

AGR 1110 – Canadian Exports Assignment

Promoting Alfalfa Seed Exports to Nepal

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Part #1 – Product Information

Product:

The Survivor™ alfalfa variety is well suited to grazing and heavy traffic because of its sunken crown. It also produces high yields in stressful environmental conditions because it is tolerant to many stressors, including; diseases, winterkill and insects (Pro Rich Pro Rich Seeds Inc. Personal communication by phone (1-800-361-1593). Date: Oct. 7, 2014.). The Survivor™ alfalfa variety was developed by DAIRYLAND SEEDS, a Dow Agrosiences company in West Bend, Wisconsin, USA (M. Holzworth, Speare Seeds personal communication, Nov. 3, 2014). Seed-Link is the registered representative for Survivor alfalfa in Canada (Inspection Canada). BrettYoung is the seed producer of Survivor alfalfa, headquartered in Winnipeg, Manitoba, Canada.

There are approximately 225,000 seeds per pound (495,000 seeds/kg) in the Survivor variety and the ideal soil pH levels for growing are 6.0-7.8, with good alkalinity tolerance, but poor acidity tolerance (BrettYoung). The field may require liming to raise the pH of the soil, liming will also increase yields if not already present in the soil (Alfalfa Management Guide). The cost per pound is \$5.65 in Ontario (Pro Rich) and an application rate of 18 pounds per acre (Speare Seeds) gives a total seed cost of \$101.70 per acre. The seed crops are grown in Western Canada and sold to seed dealers.

Benefits to Canadian Farmers and Environment:

More export of alfalfa seed will increase revenue from export, thus increasing jobs. The land area used for alfalfa production will increase from the increased demand. This will help to remove fragile lands from row crops, decreasing soil erosion and runoff. Alfalfa is a very good crop to have in a crop rotation, it improves soil quality by building organic matter, breaking up compaction and increasing the water holding capacity (Alfalfa Management Guide). It increases the number of microbes in the soil, promoting soil life and releases large amounts of nitrogen into the soil. The high levels of available nitrogen in the soil after alfalfa is ploughed under means that no nitrogen fertilizer needs to be applied and produces more fertile land (Alfalfa Management Guide). Alfalfa reduces the environmental footprint by reducing fuel consumption through less soil compaction, fertilizer and pesticide applications. Alfalfa provides more habitats for the endangered Bobolink and is essential to the bee population. Alfalfa brings more diversity to crop rotations and provides yearlong ground cover which helps to decrease nutrient runoff and little or no pesticides are required (Alfalfa Management Guide). The increased demand for alfalfa explains why alfalfa is commonly grown as a cash crop. This means greater emphasis will be placed on the importance of alfalfa and thus may help to keep Roundup Ready Alfalfa out of Canada. This is a similar scenario to why Roundup Ready wheat is not grown in Canada, as it would jeopardize our export markets.

Alfalfa releases toxins in the soil when it is stressed which chokes out the weeds providing good weed control (Alfalfa Management Guide). Roundup locks up Phosphorus in the soil and other pesticides are very high in salts, which can bring some salinity to soils.

Part # 2 – Export potential to Nepal

Benefits to Farmers/Agriculture In Nepal:

Nepal will have access to good forage genetics with Survivor alfalfa from Canada. Canada can help out its trade partner by sharing it's excellent success in breeding alfalfa. This would allow Nepal to fast track it's agricultural sector. The Survivor variety produces a high yield along with good grazing and traffic tolerance and good resistance to winterkill, pests and diseases (ProRich). Alfalfa is easy to establish and requires very little work and tools, as it can be broadcasted by hand, a small hand held spreader and incorporated with a rake or seeded using any other of the multiple more advanced methods such as a drill (Alfalfa Management Guide). The alfalfa is grazed and does not have to be harvested except for that kept for winter feed. Alfalfa can be seeded on very hilly or small strips of unusable land for grazing and at the same time combating erosion. In some Asian countries people will prepare cooked alfalfa as a meal. A good side effect of having an abundance of alfalfa is the honeybee colonies that it will support that will also be present to pollinate other crops and produce honey for human consumption.

The alfalfa will also result in much better crop yields particularly for corn due to the very high levels of available nitrogen and that corn yields are highly dependent on nitrogen. The high fertility of the soil after the alfalfa has been plowed under is also a major contributor to good crop yield and commercial fertilizer is not needed. This increases soil life, is more sustainable and decreases cost. There are many other benefits

like little to no runoff, no fertilizer related injuries and more soil life since living organisms are not being killed by commercial fertilizers and pesticides that are mostly salts. This makes alfalfa an excellent crop to start with when using unproductive soils and to use in crop rotations. Crop rotations provide many benefits like increased soil fertility and decreased pest pressure since different crops provide and require different nutrients and the pests for one crop are different for that of completely different crop. The alfalfa roots also provide soil stability and structure. Use of commercial synthetic fertilizers decreases the fertility of the soil by supplementing the soil with the required nutrients, so that the microbes are no longer needed to produce and process nutrients and begin to disappear. The microbes produce the required nutrients continuously right at the plants roots when they need it unlike fertilizers where they are applied and then required a month later and have leached and disappeared.

Trade Partners In Nepal:

There are multiple universities in Nepal that are devoted to agriculture these would be a big help in educating farmers and seed dealers on how to grow and manage Survivor alfalfa and other alfalfa varieties. The universities can help coordinate and help with the language barrier and help with planning by performing soil tests and providing recommendations for inputs of fertilizers, which should be natural if possible. In short the universities, seed dealers and farmers in Nepal along with Canadian firms and groups can effectively establish good alfalfa stands in Nepal which will in turn lead to improved crop yields on land that has previously been in alfalfa.

Marketing Plan:

The Agricultural Universities would provide the initial startup knowledge and educate and work with seed dealers to establish test plots, this seed could be airmailed to speed things up to get the project on the move as it would be a small quantity. The universities could then spread the word and continue research with the Survivor variety and pass their findings on to the seed dealers and farmers. The universities could hold seminars or open houses to explain the production methods, requirements, benefits and cost to the farmers and seed dealers. At this point a shipping container of seed will have arrived and ready for the eager farmers to buy it before they leave, thus saving an extra trip if it is a long distance. The seed will be packed in appropriate sized bags probably 5kg accompanied with clear easy to understand instructions that include images or diagrams for those who cannot read and to give additional guidance. The bags would also have contact information and additional brochures to pass on to other farmers who show interest. The knowledge will gradually spread from there on, passed on from seed dealers and other experienced farmers with the aid of brochures and open houses.

Shipping:

BrettYoung ships directly out of their warehouse in Winnipeg, Manitoba, Canada. A1 Freight Forwarding has cargo flights from Winnipeg to Kathmandu.

Future and Unseen Issues:

There could be unknown diseases, pests and stressors in Nepal that effect alfalfa. Alfalfa could become a disaster and either all the land is used due to high commodity prices, or the alfalfa may not grow or mature properly or cut after a frost leading to livestock illness. This would be a huge problem if their money is used up on seed that does not live up to its expectation and kills off their livestock. Maybe alfalfa is not suitable for the livestock breeds in Nepal. For ruminants feed changes have to be slow and gradual to allow them to adapt.

Agricultural Universities In Nepal:

Agriculture and Forestry University in Rampur, Chitwan, Nepal

<http://www.afu.edu.np>

Institute of Agriculture and Animal Science (IAAS) at Tribhuvan University

Kathmandu, Nepal

<http://tribhuvan-university.edu.np/institutes/institute-of-agriculture-and-animal-science/>

Himalayan College of Agricultural Sciences and Technology

Kalanki, Kathmandu, Nepal

<http://www.hicast.edu.np>

Seed Dealers In Nepal:

Lasersun Energy Pvt. Ltd

Sanepa, Lalitpur, Nepal

<http://www.exportersindia.com/lasersun-energy-pvt-ltd/>

Forest Nepal

Birgunj, Nepal

<http://www.exportersindia.com/forestnepal/>

Gego Enterprises Pvt. Ltd

Kathmandu, Nepal

<http://www.exportersindia.com/gegoenterprises/>

References:

Part # 1:

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http://www.speareseeds.ca/index.php?p=Forage_Seed

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http://www.brettyoung.ca/html/west-canada-seed-crop-inputs/WCDNRLT_Forages/WCDNRLT_Forages-AlfLegs/survivor/index.cfm

References:

Part # 2:

Air Shipping to Nepal from Canada: Air Freight & Air Cargo. Retrieved from: <http://www.a1freightforwarding.com/country/air/nepal-2/>

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<https://www.agronomy.org/files/publications/alfalfa-management-guide.pdf>

<http://www.exportersindia.com/forestnepal/>

<http://www.exportersindia.com/lasersun-energy-pvt-ltd/>

<http://www.hicast.edu.np>

<http://tribhuvan-university.edu.np/institutes/institute-of-agriculture-and-animal-science/>

<http://www.exportersindia.com/gegoenterprises/>

