

# **Canada to Nepal Export idea: Univerco's Ecoweeder**

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## **Introduction**

This paper has been created for show the benefits and challenges in sending Univerco's Ecoweeder to Nepal. Outlined below are the benefits for Nepal and for Canada in exporting this piece of machinery, required factors in order for this product to work, global competitors and much more.

## **Part 1- Information about the Univerco Ecoweeder and Canadian benefits.**

### **Univerco and the Ecoweeder**

Univerco is a very small Canadian company in Napierville, Quebec, Canada. This company was founded in 1987 by Mr. Pierre Bisaillon. When Bisaillon first opened his business it was named Équipement Universal (Bisaillon, 2016). With the growing demand for their products, the company name was changed to Univerco, making the company more diverse allowing them to reach out to more consumers. Today, Univerco employs 25 people with jobs in manufacturing, sales and marketing (Bisaillon, 2016). The Ecoweeder, a ride on weeder pulled by tractor, was manufactured in 1999 mainly for weeding young crops or crops that are low to the ground such as corn, seedlings or soybeans. Once the demand became larger the weeder was used for a more diverse variety of crops from legumes to small trees (Bisaillon, 2016).

This weeder is non-hydraulic. Instead of using hydraulics to make the weeder work, there is a belt inside that spins to turn the disks of the weeder. This piece of equipment is attached to the tractor with a three-point hitch. The product allows for easy detachment and the most effective way to attach, pull and lift the weeder off the ground when not in use. The Ecoweeder has a power take-off of 540 revolutions per minute (Univerco, 2016). A power take-off is the amount of allowed power that is able to go into able piece of equipment at once. The measurements of the weeder are as follows; 1.13 meters in length, 1.22 meter in height and 1.42 meters in width. Altogether the weeder weighs 159 kilograms and is completely made of metal excluding the seat and the handles (Univerco, 2016). The Ecoweeder is useful for crops in small fields and farms with little man power. The weeder has two disks with sharp vertical prongs

coming out the bottom which protrude through the soil to reach the roots of the weeds. The disks are attached to poles with handles on the end for the person riding on the weeder to maneuver the disks around the crops and into the weeds.



**Figure 1 The Ecoweeder** <http://www.univerco.com/en/home/>

The Ecoweeder has adjustable wheels that account for different width rows depending on what type of crop is being grown. The adjustments go from 0.61 meters to 1.22 meters, center to center. There are attachments for the Ecoweeder to make it more efficient, pieces are able to be purchased to weed two rows at once instead of one. (Univerco, 2016)

**Figure 2 Ecoweeder disks**



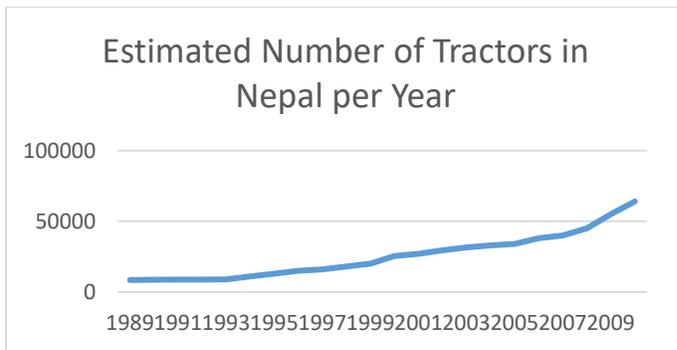
<http://www.univerco.com/en/home/>

**Table 1 Ecoweeder features**

**Other required factors**

Weight	159 kg
Length	2.13 meters
Height	1.22 meters
width	1.42 meters
Wheel Adjustments	0.61 meters – 1.22 meters center to center
Power take off PTO	540 RPM
Hitch type	3 point hitch

The Ecoweeder is a tractor pulled weeder. This will be a challenge, however the tractor required is a mere 20 horsepower. (Univerco, 2016). In Asia, some of the major tractor manufactures are TAFE, Escorts and Gujarat Tractors (Mandal & Maity, 2013). The number of tractors in Nepal is increasing every year. The total amount of registered tractors in Nepal in 2012 was approximately 64164 (Shrestha, 2012). Although livestock is the primary mechanism used for plowing, with the numbers climbing, a need for a tractor shouldn't be too much of a factor in making this product a valid idea to help Nepal.



**Figure 3 An approximated number of tractors registered in Nepal each year. (medal)**

Due to the fact that this is a ride on weeder pulled by a tractor, there are two people required to work the machinery. One person drives the tractor making sure it pulls the weeder straight through the crop's rows and the other person sits upon the weeder working the disks to

make sure all the weeds are removed and the crops are intact after the weeder runs through the row. In Nepal the average family size is 5, three children and two parents (Stash, 1996). Therefore, finding two people to work the weeder and the tractor on a farm should not be difficult.

### **Canadian benefits of sending the Ecoweeder to Nepal**

Sending the Ecoweeder to Nepal Would benefit Canada in many ways. Univerco, the Ecoweeder manufacturers are solely base out of Napierville, Quebec, Canada. Consequently, all the profit made by selling their product would go straight to them. Seeing how this company is small, only 25 employees (Bisaillon, 2016), every order for one of their products helps ensure jobs for Canadians in the agricultural industrial sector. Almost all Univerco's suppliers are Canadian(Bisaillon,2016). Therefore, sending Ecoweeders to Nepal would not only benefit the employees and the company but any company affiliated with Univerco would benefit from it as well.

This will create profit for multitudinous Canadian companies and give jobs to many Canadians. By sending this weeder to Nepal, there will be a larger percentage of crops kept healthy and sellable. As well and cutting down the amount of time spend on a tedious task drastically. By allowing this there will be more time available for furthering their knowledge in the farming industry and helping to introduce other crops in the future that are able to be exported back to Canada to further processing that Nepal cannot complete on its own, which would create more availability for jobs in Canada. Nepalese farmers could also eventually export certain crops for Canadian farmers to plant or even for just for consuming.

### **Responses of Ecoweeder Users**

“Yes, I would absolutely recommend it” said Peach. He says it's a great product, Peach has had the Ecoweeder for 7 or 8 years now and it is still in very good shape. “I've saved so much work and money in time and labour with this machine” he says. What used to take a week to weed can now be done in under a day. Since it is only three people, himself, his wife and an employee they need all the help they can get to take away the time they spend on small projects. Peach says the only problem with the Ecoweeder is you have to make sure you adjust your wheel width according to your row width because if you don't it will be next to impossible to use the weeder efficiently states Peach. (Peach, 2016)

“My experience with the Ecoweeder has been very positive.” My main market consists of people who do not want herbicide associated with their food. I am able to use this machine to mechanically remove weeds with great precision and significant savings of labour. The essence of this machine is to be able to focus the power of the tractors engine in conjunction with the dexterity of the human hand says Carter. “This machine is fool proof. I have never had any problems with the Ecoweeder. I have had my children working the weeder since they were ten years old” (Carter, 2016).

## **Part 2- Export potential of the Ecoweeder to Nepal and Nepalese benefits.**

### **Nepal**

The country of Nepal is landlocked between India and China. India surrounds the country on the east, south and west borders of Nepal and China borders the north. The small country covers approximately 147000 square kilometers (Consing, 1963).

Nepal is populated with about 28 million people (Chapagain, 2016), 69 times less than the population of China and nearly 46 times less than India (Kansakar, 2012). The most populated city of Nepal is Kathmandu; this is also the capital of the country (Nepal Gov. 2015). Tourism is one of Nepal’s largest industries.



<http://www.nepalmountainnews.com/cms/archives/88397>

This is mostly because of the Himalayas and Mount Everest. The

Himalayas are the largest mountains in the world and Mount Everest is the world’s highest summit these attractions have pulled people from all across the globe to come to Nepal (Thapa, 2012). Nepal is separated into three regions. The first being the mountain region maked up 35 percent of the land. This region has the smallest amount of crop

farms due to the climate and the shorter glowing season. The soil is a dry sandy loam with lots of small pebbles, it is not fertile land. 28 percent of the mountain region is irrigated (Ba`umler & Zech, 1994). The main source of income in the mountain



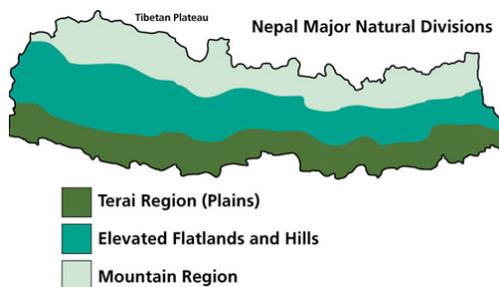
region is livestock as grazing crops are the easiest to grow (Ba`umler & Zech, 1994). The second region in Nepal is the hill region which makes up 42 percent of the country. This

region's soil has a cla

loam to sandy loam. 29 percent of the soil is irrigated (Chapaging, 2016). The hill region has a warm temperate climate. The most common crops in the hill region are maize and millet as well as certain fruits and coffee. The most common mode of transportation in the hills still depends on mules and sheep (Chapagain, 2016). The last and smallest region of Nepal is the terai which takes up 23 percent of the land. In this region, 57 percent of the highly fertile soil is irrigated. The most popular crop grown in the terai is rice but it also a good climate to grow mangos, pineapples and papaya.



<http://www.johntyman.com/nepal/02.html>



**Figure 6 The three regions on Nepal**

<http://supnepal.blogspot.ca/2011/02/terai-region-of-nepal.html>

### **Transportation of the Ecoweeder**

Seeing how large the Ecoweeder will be, transportation will be quite the challenge. The easiest and cheapest way to ship the weeder would be across the ocean by container ship. Referencing A1 freight shipping, the estimated cost to ship this product from Montreal to New Delhi, India would be approximately \$456.21 Canadian dollars or 36935.24 Nepalese Rupees. (A1 freight shipping, 2016). After the package was delivered to New Delhi, it would have to be taken by truck the rest of the way to the Nepalese village it was ordered for.

### **Nepal benefits of the Ecoweeder**

Nepal would benefit tremendously from Univerco's Ecoweeder. Since there is a labour shortage in Nepal (Chapagain, 2016), having a weeder like this will drastically reduce the amount of physical labour and time spent on weeding. With this weeder, there will be no need

for herbicides, therefore the farmers won't have to keep purchasing chemicals to spray their plants. In Nepal, 3.05 million dollars a year are spent on pesticides, 7.43 percent of these pesticides are herbicides. This means by eliminating the use of herbicides in Nepal, the country would save almost 226,000 dollars a year (Sharma, Thapa, Manandhar, Shrestha, & Pradhan, 2013). Eliminating the use of herbicide will also make the crops safer for consumption and increase the price of them. Crops that are herbicide free are a bigger attraction. This will attract tourists and people of high economic status. These benefits will not only help the farmer but will also help the children and women of Nepal by providing safer produce for them to consume, saving money and making their work day easier.

### **Market for the Ecoweeder in Nepal**

On the grounds that Nepalese farms are usually very small, it would be uneconomical for one family, or farm, to purchase an Ecoweeder alone. Sending Ecoweeders to Nepal would not be a continuous business. There would not be a distributor in Nepal needed for the Ecoweeder to be sold there. With the average number of households per village being 92 with a standard deviation of 11.3 (Bajracharya, Furley, & Newton), and with weeding only having to be done every so often, a village should be able to fundraise and buy one Ecoweeder together instead of a family or farm individually purchasing one.

### **Global competition of the Ecoweeder**

There are products somewhat similar to the Ecoweeder but none uncovered that are exact. Firstly, there is a vertical axis rotary brush weeder. This piece of machinery is very similar to the Univerco Ecoweeder but has a very large difference; instead of using vertical metal prongs to remove the weeds, there are stiff brushes that take the weeds out of the ground. This option is an older invention and is not as suitable for stronger weeds (Univerco, 2016). This option may be better for the people of Nepal since their soil isn't as tough as Canadian soil, it is looser and sandier which would make it easier for the brushes of the vertical brush weeder to dig through the soil to the root of the weed there. This option is also cheaper and is manufactured in Europe, making shipping cheaper and easier (Melander, 1997). There is also a company in Italy that manufactures a weeding mechanism that is very similar to the Ecoweeder but it is hydraulic

making it more expensive than the Ecoweeder.

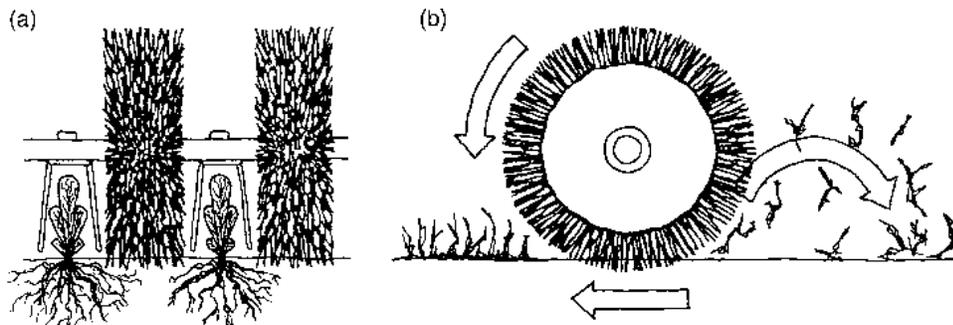


Figure 4-12 Brush hoe. (a) View from rear, showing tunnel shields. (b) Side view. (Redrawn from Pedersen, 1990.)

**Figure 4 The vertical Axis Rotary Brush Weeder** <http://www.progressivegardening.com/weed-management/narrow-tools-vegetable-knives-disk-hillers-spyders-basket-weeders-and-brush-weeders.html>

### Exportation documentation

Certain documents needed to export out of Canada are, a certificate of origin which is a signed paper from the manufacturer of the product stating that the product is indeed of Canadian origin. A commercial invoice is also required. This is prepared by the exporter, the foreign buyer requires this to prove that they bought the item being shipped (FedEx, 2016). A business number with an import-export account is required as well (Canada Business Network, 2016).

### Cost of weeder

The Ecoweeder will cost approximately 5000 dollars to purchase and 456 dollars to ship overseas. Altogether this would be approximately 443838.55 Nepalese Rupees. With Nepalese's income being around 50 Canadian dollars a month (USAID, 2016), The cost of the Ecoweeder is economically impossible for the Nepalese to afford.

**Table 2 Total costs for the Ecoweeder**

	Canadian Dollars	Nepalese Rupees
Approximate cost of the Ecoweeder	5000.00	409754.36
Approximate Shipping costs	456.00	37369.60
Total	5456.00	447123.96

## **Challenges of sending the Ecoweeder to Nepal**

There have been many challenges with the exportation of the Ecoweeder to Nepal. Initially, there was no way to get a hold of anyone in Nepal as the phone used would not allow overseas calling. There is however a Nepal embassy in Ottawa which was contacted but no response from them was giving after many attempts to connect. This weeder would be much more beneficial if it could be pulled by livestock but unfortunately it needs to be powered with a motor from another machine. With the cost of the weeder and the cost of shipping it will be very far out of the price range of a Nepalese village even with fundraising.

## **Is this a realistic idea?**

As beneficial Univerco's Ecoweeder would be for Nepalese farmers, this is not a realistic idea. The Ecoweeder alone will cost 5000 Canadian dollars. With shipping, the product will become about 5500 dollars which is not economically feasible. Even with fundraising and international help from organizations in other countries, this still wouldn't make sense as a tractor is needed to pull it and tractors require a lot of upkeep plus fuel. If there was a weeder similar to the Ecoweeder but pulled by livestock, it would be much more practical for Nepal.

## **Conclusion**

In my experience and from the reviews received from others, the Ecoweeder has been tremendously helpful and effective in reducing the time it takes to precisely remove all the weeds from a crop while assuring the crop is left securely in the ground to finish maturing. It is easy to attach to the tractor and easy to use. This product would be beneficial to Canada by providing extra jobs for Canadians in the industrial sector and the industrial agricultural sector. The Ecoweeder, if sent to Nepal would limit the amount of physical labour in the run of the day for farmers and eliminate any herbicides used which will provide safer products for consumption and reduce the day to day cost of maintaining the crops in the field. Although this product would be economically challenging to send to Nepal it would provide a great deal of benefits for both Nepal and Canada.

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