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## Contemporary Hemp Weaving in Korea

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Until the 1900s, hemp was one of four traditional textile fibers in Korea, the others being cotton, ramie, and silk. The production of hemp fabrics had traditionally been for family use, but since the 1950s, that tradition has ceased to exist. The present status of hemp production is, therefore, extremely limited to the rural regions, and practiced by only a small number of the elderly (fig. 1). Of the approximately thirteen hemp cultivation regions (fig. 2), the city of *Andong* developed a different technique in hemp fiber-making from the rest of the regions and this paper will cover hemp fabric production, concentrating on the traditional way of fiber making in *Andong* as well as how hemp fabric was used in the past and being used presently in Korea. Lastly, the future of Korean hemp will be discussed.

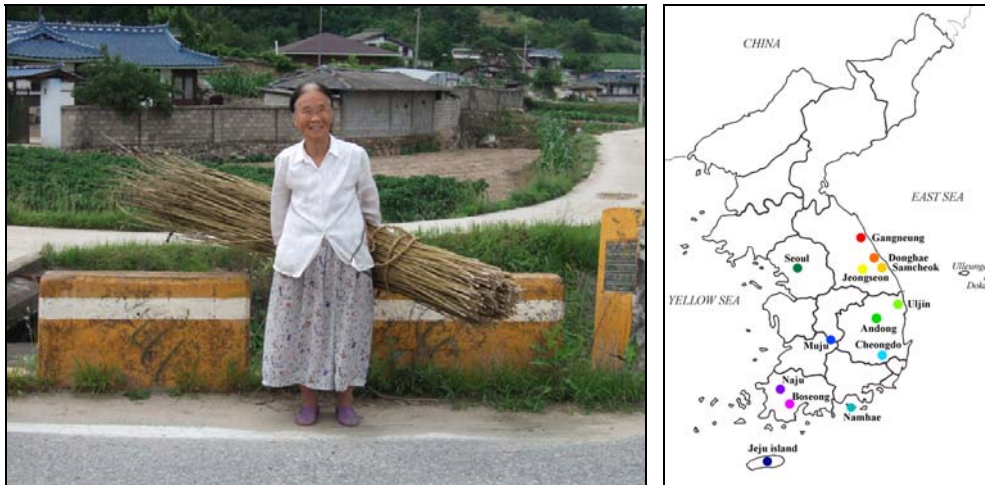


Figure 1(left). An elderly woman holding the dry hemp stalks in 2006.  
Collection of the author. Photograph by the author.

Figure 2(right). Hemp producing districts in South Korea. Map by author.

*Sambe*, hemp cloth in Korean, was used for everyday summer wear by farmers and their servants. Women of the middle class also made summer clothing and sanitary napkins in hemp fabrics as part of their dowries. Noble families, however, never wore hemp clothing, even in hot summers.

Because hemp cloth was the coarsest and thickest of the fabrics produced in Korea, it was chosen for funeral wear and that became its main use. (figure 3) The origin of hemp fabrics worn as funeral wear may be found in A.D. 936, from a legend that the son of the last king of the *Silla* dynasty (B.C.57-A.D. 935) fled to the mountains and wore hemp clothing to show his grief for the rest of his life. As mourning dress, hemp fabrics were worn for three months to two years, the length of time determined by the relationship of the wearer to the deceased. Children experienced feelings of “shame” and “guilt,” as well as grief, when confronted with the loss of a

parent, even if that parent had led a long life. Wearing hemp clothing was a symbolic act intended to “pay” for this loss and to compensate for the fact that the children had outlived their parents. This funeral rite regulation was strengthened by Confucian influence that was nationally spread since the fourteen century.



*Figure 3. Traditional funerary costumes. Courtesy of Traditional Korean Costume Research, ed., Shroud of Korea. p. 9. Shinyou Publication, 2002.*

Before a currency system was instituted, cotton and hemp fabrics were collected as taxes. Before the 1900s, a man between the ages of sixteen and sixty was obligated to pay a tax and serve in the army and women in his family had to weave a lot of hemp fabrics to meet this obligation.

Until the 1950s, taboos were associated with each step in the hemp production and certain people were prohibited from joining in or even being where the hemp was being processed. For instance, women who were menstruating were banned from being present at the steaming area. People believed that menstruation would prevent uniform steaming of the hemp stalk, ruining the resultant hemp fabric. Men were kept away from where the warping and starching took place, because they tended to sit with their legs crossed which was thought to cause the yarn to tangle. In particular, this last taboo still is strongly believed and no men can be found in the yarn making procedure.

The major crop in Korea is rice. Because hemp plants grow well in the cold weather before rice cultivation begins, hemp is an alternative crop that can be grown in rice fields (fig. 4). The seeds are generally planted between late March and early April. They are scattered by hand, and the soil is turned over by foot. Furrowing follows seeding. Cultivation of hemp plants requires little maintenance, just watering and, if necessary, spraying for insects.

The best time for harvesting hemp is late June or early July, a hundred days after seeding. After being collected, hemp stalks are piled on the ground in the shape of a cross (fig. 5). Stems are cut close to the roots with a sharp blade. Leaves are trimmed off immediately, and the hemp stalks are then sorted according to the diameter of their stems. They are divided into large bundles and stored upright in the middle of the field until they are carried to where steaming will take place.

*Samgut* is a place for steaming hemp stalks. A pit in the ground is equipped with a place for a fire at one side (fig. 6). A cast iron water container goes into the pit and several wooden bars

are placed across the top. As the hemp stalks are piled upon the bars, wooden sticks are inserted into the piles occasionally to help the steam penetrate well. Then the whole pile is covered with a plastic sheet that is tied all around to trap the steam. 80-100 bundles of hemp stalks can be stalked up in the steaming place. Steaming generally takes six to seven hours (fig. 7). After steaming, the hemp bundles are loaded onto a truck or a cultivator and sent to the drying areas.



*Figure 4 (left). Hemp plants in the field. Photograph by the author.*

*Figure 5(center left). Harvesting hemp plants. Photograph by the author.*

*Figure 6(center right). Traditional steaming. Photograph by the author.*

*Figure 7(right). Steamed hemp stalks. Photograph by the author.*

The hemp bundles are spread out anywhere- front yards, streets, house fences, and the roofs of houses (fig. 8). It takes 24 hours when the sun is up. Recently, tobacco dryers are also used to dry hemp stalks for they have certain advantages, such as less drying time and less labor regardless of weather.

After first drying, small bundles of dry hemp stalks are soaked in water for a couple of hours. Then the bast fiber layer is peeled from the core. The base end area is grabbed first and opened and the rest of the area is peeled off by the fingers of the right hand in a pulling motion. Then it has to be rinsed several times. In peeling, the fiber layer must be peeled in one long piece. If there is any tear in the layer, it cannot be scraped off well and becomes useless for good yarn making.

Then the base end of the bast fiber is placed on a board, outside layer up, and rubbed off with a metal scraper in a pulling motion to remove remnants from the fiber (fig. 9). The layer is then turned the other way around and the rest of it scraped off.



*Figure 8(left). Drying right after the steaming procedure. Photograph by the author.*

*Figure 9(right). Separation of the outer layer from the hemp fiber layer. Photograph by the author.*

It is very important that any impurities are removed completely in one scraping motion. Otherwise, remnants will be left on the fiber, producing low quality fibers. As the impurities are removed, the fiber changes from a color green to a light translucent color. The fiber layers are

then sorted by quality, and oriented so that their tip and base ends all point in the same direction, and hung to dry (fig. 10).



*Figure 10. Drying hemp fiber layers. Photograph by the author.*

One bundle of bast fiber is chosen for splitting and most of the fibers are wound around its base end making a ball shape. This is held in the fingers of the left hand. Each strip of the fibers is split at a time and this splitting is accomplished using the fingers of the right hand and a long thumbnail, which the weaver deliberately keeps long for this purpose. As the fibers are split, they are inserted between the fingers of the left hand according to quality (fig. 11). The base end of the fibers is combed. Combing creates a lot of waste that the weaver never uses for the weaving because this waste only creates many joins in splicing yarns and these cause difficulties in weaving. Then the base end area is scraped and combed again to make it soft and pliable. And to make it even thinner, the base end is wet and scraped a second time. This vigorous scraping is needed for the base end area because it is rougher and thicker than the tip end.

The quality of the hemp fabric to be woven is already a consideration in the splitting process. The fineness of the woven textile depends on the skill applied to the splitting and the quality of the raw fiber layer. It takes a day to split sufficient fibers to make yarn for a bolt of fabric 15 meters long and 35 centimeters wide. After splitting, the fibers are hung to dry again.



*Figure 11(left). Split of the hemp fiber layers. Photograph by the author.*

*Figure 12(right). Splicing hemp fibers. Photograph by the author.*

To make a continuous length of hemp yarn, the split strands must be spliced together (fig. 12). A strand is pulled out from the split bundle and the tip end is wet with saliva and split into two. The base of a second strand is wet, and this and one of the split tip ends are combined and twisted, first in a Z-direction. The other split tip end is then added and also twisted in a Z-direction. Finally all three elements are twisted in an S-direction (fig. 13). After a length of continuous yarn is made by splicing, a S-twist is added to the rest of the yarn by the weaver rolling it on her thigh. Then she puts the yarn around the leg below the knee and pulls out to loosen the twist. As the yarns are made, they are gathered in a basket.

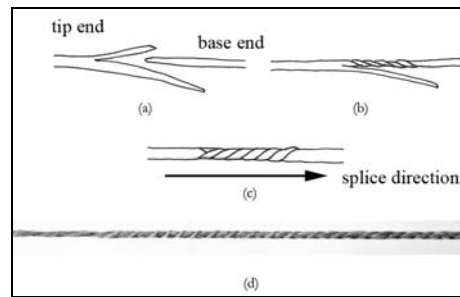


Figure 13. Diagram of splicing yarns. Diagram and photograph by the author.

A *kkuri*, an oblong bundle of weft yarn with a hollow center, is fitted into a Korean traditional shuttle. To make a *kkuri*, a bobbin-winder can be used to wind yarn onto a bamboo bobbin or, a bobbin is wound manually (fig. 14) A skillful weaver can do this so that the yarn unwinds smoothly in the shuttle without the slightest hitch. After a bundle of weft yarn is made, the bobbin is removed and it is soaked in water for three to four hours before fitting it into the shuttle.

Warping is usually done outdoors due to space requirements. Each strand from the ten bundles for ten warps, which are lined up on the ground, is fed through ten holes of the thread guide, and while the initial lease is formed at a peg nearest to the thread guide, the length of the warps is measured (fig. 15). Another warping frame is placed either at the one-quarter point or at the half point on the measured warp, and the warps are circulated between these two warping frames (fig. 16). The beginning of the yarns in the circuit must be the tip end area of fibers. When the warping circuit is finished, the lease of ten warp units is secured with strings, and the rest of the warp length is wound into a bundle and secured with ties (fig. 17).



Figure 14(left). Winding an oblong bundle of weft yarn using the bobbin winder. Photograph by the author.

Figure 15(center left). Warping procedure. Photograph by the author.

Figure 16(center right). Warping procedure. Photograph by the author.

Figure 17(right). Measured yarn bundles. Photograph by the author.

Reeding-in is done before dressing the loom. One odd and one even strand are threaded in each dent of the reed. Meanwhile, the lease must be kept secured with lease sticks. While the strands are being inserted, they are tied occasionally to secure them and the tied sets are separated into the odd and the even warps by twisting them around themselves. The tied ends of the warp will be set up on the warp beam later when the warp is being sized. The warp must be sized with cooked starch for additional strength to protect against the abrasion created by the reed and the movement of the upper and lower shed threads during weaving. The starch is prepared by mixing boiled millet grains with Korean soybean paste. It is said that salt from the soybean paste absorbs moisture in the air, keeping the warp from breaking, and that the soy waxes the surface of the warp.

The warp beam is installed on the warp beam hanger, and the warp is stretched out in preparation for sizing. Working over a bed of embers of rice husks, burned in preparation for starching, the weavers apply water and starch with a brush working in one direction only, following the direction of the splice along the length of warp yarns.

As starch is applied, the reed is moved up to separate the individual threads of the warp as they are being dried above the embers. As each successive section of warp is dried, it is wound onto the warp beam with sticks laid between the layers to prevent the warps from getting stuck to each other and to keep the tension even (fig. 18).



Figure 18. Starching yarns. Photograph by Bu-ja Koh.

A *baetl*, a traditional body-tension loom, is being assembled for weaving. First, the body of the loom is set, and pulleys are attached. Next, the warp beam is placed on the back of the loom. Then a warp depressor rod is put in place. A curved treadle rod with a shoe attached is installed where the pulley rods are. Here, you see a V shape heddle hanger used for creating loop heddles. A strong continuous yarn is used for loops. Initially this is wound around the hanger in a figure-eight formation. Even warps are then attached to the heddle hanger by looping the heddle yarn around the warps.

After heddle loops are created, the heddle loops are transferred to the three heddle rods. The lease sticks are placed near the warp beam. The shed is kept separate by a triangular shaped shed rod and the depressor rod is put in between loop heddles and this shed rod. A cloth beam is inserted at the end of the warps and it is held around the weaver's waist with a back strap. A pair

of reed cases are installed on the reed and secured with pins and ties. This gives the weaver better control.

Using the back strap around her waist, the weaver pulls her body back to tighten and forward to loosen the tension on the warps (fig. 19). When weaving starts, the hemp warp yarns just above the weaving area must be wet. A temple, made from a branch of bush clover, with pins in both ends, is used to maintain the width of the cloth while weaving. Whenever warps are broken while weaving, an unprocessed silk from a cocoon is used to rejoin them. The width of the hemp fabrics is from 34cm to 38cm.



Figure 19 (center). Weaving on a traditional loom. Photograph by Bu-ja Koh.  
Figure 20 (right). Weaving on a standard frame loom. Photograph by the author.

The loom can be disassembled when it is not in use to save space. During the Korean War, a large number of traditional looms were destroyed and for greater efficiency a standard frame loom has been used since the 1950s (fig. 20).

When a section of hemp fabric was removed from the loom, the final touch up, such as bleaching and dyeing, had been conducted individually. However, this final procedure and its techniques have developed and been professionalized and presently, most woven fabric is sent to a central bleaching place for the last process.

The woven hemp fabric is bleached in a bath of a caustic soda solution (fig. 21). Then it is put in the extractor for 10-20 seconds to get rid of excessive caustic soda. The fabric is stored in a plastic container in a temperature-controlled room about 25°C, wrapped with cotton fabric sheets and sealed with a sheet of plastic on top. After 2-3 days, the fabric is rinsed several times, and a second bleaching with another bleach called *sarasi*, a dialect term in this village, is applied. Through these bleaching processes, any remaining impurities will be removed from the fabric and it becomes a very white color. Then it is dyed with gardenia seedpods to get a clean yellow color.



Figure 21. Bleaching procedure-hemp fabrics in the caustic soda solution. Photograph by the author.  
Figure 22 (right). Drying hemp fabrics on the drying rack. Photograph by the author.



The hemp fabric is then placed on a drying rack until it is in a semidry state (fig. 22). As it is removed from the drying rack, it is folded. The fabric is smoothed out and several pieces are stacked up to be tamped down by foot. Then it is laid down on the pounding stone and pounded with wooden rods. If the fabric is too dry, water is sprayed over it. The second pounding is carried out on the rolled fabric. In the final rolling, the name of the weaver, which is always written at the end of the fabric when it is being woven, will show up at the outside of the rolled bolt. Lastly, the roll is wrapped with a sheet of paper and it is ready for sale.

As I mentioned in the beginning, *Andong* has developed a unique technique in hemp yarn making and even the fabric is named after the region, *andongpoh*. However, there is also another kind of hemp fabric, called *musam*. *Musam* is representative of Korean hemp fabric in general. It is very coarse and thick. It used to be woven more finely, but after it became popular for funerary shrouds, no one bothered to weave the better quality version. It is being produced in most of the regions in Korea. The difference between these two types of hemp fabrics involves different yarn making procedures. Whether the scraping of the fiber is done before or after splitting determines the quality. *Andongpoh*, which is scraped before (fig. 23), is superior to the coarse and thick *musam*, which is done after (fig. 24). *Andongpoh* is about \$150 to \$200 more expensive than the price of *musam* in the market.

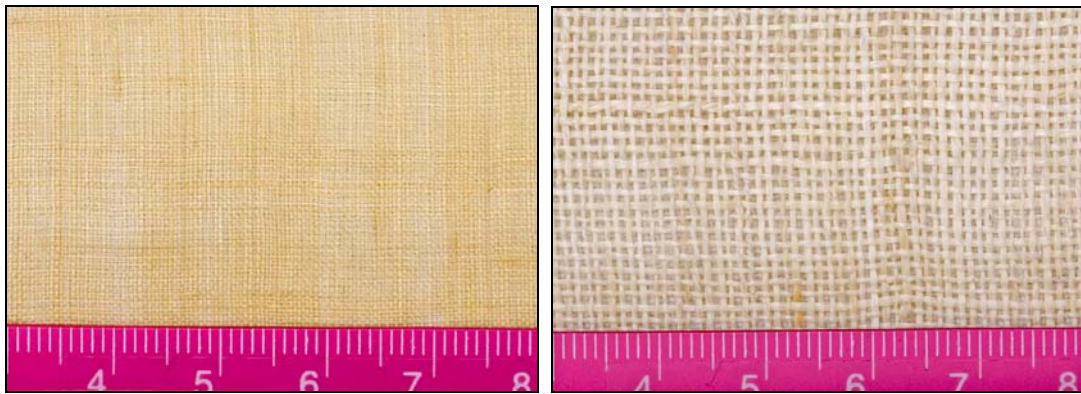


Figure 23 (left). *Andongpoh*. Photograph by the author.

Figure 24 (right). *Musam*. Photograph by the author.

Four kinds of hemp products are marketed. The raw fibers before the splitting stage and hemp yarn are primarily sold to those weavers who cannot afford to cultivate hemp. They are sold by weight, and 4.8 kilograms of hemp yarn, for example, sold for US\$140–150 in July 2004.

A third product is *sambe*, the selling price of which is based on length and quality. The price ranges from \$300 to \$2500 in the same length (fig. 25). The last of the four hemp products, *suûi*, is a set of burial clothing with multiple components: basic *hanbok*, the traditional Korean dress, as well as a complete bedding set, a face cover, a pair of socks and of gloves, and a wrapping cloth (fig. 26) Generally, a shroud set is sold for US\$2,500–3,000. The most expensive *suûi* is made, of course, with *Andong* hemp fabric.



Figure 25 (left). Hemp market. Photograph by the author.

Figure 26 (right). This contemporary hemp *suui* (burial clothing) for a woman consists of twenty pieces. Private Collection. Photograph by Bu-ja Koh.

The traditional funeral rite regulations involving hemp garments have virtually disappeared and the public today seeks simple and pragmatic funeral rituals. Furthermore, with the introduction of Christianity at the turn of the twentieth century, the less-complicated Christian ceremony was embraced by new adherents to the faith. Today, men typically attend funerals dressed in black Western-style suits worn with a hemp armband and a hemp ribbon. The armband has one or two horizontal stripes symbolizing the relationship between the wearer and the deceased. Women wear the traditional Korean dress, *hanbok*, in black or white (fig. 27).

Within ten years, there has been a trend in Korea toward emphasizing leisure and health over concerns of affluence and reputation and this has influenced the use of hemp fabrics for items such as summer bedding sets and ordinary summer clothing (fig. 28).



Figure 27 (left). This funeral ceremony took place in April of 2005. The men wear a band (*wanjang*) around their right arms, which indicates their relationship to the deceased. Two stripes indicate that the wearer is a son; and one stripe, a son-in-law. Grandsons and other male relatives wear a *wanjang* without stripes. In this photograph, Christian participants stand, bending forward from the waist to pay their respects. Others, who are Buddhist, kneel down and bow on the ground before the tomb. Photograph courtesy of the family of Sô Ch'ôngwôn.

Figure 28 (right). <http://myhome.naver.com/jns3467/f5.htm>.

Korean hemp is a natural fiber and a sustainable resource. No waste is associated with it from the growing stage to the making of cloth to recycling. The white core of the hemp stalk can be utilized to make shades, floor mats, and dividers, as well as plant food. As people have begun to experience the drawbacks of synthetic fibers, they have turned once again to natural fibers. Simultaneously, it has become very important economically and ecologically to find a fiber that does not pollute the earth in the process of its cultivation. Today, hemp fiber is recognized as one of the desirable fibers in Korea.

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