Handling and Marketing Wool

Bulletin #2070

The Value of Wool

In New England, wool is the most misunderstood part of the sheep industry. The result of this attitude is a financial loss to the producer.

What is the potential of this overlooked and underutilized product? Wool, a natural fiber that "breathes" and insulates the body in hot or cold weather, helps conserve heating and air conditioning fuels. Wool seldom catches fire and, if it should flame, will usually extinguish itself before much damage is done. It will not drip, melt or reburn in other areas.

Because of the desirability of wool as a fabric, wool production is at an all-time high. However, New England sheep producers are not sharing in its popularity. The New England wool crop often sells for a lower price than in many other parts of the country. The primary reason is a poor quality reputation based on improper care of the fleece both before and after shearing, and a lack of grading at wool pools.

Economically, wool can provide a significant source of income. The differences in fleece yields result from variation within and between breeds and is affected by climate, nutrition, wool grease and foreign matter. Wool is a valuable product that is easily spoiled. The primary spoilage agent is foreign matter such as dirt, chaff, burrs, hay, straw, seeds, and grain. These all cost money to remove. The best plan is to prevent contamination while the fleece is on the sheep's back. Keep your facilities clean. Use care during shearing, while storing fleeces, and before selling.

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Grading and Classification

Wool is ordinarily sold by the pound on the basis of grade, class, and quality. "Grade" refers to the fineness of fiber. "Class" refers to length of the staple or fiber. "Quality" refers to the freedom from foreign material and to the "life" or character of the wool itself.

The term "grade" can refer to either of two systems. The oldest system is the American or Blood system, but it is gradually being

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replaced by the British or Count system, illustrated below.

This numerical "count system" is a more technical method of grading by fiber diameter. These numbers refer to the "hanks" of yarn, each 560 yards long, which can be spun from one pound of clean wool. Thus, a 64s wool would yield 35,840 yards of yarn (560 times 64) which equals 20.4 miles.

Within grades, wools are classified on the basis of length. The term "combing" indicates longer fiber length and, therefore, higher spinning quality. The term "clothing" indicates shorter fibers and less spinning value. For example, "58s combing" indicates 58s grade (degree of fineness) and a longer fiber. Fleece length is partially determined by the shearer: poor shearing and a lot of second cuts result in short-fiber-length fleeces.

Table 1. British or Count Wool Grading System

Breed	Wool Grade	Wool Type
American/Delaine Merino	64s to 80s	Fine wool breeds
Rambouillet	62s to 70s	
Targhee	58s to 60s	Crossbred wool breeds
Correidale	50s to 60s	
Columbia	50s to 60s	
Panama	50s to 58s	
Southdown	56s to 60s	Medium wool breeds
Shropshire	48s to 56s	
Hampshire	48s to 56s	
Suffolk	48s to 56s	
Dorset	48s to 56s	
Cheviot	48s to 56s	
Oxford	46s to 50s	
Romney	40s to 48s	Long wool breeds
Lincoln	36s to 46s	
Cotswold	36s to 40s	

How to Improve the Quality and Value of Your Wool Crop

Keep Fleeces Clean

Avoid vegetable matter contaminations of fleeces. Use feeders designed to keep hay and chaff off the backs of sheep. Do not carry or throw hay over sheep to feeders. Avoid pouring grain in troughs over the heads of impatient sheep. Do not use sawdust or shavings as the only source of bedding. Use straw, waste hay or other material as a covering to keep wood particles out of the wool. While hay and chaff can be removed from the wool by the processor, wood particles cannot. Remove burr-producing plants from pastures and hay fields. Purchased hay should be free of foreign matter. Animals with high quality wool can be protected with wool coats. Avoid using dewormers containing phenothiazine. This compound has reduced effectiveness against most internal parasites and can cause a reddish-brown urine stain in wool.

See Table 2 for causes of wool rejection and take management actions to prevent them.

Use only soluble paint or markers specifically manufactured for sheep identification.

Produce More Wool Per Sheep

Equally important to producing a clean, quality wool product is the production of more wool per sheep, to increase economic returns.

Wool blanket covering used to keep sheep clean and produce higher quality wool.

- Prevent and control internal parasites to allow sheep to utilize feed for maximum production.
- Keep external parasites under control to prevent itching and rubbing, which reduce wool quality. Maintain the overall health of the animal.
- Follow a well-balanced feeding program. The quantity of wool produced is influenced directly by the amount and quality of feed the animal receives. It is possible to triple the pounds of wool produced per animal by meeting nutritional requirements.
- Maintain proper flock health. A sick or feverish sheep will produce a weak spot in the fiber during the illness.
- Some breeds (Lincoln and Lincoln crosses) can be sheared twice a year.

Handle Wool Correctly

- Shear as early in the spring as weather and shearer availability permit. If weather or housing facilities permit it, consider shearing before lambing. This allows you to house more animals in a given space, and more easily observe lambing. It also prevents the loss of wool by tagging or removing tail area and udder wool before lambing, and reduces the likelihood of wool becoming stained.
- Keep sheep dry before shearing, both on the surface and in close to the skin. Damp wool molds and spoils.
- Shear on a clean, dry surface. An eight-by-eight-foot wooden shearing floor is more comfortable for the shearer and easier to clean. This can be made of two four-by-eight-foot, half-inch plywood sheets on a frame made from 2x3s or 2x4s. Alternatives include an old carpet or canvas or a clean concrete floor. Sweep the shearing area of the floor after each sheep to provide a clean shearing surface for the next. This will prevent the fleece from picking up chaff, dirt or other material.

Table 2. Causes of Fleece Rejection

Not all wool can be processed for spinning purposes. Fleeces can be rejected for a variety of reasons. Common examples are as follows:

Reject category	Cause of reject status
Gray or off-color	Sheep of blackface breeds carry black fibers throughout their fleece.
Burry wool	Burrs from pasture or hay in fleece.
Seedy wool	Hay or feed particles in fleece resulting from careless handling of sheep in winter.
Cotted/short, felty fleece	Fleeces from old ewes low in vitality, from animals on poor feed or heavily infested with parasites such as ticks.
Spoiled wools	Fleeces tied too tightly, or sheared when wet. Fleeces tied with anything other than paper twine. Use of wool boxes can cause fleeces to be tied too tightly.

Improperly tied wool may not be salable at any price.

- Separate the belly wool and tags from the rest of the fleece and handle them separately. Ask the shearer to separate the belly wool from the fleece as he or she shears it.
- Take sheep off feed several hours before shearing. A full stomach contributes to animal discomfort during handling and shearing. In the case of pregnant ewes close to lambing, a full stomach at shearing can be dangerous to the well-being of ewes and unborn lambs.
- When shearing, avoid second cuts and shear as close to the skin as possible to maximize fiber length. This is done partly by holding the angle of the shearing head in the right position. Keep the fleece in one piece.
- Every sheep producer should know how to properly skirt, roll and tie a fleece. A properly prepared fleece (the saleable product) helps create a favorable impression on the buyer or grader. Throw the fleece flesh side down, so the dirty outer edge of the fleece faces up, on either the shearing floor or a skirting table. Remove off-color wool, such as from legs, solid wool such as tags from around the breach, other contaminated areas and very short or matted wool such as from the head. Then roll the two sides of the fleece in toward the middle and roll the fleece from one end to the other. The flesh side will now face out, creating a clean, attractive package. A simple skirting table can be made from a four-by-six-foot wooden frame to which a section of one-by-two-inch wire fence 48 inches high is fastened. This allows you to work off the floor, and undesirable material such as short second cuts will fall through the openings.
- If you tie individual fleeces, use **paper twine only!** All other types of tying materials cause processing problems. The fibers cannot be separated from the wool, are destructive to processing machinery and do not take dye the same as wool, causing imperfections in the finished product. Improperly tied wool may not be salable at any price.
- All belly wool, tags, off-color, burry, seedy, chaffy, cotted, stained or dead wool should be handled and bagged separately.
- Pack fleeces either tied or loose in regulation wool bags. These bags are available from supply houses, wool buyers or wool pool managers. Do not pack fleeces in plastic grain or trash bags as trapped moisture in fleeces can cause the fleece to mold. If such bags must be used, keep the tops open to allow moisture out. Do not use plastic mesh grain bags since these are a major contamination source for fleeces. Homemade wool bags can be sewn together from burlap or canvas fabric.
- Store wool, properly packed, in a clean, dry place until ready for market. Wool marketing is seasonal in nature. Wool is perishable and will pick up moisture, so it must be properly packed and stored to remain in good condition until sold. This process is often overlooked at shearing time.

Small flock owners many not produce enough wool annually to justify a wool bag. However, this does not mean they cannot produce a high quality fleece for sale using the above principles.

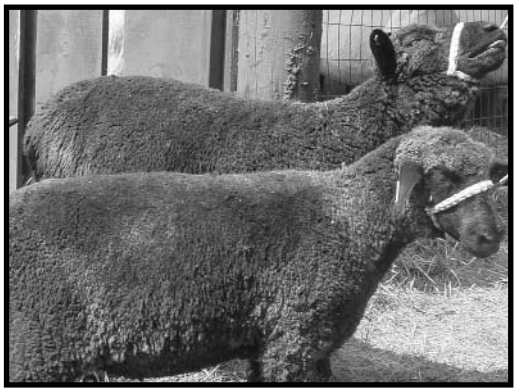
All wool is eventually graded and sold on a grade basis. Dissatisfaction in marketing wool to local buyers has brought about the development of wool pools sponsored by the Maine Sheep Breeders Association and the Central Maine Sheep Breeders Association. Marketing wool cooperatively has educational value. Pooled wool offered on a volume basis is more attractive to buyers and gets a higher price because it saves the buyer time and money. There are a limited number of wool merchants and mills in New England and Eastern Canada that buy wool directly from the grower, with payment made after inspection by the buyer.

Selling to Spinners and Weavers

There is a renewed interest in the Northeast in quality handcrafted woolen products. Spinners and weavers constitute a specialty market for certain types of wool, usually carrying a premium price. Types of wool desired by this market include

- long fiber fleece wools, and
- clean black or other-colored wools used for blending with white wools to create various natural shades of yarn.

The development of fleece shows and sales can be used to encourage spinners to be present where fleeces are auctioned off. Also, the Maine Spinners Registry and the Southern Maine Guild of Spinners and Weavers have a number of functions for their members where wool vendors are invited to sell products such as raw wool, cleaned wool, roving, bats, and yarn.



Natural-colored sheep

Wool Terminology

The following terms should be known by all wool producers to help them produce, package, and sell a superior wool product.

Apparel wool: Wool suitable for manufacturing into apparel fabrics.

Black wool: Fleeces from sheep containing gray, brown or black wool.

Buck wool: Wool shorn from rams or male sheep.

Bulk grade: The largest percentage of grade in a lot of original-bagged wool.

Coring: Taking core samples of bales or bags of wool. The samples obtained are processed by laboratories to determine the percent yield of clean content.

Crimp: The natural waviness in the wool fiber.

Crossbred: A sheep or wool from a sheep resulting from the cross of two different breeds.

Cotted: The matting together of wool fibers.

Fleece: The wool from a single sheep in the shorn grease state.

Fleece wool: Usually all fleeces grown in the states east of the Mississippi and Missouri rivers. A farm flock of medium grade.

Foreign matter: Any material, such as hay or burrs, that appears in the wool and is removed in processing.

Grade: Refers to the diameter of a wool fiber.

Grading: The classification, by fleece, of the grade of that fleece. Wools of like grade and yield are combined for use by top makers and mills.

Grease wool: Wool as it is shorn from the sheep, before any processing.

Handle: A term referring to the actual feel of wool. Wool with a good "handle" is a wool with great resilience and softness, one most pleasing to the touch.

Lamb's wool: Wool of short character taken from a lamb not over seven months of age.

Lanolin: Wool grease. This substance, sometimes called "yolk," is a secretion from the sebaceous glands of sheep. It collects in the wool and serves as a conditioner to prevent excessive drying of the wool.

Lock: A small, approximately finger-sized bit of wool that tends to stay together when shorn from the sheep.

Range wool: Wool grown on sheep on large ranches, distinct from wool grown on small farms.

Sacking: Tied wool fleeces are usually sacked at the shearing plant in large burlap bags varying in length from five to seven feet and in diameter from 20 to 30 inches. From 200 to 400 pounds of grease wool are packed in each bag for shipment to mills.

Shrinkage: The loss in weight of a wool fleece during the removal of grease and foreign matter when grease wool is scoured. Also used to refer to the estimated percentage of foreign matter in grease wool.

Sorting: Virtually all fleeces contain more then one grade of wool. As grading is the classification by fleece, sorting is the classification of wool within a fleece.

Scouring: The process of washing fleece to remove impurities and grease.

Tying: After the wool is shorn, it is rolled into a neat bundle and tied with a paper cord. The side of the fleece that was nearest the flesh, which is always cleaner, is left on the outside in order to present a more attractive sale package and permit easier grading.

Yearling wool: The first full fleece shorn form a sheep 12 to 16 months old.

Yield: The amount of clean wool that is derived from grease wool in the scouring process.

This fact sheet is made available through cooperative efforts of the New England Extension livestock specialists. January 1990. Updated by the University of Maine Cooperative Extension livestock team, July 2004.

Online Links of Interest

University of Maine Cooperative Extension Livestock Web Site

www.umaine.edu/livestock

Maine Sheep Breeders Associations

www.mainesheepbreeders.org

Central Maine Sheep Breeders Association

www.freewebs.com/cmsba/

Maine Spinners Registry

www.mainespinnersregistry.org

Southern Maine Guild of Spinners and Weavers

www.fiberart.com/guilds_spin_me_sm.html

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