

Linum usitatissimum

[Synonyms : *Linum angustifolium*, *Linum humile*]

FLAX is a cultivated annual (some varieties are biennial or perennial). Probably from Asia it has small, pale blue (occasionally red or white) flowers.

It is also known as *Alshi* (Tamil), *Alsi* (Hindi, Urdu), Annual blue flax, *Atasi* (Sanskrit, Telugu), *Cheruchanavittintevilta* (Malayalam), Common flax, Cultivated flax, *Echter Lein* (German), *Faserlein* (German), *Flachs* (German), Flax seed, Flix, *Kulturlein* (German), *Lan užitkový* (Slovak), *Lein* (German), *Len setý* (Czech), *Len užitkový* (Czech), *Lin* (English, French, Swedish), Linn, *Lino* (Spanish), Linseed, Lint, Lint bells, *Llin Amaeth* (Welsh), *Masina* (Bengali), *Oljelin* (Swedish), *Öllein* (German), *Pellava* (Finnish), *Roghan-bazark* (Persian), *Spånadslin* (Swedish), *Trhovniček* (Czech), *Vlas* (Dutch), Winterlien, and *Zahas-bizri* (Arabic); and in flower language is said to be a symbol of domestic industry, domesticity, fate, gratitude, 'I feel your kindness', industry, simplicity, and utility (dried).

Oil is extracted from the seeds. Stem fibre is extracted by retting (steeping the uprooted plants in water) and combing out the thick, ¾-1½ ft. long fibres for drying and spinning.

Warning – leaves and seed husks can be poisonous. Internal human consumption must not exceed 2 oz. of seed and unripe seeds can be poisonous. Unprocessed linseed cake is poisonous for animals.

Usitatissimum is derived from Latin *usitatus* (customary, usual) meaning 'most useful'.

There are several cultivated varieties grown today. Those with large seeds (that produce generally smaller, more branched plants) are sown thinly to enable the plants to branch and flower freely and are used for oil extraction. Those with smaller seeds are generally sown closer together to encourage tall plants (and thus longer stem fibres) and are used for linen and cloth manufacture.

Compared with cotton (*Gossypium*) flax fibres are two or three times stronger and are not only smooth but straight and up to 3 ft. long. They also bestow a further asset. The linen made from them has the ability to 'breathe' because of the fibres' special drying and water-absorbent qualities. As an indication of the material's strength linen, when waterproofed, was used in the wings of early planes.

One of the oldest plants, it has been cultivated since at least 5000 BC. In the remains of the Swiss Lake Dwellings at Robenhausen (which date back to about 8000 BC, the beginning of the Middle Stone Age) archaeologists have found the remains of yarns, rope and different qualities of material all made from flax. Further east it was from flax that both the Mesopotamians and then the Egyptians made cloth that was used to wrap the bodies of the dead. Flaxen fibres (in different quality linens) were a part of life around the Mediterranean long before the birth of Christianity. Apparently the finest of these were gossamer-like and made with as many as 500 threads per inch

Detailed description of the plant and its use (ranging from material for clothing, sailcloth and lamp wicks to shrouds) appear in the records left by the ancient Egyptians, the Hebrews, the ancient Greeks and the Romans.

Murals in Egyptian tombs depict the cultivation and processing of flax (an indication of its importance to that civilization). That of Tut'ankhamun (the boy-king who was a pharaoh

of the 18th dynasty for six years until his death at about 18 in c.1340 BC) for instance held rolls of linen cloth, delicate funereal drapes and clothing made from linen of varying weights. Apparently Egyptian linen was highly regarded and was exported to other countries – and the *Bible* refers to flax in several of its books. These include reference in Exodus (9:31) to the hail (one of the plagues that beset the Egyptians and ruined the flax and barley (*Hordeum*) crops both of which were ready for harvesting), an indication in Proverbs (7:16) that ‘fine linen of Egypt’ was an extravagant luxury in Jerusalem, and a description in Ezekiel (27:7) of the ships of Tyre being dressed with sails of ‘fine linen’.

It was the Romans who are credited with encouraging its use in northern Europe. Charlemagne (747-814), who was king of the Franks and Christian emperor of the West, established linen-weaving in various Flemish cities. European monks wore linen robes and used the material for shrouds, thus flax became a necessity in monastery gardens.

By the Middle Ages flax was being woven with wool and this wool and linen mixture was to be the prime material worked by the Europeans (including those in North America who carried their knowledge and practices to the New World and called their sturdy cloth ‘linsey-woolsey’. Linsey-woolsey was only to be superseded by cotton after that fibre became available in quantity in the early 1800s. [It is interesting to note that when Henry VIII (1491-1547) was on the English throne both flax and hemp (*Cannabis sativa*) were considered of such importance that he decreed that anybody in England with a suitable 20 acres of land must cultivate one of these plants.]

Although records indicate that Irish linen manufacture first began in 500 AD, it was not until the mid-18th Century that the Country had become a major linen-weaving centre. During the previous century many Protestant linen workers had fled to Ireland to escape religious persecution in Belgium and France, and these immigrants were to form the backbone of the emerging Irish linen industry that still maintains an enviable reputation today.

Linen rags (like those of hemp, *Cannabis sativa* and cotton, *Gossypium*) were used by the Arabs in making paper, a method developed (beyond the ancient Chinese paper-making process) and practised for centuries until the 19th Century. The paper came to be used for such diverse purposes as Bibles, cigarette wrappings and time-resistant writing material. And today flax fibres are still in demand when particularly strong, flexible and durable paper is needed, as for instance in legal documents or bank notes. Today fibre and stems are still employed commercially in cloth and linen manufacture, as well as in making sewing thread, twine and webbing

Linseed oil (extracted from the flax seeds) was originally the prime ingredient for the tough, pliant floor-covering known as Linoleum or Lino (a name derived from the Latin words *linum* and *oleum* meaning ‘flax’ and ‘oil’ respectively). Linoleum replaced the previously familiar oilcloth – cloth painted with coats of linseed oil. Today other seed oils besides linseed oil are used in the manufacture of linoleum.

The oil is one of the most important ingredients today in varnishes and protective coatings for wood eg. mahogany (*Swietenia mahagoni*), walnut (*Juglans*) and oak (*Quercus*) – and willow (*Salix*), the traditional medium for cricket bats. It is also an ingredient in paints, printing inks, and artists’ oil paints. Linseed oil is also used in making cleaning polishes. It plays a significant role in preparing wool for spinning as well. Linseed oil contains fatty alcohols that are extracted and used in cosmetic creams, lotions and lipsticks too. Also the oil is used in veterinary medicine.

Appropriately processed the residue after oil extraction (oilseed cake or meal) is used in fattening-foods for animals, and the seeds are enjoyed by small birds. – Then the residue from fibre extraction can be used in making chip or plasterboard.

In Europe the flowers were considered to be a strong safeguard against sorcery and the plant, as a whole, attracted many traditional superstitious practices. In Bohemia (in what is now

known as the Czech Republic) they believed that their children would be beautiful if at seven years of age they danced among the flax. While in Germany a bride would want for nothing if she had flax in her shoe during the wedding ceremony. In Britain the whole community took an interest in encouraging a good flax crop. Farmers would sit on a seed-bag facing east three times before planting in order to encourage a good harvest. (This would be further ensured if the bag contained a small quantity of stolen seeds.) His labourers would jump over fires on Midsummer Night (24th June) for the same end and bellringers added their enthusiasm to the proceedings by ringing the church bells on Ascension Day. Flax was also a tool in rituals that were supposed to enable young ladies to see their future husbands.

Despite this ardour, no doubt fuelled in more recent times by the demand for cloth and oil, people were well aware of how much the flax plant impoverished the soil. Pliny (23-79), the Roman natural historian, is said to have written that flax 'scorches the ground' – at the same time marvelling at the many uses to which the plant could be put. Many centuries later the noted English farmer, Thomas Tusser (c.1520-c.1580) was running his farm in Suffolk. In 1557 he wrote his famous work, *A Hundredth Good Pointes of Husbandrie* and from this one learns that in a Parliamentary Act of 1532 the English had been forbidden to plant more than 1 rood (¼ acre) of flax in every 60 acres (a practice pursued no doubt in other countries at that time). [This was not repealed in England until 1863 and today of course such considerations would be a matter for the individual farmer.]

Apparently flax was familiar to some North American Indian tribes. Records show that the Cherokees respected its medicinal properties and used it to treat fever, lung ailments, coughs, colds and some urinary disorders.

Flax is referred to in literature and examples appear in several of the plays of the famous English dramatist, William Shakespeare (1564-1616). In *Twelfth Night* Sir Toby Belch, tongue in cheek, reassures poor old Sir Andrew Ague-cheek on the appearance of his hair by saying

Excellent; it hangs like flax on a distaff, and I hope to see a housewife take thee between her legs and spin it off.

Medicinally, European herbalists used poultices of seeds to heal wounds, skin ulcers and inflammation. The oil was applied externally in the treatment of burns and scalds, and taken internally for constipation. Flax seed tea was chosen to treat respiratory and intestinal disorders, and an infusion of the plant was recommended for treating piles and dysentery. In India the seeds have also been used in treatments for some venereal disease, and have been an ingredient in poultices applied to gouty or rheumatic areas. Today the oil is sometimes used as a laxative, and the seeds provide an internal treatment for bronchitis and coughs, and externally can be applied in poultices to heal scalds, burns and boils. The fresh plant is used in homoeopathic treatments (and it is also contained in some medicinal preparations).

It is the birthday flower for 28th August.