

WOOL MATTRESS MAKING & CULTURE PRESENTATION TO BLACK SHEEP SPINNERS GUILD

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Our Story

I decided that I wanted to make a mattress in the summer of 2017. I had been sleeping on a foam mattress for many years and was convinced that it was starting to feel “stale”, so I wanted to make something out of a natural, cleanable fiber. I began looking into cotton and wool, and

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decided to use wool after hearing that wool mattresses are a tradition in many cultures, including Sasson's.

Over the course of my journey to make the mattress, we were fortunate enough to meet a number of very kind, generous people including Roger and Linda Hastings, who introduced us to the fermented suint method of wool cleaning, Shelly Merino, who gladly lent us a wool picker without knowing anything about who we were, and all of the members of the Black Sheep Handspinners Guild. We could not have completed the mattress without the guidance we received from them, our parents, and the willingness of the Dilmun Hill student farm managers, who allowed us to undertake the smelly process of wool cleaning on their land.

History of Wool Mattresses

Wool mattresses have been used in many cultures including in Azerbaijan, where Sasson's family is from.

In Azerbaijan, women make mattresses for their families, and wool picking is done by hand as communal activity. Sasson's grandmother made mattresses for his family, and when they immigrated to the United States, their mattresses were one of the few belongings that they brought with them. They still have these mattresses, which Sasson's mother was kind enough to open up and show to me. Sasson has memories from when he was a young child of his grandmother opening the mattresses, cleaning and picking the wool, and restuffing them.

We don't know exactly what method his family used to clean the wool, but when his mother described it to us it sounded very similar to the fermented suint method.

Wool Processing

The wool processing required for a mattress is comprised of four major steps: shearing, skirting, cleaning, and picking. Wool for a mattress does not need to be carded.

Shearing

In our search for wool, I quickly realized that the cost of processed wool was far outside of my budget, so we decided to process our own. Sasson found Robert and Linda Hastings at Shady Hill Sheep & Wool Farm¹, who are located in a beautiful part of the Adirondack Mountains in New York, very close to the Vermont border.

We drove up to their farm and purchased about eighty-five pounds of raw fleece² from Roger and Linda at \$0.40/lb. This amounted to nine garbage bags packed full with wool.

¹ Shady Hill Sheep & Wool Farm: <https://www.facebook.com/ShadyHillSheepWool/>

² Raw fleece is wool that is "fresh off the sheep", meaning that it is unprocessed.

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Skirting

We took the raw fleece that we purchased from the Hastings' back to my camp in the Adirondacks, and skirted it outside on a picnic table. Skirting wool refers to removing the dirtiest parts of the wool containing sheep poop and vegetable matter³. To remove these parts, we simply unrolled a fleece onto the table, looked through it, and pulled the dirty clumps out. After skirting, we were left with wool that was still fairly dirty, but did not have any large clumps. We removed approximately 15 pounds of dirty fleece. This was a somewhat dirty process, but not too bad.

Cleaning: The Fermented Suint Method

While we were getting wool from the Hastings', Linda told us about the fermented suint method of wool cleaning. This method was very appealing to me, as it did not require a washing machine, and had a lower risk of felting the wool since cool water, rather than hot, was used, and the wool is not agitated during the cleaning process.

The fermented suint method involves allowing the wool to "self-clean" by creating a fermentation culture and utilizing the natural lanolin already present in the wool. I could not find any scientific explanation of why this method works, but there were many sources online vouching for the method's efficacy, and I trusted the first-hand directions that I had received from Linda.

To start the culture, I chose the three dirtiest bags of fleece, and transferred them from their garbage bags to large mesh laundry bags⁴. I placed these bags in a kiddie pool⁵ filled with water, and the water quickly began to turn brown. It is important to use rainwater, or water that has a neutral pH, due to the acidic nature of the wool.

The first set of fleeces needs to be left in the water for about one week, to start the culture and then self-clean. After one week, I removed these bags and added three more. These bags only required about three days to clean, since a robust culture had already been started. Three days later, I removed these and added the last set of bags, which also took only three days to self-clean.

While the wool was cleaning, I flipped the bags over once every day or two, to make sure both sides got to be in contact with the fermentation culture. This is not necessary if you have a pool deep enough to fully submerge the bags (which will need to be weighed down with rocks or another heavy object).

³ BSHG note: this dirty fleece can be used as a great mulch in the garden.

⁴ BSHG note: onion bags can also be used for this

⁵ BSHG note: large garbage cans with tight fitting lids can also be used for this, and are nice because with the lid, they can be stored inside without making the house smell.

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I did this outside at Dilmun Hill, Cornell's student-run organic farm. Interestingly, despite how wet and buggy the season was, no mosquitoes laid eggs in the water. We were concerned that



since the water was essentially a stagnant pool, it would become overrun with mosquitoes, but on the contrary, the water seemed to repel bugs. We saw the occasional fly buzzing past the pool, but even those were not attracted to the water. After the cleaning is finished, this water can be used as a natural fertilizer in the garden.

After the wool is removed from the culture, it needs to be rinsed. This was the most labor intensive part of the process. I worked on a tarp, so that I had a washable surface. First, I ran water over the bags containing the wool, and stepped on them until they ran a bit more clear. Initially, the water was very brown and pungent. Next, I opened the bags, and divided each bag into thirds. Using two large Rubbermaid bins, I put one of these thirds into a bin full of water, and then transferred the hose to the next bin. While the second bin was filling, I

gently stepped on the wool in the first bin. After the second bin was full, I squeezed the wool to remove as much of the dirty water as possible, transferred the wool to the second bin, and repeated the process. I found that it took about six of these rinses for the wool to run clear. A large close wringer would significantly expedite the process, as most of the dirt is removed each time the wool is squeezed, and only small amounts can be wrung at a time by hand.

After the wool was clean, I laid it on a large screen that Sasson made from chicken wire and cinder blocks out in the sun to dry. It is important to make sure the screen is at least a few inches above the grass, or the bottom of the wool will continuously get wet by the morning dew.

Picking

After the wool is cleaned, it needs to be picked. Picking the wool is very simple: the wool is simply pulled apart. As the wool is picked, it will appear to grow in volume due to the air being incorporated into the fiber.

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I started out picking the wool by hand, taking a handful and pulling it apart until it felt aerated. The process was incredibly slow, and with sixty-five pounds of wool it felt like I would never finish. I started asking around to see if I could find a wool picker, and was fortunate enough to connect with Shelly Merino, a member of the Black Sheep Handspinners Guild. Shelly graciously loaned me her swing picker, and after one day of work, I had picked through all sixty-five pounds, with a much better result than I got picking by hand.

Sewing the Mattress

I could not have sewed the mattress without my mother.

The mattress is made out of a heavyweight 100% cotton tight-weave fabric, stitched with french seams. For additional reinforcement, we top-stitched the french seams to mimic a flat felled seam.

The mattress is a 72" square, with a 5" baffle.

We stitched the mattress together everywhere except for about 48" on one edge. Through this opening, we stuffed the mattress. Then, we sewed the last 48" together by hand using heavy cotton button thread with a slip stitch.



Next, we used a large 4" upholstery needle to make nine evenly spaced tufts across the mattress in a grid pattern. These tufts secure the wool and prevent it from shifting when the mattress is slept on.

Initially, the mattress will be 8-10" tall, but will settle within a few nights of use.

Making the Bed Frame

It is very important for the mattress to be aerated. If the mattress is going to be used on the ground, it must be rolled up in between uses.

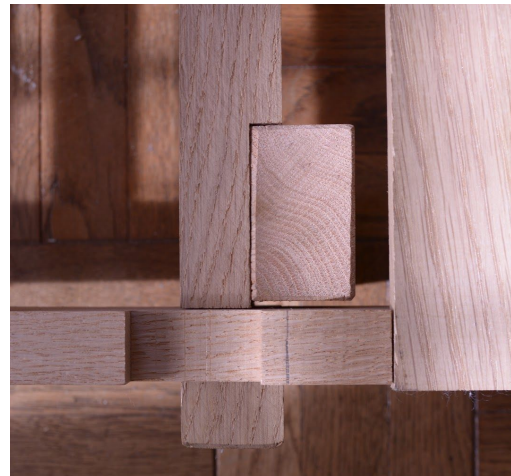
Sasson was kind enough to make me a bed frame to maximize air flow around the mattress.

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The frame for the bed is 1" larger than the mattress on all sides, making it a 74" square. It raises the mattress to a height of 10" off the ground, with plenty of room for air circulation between the major structural elements. The slat construction is also designed to help with aeration of the mattress, leaving about fifty percent of the platform clear for air flow. We realized that gaps larger than 2" would be felt while trying to sleep on the mattress, so we kept the gaps at 1 ¾", with the slats at the same width.

Sasson used a variety of joints to construct the frame, so that it can be easily disassembled into a pile of individual boards.



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Maintaining the Mattress

Every time I change the bed sheets, I flip and rotate the bed. This helps with aeration, and also makes sure that the mattress is evenly used. The square format of the bed allows me to aerate the bed in more orientations than a traditional rectangular mattress.

Every five years, the mattress should be opened and the wool should be re-picked. At this time, the entire mattress cover can also be washed.

