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Trade Foraging in Nepal

A report on forage seed and its trade potential with Nepal

Agricultural Nepal Trade Project

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Introduction

Over the course of history, trade has been a significant method of education and advancement. Trade is typically beneficial to both parties involved and sees the exchange of goods or services (Dictionary, 2014) Agriculture has been the backbone to human civilizations and advancement and trade in this sector has been important as long as agriculture as existed. In Asia, particularly Nepal, there is much opportunity for trade in agriculture. This report is an analysis on a particular product that was seen fit to introduce to the Nepalese agricultural community. The intent for this product was to improve local practices immediately as well as to establish long term returns. One unique product was chosen to be discussed as the focal point for this report. That product is a seed package. This blend of seed will be specifically designed for erosion management and double as forage seed. The positive and negative aspects of this product will be compared and the potential for real life application in Nepal evaluated. A conclusion will then be made on the findings.

SECTION I

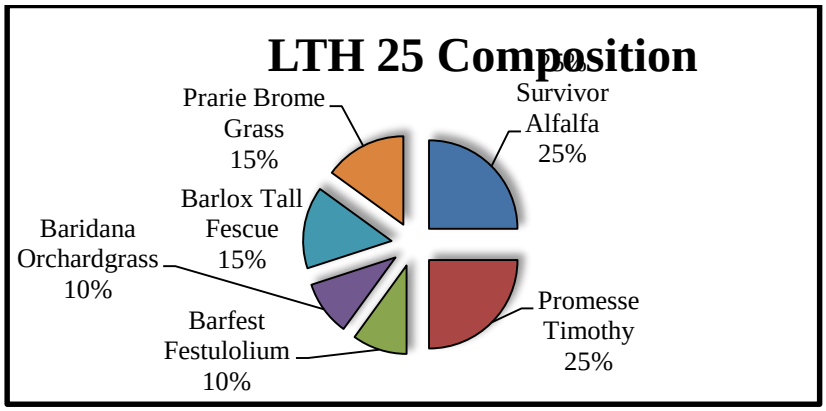
Product Information

This product is a special genetic package of seed designed for maximum erosion protection and nutritious livestock forage. This seed blend was designed by Spear Seeds, a seed company based in Harriston, Ontario. They specialize in forage blends, cover crops and lawn and turf seeds. (Bowman, 2014)

This seed blend is Speare Seeds called their Long Term Hay blend, sometimes referred to as "LTH 25." It was developed by Speare Seeds as a versatile, low maintenance crop for agriculture. It is renowned for its excellent erosion prevention, cold tolerance and excellent regrowth capabilities (Bowman, 2014).

Description

The Long Term Hay blend is a cutting edge seed package composed of both grasses and legumes. It contains the following species; Survivor Alfalfa, Promesse Timothy, Barfest Festulolium, Baridana Orchardgrass, Barlox Tall Fescue and Prairie Brome Grass. Each one of these species is unique and contributes to the package individually.



LTH 25 Speare Seeds, 2014 Figure 1.

Background and Production

The species that compose LTH 25 are grown in North America. They are cleaned as individual species and then, mixed and packaged at the Speare Seeds facility in Harriston, Ontario. They can be distributed directly from the plant in 25 kg bags, or in larger totes if necessary (Holzworth, 2014).

Labor Required and Cost Evaluation

In terms of producing this seed blend, a significant amount of management is required to ensure that a quality product is achieved. However, in terms of commercial production, farmers will find that LTH 25 is extremely low maintenance and requires minimal labour after planting. The cost of the blend is also quite reasonable. Retail value sits at $230.95 per 25kg bag or $9.23 per kg. Recommended seeding rates are 18lb or 8.2 kg/ac. Calculating the cost per acre gives us an even $75.75/acre or $30.68/ha CDN/$. (Bowman, 2014)

Preparation, Inputs and Harvest

1. **Planting**

Planting requires a good weed free environment, adequate soil moisture and optimum soil to seed contact. These points are all important however the latter is critical to ensure good germination. It must be noted that seeds of this nature should not be worked too deep. Recommended seeding depths for forage seeds of this nature are in the range of one-quarter to one-half inch deep (Lewandowski & Sulc, 2012). Often, broadcasting followed by packing or a

light harrowing is sufficient. One modern planting tool that does an excellent job of planting fine forage seeds is a planting implement known as the Brillion drill. (Landoll, 2014)

2. Fertilizer

To summarize the following information, fertilizer input levels cannot be developed until soil testing has been completed. This applies to both Micro and macro nutrients.
However it can be noted that pastures containing more than 25% legumes generally do not require nitrogen fertilizers because of the N fixing capability that legumes have (Green, 2014). Because this blend is right on the threshold, there is a possibility that N fertilizers may be required. Nitrogen as well as Phosphorus and Potassium requirements will depend on the soil tests of the area possible that might be required. It should also be noted that using this seed in rotational grazing may reduce the need for industrial fertilizers as livestock species grazing on the crop will naturally fertilize it as they graze.
(USDA, Dixon, Cash, Kincheloe, & Tanner, 2005)

3. Weed Control

Competitive weeds can be difficult to manage in Hay or forage crops. Effective selective herbicides are difficult to find for use in grass and legume hay mixtures. (OMAFRA, 2000). Pasture management through grazing also reduces competitive weeds if grazing takes place early enough. It is a fact that many weeds at early growth are nearly as nutritious and palatable as forage crop species (J. D. Green, 2006). Another effective weed control methods are by effective mowing which knocks back competitive annual weeds and allows rapid regrowth of the crop.

4. **Pest Control**

Pest control is an important factor for a successful crop. Probably the most vulnerable species in this blend is the Survivor Alfalfa (Holzworth, 2014). Methods of integrated pest management (IPM) will come into play such as scouting and managing threshold levels. (IPM, 2014). Many pests of Alfalfa can be controlled with pesticides or early harvest of the forage either mechanically or through grazing.

5. **Harvest**

Harvest of Forage species generally takes place with mechanized equipment and is stored till it is needed in the form of fermented silage in silos, or as wet or dry hay. However, because of the nature of this product and its potential for marginal land, most of the harvest of this product will take place naturally through rotational or constant grazing.

Patents and Restrictions

Almost every product designed, fabricated or engineered or developed in Ontario falls into some form of patent restriction or licensing system. All seed sold in Canada must comply with the Seeds act and Seeds Regulations Act of Ontario and will be listed with the CFIA. Even custom seed blends must be composed of species that are licenced and regulated. All seeds sold from Speare Seeds are “Blue Tag” certified and registered with the CFIA. (CDNSeed, 2014)

Market Community

The target market of this product in North America is typically for farmers wishing to seed perennial pasture in Class 3-5 land for continuous or rotational grazing systems and perhaps some mechanical harvests (Canada, 2013). It will work well in many other circumstances however its hardy nature allows it to do exceptionally well in less than average conditions. Also, because this is a "dual purpose" seed blend, it is a valuable crop not only for livestock farmers, but any farmer who wants to manage erosion.

Benefits and Environmental Sustainability

The benefits to Canada are endless. Not only does this allow Canadians to be a part of creating and improving agriculture in North America, it also improves the local economies by creating more jobs in the seed research and production industry. Farmers experience more options and solutions for the challenges they face in their production businesses, and livestock are given the opportunity to perform at their peak potential with quality feed. (OMAFRA, 2014)

Also, plant life is invaluable to the environment. Plants absorb and reduce Carbon Dioxide in the environment, converting it to energy useable for other life on earth. Furthermore, plants emit Oxygen and Water as by-products of this process. (BGCI, 2014)

SECTION II

Export Potential to Nepal

The Long Term Hay mix, (LTH25) from Speare Seeds has been used for several years in North America and has proved to be a valuable input in agriculture. At this point, an evaluation will take place to see the value of the product in Nepal. Although optimism is necessary in researching the potential of this product in Nepal, realism is critical! There are factors that will make or break the reality of this trade opportunity. The following topics are areas that need to be discussed in order to realize the financial, demographical and logistical aspects of trade.

Transportation Logistics and Storage Requirements

Moving LTH 25 to Asia is perhaps one of the biggest costs associated with trade of this nature. Several routes and methods may be considered in getting the product to Nepal involving land, water and air transportation or a combination thereof. Initially, we will not be transporting large amounts of seed. Air transportation is fast, of superior quality and reasonably cheap with consideration to time. As market opportunities grow, shipments would be made over water instead.

Air Fare shipping estimates run around 3,420.00 $ CAD for a 1000 kg skid load of seed (A1Freight, 2014). Low Temperature and Humidity are the two key factors to storing seed and maintaining its viability – another reason for air travel. A seed blend of this nature will have already been dried to the required 10-12% moisture levels (PennState, 2014).

Refrigeration or consistent cool temperatures upon arrival will greatly improve the longevity and quality of the product particularly in a hot humid climate.

Also depending on the size of shipment, seed may need to be stored for several seasons till it is all purchased and planted, thus a permanent quality storage facility is required (PennState, 2014).

Cost and Profit Analysis

Figures were calculated using Canadian dollars. The current conversion rate is $1 Cdn = 88.87 Nepalese Rupees. Figures were based on an average Nepalese salesman's annual income in the range of $3,000 and a rental complex valued at $1,350 (Dave, 2013). This simple table shows the cost/unit kg of product with the current values of shipping, storage and labour.

LTH25 Cost analysis		
Fixed Costs		
Labour Salaries x 2	6000	6000
Storage in Nepal	1350	1350
Variable Costs	1,000 kg	10,000 kg
Seed	9230	92300
Transportation Air	3420	34200
Transportation Land	1000	10000
Total	**21000**	**143850**
Cost per kg	$ 21.00	$ 14.39

Figure2.

Needs and Benefits

The reason this product was researched was because it could provide the solution to two critical areas in Nepal. Quality livestock feed, and erosion management. LTH25 has the

opportunity to boost the agricultural communities in Nepal. Furthermore, from an environmental standpoint, this seed blend will provide erosion control on the terraced farmland and bare hillsides of rural Nepal. This product also consists as a sustainable food source for livestock and life forms capable of reducing carbon dioxide in the atmosphere (BGCI, 2014).

Contact Information

As already mentioned, Speare Seeds is a Canadian Company. Much of this research and information was obtained through the advice and recommendations of both the Sales Manager Scott Bowman, and the Sales Representative Mike Holzworth. Speare Seeds can be reached at the following address.

Spear Seeds Inc.

99 John St. N, PO Box 171,

Harriston, ON, N0G 1Z0

Tel: 519-338-3840

E-mail: info@speareseeds.ca

. Questions regarding for the Nepal Department of Agriculture can be directed to:

Government of Nepal

Ministry of Agriculture Development

Department of Agriculture

Hariharbhawan, Lalitpur, Nepal

Email: info@doanepal.gov.np

Phone No.:01-5010003,5521356,5521323

Competitive Marketing

The current marketing strategy would involve hiring a local dealer/coordinator and a student familiar with the language, culture and trade of Nepal. They would be trained to propagate the product via word of mouth and demonstration. They would be compensated for their efforts. Because farming is typically undertaken on a scale of 1-3 Ha/family, marketing the seed in 25kg bags is a reasonable quantity (Weber, 2014). The product would be stored at one and possibly several locations if the future of this trade were to grow. From there, it could be sold and distributed for farmers across the country. There are no seed packages even similar to LTH25 In Nepal at this point and its nature and effectiveness will begin to "sell itself" once it establishes a name in the rural communities of Nepal.

Export Documentation and Trade Barriers

As might be expected, there are fees and forms and regulations required for the export of goods from Canada, as well as for import to Canada. These are completed essentially to uphold trade agreements legally and track export data (Government, 2014). Furthermore, importation in Nepal requires separate documentation and recordings (Economics, 2013). In Nepal, most trade restrictions are being eliminated with the exception of a high tariff remaining on agricultural products (Economics, 2013). This value was not taken into account during the calculations and will add even more cost to the export process.

Canadian Grants

There are many grants available to aid in establishing trade and/or business from Canada to other countries. The "Agricultural Micro-Enterprise Development Grant" for example, is a Nepal Specific Grant for up to 1.2 million dollars (ForeignAffairs, 2014). There are also many grants available for small businesses for Ontario. These could apply if the project were to be established as a business that marketed and delivered to the seed demands in Nepal. Finally, the Nepalese government offers grants to the agricultural sector as well. A proper understanding of these systems is important to obtain the highest chance of receiving these grants, but they provide a unique opportunity of funding.

Conclusion

In order to determine the need and effectiveness – or perhaps the lack thereof, it is beneficial to do a simple SWOT analysis. A SWOT an analysis is an analytical breakdown of any product or circumstance to weigh the pros and cons. SWOT is an acronym that stands for Strengths, Weaknesses, Opportunities, and Threats. *(OMAFRA, 2014)*

Strengths of LTH25 include the many benefits it has to offer Nepalese farmers and Ontario in terms of trade and economic and environmental gains.

Weaknesses to this product and future market include the high cost of transportation and licensing in Nepal and overall market value for farmers in Nepal.

Opportunities are the possibility of obtaining government grants to fully fund this project or provide assistance; either to farmers, or the suppliers so the price of the seed can be dropped to a more reasonable rate.

Threats of this operation are many. Transportation dangers, closing of trade opportunities and product spoilage just to name a few.

In conclusion, it is quite apparent to see that the cost of the idea is outrageous not only for Nepalese farmers, but also for anyone required to provide the seed and services. The average price is quite easily doubled because of the transportation fees and additional marketing required. Regulatory fees, taxes and additional licensing fees were not even been included in the data. The simple financial demonstration does prove that the larger the sales bracket, the less cost per unit is achieved for the supplier. That said, the only way this project could be effectively be implemented is to obtain a government grant that would cause the prices to fall into a more reasonable affordable range.

To summarize the following information, it can be observed that unless government grants or assistance is achieved, this project does not make sense financially and is therefore not feasible.

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