

# Export Potential of Long Handled Apple Pickers to Nepal

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## Part 1: Product Information

### Product Description

The product whose export potential to Nepal that will be analyzed in this paper is a long-handled apple picker from Lee Valley Tools. Small scale farmers can use apple pickers to reach apples that are too high to reach by hand. This fruit picker consists of rounded metal fingers attached to a cotton bag, which is then attached to pole that is not provided (Lee Valley Tools, 2016). Depending on the size of the tree from which apples need to be picked, and the materials available, any number of poles may be used. These include broom handles or bamboo shoots. The pole can then be detached



Figure 1. Long-handled apple picker.  
<https://www.google.ca/search?q=lee+valley+apple+picker&espv=2&biw=1366&bih=662&source=lnms&tbn=isch&sa=X&ved=0ahUK>

after using the product and stored easily. The metal fingers are made from stainless steel and will not rust. The product does not require any special cleaning or storage techniques. The opening is 4” wide and the bag is 10” deep. This way, more than one apple can be picked at a time before it is necessary to empty the picker. The price for one unit is \$19.95 Canadian (Lee Valley Tools, 2016). The picker is very user friendly and would not be difficult for new users to learn how to use.

## Description of Company

Lee Valley Tools is the manufacturer of this product. Lee Valley Tools is a Canadian company that was established in 1978 by Leonard Lee in Ottawa, Ontario. They currently employ 800 people and have 17 store locations, as well as multiple manufacturing sites throughout Canada (Lee Valley Tools, 2016). Lee Valley Tools produces many products in Canada, but unfortunately does not disclose the manufacturing location of products not built in Canada or the United States (Lee Valley Tools, 2016). The apple-picker is one of these products. For research purposes, as well as personal interest, an apple picker from the Lee Valley website was purchased. The box that the apple-picker came in said product of Germany on it. For further information concerning Lee Valley Tools, and the products it manufactures, a company official can be reached by telephone at 1-800-267-8761, or by email at [customerservice@leevalley.com](mailto:customerservice@leevalley.com).

## Competition

Lee Valley Tools is the only Canadian company that produces long-handled apple pickers, but there are other fruit pickers that are currently on the market. Many of these products are priced at about the same level, ranging from \$18.56 to \$50.58 Canadian per unit. If a competitor had a manufacturing plant in either China or India they would have an advantage over Lee Valley Tools due to shipping costs. However, most of the competitors build their product in Europe as well, which would not offer any immediate advantage over Lee Valley Tools. The competitors all have slightly different designs but no design is obviously superior to another.

Manufacturer	Corporate HQ	Cost per Unit (CDN dollars) *plus tax	Contact Information
Lee Valley Tools	Ottawa, Canada	19.95	Phone: 1-800-267-8761 Email: customerservice@leevalley.com

Wolf Garten	Cleveland, United States	25.32	Phone: 763 746 7830 Email: bdillon@dillongroup.us
Burgon and Ball	Sheffield, England	18.56	Phone: N/A Email: maria@burgonandball.com
Darlac	Berkshire, England	50.58	Phone: 01753 547790 Email: N/A

Table 1. Long-handled apple pickers manufactures information (information from the table is from (Lee Valley Tools, 2016; Wolf Garten, 2016; Burgon and Ball, 2016 and Darlac, 2016).

### **Apple Industry in Canada**

The apple industry is an important contributor to the Canadian economy. In terms of tonnage of fruit produced, apples are the most significant fruit in Canada. They are also the second most valuable fruit, after blueberries (Makki, 2015). Apples represent 22% of the total fruit farm gate value in Canada (Makki, 2015). Apples, are picked by hand using an apple picking basket and ladders. These baskets may weigh up to 40lbs and climbing up and down ladders strains the body (Pat Behan, personal communication, November 27, 2016). In the past ten years, the apple industry in Canada has stagnated in terms of tonnes produced and the number of acres planted has decreased significantly (Makki, 2015). New plots that are planted are generally high density plantings. This method produces more apples per acre, though it is more expensive to plant than traditional or semi-dwarf trees, thus the same number of apples can be produced on less land (Makki, 2015). From a discussion with the owner of Moore Orchards in Cobourg Ontario it was learned that the major inputs for growing apples include: labour costs and chemicals such herbicides, pesticides, and fertilizers, as well as fuel and equipment repairs (Pat Behan, personal communication, November 27, 2016). The apple industry in Canada will most likely stay at about the same level of production for the foreseeable future unless wage increases continue to make apple production in Canada less competitive in the global market (Makki, 2015).

### **Benefits to Canada**

Exporting this product to Nepal would benefit Canada. Currently, it would not have a tremendous direct benefit, as the product is not manufactured in Canada. However, if Lee Valley Tools brought the production of this product to Canada this would create many manufacturing jobs. In 2014 the manufacturing industry in Canada made up 10.6% of the GDP in Canada (Statistics Canada, 2016). It also reached an all time high of \$621.7 billion dollars in 2014 (Statistics Canada, 2016). There would also be an increase in demand for stainless steel which could increase jobs in mining as well as manufacturing in Canada. There would be an increase in the number of sales jobs as well as translators at Lee Valley Tools, which would benefit Canada. There would also be a small positive impact in the transportation sector of Canada, as the product would need to be shipped across the country. Finally, exporting the product to Nepal would increase international trade between the two countries, potentially opening the door for future exports. The potential benefits for Canada would not have a very large impact on the overall Canadian economy due to the limited number of products that would be produced and shipped, but it would have a comparatively large positive impact on a Canadian company, Lee Valley Tools.

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

### **Brief Introduction to Nepal**

Nepal is a small landlocked country in south-eastern Asia. It is located between two world powers, China and India. As of July 2016, Nepal had an estimated population of 29,033,914 people and an area of 147,181 sq. km (CIA, 2016). The main religion in Nepal is Hindu, while the official language is Nepali, though a myriad of other religions and languages are practiced and spoken. Unfortunately, Nepal is an extremely poor country whose GDP per capita is only

\$691 American dollars per year (UN, 2016). Agriculture employs about 70% of the population and accounts for 32.5% of the GDP (UN, 2016). Nepal is also a food deprived country and does not produce enough food to feed itself.

From a geographic perspective, Nepal is divided into three main agro-ecological regions; Mountain, Hill, and Terai (see Figure 2). Mountain comprises 38% of the country and is not an overly productive agricultural region (Chapagain, 2016). The main farming technique is nomadic herding and few people live there (Chapagain, 2016). The Hill region makes up 42% of the country and much of the population resides there. Terrace farming of maize and millet is common and this area is suitable for a variety of other fruits as well as animal production (Chapagain, 2016). Finally, the Terai region makes up 23% of the country and is quite flat. This allows for mechanized rice production to take place. The Terai region's tropical climate is also suitable to produce many vegetables and tropical fruits (Chapagain, 2016).

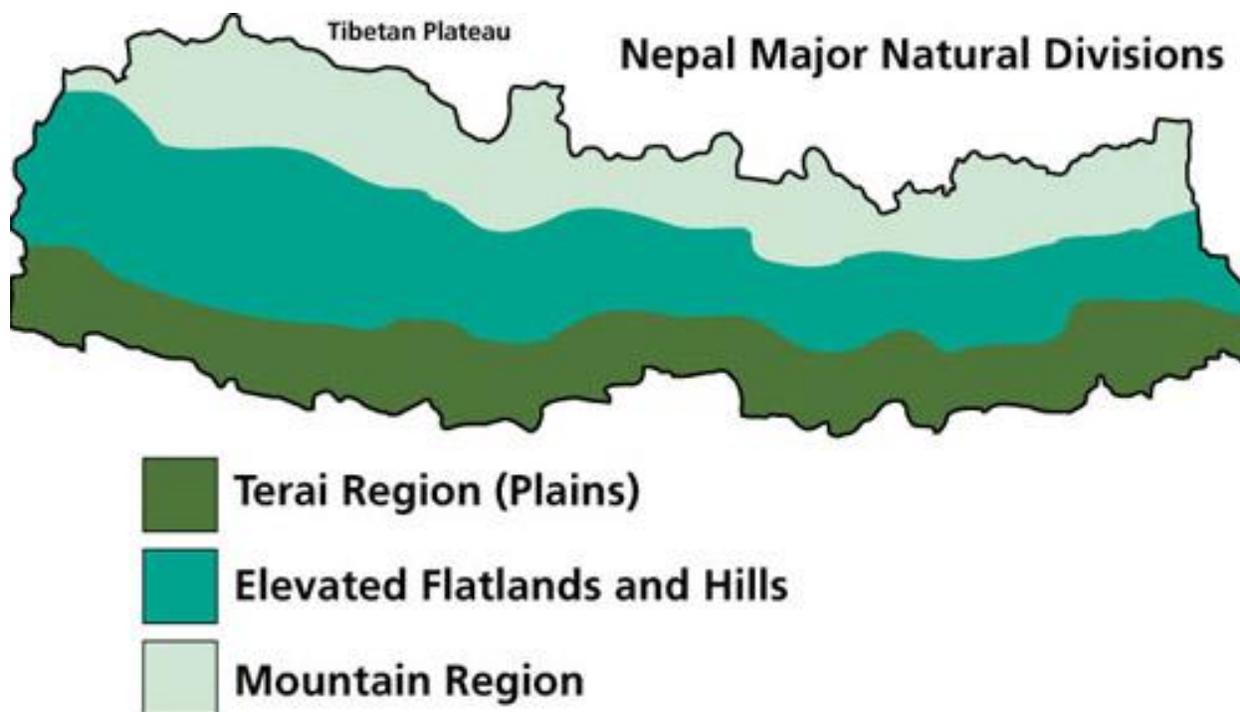


Figure 2. The geographic divisions of Nepal.

[https://www.google.ca/search?q=geographic+regions+of+nepal&espv=2&biw=1366&bih=662&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjR2fDV-8zQAhVC5WMKHenFBaUQ\\_AUIBigB#imgrc=FQ-VXpjN9ifvuM%3A](https://www.google.ca/search?q=geographic+regions+of+nepal&espv=2&biw=1366&bih=662&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjR2fDV-8zQAhVC5WMKHenFBaUQ_AUIBigB#imgrc=FQ-VXpjN9ifvuM%3A)

## **Apple Industry in Nepal**

Growing apples is not a traditional industry in Nepal. Despite this fact, apples are the most popular deciduous fruit to plant in Nepal as Table 2 demonstrates. This is most likely because apples are a high value crop that have the potential to increase farmers' incomes and thus improve their lives. Apples are also ideally suited to the climate of the Hills region of Nepal. For these reasons the government of Nepal is currently offering incentives to help farmers establish new orchards, so this industry will be increasing in both acreage and importance. In Jumla (a region in Nepal), the government wants upwards of 80% of households to have an apple orchard of at least 25 trees (Christensen and Gaire, 2015). To accomplish this goal, the government will be providing training and subsidizing many of the costs associated with creating and running an orchard for 4 years, beginning in 2015 (Christensen and Gaire, 2015).

The geography of Nepal offers many challenges to apple producers. These challenges include rough and uneven terrain, that is unsuitable for the safe use of ladders, as well as very poor infrastructure, which makes transporting the product to market very difficult and costly to do. If the apple industry is going to increase in importance then infrastructure must improve, to allow for quick and easy transportation of the apples to market. Another major drawback to apple production Nepal is apple and pest diseases. Many pests and diseases affect apples. In Canada, these problems can be dealt with by using an integrated pest management system which utilizes both preventative methods and reactive methods to combat these issues (OMAFRA, 2009). Due to the high costs associated with this system, it is not feasible for Nepalese farmers to implement. Thus, high rates of lost and or damaged fruits are observed (FAO, 2002). For Nepalese farmers to obtain high yields of quality apples, they will need access to training on how and when to

apply pesticides, fungicides, herbicides, and fertilizers, as well as access to low cost versions of these products.

<b>Fruit</b>	<b>Total Area (ha)</b>	<b>Productive Area (ha)</b>	<b>Production (Mt/ha)</b>	<b>Yield Mt/ha</b>
Apple	4652	3006	28595	9.51
Pear	3049	2381	27339	11.48
Peach	2143	1765	12819	7.26
Plum	1441	1179	8294	7.03
Apricot	97	63	431	6.84
Persimmon	71	45	328	7.29
Total	11392	8439	77806	

Table 2. Area, Production, and Productivity of Deciduous Fruit in Nepal (FAO, 1997)  
<http://www.fao.org/docrep/004/ab985e/ab985e09.htm>

## **Transportation**

Transporting the apple-picker to Nepal would pose a serious problem. To estimate the cost of shipping the product to Nepal, various websites were used to compare the costs of different methods of shipping. 500 units was estimated as the total number of units to be shipped, which is most likely on the high range of products that would be exported, to show what the cost would be in an ideal situation (more product shipped=lower cost per unit). As Table 3 demonstrates the cost of shipping 500 units to Nepal would still be quite high. Distributing the product throughout Nepal poses another problem as many of the locations where apples are grown are remote, with very little infrastructure serving them (FAO, 2002). Transportation issues may ultimately prove to be the deal breaker for this product, unless a lower cost product can be located or transportation costs can be diminished greatly.

Shipping Method in Canada	Not needed (ship directly from Toronto to Kathmandu) Cost: \$0	Shipped by truck by FedEx from Toronto to Vancouver Cost: \$5095.80
International Shipping	Shipped by plane by A1 Freight Cost: \$1434.37	Shipped by cargo boat by A1 Freight Cost: \$524.37
Total Cost	\$1433.37	\$5620.17

Table 3. Costs of shipping 500 apple-pickers to Nepal (Dimension of 1 unit 5-inch height, 5-inch width, 10-inch length, 0.5 lbs).

### **Export Regulations**

To export a commercial good from Canada, a business number is needed, as well as a general export permit (CBSA, 2016). An export declaration would also be required, as the amount of goods would exceed \$2000 Canadian dollars (CBSA, 2016). The long-handled apple picker would not require any other special permits, because it is not a restricted product in either the exporting country of Canada or the importing country of Nepal (CBSA, 2016). Most of the rules and regulations would be familiar to Lee Valley Tools, as they distribute products worldwide and would be used to dealing with international regulations on a regular basis (Lee Valley Tools, 2016).

### **Benefits to Nepal**

The apple picker would benefit Nepal. Labour is the biggest expense in apple production (Pat Behan, personal communication November 27, 2016) and this product would make a single labourer more efficient at picking fruit from the tops of trees. Also, despite the cost of shipping the product to Nepal, it would still be cheaper than buying a new aluminum picking ladder and

much more versatile on uneven terrain. The apple picker would allow for the safe and efficient harvest of fruit from the tops of trees. It could also increase yields, as all the fruit from the tree could be harvested. Unfortunately, this potential yield increase would be minimal to non-existent depending on whether the producers were already able to harvest the apples from the tops of the trees using another method of harvest. It could also be used to harvest produce from other fruit bearing trees that are grown in Nepal, such as pears and peaches, making the product a better investment for farmers. The increased revenue that producers make by using this product can be used to improve people's lives. It may, however, be difficult to convince producers that the potential safety/yield benefits would outweigh the initial cost of purchasing the product.

### **Market in Nepal**

Currently the apple picker would serve a niche market in Nepal, due to the lack of apple growers. An increase in the importance of the apple industry would lead to more potential sales. Sales would most likely be in the hundreds, due to the lack of growers and the comparatively high costs associated with buying the product. These limitations would limit the product to large apple producers, those who could afford the product, not small land holders, who may benefit the most from owning an apple picker. One way of combatting this issue would be for small farmers to create a co-op, sharing the cost of purchasing the product. This could work well, as many farms are small scale operations with as little as one or two trees. These producers would not be able to purchase their own apple-picker but could pool funds and share the product. Another way of increasing the number of units being sold would be to advertise the apple-picker as a multi-fruit picker. This would increase the number of potential buyers but would still result in the apple-picker being in a niche market.

### **Distribution in Nepal**

Distributing the product in Nepal would be difficult due to the lack of infrastructure in apple growing regions of Nepal (FAO, 2002). The product could be transported using trucks once it reached Nepal or, due to its small size, it could even be transported in small numbers by smaller vehicles such as motorcycles, which may be better able to access more remote regions of Nepal. A successful strategy to market the apple picker in Nepal could involve contacting the Nepal Ministry of Agricultural Development by phone at 01-4211665 or by email at ykkarkee@hotmail.com and seeing if they would be interested in helping finance the cost of a picker as a part of their mission to increase apple orchards (MOAD, 2016). The government is already planning to provide incentives and training to increase apple production, so it would be a simple matter for them to include this product in an “orchard starter pack”.

### **Unknown/Future Studies**

Research would need to be done to determine exactly how many units would be needed, as well as to gauge the interest of the Nepalese people in this product. If it were found that the Nepalese farmers were not interested in this product without considering costs, then no further research would need to be done. With the information found from these studies, better estimates could be obtained from transportation companies and a more realistic picture of the export potential could be obtained. It is also unknown how much the apple industry in Nepal will grow in the future. If the industry sees dramatic increases in acreage, it may become more likely that the product would be needed. These findings will thus affect the viability of venture.

## **Recommendation**

I would recommend that Lee Valley Tools produces this product at a factory in India and ships the apple picker directly to Nepal. This would cut down on costs greatly and make the export of long-handled apple pickers a more viable option. Another recommendation would be for Nepalese farmers to simply build their own versions of the long-handled apple picker with local materials. It would not be too difficult to fashion an apple picker of sorts out of wood and a canvas bag. This may not result in the best-looking product, but it would ultimately accomplish the same goal at little to no cost to producers. This would not involve Canada unless Canadians came up with a way of teaching people how to build an apple-picker and then travelled to Nepal and taught people there. Even then the benefits to Canada would be minimal.

## **Conclusion**

In conclusion, Lee Valley Tools is the only Canadian company that produces a long-handled apple picker. International competitors do not have a significant advantage over Lee Valley Tools when it comes to exporting the product to Nepal. The apple industry in Canada is an important contributor to the Canadian economy. Exporting the long-handled apple picker to Nepal would benefit Canada by potentially increasing jobs in manufacturing, transportation, and sales, all the while helping a Canadian company become more successful and opening the doors to future exports.

Nepal is poor country, impaired by poor infrastructure, that would benefit from increased apple production. The government of Nepal has recognized this and is offering incentives to increase the number of acres of apples in production. Despite this, the market for a long-handled apple

picker would most likely be very limited, due to the lack of producers and the costs associated with buying the product.

It would not be economically viable to produce the long-handled apple picker in Canada and ship it to Nepal. It would make more sense economically to produce the product in India and ship it directly to Nepal. This would not offer as many direct benefits to Canada but it would still have a positive impact on Nepal. It would be expected that the apple-picker would benefit Nepal in a significant way. Being able to increase yields by picking all the available fruit from the tops of trees on uneven terrain, where ladders would not be safe, makes this product ideal for use in Nepal. The easy-to-use and -store design, also makes this product suitable for use in Nepal.

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