

Understanding Reasons of Slow Growth in Development of Traditional Fibre Craft “NETTLE” Industry of Uttarakhand

Abhishek Ganeshgudi¹, Bhavin Patel²

¹Principal, School of Design, P. P. Savani University, Surat, India

²Associate Professor, School of Design, P. P. Savani University, Surat, India

Abstract: This research work aims towards understanding the reasons of slow growth in fibre production of Himalayan nettle (*Girardinia diversifolia*), that is found to be occurring abundantly in the Garhwal region of Uttarakhand. For this purpose, various factors involved in fiber production are critically examined.

Keywords: Fibre Craft, Uttarakhand, Himalayan Community, Production, Textile

1. Introduction

India is a land full of traditional art and crafts. Agriculture and textile sector comprises top two employment generating sector. But craft being unrecognised as employment generating sector, today comprises over 20 million practitioners (NCERT – Indian Crafts XI, XII).

Uttarakhand is a region of outstanding natural beauty. The people of Uttarakhand have created and nurtured various forms of arts and crafts since ages. Nettle – traditional fiber craft of Uttarakhand is one such form. Apart from Gadwali and Kumaoni population there are five major tribes in Uttarakhand namely Jaunsari, Tharu, Raji, Buksa and Bhotiyas. This Nettle craft is practised by Bhotiya community.

Himalayan nettle (*Girardinia diversifolia*), is found to be occurring abundantly in the Garhwal region of Uttarakhand. It was lying unexplored until 7-8 years back. In 2009, during the International Year of Natural Fibres, the state government decided to promote nettle, having a potential for value adding. On realizing its potential in the field of textiles, many organizations in the region initiated Research and Development activity on the possibilities of handloom based product development in nettle. Research and Development in this field, is mostly aimed at generating livelihood opportunities for the rural people of Garhwal.

The Himalayan Nettle is a self-sustaining plant that grows in wild cold climate. It is locally known as Kandali, in Hindi it is termed as Bichoo ghass. The fiber is obtained from stem and currently is used for making shawls, jackets and running fabrics. Additionally, Kandali is used for several other purposes – as food, fodder and medicinal purposes.

Objective of this research is to obtain information about this

traditional craft, and point out the issues pertaining in this study.

2. Research area

The area of Research was in Uttarakhand. Researcher divides the study into two areas:

- Visually examining and documenting the entire process
- Interview schedule with people involved in processing and Expert interviews with people who are engaged at large level in this craft.

The study was conducted in Mangroli, Uttarakhand. Mangroli is a village panchayat located in Chamoli district of Uttarakhand state of India. It lies in the altitude of 1358 meters above sea level. Temperature rises between 31°C in summers to -5°C in winters.

30 random samples were studied by conducting the interview schedule, and data was compiled for the same.

In expert's interview, data was compiled from people working in different organisations at different levels.

3. Methods

The method consists of ethnographic study and survey. The result obtained will be both quantitative and qualitative. Representation will be done in the form of tables, graphs and diagrams.

The flowchart describes the procedure.

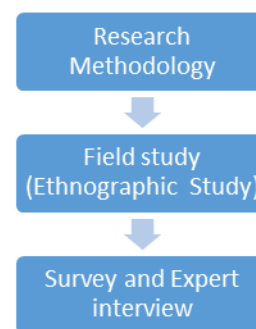


Fig. 1. Flowchart

A study of archived article of nettle craft and an interview

schedule with the experts involved in the areas/positions pretending to nettle processing are studied.

Survey with the people involved in processing/manufacturing of Nettle products was held.

A. Collection of Bark

The Himalayan Nettle is found in higher vicinity of Upper Himalayas near to the villages. According to villagers fibre is brought during months of January, February and March from different high altitude villages of Uttarakhand. These villages includes: Tasna, Ravini, Bagna, Deval, Ghuni, Mori, Chinch, Uttarkashi and Bageshwar. Here Nettle grows high upto 3 to 4mt. While collecting bark plant is not taken off from its root but is cut 4 inches above earth. The reason is plant grows again if roots remain in the soil. Fiber extraction is done by bare hands.

After this the barks are collected in bundles and are left to rot for a week or two in snow. After a week villagers come back to take the stalk (bark peeled out of stem). And bring them to processing situated in villages: Mangroli, Tafena and Jhulabagarh.

All the villagers in Mangroli said that here only processing work is done consisting of cleaning, beating, spinning and weaving. Fiber extraction is brought from other villages.



Fig. 2. Nettle bark brought from mountains stored in Tafena Village

B. Processing of Himalayan Nettle fibre

After extraction, the bark is dried and weighed in kilos and brought down to processing villages. Here they are stored in village - Tafena (Store room of – Uttarakhand Bamboo and Fiber Development Board), villagers do beating and cleaning of fiber stalk in Kilos. This is done in Mangroli and Tafena. This process is most tedious step in Nettle processing. In study it was identified that most villagers complained about the hardship in cleaning the fiber. There is need of rigorous beating with hammer that causes rashes and blisters in women hand. Hence high cleaning cost has to be provided.

Degumming is done in this stage. Heating of fiber in water and solvents to remove lignin from the fiber is done. But the solvent used are Hydrogen per oxide and soap – these are called scouring and bleaching agent hence no effective degumming occurs. Therefore, final product still has bark residue on the woven fabric surface.

This issue is not known by the people working and the

government officials involved and therefore it is the main issue of degradation of Nettle product. According to the respondents it takes two hours to cook the fiber to remove lignin and this process also whitens the fiber. And four hours to beat and wash the fibers. Cooking is done on traditional chullahs and fiber is cleaned on the bank of river.

C. Carding

Here fiber extracted after cleaning and beating is further sent on carding machine for cleaning. This opens up the fiber and makes the fibers softer. Presently there is only one carding machine available in Uttarakhand that is installed in Dehradun in Uttarakhand Bamboo and Fiber Development Board.

This is second issue that was observed in the study. Fiber has to be transported to Dehradun where carding is done. It takes lots of time and money. The carding machine installed here is similar to wool carding machine hence proper cleaning of Nettle fiber do not occur. It was also stated that most of the time, machine is stuck as wire breaks of the drums and no processing is done for months till the machine is repaired.

D. Spinning

Uttarakhand Bamboo and Fiber Development Board with collaboration of Indian Institute of Technology – Roorkee have setup state of the art spinning machinery called the Bageshwari Charkha.



Fig. 3. Bageshwari Charkha

Spinning in this charkha is simple and effective but due to ineffective carding and degumming spinning is not even. Bhotiya community women are expert in spinning the fibers.

E. Weaving

Once the fiber is spun, the fabric is made on loom. Bhotiya women are expert in weaving. With government initiative, women are taught various other weaving techniques to improve weaving. Fabric developed are not finely woven due to defects in processing.

F. Cost involved in Nettle processing

- Bringing Nettle stalk from field to villages for processing – 60 Rs/Kg along with travelling charges.

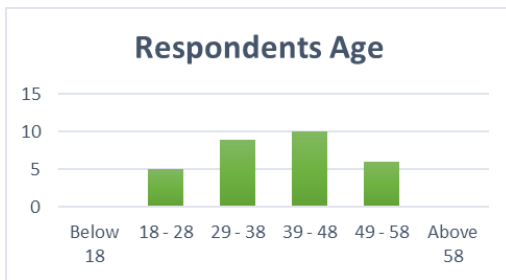
- Cleaning and beating to obtain fiber – 400 Rs/Kg
- Spinning Cost – 100 Rs/Kg
- Yarn Cost for buying – 1200 Rs/Kg
- Fiber cost for buying – 300 Rs/Kg
- Weaving Cost – 100 Rs/mt
- Running fabric cost – varied starting from 1000 Rs/mt

Reasons for high cost of Nettle product is accounted to labour intensive work, high transportation cost and low production.

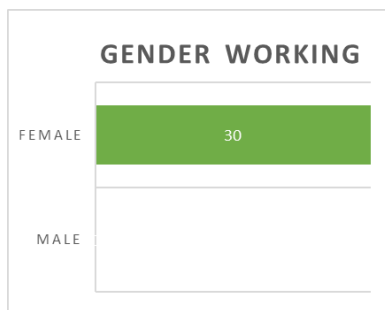
G. Data Analysis of Rural community involved in Nettle processing

Data compiled shows that maximum respondents are between 39-48 age bars. Below 18 and above 58 years of people is not part of nettle processing.

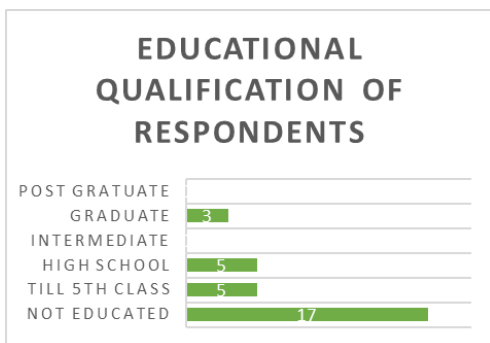
Range of respondent working in Nettle processing lie between 18 to 58 years.



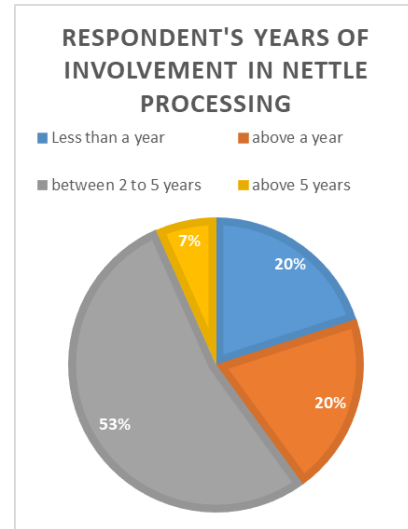
All respondents working in washing, spinning and weaving are women. Below mentioned graph give ratio of male and women working in this sector.



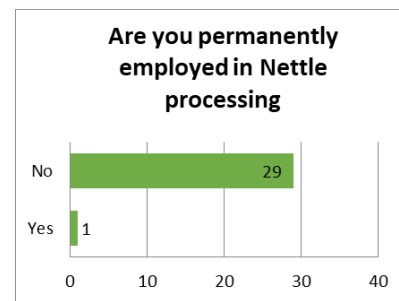
Maximum of respondents are uneducated, very few have studied till graduation.



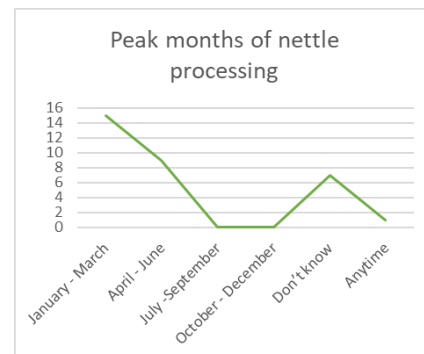
In the survey it is identified that maximum of respondents have started working in Nettle processing in between 2 to 5 years (as illustrated in pie chart 53%). Very few respondents had started working in Nettle processing 5 years back (as illustrated in pie chart 7%). This shows that there has been gradual increase in labour force for Nettle processing.



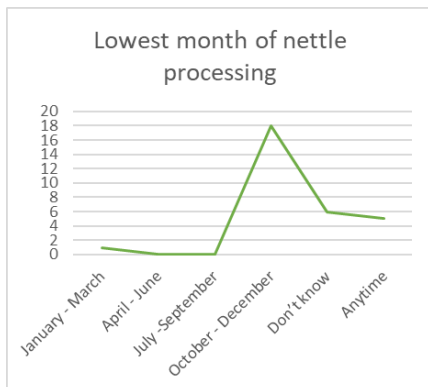
This survey shows that the respondents are not permanently employed for nettle processing. This means that there is less demand of manufacturing Nettle products.



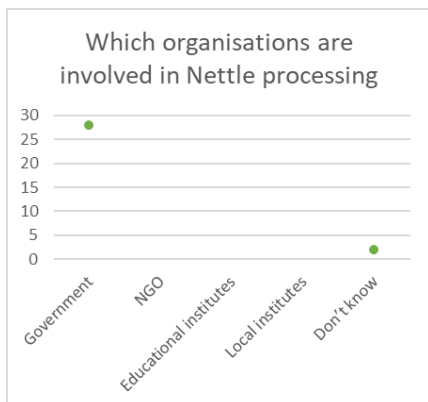
This graph illustrates that for cleaning, spinning and weaving time between January till June has maximum work. Only one respondent has year around work for nettle processing and few didn't know the months when they are employed.



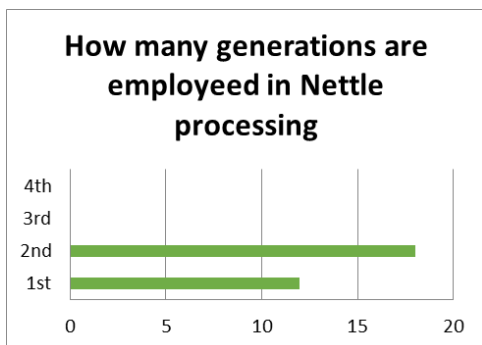
This graph represents lowest months when respondents don't have nettle work. It is between Septembers to December. Also little inclination in January month suggests that respondents start getting work afterwards.



This survey identifies respondent's awareness about – for whom they are working for. Maximum of respondents are aware that they are working for government.



This study identifies that Nettle processing have started recently in Uttarakhand. Only two generations were recorded doing Nettle work.



4. Discussion

The survey revealed that:

- Bhotiya community was traditionally not involved in

nettle processing. It was government initiative that involved the women in this area.

- During the survey it was observed that none of the respondents were aware about the scope of Nettle business. They were doing it because government was providing money (under MGNREGA). None of the respondents were aware of the opportunity in Nettle.
- Production process is decentralised and it may take months to complete order as plant is present at other village, processing is done in another village, carding has to be done only in Dehradun and for spinning back it has to be sent to those villages. This whole process consumes lots of time and money causing ineffectiveness in the system.
- It was noticed that only one person in the village was aware of using the chemicals, but lacked information behind. Therefore for past seven to eight years bleaching and scouring is being done instead of degumming.

Although there is potential in Nettle business but there is lack of marketing and distribution. According to Uttarakhand Bamboo and Fiber Development Board products are sold at fairs and exhibitions. Many a times, orders are placed for fiber or yarn from design houses from India as well as abroad, but the order amount is not satisfactory.

According to Mr. Fitru Ram, master craftsman of Nettle, the work in Nettle processing has started in year 2009 and he is the first craftsman to work in this area. Being only correspondent bridging the gap between government and local people, he told that it is difficult to find women for cleaning and beating fiber. Younger generation is not willing to show their interest due to hardships in work is involved. There is need to improve processing and grading fiber.

Although at ground level people are unaware of this burgeoning business. But the experts suggested that Nettle sector will gain more importance in coming decades because it is environment friendly.

5. Conclusion

Nettle is a traditional craft of Uttarakhand but now it is emerging as employment generating sector. The traditional knowledge has helped government to identify Nettle as fibre crop but today lots of upgradation has to be done in this area. Nettle farming is not yet practised in Himalayan community but it can be a profitable venture in coming years.

References

- [1] Shanthi Radhakrishnan and A. Preeti, "Development of Fabric from Girardina Diversifolia Stem Fibres and its Blends," *International Journal of Innovative Research in Science, Engineering and Technology*, vol. 4, no. 11, pp. 10499-10506, November 2015
- [2] Council, U. H. (2013). Uttarakhand Handloom & Handicraft Development Council. <https://www.uttarakhandcrafts.com/uhhdc.php>
- [3] Dhiman, V. (n.d.). Extension of Standardized Natural fibre Extraction and Processing Techniques in different craft clusters of Uttarakhand. Dehradun: Uttarakhand Bamboo and fibre Development Board.

- [4] Edom, J. H. (2012). Nettle Fibre: Its Prospects, Uses and Problems in Historical Perspective. *Textile History*, 107-119.
- [5] Gopu R. Nair, (2013). Application of Electro-Technologies in Processing of Flax Fiber. *fibers*, 21-35.
- [6] H'ogner, B. (2013). Himalaya Nettle in Uttarakhand – Reflections on a Promising Business in Rural India. Stuttgart-Hohenheim.
- [7] Himmothan. (2013). Annual report 2012-13. Uttarakhand: Himmothan.
- [8] Livelihoods Improvement Project for the Himalayas, U. (. (2013). Annual progress report 2012-2013. Dehradun, Uttarakhand.
- [9] Mahapatra, D. (2012, September). Processing of Himalayan Nettle fibre in textile industries. *Colourage*, pp. 50-52.
- [10] Mahapatra, D. (2012, December). The world of eco fibres. *Colourage*, pp. 52-55.
- [11] Mahapatra, D. (2014, March). Processing of nettle fibres in textile industries. *Colourage*, pp. 53-58.
- [12] Mazharul Islam Kiron. (2014). Sisal fiber - properties of sisal fiber-uses/application of sisal fiber. <http://textilelearner.blogspot.in/2013/01/sisal-fiber-properties-of-sisal-fiber.html>
- [13] Milano, N. S, High Economic and Commercial Potential of Himalayan Giant Nettle. *Devnet-Asia*.
- [14] Nettle Fibers as a Potential Natural Raw Material for Textile in Latvia; <https://ortus.rtu.lv/science/en/publications/>;
- [15] N.S.E. Ahmed, Ultrasound assisted pre-treatment and dyeing of linen fibres with reactive dyes. Cairo: Textile Research Division, National Research Centre.