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Prospects of Increasing the Usage of Allo Yarn in Carpet Factories in Kathmandu[1]

Abstract

Carpet weaving is an old tradition in Nepal. Carpet is a major export item. Natural fibres like jute, hemp, Allo, etc. are gaining popularity in the carpet market. The supply of Allo yarn has not met the demand of carpet factory. This study was conducted to analyze the prospect of increasing the use of Allo yarn in carpet manufacturing. The producers are getting a gross profit of Rs 83/kg Allo yarn. Since more than 80 percent of the cost of production is due to family labour, most of the return from Allo yarn production goes to the family. The export of Nepalese carpets is in decreasing trend over the years due to deteriorating quality, and issue of environment and child labour use. As Allo harvesting is much below its potential (only 20% exploited), programmes like MEDEP should promote Allo yarn enterprises for harnessing its full potential. To achieve efficiency in production, the harvesters should be equipped with the gloves for harvesting and machines for processing and spinning.

1. Introduction

1.1 Background to the Study

Carpet weaving is an old tradition in Nepal, especially in the mountainous region of the country producing *Radi, Pakhi, Bakkhu, Darhi*, etc. for the domestic market. The development of an export quality carpet was initiated with the influx of the Tibetan refugees in the early sixties with the support from Swiss Agency for Technical Assistance (SATA). The first export was to Switzerland in 1964. With vision and entrepreneurial skill, it transformed into a nationally recognized commercial commodity and remains as one of the most important export products from Nepal, making it the 12th largest carpet exporting country. The design of the Nepalese-Tibetan carpets is basically influenced by Buddhism. In recent years, modern design and colours have also been introduced. At present, 95 percent of the production of carpet is concentrated in the Kathmandu Valley with the remaining 5 percent spreading over a number of other districts of the country.

1.2 Statement of the Problem

The major raw materials of the carpet are cotton and synthetic threads and wool. Research have concluded that cotton, despite being a natural fibre, is one of the unsustainable crops owing to the extensive use of fertilizers and pesticides in production. And the other important fibre, silk, is engulfed in a moral war of being cruel. Even though concepts like organic cotton and 'ahimsa' silk have well been established, the cost of production is quite high. In this case, it becomes an urgent need to identify and promote natural fibres other than cotton and silk. Global carpet

[1] By Micro-Enterprise Development Programme (MEDEP) - 2011

industry has been looking for alternative fibres, which can reduce the heavy reliance on synthetic fibres. As a result, minor natural fibres like jute, hemp, Allo, etc. have gained popularity in the market since last two decades (Shrestha, 2001). The supply of Allo yarn has not met the demand from carpet factories. There is a demand for 470 tons of Allo yarn of which only 150 tons (20%) is being collected (Katwal, 2010). However, there is no information on the prospect for increased supply of Allo yarn.

1.3 Objectives of the Study

The major objective of the study was to analyze the usage of Allo yarn from the producers to the end users with respect to thick yarn being used in carpet factories in the Kathmandu Valley. The specific objectives were to:

- examine whether the producers were getting the right price for yarn,
- assess whether the demand and supply was going in synchronization, and
- analyse the prospect of Allo yarn in the carpet factories.

2. Methodology

2.1 Conceptual Framework

The demand for Nepalese carpets has declined in the last few years. The stiff price competition was posed by the Indian and Chinese carpets. Now the time has come for the Nepalese carpet weavers to put in extra effort to enhance their competitiveness. Looking for more untapped markets, getting the raw materials at cheaper price, going for promotional campaigns, improving quality, and reducing the cost of production are five recommended measures to enhance competition.

2.2 Analytical Framework

This study has considered production technology, cost of production and pricing situation, quality, and promotion campaigns and policies in the production and marketing of Allo yarn. The study has also conducted strengths, weaknesses, opportunities and threats (SWOT) analysis to explore the prospects of increasing the usage of Allo yarn in carpet industries in the Kathmandu Valley.

2.3 The Data

This study was conducted from three aspects i.e., from producers' group (micro-entrepreneurs), buyers' group (carpet factories) and the agents (middlemen in between the producers and the buyers). For the producers group, Bahane, Pyuthan district was selected as the focal point for interaction with the micro-entrepreneurs. For the buyers'/users' group, the Kathmandu Valley has been chosen for the reason that about 95% of the total of around 350 carpet factories are based in the valley. For the agents, the Kathmandu-based middlemen and exporters were contacted. A total of 13 micro-entrepreneurs from Syaulibang, Khalanga, Liga and Damri VDCs were interviewed at the producers' side. 10 people (one from each carpet factory) were interviewed from among the carpet factory personnel in Kathmandu, Bhaktapur and Lalitpur. From among the middlemen, three exporters and middlemen were contacted.

Though this study should have covered most of the carpet factories using Allo yarn, the time and resource confined the gathering of information to only a few stakeholders.

3. Review of Production Technology

Allo Yarn: Allo (*Girardinia diversifolia (*APPROSC, 1991)), also known as the Himalayan stinging nettle, is a tall, stout and erect herb, 1.5 to 3 m. high, with perennial rootstock. Stems shoot up to 10-11 feet height, its bark stem contains fibres of unique qualities -strength, smoothness, and lightness and when it is processed appropriately a silk-like lustre appears. Fibre length is found up to 580 mm, which is said to be the longest fibre in the plant kingdom. It is harvested during August to December. After harvesting, the bark is removed and peeled. The peeled barks are dried in a shade in the open air. The inner barks are then cooked in a drum containing water with wood ash or caustic soda for 1.5 hours. The cooked fibre is then washed in running water accompanied by frequent beating with wooden sledge hammer. The beating and washing in running water is repeated for 2-3 times. The fibres thus extracted are mixed with rice husk, or maize flour, or in a white clay solution to bleach the pulp to obtain a white shining fibre and making it soft. After bleaching, it is washed to remove the bleaching materials. The fibre is dried and is ready for spinning into yarn. The spinning is either done with self-constructed hand spindle, made of wood known as *Katuwa* or with spinning wheel.

Yarn Quality: Colour is also one of the qualities of yarn. Drying peeled barks directly under the sun leads to darkening of the barks and thus, darkening the yarn. Another reason is the moisture in the yarn bundle balls. Moisture in the yarn bundle leads to decaying of the yarn. Out of total supply, about 10% of the yarn gets decayed due to moisture content in it. Sometimes the adulteration is also practised by the producers. In that case, it takes time for the middlemen and/or their agents to separate such materials. To avoid such problems, sometimes some carpet factories even buy the fibre themselves and spin the yarn out of it on their own with the help of the machine. This machine-spun yarn looks fine and smooth but does not give that strength and resilience which otherwise the hand-spun yarn gives.

Carpet Quality: Nepalese carpets are unique in knotting system because they have high density of knots. The texture of knotted carpets is of good quality and nature of the material used and the number of knots/sq. inch. The best quality Nepalese carpets have a tighter and denser weaving technique and a thicker, deeper pile with excellent resiliency. Previously, Nepalese carpets were confined to 60 knots (60 knots/sq. inch) only. But with the diversification of market, 70, 80, 100 and above 100 knots quality carpets are being produced.

Colour variations: The experienced Nepalese have created more than 50 different shades using primitive vegetable dyes. In addition, Nepalese dyers have also introduced synthetic dyes as per the increasing demand of the buyers. However, in case of Allo carpets, the carpet manufacturers choose not to colour the yarn.

Use of Raw Materials:

Wool: Tibetan wool offers strength and toughness, however, is courser than the one from New Zealand. New Zealand wool, when dyed, offers lustre unlike from other countries and is much cleaner and produces smooth and fine yarn very suitable for bright and light colours.

Silk: Both Chinese and Indian silks are used in the Nepalese carpets. Silk offers beauty, and smoothness to the carpets.

Allo: Currently, the carpet factories are using Allo yarn of about 2 to 4 tons per month; however, they actually would have used double of what they are using had they received the yarn as per demand.

Hemp: Hemp fibre has always been valued for its strength and durability.

Wool is the most demanded input in carpet industry. About 40% of the yarn used in overall carpet factory is wool, and the rest 60% is of Silk, Hemp, Allo, Cotton and Banana fibre. The production process is presented in Table 1.

Table 1: Production process

Process	Features of the process
Carding	Allows the fibre strand to flow smoothly when spinning. Fibres are blended at different ratios. Both hand- and machine-carding is available.
Spinning	Carded fibre spun into yarn by hand using a *charkha* (spinning wheel). Depending on the demand of the buyers in the international market, the carpet manufacturers either thicken or make the yarn thinner to be used in the carpet.
Dying	Dying raw materials from renowned international manufacturers having a high degree of fastness. The dyed yarn is dried in the sunlight.
Weaving	The designs are charted out on a graph and the weaver translates the graphic designs into knots on a carpet. Each knot is made on a steel rod, and eventually cut at the end of each row.
Trimming	Each pattern is trimmed manually using a flat pairs of scissors to facilitate the trimming of complex patterns.
Washing	The carpet is washed with the fresh water and chemicals using wooden "shovel-like" tools until all loose dirt and dye have been completely washed off. The washed carpet is dried in the sun for three to five days.
Stretching	Since the carpet shrinks after washing and drying, it is stretched to meet the specified dimensions.
Finishing	Thoroughly checked for weaving, cutting and colour consistency. Small alterations are made to make sure the quality is up to the standard before it is entered into the packaging department.
Packaging	*Allo yarn* is packed in plastic bags with 3 balls in one bag. *Finished carpets* are rolled and wrapped in polythene sheet individually and then sealed at each end.

4. Production and Marketing

4.1 Allo Collection and Yarn Production in Nepal

Allo grows in about 20 districts throughout the country. Of the total 23,890 kg yarn produced in 2010, most of it (14,160 kg) was produced in the mid-west region (Pyuthan alone producing 7,200 kg). There were 259 entrepreneurs involved in collection and 498 in yarn-making in Nepal. Records show that 469 mt tons of Allo yarn could be produced from these 20 districts, while these districts are producing only 100 mt tons (20%) of the potential production.

4.2 Cost of Production and Price of Allo Yarn

Yarn producers in the study area are price takers and traders are price givers. The product conversion ratio is 30 kg green bark to 10 kg yarn. The producers' cost of production (including family labour) is Rs 5,062.5. Including Rs 10/kg for transportation, the yarn reaches the trader for sale. Any price above Rs 517/kg yarn is a profit to the producers. The middlemen (yarn collector) buy the yarn at Rs 600/kg. It shows that the producers are getting a gross profit of Rs 83/kg Allo yarn. Since more than 80 percent of the cost of production is due to labour and the labour used is from the family, most of the return from Allo yarn production goes to the family. It was found that the carpet manufacturers were buying Allo yarn at Rs 800/kg. The difference of Rs 200/kg includes collectors' (middlemen's) profit and transportation and storage costs.

4.3 Carpet Export

Except a negligible quantity, that also due to manufacturing errors, sold in Nepal, most of the Nepalese carpets are exported to Europe and America. Germany and the USA are the two biggest markets absorbing more than 40 percent. However, the export of Nepalese carpets is in decreasing trend over the years (Figure 1). There were several reasons such as low quality (same quality over time); deteriorating quality of Nepali carpets due to contaminated hand-knotted carpet tradition by machine, recycled yarns from the wastes, use of acrylic yarns, and issue of child labour use, etc. are accorded reasons for this decreasing trend.

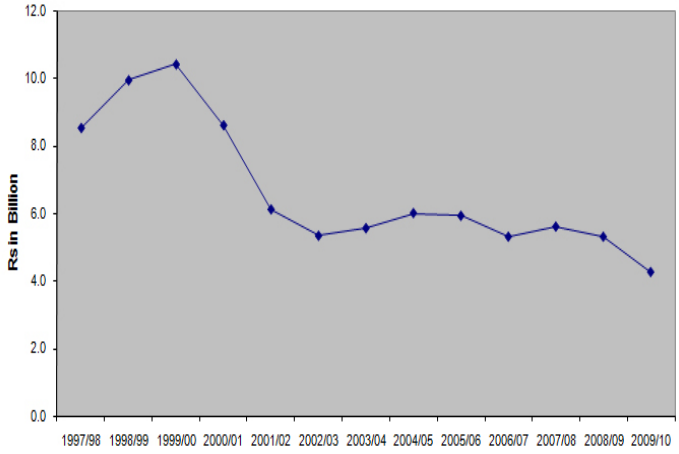

Figure 1: Export trend of Nepali carpets

4.4 Promotion

Tax incentive for exporters (0.5-0.8% customs duty, Rs 2/sq. mt. for obtaining Generalised System of Preferences certificate), promotion of "Nepali Carpet" brand, assistance to address environmental and child labour issues (giving certificate of no-child-labour use) are some of the government efforts to promote Nepali carpets. Likewise, uploading information to the website and participation in international exhibitions are promotional efforts of carpet manufacturers and exporters.

5. SWOT Analysis

Strength: Self-renewable nature of Allo, possibility of quality production at the micro-enterprise level, strong commitment and honesty, locally available technology (*Charkas* for spinning the yarn, locally available raw materials for processing Allo), etc. are the strengths in Allo yarn production. For carpet manufacturers, the greatest strength in the international market is the originality and image of traditional Tibetan carpets.

Weakness: Lack of technology (harvesting the stinging Allo stem, processing by beating, spinning yarn in Katuwa), lack of business mindset with the entrepreneurs, lack of market information, high cost of overseas market promotion, etc. are the major weaknesses in Allo yarn production.

Opportunity: Global shifts towards natural fibres, creation of employment opportunities at the local level, increasing tourism and exposure of Nepalese abroad, availability of modern processing technology to reduce the cost of production, etc. are the major opportunities to promote this enterprise.

Threat: Global competition in the carpet market is a major threat to Nepalese carpet industry. As Allo is a common property resource, increasing the use of Allo is creating the problem of conservation. In this regard, there must be a strong sense of optimal harvest, on one hand. This may be obtained through the mobilisation of forest users' groups or the community forest approach (MEDEP, 2000). On the other hand, use of hemp is increasing, threatening the use of Allo yarn.

6. Conclusions and Recommendations

6.1 Conclusions

In light of the self-renewable availability, trained people in harvesting and processing, international market demand for natural fibres and established Nepalese brand named carpets, it has been concluded by this study that there is a high prospect of increasing the usage of Allo yarn in carpet factories in the Kathmandu Valley.

6.2 Recommendations

Allo harvesting is much below its potential (only 20% exploited). Hence, programmes like MEDEP should consider it and promote Allo yarn enterprises for harnessing its full

potential. For the expansion of area under Allo, new plantations should be encouraged. Without plantation of this species, its use cannot be sustained. The poor harvesters are using traditional technology to harvest the stingy barks. It is thus, recommended to help them get equipped with gloves or forceps or if any other tools suitable, for harvesting purpose. Another tedious and time-consuming method of processing is the way they beat the barks. Rather, the beating machines will be a much better way of processing them. Then, there are the traditional spinning wheels to further process the yarn, for which motorized spinning wheel can be of a great help to them.

REFERENCES

APPROSC, 1991. Glossary of Some Important Plants and Animals Names in Nepal. Agriculture Projects Services Centre (APROSC) Nepal. Ram Shah Path, Kathmandu

MEDEP. 2000. Allo Fibre - Proposed Export-led Production Programme for Poverty Reduction in MEDEP Districts. MEDEP, Ekantakuna, Kathmandu.

Katwal, B. 2010. Value Chain Analysis of Allo. Micro-Enterprise Development Programme. Dhobighat, Lalitpur

Shrestha, D. 2001. Report on Market Study of Allo and Hemp. Micro-Enterprise Development Programme. Pulchok, Kathmandu

Thapa, Punam. 2003. Financial Analysis of Allo-based Micro-Enterprise and its Impact on Livelihood on Rural Community of Parbat District. MEDEP

Websites:
www.nepaltourism.info
www.ansab.org
http://nepalcarpet.org/index.php?page=manufacture
http://www.jhcnepal.com
www.nepaltourism.info
www.ansab.org
http://www.nepalitimes.com/issue/2011/06/10/Business
http://www.artelino.eu/en/articles/news/225-nepal-capet-industry-2010.html