

SWATCH PAGE

SPINNING HELPS AND HINTS

This month this column contains a potpourri of information for spinners. The Linders workshop in September gave a stimulating and inspiring start to the new season, and the follow up spin-in in October should give us the necessary impetus to continue spinning joyously and productively throughout the whole year.

FIBERS

Most handspinning today is done with the natural fibers which have been used since spinning began: cotton, linen, silk and wool. Today the scope has widened considerably with the introduction of manmade synthetic fibers, but as yet they are not readily available in the fiber form to handspinners. The Yarnery used to carry a cut, crimped nylon fiber made by DuPont, which needed no carding, spun nicely, dyed beautifully, as well as blended readily with other fibers, but at the time I was about the only person who bought it so it was discontinued as a stock item! Straw into Gold in California carries a very soft polyester roving.

COTTON

It can be purchased locally from Northcentral Woolgrowers Wool-N-Shop, the Yarnery, and the Threadbenders. I believe this is short staple cotton which generally runs from 7/8 to 1 -1/8 inches in length. Long staple cotton can be 1 to 2 inches in length, with Sea Island cotton staple running as long as 2½ inches. The primary difference between the short and long staple cotton is more marked in the diameter and the number of convolutions in each fiber than in the actual length of the staple. This results in a much silkier feel in the long staple.

Before taking the Linder workshop I had only spun six or eight ounces of cotton. I liked the end product but found the process too slow. It was my understanding that the drawing out of the fibers should have a direct relationship to the length of the fiber i.e., short fiber, short draw. I now seriously question this premise, finding that by allowing a small amount of twist to go up several inches into my rolag, and pulling against this twist to draw out to three or four times the original length a slender arrangement of fibers, the result is a strong thread. It is stronger still when the twist is allowed to further build up by slightly holding back before allowing the thread to move onto the bobbin. This is a very relaxing method and produces a very even yarn if the cotton was carefully carded. Ginned cotton, where the seeds have been already removed (the form most of us purchase our cotton) can be spun in this same way without carding, but a rather highly textured thread is the result. The key to this method of spinning, which incidentally can be used on almost any fiber, is to let enough twist work into the rolag to hold the fibers together, but not so much that they don't slip under the tension exerted by your hands when elongating the portion of the rolag on which you are working. You want this area to stretch. A special point to keep in mind with this technique is to maintain a loose tension which allows for a greater control of spin moving up into the rolag.

Setting the twist:

All fibers I have worked with need to have the twist set with heat and pressure, or by plying.

Plying is simply the spinning together of two or more spun threads in the opposite direction of the original spin. If you spun the single threads with the wheel going in a clock-wise direction (a "z" twist thread results) then the wheel should be reversed when plying (the end product is an "s" plied thread).

To set the twist for cotton, the fiber should be boiled under tension for about fifteen minutes. The Linders suggest using PVC (polyvinylchloride) plumbing tubes in which you have drilled holes; I've used some smooth curlers very successfully. It is important to use a direct transfer system when winding the cotton onto the tube from the bobbin, so added twists aren't introduced. If you add two tablespoons of sodium carbonate (washing soda or soda ash) to your boiling water (to which you've already added a teaspoon a liquid soap or detergent), a slight shrinking action will take place which will somewhat straighten out the convolutions in the fiber, thereby giving a more lustrous look to the finished product (mercerizing). I also suspect that the shrinking strengthens the thread. Rinse thoroughly after washing and skein off, keeping thread under tension for proper drying.

In India, cotton is always spun with a "z" twist which causes greater shrinkage in the setting process. According to tradition this makes the resulting thread stronger. These are the spinners who traditionally spin the finest cotton thread -- 330,000 yards per pound of cotton was the standard for Dacca muslin!

Sizing:

I use my yarn primarily for weaving and there are a couple sizing methods for cotton which the Linders suggested. After rinsing thoroughly, and before removing it from the tube, boil for 15 more minutes in a heavy, water soluble starch solution. Common laundry starch used as directed for a heavy consistency works well here. Then wind off as previously directed. Another technique which can be used in addition to this or used alone works as follows: when winding the warp, let the thread pass over the edge of a piece of paraffin wax for added strength.

Sizing will make your thread stiffer, but it is only temporary and will wash out after weaving. Although it is a bit of a bother, it can save repair time because of the added strength it imparts.

WOOL

Because wool is so available to us all, I wish that greater thought went into choosing the right type of fleece for the end product. It is true that the finer wools, sixties and seventies, take a little more care in initial fiber preparation, but the end product is very distinctive. For soft scarves and hats as well as a refined clothing fabric, it is a most appropriate choice. When making rugs, try a low quarter, i.e., a wool with a count in the forties. (So much information is available on blood wool types and wool fiber counts that I won't go into it here.)

In order to have the greatest control over the end product, wool must be scoured before it is spun. This allows for free movement of individual fibers; therefore one is more easily able to maintain a consistent draw. Scouring not only regulates the diameter of the thread, but also contributes to the consistency of the spin or helix angle (the angle of the twist in the thread at any given point -- see Irene Emery's The Primary Structure of Fabrics, page 11). These considerations are especially important if you must produce a quantity of yarn which needs to be of a consistent quality. Many of the prominent handspinners such as Fannin, the Linders, Pauls Simmons, etc., scour their wool using the formula suggested in the American Wool Handbook. The proportions given are for two ounces of wool.

Number of baths	1st	2nd	3rd	4th
water	1 gal	1 gal	1 gal	1 gal
temperature	90° F	130° F	125° F	120° F
soap	---	2½ tsp	2¼ tsp	---
soda ash	---	5 tsp	1 tsp	---
time in each bath	3 min	2½ min	1½ min	1 min

The thing to remember when washing wool is that the wax and oil on the outside of the fibers must be removed as well as the dirt. This will melt off at 150° F., but as most homes don't have tap water that hot, the above formula with the use of sodium carbonate works well. When using it however, be careful to adhere to the suggested times as the protein in wool is adversely affected by prolonged exposure to alkali conditions.

In order for scouring to work well, wool must first be loosened or broken open. This picking or opening process should be done outside or over newspaper, as much sand and vegetable matter will fall out. (Don't pick your wool over the fleece you've just opened or it will gather new dirt!) It is also easier on the wool when scouring it to enclose it in a net bag, as less agitation results when changing from one bath to the next.

I use the foregoing formula with the washing machine method described in Marlyn Kluger's The Joy of Spinning, page 58. However I have had students who live in dorms use everything from sinks to garbage cans! The two important things to remember with wool are not to agitate or suddenly change the temperature. This last is not so critical when going from cool to hot, but it is critical when going in the opposite direction i.e., hot to cold. Failure to take care in this last area will cause matting even if there was no agitation!

If you want to dye your fiber (stock dye), have your final rinse water at 130° F and then place the mesh bag full of wool in the dye pot which should be at 140° or 150° F. Follow your normal dyeing procedure. Be careful not to agitate the fiber more than necessary or matting will occur. One can use special wool dyes, but household dyes such as Rit and Cushing, when used as instructed, work wonders also. It is fun to work with two or three different colored wool fibers, carding them alone or together to form a novelty thread. Careful carding is important, especially with the finer wools. Tease the wool thoroughly and card gently but totally so the rolag has a consistent fiber distribution.

If you feel your wool has become too dry due to the washing, a spinning oil can be added before you tease it. If you have a source for commercial spinning oil this is very convenient to use. If not, make a solution of one part neatsfoot oil (it can be purchased in a leather goods store), one part plain ammonia (not sudsy ammonia) and two parts water. Mix well by shaking, and spray on the wool. I would use a ratio of 7 to 10 parts wool to one part solution. If you have trouble with noils, especially with the finer wools, the application of spinning oil may be helpful. If you are not dyeing your yarn, don't wash out the oil as it acts as a mild sizing agent. If you dye your yarn after spinning, the oil must be washed out first with soap or detergent. If your water is hard and you use soap, be sure to use a water softener too.

Setting the twist:

If I am doing many skeins of one particular type of yarn I will set all of them at once. I wind carefully off the bobbin in such a way that all the elements of the skein are the same length. That is, all parts of the skein are two yards, not some two yards one or two inches, which can result if there is too much overlap. It is advantageous to keep a little tension on the bobbin when winding off, so kinks don't occur in the skeins. I submerge all the skeins in warm water, then squeeze dry and hang them on dowel sticks where they can be spread out. I put a dowel stick through the bottoms of the skeins and weight this on each end to maintain even tension on all the skeins.

If I am in a hurry or doing just a small amount of yarn I will wind it on my metal skein winder and steam it with an electric clothes steamer I bought for the purpose. This takes about three minutes of constant heat. I have found it is more effective if I let it set 15 to 30 minutes before I use the yarn. The Linders suggest winding the wool on PVC tubes and steaming them for 3 minutes in a vegetable steamer. Leave the lid off so problems don't result from condensation.

Sizing:

I have woven with handspun wool warp and weft, plied and singles, floor loom and frame loom, with much joy using setts anywhere from eighteen ends per inch to six ends per inch. I have used sized and unsized yarns and have had no basic problems either way, but suggest sizing simply because one can weave more quickly and easily. The sizing serves two purposes: gives added strength and makes the yarn slicker, thereby cutting down on abrasive wear and weakening which would result.

There are many old sizing recipes given in books, only one of which I have tried: three parts water to one part flax seed. Boil and paint on warp which is already on the loom; let dry and weave. This works, but is a nuisance because the painting process must be repeated periodically as the warp is unwound. I've tried hair spray, which helped, but I don't care to breathe the fumes (plus it could be expensive).

I have been most happy dipping the entire warp chain in a thickener or starch (it must be water soluble so you can wash it out after the yarn has been woven). Then I dry the whole thing under tension. I've read suggestions that it can be dried in a chained state but this I have never tried. I use a warping reel and have seen large oil drums used for the purpose.

One further suggestion when weaving with handspun: Make the set a little looser than with commercial yarns, and plan to shrink and full to the desired dimensions. It is a little easier on the yarns.