

Contribution of Animal Fibre in Indian Economy



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Introduction

Fibre has been of great importance to man and rank second only to food in their usefulness. Animal fibres are mostly the ones that cover mammals like goats, rabbits and sheep, but also include feather from poultry as well as cocoon of the silk-worm. Globally natural Fibres contribute about 48% to the fibre basket with 38% from cotton, 8% from bast and allied fibres and 2% from wool and silk fibres.

Different types of animal fibres are available in our country but mostly wool & silk are important. Animal fibres are from the hair (eg wool from sheep, mohair goat, Cashmere goat, alpaca, vicuna, llama, yak, Angora rabbit and camel) or from secretions (eg silk). Animal fibres Wool, the fibre from the fleece of sheep or similarly hairy animals (eg alpacas, llamas, vicunas, yaks, camels, cashmere goats, mohair goats and angora rabbits) is produced in many places around the world. After shearing, the wool is scoured (washed), carded and dyed before being woven or knitted into fabric. Wool is flexible, absorbs moisture (making it cool in summer and warm in winter), dirt resistant and flame resistant, and wears well. It is used to make fine clothing with coarser types used for bedding, upholstery and carpets. Silk is produced from cocoons of the silkworm. After gorging itself on mulberry leaves, the silkworm secretes an unbroken fibre cocoon which is boiled and unwound to form the fibre which is then spun. China is the dominant producer as with many other natural fibres. Vietnam, India, Thailand, Turkmenistan, Uzbekistan and Brazil are also major silk producers. Silk is the strongest natural fibre. Silk absorbs moisture, will not shrink, dries quickly, is easily dyed, drapes well, retains its shape and has a natural shimmer. Silk is made into many lovely fabrics such as velvet, satin, chiffon, brocade, crepe, taffeta, shantung and faille.

A. Wool & Wool like Fibres

The Wool and Woollen Textiles Industry is a rural based export oriented industry in which the organized sector, the rural sector and the decentralized sector complement each other. Around 27 lakh workers are provided with employment from this industry in its wide spectrum of activities.

The country contributes 1.8% to total world production and is the seventh largest producer of wool. The production of indigenous raw wool in 2006-07 was 45 million kgs of the total production of raw wool, 85% is carpet grade, 5% is apparel grade and 10% coarse grade. The domestic produce is not adequate, hence, the industry relies on imported raw material and wool is the only natural fibre in which the country is lacking. A little quantity of specialty fibre is obtained from Pashmina goats and



The domestic produce is not adequate, hence, the industry relies on imported raw material and wool is the only natural fibre in which the country is lacking. A little quantity of specialty fibre is obtained from Pashmina goats and

Angora rabbits. There are 958 woollen units in the country out of which the majority of which are in the small scale sector. The big players are Ramyonds India Ltd, Vardhaman Textile etc.

The wool productivity is much lower than the world average, although India is among the leading countries in terms of sheep population. Also, the country imports substantial amount of wool given the inadequate quality and quantity of wool produced in India. The wool growing community and the various user industries are currently facing several challenges on account of the current state of affairs. Adequate policy intervention is required to improve the prospects of the overall industry. The Report puts an attempt to discuss the international scenario with respect to the wool industry; the Indian scenario; D&B India's outlook on the prospects of the Indian Wool & Woollen products Industry going forward; the key issues and concerns faced by the industry currently and proposed solutions to meet the various challenges facing the industry.

- a) International Scenario World production of greasy wool has been on a decline since the past numerous years, with production having dropped from 3.39 million tonnes in 1990 to 2.11 million tonnes by 2008. The world's leading producers of wool are China, Australia and New Zealand. Australia is the largest producer of wool in the world. It has been witnessing falling production over the years mainly because of fall in sheep population. The second largest wool producer is China. Production of wool in China is on an upward trend on the other hand. The year 2008 witnessed significant decline in exports across different categories in line with the fall in global demand for woollen products.
- b) Indian Scenario India is the seventh largest producer of wool and contributes 1.8% to total world production. India ranks among the leading five countries in the world in sheep population. However, wool productivity in India is 0.8 kg/sheep/year which is much lower than the world average of 2.4 kg/sheep/year.



Bulk of the wool produced in India is of coarse quality and used mainly in hand-knitted carpet manufacturing. Since India produces a lot of value added products that are exported, demand for wool exceeds domestic production. Hence, substantial amount of raw wool is imported. Consumption recorded a CAGR of 3% during the period between 1991-92 and 2008-09, which includes domestic production and imports.

- c) Australia, Pakistan, New Zealand, China etc. are the main countries from which India meets its import requirements for raw wool. As for the exports, UK, USA, Italy, UAE and Dominican Republic are the main countries for India's exports of woollen yarn, fabrics and made-ups, whereas USA, UK, France, UAE, and Germany are the leading markets for India's exports of readymade wool garments. Overall exports of wool and wool blended products are estimated to have declined by 8.4% to around Rs 5,064.3 crore during 2008-09.

d) Industry Outlook During the next one decade, raw wool consumption (production + imports) is estimated to double, from 114.2 million kg in 2008-09 to 260.8 million kg by 2019-20. Consumption is expected to grow at a CAGR of 7.8% during the period between 2009-10 and 2014-15, and this growth rate is estimated to be maintained during the period between 2015-16 and 2019-20 as well.

e) Domestic production of raw wool is estimated to grow at marginal rate going forward. Domestic production is estimated to grow at a CAGR of 1% during the period between 2009-10 and 2014-15, and this growth rate is estimated to be maintained for the period between 2015-16 and 2019-20 also.

f) Imports of raw wool are estimated to increase significantly going forward. Imports are estimated to grow at a CAGR of 11.7% for the period between 2009-10 and 2014-15, and furthermore they are estimated to grow at a CAGR of 10.1% for the period between 2015-16 and 2019-20.

B. Wool & Woollen Products

Wool fibre has a marginal share of 1.6% (2008) in world fibre production. World production of greasy wool recorded a decline of 3% in 2008. Australia,

Countries	1995	2000	2005	2007	2008
Australia	731.0	666.0	520.0	477.0	437.6
China	277.4	292.5	393.2	363.5	405.0
New Zealand	288.5	257.4	213.2	217.6	205.1
Iran	50.9	53.9	53.9	75.0	75.0
India	41.4	47.6	44.9	45.9	46.4

China and New Zealand are the world's leading producers of wool.

C. Wool & Woollen Unites: Indian Scenario

In line with the trend in world production of various fibres, in India also, raw wool accounts for a marginal share of 0.7% in total fibre production of the different fibres produced. India is the seventh largest producer of wool and contributes 1.8% to total world production. With a population of over 60 million sheep, India ranks among the leading five countries in the world in sheep population. However, in India the average for wool productivity has been 0.8 kg/sheep/year while the world average is about 2.4 kg/sheep/year.

The industry provides employment in the organized wool sector to about 12 lakh persons with an additional 12 lakh persons associated in the sheep rearing and farming sector. There are around 958 woollen units in the country majority of which are in the small scale sector. Furthermore, there are 3.2 lakh weavers in the carpet sector. The total employment is about 27 lakh people in all. The main wool producing states of India are Rajasthan, Jammu & Kashmir, Punjab, Gujarat, Karnataka, Haryana, Uttar Pradesh, Maharashtra, Uttaranchal and Andhra Pradesh. Punjab alone accounts for 40% of the woollen units, while Haryana accounts for 27%, Rajasthan 10% and the rest of the states account for the remaining 32%.

There are different varieties of wool producing sheep grown in the country. These include Chokla, Magra Chokla (Bikaneri), Magra, Jaisalmeri, Nali, Malpura, Marwari,

etc. There are several other speciality fibre producing animals that are reared apart from these wool producing varieties of sheep, such as the Angora rabbit (mohair), Pashmina goat (cashmere/pashmina), highland sheep (highland wool), etc. Pashmina is produced by Changra (Pashmina) goat in Ladakh and Chegu breed of goat in the eastern parts of Himalayas in India. There are around 2.45 lakh Pashmina goats in the Ladakh region. Mohair comes from Angora goats. The population of Angora in the country is around 50,000.

Sheep are traditionally reared for production of wool and mutton in India. Sheep rearing mainly rests with the weaker sections of the society. These people either do not possess the land or their land holdings are so small that crop cultivation does not provide remunerative employment throughout the year. Moreover, grazing and stock watering resources are available only for a few months during the year in the major sheep rearing areas, especially in the North-western districts of Rajasthan. This forces the shepherds to lead a nomadic life. Due to illiteracy and lack of awareness, the shepherds do not adopt improved sheep husbandry practices. This adversely affects the quality as well as quantity of wool produced. Grazing practices and migration have an impact on the current state of sheep husbandry in the country. Moreover, every year, around 35% of the sheep population is slaughtered for meat purposes. This is the reason for the poor growth in sheep population in the country.

Wool – Domestic production & consumption

Of the total domestic production of wool, around 85% is carpet grade, 10% is coarse grade and the balance 5% is apparel grade. Bulk of the wool produced in India is of coarse quality and used mainly in hand-knitted carpet manufacturing. The rest are being used for the manufacture of blankets, apparel, finished textiles, knitwear, garments, etc. Since India produces a lot of value added products that are exported, demand for wool outstrips domestic production. India imports substantial amount of raw wool for this purpose.

Deccani wool

Certain southern states of the country such as Andhra Pradesh, Tamil Nadu, Maharashtra and Karnataka produce wool that is coarse and brittle in nature. Generally such type of wool is black in colour and has average thickness of 32 micron. However, this type of wool has limited usage and is used for manufacturing low-quality blankets. Usage of this type of wool should be encouraged for manufacture of certain industrial products such as filter materials, felts, etc.

D. Foreign Trade

The country depends on imports in order to meet the gap between domestic production of wool and the demand. Australia, Pakistan, New Zealand, China etc. are the main countries from which India meets its import requirements for raw wool. The country reported lower imports on a year-on-year basis during the recent two years (2007-08 and 2008-09). As for the exports, UK, USA, Italy, UAE and Dominican Republic are the main countries for India's exports of woollen yarn, fabrics and made-ups, whereas USA,

UK, France, UAE, and Germany are the leading markets for India's exports of readymade wool garments.

Wool imports fall in 2008-09

India imports raw wool to the tune of around 65.7 million kg (2008-09). There was a decline in imports during 2008-09. Raw wool imports declined by 33.5% in volume terms, while in value terms, they decreased by 5.2% during 2008-09.

A large quantity of wool is imported from Australia, China, New Zealand, Middle East and other countries since the production of fine apparel grade wool is not adequate in the country. Australia alone accounts for 27.3% of India's total raw wool requirements (2008-09), while around 13% of India's raw wool requirements are sourced from New Zealand. There has been a change in share of countries from which India sources its raw wool requirements during the last five years or so. New Zealand has replaced China as the second largest sourcing destination for India's raw wool imports in the last few years.

E. Industry Sub-Segments

D) Carpet industry

Indian carpets can broadly be classified into knotted, woven and tufted types. Carpets can be hand-made or machine-made. It is an export oriented, rural-based and labour-intensive sector. It is an employment-oriented sector, giving employment to wool growers, brokers, manufacturers, exporters and traders. It provides employment to around 2.5 million people in the backward and rural areas of the country. The Indian hand-knotted carpet industry is essentially a cottage industry in the unorganized sector. It is well-known in the states of Punjab, Jammu & Kashmir, Haryana, Himachal Pradesh, Tamil Nadu, Uttar Pradesh and Sikkim. India exports all the three varieties of carpets – silk carpets, hand-made and machine-made carpets. The major export items include carpets made from cotton, wool, jute, silk and coir, durries, cotton, mats and mattings, druggets and rugs. Hand-made carpets (knotted) account for a lion's share of 75% of the total carpet exports from India. US is the largest export market for carpet made in India as it accounts for more than half of India's export earnings.



The Mirzapur-Bhadohi-Varanasi carpet belt accounts for close to 80% of the total carpet exports from India. However, in the recent years, slowdown in export demand from the US and Europe has resulted in sharp decline in exports as it accounts for about 85% of exports from this region. Half of the units are out of business as a result. The Finance Minister has made announcement of setting up a mega carpet cluster in this belt in order to help the industry in this region in the long run.

II) Shoddy industry

The shoddy industry contributes nearly 30% to the turnover of the woollen industry. The reclaimed textile fibre is spun on the woollen system to make yarns suitable for making sweaters, blankets, heavy woollen jacketing materials and blazer fabrics. The shoddy industry in India is a major contributor to India's exports from the woollen sector. There are about 500 units engaged in the production of shoddy woollen products by way of processing, weaving or spinning. The industry is not quality-conscious and mostly produces low-end products which are mostly sold in the domestic market as well as exported to poorer countries of Middle East and Africa. World buyers of high quality carded wool fabrics and blankets have shied away from sourcing their requirements from India on account of the low quality of products manufactured.

The shoddy industry in Europe is shifting to China, Dubai, South America and Karachi on account of rising cost of labour; however, India is losing the opportunity of attracting this shift from Europe. Presently shoddy units are not allowed to be set up in SEZs/EOUs. Removal of this ban is expected to attract greater investments into this industry and improve the prospects of this industry as several foreign manufacturers would be interested in setting up their plants in India on account of the cheap labour availability. Globally, there is strong demand for high-quality blankets and fabrics made from shoddy fibres and this demand is currently being catered to mainly by Italian and other European companies. India could very well take advantage of the huge gap existing between global demand and supply by focusing its effort on quality improvement.

III) Shawl & scarf industry

The origin of the shawl industry in India dates back to 1833 during which a large number of famine-stricken Kashmiri weavers came and settled in Amritsar. Currently, Ludhiana and Amritsar in Punjab are the major shawl and scarf manufacturing centres in India. With exports to the tune of Rs 400 crore for woollen shawls and scarves and to the tune of Rs 450-500 crore for man-made and viscose shawls and scarves recorded during 2008-09, it is a substantial foreign exchange generating segment. The US, Canada, Australia, Europe, etc are the major export destinations for shawls and scarves manufactured in India.



The Indian shawl and scarf manufacturing industry is facing high raw material cost pressure. This industry is dependent upon import of Merino wool from Australia, and prices of Merino wool have risen sharply with Australia suffering from drought since the last 3 years. Prices of other inputs such as acrylic, viscose yarn, polyester, etc, have also witnessed sharp increases in the recent past. Hence, on one hand, the industry is fighting increased cost pressures, whereas on the other hand it is facing weakening in export demand on account of the global slowdown and is also facing severe competition from China. Usage

of old/outdated machinery and technology in the processing segment results in inadequate quality of finished products.

F. Exports

D&B India expects exports of woollen products to continue with their strong growth. During the period between 2009-10 and 2014-15, exports of woollen yarn, fabrics and made-ups are expected to record a CAGR of 11.6%, while during the period between 2015-16 and 2019-20, exports are likely to post higher CAGR of 13.9%. As per our estimates, the exports of readymade wool garments would post a CAGR of 19.1% during 2009-10 to 2014-15. The growth momentum is expected to accelerate during the following five years. The exports are projected to record CAGR of 21.5% during the period between 2015-16 and 2019-20.

A. Indian Silk

Silk is a very important fibre of India, Silk - the queen of all fabrics is historically one of India's most important industries. A variety of silks are produced in Indian, namely Mulberry, Muga, Tasar and Eri. This is based on the feeding habit of the cocoons. Over 700,000 farm families are employed through the sericulture industry today and is mostly concentrated in Karnataka, Andhra Pradesh and Tamil Nadu and to some extent West Bengal and Assam. 70% of the country's total silk production is accounted for by Karnataka. Presently, 56 lakhs people are dependent on the sericulture industry, 5.6 million people out of which 4.7 million are agriculturists. Sericulture is one industry which is beneficial to the agriculturists. The rest are weavers, reelers, etc. Contributing to about 18 per cent to the world production, India is the second largest producer of silk. What is more noteworthy is the fact that India's requirement of raw silk is much higher than its current production. Hence, there is considerable scope for stepping up production of raw silk in the country and overcome the persistent conflict of interest between exporters of silk products and producers of raw silk.

Exporters want imports of cheaper raw silk so as to be able to export more silk products at competitive rates, while sericulturists want imports of raw silk to be restricted to have better market for their produce. India has all the four varieties of silk namely, tassar, mulberry, muga and eri. It is disheartening to find out that we have not yet been able to fully exploit this advantage and make our presence felt on the international scene more prominently than at present. The



strengths and weaknesses of different segments have to be clearly understood for this. The strength of this industry lies in its wide base, the infrastructure created by the national sericulture project, the sustaining market demand pull especially from the Indian handloom weaving sector and the research and training capabilities.

a) Mulberry segment

Its main weakness is related to diverse range of practices leading to a divergence in productivity, quality and a poor database. Generally, there is weak accent on quality consistency in production, poor transfer of technology to the decentralised sector both due to poor technology absorption and poor/inadequate follow up on laboratory findings; poor market linkages barring in Karnataka, a thriving unfair trade in the post-yarn sector, low-end technology use and reluctance to costlier technologies due to fears that there might not be corresponding improvement in price realisations. Other weaknesses are inadequate emphasis on quality in the commercial seed sector, neglect of marketing linkages and the need for a basic perspective for development of the sector which clearly defined relative roles for the central and state agencies under the federal set-up.

Among non-mulberry silks, tassar is mostly produced by tribals by rearing silkworms on forest plants. The largest producer of tassar silk after China is India and it is the only producer of golden muga silk. India is also major producer of eri silk. Non-mulberry silk production is unsteady and fluctuates from year to year unlike mulberry silk production. The central silk board has not given enough attention to their R&D and extension activities in the area of non-mulberry sericulture in spite of its potential to directly help the poor. Currently, muga and eri silks are produced mostly for self-consumption. They have great potential for value-added exports with their uniqueness to India. The government must give to these varieties of silk the importance that is due to them and facilitate focussed R&D, targeted extension and innovative product development for value-added exports.



b) Tassar

The following are the areas of weaknesses in production of tassar and they require to be set right

- ☞ Rearing is done outdoor on trees. The natural food plants are dispersed over large areas. Therefore, comprehensive extension support would entail a large number of extension agents to cater to the farmers beyond their resources.
- ☞ Weavers are normally reelers and are not exploited by traders.
- ☞ Adoption of Oak tassar culture has not yet been properly done, as people are new to this culture and economics are yet to be established.
- ☞ Lack of disease monitoring and of control measures is also noticed.

c) Eri

Eri silk has specific thermal properties. It is largely produced in some eastern parts of the country. It can also be blended with wool, cotton ramie, other silks, synthetic fibres or jute. Areas of weakness in eri silk include:-

- ☞ Lack of systematic supply of adequate quantity of foilage.
- ☞ Lack of scientific method to check diseases
- ☞ Poor management during rearing
- ☞ Non-availability of separate rearing house and

☞ Any well-organized marketing system's absence

d) Muga

This golden yellow silk is quite unique to Assam and neighboring areas of Meghalaya and Nagaland. It has spread to Andhra Pradesh and West Bengal also. Commercial seed production is to be organized systematically while basic seed production is more or less organized. More research support is needed for this activity.

B. World Raw Silk Production

The World Raw Silk production is of about 126995 MT (2009) and it is mainly obtained from 2 countries, India and China. China leads the world with silk production of 104000 MT or 81.89% of the produce. India ranks second in respect of world raw silk production. Sericulture and silk derive their importance in the Indian textile map as it is one of the only two major silk producers in the world and from its employment potential. Policy decisions are defined mainly by these two considerations.

C. Area under Cultivation and Domestic Raw Silk Production (During 2009-10)

India's raw silk production is 19690 MT (2009-10), 82.89% (16322 M.T.) of it is mulberry and 17.11% (3368 M.T.) Vanya silks. The area reported by States as cumulatively planted under mulberry is 1.84 lakh hectares (2009-10); and the production of mulberry cocoons is 131661 tonnes.

D. Cut throat competition from China

With cheap silk coming from China and flooding the Indian markets, Sericulture in India has taken a severe beating. India imported around 9,258 tonnes of silk worth over six billion rupees last year from China which is the world's largest silk producer. According to statistics released by the Central Silk Board, nearly 49,000 hectares of mulberry crop was uprooted in Karnataka as cocoon prices crashed resulting in a loss of 3,000 tonnes to the country's overall silk production. Dumping of silk yarn from China has affected the production of silk because the rate of cocoons in the market has come down because the demand has been reduced due to import of China silk. So farmers who were expecting a better price for their cocoons stopped because market was fluctuating. Dealers lost their interest in buying the cocoons when the imported silk came in and farmers did not get the better rates. As a result of this, 49,000 hectares of mulberries were uprooted in Karnataka. Due to it the farmers have taken up other activities or other agricultural productions rather than continuing with mulberry. Their crops also suffered from the third consecutive drought last year according to the farmers. Farmers are demanding that the government should impose anti-dumping duties on Chinese silk. India stands second only to China in silk production. While China produced 69,000 metric tons of raw silk last year, India stood far behind with 16,000 metric tons. Officials say India requires 120,000 metric tons of silk to meet the demand in world market and with better infrastructure facility; the sericulture industry could improve its productivity to 15 percent as against the current nine percent. With growth rates of above 10 percent per year, the present market context for silk in the

country is one of vigorously growing internal demand for silk fabrics. The bulk of Indian silk thread and silk cloth is consumed domestically. The industry has been expanding rapidly over the last few years with substantial government and international subsidies for silk projects and marketing schemes. Silk exports are also increasing rapidly. Germany is the largest consumer of Indian silk.

Today only China and India are the producers in silk. Small quantities of silk are also produced by Thailand and Uzbekistan. India is the largest consumer of silk fabrics by way of sarees and so other products. Hence the silk culture needs to be improved in India. Today the Indian silk industry is already a major player in the global scenario and the growth prospects for the industry seem to be bullish. Things like the encouragement of further technological and economic research in the various aspects of sericulture, standardization and quality control of silk and silk products and rationalization of marketing and stabilization of prices of silk cocoons and raw silk it could expand rapidly than ever before.

E. Silk Imports:

(i) Demand Supply Gap: The domestic production of raw silk is not adequate to meet the domestic and export demand. It is estimated that against the demand of around 28,000 ton per annum the domestic production is around 19000 to 19,500 tonnes. The gap of nearly 8000 to 8500 tonnes in demand is mainly on account of the fact that high-grade quality mulberry raw silk is not being produced in the country to the extent required by the industry. This quality of mulberry raw silk is basically required in the power-loom industry, for export purposes, and to some extent in the handloom industry for warp purposes. To meet the demand of exporters, the Govt. has allowed the import of raw silk under O.G.L. as per WTO compatibility.

Year	Quantity (in ton)
2000-01	4713
2001-02	6808
2002-03	647.15
2003-04	628.41
2004-05	607.21
2005-06	779.71
2006-07	673.37
2007-08	734.44
2008-09	903.06
2009-10	933.70

(ii) Raw Silk Imports: The quantity and value of raw silk imported during the last ten years is indicated as under:

Year	Million US \$
2000-01	530.21
2001-02	495.29
2002-03	474.08
2003-04	604.70
2004-05	640.90
2005-06	721.53
2006-07	737.76
2007-08	677.40
2008-09	691.06
2009-10	

Including silk carpets and silk RMG
Source: DGCIS, Kolkata

It may be noted that 2002-03 onwards the basic custom duty on raw silk has been kept at 30% level. In case of silk fabric the basic custom duty has been reduced gradually from the level of 30% (2002-03) to 10% (2009-10).

F. Exports

The export earnings from the silk are growing steadily because of increasing demand for Indian Silk goods particularly from small markets of Asia Region in addition to the traditional major markets like USA and European countries. Exports earnings which was 2,294.05 crores during the

year 2002-03 has increased to 3,338.35 crores during the year 2006-07, showing an

increase of around 46%. Due to melt down in the global economy, sharp appreciation in the rupee vis-à-vis US\$ witnessed in the year 2007-08, there was a slump in silk goods exports of about 18.3% (2,727.87 crores) during the year 2007-08 compared to 2006-07. However, in the year 2008-09 & 2009-10, the data shows an increase of about 16.5% (3,178.19 crores) & 6.0% (2892.44 crores) respectively in the silk goods export earnings when compared to the same period of 2007-08.

3. Another Animal Fibres:

A. Angora fibre

Angora fibre is collected from Angora rabbit; angora is extremely warm, soft, very fine and silky to touch. China dominates, the world Angora fibre production, producing approximately 90% of the world Angora fibre while India produces only 40 tons per year. The rearing of Angora rabbit in India began in 1960s, largely for the wool obtained from them. It is primarily concentrated in the Kullu region of Himachal Pradesh. It accounts for more than half of the total production in the nation. The smaller concentrations are also in Punjab and Haryana and in the Kumaon and Garhwal Hills of Uttaranchal. The breeding of Angora rabbits and production of Angora fibre has a great potential for the development of small-scale business to generate income for rural people, especially women.

India also produce trace amount of another animal fibres like Pashmina, camel hair, Yak, Mohair etc.

Animal Fibres: Production, Quality and Products

Name of the fibre	Source	Production Lakh kg	Fineness Micron	Product
Wool	Sheep	456	22-60	Carpets, blankets, Felts, shirting, suiting etc.
Pashmina	Cashmere goat	0.4	10-15	Shawls and knitwears
Rabbit hair	Angora Rabbit	0.5	10-14	Shawls and Knitwears
Yak fibre	Yak	0.1	15-25	Shawl and knitwear

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