

Taylor MacLean

Tuesday 8:30am

Nepal Export Idea – Final Report

Tuesday December 1st 2015

Silo Inoculant

Part 1 – Product Information

Product Description

Silage inoculants are additives that contain anaerobic lactic acid bacteria which are used to help with the fermentation of different types of silage such as corn, grass and cereal, multi-crop and alfalfa. (Silo Inoculant,2014) Fermentation is the chemical breakdown of a substance by bacteria, yeast and microorganisms.(Silo Inoculant,2014) The purpose of using silo



(Silo Inoculant,2014)

inoculants is to have more efficient fermentation which causes a faster decline in the pH of the silage.(Silo Inoculant,2014) Another purpose of silo inoculant is to reduce fermentation losses so that only twelve to fifteen percent of the dry matter is lost, improve forage quality by reducing the pH the silage will have a preserving environment, to have a longer bunker life as well as to see improvements in animal performance due to the improved forage quality.(Silo Inoculant, 2014)

Benefits of Silo Inoculant to Animals

Healthy animals starts with making sure one has good silage, if the silage is spoiled and there is no nutrients left it it to feed to the animals they do not produce or grow as they should. (Silo King, 2015) Another reason the silage would not be as good for the animals is because there were losses during fermentations. (Silo King, 2015) A way that one could better their silage quality would be to use silo inoculants. (Silo King, 2015) This would be a useful product because it is beneficial to animals to have high quality feed. (Silo King, 2015) The inoculants would make the feed higher quality because they help to maintain energy and nutrients in the

feed. Without the inoculants in the silage the intake and digestibility decreases as seen in figure 1 below. (Silo King,2015)

Figure 1.

	Ration	
	Normal Corn Silage	25% Spoiled Corn Silage
Dry Matter Intake (lb/day)	17.5	16.2
Digestibility (%):		
Dry Matter	74.4	68.9
Organic Matter	75.6	70.6
Crude Protein	74.6	70.5
Neutral Detergent Fiber	63.2	56.0
Acid Detergent Fiber	56.1	46.2

<http://extension.usu.edu/dairy/files/uploads/htms/silagefe.htm>

Benefits to Canada

Exporting goods and services helps Canada's economy in many ways, one specific way it helps is by creating more job opportunities. (Economy, 2014)Exporting also helps to increase the costumer base, if companies export goods outside of their country they tend to have a higher income as they have more people buying their products and more people buying them means more money which allows them to pay their employees a larger salary.(Benefits of Exporting,2013) Therefore if Canada were to start exporting silo inoculants to Nepal there would be a higher demand for the silo inoculant therefore creating more jobs at Canadian chemical companies as well as it would increase the Canadian chemical companies costumer base.(Benefits of Exporting,2013) A Canadian chemical company that would benefit from and increase in the demand would be DuPont Pioneer.(Silage Zone, 2011)This chemical company makes different types of inoculant that would be very effectivities to the agriculture industry in Nepal as it would help their grains keep from spoiling as quickly, so exporting it would make the company more money as they are selling more products and it

would help the people of Nepal.(Silo King,2015) Overall not only would exporting silage inoculant help Canadians it would also help the people of Nepal.(Silage Zone,2011)



DuPont Pioneer

DuPont Pioneer is a chemical company that produces silo inoculants for a variety of different species such as corn, high moisture corn, grass/cereals, alfalfa and multi crop silages.(Pioneer,2011) The company employees

(Pioneer,2011) twelve thousand three hundred people approximately and even though the headquarters are in Iowa in the United States Dupont Pioneer has multiple stations throughout Canada as they are in 70 countries world wide. (Pioneer,2011) This would be the company that would supply the silo inoculant to these companies in Nepal.

(Pioneer,2011) The contact information for this company can be found below in figure

2.(Pioneer,2011) The names of the products that would be exported to Nepal would be the ones used for corn silage as well as grass and cereal silage. (Pioneer, 2011) These products are:

11CFT, 11C33, 1132 (corn silage) , 11GFT, 11G22 (grass and cereal silage). (Pioneer,2011)

Figure 2.

Pioneer Web Support
1-800-233-7333
Monday - Friday
8 a.m. to 5 p.m. Central Time
(Pioneer,2011)

Pioneer Hi-Bred International, Inc.
Resource Connection
PO Box 1000
Johnston, IA 50131-0184
Phone: (515) 535-3200

Market Opportunity

The market opportunity in Nepal would be good because the farmers of Nepal are looking for ways to keep their silage from spoiling within three to four months after harvest. If they were to figure that out they would make the quality of the silage better and the way for them to fix the spoiling silage problem is to use silo inoculants. Introducing silo inoculants to Nepal might take a little while for the farmers there to accept the idea even though it is proven to work all over the world but if a few farmers try the new product and it works then others will see that their silage is better quality and want to buy the product as well. Another reason the potential market opportunity in Nepal is good would be that even though the people of Nepal have difficulties transporting products places silo inoculant is easy to carry and easy to use as you just add it to your silage, it does not involve any extra machinery or work and they would be able to afford it because it would help to improve silage quality therefore in the end making them more money in the end and they don't lose any money by buying the inoculant. It would also be a good market because there are no competitors in the country or around as DuPont Pioneer has stations in both of the bordering countries and therefore there is no competition. The other reason it would be easy to market silo inoculant is because of the many benefits it has for the country and the people of Nepal. These benefits include better silage quality which means healthier animals and better crops to export which means more money for the Nepal farmers and an overall better economy for the country itself. Overall silo inoculant has a lot of market potential in Nepal and it would not be difficult to market it.

Part 2 – Critical Analysis of Potential Benefit to Nepal

Introduction to Nepal

Nepal is a small country located in Asia in which eighty percent of the population of approximately twenty-six million people are involved in agriculture. (Nepal Agri.2013) Majority of farmers live off plots of land that are cultivated in very difficult conditions. (Nepal Agri,2013) The country in general needs help with their agriculture industry as well as finding more jobs for the people who live there. (Nepal Agri.2013) The climate in Nepal varies depending on where in Nepal you are located. (Nepal Agri,2013) The north has cooler summer with severe winters and the south has tropical summers and mild winters. (Nepal Agri,2013)

Agriculture in Nepal

The agriculture industry in Nepal is the largest industry in the country and even though only twenty percent of the land can be cultivated eighty percent of the population is involved in the industry. Sixty percent of the country's gross domestic product and about seventy five percent of the country's exports. Majority of the farming takes place in the hilly regions of Nepal making any sort of delivery transportation of products very difficult. The government has tried multiple different programs like irrigation and fertilizers but nothing can be delivered to these farms due to the mountainous terrain. Due to the amount of people involved in this industry and the fact that farming is very seasonal during the off season there is a lot of underemployment in Nepal. The problem with trying to increase the agricultural activity in Nepal is that Nepal has many small and rather fragile ecosystems that will be destroyed if the forest land is destroyed. Another negative effect of taking down the trees and deforestation would be that there will be a much greater risk of soil erosion which leads to flooding which could endanger the lives of many farmers so deforestation is not an option. As you can see the Nepal agricultural industry has

many challenges that are not easy to overcome which makes it a problem for the country's economy as over half of their population is involved in this industry. (National Encyclopedia, 2014)

Needs and Benefits to Nepal

One of the problems with Nepal's agriculture is finding a successful way to store their harvested crops as they seem to be going bad very quickly. A way that exporting silo inoculant could benefit Nepal would be helping their grains stay good for longer which would allow them to have food for more than three or four months after harvest. Not only will keeping the food good for more than three to four months after harvest help with the food deficit, it will also help in the animal production department because good feed for animals means they will grow and or produce better helping with the overall agriculture industry. (Earth Trees, 2014) Another way that exporting goods to Nepal would benefit the Nepalese is it would create more jobs for the people as the company National Seeds Limited which currently employs approximately 2500 and would need to hire more people to sell with the newly introduced silo inoculant. National Seeds Limited would also need to hire people to specialize and learn all about silo inoculant so they could explain and convince farmers why they should buy the product and how it will help the farmers as it is a new product and they would not know. (Benefits of Exporting, 2013) The company that Canada would ship the inoculant to would be National Seed Company Limited which is stationed right in the capital city Kathmandu, Nepal. Having a seed company that is stationed in the capital city makes it very convenient for selling the new product as it is easily accessible by the farmers. (National Seeds Corporation, 2010) The silo inoculant will help with slowing down the rate of the spoiling silage, it would also help to increase the amount of silage that the farmer can export which is another benefit to Nepal because it would help increase the

countries economy by creating a larger income for those farmers that are trying to export goods. (Earth's Trees,2013) Due to the cost efficient shipping methods the Nepalese and the Canadian companies came up with for getting the product to Nepal and distributing the product to the seed company both sides would come out on top and make some sort of profit off of the trade agreement therefore benefiting both countries.(Company Profile,2009)

Transportation

The cost efficient way that the silo inoculant will get all the way from Canada over to Nepal would be to ship the silo inoculant from the DuPont Pioneer station in Calgary, Alberta as it is the closest to the Pacific Ocean which will be the main transportation method used. It will be shipped from the station via transport truck to the docks where it will be loaded on a boat owned by the shipping company Nepal Shipping and Air Logistics (NPSAL). Once on the boat it will be shipped from British Columbia to a warehouse in Kathmandu, Nepal which happens to be the capital city of Nepal. Once in the warehouse in Nepal the silo inoculant will be put on another truck for a quick trip to the National Seed Company Limited which is a seed company in Nepal also located in the city of Kathmandu. That would be the most cost effective way of shipping the silo inoculant from Dupont Pioneer, Canada to National Seed Company Limited, Nepal. (National Seed Company Limited,2010)

Producers and Buyers

The company that will be producing the silo inoculant is DuPont Pioneer from their station in Calgary, Alberta and their target customer would be a major seed company located in the capital city Kathmandu, Nepal. National Seeds Limited is a major seed company in Nepal that could be the buyer of the silo inoculant as they are a major seed company conveniently located in the capital city. Once National Seeds Limited agrees to purchase the silo inoculant and sell it

there target consumer would be the farmers of Nepal who are trying to better there silage in a variety of ways. It would also be the farmers that make corn, grass, cereal, multi-crop and alfalfa silage as those are the types of silo inoculant that Dupont Pioneer would be selling to National Seeds Limited.(National Seeds Corporations,2010)

<http://www.indiaseeds.com/contact-us.html>

National Seeds Limited

National Seeds Limited is a seed company owned by the government of India. They have approximately 600 varieties for 60 different types of crops. They are stationed throughout the country of Asia with 10 regional offices, 5 farms and 73 area sub units. One of these locations is in the capital city of Kathmandu, Nepal making that the perfect seed company to be the target buyer of DuPont Pioneer's silo inoculant. They employ approximately two-thousand five-hundred people in which sixty-nine percent of them are accounted for the sale turn over rate. Real life contact information for this company is seen below in figure 3. (National Seeds Limited, 2010)



NSC Recruitment 2015

Figure 3.

Phone Nos : +91 011 25846292, 25846295, 25842672,
25841379, 25842383, 25843357, 25842460
Fax: +91 11 25846462, 25842904

National Seeds Corporation Limited
Beej Bhawan, Pusa Complex,
New Delhi-110 012, INDIA

Potential Market in Nepal

The potential market opportunity in Nepal would be that even though the people of Nepal have difficulties transporting products places silo inoculant is easy to carry and easy to use as you just add it to your silage, it does not involve any extra machinery or work and they would be able to afford it because it would help to improve silage quality therefore in the end making them more money in the end and they don't lose any money by buying the inoculant. It would also

be a good market because there is no competitors in the country or around as DuPont Pioneer has stations in both of the bordering countries and therefore there is no competition. The other reason it would be easy to market silo inoculant is because of the many benefits it has for the country and the people of Nepal. These benefits include better silage quality which means healthier animals and better crops to export which means more money for the Nepal farmers and an overall better economy for the country itself. Overall silo inoculant has a lot of market potential in Nepal and it would not be difficult to market it. (National Seeds Limited, 2010)

Potential for Niche Market

There is a good market opportunity in Nepal as mentioned above but the opportunity for a niche market may be greater as the product would be better off being marketed to the farmers of Nepal who store their silage and are at risk of having their silage spoil. There would not be a point in marketing to the people of Nepal who live in the city or who do not store their silage as they would have no use for the silo inoculant. Whereas if you only market the silo inoculant to the farmers who make silage out of their crops as there would be more of a chance that those Nepalese farmers would want to buy the product and better their silage quality and animal health and overall income of their farm as that is what silo inoculant could do for them.

Unknowns

The unknowns or future studies that would have to be done when exporting silo inoculant from Canada to Nepal and introducing this new product to the farmers of Nepal would be how well the silo inoculant would work with the types of storage that they use in Nepal as their tower and bunker silos are not the same as the ones we have here in Canada so whether or not the silo inoculant would work as well there as it does here will not be known until it is tested being used there. Future research would also have to be done in order to

convince the farmer that the silo inoculant does indeed help their overall income and they are not wasting their money on a product that is not going to work and they would have spent their money elsewhere on something that could have been more useful so once again they would have to do testing based on the types of storage units that the Nepalese farmers use. Future research would also have to be done to see if new kinds of inoculants could be created and used for crops in Nepal that are not grown in Canada and could therefore further help the economy of Nepal. Even though I think that exporting silo inoculant to Nepal is a very good idea and it would be very helpful to the overall economy there is still many unknowns about the new product but there could be a bright future for it as there are multiple opportunities to expand the use of that product.

Conclusion

In conclusion Nepal's agriculture industry needs as much help as it can get because the majority of the population is involved in the industry so if it improves the overall economy of the country will improve. This paper was written to show that exporting silo inoculant to Nepal has more benefit to Nepal than it does to not ship it there. Silo inoculant is going to benefit the agricultural industry which is going to help over half of the population of Nepal. Another reason shipping silo inoculant from Canada to Nepal not only benefits Nepal but it also benefits Canada in a variety of different ways making silo inoculant a good export option for Nepal.

References:

225 - Earth's Tree News. (n.d.). Retrieved October 20, 2015, from <http://olyecology.livejournal.com/59178.html>

Benefits of Exporting. (n.d.). Retrieved October 20, 2015, from http://www.export.gov/about/eg_main_016807.asp

Importance of exports to the economy. (n.d.). Retrieved October 20, 2015, from <http://www.economicshelp.org/blog/7164/trade/importance-of-exports-to-the-economy/>
Nepal - Agriculture. (n.d.). Retrieved October 20, 2015, from <http://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Nepal-AGRICULTURE.html>

People. (n.d.). Retrieved December 1, 2015, from <http://www.welcomenepal.com/know-nepal/ethnic-mosaic/>

Company Profile. (n.d.). Retrieved December 1, 2015, from <http://www.nscl.org.np/home>

Pioneer. (n.d.). Retrieved December 1, 2015, from <https://www.pioneer.com>

Silage Inoculants. (n.d.). Retrieved October 20, 2015, from http://www.omafra.gov.on.ca/english/crops/facts/info_silageinoc.htm

Silo-King® - Agri-King. (n.d.). Retrieved December 1, 2015, from <http://www.agriking.com/silo-king>

Silage Zone. (n.d.). Retrieved October 20, 2015, from <https://www.pioneer.com/home/site/ca/livestock-feed-nutrition/library/template.CONTENT/guid.B36A6B21-F83D-4812-8FB2-38AB62C5BDF>

People. (n.d.). Retrieved December 1, 2015, from <http://www.welcomenepal.com/know-nepal/ethnic-mosaic/>

Company Profile. (n.d.). Retrieved December 1, 2015, from <http://www.nscl.org.np/home>

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