

**PILOT PROJECT FOR REVIVAL OF SISAL FIBRE PRODUCTION  
BY THE SOIL CONSERVATION DEPARTMENT**

**Preface**

The Jammu and Kashmir Soil Conservation Department had been producing sisal fibre at its Birpur Soil Conservation Unit about 10 Kms away from Jammu city till 2007-08. The production has been discontinued due to unfavourable market and other factors. It is now felt that the production needs to be revived so that in the process there can be better management of Sisal plantation, employment generation, besides generation of revenue through harvest of the rich Sisal crop in the field.

Before taking headlong plunge into the Sisal fibre production a preliminary market study is imperative to explore the scope and viability of the venture in the present day scenario where the synthetic fibres have made inroads.

The extraction and field work was undertaken by the Zonal Soil Conservation Officer Purmandal and his field staff who worked with dedication and proficiency during the entire project period despite harsh cold weather condition and inadequate infrastructure.

The Pilot Study was taken up under the direction, support and able guidance of the Director, Soil Conservation Department J&K to whom I convey my deep gratitude.

It is hoped that the study will give new dimension for better management of Sisal Plantation, employment and revenue generation through plantation and harvest of Sisal Plants.

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## **Introduction:**

Sisal plant imported from Orissa in early eighties to the State by Soil Conservation Department on trial basis for its introduction as one of the soil binder in the soil erosion and landslide prone areas. The Department has successfully developed the sisal plant at its Demonstration Plot Birpur and Nonath-Gagwal. It was used in the field areas of Jammu, Udhampur and Ramban areas at initial stage. Later-on, the extent of sisal “a soil binder” was trialled in Rajouri and Kathua Districts as well.



Sisal fibre is extracted from the mature leave blades of *Agave sisilana* which is a tropical shrub. It takes about 4 years for a plant to reach maturity. Every year about 25-30 blades can be harvested from a plant. After the mother plant attains 8 years it flowers/produces bulbils and then perishes within a year. Plant propagation is through bulbils or root suckers.

Sisal fibre is used for making ropes, carpet, bags, wall hangers, coarse fabrics etc.

### **Objective of the Pilot Project:**

The objectives of the pilot project study are outlined as under:

1. Studying the management aspects of the Sisal crop in the field.
2. Revival of fibre extraction Unit at Birpur.
3. Rough estimate as to the volume of Sisal leaves available for harvest.
4. Harvesting of the leaves and extraction of fibre with standardization as to the quantity of fibre per leaf.
5. Identification of Market and marketing of fibre at competitive price within and outside the state.
6. Remittance of revenue thus earned into the state treasury.

### **Methodology Adopted in the Pilot Project:**

The plantation areas of Sisal in Jammu region were inspected and areas near road side with sizeable concentration of Sisal crops were identified, to have an estimate of the crop that can be sustainably and commercially harvested. The district wise number of harvestable crop identified in different inspected areas is given below:

<b><u>District</u></b>	<b>SC Closure</b>	<b>No. of plants (appx)</b>
<b><u>Samba:</u></b>	Birpur closure	500
<b><u>Kathua:</u></b>	Sadyal unit-III	100
	Dabi unit (Hiranagar block)	300
	Gagwal Sisal Demonstration Plot	50,000
<b><u>Rajouri :</u></b>	Balshama Closure.	40,000
	Thanda Pani Closure.	10,000

<b><u>Udhampur/Reasi:</u></b>	Katra, Balli Nallah, Narsoo Nallah and Tamatar Morh.	30,000
<b><u>Ramban:</u></b>	Seri and adjoining areas.	15,000

In order to generate a sample base for marketing/ showcasing product, 2000 blades of Sisal were harvested from about 80 plants of Birpur closure located about 200 metres away from the fibre extraction Unit. The fibre blades of Birpur Closure can be given B grade in a grading of A, B and C.

The main steps involved to produce fibres are:

- Cutting of Sisal blades from mature plants. About 50 cut sisal blades are bundled for one head load carriage.
- Crushing of Sisal blades in machine.
- Washing of fibres in water by dipping and rinsing in troughs.
- Drying of fibres in the sun. After crushing and washing, fibre of 25 blades is bundled for drying.
- Depending on weather condition and season it takes about 2 to 7 days for the fibres to fully dry.

The study yielded the following first hand information:

- ❖ From one plant of mature Agave Sislana about 20 to 30 blades can be harvested annually.
- ❖ 1 Sisal blade can yield about 13.5 gms of dry sisal fibres.
- ❖ Hence 1 Sisal plant (25 blades) can yield 337.5 grams of sisal fibres.
- ❖ The Department can commercially and sustainably harvest about 1 lakh plants annually, thereby about 34 Metric tonnes of Sisal fibres can be produced annually.
- ❖ About 12000 man days can be generated in the process of harvesting of 1 lakh plants.

## **Identification of Market and Marketing of Fibres at competitive prices:**

In the past, the Sisal fibres used to be purchased by local buyers within the state. As per the available records the highest procurement price by the fibre buyers was R.42/kg of fibre during 2006-07.

During the last year, marketing of Sisal produced by the Department in 2007-08, Sisal blades were sold @ 10 Paisa/blade instead of Sisal fibre. The buyer made all arrangements for harvesting of the Sisal crop, its transportation and fibre extraction at Birpur, whereas the Department provided the facility of the extraction unit. However, all monitoring and supervision work was done by the Departmental staff at the field as well as in the extraction unit.

The sale of Sisal blade may be simple and feasible for the Department, but if the buyer is from outside the state this may not be agreeable to the buyer.

The importance of identifying market and marketing of fibre at competitive price is the key to make the venture a commercially viable one keeping in view the fact that synthetic fibres have already made inroads in the market.

In order to market our product, fibre procurers/ manufactures from outside the state as well as within the state have been contacted. The sample of Sisal fibre produced from Birpur Unit was despatched to fibre dealers outside the state for inviting their *offer rate/kg and total annual requirement which is to be lifted from FOR Jammu*. The fibre dealers have somehow not quoted their

offer price although they have shown interest over phone in purchasing Sisal fibre from the Department.

For assessing the market and inviting buyers from outside the state we may have to extract about 2 to 3 quintals of Sisal fibre and put the same through auction.

### **Remittance of Revenue into the State Treasury:**

In the past the revenue were remitted into the state treasury by the buyers and also through the Department as and when the purchase was to be made and the treasury receipts was produced before the Department against which the fibre was issued.

The system of Bank drafts or treasury remittance in favour of the Department can be adopted.

### **Required Improvement in Management**

There are certain constraints in the present setup of fibre extraction which needs to be addressed, if Sisal fibres have to be commercially and sustainably extracted.

- The existing machinery is old and obsolete and needs to be replaced in order to increase efficiency and cut down the production cost.
- Erratic power supply in the area of the Production Unit can be overcome through installation of Genset of adequate capacity.
- Construction of tank connected with water connection for ensuring adequate availability of water for washing of crushed fibre.
- Proper management of Sisal crop is basic requirement to ensure regular availability of raw material for achieving desired results.

1. It has been noticed that suckers around the plants are to be given adequate space to grow.
2. A lot of gaps/blanks noticed in Sisal closures are to be tackled.
3. Timely cutting of sisal blades after attaining maturity.
4. Planting out suckers in gaps in the field are necessary to maintain an even spread of the Sisal crop thereby ensuring better protection of the soil as well.

## **Benefits of Sisal Fibre** **Extraction Activity:**

The benefits of sisal fibre extraction activity are many:

- It will facilitate better management of the Sisal crop in the field and thereby effectively conserve the soil in critical areas where it was planted for.
- The activity will improve the livelihood of the local people through generation of man-days and promote cottage industries.
- The activity can also fetch revenue for the government.

**>>>>THANK YOU<<<<**

## **1. Sisal – Harvesting process.**



## **2. Bundling of Sisal blade.**



### **3. Crushing of sisal blade.**



### **4. Washing of sisal fibre.**



## **5. Drying of sisal fibre.**



## **6. Sisal fibre ready for marketing.**



**==THANKS FOR KEEN INTEREST==**