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Flax Production at South Union, Kentucky

by Donna Parker and Jonathan Jeffrey

Shakers were known for their ingenuity and industriousness. Converts brought a diverse body of knowledge and skills to each community, including the manufacture of textiles. Linen was an essential fabric for most early settlers. All the Shaker communities grew flax, but in the western and southern settlements “flax was an especially important crop, for these communities were heavily oriented to agriculture and agricultural products rather than to manufacturing.”¹ Through several tedious processes, the Shakers at South Union, Kentucky, cultivated flax and manufactured that utilitarian fabric, linen.

Charter members at South Union lost no time in preparing to meet immediate needs by harvesting and storing flax. In 1810 the area’s earliest Shaker converts collectively gathered 21 loads of flax for the community’s use. Unfortunately an arsonist torched the barn where the important commodity was stored.²

Despite its ruinous beginnings, flax cultivation and linen manufacture at South Union continued well into the 1840s. In addition to its many domestic uses, linen provided a commodity the Believers used to barter with “world’s people.” Although Shakers processed flax in about the same manner as most of their contemporaries, few others left such an abundant documentation of the routine activity.³

The South Union Shakers planted flax in early April and harvested it in late June. A thickly sown field produced a thinner stalk, resulting in a finer quality fiber. Some sources recommended casting 1 to 1.5 bushels of seed per acre, while others suggested sowing a “handful of seed over five or six strides.”⁴ Usually the previous year’s crop was insufficient to

¹ Beverly Gordon, *Shaker Textile Arts* (Hanover, N.H.: University Press of New England, 1980), p. 36.

² Shaker Record A, 1807-1836, 12 October 1810. The original Shaker Record A for the South Union society is located in Library Special Collections, Manuscripts, Western Kentucky University, Bowling Green, Kentucky. The Shaker Records A-D are day-by-day journals of the society’s activities.

³ Gordon, *Shaker Textile Arts*, p. 35.

⁴ *All Sorts of Good Sufficient Cloth: Linen Making in New England, 1640-1860* (North Andover, Mass.: Merrimack Valley Textile Museum, 1980), p. 36; Virginia C. Taylor, “Raising Flax,” *Early American Life* 9 (February 1978), p. 87.

provide all the seed needed, consequently the Shakers often purchased flax seed.⁵ The community generally sowed no more than 30 acres of flax, but one year it planted 100 acres.⁶

The Shakers at South Union practiced crop rotation, moving their flax field to a different location each year. In 1820, for example, a 30-acre crop was grown at Black Lick, a farm located three miles from the main settlement. The following year the crop was grown at Mill Point, another outlying farm located on Drakes Creek about 15 miles from South Union.⁷

Three to four days after cultivation the seed, as well as weeds, began to sprout. The Shakers made no reference to weeding flax fields, perhaps because it was such a common and laborious task. In colonial America, children performed the chore and this may have been the case at the Shaker colony. In about two months the flax, covered in blue blossoms, stood two to three feet high. Towards the end of June these blossoms began to produce a seed boll.⁸

When the bolls began to ripen in late June and early July, the flax was ready for harvest. Because of its short taproot system the plant was easily uprooted or “pulled,” which allowed for maximum use of the stalk’s fibers.⁹

The Sisters played an important role in the harvest, particularly in the early years. An 1818 entry in the community’s journal reveals that “All the Sisters who are able turn out to pull the Flax – Cheerful hearts & willing hands does up the job.”¹⁰

Harvesting flax was an enormous task but sometimes the Shakers made it a festive occasion: Brn [Brethren] & Sisters made a Bee & unitedly pulled the flax to day – 8 acres.

On one such occasion, a Brother quipped: “There is a sweet union that’s strong like a chain/Tis felt in the flax field & saving the grain.”¹¹

Despite such high spirits, bending over and uprooting plants in the humid Kentucky summer was a hot and tiring job. Eldress Molly and Mercy gave the Sisters some relief from

⁵ (South Union Shaker) Society’s Daybook, 1810-1813 (Cleveland, Ohio: Western Reserve Historical Society Library, Shaker Manuscripts, vol. 47, 1974) (Microfilm), 2 April 1811; (South Union Shaker) Society’s Account Book, 1844-1860 (Cleveland, Ohio: Western Reserve Historical Society Library, Shaker Manuscripts, vol. 83, 1974) (Microfilm) 22 February 1844.

⁶ Shaker Record A, 20 June 1822.

⁷ Ibid., 26 June 1820; Julia Neal, *By Their Fruits* (Chapel Hill, NC: University of North Carolina Press, 1947), p. 40; Shaker Record A, 27 June 1821.

⁸ Taylor, “Raising Flax,” p. 87.

⁹ Kax Wilson, *A History of Textiles* (Boulder, Colo.: Westview Press, 1979), p. 11.

¹⁰ Shaker Record A, 30 June 1818.

¹¹ Ibid., 23 June 1832.

their toil when they “went out to the flax field (30 acres) & gave all the sisters a drink of wine – lit our pipes & took a union smoke!”¹²

Most stages of flax production required a general turnout of members. In the early years the Sisters seemed to be responsible for harvesting the flax, although the Brethren assisted whenever needed, particularly when the time came to bind and haul the crop to the barn. In the 1830s men and women equally shared the task of harvesting. Twenty-three Brethren and 26 Sisters pulled eight acres of flax in 1831.¹³

Women’s role in the harvest prompted South Union’s journalist to comment: “How could we get along without Sisters?”¹⁴ In the later years of South Union’s flax cultivation the Brethren and hired hands did most of the work.

Once pulled, the flax was spread in the field to dry, then bundled and put under shelter. Everyone worked together in “taking up” the flax, although sometimes the Sisters finished the job when the men harvested other crops. Like hay, flax had to be gathered at the right time, which even justified working on the Sabbath: “Flax lifting Sabbath infringement – The Brethren turned out this Sabbath day & lifted, bound & hauled in 3 acres of flax – The excuse for this breach is that the flax is sufficiently rotted & should rain fall on Monday the crop would be ruined.”¹⁵

Laboring in the fields exposed the workers to nature’s elements. On June 25, 1836, a large number of workers had almost completed the harvesting of six acres of flax when it “commenced raining – The Sisterhood ran under an old straw Shed – this did little or no good – The Brethren & darkies finished the flax & then went directly home – The Sisters unprotected also set out thro the rain which was pouring down quite freely & so it was that the whole of us got a sound ducking. The nurses perceiving our plight brot forward a ginger stew & all was right, after the dry apparel was donned.”¹⁶

The crop was stored under cover until the seed could be threshed from the plant. To remove the seed bolls from the stalk, flax was either pulled through a coarse comb, called a ripple, or struck with a heavy tool. The seed were then put aside for the next year’s crop or crushed for linseed oil.

¹² Ibid., 1 July 1818.

¹³ Ibid., 2 July 1831.

¹⁴ Ibid., 29 October 1832.

¹⁵ Ibid., 12 July 1835.

¹⁶ Ibid., 25 June 1836.

The South Union Shakers retted (rotted) flax by spreading it in fields and leaving it several weeks. Retting the crop allowed the dew and autumn rains to decay the natural materials that held the fibers to the woody portion of the stalk.¹⁷

During the early years, the responsibility of spreading the flax belonged to women. However, as the years progressed, men shouldered more and more of the burden. An 1833 journal entry records that “for once the Brethren spread the flax without the help of the Sisters.”¹⁸ When the flax was rotted enough for the brake it was gathered and put under cover.

Breaking the flax separated the woody stem and core from the long fibers of the plant. A four-legged flax break was made so that a bundle of flax could be laid over three or four wooden knives set on edge within a wooden frame.

Manually operated, the hinged breaking rod was brought down on top of the bundle, breaking and crushing the stem.¹⁹ Pounding the woody stem of the flax plant required physical strength, and the Shakers often hired a man to perform this chore. In 1845 the Society at South Union paid J. Hardin \$13.50 to break 2,163 pound of flax. He was hired the following year to break 1,875 pound for \$9.37-1/2. In 1848 Hardin received a daily wage of 40 cents in addition to \$15.64 for breaking 3,728 pounds of flax.²⁰

Scutching or swingling the flax removed the remaining stem from the fiber. A scutching knife was used to strike the flax as it lay over a sharpened one-by-three foot board. The flax was then formed into hanks and slightly twisted. Some Shakers seemed to be better at the job than others: “Big days work – David Barnett (colored Br. [Brother]) scutched 130 lbs of cleaned flax from the Break to day – more than doubled the best days work of others – The flag for Dave.”²¹

The long glossy hanks of flax were then hackled or combed. Hackling (hetcheling, heckling) loosened the fibers adhering to each other, separating the tow (short fibers) from the line (long fibers). The hank of flax was held in the middle and combed through progressively smaller set of flax hackles, made of eight-inch-long spikes set into a rectangular block that was then attached to a wooden board.²²

¹⁷ Wilson, *A History of Textiles*, p. 11.

¹⁸ Shaker Record A, 6 September 1833.

¹⁹ Taylor, “Raising Flax,” p. 88.

²⁰ (South Union Shaker) Society’s Account Book, 1844-1860, 8 February 1845, 1 April 1846, 22 March 1849.

²¹ Shaker Record A, 29 April 1829.

²² Taylor, “Raising Flax,” p. 88.

After hackling, the tow was wadded into a loose mat and the line was twisted into stricks, bundles that resembled huge pears. Attempts to mechanize hackling were largely unsuccessful, because machines broke the prized line fiber.²³ South Union records indicate that the Shakers may have experimented briefly with mechanized hackling. In 1826 “John D. Shaw & Robert Johns begin to make a flax dressing machine & finish it in 7 days – Now in operation – only tolerable.” Records made no further mention of the machine.

In 1848 the Society paid Thos. G. Gouch \$22.00 to make three “flax hatchels,” indicating that they used the traditional method of hackling at that time.²⁴

Dressing the flax also referred to winding the flax on the distaff, a devise attached to the spinning wheel to hold the unspun fibers. The fibers in the strick fanned out in layers which crisscrossed. The resulting mass was wound on the distaff and secured with a ribbon.²⁵ Flax was spun on a Saxony, or flax wheel. Also referred to as a low wheel, the Saxony wheel allowed the spinner to sit at her task. The flax wheel held a distinct advantage over the wool wheel because its bobbin and flyer mechanism allowed for continuous spinning. The yarn automatically wound on the bobbin, freeing the spinner’s hands to work with the yarn.

Spinning flax was a tricky business, for a spinner must treadle while coordinating the fibers that fed the yarn.²⁶ Because flax spins better when dampened, water was used to wet the fibers.²⁷

Weaving linen was difficult and required great care. The long flax fibers that gave linen its strength had very little elasticity and were unforgiving where mistakes were made. A warp that became loose on the loom or selvages unevenly woven caused problems difficult to remedy. The warp was less likely to loosen when the threads were soaked in water before winding them on the loom.²⁸

Even after the momentous tasks of growing the flax, processing the fiber, and weaving the thread, the product was not completed. Yardage taken off the loom went through various

²³ *All Sorts of Good Sufficient Cloth*, p. 26.

²⁴ Shaker Journal A, 16 May 1826; (South Union Shaker) Society’s Account Book, 1844-1860, 19 August 1848.

²⁵ John Seymour, *The Forgotten Crafts*, (New York, NY: Alfred A. Knopf, 1984), p. 179.

²⁶ Mary Meigs Atwater, *The Shuttle-Craft Book of American Hand Weaving* (New York, NY: The Macmillan Co., 1937), p. 61-64.

²⁷ Janet E. Nugent, “Spinning and Weaving Flax,” *Midwest Open-Air Museum’s Magazine* 11 (Winter 1990), p. 7.

²⁸ Nugent, “Spinning and Weaving Flax,” p. 8.

finishing processes. The fulling mill agitated the cloth in hot water to clean and shrink the fabric making it denser. Linen and cotton, as well as wool, were traditionally fulled.²⁹

The South Union fulling mill, opened in 1815, was one of the community's first commercial enterprise and served the area in and around Logan County, Kentucky. At the mill, Shakers fulled and dyed linsey, a cloth made of linen and wool, in colors ranging from light drab to bottle green. The Shakers fulled cloth for "the world" and their own textile industries. The same property that made linen comfortable to wear in hot weather also prevented dyes from penetrating the fiber.³⁰

Consequently bleaching was the most popular method for finishing linen cloth. Linen was bleached by alternately soaking the cloth in baths of lye, lime water, and buttermilk and then spreading it on a grassy area for the sun to hasten the process.³¹

Pressing, generally the final step in finishing linen, was the process by which the cloth was either rubbed with a hard, smooth object or dampened, folded, and placed between two plates that provided even pressure on the fabric. Although South Union records do not detail how the cloth was pressed, the latter method probably was used.

Fine linen thread consisted of the long flax fibers or "line." Varying weaving techniques allowed linen thread to be used for myriad textiles, including fabric for clothing, household sheets and pillowcases, towels and washcloths, mattresses, quilts, coverlets, curtains, table linens, breadcloths, strainers, cleesecloth, ironing cloths, bandages and garden sheets. The "tow" or shorter flax fibers produced a rough thread used for feed bags, twine, mopheads, work clothes, rope, rugs, laundry bags and horseblankets.

Documentation reveals that the Shakers rarely, if ever, traded finer linen, undoubtedly reserved for the Society's own use. However, they bartered the tow for bed ticking, domestic, flannel, muslin, cambric and some silk. Other receipts indicate that merchants in Nashville and Clarksville, Tennessee, and Bowling Green and Russellville, Kentucky, accepted tow in exchange for foodstuffs such as tea, sugar and wine, as well as for other household goods,

²⁹ Beverly Gordon, The Final Steps: Traditional Methods and Contemporary Applications for Finishing Cloth by Hand (North Andover, Mass.: Merrimack Valley Textile Museum, 1982), p. 2.

³⁰ Wilson, A History of Textiles, p. 11.

³¹ Marion L. Channing, The Textile Tools of Colonial Homes (Marion, Mass.: The Author, 1971), p. 52.

including soap, buttons and dishes.³² In a barter society, “tow’ linen allowed the South Union Shakers to trade a basic commodity with outside merchants.

By 1840 linen and cotton fabrics were available commercially at reasonable prices and by 1855 “it was not sensible to produce even rough tow cloth by hand.”³³ When Elder Harvey Eads copied the original South Union journals for posterity, he often inserted his own comments.

In 1871 he copied the following entry for July 1, 1828: “Flax Harvest – the Brn [Brethren] and Sisters having pulled the flax last month – To day unitedly they gathered, bound & hauled it in.” To this entry, he added: “To us now, in 1871 this seems like backwoods life.”³⁴

The last recorded references to pulling, spreading and breaking flax appeared in 1848 and 1849. By the 1850s the South Union Shakers were producing woolen textiles and “the world” had perfected cotton cloth production. Cotton, the crop natural to the United States, “was [the] chief reason . . . for the failure of linen to maintain a prominent position in the textile industry.”³⁵ The Shakers’ preoccupation with woolen industries and the availability of commercial linens and cotton fabrics made flax cultivation at South Union impractical.

From 1810 to 1849 the Shakers cultivated flax and produced linen at South Union, Ky. They tried new techniques and equipment, with varying degrees of success, to make this arduous work easier. Not only did their linens provide necessary household and work textiles but also a product to trade with the “world’s people.”

More economically produced textiles led to the demise of flax production in the western Kentucky community. As the world produced cheaper fabrics, the Shakers abandoned textile production and concentrated on producing fancy goods and specialty foodstuffs.

³² A large number of receipts are located in the “Shakers – South Union, Ky.,” MSS 63, Folder 7, Department of Library Special Collections, Manuscripts, Western Kentucky University, Bowling Green, Kentucky; Gordon, *Shaker Textile Arts*, p. 25.

³³ Gordon, *Shaker Textile Arts*, p. 37.

³⁴ Shaker Record A, 1 July 1828.

³⁵ William C. Langdon, *Everyday Things in American Life*, 1776-1876 (New York, NY: Charles Scribner’s Sons, 1941), p. 241-242.