

Benjamin Van Eyk
Agriculture 2150
Professor Manish Raizada
November 18, 2014

Himalayan Creeping Bramble

- Product Info and Benefits to Nepal

The product that Nepal could export to Canada is a raspberry known as the *Rubus nepalensis*, also known as the Himalayan Creeping Bramble, a plant which is native to the country of Nepal. It comes from the Rosaceae family of plants (Finch, 2014). It is a shrub that has many stems, and it is known for growing widely and covering a lot of ground. It spreads wherever it grows and takes over the area in which it is located. This plant is an evergreen, which means it will remain green throughout the whole year. It does not grow very high; the average height it will grow to is ten inches, and its spread would be about three feet. It has a Hardiness Zone of about 8a, which means that it can grow in, and withstand, an area with a minimum temperature of -12.2°C to -9.4°C (Finch, 2014). So, compared to many plants, it needs a relatively warm temperature. The flowers on this particular plant are a hermaphrodite, meaning it has both female and male flowers (Hook, 2012). This plant can be grown almost anywhere in Nepal, as it will grow in a variety of soils, including soils which contain clay or sand. It prefers soil that is drained, in other words, soil that is not too wet. This is an ideal plant for farmers to cultivate in Nepal, as the topography there is mountainous. If the berry was planted on the mountainsides, any excess water would naturally drain downward. This plant can either grow in little shade, or in no shade at all. This plant does not need a lot of care to grow well and produce a great output; it can do so with little human intervention (Hook, 2012).

However, this plant cannot grow in acidic soils. It requires a neutral pH level (Hook, 2012). As previously mentioned, it requires soil that is drained. The soil can be moist, but if there was to be a lot of rainfall and the soil were to become saturated, that would be bad for the plant.

This plant is not drought tolerant, thus requiring a constant supply of water. Although this plant can grow with no shade, it does not do well when it is too hot, or if there is direct sunlight for extended periods of time. This plant is also known to be attacked by honey fungus. Honey fungus takes over the plant and eventually kills it. So farmers would need to ensure that this does not happen (Hook, 2012).

This plant is very environmentally sustainable. Farmers only need to purchase seeds for the initial planting. Seeds can then be harvested from the plant the next year, and planted. So there is only a start-up cost, because after the initial time, the plant is sustainable (Hook, 2012). Nepal is a mountainous country, and if this plant is grown on the mountains, it is vital to ensure that erosion does not occur. This plant itself would only minimally contribute to erosion as taking nutrients out of the soil exacerbates erosion, but the farming practices such as cutting down trees to clear land would contribute to soil erosion. A study found that using simple, inexpensive matter such as mulch, manure, and cover crop on the soil would help prevent erosion (Siebert, 1990), and this manure could also be used as a natural fertilizer for the plant. This plant would also not require much, if any, pesticides or herbicides, as it is only really susceptible to honey fungus, as previously mentioned. The cultivation of this plant does not require ploughing or any work done by animals, which is expensive. The initial seeding is done by simply placing the seed in a hole, and after that it requires only occasional weeding and watering (Finch, 2014). For all these reasons, this plant is very cost efficient for poorer farmers.

The impact which this plant has on local biodiversity and culture is very positive. It is a plant that is native to Nepal, thus native to the local ecosystem. It is preserving this ecosystem, as a foreign species is not being introduced, but something that is natural to the area is being cultivated. This plant also contributes to biodiversity as it gives nutrition to insects that pollinate

it (the flowers are hermaphrodite, but require pollination through insects). Since this plant is indigenous to the country, it would not become an invasive species. Sometimes, however, it can spread and takeover a lot of ground cover. Then it must be cut back in order not to compete with other crops or plants (Finch, 2014).

The impact this plant has on Nepalese women and children is also very positive. It is not difficult to cultivate this plant, plus it does not require much human intervention, only periodical weeding, or cutting it back, as it grows naturally (Hook, 2012). So it can be cultivated without a lot of hard labour. This allows any women who may be growing it to take care of other household matters, such as raising the children. It is also nutritious for children as it contains high volumes of vitamin C, which is needed for growing bodies.

If this crop were to become an export to Canada, one of the economic benefits would be that it would help to generate a stable income for farmers and their families, which then could help them to improve their farming practices, and raise their standards of living. It would allow them to eventually expand their farming practices, if the demand required it. It would also help to develop Nepal's system of commerce, as people would be required to grade and pack the berries, and to transport and export them. It would not be a difficult task to begin a business with this plant. As mentioned earlier, seeds are usually inexpensive, and once the first seed is planted, the subsequent plant produces seeds that can be used for more plants, at no cost. Farmers can share seeds with each other, or simply buy them from a market. Since seeds are not usually expensive, the start-up costs would be low. This plant also does not require a tremendous amount of land to grow, in contrast to a crop such as maize, for example. Thus it is relatively easy and inexpensive to cultivate, as there is no need to buy large amounts of land, or equipment such as ploughs or animals. The fruit of this plant is very versatile, as it can be used in a wide variety of products,

such as smoothie additives, jams, or dried fruit (Hall & Funt, 2013). So there would be a wide market to which these farmers can sell.

•Export Potential

The marketing opportunity for this product is significant. This is not just a niche product, but one which is used by a large part of the population. As mentioned, this product can be used many ways, such as smoothie additives, jams, or dried fruit (Hall & Funt, 2013). These products are in demand in many countries, Canada being one of them. Canada is a country known for its cultural diversity; many nationalities live in Canada, one being people who come from Nepal, or are of Nepalese descent. Nepalese who live in Canada would be possible consumers of this raspberry, as well as the average Canadian who may be inclined to try a new type of food. Many Canadians are concerned with eating healthy, natural foods, and these berries from Nepal could be grown with minimal, if any, fertilizers or pesticides. This would be a great selling point for an ever increasing segment of society who are ecologically minded. Grocery stores such as Sobeys (Phone: 1-888-821-5557), health food stores such as GNC (Phone: 1-888-462-2548), or even shops that sell smoothies such as Booster Juice (Phone: 780-440-6770) would be able to market this exotic fruit.

This fruit would also need to be transported from Nepal to its export countries. This would need to be done quickly if the berries were to be sold fresh in countries such as Canada. One solution would be to freeze dry the berries, and send them to Canada; another would be to make the jams right in Nepal. Both of these methods would bring additional jobs to Nepal. Exporting this product, potentially has great benefits for women and children. It would provide them with a stable income, and allow them to raise their standard of living. In order for them to export the product they would need to pay all duties and taxes, and get the necessary permits and

certificates, such as phytosanitary certificates, which confirm that the products are free of unwanted pests (*Canadian Food Inspection Agency, 2014*). These costs could be brought down dramatically with help from the Agribusiness Promotion and Marketing Development Directorate, which is a government agency in Nepal. This agency helps farmers by giving them recommendations in a variety of areas, training them as to the best methods of farming and selling, aiding them in making business plans, helping them with farming regulations, just to mention some areas. Basically, this organization helps farmers with their business and helps them to promote the sale of their product (*Agribusiness Promotion and Marketing Development Directorate, 2014*). So, this organization could greatly help those farmers who need connections in order to sell their produce. The Government of Canada has also engaged in trade programs with Nepal. The Canadian Co-operation Office is an agency that carries out the projects Canada is conducting in Nepal. Originally, this agency helped Nepal with aviation, but now it does much more. It deals with areas such as food security, dealing with poverty, helping improve agriculture, education and reading, and working on providing reliable sources of food in Nepal (*Canada-Nepal Relations, 2006*). This is an agency that could directly help the farmers who wanted to export food into Canada. This is an agency designed to specifically work with them, and to address their specific needs. So, for example, it can provide them with the needed expertise in figuring out how to take raw material, the berries, and turn it into something that could be exported into Canada. Lastly, future studies regarding *Rubus nepalensis* would be beneficial in helping farmers to get rid of Honey fungus without using pesticides; method that is easy and cost efficient would be ideal. In addition, studies with respect to increasing the yield of the number of berries per plant would also be very beneficial to the Nepalese farmers, since this would increase their profit.

Works Cited

Agribusiness Promotion and Marketing Development Directorate. (2014, January 1

Canada-Nepal Relations. (2006). *Canada Foundation for Nepal*.

Finch, E. (2014). Nepalese Raspberry. *Garden Supply*, 1-1

Hall, H., & Funt, R. (2013). *Raspberries* (p. 30, 52). Columbus, Ohio: Department of Horticulture and Crop Science, The Ohio State University.

Hook, K. (2012). *Rubus nepalensis*. *Plants For A Future*, 1-1.

Phytosanitary Certificates. (2014). *Canadian Food Inspection Agency*.

Siebert, S. (1990). Hillside Farming, Soil Erosion, and Forest Conversion. *Mountain Research and Development*, 10(1), 64-72.