The Tarai region often experiences subtropical climates. The Hilly region experience climates from warm to cool. The Mountainous regions have cool to freezing temperature for most of the year (Leo E. Rose 2015). Because of Nepal's diverse landscape and climate it allows the growth of many different crops and fruits. Nepal has reached a population of about 28 million people as of the year 2015 (Martin De Wulf, 2015).

Agriculture is the largest sector in Nepal and employs about 66% of the total population (Ministry of Agriculture Development, 2014). The agriculture sector also makes up for about 33% of the total GDP (Ministry of Agriculture Development, 2014). Given that information it is easy to see that any improvement to the agriculture sector will directly and positively affect the Nepalese economy.

### **Brief Description of Fruit Production in Nepal:**

Fruit production in Nepal is a very diverse and broad topic since the country ranges in altitudes from 100 meters above sea level up to 5000+ meters above sea levels (Devkota Nath Lok, 1999).

**Table 1. Characteristics of Physiographic Regions of Nepal**

<b>Features</b>	<b>Terai</b>	<b>Siwaliks</b>	<b>Middle Mountains</b>	<b>High Mountains</b>	<b>High Himal</b>
Land Area (Million ha)	3.1 (44%)	2 (12.7%)	4.4 (29.5%)	2 (19.7%)	2.4 (23.7%)
Geology	Quaternary alluvium	Tertiary sandstone, siltstone, shale & conglomerates	Phyllite, quartzite limestone and islands of granites	Gneiss, quartzite & mica shists	Gneiss, schist, limestone and Tethys sediments
Elevation	100-300 m	200 - 1500 m	800 - 2400 m. Relief 1500 m with isolated peaks to 2700 m	1000 - 4000 m High relief 3000 m from valley floor to ridges	2000 to 5000 m +
Climate	Tropical	Tropical, subtropical	Subtropical, warm temperate (but tropical in lower river valleys; cool temperate on high ridges)	Warm to cool temperate, alpine	Alpine to arctic (snow 6 - 12 months)
Moisture Regime	Subhumid in FW+MWDR; humid in W+C and FDR	Subhumid in most of the area; humid in N-aspect of W+C=EDR and Dun Valleys	Humid; perhumid above 2000 m	Subhumid to perhumid	Semi arid behind Himal
Rainfall Intensity	High	High	Medium	Low	Low
Horticultural crops	Mango, lychee pineapple, jack-fruit, potato, tomato	Mango, papaya, banana, potato	Mango, papaya, banana, orange, lime, lemon, peach plum, nectarine, persimmon, Asian pear, potato, cauliflower	Chestnut, walnut, apple, peach, plum, apricot, cherry, almonds, potato	

**Table 1:** Represents all of the different characteristics of each physiological region of Nepal including land area, elevation, climate, moisture, rainfall, and the horticulture crops (Devkota Nath Lok, 1999).

In **Table 1** it is shown that at 100-1500 meters only fruits such as mango, pineapple, lychee, papaya, banana, etc. are able to grow (Devkota Nath Lok, 1999). In **Table 1**, at levels from 800-2400 meters there are fruits such as orange, lime, lemon, peach, plum, nectarine, persimmon, Asian pear, etc. that are able to grow (Devkota Nath Lok, 1999). In **Table 1**, at the high levels of 1000-4000 meters there are only a couple of deciduous fruits that are able to be grown like apple, peach, plum, apricot, cherry, almonds, etc. Any area above 4000 meters there is very little vegetation and no fruit crops grown (Devkota Nath Lok, 1999).

Commercial fruit production is not a popular concept among the Nepalese people since the average person only owns about 6.5 ha in the Hilly regions and 1.8 ha in the Tarai regions of land in Nepal (Devkota Nath Lok, 1999). Most Nepalese only grow fruits for personal consumption and the leftovers are taken to local markets. Transporting the fruit can also be a hard thing for those who live up in the mountains since it would involve either walking or moving it with the use of an animal. Until the year 1925, when the Department of Agriculture was established, Nepal didn't produce many deciduous fruits which are now considered the most important fruit crop in Nepal (Devkota Nath Lok, 1999).

**Table 2. Total Area, Production and Productivity of Fruits in Nepal (1996/97 - End of the Ninth Five Year Plan)**

Fruit	Total Area (ha)	Productive Area (ha)	Total Production (MT)	Yield MT/ha
Deciduous (Temperate)	13261.00	9402	81640	8.68
Citrus	15923.59	9330	92994	9.97
Evergreen (Tropical)	33734.28	23553	253591	10.77
Total	62918.97	42285	428225	10.13

**Table 2:** Represents the total area and productive area in hectares of fruit that is grown in Nepal. The column total production is measured in metric tons of each kind of fruit produced.

The yield is measured in metric tons of fruit per a hectare of land for each type of fruit (Devkota Nath Lok, 1999).

Fruit production in Nepal is a growing sector but due to the scattered production of fruits all over Nepal it has not had a big effect on the commercial value of the fruits (Devkota Nath Lok, 1999). Out of the total land that Nepal covers, 14,718,100ha, about 62,918.97ha of that is fruit production (**Table 2**). Although this might seem like a small amount of fruit production, this is a sector with lots of potential in the future (Devkota Nath Lok, 1999).

### **Benefits to the Importing Nation (Nepal):**

There are a couple of different benefits that the fruit picker would potentially have to Nepalese producers. The fruit picker is a tool that is used to gather fruit from high in the top of different fruit trees so in that perspective it would allow the elimination of ladders and step stools that have the potential of malfunctioning and hurting someone (Lee Valley, 2015). Another benefit being it could help eliminate having people climbing the fruit trees putting themselves in danger and also possibly harming the tree (Lee Valley, 2015). The argument falls on whether or not it is a feasible improvement that can be made to a Nepalese production system. The fruit picker is a product that would only improve the safety and speed of harvest. It is also a tool that would only get used during the harvest season of the fruits.

### **Information:**

The general cost of shipping the tree fruit picker is based on sending 100 units of each product. This number is just a general and easy estimate since the actual price would not be able to be determined till the demand for the product was known.

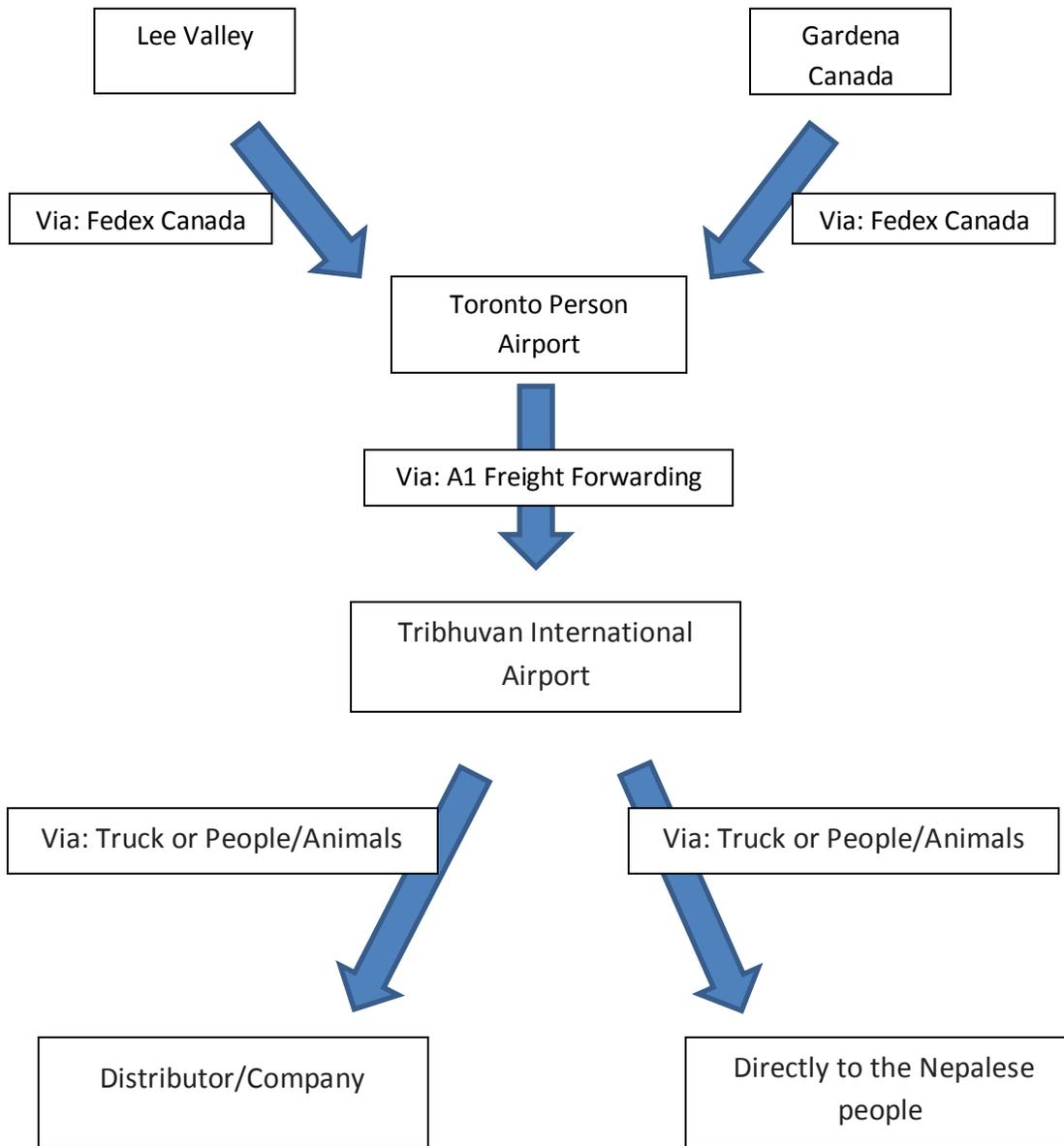
**Figure 3: Transportation Overview**

	<u>Lee Valley</u>	<u>Gardena Canada</u>
<b><u>Shipping Details</u></b>	Weight (1 unit): .5 lbs Weight (100 units): 50lbs Size: 10" long 5" wide 5" high	Weight (1 unit): 2.15 lbs Weight (100 units): 215 lbs Size: 63" long 2" wide 3" high
<b><u>In Canada Transportation</u></b>	The fruit picker would be sent via Fedex Canada FROM: 167 Chrislea Road Vaughan, ON TO: Toronto Person Airport  This is a quote and could change. Total Cost: \$24.79 CDN	The fruit picker would be sent via Fedex Canada FROM: 100 Summerlea Road, Brampton, ON TO: Toronto Person Airport  This is a quote and could change. Total Cost: \$879.00 CDN
<b><u>Over Seas Transportation</u></b>	The fruit picker would be sent via A1 Freight Forwarding FROM: Toronto Person Airport TO: Tribhuvan International Airport This is a quote and could change. Total Cost: \$353.52 CDN	The fruit picker would be sent via A1 Freight Forwarding FROM: Toronto Person Airport TO: Tribhuvan International Airport This is a quote and could change. Total Cost:\$556.80 CDN
<b><u>Total Quote=</u></b>	\$378.31 CDN	\$1435.80 CDN

**Figure 3:** Represents the costs of transportation of the product from the original company to Nepal.

Once the packages get to Tribhuvan International airport in Kathmandu, it would be transported either directly to the buyer or too a distribution company by way of Noble Logistics Nepal (P) Ltd which is a trucking company in Nepal. Distribution costs in Nepal would vary greatly depending on where it was going and whether or not a truck could transport it. Where trucks are not able to be used it would have to be transported by horses, people, etc. As shown in **Figure 3**, the Lee Valley fruit picker is a much more affordable item that the Gardena combisystem fruit picker.

**Transportation Flow Chart**



**Figure 4:** This is a flow chart representation of the route that will be needed to be taken and the potential way of getting it there.

**International Competition:**

There is not much competition when it comes to the tree fruit picker. The only other competition that was able to be found was the True Temper 8-ft Fruit Harvester. This product was being offered by multiple companies throughout the United States including Essential Hardware. Essential Hardware is based out of Edison, NJ, in the United States (Essential Hardware, 2005). The True Temper 8-ft Fruit Harvester that they offer is made out of enamelled steel. It is able to extend up to a length of 8 feet. The fruit picking head has metal prongs and the fruit falls into the metal cage that only has a little foam piece in the bottom to keep the fruit from getting bruised (Essential Hardware, 2005). This particular fruit picker is not as good of quality as the Lee Valley or combisystem fruit pickers.

**PART III: FUTURE STUDIES AND CONCLUSIONS:****Unknowns/Future Studies:**

To be able to export this product more studies would have to be done on the pricing such as looking into the exact size and shape of the packages being shipped since the figures given in this paper were just estimates. There would have to be more studies done on the specific demand or interest that would be shown by the Nepalese people and then also on how the fruit picker would be distributed in Nepal.

If the product were to be manufactured by a Canadian company research would have to be continued on the specific machines needed to manufacture the fruit picker. The specific

material used to make the fruit picker would have to be sourced and priced also. So overall if this product were to be shipped there would have to be more specific information gathered.

### **Conclusion:**

This paper went into depth about the idea of exporting a tree fruit picker tool to Nepal. This included looking into the Canadian fruit production system and evaluating how this tool might affect the Canadian economy both presently and potentially if it were to be exported to Nepal. It looked into fruit production sector in Nepal which was found to be both a growing and important sector of Nepalese agriculture. A pricing quote was given on the price of the product when sold in Canada and then a quote of how much it would cost too transport the product from Canada to Nepal. The two Canadian companies that offer the fruit picker are Lee Valley and Gardena Canada. The Lee Valley fruit picker proved to be the most affordable and efficient one that might be potentially exported. This is due to its ability to attach to any standard broom handle or stick carved to fit. The fruit picker offered by Gardena Canada was the more expensive unit and this is because it is telescopic, being able to extend when needed verses being stationary. Both fruit pickers would get the job done but the main purpose of the project is to benefit and increase the profitability of the average Nepalese farmer so, then the price of the tool being offered really makes an difference in whether or not it will increase profitability for a farmer. The fruit picking tool is a product that would only be used once a year and that is also something that must be taken into mind when considering this export idea.

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