



## Chapter 4 Potential for Enterprise Development

### Introduction

Studies carried out on fibre-yielding plants so far reveal that these plants and their products play a significant role in the different activities in a village system. In spite of the increase in awareness about the market potential of modified products and the support extended by non-government and government agencies, few people have taken the initiative to revive these practices and processes with the intention of developing them into cottage industries. The present set up should be used and strengthened as far as possible by providing modern, scientific, and technical knowhow (as in the case of *Agave*) and management inputs.

### Status of Plant Species

There is ample scope for research and development on the fibre of *Grewia*, a tree recognised for the quality of its fibre. Products, such as hats, wall hangings, shoes, etc

(Plate 4.1), have been made from this fibre and successfully tested in the market. Recently, a new herbal shampoo has been developed from the *Grewia* plant (Plate 4.2).

*Cannabis* fibre is considered to be superior to that of *Grewia* by the villagers. It is available in the rural or market towns but, because of its narcotic properties, there have been restrictions on commercial cultivation and use. Hence, any large-scale production of raw material (*Cannabis* fibre) for developing a cottage industry would have to receive permission from the government (Plate 4.3).

Recently, the use of *Agave* has been promoted in this area in order to develop household-based industries. Plantations have been established in a few locations with the help of many organizations. A mechanised process has also been developed for the extraction of fibre by using diesel engines (Plate 4.4). The main emphasis, so far, in terms of product develop-



**Plate 4.1:** The fibre from plants used for making

A) ladies' purses

B) wall hangings

C) rakhee

D) glass covers (all from *Agave* fibre)

E) shoes from *Grewia* fibre

**Plate 4.2:** A herbal shampoo made with *Grewia* as the main component



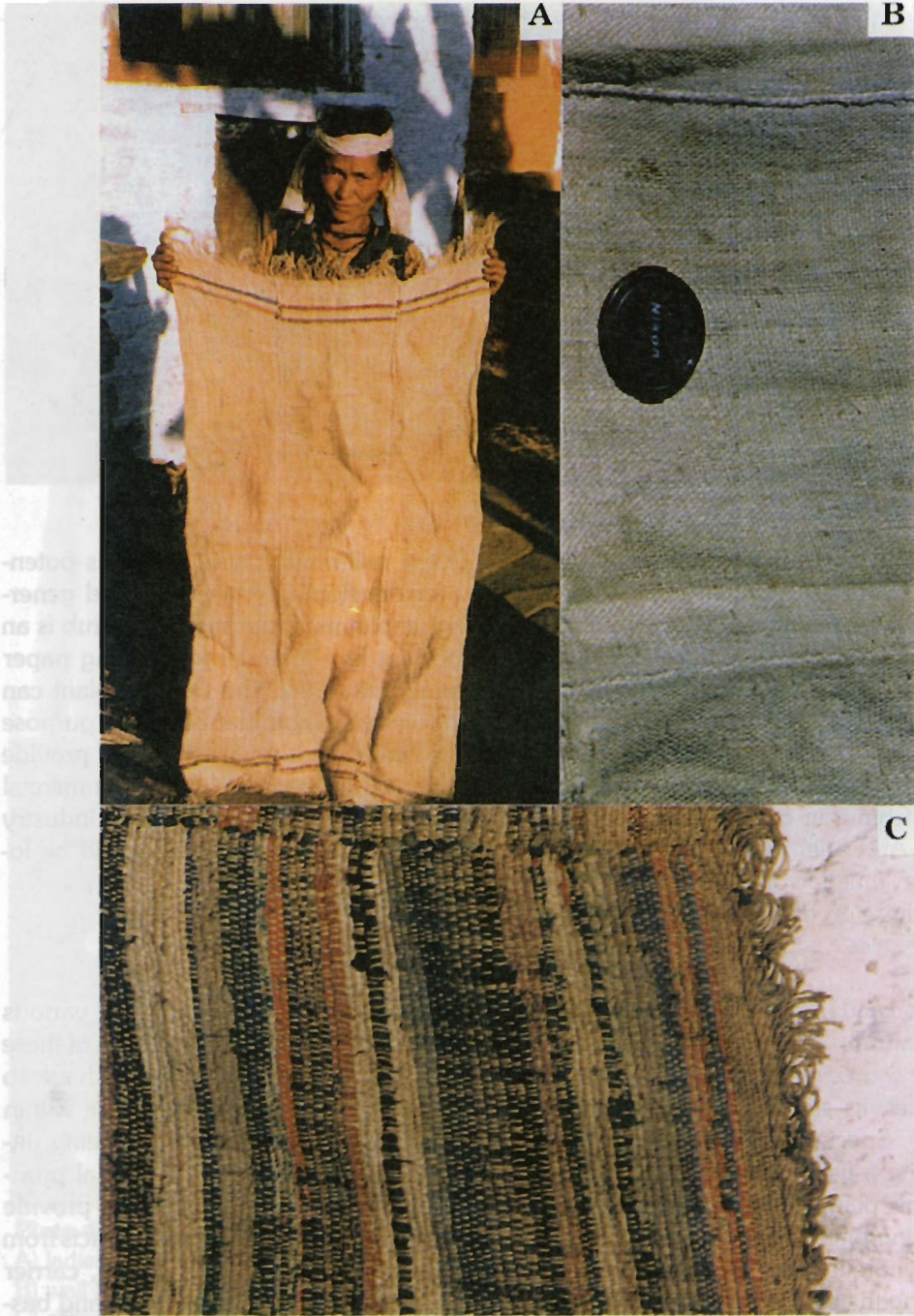
ment has been on the consumer needs of urban settlements. Further, fibre from the *Agave* plant has attracted special attention from creative artists. Various products, viz., decoration pieces, table mats, shoes, handle covers, wallets, ladies' purses, tea coasters, garlands, shaving and painting brushes, etc (Plates 4.1, 4.5 and 4.6) have been developed from it in collaboration with local artisans. An outlet run by a voluntary organization that is working on the development of these products has also helped promote the sales.

*Girardiana* and *Daphne* plants, being a part of the natural vegetation, form an easily available source of fibre, but, in the case of the former, its stinging bristles restrict its wide use. Special use of *Girardiana* fibre, e.g., to make fishing nets that are durable, makes this plant important among the fibre-yielding plants of the region. Introduction of synthetic fibre-based fishing nets is hampering the use of *Girardiana* and indigenous skills. Similarly, indigenous knowhow in making paper with bark from the *Daphne* plant has practically vanished from this region as a consequence of the availability of

modern mill-made paper. There is potential for developing enterprises and generating employment because this shrub is an important raw material for making paper commercially also. The *Daphne* plant can be harvested in abundance for this purpose and/or cultivated in wastelands to provide additional raw material for the commercial manufacturing of paper at cottage industry level. A mill for this purpose could be located in the foothills.

### Acceptability of Products

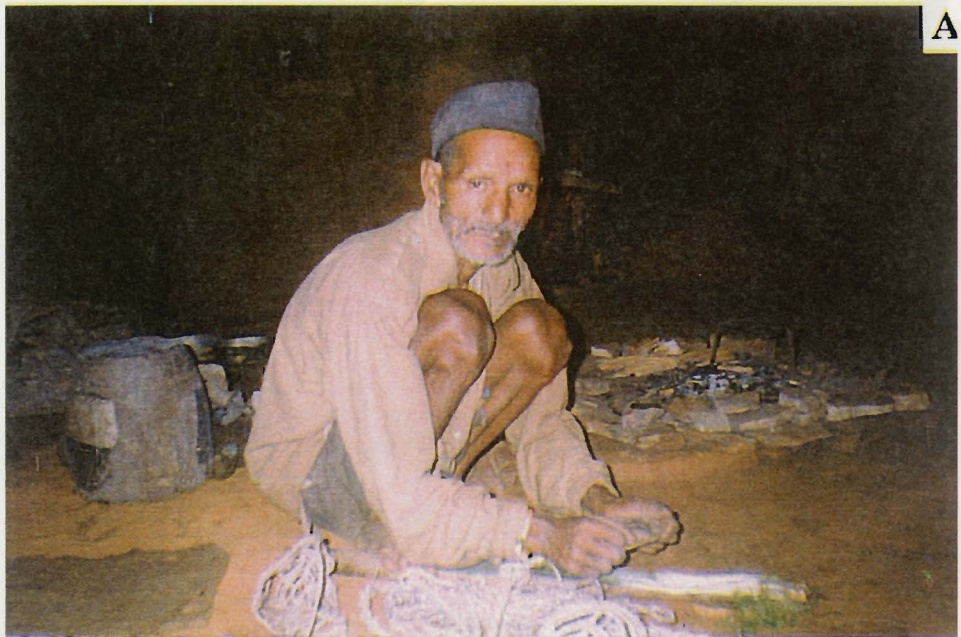
It appears from the analysis that various traditional products developed out of these plants, and the relevant practices have so far been centred on their local use within villages. However, attempts are being undertaken to develop non-traditional products for revenue generation and to provide job opportunities. Traditional products from natural fibre, such as nets, *jutora*, carrier bags, masks, collar belts, baskets, and baskets for collecting grass and for use in various agricultural and household activities, cannot be substituted by any other product. Where substitutes (synthetic polymer)



**Plate 4.3:** Various cloth pieces made of *Cannabis* fibre

- A) Budla mat
- B) Close-up of Kuthla
- C) Close-up of a mat

A



B

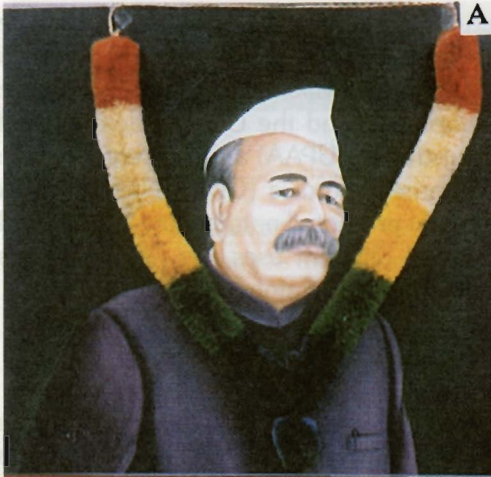


**Plate 4.4:** Development of Technology  
 A) Primitive, manual method of scutching Agave fibre  
 B) Modern machine developed for the extraction of fibre



**Plate 4.5:** Fancy articles made out of *Agave* fibre

- |                               |                 |
|-------------------------------|-----------------|
| A) Decoration piece           | B) Table mats   |
| C) Shoes                      | D) Handle cover |
| E) Wallets and ladies' purses |                 |



**Plate 4.6:** Use of *Agave* fibre to make

- A) garlands,
- B) tea coasters,
- C) decoration pieces, and
- D) shaving and painting brushes

are available, as in the case of ropes for livestock-related activities, villagers prefer natural fibre-based ropes due to their remarkable advantages. Ropes made of natural fibre do not heat up even under direct sunlight. Further, they remain soft when animals move or change posture. Therefore, use of natural fibre does not harm animals or cause rashes and wounds on the neck,

while polymer-based ropes cause bruising and uneasiness.

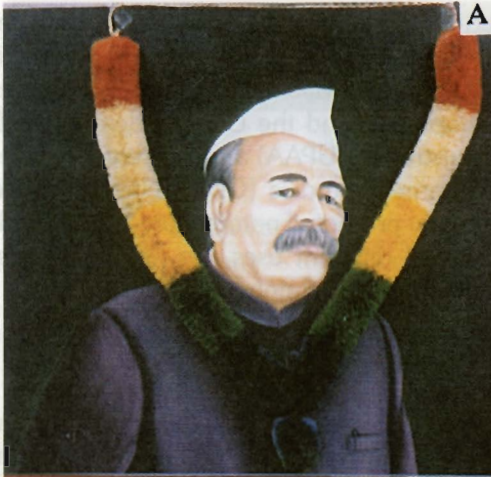
Despite consumer preferences and availability of substitute products, natural fibre-based products have the potential of being used in cottage industries because of the availability of raw material within accessible distances. In addition products can be



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A



B



C



D

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Despite consumer preferences and availability of substitute products, natural fibre-based products have the potential of being used in cottage industries because of the availability of raw material within accessible distances. In addition products can be

modified/alterd to some extent to suit consumers without too much technical input and equipment. There is also a growing global preference for natural products in place of synthetics. In addition to employment generation at the village level, an important aspect of this industry is that the manufacturing processes are non-polluting and use environmentally-friendly, indigenous techniques. It has been stressed that alternatives for development (in the present case, natural fibre-based cottage industries) should cause no or minimum damage to the environment (Papola 1996). Successful implementation of such activities will, however, only be possible through improving people's capabilities and eliciting their participation.

### **Market Potential**

Traditional products, such as ropes and so on, can reach local markets only because of the demand for them in the villages. However, non-traditional products have yet to gain importance in the market towns through value adding and advertisement. The specific advantage of natural products is that they can withstand competition in the market due to their uniqueness.

Various traditional and non-traditional fibre-based products have been listed in Table 4.1. The cost of traditional products varies between Rs two to 1,000, whereas for non-traditional products the range is from Rs 15 - 1,300. Non-traditional products have potential to create a demand in urban markets in spite of the use of synthetic materials. Nonetheless, there is an increasing awareness in the urban community and a growing global preference for natural rather than synthetic products. Further, natural fibre products attract tourists to local markets. They have also been

adopted by many organizations. In this regard, institutes such as the G.B. Pant Institute of Himalayan Environment and Development, and the U.P. Academy of Administration (UPAA) and its Centre for Development Studies (CDS), Nainital, have already promoted natural fibre-based products for different uses, e.g., bags, folders, and so on at seminars and workshops.

### **Strategies for Promotion**

Market promotion will play an important role in making room for non-traditional products in the outside market. This can be achieved by encouraging NGOs involved in this work. Products also need to be advertised properly in various newspapers, magazines, and through links with organizations such as the Indian Institute of Fashion Technology (IIFT). Advertisement through the tourism industry, such as the Kumaon and Garhwal *Mandal Vikas Nigam*, could be among the means to promote these products. Exhibitions in big towns and in historical places could also help. In this connection, UPAA and CDS, Nainital, have already begun introducing stalls for different products obtained from various NGOs. Producers' cooperatives should be established to organize, manufacture, and sell fibre-based products.

A few NGOs are already active in the promotion of natural fibre-based products in the study region. The idea of developing non-traditional products for commercial purposes was launched by the *Griha Udyog* and *Resha Utpadan Samiti* (Plate 4.7). At present, other NGOs (Himalayan *Gram Vikas Samiti*, *Mahila Vikas Sangathan*, HOPE, Pithoragarh, *Sanskrit Parishad*, etc) in the Central Himalayas are engaged in preparation of various fibre-based products, although on a very limited scale. The scale

**Table 4.1: Cost of Various Traditional and Non-traditional Fibre Products**

Products	Preparation time (hours)	Appr. Cost (Rs)
<b>Traditional Products</b>		
Ropes of various lengths and thicknesses	0.5-3.5	2-22
Ropes (Haroon, Jutura, Nara)	0.5-1	6-14
Carrier bags for carrying curd	1-2	10-30
Cloth for making mats, coats and bags	30-48	100-200
Masks for bullocks' mouths	1-2	15-25
Collar belts	1	12-25
Baskets	6-10	20
Fishing nets	60-70	700-1000
Nets	40-50	20-50
<b>Non-traditional Products</b>		
Jackets	80-110	158
Ladies' bags (based on size)	2-24	30-260
Ladies' purses (based on size)	2-24	18-100
Gents purses	2-4	20-25
Floor mats	96-190	720-900
Belts	4-9	67
Table cloths	6-48	85-760
File covers (folder)	12-22	50-200
Bags (based on size)	50-110	80-250
Wall hangers	8-10	50-105
Door mats	2-24	20-250
Hats	2-8	40-65
Himachali caps	2-8	45
Toys	6-48	45
Photo frames	18-30	15-250
Cushions	20-40	40-200
Telephone mats	2-24	15-100
Small mats (like <i>kaleen</i> *)	50-80	50-315
Cradles	90-130	1300
Tea set mats	1-2	45-65
Tea cosy	2-8	45
Chair mats	6-24	40-150
Shoes and sleepers	2-4	Not fixed

\* *kaleen* = carpet



**Plate 4.7:** *Agave* sp

A) A close-up of a large-scale plantation

B) Transportation of fibre

C,D) Finished fancy products

E) Mr. Girish Kandwal who runs an NGO working for the commercialisation of fibre products

F) A skilled woman trained by Mr. Girish Kandwal, now working independently

is small because of the lack of markets, marketing skills, and the limited supply of raw materials. These organizations sell their products in local markets through exhibitions. They also receive some financial support from the Hill Development Department of the Government of U.P. and the District Rural Development Agency (DRDA).

The *Griha Udyog* and *Resha Utpadan Samiti* have taken a lead in developing various fibre-based products for commercial purposes. The organization, at present, receives orders for fibre-based products from IIFT; the UP Academy of Administration, Nainital; Kumaon *Mandal Vikas Nigam*; the G.B. Pant Institute of Himalayan Environment and Development; Kosi-Katarmal; Delhi Exports; and so on. Various products have also been commended by importers and consumers from Canada, the USA, and Mexico. They have placed orders for these products in bulk but, due to shortage of raw materials, the consignment could not be met.

NGOs such as HOPE and *Paryavaran Sansthan* (GBPIHED) have also taken a lead in Human Resource Development by training farmers on fibre extraction. The extracted fibre is sold to the NGOs who carry out the training. *Griha Udyog* and *Resha Utpadan Samiti* have also trained two women, and they have set up their own businesses. Moreover, this organization has also given employment to about 30 persons (about 12 in the nursery and 18 in the office) for preparation of finished products.

### **Resource Development**

*Griha Udyog* and *Resha Utpadan Samiti* and *Mahila Vikas Sangathan* have developed their own nursery of *Agave sisal* hy-

brid. The nursery of these organizations is spread over an area of five to six ha. Plantation work has also been carried out on an area of 30 to 70 ha, in order to support production on a commercial scale.

Intensive research and development programmes are still essential in order to make raw materials available for commercial production of fibre products. To obtain raw materials, more nurseries, particularly of *Agave* spp, need to be established to support large-scale plantation of the species (Plate 4.8). This species is regenerated through bulbils and is well adapted to nutrient poor and xeric sites. The species can be cultivated on wastelands that comprise about 5.5 per cent of the total area of the Central Himalayas. In addition, plants used for biofencing and slope stabilisation can also be used for fibre extraction by plantation at regular intervals. Fibres extracted at village level can be collected through cooperatives and made available to NGOs and others. Some NGOs have also begun to purchase extracted fibre from villagers at the rate of Rs 20.00 per kg.

Similarly, research and development work needs to be carried out on seed germination, cultivation practices, and coppicing of *Daphne* before recommending the species for commercial use in paper-making. In order to obtain more fibre from *Cannabis*, traditional methods of cultivation need to be improved through further research and development, especially in the field of biotechnology. This would also help to develop plants free of narcotics.

In conclusion, it is clear that fibre-based (both traditional and non-traditional) products have considerable potential to sustain the rural system, generate revenue, and provide job opportunities. If non-traditional

products are launched in the outside market properly, it will contribute significantly to the sustainability of many households in the Himalayan region. Further, as the tech-

niques involved in extraction of fibre and preparation of products are ecofriendly, it will help preserve the Himalayan ecosystem.



**Plate 4.8:** *Agave* sp  
A) Large-scale plantation and  
B) regeneration through bulbils in a nursery