**PLANT FIBERS:** [**http://sheeplessknitter.net/plantfibres.shtml**](http://sheeplessknitter.net/plantfibres.shtml)

Textiles of plant origin are classed according to the parts of the plant which gives the fibre, and these include **seed hairs**, such as cotton, **stem fibre**s, such as flax and hemp, **leaf fibres**, such as sisal, and **husk fibres**, such as coconut. To illustrate the wide potential of plant fibres, here is a list of most of the commonly used ones, not all of which are used for knitting yarn:

**PLANTS:**

* **Abaca**, a plant native to the Philippines, was once used widely for rope and is now being developed as an energy-saving replacement for glass fibres in cars and boats.
* **Bamboo** processing can involve leaves, stem and the soft inner pith to synthesise textiles suitable for many uses.
* **Coir** is a coarse, short fibre extracted from the outer shell of coconuts. It is used for ropes, mattresses, brushes and car seats.
* **Cotton** is pure cellulose and is the world's most widely used plant textile fibre. Cotton still leads the global textiles industry.
* **Flax** is one of nature's strongest vegetable fibres and was one of the first to be harvested, spun and woven into textiles.
* **Hemp** also has a long history and is now being developed as a versatile fibre especially for clothing and accessories.
* **Jute** has strong threads which are used worldwide in sackcloth. It often originates on small farms in the monsoon regions of the Indian subcontinent.
* **Kapok** is a strong and lightweight fibre which comes from the seed pods of a tree native to South America.
* **Ramie** is a nettle fibre, white, with a silky lustre, and is one of the strongest natural fibres, similar to flax in absorbency and density.
* **Sisal**is a coarse fibre which can replace glass fibres in composite materials used to make cars and furniture.

**FIBERS:**

Please see the [guidelines](http://sheeplessknitter.net/guidelines.shtml) page for more information about how each yarn behaves. If you are buying on line you will want to do your own searching, but on the links page you will find some online shops which are UK based, well stocked and carry a variety of non-wool fibres. As far as knitting goes, the main plant fibres are hemp, linen, cotton, rayon, ramie, corn and soy. In general they are soft, breathable and have insulating properties. They are also renewable!

* **Linen** Traditionally, the process of getting the fibres from the tough plant stalks involved 'retting' to break up the fibres by immersing the stalks in running water, 'scutching' to separate out the woody bits, 'hackling' or combing the fibres, 'carding' to align them further, and finally spinning. I can't believe that I once sowed an experimental bed of flax (it's very pretty) so that I could try doing all that myself. Needless to say it didn't work out! Even with technology this process is laborious, hence the relatively high price of linen. Flax is widely grown in the UK, mainly for the oily seed, and there have been several attempts in recent times to revive our once thriving linen industry. Flax for linen was last grown in England in the 1950s. Linen yarn for knitting is available for instance from Texere and Rowan. It is not particularly smooth to handle but makes a hard wearing breathable garment that improves with washing.
* **Hemp** The processing of hemp for textiles is similar to that for linen. Despite having the same botanical name, industrial hemp varieties contain a negligible amount of narcotic. China is the largest exporter of hemp but it is now grown in many other countries including the UK (for paper and textiles other than yarn). Like flax, the seeds of hemp have great nutritional benefits. The plant has potential as a 'green' renewable as it is hardy and needs comparatively little fertiliser and pesticide. Hemp knitting yarn is available in the uk. It is rather hard, like linen, but improves in softness by liberal machine washing, and is very hard wearing. Unlike linen, hemp creases very little when folded. 100% hemp yarn for knitting and crochet can easily be purchased on line though sometimes you will find it blended with wool.
* **Cotton** This is another textile used since ancient times, though not widely in the UK until the industrial revolution, when it was one of the main drivers of that revolution. It can't be grown successfully here and even in its native regions it needs lots of pesticides when grown on a large scale - only organic cotton can be said to be environment friendly. Because of the way that cotton behaves when it is spun, it is the most flexible of the plant fibres. Cotton yarn for knitting is widely available – a cotton / acrylic mix is warmer and lighter to wear than 100% cotton.
* **Plant based synthetics** Often these are the biproduct of another industry, as with corn and soy. So that's all good. However, before being used for soft textiles they first need to be made into a pulp and processed with heat or chemicals to produce a liquid which is then forced through a spinneret to make solid filaments, which means that they are quite a way from being in their natural form. Recent technology has led to the creation of filaments of many different kinds, for instance hollow filaments would give cloth or yarn warming properties, which is brilliant for knitters. They are also resistant to 'pilling' (those messy bits which appear on the surface and can be pulled off some knitted garments).
* **Bamboo** Bamboo is a multi-purpose plant and has long been used in building and paper making. We even eat parts of it. Bamboo textiles are reputed to have a natural antibacterial property which remains even after many washes. Like all synthetics, bamboo is beautifully smooth to knit but is usually mixed with other fibres to give more flexibility. Blended with cotton it gives a hard wearing and biodegradable garment. Again, purchase of bamboo yarns (without wool mix) is easier on line than in the shops.
* **Corn** Filaments for spinning are made not from the plant fibre but from sugars which are extracted from the corn and fermented. A search will find that 100% corn yarn is available to buy on line. It is often spun into 'ribbon' type, tubular yarns.
* **Soy** Soy yarn is made from the waste produts of soya processing. It was first developed in war time but the industry has since declined. You can find it on line now, but it has yet to become widely available. I have handled soy 'tops' (fibres ready for spinning) which are super smooth and soft, but I've never used a soy yarn. As with hemp, soy is sometimes blended with other fibres to give it flexibility and bounce. It's also blended with expensive animal derived yarns to cut down costs and increase durability.
* **Rayon and Viscose** Rayon was the first 'man made' textile and dates back to the very early 20th century. Like viscose it is made from cellulose extracted from wood and cotton fibres and is commonly used in a yarn mix to give sheen. However it needs to be washed carefully.
* **Modal** Modal is made from wood, by the same basic process as synthetics. It is stronger than rayon and stays soft after many washings (whereas cotton can become hard in hard water areas). Also, unlike rayon, it doesn't stretch or shrink when wet - so it's good for a cotton blend, where you will often find it.
* **Ramie** Ramie is similar to modal in quality and you will also find this in cotton blends. The raw material (nettles!) is mostly imported from China and other Asian countries.

See the [Guidelines](http://sheeplessknitter.net/guidelines.shtml) page for some general guidance on using plant based and synthetic yarns.

***Go to*** [***http://www.phillyknits.org/Learn2Knit.htm***](http://www.phillyknits.org/Learn2Knit.htm) ***for more print-outs!***