Mapping and profile of Himalayan nettle (*Girardinia diversifolia*) units in Uttrakhand

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Abstract

A minimum of eight units, in Chamoli and Uttarkashi districts were selected through probability proportional to size sampling technique (PPS) to study the work profile of nettle units in Uttrakhand. Fifty per cent of nettle units were established in the years 2007-2008. It was observed that 72.50 per cent and 62.50 per cent of nettle fibres were used in Uttarkashi and Chamoli respectively. They used 100 per cent nettle fibre which is a harvest wild growth in this area.

Keywords: Nettle, mapping, tools, techniques.

1. Introduction

Nettle or *Bichu Bati* is a fibre that grows wild as undergrowth particularly in Chamoli and Uttarkashi districts in Uttrakhand. The stem fibres are pliable which are used to weave or knit fabric. Stinging nettle is found growing in temperate and sub-tropical Himalayas, from Kashmir to Sikkim between 1200 to 3500 meters above sea level. The plant can attain a height of 12-18 feet and the fibre is present in the inner bark of the stalk. It is also ecologically benign, given its natural resistance to diseases and pests and hence needs no pesticides (unlike cotton) and man-animal conflict is rare. It is perennial and requires minimum care and protection. The plant has a long history as fibre plants were widely used for bowstrings, fishing nets and lines, sail cloth and even fine textiles in many cultures. This study was aimed at following objectives:

- To identify nettle manufacturing units in Chamoli and Uttarakashi districts of Uttrakhand.
- To study the profile of nettle units in term of raw material, capital investment, marketing etc.

2. Methodology

The present study was conducted in Chamoli and Uttarkashi districts of Uttrakhand, which was selected probability proportional to size sampling techniques. Nearly eight nettle unit were available both in Chamoli, whereas eight units were found in Uttarkashi as per data available with Uttrakhand Bamboo Fibre Development Board (UBFDB). An interview schedule was prepared to obtain the information regarding nettle units such as year of establishment, type of units, capital investment, raw materials used, sources of purchase and marketing.

3. Results and Discussion

3.1 Mapping of Nettle Units

The four units in Chamoli area namely Mangroli, Trikot, Trishula, Nagali depicted in Fig 1 and four units in Uttarkashi area namely Gajoli, Shrikot, Panow, Pani Gaon shown in Fig 2 were selected on the basis of probability proportional to size sampling technique for investigation purpose.

3.2 Year of establishment

It is evident from Fig 3 that in Uttrakhand, fifty per cent of the nettle units were established during the year 2007-2008, followed by 37.50 per cent in the year 2009-10 and only 12.50 per cent in the year 2005-06 in both Chamoli and Uttarkashi districts. The growth of units varied between the years 2005 to 2010.
Fig 1: Map of Chamoli

Fig 2: Map of Uttarkashi

Fig 3: Year of establishment of nettle units in Uttarakhand district
3.3 Type and size of units
In Chamoli and Uttarkashi districts, there were only spinning units. The units were mainly micro enterprises and the work carried out was mainly manual in nature with very less investment on plants and machinery depending mainly on skilled labour for the spinning of nettle yarn.

3.4 Capital investment
All the units had received financial help from the UBFBD (Uttarkhand Bamboo and Fibre Development Board), who used to give subsidy of ₹10000 to ₹25000 to all nettle units every year as an incentive towards usage of nettle fibre and to promote self-employment by skilled workforce.

3.5 Type of fibres/ yarns/ fabrics used in the nettle units
It is evident from the results reported in data that 72.50 per cent and 62.50 per cent of nettle fibres were used respectively in Uttarkashi and Chamoli districts. It was found that 62.50 percent and fifty per cent of yarn at the cost price of ₹800 per kg were used in Uttarkashi and Chamoli, respectively. The fabrics from nettle fibre and yarn were made only in Chamoli district. Cotton fibre usage was 37.50 per cent and 27.50 per cent, respectively in Chamoli and Uttarkashi. Similarly the yarn usage was fifty per cent and 37.50 per cent in Chamoli and Uttarkashi respectively. All units in Chamoli were using cotton fabric along with nettle for product development, while no fabric was used in any of the units in Uttarkashi. Cost price of cotton fibre was same in both Chamoli and Uttarakashi and was found ₹ 200 per Kg.

3.6 Sources used for procurement of raw material in the units
It is elicited from the results that the respondents of Chamoli and Uttarkashi never cultivated nettle although nettle is a weed of hills and they were using 100 per cent nettle fibre which was harvested as wild growth in these areas. Nettle plant was collected from the hilly areas by workers without paying any cost to the land owners. None of them buy it from the open market.

3.7 Procurement of raw material
It is evident from the data that all units of both the districts procured raw material either in fibre or in yarn form. Each unit from Chamoli and Uttarkashi procured 50.00 per cent raw material in the form of fibre and 50.00 per cent in the form of yarn.

3.8 Type of tools and equipment used in the units for various operations
Fig 4 reveals that workers of two units, (Mangroli and Trishula) out of four units used to spin yarn by using Bageshwari Charkha, Machine was used for carding by 50.00 per cent of the respondents in Chamoli, whereas two units (Panow and Pani Gaon) in Uttarkashi, respondents (75.00%) used carding machine, ring frame (25.00%) and Bageshwari charkha. It was concluded that the respondents used carding machine for combing the fibres, while ring frame and Bageshwari charka were used for spinning yarn. All nettle units were using plain, basket, rib, twill, satin and sateen weaves for making different types of fabrics by using frame loom and fly shuttle looms.

3.9 Materials used for packing
It was found that all nettle units in Chamoli and Uttarkashi used polythene bags and hessian for wrapping and packing the nettle fabrics and end products.

3.10 Distribution channels used in marketing of products
It was observed from the results (Fig 5) that respondents of two units (Mangroli and Trikot) out of four units in Chamoli district supplied 30.00 per cent of their products to wholesalers; followed by retailers (22.50%) and for export market (12.50%), whereas in Uttarkashi district, respondents of two units (Gajoli and Shrikot) supplied all their products through market agents. It was concluded that the owners themselves supplied their goods directly to the wholesalers.
4. Conclusion
The present study was conducted in four units each in Chamoli and Uttarakashi. Fifty per cent of the units in Chamoli and Uttarakashi were established in 2007-2008. The units were mainly micro enterprises and were dependent mainly on skilled labour for the spinning work. Nettle plants were collected from the hilly areas by workers without paying any cost to the land owners. The respondents used carding machine for combing the fibres, while ring frame and Bageshwari charka were used for making yarn. It was concluded that the owners themselves supplied their goods directly to the wholesalers. In Chamoli district, availability of nettle fabric was more than Uttarkashi therefore there was much demand for this fabric.

5. References