

Ear Tag Export for use on Nepalese Livestock

Nepal Final Report

3280 words

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Thurs/2:30

AGR1110

Monday Nov 24

Introduction:

The export idea that is being proposed to Nepal for helping their agriculture system is to send them ear tags. Ear tags for livestock have benefited the dairy, sheep, cattle, and goat industries significantly. Large or small farmers will be able to use the ear tags and benefit from them. Farmers are able to keep track of their herd and separate individuals in pastures. An animal's information can be kept on record with the number that is on the tag. If there is a problem, it can be searched in records from previous accounts and it may be solved more rapidly.

Product Information:

Background of Ear Tags

Before the ear tags were produced the main identification system used to identify animals was branding (FAO/WHO, 2004). The branding was used for the farmers to be able to identify their animals. The main reason for using an identification system is to mark animals so there is proof of ownership and to be able to manage and trace the animals. Livestock can be identified and recovered if they are stolen or run away. Hot branding has been used for around 4000 years to identify livestock. There are several disadvantages to using hot branding to identify livestock. The hide of the animal becomes damaged where the animal is branded, so its value decreases. The size of the ear tags has a limit of how large the numbers can be. When the animal is branded at a young age the branded numbers or letters could get distorted, and then the numbers or letters may not be legible. In the winter as the animals grow a thicker coat of hair, the brand may become more difficult to see. Animal welfare has become a problem when animals are branded. The branding is said to cause distress and pain to the animal so it has been less frequently used. Ear tags are now used more commonly (FAO/WHO, 2004).

Ear Tag Industry in Canada:

The cattle industry in Canada requires producers to have their cattle tagged with radio frequency identification when they are leaving their original herd (OMAFRA, 2010). There are 12.22 million head of cattle and calves in Canada (Agriculture and Agri-Food Canada, 2014). Tagging the animals is the easiest way to identify a large number on the farm and in the processing plant (Agriculture and Agri-Food, Canada 2014). The dairy industry requires producers to tag their animals to have both a radio frequency identification tag and a normal visual tag (OMAFRA, 2010). The Canadian producers have very tight standards because they want to minimize the spread of diseases and prove the ownership of the animal (OMAFRA, 2010).

Product Company:

Ketchum Manufacturing Inc. was founded in 1913 by Zebulon Ketchum (Ketchum, 2014). Started in Ottawa, Ontario, the company manufactures livestock products specializing in animal identification. They are 100% Canadian owned and operated. The head office is in Brockville so all of their management staff are located there. They also have their distribution warehouse in Brockville where all of the products that come to Canada are held. The products are shipped by truck to the distributors across Canada. The company moved to Brockville in 2005 so they could expand and there they started producing metal identification tags. They have further expanded their products to include plastic ear tags, neck tags, and electronic leg tags. Ketchum Manufacturing Inc. has become one of the most well-known identification companies in the world. Ketchum is the leading supplier of identification tags used in the seafood industry to track farmed fish and wild fish that are caught. They now manufacture identification tags for

many different industries and can serve most sectors including seafood, meat packers, auction, retail and grocery, forestry, hospitality, and more (Ketchum, 2014).

Product Description:

Ketchum manufactures two different sizes of basic plastic ear tags. The smaller ear tags are 2.5 x 3” and retail at \$56.00 CDN/100 tags, while the larger tags are 3 x 4.5” and retail at \$62.50 CDN/100 tags (T. Lynch, personal communication, October 3, 2014). The larger tags are used mainly on cattle and buffalo. The animals are larger so the ear tags can be spotted from a distance away. The smaller tags can be used on goats, sheep, or heifers. Ear tags can be either plastic or metal, the plastic ear tags are more commonly used because they are larger and more visible than the metal ear tags (Ketchum, 2014). The tags also come in various colours. Some of the colours are very bright so they can easily be seen from a distance.

Tools Needed:

The tagger is the tool that is used for connecting the ear tag to the ear. It retails for \$28.60 CDN and is universal so it can be used to tag any of their basic ear tags (T. Lynch, pers. comm. October 3, 2014). There is a specific tagger for each different line of ear tags. The tags do not affect the cows’ health or milk production. The tagged animals can be monitored easier, if they need to receive medication they can be located quickly within the herd.

Labour Required:

To secure a tag onto a cow’s ear, the tagger is used. The tagger is a handheld tool that is very easy to operate. When putting an ear tag on a cow the ear has to be clean (Oklahoma State University, n.d.). The ear tag should be cleaned before it is inserted through the ear. Rubbing alcohol is a very quick and easy way to clean the ear tag. This will decrease the chance of the

animal getting an infection or disease from the open cut. If an infection or disease were to develop, the cow would suffer. The animal may lose production for a period of time or it may even die if the infection is harsh enough. The tagger crimps the tag on the front of the ear with a stopper on its back side. The animal will need to be held down when the ear tag is being applied. Most of the animals will move around or jump. If the animal is not held down, the animal or the person tagging could become injured. The best way to hold down cattle, is to put them in a chute with a halter, nose lead, or a head gate. For swine, the best way is to put them in a small pen with boards around them to cut off the movement. To completely secure the animal, a swine snare is recommended. To tag goats or sheep, they only need to have their heads held tightly by a second person. Very little labour is required once the tag is fastened on to the ear (Oklahoma State University, n.d.).

Steps to Applying Ear Tags:

When applying the ear tags, they should be placed between the upper and lower ribs in the middle third of the ear (Figure 1) (Oklahoma State University, n.d.). The tagger and the site of the ear tag needs to be clean. The two halves of the ear tag are loaded into the tagger. Before the animal is tagged the alignment of the tagger needs to be checked to see if the jaws close at the right point. The stud of the male portion needs to be in the center of the hole on the female part. The tag needs to be positioned in the proper site on the ear, then the tagger needs to be closed firmly and released in a quick manner (Figure 1). Check to see if the tag was placed in the correct position and secured (Figure 1). Also make sure the animal is comfortable with the ear tag applied. For the week after the tag has been applied the animal should be watched. The best way to prevent an infection is to apply hydrogen peroxide daily for the first week to the

site where the ear tag is. The ear needs to be watched until it is fully healed so no infection can develop on the animal (Oklahoma State University, n.d.).

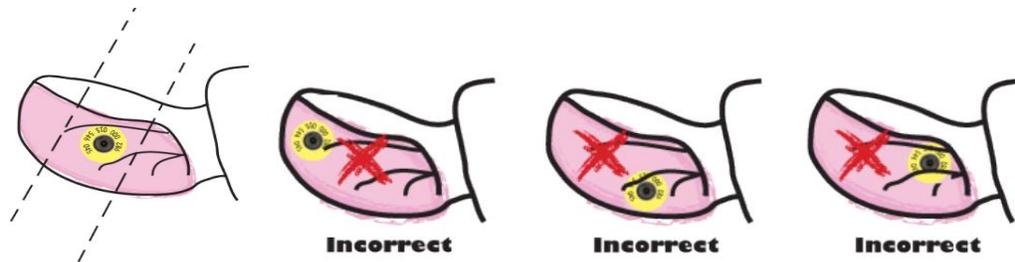


Figure 1: Correct and incorrect placement location for ear tags (Oklahoma State University, n.d.).

The ear tags are marketed for farmers with large herds of cattle, sheep, or goats as a means to keep them organized. The ear tags can also be used on smaller farms to keep the animals contained and organized. If an animal escapes a pasture and moves in with another herd, it could be located quicker if it has an ear tag on its ear. There is over 22 million head of cattle, buffalo, goats, and sheep in Nepal as of 2012 (Table 1) (FAO Statistics, 2014). Not all of the farmers will purchase the tags but there is a large potential for the number of animals present.

NATIONAL SAMPLE CENSUS OF AGRICULTURE 2011/12

NEPAL

Total area of holding	Livestock											
	Total		Cattle		Yak/Nak/Chauri		Buffalo		Goat		Sheep	
	No. of holdings	No. of heads	No. of holdings	No. of heads	No. of holdings	No. of heads	No. of holdings	No. of heads	No. of holdings	No. of heads	No. of holdings	No. of heads
Holding without land	109,679	508,444	65,309	139,545	70	1,242	34,748	58,082	61,084	248,337	1,390	12,957
Holding with land	3,244,178	21,626,614	2,215,233	6,290,852	6,165	47,623	1,634,072	3,116,307	2,291,369	10,741,810	94,855	595,117
Under 0.1 ha	224,331	888,013	107,198	226,984	233	1,670	58,646	89,500	145,746	495,812	3,439	15,954
0.1 ha and under 0.2 ha	365,840	1,775,670	200,980	495,503	647	4,363	139,741	221,505	240,234	935,885	8,268	37,949
0.2 ha and under 0.5 ha	1,037,344	6,353,284	665,522	1,793,621	2,003	13,646	510,115	891,776	725,738	3,255,285	28,659	169,151
0.5 ha and under 1 ha	916,609	6,810,985	679,343	1,995,437	1,982	14,878	507,935	986,068	671,262	3,372,939	28,770	197,907
1 ha and under 2 ha	517,401	4,207,266	412,016	1,270,725	1,033	9,121	302,406	649,372	380,616	2,004,770	18,138	113,892
2 ha and under 3 ha	121,403	1,033,212	99,918	325,628	67	521	76,022	179,344	86,313	451,166	4,360	34,052
3 ha and under 4 ha	36,887	326,268	30,153	104,813	60	347	23,670	57,711	25,379	132,804	1,992	16,965
4 ha and under 5 ha	13,761	130,980	11,242	44,215	63	705	8,838	22,786	9,140	52,012	769	6,480
5 ha and under 10 ha	9,741	95,554	8,245	31,357	76	2,371	6,265	16,968	6,637	39,662	459	2,767
10 ha and over	861	5,381	616	2,567			435	1,278	303	1,474		
Total	3,353,857	22,135,058	2,280,542	6,430,397	6,235	48,865	1,668,820	3,174,389	2,352,453	10,990,147	96,245	608,074

Table 1: Number of livestock for different total areas of holdings (Central Bureau of Statistics Nepal, 2014).

The Ketchum ear tags are made in the United Kingdom (T. Lynch, pers. comm. October 3, 2014). They are brought to Canada to be distributed. The company's main focus is to sell their products within Canada, but they will export across the globe if there is a demand for the ear tags (T. Lynch, pers. comm. October 8, 2014). There are no other Canadian based companies that are selling ear tags. There are many companies in the United States, Europe, Asia and Australia who are marketing ear tags.

Benefits to Canada:

Exporting ear tags could benefit Canada in many ways. When exporting this product to Nepal, this would produce new management jobs within the company. The company has to deal with trading, exporting products, shipping, and handling that are involved with getting products out of Canada. The product needs to be sent to Nepal so there is trucking involve with getting

the supplies from the warehouse to the shipping port or the airport. Ketchum could increase their sales and profit within the company by exporting to Nepal. This could be a start to exporting throughout the world. The sales will increase the revenue for Canada because of the exports. This will strengthen relationships with Nepal, so Canada could have the ability to trade more with Nepal.

For more information on the ear tags or other products, Tom Lynch from Ketchum Manufacturing Inc. can be contacted at, 1245 California Avenue Brockville ON CAN, K6V 7N5, phone (613) 342-8455, fax (613) 342-7550, Email toml@ketchum.ca.

Export Potential:

Background on Nepal:

Nepal is located in southern Asia between China in the north, and India in the south (Central Intelligence Agency, 2014). The country has three different geographical regions. The terai or plains region in the south has a warm and wet climate (Central Intelligence Agency, 2014). There are many cereal crops, fruits and vegetables and food crops grown like, rice, wheat, corn, potatoes, peas, and more (FAO Corporate Document Repository, 2001). The hills in the middle region has a moderate climate. There can be an abundance of crops grown here also but many will be farming on terraces. Rice can be grown here but only if it can be irrigated. Unirrigated land will grow corn, millet, legumes, potatoes, vegetables, and more. In the mountains corn, potatoes, wheat, niger, and vegetables are grown (FAO Corporate Document Repository, 2001).

Nepal's population is 27.8 million people (Government of Canada, 2014). The total area of the country is 147,181 Km². Their population density is 189 people/Km². The national GDP

of the country is \$19.8 billion US. The average income for a working person in one year is \$714 US. They have their own currency of Nepalese rupees, one Canadian dollar is equal to 89.6 Nepalese rupees (Government of Canada, 2014). The life expectancy for males is 67 years and the life expectancy for females is 69 years (The World Bank, 2014). The country is highly agricultural related with 71% of its population employed in the agriculture sector (The World Bank, 2014).

To be able to sell ear tags in Nepal, many barriers exist that need to be passed. The price for a basic small tag is \$0.56 CDN (T. Lynch, pers. comm. October 3, 2014). The tags would be realistic for a single farmer to buy. The price of misplacing or losing an animal is a lot higher than the price of one ear tag. The taggers may not be realistic for one farmer to purchase, but if a group of farmers came together to buy one to share, it might be more feasible. This product is not going to affect anyone if they have it or not. This will only benefit the people who purchase the ear tags.

Transportation:

The tags do not need to have any specialty transportation and they have an indefinite shelf life. They are light weight so any kind of transportation could take the product to Nepal. Purolator can pick up the product with transport trucks from the distribution warehouse which is located in Brockville Ontario (Purolator, 2014). They will ship the boxes on a container ship from Quebec City to the Haldia port in India. From there it will be shipped to Nepal on trucks. They are able to transport one box of ear tags from Brockville, Ontario, to Dhangadhi, Nepal for a cost of \$305.54 CDN (Purolator, 2014). For a pallet of the ear tags to be flown from the warehouse to the Nepalganj, India, it would cost \$4955.17 US (Xpress Rate, 2014). There can be 128 boxes shipped on a pallet, therefore 12,800 ear tags can be shipped on a pallet (T. Lynch,

pers. comm. October 3, 2014). The total cost of an ear tag shipped by a single box is \$3.69 US, and the total cost shipped on a pallet is \$1.02 US. With the transportation costs for the tags and the tagger the cost, the average Nepalese farmer is probably not going to purchase this equipment, the cost is too high. The revenue that the ear tags are producing would not exceed the cost of the product. A more effective way to ship the ear tags would be to send them to Nepal from the factory in the UK where they are made, this would save a lot of traveling distance.

Influence on the Environment:

Ear tags can have an influence on the environment within Nepal. A community could purchase ear tags for all of their livestock and put them on the same pasture to graze. Pastures could be set up to rotate the cattle between. When there is more than one pasture for the animals there is time for the forages to regrow. The pastures could be able to support a higher quality forages when there is a period for the plants to grow. Higher quality forages could be grown and healthier livestock will be produced. The livestock will need less food if the quality of the forages are higher. The livestock can be grown at a higher quality so the income from the animals will be higher. A larger group of animals would defend off predators easier and the calves would be safer in the group. The pastures could be cut after the wet season when there is an excess of growth. The forage can be stored and used to feed the livestock if the pastures or food supplies become low in the dry season.

Competitors:

There are companies around the world who are all trying to sell their ear tags. They need to be competitive with their prices if they want to sell their products. Some companies try to

produce the cheapest products so they can sell them easier. Their ear tags may only last one or two years. There are also companies who try to make a good quality product. They will have to sell it at a higher price but it may last five to ten years longer than the cheaper ear tags. The producers will usually benefit from buying the more expensive and higher quality ear tags.

Company	Country	Price/piece (\$ US)	Minimum Order	Size
Agriflex Ltd.	United Kingdom	1.23	10	Large
Allflex	USA	0.68	1	Large
Baoying Chengdong Society Welfare Factory	China	0.33	1000	Large
Duflex	USA	0.84	1	Large
Ketchum	Canada	0.56	1	Large
Perma-flex	USA	0.47	1	Large
SP Industries	India	1.05	100	Large

Table 2: Comparing the cost of ear tags and there minimum order from different distribution companies and countries around the world (Alibaba, 2014) (Cattle Tags, 2014) (CCK Outfitters, n.d.) (Ear Tags Direct, 2010) (T. Lynch, pers. comm. October 3, 2014).

The ear tags are marketed for the large herds of livestock in Nepal. They could benefit from ear tags the most. The larger farmers in Nepal could afford the tagger and the ear tags. This product could help farmers increase their production, therefore the profit of the farm would increase. The animals can be tagged and so they can be identified easier. The management of the animals will increase. If there is an animal that is sick or has an infection it can be identified, found easier, and watched in the following days. The animal can get help quicker and save the entire herd from getting infected.

This product would not be financially viable for a single small farmer to purchase. The tagger is too expensive for a single small farmer to purchase. Small farms would be able to purchase the ear tags. The best solution would be if a group of small farmers got together to

purchase a crimper together. They could all share it because cattle only need to be tagged once. Some cattle may need to be retagged if their ear tag falls off or gets ripped off. This would be a very good investment for a larger herd of livestock. The animals could be managed and cared for better. The animals can be observed and watched to see if they are having a problem. They can be found and taken out of the herd quickly before the whole herd is affected.

For this product to make it to the Nepalese farmers I would use the coop stores that are already started in Nepal. The stores that have been started by Nepalese people would be what I would reach. I would not want to start up my own business there. The people have worked very hard to start a business so I would sell them more products that they would be able to resell. The store owners would benefit from this product also because it would increase revenue within their business. For this product to be used more in the poorer countries of the world the one thing that I would change is the cost of the tagger. A cheaper tagger could be produced but it would still have to be good quality so it does not break easily. When the price of the tagger decreases the use of the ear tags will increase because more farmers will be able to afford them.

This product would help Nepal but it would have a greater benefit on India. India has the largest number of sheep, goats, cattle, and buffalo in the world at 568,270,000 (FAO Statistics, 2014). They have a population of 1.2 billion people so they need to be able to provide enough food for the people (Central Intelligence Agency, 2014). For this amount of animals the ear tags would be very beneficial. There is a lot of animals that could get lost or mixed in with the neighbours. If the farmers would tag their animals they could keep track of their animals. A community of neighbours could buy their own ear tags, and the community can get together and purchase the tagger. The tagger can be shared between everyone and they will all benefit.

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