

# Plastoband Plastic Plant Ties for Export to Nepal

Canada Exports Assignment

Christian Willemse

AGR 1110

## **Product Information**

### **Supplier and Product Information**

Plastoband plastic plant ties are plastic ties that are used for securing climbing plants, vines, young trees, shrubs, tomatoes, flowers, small fruit plants, and much more (Oughtred, Personal Communication, 2014). The plastic ties are made of 100% UV-stabilized plastic and are extremely durable in terms of the environmental conditions that they may be subjected to. These ties have a long

life expectancy because they are able to withstand being in the sun for extended periods of time without fading or withering which would affect their performance. This product is also reusable which allows the consumer to reuse the ties from season to

season. As the plants grow, the stems to which the ties are wrapped around will expand, therefore, the ties adjustability is crucial to their operation because

they can be made bigger as the stems of the plants grow and expand. The ties have a great economic footprint because of their longevity and durability and also have an extremely low cost associated with them which makes this product more appealing to the end consumer. These plant ties are sold in bulk (1000 unit plastic bags) in order to keep such a low cost for the end consumer. One bag of 1000 units costs \$39.95 which accounts for the extremely low cost of 4¢ per one unit (Oughtred, Personal Communication, 2014). In Nepal this would attribute to approximately 3595.5R per 1000 units which means that one unit would cost the consumer 3.60R. This price is extremely cheap because this product can be viewed as a one time investment.

These plant ties are also 7.1” long and very light weight which can have a very large impact on the shipping cost to merchandise ratio. With a very low shipping weight the shipping cost will be relatively low with respect to the quantity being shipped. This means that the shipping costs will not



**Plastoband Plastic Plant Tie**

**<http://www.duboisag.com/en/black-plastics-ties-u-v-stabilized-plastoband.html>**

impose on the already substantially low cost of the product. Shipping from Canada to Nepal will already be costly enough but because we will be able to ship a substantially large quantity for cheap, the price by the time the product reaches the consumer will still be extremely cheap and shipping should not add a whole lot onto the final price.

These ties are manufactured and sold by Dubois Agrinovation. Dubois is a Canadian company with locations in Quebec, Ontario, and the United States. Dubois is a company that specializes in advice and solutions for irrigation, plastic mulch film, floating covers, greenhouse & nursery equipment, vineyard & orchard equipment and much more. Their mission is to find solutions adapted to the consumers situation, listen to their needs and provide advice, expertise, and the quality of their service to add value to the products that they offer. Dubois is always developing and searching for new technologies to improve the quality of the consumers work as well as their own work (Dubois Agrinovation, 2014).

Compared to other companies, Dubois has done a magnificent job creating a product that is durable, reusable, and has a very low cost associated with it. In comparison to other companies, Dubois was able to manufacture and sell these plant ties for five times less than Lee Valley. For the same product Lee Valley charged 20¢ per unit, where Dubois was only 4¢. In Nepal this would cost the consumer 18R versus 3.6R. Compared to Lee Valley the Nepalese consumer will save 14,404.50R. This is a substantial amount of money that can be saved by the Nepalese consumer and used somewhere else or potentially saved.

The decision of which product to choose was mainly based on the principle of cost and the integrity of the product. The key factor was the cost because the consumers are not as wealthy and need to be able to make a profit after purchasing and using the product. The integrity of the product was also important to the decision because even though it is cheap it still has to be able to meet the demands of the consumer and be reliable for the job it is designed to do. There are many types of plant ties to choose from like tomato clips, staples and tape, plastic ties, and thread. Tomato clips were not chosen because of their high cost per unit, complexity, as well as their ability to only be used for one type of application.

Staples and tape were also not chosen because the tape and staples are not reusable which means the consumer would have to keep purchasing the products. Lastly, thread was not chosen because in order to be time effective the thread would be cut off the vine for removal and would require the consumer to keep purchasing the product. The plastic adjustable plant ties were the only product that was cost effective, reusable, and able to be used for more than one application.

## **Market Opportunity**

The opportunity for this product is extremely large in the Nepalese market. This product has an extremely large opportunity in Nepal because it will create new farming practices and also help with already problematic erosion. The vision for this product in the Nepalese market is to grow climbing plants on the front of terrace walls to make use of otherwise wasted land which would increase the production of the average farmer and ultimately put more money in local farmer's pockets. Along with putting more money in farmer's pockets, the use of this product on terrace walls will also decrease the rate of erosion and ultimately stop the soil and nutrients from washing down the hillside. Since these plant ties are fairly adverse they can be used for many other applications in the agriculture industry in other areas for securing plants and other crops.

## **Export Potential to Nepal**

### **Background Information**

Nepal is a relatively small, landlocked Himalayan country between China and India with a population of approximately of 27 million. Nepal is a very mountainous country with approximately 86% of the land characterized by steep hills and mountains (Peak Journals, 2014). There are five distinct regions in Nepal: the High Himalayas, the High Mountains, the Middle Mountains, the Siwalik, and the Terai (Table 1 shows the location characteristics as well as the land use). Forty percent of the population resides in the Terai region due to its subtropical climate and



**Map of Nepal**

(<http://i.infoplease.com/images/mnepal.gif>)

gentle topography which are conducive to agricultural production. Although there is severe flooding that causes river shifting and river bank cutting to occur quite frequently; this threatens the stability of agriculture in many areas of the region (Peak Journals, 2014). Nepal has an agro-based economy with more than 80% of its people engaged in an agriculture profession and the contribution of the agriculture sector to the total Gross Domestic Product (GDP) which constitutes more than 40% (Sharma, 2005). With so many individuals dependent on agriculture there is population pressure on the production system (Peak Journals, 2014).

With this large dependency there are also worries of food security. Food security and agricultural stability are two large factors that contribute to the poverty level in Nepal. Many things such as poor soil nutrient to water management and material loss through soil erosion are contributors to the worry of food security. With agricultural production already low, the means of coping with these adverse events are limited, and climate change only makes matters worse by decreasing production even more (Shrestha, 2014).

**Table 1: Land Area Usage of Nepal (Peak Journals, 2014)**

Area	Location and characteristics	Land use	Erosion rate (ton/sq.km/year)
Siwalik range	Eastern Nepal, South aspect, sand stone foot hills	Different land use ranging from forest to grazing	780-3680
		Degraded land	2000
Mahabharat range	Far Western Nepal, South aspect sand stone foot hills of Surkhet	Degraded forest, gullied land	4000
		Severely degraded heavily grazed forest, gullied land	20000
Middle mountain	Central Nepal, steep slope on Metamorphic and Sedimentary rocks	Degraded forest and agricultural land	3150-14000
		Gullied land	6300-42000
		Northern foot hills of Kathmandu Valley	Degraded forest and shrub land
Over grazed shrub land	4300		
Middle mountain	South of Kathmandu Valley	Severely gullied land	12500-57000
		75 % dense forest	800
		Phew Watershed	Protected pasture
Overgrazed grass land	2200-34700		
		Gullied overgrazed grass land	2900

A lot of farming in Nepal is done on the sides of mountains and hills. This practice is known as terracing and is one of the most advanced techniques used to promote the stability of sloping agricultural

land (Carson, 1990). These terraces in Nepal are called “bench” terraces and they help reduce erosion, increase infiltration, and make the land more easily managed during normal agriculture operations. However terraces are still susceptible to erosion problems on sloping agricultural land due to many factors. When these terraces are constructed it is taken into consideration the soils permeability, and rate of infiltration. These two factors will determine the design of the terraces needed. Thus in Nepal, the hillside regions require a “bench” type terrace. The amount of rainfall and runoff are also taken into consideration. In Nepal climate change has lead to erratic amounts of rainfall which has caused tremendous challenges for terrace farmers. Terracing has been a common technique in Nepal for many years and can be expanded into other parts of the world as well (Carson, 1990).

### **Relations between Canada and Nepal**

Canada established diplomatic relations with Nepal in 1965 and has enjoyed longstanding bilateral relations from 1968 to present. Nepal’s exports to Canada are dominated by textile garments and apparels. Canada’s exports to Nepal are mainly in the areas of aerospace, machineries, paper and paper board, vegetables and optical instruments along with appliances (Government of Canada, 2014). With the export of our product we hope to expand and build on our relationship to conduct future business.

### **Nepalese Trade**

Nepal has bilateral trade agreements with Bangladesh, India, Pakistan and Sri-Lanka (Prasai, 2014). Most of the Free Trade Agreements (FTA’s) between Nepal and trading partners are merchandise related rather than service or investment and labour mobility. Nepal is known for their advantage in handmade products for export such as carpets, Pashmina products, garments, and other handicrafts. Nepal does not have an advantage in exporting these goods because of its location between two major manufacturing countries China and India. More than 60% of Nepal’s trade is associated with India, with the main areas of trade being in textiles, zinc sheets, thread, and polyester. The rest of Nepal’s trade is with other countries. The percentage values of Nepal’s trade with other countries can be observed from Table 2. Table 2 is based on the average import and export values. Next to China and India, the United States is also a major trade partner with Nepal accounting for 17.17% of total exports. Canada is not

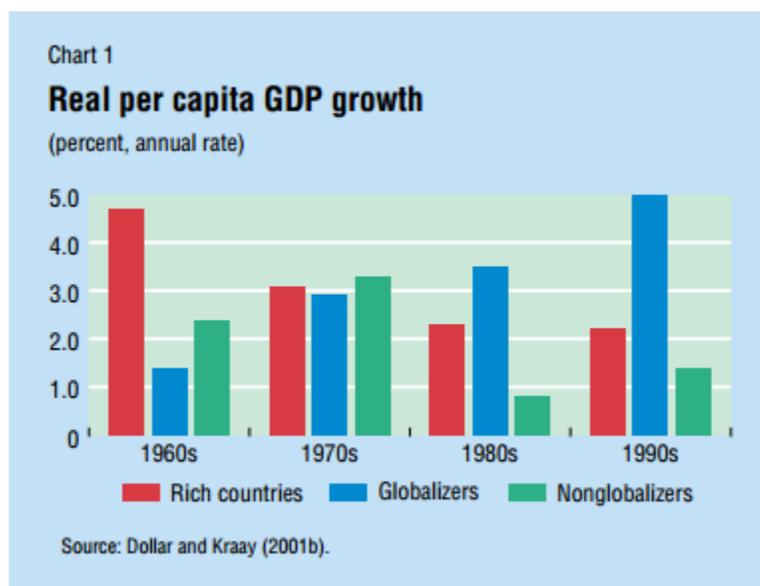
listed in Table 2 to be a country that Nepal is currently doing trade with as of the year 2000. Trade with Nepal has become increasingly easier with the initiation of the trade liberalization program in the mid-1980's. This liberalization allowed Nepal to abolish trade restrictions and policies which allowed them to form trade agreements with eighteen countries. As a result Nepal joined the World Trade Agreement (WTO) on April 23, 2004 as the 147<sup>th</sup> member. Very few studies have examined Nepal's trade patterns over that last thirty years even though there has been a lot of movement in terms of their trade agreements and new trading partners (Prasai, 2014).

**Table 2: Ratio of Major Regions/Countries in Terms of Nepal's Export and Import (Prasai, 2014)**

Countries	1980s (in Percent)		1990s (in Percent)		2000s (in Percent)	
	Export	Import	Export	Import	Export	Import
India	28.02	24.01	16.15	22.39	59.04	58.06
ASEAN	4.89	13.10	0.63	19.76	0.60	11.16
OECD (except Japan & USA)	38.10	25.20	49.91	17.91	18.03	10.69
China	2.42	6.59	0.51	7.42	0.39	9.63
Others	0.45	2.70	1.58	16.63	0.63	5.13
Japan	1.17	19.60	0.69	8.11	1.26	1.94
Middle East	0.01	0.02	0.03	4.82	0.32	1.55
USA	21.20	6.35	28.28	1.42	17.17	1.33
SAARC	3.75	2.31	2.22	1.46	2.56	0.49
EU (Non-OECD)	0.00	0.12	0.00	0.08	0.01	0.01
Total	100	100	100	100	100	100

Foreign trade is considered as an essential factor for accelerating the path of economic development (Sharma, 2005). Most countries are involved in trade for the creating employment, increase foreign exchange, and to raise the propensity to save. The import of goods brings competition and variety of domestic markets which benefits consumers. Nepal has had poor foreign trade performance in the past mainly due to the fact that it is landlocked, which is a major cause for their weak production base which is directly linked to the growth of their imports and exports of technology and raw materials. For developing countries such as Nepal, trade is the primary vehicle for realizing the benefits of globalization (Sharma, 2005). Globalization has had a tremendous impact over the past twenty years on lowering poverty and

raising incomes which has allowed countries like Nepal to develop more than ever. Nepal is one of the twenty three countries considered part of a small group that has seen large increases in trade over the past twenty years who are referred to as the “post-1980 globalizers” (Dollar D, Kraay A, 2001). Figure 1 compares the real per capita GDP growth of the rich countries, the globalizers and the non-globalizers from the 1960’s to the 1990’s. From this chart we can see that as developing countries (such as Nepal) became more globalized and their annual rate percentage increased and surpassed the non-globalizers. As result of changes in trade agreements, trade policy, and joining the WTO, Nepal has successfully grown as a globalizing country in terms of total imports and exports which have increase their total Gross Domestic Product (GDP).



**Figure 1: Comparison of Real per capita GDP growth (Dollar D, Kraay A, 2001)**

### **Trade Restrictions**

Trade accounted for approximately 38.8% of Nepal’s total GDP in 2012 which was a substantial increase driven by imports; exports have remained stagnant (Yurendra, 2014). The trade tariffs within the South Asian regions, as well as globally, are being reduced substantially. Nepal’s regional and global trade barriers are shifting which is presenting them a lot of new challenges. Nepal’s tariff preferences are

shrinking, however, non-tariff measures in both the regional and global export markets are increasing (Yurendra, 2014).

There are very minimal trade restrictions when it comes to exporting products to Nepal. With Canada's strong ties with Nepal in terms of bilateral trade, the only trade restriction is the application for a licence to conduct trade. This application is filled out by the entrepreneur and submitted for government authorization. The application for a trade licence includes business location, industry, and the business type. For our product to be exported to Nepal, our application would state that the business location be district/regional, the industry to be agro based, and the business type: agriculture and related service activities. The application for this licence can be done online and is found on Nepal's Government website. The e-portal provides easy access to information about licensing requirements for business activities in Nepal (Nepal Business, 2014).

### **Transportation**

In order to keep our product low cost and economically viable, a low cost alternative for transportation will need to be kept in mind whether it's by air, sea, or land. To transport our product from Canada to Nepal it will require at least two or more different forms of transportation. Shipping these plant ties to Nepal will require transportation by land, rail, and sea. The ties will be shipped in boxes that measure 8"×8"×4" and these boxes will be placed on standard 48"×40" wooden pallets. Each pallet will have a total of 270 boxes and each box will contain 1000 units, therefore each pallet will contain 270,000 individual units. These pallets of plant ties will then be shipped in a standard 20' shipping container. Each container holds exactly 24 standard shipping pallets. The pallets will be stacked two high, two wide, and six deep in the container, therefore each container will contain 6,480 boxes, or, 6,480,000 individual units. This means that one container is worth a total of \$259,200.00 CAD or 23,328,000.00R.

The plant ties will first be loaded onto a transport truck in Simcoe, ON at Dubois warehouse. It is important to take into consideration when choosing a trucking company that the time to load the truck (approximately two hours) will be included in the cost. The trucking company will transport the container of plant ties 141km to the rail yard terminal in Brampton, ON. From Brampton, ON the

container of plant ties will be transported via CN Rail. The container of plant ties will be transferred onto a CN Rail train where it will then travel 4,400km to the Vancouver, BC port. The cost to ship this container from Brampton, ON to Vancouver, BC will be approximately \$2,000.00 CAD depending on the day of the week (shipping is cheaper at the beginning and end of the week) (CN Transportation Services, 2014). After the train arrives in Vancouver, BC, it will then be placed on a cargo ship at the Vancouver port from which it will then travel by sea to the receiving port in Kolkata, IN. To ship the container of plant ties from the port in Vancouver, BC to the receiving port in Kolkata, IN it will add approximately \$8,702.44 CAD to the total shipping cost (A1 Freight Forwarding, 2014). From the port in Kolkata the container of plant ties will need to be picked up by another trucking company in India and transported across the border into Nepal to Kathmandu. The total cost of transportation including the ground, rail, and ocean freight costs will be around \$11,000-\$12,000 CAD. The total cost of one container would then be upped from \$259,200.00 CAD to between \$270,200.00-\$271,200.00 CAD. Considering that 6,480,000 individual units are being shipped at cost between \$11,000.00 to \$12,000.00 CAD this is quite reasonable seeing as how they are being shipped over seas to a land locked country. This would up the price per unit to between 3.75R and 3.77R as opposed to 3.60R before freight costs. Considering that there is a 0.15R difference between the cost of the product with and without freight, the shipping cost of the product is quite reasonable.

## **Conclusion**

In conclusion the export of this product to Nepal would benefit both Nepal and Canada tremendously. Dubois Agrinovation has manufactured a great product that has many uses in the Nepalese agricultural industry in terms of attaching climbing plants to terrace walls. With the overall cost of the product being very low it is easy to see that this product is very economically viable and will be a huge asset to the Nepalese farmer. With Nepal reconstructing its trade policies and trade agreements, there should be no problem obtaining a trade licence for this product and getting it to the Nepalese market. There is a huge opportunity for this product in the Nepalese market as it has not yet been dominated and there is work to be done in the creation of vertical farming. This is a great product and there is no doubt

that it will serve the Nepalese agricultural very well and ultimately put more money in farmer's pockets as well as increases the countries GDP through the agriculture sector. This product will be very beneficial to both Canada and Nepal.

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