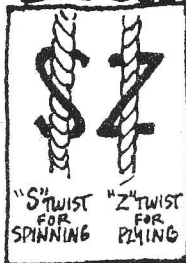


Lay the distaff at one side, top facing you, and roll the fibers around it. Untie the ribbon from your waist, and retie it at the top of the distaff. Criss-cross the ribbon around the flax and tie it in a bow at the bottom. Tuck long loose ends under, and you're ready to **SPIN!**

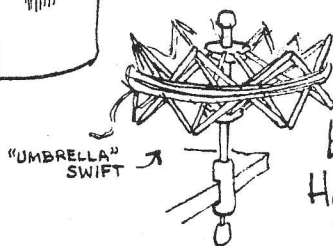
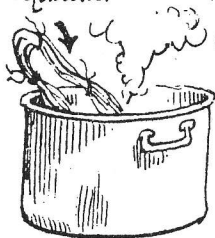
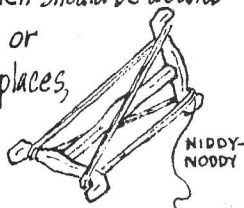
SPIN FLAX



fairly fine, using a counter-clockwise spin of the spinning wheel ("s" twist). Keep the fingers that smooth down the fibers as they enter the orifice **WET** by periodically dipping them into a cup of water. This "glues down" tiny hairs that would otherwise make a very fuzzy thread. Draw down a few fibers at a time from the distaff with the other hand.



Once it's spun — and plied, if desired, the linen should be wound off the bobbin onto a "niddy-noddy," skein winder, or equivalent to make a skein. Tie firmly in several places, and boil in a pot of water for a couple hours to set the twist and reduce the fuzziness.



Re-reel it, putting the wet skein on a swift and running the linen through your fingers (to smooth it) back onto the niddy-noddy or winder. Hang the skein loosely to dry.

Info on bleaching, dying, sizing, and weaving: Linen by Patricia Baines, 1989 INTERWEAVE PRESS

I can provide all the equipment mentioned in this brochure, from ripples to spinning wheels, lovingly made to order using only hand tools and traditional woodworking techniques. I can also provide dimensions & tips to help you build your own!
(Prices available on request.)

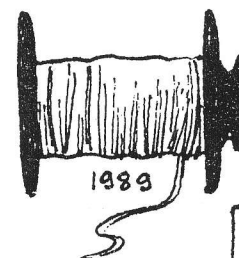
CHUCK TRAPKUS
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FLAX into LINEN

Step-by-Remarkable-Step

by

Chuck Trapkus



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This booklet provides basic information needed to produce linen thread from "scratch." Along the way I mention equipment which you can build yourself or purchase from me. Most of the techniques & processes listed here are traditional; I simply offer *one way* to do the job.

We start with the seeds.


The linseeds I provide are a blue flowering fiber-producing variety called "Natasja" and adapted to our midwestern climate. You'll also need a plot of ground for planting. Flax needs **full sun** and moderately fertile soil. (Too much nitrogen causes **lodging** — the plants just flop over & are hard to harvest.) 

Figure how much you need: $\frac{1}{2}$ lb. of seed (about $2\frac{2}{3}$ cups) should cover an area of about 225 sq. feet. A plot that size would take me about 4 hours of total weeding time, and about 6-8 hours to harvest, ripple and bundle. Average net yield for that size plot may be 2-4 lbs. of fiber, but who's counting?



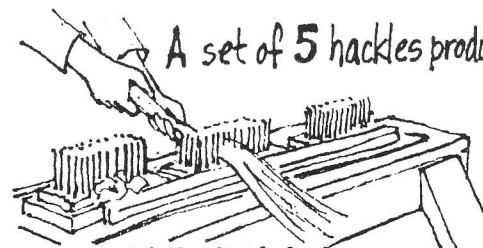
$\frac{1}{2}$ lb. of linseeds...
225 sq. ft.

4 hrs. weeding
6-8 hrs. harvest,
bundling, rippling

2-4 lbs.
fiber



Plant as early as the ground can be worked, or when the soil temperature reaches 40°F in early spring. Flax tolerates light frost, and earlier plantings are more disease-resistant and get a head start on weeds. Harvest temperatures over 90°F stunt stalk growth and cause coarser fibers. It's best to determine when 90°F

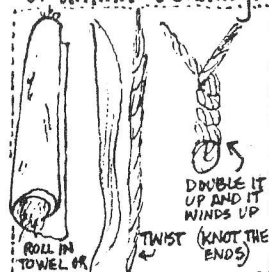
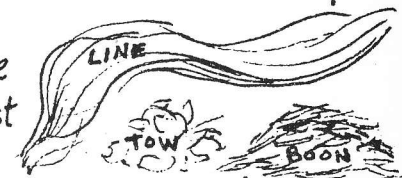


HACKLES IN A MOUNTING BOARD ATTACHED TO TOP OF FLAX BREAK

A set of 5 hackles produces a silky, shiny "strick" of fibers ready for spinning.

Hold the strick firmly, and lightly toss the last few inches onto the coarsest hackle.

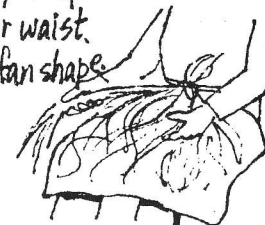
Gently pull the strick toward you, and repeat, gradually increasing the amount of fibers you toss onto the hackle. If too much resistance or tangling is felt, lift the strick off the pins and try again, closer to the strick's tip. When just over half the strick is done, reverse it in your hands and hackle the rest. Then proceed to the next hackle, and so on to the finest. The first 3 should remove almost all the remaining boon — the last 2 split and polish the fibers. The long fibers in your hand are called "line"; the shorter fibers in the hackles are "tow". The coarsest tow contains too much boon to spin, but can be twisted into coarse rope, or rough weft for weaving mats, baskets, etc. Boon makes good mulch or animal bedding.

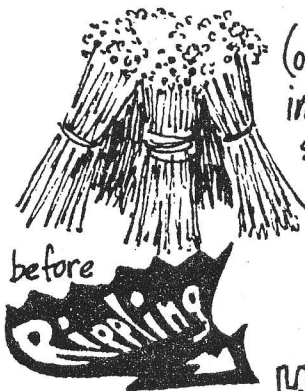


ROLLING FLAX ONTO DISTAFF

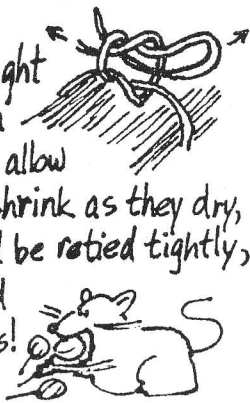
The finer tow is quite spinnable and produces a coarser thread than line. Tow can be carded like wool or simply teased by hand before and during spinning. Store it in a bag or box — line must be stored by rolling it up in fabric or newspaper or winding it as you would a yarn skein.

Line can be spun out of your hand or lap, but I find a distaff helps keep it untangled and eases spinning. Tie a ribbon at one end of a couple stricks together, lay an apron or towel on your lap and tie the ends of the ribbon around your waist. Spread the fibers irregularly, in thin layers, in a fan shape.

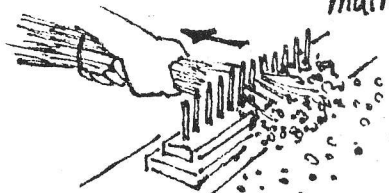
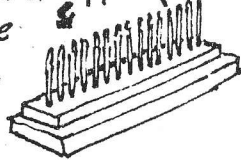




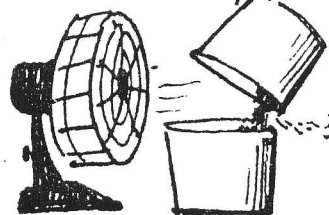
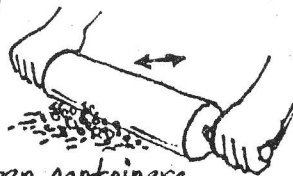
(or "beets") should be brought indoors or covered. Use a slip knot or bow knot to allow rettying — the stalks shrink as they dry, so each bundle should be retied tightly, **Beware:** mice and birds love the seedheads!



When the plants are dry, the seedheads are removed. Mount a ripple (a row of blunt nails evenly spaced) on a sawhorse or flaxbreak, or drive it into the ground with stakes. Spread a sheet out to collect the seedheads. Pull the end of each bundle through the ripple to pop the seedheads off, taking care to maintain the evenness of the bundles' root ends.



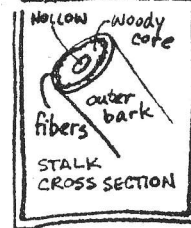
can be **THRESHED** (crushed) easily with a rolling pin on a hard surface, a handful at a time. The threshed mixture is **WINNOWNED** by pouring it slowly back



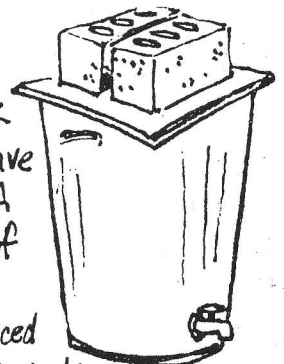
and forth between containers on a breezy day or in front of a fan, to blow away the chaff. You can also use a coarse (1/4") screen to filter out some chaff. Store seed in a

tightly sealed container in a cool, dry place (I use our unheated garage), for planting next year's flax crop. It can also be eaten (it is a natural laxative), cracked and pressed for linseed oil, or boiled to make a gel that pioneer women once used to set their hair with!

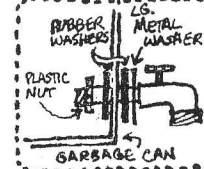
"RETTING"



The inner stalk must now be rotted away to leave the outer fibers intact. A large water tight container of wood, concrete, earthenware or plastic (NOT METAL — acids produced

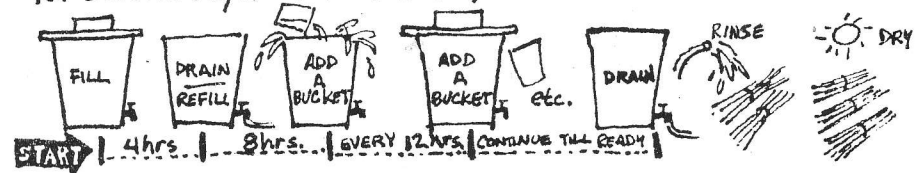


will corrode it) is needed. I have used a TALL plastic garbage can, with a plastic spigot (for a water heater) installed near the bottom.

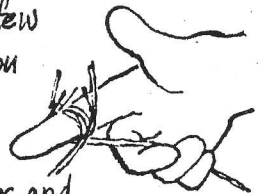


I pack as many bundles as I can inside, fill it up with water (80°F is best, so do this in warm weather) and bend down the taller stalks as I cover the barrel with a board and cement blocks to 1. keep the flax submerged, 2. conserve warmth, and 3. contain the STENCH! (pew!) submerged,

After 4 hours, the barrel is drained — a hose attached to the spigot makes this easy. It is then refilled to the brim, to soak for several days. After 8 hours, add a bucket or two of water to



wash away the scum that forms on the top — it overflows the sides. This is repeated every 12 hours — at 80°F it takes 4 or 5 days; at colder temperatures it may take weeks. **HOW DO YOU KNOW WHEN RETTING IS COMPLETE?** Tricky at first. The bundles should feel soft and slimy, and you should see quite a few fibers standing out from the stalks. When you wrap a piece of stalk around your finger, the inner woody part should spring up away from the fibers. If you're unsure, dry the bundles and see how they respond to further processing; retting can later be resumed if necessary. Under-retting makes processing difficult or impossible; over-retting (God forbid!) rots the fibers as well as the stalk.



When retting is done, drain the barrel again, rinse the bundles under a hose, and lay them out to dry thoroughly, a few days. At this point they can be stored in a dry spot indefinitely.

To extract the fibers from the straw -- "DRESSING" -- the bundles are

① BROKEN

② SCUTCHED

③ HACKLED

A FLAXBREAK

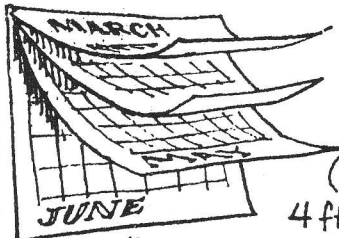
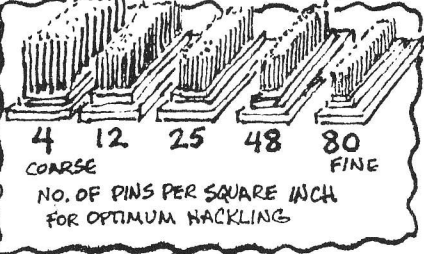
has a set of wooden blades which mesh together when the upper jaw is lowered.

Untie a bundle, hold one end firmly and lay it across the lower blades of the break. Bring the upper jaw down forcefully, raise it, and move the flax out an inch or two and repeat. When that half is broken, grasp the broken ends and repeat the process on the other half. A slight shake should leave a pile of "boon" on the ground.

SCUTCHING is the next step, which removes more of the boon.

Hold the bundle firmly in one hand and drape the loose half over the edge of a board fixed in a verticle position. Swing a wooden "scutching knife" down on it, scraping the edge of the knife along the fibers to catch on the boon and sweep it away. Pull the bundle back slowly as you go, turn it over a few times, and then reverse the bundle end for end to scutch the other half. Some fiber will also be scutched away; this is normal.

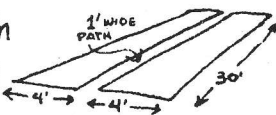
HACKLES are small beds of "nails" -- sharp, long-tapered, tempered, polished steel pins of various sizes driven into wooden blocks at regular spacing.



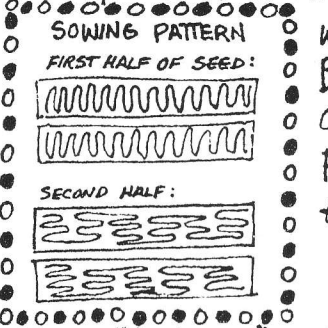
weather begins, and count back 100 days for the best planting date.

Work the soil to a fine filth. Sow

(broadcast) the seed in 4 ft. wide sections with

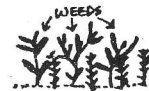


narrow paths in between.



This allows for hand weeding without stepping on the plants. Broadcast evenly and gently rake the soil to cover the seed to a depth of about 1/2 inch. Fiber flax must be sown thickly to encourage thin, straight stems.

Hand weed as early and as often as necessary, before the plants reach 10" high. When they are taller they do not spring back up once bent over. Flax competes poorly with weeds because of its tiny leaves and shallow roots, so **WEED EARLY!**



About 60 days after germination, tiny blue (white in many varieties) flowers open up, mostly in the morning. Most blooming occurs all at once, and then tapers off over the following weeks. Begin harvesting about 30 days after the initial blooming, when stalks are yellowing but some green remains. Later harvest yields coarser fibers, though I have produced lovely fiber from plants left standing 2 months beyond that, and in a drought! Most unripe seeds will ripen

To Harvest:

Pull (don't cut) by

handfulls, straight up. Join several handfulls together with the root ends butted evenly. Tie a string around the middle and set it aside. When you have done several, stack them together, root ends down, to dry for about two weeks, depending on the weather. If it's rainy, the bundles

