

The Potential to Increase Jute Production to Benefit both Canada and Nepal

The Potential to Increase Jute Production in Nepal to Benefit both Canada and Nepal

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## Part I

### Nepal and Jute Production

The country of Nepal is located in south-east Asia, land locked between China and India (Whepton, 1990). There are three main topographical regions in Nepal; the mountain regions where there are some nomadic livestock herders, next are the hill regions where small scale livestock and crop farming occurs on terraces, and finally there is the terai region or otherwise known as the plains region, this is the area where most of the agriculture in Nepal occurs because the land is the most fertile and easiest to manage (Whepton, 1990).

The following figure shows the country of Nepal bordered by both China and India and also analyzes the elevation of the entire country, green being the lowest elevation and white representing the highest mountain peaks of the Himalayan Mountain Range.

(Figure 1)

[https://www.google.ca/search?hl=en&site=imghp&tbo=isch&source=hp&biw=1366&bih=643&q=nepal&oq=nepal&gs\\_l=img.3..0l10.5096.6647.0.6965.54.0.1.1.0.84.305.4.4.0...0...1ac.1.58.img..0.5.313.veM2CvdLOOQ#hl=en&tbo=isch&q=nepal+topographical+map&facrc=&imgdii=&imgrc=cOXVmb0YuNKmtM%253A%3B38](https://www.google.ca/search?hl=en&site=imghp&tbo=isch&source=hp&biw=1366&bih=643&q=nepal&oq=nepal&gs_l=img.3..0l10.5096.6647.0.6965.54.0.1.1.0.84.305.4.4.0...0...1ac.1.58.img..0.5.313.veM2CvdLOOQ#hl=en&tbo=isch&q=nepal+topographical+map&facrc=&imgdii=&imgrc=cOXVmb0YuNKmtM%253A%3B38)



[HFDnHUHNyKM%3Bhttp%253A%252F%252Fwww.worldofmaps.net%252Fuploads%252Fpics%252Ftopographische-karte-nepal.jpg%3Bhttp%253A%252F%252Fwww.worldofmaps.net%252Fen%252Fasia%252Fmap-nepal%252Ftopographic-map-nepal.htm%3B1400%3B852](http://www.worldofmaps.net/uploads/pics/topographische-karte-nepal.jpg)

In the plains there are threats of floods and with that comes soil erosion and crop damage (Whepton, 1990). Therefore the most efficient crop species are planted, which often happens to

be sugar cane, corn, and rice (Ghimire and Yadav, 2014). Another crop grow in Nepal is a vegetable called jute; this is a long, shiny and fibrous plant, whose fibre is used for burlap bags and string (Dipankar, 2006). Jute is a very labour intensive crop and has decreased in production quite drastically; it used to be a major part of Nepal's export but in recent years they have been unable to export as much because the competition for arable land is rising and jute often comes second to more efficient and profitable crops (Ghimire and Yadav, 2014). Jute is a biodegradable natural fibre, which is why the United Nations wishes to increase the use of jute fibre instead of synthetically made plastic fibre (Dipankar, 2006). In the last few decades, production of jute decreased in Nepal because plastic fibres were about 50% cheaper; in the recent years however with the push for environmental stability, export potential and market demand has risen (Dipankar, 2006).

**(Figure 2)**

[https://www.google.ca/search?hl=en&site=imghp&tbo=isch&source=hp&biw=1366&bih=643&q=nepal&oq=nepal&gs\\_l=img.3..0l10.5096.664.7.6965.5.4.0.1.1.0.84.305.4.4.0....0...1ac.1.58.img..0.5.313.veMZCvdLOOQ#hl=en&tbo=isch&q=jute&imgdii=](https://www.google.ca/search?hl=en&site=imghp&tbo=isch&source=hp&biw=1366&bih=643&q=nepal&oq=nepal&gs_l=img.3..0l10.5096.664.7.6965.5.4.0.1.1.0.84.305.4.4.0....0...1ac.1.58.img..0.5.313.veMZCvdLOOQ#hl=en&tbo=isch&q=jute&imgdii=)

Jute is traditional crop in Nepal and once held a great portion of their economic value, this could happen again if the production of jute increased (Ghimire and Yadav, 2014). Most of the jute farmers in Nepal now are the older generation and the younger families do not want to start farming jute because it is very labour intensive and not economically beneficial (Ghimire and Yadav, 2014). However, if time and effort was invested into jute production there is a huge potential for the jute industry in Nepal to have a break through and have great benefits to Nepal.

**Issues Facing Jute Production**

There are many issues in the current jute industry and many possible ways to help increase the production of jute. One problem facing jute production is the seed that they are using because it is genetically low yielding and not uniform in size and tolerance to the



environment (Ghimire and Yadav, 2014). Currently there is research being done to improve the genetics of jute seed to help increase yield and therefore increase the revenue for the farmer (Ghimire and Yadav, 2014). As mentioned before jute production is very labour intensive and therefore not always appealing for new farmers. Jute is being sown by hand and later thinned out by hand as well; these two steps are the most labour intensive and very straining for the body. One solution is to use a seed spreader to make the sowing process much faster and easier, this would also in turn distribute the product much more uniformly and therefore the thinning out process would be less work. Unfortunately the farmers will still have to thin out the crop to some extent but not nearly as much as when the seed is sown by hand. This would also lead to less wasting of seed and in return not cost the producers as much money. In the devolving counties such as the USA, Canada, and the western European counties there has been a large push towards environmentally friendly resource; this means natural fibres instead of synthetically made plastics (Dipankar, 2006). This trend is creating a demand and can help Nepal open a market to these developing countries; Nepal just has to be able to fill the supply of jute fibres.

### Product to be Exported

The intended product to be exported to Nepal is a seed spreader; the kind used for home use for lawn care. The spreader has the capacity to hold up to 80 lbs of seed; the flow of the seeds is able to be manually adjusted with a leaver on the handle (Home Hardware, 2014).

(Figure 3) [http://www.homehardware.ca/en/rec/index.htm/Outdoor-Living/Yard-Maintenance/Garden-Tools/Fertilizer/Spreaders/80lb-Capacity-Deluxe-Broadcast-Fertilizer-Spreader/\\_N-2pqfZ67l/Ne-67n/Ntk>All\\_EN/R-I5132698?Ntt=spreader](http://www.homehardware.ca/en/rec/index.htm/Outdoor-Living/Yard-Maintenance/Garden-Tools/Fertilizer/Spreaders/80lb-Capacity-Deluxe-Broadcast-Fertilizer-Spreader/_N-2pqfZ67l/Ne-67n/Ntk>All_EN/R-I5132698?Ntt=spreader)

The seed spreader is also equipped with 10" heavy duty poly wheels that are built to last on varied terrain (Home Hardware, 2014). The product isn't specifically build for jute seed but for a general combination of seeds and fertilizer. Jute seeds are roughly the size of grass seeds and therefore the spreader would work well for jute because it was designed as a lawn care spreader which includes grass seeds.

### Company Involved

At first it was thought that Home Hardware would be able to provide the product in bulk shipments. Due the fact that Home Hardware is a 100% Canadian owned company it would have had large potential to benefit the Canadian industry and help to further expand a large iconic Canadian company (Home Hardware, 2014).

The issue with having Home and Hardware supply the product is that they buy the product from their manufacturer; meaning that there is already a significant mark up on the price and if it were then sold to Nepalese farmers the price markup would be even greater. In an economic sense from the view of the Nepalese farmers it would not be very cost efficient to buy the seed spreader from Home Hardware but instead directly from the manufacturer in bulk quantities to avoid the second price increase.

### Market Opportunity

In Nepal there is a great opportunity for this product, many farmers could benefit from having a seed spreader in their possession. In the 2005/2006 growing season 17100 metric tonnes of raw jute was produced over a total of 11975 hectares of land, mostly in the terai region (Ghimire and Yadav, 2014). Most of these farmers own a few hectares of land and do mostly hand labour, this is a lot of hard, physical labour that is very stressful for the human body.

Having a seed spreader reduces the labour on one of the steps in growing a crop; however, the raising, harvesting and post-harvesting events in the growing seasons are still equally intensive.

This spreader is designed for general seed and fertilizer use. This can greatly benefit Nepalese farmers and also makes the product more attractive for them because they will be able to use it for multiple kinds of seed as well as fertilizer. Originally this seed spreader was thought to be used for jute seed and help to improve jute production in Nepal; however, any farmer can purchase the spreader if they are willing to use it for other grass seeds or fertilizer. Therefore, this product has large potential and a great market opportunity in the country of Nepal.

Not only is this product great for farmers to plant their crops but any homeowner can use this product; it was originally designed to be a grass seeder for lawn care after all. This means that there is also a market opportunity directed toward people that populate the larger cities of Nepal that have a higher income than the average Nepalese farmer; if the people living in urban cities wish to sow a nice lawn they may want to purchase a grass seeder. Moreover, there are many tourists in Nepal that live in big reserves and hotels, these vacation destinations must look presentable to tourists meaning that they will need a nice, uniformly spread lawn – this can be done with the seed spreader being proposed to be exported to Nepal (Whepton, 1990).

This potential export product is very simple and not incredibly expensive; moreover it can be used for a variety of different seeds and fertilizers which makes it a great product for any labour intensive farming system which are seen in most developing countries. Due to this the product has the potential to not only be exported to Nepal but the seed spreader could also have a good market potential in many African nations, other Asian countries and developing countries

in both Central and South America; giving Canada a large export potential with great market opportunity on the receiving end.

### Benefits to Canada

Canada already has a relatively stable export-import relation with the country of Nepal. Canada imports mostly garments, carpets and jewelry. Nepal imports lots of Canadian goods such as peas and lentils, aircraft parts, appliances, stainless steel, and chemical instruments (Embassy of Nepal, 2014).

The following table shows the amount of trade that Canada has with Nepal since 2007, the information coming from Statistics Canada (Embassy of Nepal, 2014). The amounts are in thousands of Canadian dollars. Each year the amount of goods that Canada imports to Nepal is slightly increasing however that total amount of goods that is getting exported to Nepal is on a decreasing trend, with a slight increase in 2011 (Embassy of Nepal, 2014) Having this seed spreader to export to Nepal could potentially increase the amount that Canada exports to Nepal and could help stabilize the trade balance since currently Canada imports more than they export to Nepal.

	2007	2008	2009	2010	2011
Total Import	14,061	15,433	13,282	15,379	15,728
Total Export	10,996	4,143	4,170	5,497	6,339
Trade Balance	-3,065	-11,290	-9,112	-9,882	-9,390

(Table 1) taken from

[http://www.nepalembassy.ca/index.php?option=com\\_content&view=category&id=14&layout=blog&Itemid=34](http://www.nepalembassy.ca/index.php?option=com_content&view=category&id=14&layout=blog&Itemid=34)

Canada stands to gain a lot by exporting this seed spreader to Nepal, it strengthen trade relations with Nepal and increase revenue and Canada's overall Gross Domestic Product if enough seed spreaders where exported. However, it also has the potential to create future trade deals with Nepal especially in the agriculture sector. Since this product is designed to increase jute production in Nepal, Canada might be able to import more jute from Nepal to fill the demand for fibre bags.

If this product were to be exported to Nepal it would have the ability to create more jobs in Canada, particularly in Alberta where the warehouse is located that would organize the shipments and also in Prince Rupert where the port is located that the Canadian Steamship Lines would facilitate to transport the containers of product across the Pacific Ocean.

## Part II

### Transportation

The seed spreader would be sold in large quantities and therefore it must be shipped via freight liner across the Pacific Ocean to make it the most cost efficient. One of the four distribution centers of Home Hardware is in Wetaskiwin, Alberta (Home Hardware, 2014); this is where the product would be shipped from because it is the closest to Canada's west coast. The spreaders would get transported to Prince Rupert where they would be loaded on to a freight liner owned by the Canadian Steamship Lines (Price Rupert Port Authority, 2014) (CLS, 2014). This boat would make its way across the ocean to the major port in Hong Kong, covering almost

9,520 km. The next leg of the journey is again by transport truck from Hong Kong to Kathmandu, Nepal which is a distance of 2, 958 km. Cosco Logistics is a large company based in China that owns, commercial vessels and transport trucks (Cosco Group, 2014); this company will be able to transport the product from the port of Hong Kong to a warehouse in Kathmandu, Nepal. From Kathmandu, Nepal the product can be shipped by smaller truck loads to smaller cities where farmers have requested or the individual farmer can buy them from a warehouse in Kathmandu if they have transportation to the city.



(Figure

4)

[https://www.google.ca/search?  
q=map+of+the+  
world&es\\_sm=1](https://www.google.ca/search?q=map+of+the+world&es_sm=1)

## Benefits to Nepal

Nepal could greatly benefit from exporting this seed spreader for a variety of different reasons. The first reason is because using this seed spreader will reduce the intensive labour associated with planting jute seeds at the beginning of each crop season. Traditionally the planting process has been done by spreading the seeds by hand (Ghimire and Yadav, 2014); this is hard and time consuming work but it also spreads the seed very unevenly due to human error. With this seed spreader the labour would be greatly reduced as well as the time and the jute seeds will be able to be sown uniformly. This in turn also decreases the amount of “thinning out” that has to take place when the seeds are sown by hand (Ghimire and Yadav, 2014). These two things in turn will be able to help productivity of jute in Nepal which will help their agriculture sector as well as the economy.

If Nepal were to import the seed spread from either Canada or China there are more potential benefits than just decreased hard, physical labour and an increase in jute production. One of these possible benefits is the opening of job opportunities; from transporting and distributing the product once they have reached the warehouse in Kathmandu Nepal. Several men and women would be needed at the warehouse to organize large arriving shipments and then also to organize smaller shipments going out across the country of Nepal itself. Furthermore, Nepalese men and women could be hired to drive trucks from the center warehouse in Kathmandu to other cities where the product can be sold straight to individual farmers or to stores that then sell the product in their inventory. By creating jobs in Nepal this will greatly benefit the families that receive the jobs but also Nepal as a whole because they will have less unemployed people and more money being put back into the economy.

## Competition

It was already discussed that this product is a great potential export idea to Nepal; however looking at a global map there will be quite a lot of competition especially from Nepal's neighboring countries China and India. Both these two industrialized nations make similar seed spreaders and therefore it would make more economic sense if Nepal was to import seed spreaders from China and/or India. On the website Alibaba.com the company Ningbo Vertak Mechanical & Electronic Co., Ltd sells very similar manual seed spreaders for a cheaper price, which will have a higher chance of selling to Nepalese farmers than seed spreaders from Canada (Alibaba, 2014). The retail price is between \$14.50 and \$24.50 US dollars, the actual manufactured price is unknown (Alibaba, 2014). Also, these seed spreaders are manufactured in China and therefore the price of transportation via transport trucks will be much less compared to the transportation costs if the spreaders came from Canada.

The following table lays out the price difference between China and Canada; the results clearly show that it makes more economical sense for Nepal to import the product from China instead of Canada.

	Retail Price	Transportation Distance	Price of Fuel for Trucks
Canada (Home Hardware)	\$84.99 (CND Dollars)	Land: Over 3000 km Sea: 9520 km	Calgary: \$1.204/L Vancouver \$1.457/L
China (Ningbo Vertak Mechanical & Electronic Co., Ltd)	\$14.50 - \$24.50 (US Dollars)	Land: 3500 km	\$1.28/L US dollars

(Table 2)

### Future Studies Required

This particular seed spreader was never tested with jute seed, the idea that it would work well with jute was based on the size of jute seed. Since jute seed is similar to grass seed, and grass can be seeded with this spreader the assumption was made that the spreader would have great potential with jute seed. This assumption must first be tested to make sure that it will work for jute seed before being marketed to Nepalese farmers. As mentioned before the spreader isn't limited for use for jute seed but can be used for other grass seeds as well as fertilizer so even if the spreader ends up not being compatible for jute seed there is still a use for the spreader in Nepal.

### Conclusions

Overall if Nepalese farmers could great benefit from having a seed spreader such as the intended export product if it was made available to them. It has the potential to have positive effects on the Canadian economy and trade relations if the product were exported from Canada and shipped to Nepal with a combination of land and ocean transport. However, due to high transportation costs it makes more economical sense if Nepal exports a cheaper yet equal quality seed spreader from China while Canada strives to export the seed spreader to a nearer country that can benefit from a spreader adaptable to different kind of seed varieties and fertilizers.

## Contacts

In the event that any of the listed companies are wished to be contacted there is a following list of companies and their contact information.

### Cocso Logistics Group

Address: Ocean Plaza, 158 Fuxingmennei Street Beijing 100031, China

Telephone: 0086-10-66493388

Fax: 0086-10-66492288

Website: <http://www.cosco.com>

Email: [internet@cosco.com](mailto:internet@cosco.com)

### Canadian Steamship Lines (CSL) Group INC. Head Office

Address: 759 Square Victoria, 6th Floor Montreal, Quebec Canada H2Y 2K3

Tel.: +1.514.982.3800

Fax: +1.514.982.3801

### Home Hardware

#### Western Distribution Centre

Address: 6410 36 St, Wetaskiwin, AB T9A 3B6

Tel.: (780) 352-6053

### Alibaba Co., Ltd. Head Offices

#### China Office:

969 West Wen Yi Road

Yu Hang District

Hangzhou 311121

China

Tel: (+86) 571-8502-2077

Fax: (+86) 571-8526-9066

#### Hong Kong Office:

c/o Alibaba Group Services Limited

26/F Tower One, Times Square

Matheson Street

Causeway Bay, Hong Kong

Tel: (+852) 2215-5100

Fax: (+852) 2215-5200

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