

FLAX

Linum usitatissimum

HISTORY: Flax is a crop plant grown for fiber from which linen cloth is made. Cultivated flax is believed to have originated in the Mediterranean region. Flax was an important fiber plant in ancient Egypt where manufacture of linen cloth developed. Its manufacture was taken up by the Chaldeans and Babylonians and later by the Phoenecians, Greeks and Romans. Still later flax culture spread through Europe and reached America with the early colonists.

American pioneers spun the flax yarn in their homes and wove the yarn into cloth. Flax culture spread throughout the eastern part of the US well into the 19th century, but the increasing use of more economical cotton after the invention of the cotton gin in 1794 brought a decline in linen use in America.

The world crop of flax is grown for seed or fiber on nearly 20 million acres annually. Of this more than 14 million acres are harvested only for linseed and the remainder for fiber with linseed as a byproduct. World flax seed production averages 130 million bushels, yielding about 7 bushels per acre. There are about 2000 acres of fiber flax in Oregon.

Flax grew only on the south coastal plain near Jericho and in Galilee. Egyptians grew much flax and by soaking it in running water they were able to produce a very soft thread of linen. This was called "fine" linen.

CULTIVATION AND PROCESS:

Flax is an annual, growing 10-40 in. high. It has a single taproot and distinct main stem. The stem becomes a hollow cylinder near maturity as the central pith cells break down. The woody cylinder around this pith in turn is surrounded by a layer of woody fibers that provide the linen.

Fiber flax is harvested before the seed is fully mature, since ripe flax stems contain harsh fiber. It is harvested by pulling the plants out of the ground to save all fiber in stems. The pulled stems are tied in bundles and then *shocked* for curing. The cured bundles may be stored in stacks until ready for threshing. The seed is threshed by passing the tops of the bundles between smooth revolving rollers. The stems are then ready for *retting*.

Retting is the process of soaking the stems to loosen fiber from the woody part. This causes them to rot or partially decompose. In "dew" retting, the flax is spread out thinly on the ground to allow the dew and rain to wet the stems. It takes 7-10 days to loosen the fibers in warm weather. Retted flax is dried and taken to the mill. There the straw is passed between fluted rolls to break the

woody portions into short sections called *shives*. The shives are then separated from the fibers by a beating cylinder and shaker – the process being called *scotching*. The scotched fiber is further separated from the shives and short tangled fibers at the spinning mill by *hackling*, a combing process. (Encyclopedia Americana)

OTHER USES OF FLAX:

Linseed oil is made from the seeds of the flax plant. Oil is pressed out after the seed is ground or crushed. If linseed oil is extracted by hydraulic pressure alone it is light yellow, tasteless, odorless; but if heat is used in the process it is brown with a bitter taste and strong odor. Linseed oil was formerly used for medicinal purposes, often in poultices and liniments. The value of linseed oil lies in its ability to absorb oxygen. It has been used as a drying ingredient for paint and varnish ever since the introduction of oil painting in the 12th century. It is also used in the manufacture of printers' ink, oilcloth, linoleum and soap. There are no biblical examples of linseed oil.

Flax was also used for feed for animals. After the oil was pressed out of the seed, the remaining material (pulp) was made into cakes which were a valuable food item for livestock because of the high protein content.

Flax was also used for wicks and ropes (twisted strands of flax).

Among other things, one of the current benefits of flaxseed is a reduction of cholesterol.

BIBLIOGRAPHY: Eerdmans' Encyclopedia of the Bible; The Children's Illustrated Bible (Hastings and Thomas), Encyclopedia Americana..