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Barbados Blackbelly

A hair sheep

© Jeannette Beranger/The Livestock Conservancy

You'd think such an elegant and beautifully colored sheep would have interesting fiber to spin. While the Barbados Blackbelly's fiber *is* fascinating, using it as a textile material requires some perseverance and a lot of imagination.

The breed developed on the Caribbean island of Barbados, starting in the 17th century. While its originating genetics are only beginning to be teased out, studies indicate closer proximity to breeds from Spain and Portugal than they do to those from Africa. This relationship, however, does not show up in its coat.

Barbados Blackbelly sheep are covered with very coarse hair that mostly runs between ¼ inch and 2 inches (6 and 50 mm) in length, with a short undercoat of wool. Colors for the hair fall in the light to dark brown spectrum with excursions into reddish tones; the undercoat is lighter. The rams have a mane formed of unusually long hair. The undercoat should shed out completely every year, and combing at the time when it loosens up should yield a separated woolly component that has a moderate amount of crimp.

Barbados Blackbelly may be one of the most challenging sheep-grown fibers to spin. The hair is stiff and slippery and resists twist. Work slowly with gentle take-up and you can produce yarn. The upper strand in the photo is mostly undercoat and some hair. The lower strand is entirely hair.

lock and yarn photos reproduced to the same scale

lower photos © Deborah Robson

Not to be confused with the American Blackbelly, a newer breed developed from mouflon and Barbados Blackbelly.

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Black Welsh Mountain

Black Welsh Mountain sheep came to prominence in the Middle Ages, due to their unusual fleeces that did not require dye. Over time, they became a distinct breed, very different from the other Welsh Mountain breeds. Most dark-wooled sheep gray with age. Black Welsh Mountain sheep tend to maintain their dark color. The ewe lambs at right show the slight sun-bleaching often apparent on the tips of the locks; it normally disappears into the black in processing.

Black Welsh Mountain wool can be fairly soft or quite crisp. Some will be suitable for cardigans or jackets, while some may work better for woven, tweed-style fabrics. Mill-spun yarns will generally hit a middle note in terms of texture.

If you plan to buy a fleece, discuss your intended project with the shepherd, in order to match the fiber quality to the purpose. A single fleece will likely provide enough for a sweater or for a cluster of mittens and hats. The wool is usually easy to process and work with. Kemp is rare; it may occur in the britch area, and that section can be sorted out for alternative uses. While carding may be the most familiar preparation method, combing can provide a delightful spinning experience and comparatively smooth yarn with a bit of loft.

Fleece weight	2¼–5½ pounds (1–2.5 kg), usually 3–4 pounds (1.5–2 kg).
Staple length	2–4 inches (5–10 cm), usually 3–4 inches (7.5–10 cm).
Fiber diameters	Generally 28–36 microns, although the North American breed association aims for a finer range of 26–32 microns.
Lock characteristics	Dense, firm, not especially long. Almost completely free of kemp. Individual fibers have significant crimp that is not organized in the locks, which blend together in a mass except at their slightly pointed tips.
Natural colors	Deep black, perhaps with a slight reddish cast.

lock photos reproduced to the same scale

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Clun Forest

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Clun Foresst sheep originated in the Welsh/English borderlands in the mid-19th century. They are one of the sturdy hill breeds, able to do well with natural grazing in challenging environments. They come from the same part of the world as, and are related to, the Shropshire.

Cluns arrived in North America in 1970, by way of Canada. They have quietly spread from there throughout the continent and developed a devoted following among both shepherds and fiber folk, the former for the breed's ability to thrive in a variety of environments and the latter for the quality of the fiber, which is versatile and pleasant to work with.

Although the Clun Forest is not one of the six classic Down breeds, it shares many of those breeds' attributes, including a dark face and legs and a mid-grade fleece that can be prepared in many ways and used for a variety of purposes. Where some of the Down breeds' faces are clean (wool-free) and some are partially or almost fully covered with wool, the tops of Cluns' heads have a nice "crown" of white wool.

Clun Forest wool tends to be consistent through all or most of a fleece, and thus can be easy to sort. Staples are moderate in length and the matte-surface wool embodies a lot of bounce and elasticity. It is usually fine enough to be workable next-to-the-skin, although it is more resilient than super-soft. It is usually spun woolen, although it can be fun to use as a worsted yarn.

Fleece weight	4½–9 pounds (2–4 kg), generally 4½–6½ pounds (2–3 kg).
Staple length	2½–5 inches (6.5–12.5 cm), generally 3–4 inches (7.5–10 cm).
Fiber diameters	Most resources indicate 25–28 microns, although the American Sheep Industry Association notes 28–33 microns. This may reflect environmental differences or breeding preferences.
Lock characteristics	Dense locks and blocky staples with either blunt or somewhat pointed tips. The defined crimp shows up well in the fibers, and may (or may not) also be obvious in the locks.
Natural colors	White, with no kemp or colored fibers.

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Cotswold

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One of the oldest of the British longwool breeds, the Cotswold likely dates back to Roman times. Derived from and comfortable in the Cotswold hills of England, they are sturdy, large animals that grow abundant wool.

Gloriously long and lustrous, Cotswold fleeces are often shorn twice a year to make them more manageable, although a full year's growth can provide material for making dolls' wigs or Santa beards. Most of us prefer to use it at a shorter half-year's length, whether the fiber will be processed by hand or in a mill.

Elegance, strength, and beautiful natural colors characterize Cotswold wool. While most Cotswolds are white, animals that grow gray and black fleeces have become deservedly popular over the past several decades. The warmth of the grays and blacks comes from the nature of the pigmentation and from the fibers' shine.

Worsted-spun yarns make the most of Cotswold's remarkable luster and durability. Depending on fleece, preparation, and spinning, yarns can be either supple or crisp. The strength and body of the fiber make it a natural for art yarns like corespuns and bouclés, in addition to fashioning even, durable wovens or being used in lock form to create pile fabrics. Improbable as it may seem, when spun fine and smooth—think worsted techniques—the fiber's exceptional drape makes nice shawls.

Fleece weight	8¾–20 pounds (3.5–9 kg), generally 12–15 pounds (5.5–7 kg); yield about 60 percent.
Staple length	7–15 inches (18–38 cm), generally 8–12 inches (20–30 cm).
Fiber diameters	33–42 microns.
Lock characteristics	Heavy, lustrous, and hanging in ringlets.
Natural colors	Traditionally white; also deep black and all shades of gray.

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Dorset Horn

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Sheep names can be confusing, and the Dorsets are at the top of the confusion list. There are three distinct Dorset breeds, all with English origins. Two are white-faced—the Dorset Horn and the Poll Dorset*—and one has a colored face and legs, the Dorset Down. Two are rare—the Dorset Horn and the Dorset Down. We only have the white-faced types, the Dorset Horn and Poll Dorset, in North America.

Dorset Horn sheep are seriously good-looking animals that grow mid-grade wool most often in white but also occasionally in a deep natural, near-black. Regardless of color, the fibers spin into yarns with remarkable bounce. The amount of elasticity can be surprising.

Woolen preparation and spinning are traditional for this type of wool, and will maximize the insulating qualities, and thus warmth. For greater durability (and stitch definition), it can be prepared and spun worsted.

The crimp patterns are moderate to intense, and can vary rather a lot from sheep to sheep. The lock shown in the photo below falls on the looser side of the Dorset Horn crimp spectrum; the crimp is often tighter. Regardless, it's a adaptable, long-wearing wool.

* Poll or polled means "without horns." The Poll Dorset, Polled Dorset, also known as Dorset Poll, was developed from the older Dorset Horn breed, and is most frequently just referred to as Dorset. It's the second most common breed in North America (after the Suffolk), and thus far from rare.

Fleece weight	4½–9 pounds (2–4 kg).
Staple length	2½–5 inches (6.5–12.5 cm).
Fiber diameters	26–33 microns; U.S. breed standard calls for 26–32 microns.
Lock characteristics	Dense locks; strong but irregular crimp evident in fibers and in staples.
Natural colors	Most is white, although some are colored. Colored fibers or kemp will disqualify animals from some breed societies.

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Florida Cracker

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The Florida Cracker is a North American original, able to withstand the heat and humidity of the southeastern United States. As a landrace breed—which means one adapted to an environment, rather than to standardized production values—the fleece qualities and colors vary, within some predictability. Recent study, including DNA analysis, has established the Florida Cracker as a distinct population, separate from the Gulf Coast Native, with which it was previously grouped. Although some Gulf Coast sheep have colored wool, the presence of varied colors and patterns is more characteristic of the Florida breed.

Florida Crackers seem to have developed from the Spanish commoners' sheep, the *churro* or *churra*, introduced from the southeast edge of the continent by explorers, possibly as early as the 1500s. This stock has been augmented over the years by some finer-wooled strains, possibly including some Merino, Rambouillet, white-faced English breeds, and American Tunis. These latter infusions have strongly influenced the wool, which feels softer than its micron counts imply. It may have a slight crispness that will give it body and provide stitch definition in knitting or crochet.

With their pleasant and versatile fiber, Florida Cracker fleeces warrant exploration for blankets as well as garments of many descriptions.

lock and yarn photos reproduced to the same scale

lower photos © Deborah Robson

These are just initial results from a handful of samples. More data are needed.

Fleece weight	3–3½ pounds (1.4–1.6 kg).
Staple length	2½–3 inches (6.5–7.5 cm).
Fiber diameters	averaging in the vicinity of 24–34 microns.
Lock characteristics	Locks seem to be more puffy than well defined. There is quite a bit of crimp, more evident in single fibers than in the locks. There should not be any hair, although a bit sometimes occurs.
Natural colors	The breed society recognizes all colors, and a sheep's appearance is often mottled or tinged with non-white shades, while the bulk of the body, and the wool, may be consistently white.

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Gulf Coast Native

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The Gulf Coast or Gulf Coast Native is a North American original, well adapted to an environment that is known for being hostile to the needs of most sheep. The breed is classified as feral or semi-feral, because it does well with minimal to no human intervention. Recently differentiated from the closely related Florida Cracker, the Gulf Coast may have been introduced from the southwest—from Latin American sources—whereas the Florida Cracker likely came in from the southeast, by way of Florida. Most Gulf Coast sheep are white, although there is a subset of dark brown-to-black fleeces.

Breeds that are thought to have contributed to the development of Gulf Coast sheep include Spanish churros and possibly Merinos, French Rambouillets, and, from the British Isles, Southdowns, Hampshires, Dorset Horns, and Cheviots. This mélange, along with natural selection for survivability, has resulted in highly variable wool, often much better suited for hand processing than for mills, because an individual spinner can respond to a fleece's fiber unique qualities. The irregularities in fiber quality exist not only from one animal to the next but within individual fleeces. Nonetheless, sorting for length, micron counts, and other characteristics makes the manufacture of commercial yarns feasible.

Within all that variability can be found a lot of enjoyable and versatile fiber. Much of it falls within the lower 20s of micron counts, and even the sections that register higher fiber diameters tend to feel softer than expected. As a result, Gulf Coast wool supplies fiber artists with material suitable for a wide range of textiles, ranging from next-to-skin for the softer components to relatively sturdy outerwear, pillows, or bags for the more robust.

For many years, Gulf Coast sheep have provided human residents of—for the most part—Arkansas, Louisiana, Missouri, Mississippi and Texas with useful fiber from resilient, nearly self-sufficient flocks.

Fleece weight	4–6 pounds (2–2.5 kg).
Staple length	2½–4 inches (6.5–10 cm).
Fiber diameters	20–32 microns.
Lock characteristics	Single-coated, open, wavy and/or crimpy, low in grease.
Natural colors	Mostly white; some tan, dark brown, black, and multicolors in patches.

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Hog Island

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One of the North American original breeds that for most of its hisory has lived in a feral state, getting along without much attention from humans, Hog Island sheep take their name from the island off the Virginia shore where they became established. The original introductions, in the mid 1600s, involved a mix of British sheep closely related to the Down breeds. Genetic studies indicate a comparatively close relationship to Southdowns, which are the foundation for all of the classic Down breeds. There's believed to have been some Merino influence, although that's not readily apparent in the wool. The Downbreed heritage comes through in the lock shapes, which are generally rectangular although they occasionally have pointed tips, and in some resistance to felting.

Initial impressions of the wool can be unprepossessing: it is matte, with a dull appearance and disordered crimp. The whites tend to be yellowed or grayish. Hog Island sheep also seem to excel at collecting vegetable matter: grass, seeds, twigs, and burrs. If the fiber has already been processed into yarn, this will not be a concern. For the spinner, combs (especially minicombs) will help remove most of the vegetable matter except burrs, which will need to be plucked out by hand. For worsted yarns, proceed to spin immediately and for woolen yarns card after combing.

Persevere! Hog Island yarns are most often surprisingly pleasant. They can be fashioned into warm and serviceable sweaters, hats, and blankets. Some will even be soft enough to use next to the skin.

lock photos reproduced to the same scale

lower photos © Deborah Robson

Fleece weight	2–8 pounds (1–3.5 kg), usually in the range of 3–5 pounds (1.5–2.5 kg).
Staple length	Insufficient data; samples I have examined ranged from 1½ to 2½ inches (3.7–6.5 cm).
Fiber diameters	Insufficient and inconsistent data. Estimated 22–32 microns, although what I've seen has been on the stronger end of that.
Lock characteristics	Single-coated fleece, high in lanolin, with locks somewhat rectangular and dense; disorganized crimp.
Natural colors	White, sometimes black (10 to 20% of sheep).

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Jacob (American)

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The origins of Jacob sheep are mysterious, and these animals have had many names over the years: among others, they've been called Spanish sheep, as well as Piebald, Pied, and Spotted sheep. Their spots and horns—which both rams and ewes grow—are distinctive. Their clearly defined spots can be brown, black, or a mid-tone in either gray or soft brown known as *lilac*.

Jacob fleeces cover a wide range of textural options, from moderately fine and next-to-skin quality to relatively coarse and sturdy. Most of the fiber falls into the middle of that spread, making it a versatile choice for fabrics that need to sustain a lot of wear while remaining pleasant to the touch. Because Jacobs are an old breed, there may be a tiny amount of kemp (short, brittle fiber) in the haunch area. It can, of course, be sorted out.

British Jacobs have been bred to be larger and faster-growing than the American breed, and in the process their wool seems to have changed texture somewhat as well. The smaller American Jacobs, and their fleeces, more closely resemble the Jacob's characteristics from previous centuries.

Fleece weight	3–6 pounds (1.5–2.5 kg), or a bit more; yield 50–65 percent.
Staple length	3–7 inches (7.5–18 cm), 3–6 inches (7.5–15 cm).
Fiber diameters	Mostly 25–35 microns, and even though this is a wide range, some may be finer and some coarser.
Lock characteristics	Single-coated. Slightly pointed tips on jumbled locks with moderate crimp and some luster. The different colors in a single fleece are likely to have different lengths and textures, although pronounced variation is called a quilted fleece and is not considered a good thing. There may be some kemp.
Natural colors	White, black, brown-black, and a color called lilac that is a soft gray or brown.

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Karakul (American)

The American Karakul grows one of the most intriguing and practical fleeces on the planet, yet people who make textiles by hand need to learn to use it because it is very much *not* like the familiar fine and medium wools. The animals' fat tails reflect their Middle Eastern heritage, although the breed in North America has incorporated other genetics—including Lincoln Longwool, Cotswold, American Tunis, and Navajo-Churro—to create a distinct population.

Karakuls grow long, double-coated fleeces that come in an unusually broad arrange of colors, including variations that extend along the length of individual staples. Like people, black Karakuls gray with age.

Karakul wool is easy and fun to spin into robust yarns. But what to do with them? They are generally not candidates for next-to-skin wear. On the other hand, they felt readily, and have terrific durability. In the Middle East, people make socks from Karakul; most modern North Americans would immediately reject that idea. Slippers might be acceptable. And Karakul is a dream fiber for rugs, bags, pillows, and other items that need to endure hard use over many years. Karakul is made to last.

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Fleece weight	5–10 pounds (2.5–4.5 kg); yield 80–85 percent.
Staple length	6–12 inches (15–30 cm).
Fiber diameters	Karakul's quality is more important than its fiber diameter, often listed as 29 microns, as an average or a "greater than" orientation point. The American Sheep Industry Association says 25–36 microns, which is appropriate. The inner coat is likely to have micron counts in the 20s and the outercoat in the 30s, or stronger.
Lock characteristics	Open, lustrous, with wide bases gently tapering to the tips (a characteristic of double coatedness).
Natural colors	Black predominates, although colors include grays and browns, as well as unusual gold and red tones, and some whites. The wool can be solid colored or display shades of color within the staples.

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Leicester Longwool

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The Leicester Longwool* has many names; the predominant alternative you'll come across is English Leicester. It is a key breed in the English longwool family, which originated in the British Isles. It is "key" because of its influence on many other breeds, following the experimentation carried out in the 18th century by Robert Bakewell to increase the breed's productivity.

Although the famous Robert Bakewell focused mostly on meat, his sheep retained the ability to grow fleeces bountiful in both length and quantity—so much so that they are often shorn twice a year. The locks are generally a bit finer and longer than the fiber produced by the Cotswold and Lincoln Longwool, but any effort to emphasize fineness in the Leicester Longwool runs contrary to the breed's distinct qualities. If you want finer wool, other breeds grow it. Enjoy the Leicester Long-wool for its glorious shine, drape, strength, and open crimp.

Spinning these fibers with worsted techniques makes the most of their luster (which also gives dyed colors brilliance) and can result in smooth, durable yarns that have exceptional suppleness. The drape is more pronounced in finer yarns, which can even be used to fashion laces and lightweight woven textiles. That said, Leicester Longwool can be great fun to spin with woolen techniques or to use in constructing sound novelty yarns. Leicester Longwool is versatile, durable, and brilliant: just match the yarn weight and structure to your goal.

Fleece weight	5 (half-year)–18 (full-year) pounds (2.5–8 kg).
Staple length	5 (half-year)–14 (full-year) inches (12.5–35 cm), averaging 6–10 inches (15–25 cm); frequently shorn twice a year.
Fiber diameters	(U.S.) White and colored, 32–38 microns.
Lock characteristics	Long, distinct locks with crimp that is well defined from pointed tips to flat bases.
Natural colors	White, black, and a varied gray (called English blue).

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* Leicester is pronounced LESS-ter.

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Lincoln

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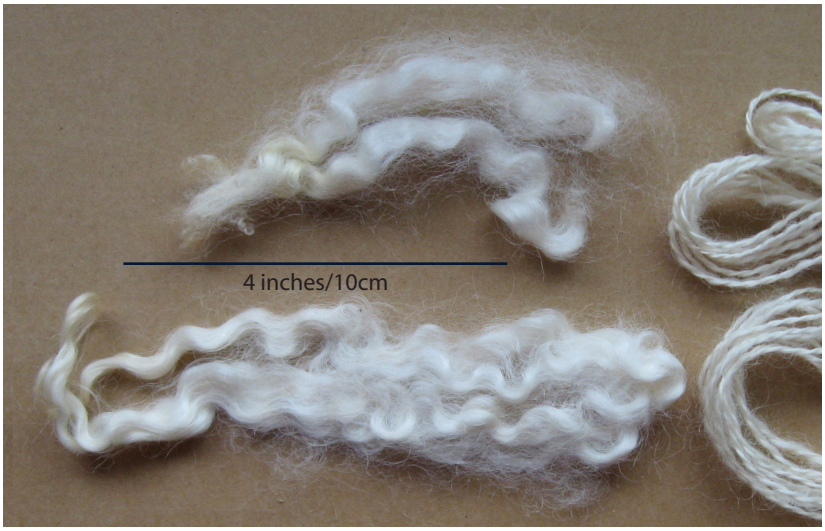
Those young Lincoln ram lambs in the photo, members of the English longwool family of breeds, represent the largest of British sheep. At their adult size, these gents will weigh up to 300 pounds; the ewes will come in at something over 200 pounds. Their fleeces are equally massive and enough length accumulates over the course of a year that they can be shorn twice and still produce generous locks.

A full year's growth of Lincoln wool can be used for dolls' hair or Santa beards. Either six-month or twelve-month growth lends itself beautifully to spinning highly textured novelty yarns or smooth, durable worsteds. Lincoln fleeces can be spun woolen-style as well, although that's not the first approach that comes to mind for the fiber. Because of its robust nature, thick yarns will be quite heavy. Thinner yarns can be sleek. Known for a lustrous surface, Lincoln takes dyes beautifully. It also drapes well.

Because of the relatively large fiber diameter, Lincoln wool is not next-to-skin soft, although when spun worsted (minimizing the potential for the prickly fiber ends to stick out), it can feel smooth and cool, with some of the behavior of a heavy silk.

While Lincoln can be exquisite in garments, it is unparalleled for making rugs, tapestries, pillows, and bags. In addition to being appropriate for knitted and crocheted textiles, Lincoln is an extraordinary wool for weaving, whether balanced, weft-, or warp-faced. For a glorious experience, supplement the delicious natural colors with dyed jewel tones.

Fleece weight	Generally 11–16 pounds (5–7.5 kg); yield 55–80 percent.
Staple length	Generally 7–15 inches (18–38 cm), average 7–10 inches (18–25 cm).
Fiber diameters	(U.S.) 33.5 (minimum)–41 microns.
Lock characteristics	Firm, heavy locks, with pointed and often spiraled tips, and defined crimp.
Natural colors	White, silvery grays (light through dark), black, and possibly some moorits (a shade of brown).



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Navajo-Churro

© Nikyle Begay

The Navajo-Churro is a North American breed, acclimated to the dry climate of the southwestern United States. The breed's wool has sustained both Navajo and Hispanic traditions.

Fleeces are double-coated for the most part, although the degree to which an outercoat is present or evident varies; the undercoat does tend to predominate. The presence of the outercoat contributes durability to textiles made from Navajo-Churro wool, while the undercoat provides cushioning and insulating qualities. There may be a little kemp (short, brittle fibers), but it's relatively uncommon and sparse.

When the sheep are raised in their natural environment, their wool has low lanolin content. Sheep raised in climates with more humidity and vegetation than the Southwest may grow longer, coarser fleeces that contain more lanolin.

The breed's fiber combination—fortified by its diverse natural color options—produces functional and durable rugs and tapestries. Yet Navajo-Churro wool exemplifies versatility: it also works well for sweaters, mittens, gloves, and other useful items. Weave it, or try it in knitted lace or colorwork.

Fleece weight	2–8 pounds (1–3.5 kg); yield 60–65 percent (most loss is due to dust, rather than grease).
Staple length	Undercoat generally 3–5 inches (7.5–12.5 cm); outercoat generally 6–12 inches (15–30 cm).
Fiber diameters	UNDERCOAT 10–35 microns, most in the low 20s. OUTERCOAT 35+ microns. KEMP 65+ microns.
Lock characteristics	Wide base tapering to a narrow tip. Low grease and open.
Natural colors	White; light to dark browns, some with reddish undertones; grays and blacks. Outercoat and undercoat can be different colors. Some sheep have spots.

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Oxford

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The Oxford, or Oxford Down, is one of the six classic Down breeds of sheep,* which originated in southern England during the 19th century. The Oxford was developed during the 1830s, through crossing Cotswold rams (a longwool breed) on Hampshire ewes, with possibly some Southdown contribution as well (both ewe types are Down breeds).

Oxfords, being large sheep, grow abundant fleeces. You could outfit yourself head-to-toe for winter with a single year's growth from one animal. As a plus, the wool is highly unlikely to felt, so textiles should be machine washable and dryable without any commercial shrink-preventing treatment.

The challenge in using Oxford wool is getting a good supply in decent shape. The white wool may contain dark fibers from the face and legs, so it is of minimal commercial value. Shepherds don't tend to think of it as being worth careful tending and a fleece may contain a lot of vegetable matter. Combing removes this better than carding; if you want to card, you can comb first to clean it.

Versatile, bouncy, and durable, Oxford wool is worth seeking out for sweaters, mittens, hats, blankets, and other fabrics intended for everyday use. Fiber folk would enjoy having mill-spun yarns.

* Dorset Down, Hampshire, Oxford, Shropshire, Southdown, and Suffolk. Of these, all but Dorset Down exist in North America, and all but Hampshire and Suffolk are rare breeds.

Fleece weight	At one time Oxford fleeces were almost twice as large as today. Current weights run from 6½–12 pounds (3–5.5 kg); yield 50–60 percent
Staple length	Usually 3–5 inches (7.5–12.5 cm); may reach 6–7 inches (15–18 cm).
Fiber diameters	25–37 microns, though described most often as 28–34 microns.
Lock characteristics	Dense, resilient, medium-grade wool; blocky, rectangular staples hold together and may be hard to distinguish from each other.
Natural colors	White. There may be a few black fibers, because the Down breeds have colored faces and legs. Large flocks will favor white wool. In small flocks, colored strains may exist or emerge.

lock photos reproduced to the same scale

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Romeldale/CVM

© Marushka Farms

The Romeldale originated at the beginning of the 20th century in California with a cross between prize-winning New Zealand Romney rams and an exceptional flock of Rambouillet ewes. That longwool × finewool combination has over the years initiated some splendid breeds, of which the Romeldale is one of the best, in part because of its texture and because of the color options that gradually appeared.

CVM refers to one of the Romeldale's color patterns. It stands for *California Variegated Mutant* and refers to a particular set of markings called *badgerface*.* For a time, CVMs were treated as a separate breed. Then additional color patterns showed up and were also accepted.

Handspinners supplied the primary reason that color was developed in the breed. Spinners are frequently surprised to learn that the breed is rare; this is because they provide the market for almost all of the wool, which is fine enough to be used next-to-the-skin and can serve as a gateway to the discovery of rare wools—and can also provide long-term pleasure.

lock photos reproduced to the same scale

lower photos © Deborah Robson

* The color does not actually result from a mutation. It is a natural component of the genetics that was originally culled out in favor of the white wool.

Fleece weight	6–15 pounds (2.5–7 kg); the American Romeldale/CVM Association breed standard calls for 6–12 pounds (2.5–5.5 kg); other sources suggest 10–15 pounds (4.5–7 kg); yield 60–65 percent, the latter by breed standard.
Staple length	3–6 inches (7.5–15 cm).
Fiber diameters	Breed standard calls for spinning counts of 60s–64s, roughly 21–25 microns.
Lock characteristics	Dense, soft, nicely crimped from base to tips, which are flat or minimally tapered. No kemp or hair.
Natural colors	Romeldales can be white, or shades of reddish to clear brown (dark to light), and a full span of grays through blacks, either mixed or solid. CVMs are multicolored with specific color patterning (badgerface criteria); the base color is often cream or gray.

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Saint Croix

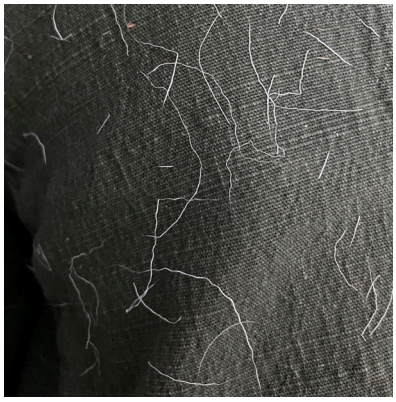
A hair sheep

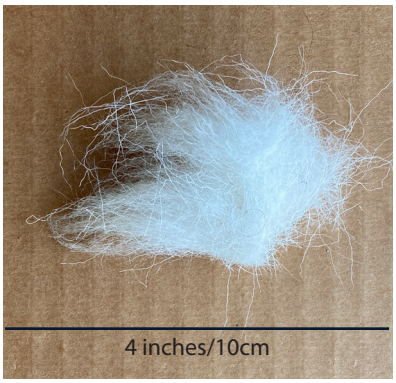
The Saint Croix shares a number of characteristics and historical roots with the Barbados Blackbelly, another rare hair-sheep breed with ties to Caribbean islands, although the two differ dramatically in appearance. The island of Saint Croix is in the U.S. Virgin Islands and the foundation stock for this breed came into mainland North America from that locale. Where they originated before that remains mysterious. Logic suggests that they derived from north Africa. Twenty-first-century genetic studies, however, while they confirm the close relationship to the Barbados Blackbelly, show closer relationships between those two breeds and the wool-growing sheep from the Iberian Peninsula (Spain and Portugal) than to the hair-sheep breeds of Africa.

The fiber, however, bears essentially no resemblance to those Iberian breeds. The Saint Croix mix of fiber types will vary depending on the season, consisting predominantly of hair in the summer and including a more woolly undercoat in the winter. Spring brings shedding. Rams have a chest ruff of very long hair.

The hair component in the sample shown here has all the characteristics of kemp: it is short, brittle, has angular contours along its length, and flies out exuberantly when the clean wool is handled. That's escaped Saint Croix kemp in the photo just to the right.

The fiber mix can be carded into loose rolags and, with relatively slow, steady twist insertion and light take-up, spun into a yarn to use for texture in tapestries, for basket-making, or for other inventive purposes.





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Santa Cruz

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Santa Cruz sheep exist only in North America, and lived as a feral population, without human care, on the island for which they were named, off the coast of California, until they were removed toward the end of the 20th century. They may have arrived on the island as early as the 1500s. They were certainly well established by the 1800s.

Theories suggest Rambouillet and possibly Merino foundations. Recent genetic analysis indicates influence from the Spanish churro as well, a heritage the Santa Cruz likely shares with the Gulf Coast and the Navajo-Churro.

These speculations help us interpret Santa Cruz wool, which possesses unique qualities. Spun appropriately—and exactly what that means is open to experimentation—the yarns can display a nearly spandex-like elasticity. Another breed where this has occasionally been observed is the Gulf Coast. (The Navajo-Churro, with partially similar ancestors, has entirely different qualities.) Sometimes woolen preparation and spinning techniques evoke the fiber's unusual elasticity, whereas occasionally the counterintuitive worsted processes yield those results.

Because of their meager population numbers, finding optimal Santa Cruz wool to work with can be a challenge. Husbandry efforts have, for the most part, emphasized the breed's survival rather than production of the highest-quality fleece.

Despite a lack of data on fleeces, Santa Cruz wool can fairly certainly be categorized as soft enough to be used in next-to-skin textiles. Staple length is not one of the breed's outstanding qualities, although a good 3 inches (7.5 cm) should be attainable. That would make it a reliable fiber for comfortable hand processing. Acquiring sufficient quantities for mill handling is a future goal.

Fleece weight	Insufficient data; small animals, so fleece weight will be relatively light.
Staple length	Guessing 2–4 inches (5–10 cm), although what I've seen lately has been definitely on the short side.
Fiber diameters	Insufficient data; fine; on pure speculation, estimated average range 18–26 microns.
Lock characteristics	Samples I've seen have been very finely crimped but disorganized in the staple. Often very dirty tips. This amazing fiber tends to look very unappealing in the fleeces I'm seeing. It's worth playing with.
Natural colors	Mostly white; a few are medium brown, and some are a dark brown that appears nearly black.

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Shetland

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Shetland sheep are part of the Northern short-tailed family. Their point of origin is Shetland, a group of islands located north of mainland Scotland and west of Norway, with cultural ties to both. The sheep (and their fleeces) relate obviously to the other Northern short-tails in Scandinavia, as well as having especially close ties to the North Ronaldsay and the Soay in the British Isles.

It's said that you can find a Shetland fleece appropriate for any textile project you have in mind. That's true. It also means that any single Shetland fleece is not predictive of the qualities you will find in another—unless you ask the shepherd or seek out a similar breeding program. The two locks shown here roughly represent the extremes within the breed. The upper fleece is evenly crimpy, without a component of hair. The lower fleece has a crimpy undercoat and a wavy outercoat.

Within Shetland, textile traditions have taken advantage of all the wool types, yielding fine laces, practical hap shawls, Fair Isle patterned garments, and bed covers known as taatit rugs.

Fleece weight	2–5 pounds (1–2.5 kg), usually in the range of 2–4 pounds (1–2 kg); yield 65–80 percent, usually on the higher side.
Staple length	Depends on type. In general, 2–4½ inches (5–11 cm). Some fleeces have a range of 4–6 inches (10–15 cm), while others are as long as 6–10 inches (15–25 cm). Some people question whether the longest fleeces, with staple lengths of 6–7 inches (15–18 cm) or more, remain true to the wool's history; others prefer to breed for length.
Fiber diameters	Most fibers 20–30 microns, with some as fine as 10–20 microns (neck wool from the finest fleeces) and some as coarse as 30–60 microns or more (outercoat on a sheep with a hair component). The Shetland Sheep Society (in the U.K.) gives an average fiber diameter of 23 microns.
Lock characteristics	Regardless of style, dense with triangular locks, wider at the base and somewhat pointed. The fine fibers are nicely crimped, and the longer, coarser fibers, if present, are wavy to nearly straight.
Natural colors	A full range of browns, grays, blacks, creams, and whites. The grease seems darken and yellow the color, and the wool often washes up lighter and whiter than it appears when raw.

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Shropshire

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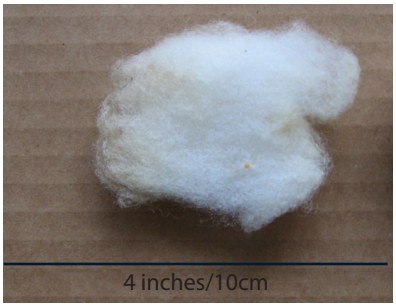
Shropshires come from the Welsh Marches, a variably defined region of western England adjacent to Wales. They are members of the Down family,* and, like the other breeds in the family, carry Southdown blood; during the 18th century, Southdown breeding was added to locally well-adapted sheep. All the original breeds that contributed to the formation of the Shropshire, other than the Southdown, are now extinct. Their legacy endures in this trouper of an animal, hardier than the other Down breeds and a reliable producer of dense, resilient fleeces.

While the Down breeds were developed to maximize meat production, the Down wools are all notable for their remarkable, and valuable, resistance to felting. That characteristic means that—in addition to making naturally machine washable and dryable garments and blankets—a lot of Shropshire wool goes to Japan to fill futons. Despite this functional benefit, the Down breeds' colored faces and legs mean that dark fibers may make their way into the shorn fleeces and they are thus considered undesirable for many industrial applications, where pure white wool works best.

A good Shropshire fleece is a delight for handspinning. The staples tend to be flat, with blunt tips. Most often prepared and spun with woolen techniques, to emphasize the cushiony and insulating properties, the wool can also be processed worsted-style and will result in smooth fabrics with increased durability.

* The Down breeds include Dorset Down, Hampshire, Oxford, Shropshire, Southdown, and Suffolk. Of these, all but Dorset Down exist in North America, and all but Hampshire and Suffolk are rare breeds.

Fleece weight	4½–10 pounds (2–4.5 kg) ewes; up to 14 pounds (6.5 kg) rams; yield 50–75 percent.
Staple length	2½–4 inches (6.5–10 cm).
Fiber diameters	Variable, from 24.5–33 microns, generally 26–29 microns.
Lock characteristics	Dense, resilient, medium-grade, with blocky, rectangular staples that hold together and may be hard to distinguish from each other.
Natural colors	White. There may be a few black fibers, because Down breeds have colored faces. Colored strains may exist or emerge in small flocks. They are generally culled from larger ones.



lower photos © Deborah Robson lock and yarn photos reproduced to the same scale

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Soay (British)

Thousands of years ago, Soay sheep were established in the Saint Kilda archipelago, located in the Atlantic Ocean about 40 miles (64km) west of Scotland's Outer Hebrides. They have lived there in a predominantly feral state, meaning they are domesticated sheep that can survive without much, if any, human intervention. That tells you quite a bit about the hardiness of these small sheep.

Within North America there are two lineages of Soay, one of which is eligible for the Conservation Priority List. Sheep derived from the first importation, in 1974, do not qualify; known as American Soay, their genetics incorporated other breeds. In 1990, sheep came in that were registered with the Rare Breeds Survival Trust. Animals whose ancestors all have RBST registration constitute the British Soay population.

British Soay sheep come in two basic color variants, dark phase (most common, and ranging from mid-brown to near-black) and light phase (tan to light brown). They also have two primary fleece types, woolly and hairy, as well as intermediate configurations. The wool sheds naturally. The photos below show several possible lock forms, and some yarn. The undercoat tends to be short and very soft. Remarkably, undercoat fibers can be as fine as 9 or 10 microns; a common demarcation for cashmere is less than or equal to 18 microns.

Fleece weight	¾–2 pounds (300–1000g).
Staple length	1½–4 inches (4–10 cm).
Fiber diameters	9–48+ microns.
Lock characteristics	Soft undercoat and hairy outercoat.
Natural colors	Brown; also tan, near-black, a few white.

lock and yarn photos reproduced to the same scale

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Southdown

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Southdowns are the oldest breed in the Down family, a group developed in southern and southwestern England during the 18th century. Southdowns formed the breeds' common foundation.* All of the Down breeds have colored faces and legs. Southdowns' coloring is the most subtle. Top-quality Southdowns were imported into the U.S. in the first half of the 19th century.

Breeder preferences for the sizes of Southdowns have gone through shifts in both the U.S. and the U.K., as well as other places where the breed has been established. Wool from all the strains is similar. Most of it is next-to-skin soft. For the most part staples are on the short side. Classic preparation and spinning follows woolen procedures, producing lofty yarns that are cosy because they trap air between the fibers. Worsted-style preparation and spinning increases durability and results in a smoother fabric.

Suggested weight in pounds	Rams	Ewes
U.S. Southdowns	190–230	130–180
U.K. Southdowns	155	110
U.S. Babydoll Southdowns	60–125	60–125

In common with the other Down wools, Southdown resists felting to the extent that fabrics are likely to be naturally machine washable and dryable. In short, trying to felt Southdown wool will waste energy. Instead, use these fleeces to make terrifically practical socks, mittens, sweaters, and blankets.

* The six Down breeds are Dorset Down, Hampshire, Oxford, Shropshire, Southdown, and Suffolk. Of these, all but Dorset Down exist in North America, and all but Hampshire and Suffolk are rare breeds.

Fleece weight	There's a lot of size variety among different strains. 4–6 pounds (2–2.5 kg) to 7–12 pounds (3–5.5 kg); a working average of 5–8 pounds (2.5–3.5 kg); yield 40–55 percent.
Staple length	1½–4 inches (3.5–10 cm), mostly 2–3 inches (5–7.5 cm).
Fiber diameters	23–29 microns for white; 27–31 microns for black.
Lock characteristics	Dense, resilient, medium-grade, with blocky, rectangular staples that hold together and may be hard to distinguish.
Natural colors	White. There may be some darker fibers in a white fleece, and there are colored Southdowns.

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Teeswater

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Teeswaters are members of the English longwool family, and the listing of Teeswaters as endangered by The Livestock Conservancy reflects the breed's small global numbers and the recognition of North American Teeswaters as an important satellite population by the British breed society. Although North American Teeswaters have been developed through upgrading, they have come to represent a genetic resource for the breed.

Teeswater sheep grow masses of long fiber and are often shorn twice a year, to yield more workable lengths. Teeswater fleeces grow in long locks with a characteristic called *purling,* a distinctive spiraling form that also shows up in the fleeces of Wensleydales (classified as rare in the British Isles) and Blue-faced Leicesters (not rare).

Teeswater wool combines elegance with a good supply of durability. If you're familiar with micron counts with regard to fiber and you see numbers like 30 to 36, next-to-skin use is not your first thought. Yet Teeswater can be processed in ways that allow it to be used to make such items as sweaters or shawls.

Think of these as supple wools. Worsted preparation and spinning techniques, which maintain the parallel arrangement of fibers, emphasize the luster, maximize durability and draping qualities, and minimize any potential itchiness. Teeswater fleeces can also be carded and spun woolen, although that won't bring out these unique properties. They can also be spun into novelty yarns that have enough body to hold their shape and enough softness to use in a variety of applications.

The natural Teeswater whites are most often pure and brilliant. This inherent clarity of color, combined with the luster, means that dyed hues sparkle.

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Fleece weight	7½–18 pounds (3.5–8.25 kg), often 12–15 pounds (5.5–7 kg).
Staple length	12–15 inches (30.5–38 cm) first clip; then (twice a year) about 6 inches (15 cm).
Fiber diameters	30–36 microns.
Lock characteristics	Very long, wavy locks with brilliant luster and a smooth surface.
Natural colors	Teeswater wool is white by the British breed society's standard.

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Tunis

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The American Tunis got its start in the 18th century, around the time of the Revolution, when the Bey of Tunis—a ruler in North Africa—sent some sheep as a gift to George Washington. Those African origins likely explain the breed's tolerance for the heat and humidity in the southeastern United States, although it has a remarkable ability to thrive in a variety of environments, including where it's snowy.

The breed was almost wiped out during the Civil War, due to the fighting itself and the armies' need for food. Fortunately—because they are nice, practical animals with lovely wool—a small number were salvaged and formed the basis for today's flocks.

Lambs sport cinnamon-colored fiber that fades to cream on the adults, leaving vestiges of the reddish color on the faces, ears, and legs of the grown-ups. The mature wool itself processes into a pleasant, clear white.

As the photos demonstrate, lock formation and crimp profiles can vary. Overall, though, the staple length and fiber diameter fall into a range that's very sweet for hand processing. It's also a versatile wool. A good percentage of fleeces will be useful for next-to-skin purposes for most people, while some will be sturdier and good for objects that need to endure more wear. Either woolen or worsted processing will produce good results, depending on personal preference and intended purpose.

Fleece weight	6–15 pounds (2.5–7 kg), usually 8–12 pounds (3.5–5.5 kg); yield 50–70 percent
Staple length	3–6 inches (7.5–15 cm), generally 3½–5 inches (9–12 cm).
Fiber diameters	U.S. breed standard is 24.29–29.2 microns; in the field, expect to find 24–31 microns.
Lock characteristics	Relatively open, a bit blocky, sometimes with pointed tips.
Natural colors	Ivory to cream; reddish from first and second lamb shearings before the wool lightens.

lock photos reproduced to the same scale

lower photos © Deborah Robson

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Wiltshire Horn

A fully shedding sheep

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The Wiltshire Horn occupies a space between wool sheep and hair sheep. The breed is often classified as a hair sheep, which makes sense because it sheds its coat annually; however, its fiber complement doesn't fit neatly with either the hair sheep or the wool sheep. The breed description says the animals are "covered in short, kemp wool."* The quality of the coat can vary dramatically between sheep, but it is far more wool-like than the coats of the Barbados Blackbelly and the Saint Croix. A study in the 1960s comparing fleece growth between Tasmanian Merinos and Wiltshire Horns observed that if the Wiltshire Horn's coat didn't shed, it would be considered a short-wool fleece, with fiber diameters ranging from finer than 40 microns to 80 microns. The lower end of that analysis puts the fiber diameters (although not their lengths) in the company of the longwools and the outercoats of a number of double-coated breeds. The upper end is about the same fiber diameter as human hair (in the world of wool, that's coarse).

Kemp fibers are notoriously stiff, short, and brittle. They do not display changed color when they are dyed. The bulk of the Wiltshire Horn fibers in this sample were flexible, longer than most kemps, and more supple. When a breed is not grown for fiber, surprises occur often and consistency is rare. In sum, this wool was quite readily spinnable.

The sample comprised fibers with a hand reminiscent of comparisons well below 40 microns—possibly in the mid-20s to low 30s. The fleece consisted mostly of fibers in the vicinity of 1 to 1½ inches (2.5 to 3.8 cm). Some were as short as ¼ inch (6 mm) and the shortest were kemp-like. Spinning an even yarn was out of the question without tedious, wasteful sorting, yet the result—spun directly from mini-combs, which eliminated the shortest, stiffest components—displayed a surprising amount of both luster and elasticity.

Take the fiber where you find it and see what happens.

lock and yarn photos reproduced to the same scale

lower photos © Deborah Robson

* Kemp has a specific technical definition according to ASTM International: "a medullated fiber in which the diameter of the medulla is 60% or more of the diameter of the fiber."