



# Icelandic Sheep Breeders of North America

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## Notes from Judith Mackenzie's Class on Fleece Selection and Grading

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Judith started off her class by telling us that producers should never sell their fleeces for less than \$7 per pound. Spinners, knitters, and weavers spend huge amounts of time and effort on a project and the cost of the fiber that they will use is irrelevant. Any fleece that is of high enough quality to be used as a hand spinning fleece should be worth at least \$7 per pound.

Spinning fleeces should be well skirted. Take off the belly wool as well as anything that "clanks" (manure tags) as well as any wool that is stained. Stains that should be removed include paint brands, tattoo ink, grass stains, Canary stains and peach stain.

Peach stain is usually found in fine wool breeds and causes the wool to be a peach color and is caused by wool rot.

Canary stain is caused by an organism that infects sheep systemically. It is seen as a bright yellow stain or band of staining in the fleece or on the skin of a sheared animal. The organism that causes Canary stain is parasitic and feeds on the wool wax and then on the protein in the wool causing it to weaken, break and eventually disintegrate. It will grow as long as the temperature is moderate. Extreme temperatures of hot and cold stop the growth of the organism. The lock that has canary stain will have a dished look, bowing in at the banded area where the Canary stain banding is. The fleece will have a strong yeasty smell and when a lock is checked for soundness, it will have a low-pitched sound instead of the healthy high-pitched sound of a healthy fleece.

The organism that causes canary stain can cause deformations on the face and mouth. Lambs can become infected from their mothers while nursing. It attacks the immune system of these lambs often causing them to be poor doers. It also decreases the wool yield. Animals that have canary stained wool should be culled. Rams that have Canary stained fleeces or skin should never be used as breeding animals, as it is hereditary. No research has been done on this organism.

Canary stained wool is separated out by the wool industry as it causes a gummy substance on the wool that won't wash out and doesn't take dye well. Washing with soap will, however, kill the organism.

It is more prevalent in fine wool breeds and luster long wools. Areas of the fleece that are affected tend to felt or cot (felt) easily where the fiber is damaged. It can appear on the skin as well as on the wool.

Yolk or lanolin is not to be confused with Canary stain. Yolk or lanolin is the natural substance on the wool that provides lubrication for the wool fibers as well as cleans and protects the fiber from degradation from sun and rain. It gives a soft creamy yellow color to the wool as opposed to the bright

yellow color of Canary stain.

Consistency is important in fleeces except in primitive breeds where you expect to see a variation in different parts of the fleece.

Merino fleeces have crusty tips that are a combination of weathered fiber, dried lanolin and skin scurf that has worked its way out to the tips. Tippiness are locks that are glued together at the tips for at least 2/3 of an inch. Check tippy locks for soundness. You see tippiness on sheep with a high amount of follicles per inch such as Merinos.

To improve fleece characteristics in your flock, select consistently superior robust sires and pay attention to the nutritional needs of your flock.

To test the strength of a fiber, grasp the ends of a lock with two hands on the ends. Pop or snap the lock close to your ear three times. A high-pitched sound means a healthy fleece. Crackling sounds mean weak breaking fiber. The amount of fiber that breaks on the first pop will indicate the yield of that fleece when processed. Fibers that break will be lost in commercial processing. If you are testing a dual coated fleece be sure to test the different coats separately as sometimes the tog will be strong but the thel will be tender and break if popped or pulled. Be sure to test the fleece in different places on the fleece. The back is one place that is liable to be tender as it is subject to the most weathering by sun and rain.

The bright white fiber that is so coveted by the wool industry is the result of selecting for the gene for absence of color. This causes the same effect as the Spotting gene in Icelandics.

A fleece should exhibit good breed characteristics:

Primitive breeds like Icelandic, Shetland and Navajo Churro should be strongly dual coated with a real difference in the feel of the two coats.

A Romney should have high luster, a length of 3 1/2 inches or more, big sidewise crimp, coarse fiber, and ivory colored "white" animals. A Romney should be a strong fiber that is best used for upholstery, socks, and rugs. It doesn't "full" but will felt. Tippiness is not a problem with Romney wool.

Breaks in the fiber can be caused by poor nutrition, digestion that stops for 48 hours as in an illness, drastic changes in feed, stress such as being chased by dogs or from being transported, high heat, lack of water or drought. If you have continuing wool problems, test your feed and minerals.

Breaks are usually environmental and not genetic. Low copper can cause a white or transparent band in the fiber that is not tender. This can also indicate a liver problem. If a fiber breaks it can still be used if the fiber is at least 2 inches long.

Rams lose their oil in their fleeces during breeding season as they are putting all of their energies into the rut.

Britchiness is long coarse wool on the back legs or "britch." It is not the same as kemp. Kemp is a chalky white colored bristle that has a sharply tapering tip and is "L" shaped. It doesn't take dye at all.

Lambs that are born with long coarse wool that sheds out should be culled. It will cause a halo effect on the fleece and the fiber will be inferior. Some breeds such as Drysdale and Swaledale allow these kinds of fleeces. It also appears in the Dorset and Suffolk breeds.

Colored fleeces usually have more flaws in their fleeces. Many will have a roo line which is a throw

back to the natural shedding trait. The roo line will look twisted as the hormone that causes shedding or rooing causes the skin of the sheep to itch. The sheep are uncomfortable and rub on fences and posts.

Skirt off all belly wool. Cull all animals where the belly type wool is growing up on the sides, as this trait will lead to lower wool yields.

Breed fine wool breeds for consistency in the fleece.

If you detect flakes of skin or scurf in your fleeces that won't wash or card out, then your sheep may have a mange type mite. This is a serious problem that affects all mammals and is highly contagious. Mange means death to coyotes and foxes. Treat the flock with Ivomec and repeat the treatment in 10 days. Lice can also be killed by rolling on an insecticide like "Spot On" that has been mixed with some dish detergent to allow it to penetrate. It is applied to the shoulders and back after shearing.

Avoid second cuts by hiring a shearer who does a good job. Any second cuts can be best shaken out of the fleece by laying the fleece on a skirting table, cut side down just after shearing and then bumping or lifting and dropping the table to jar the cuts from the fleece. Second cuts will cause noils to appear in your carded wool.

A variegated fleece is not one that is banded on the lock but one that has color variation within the lock such as our "Dalmatian" spotted Icelandic sheep. California Variegated Mutant sheep is an example of a breed that has variegated fleeces.

Wool patterns on the sheep can be an indication of certain traits such as: ewes that have clean faces are good mothers.

The rump of sheep should not be level but slope gently downward to tip the birth canal in a direction that makes delivery easier for the ewe. This conformation is directly related to easy births.

The invention of Shears and Dye pot changed the focus of selective breeding. Up until that point, sheep had been selected for thousands of years for sheep that would shed their wool all at one time in May or June. This helped the ancient people to collect more of the wool. After the invention of Shears, sheep were bred for continuous year around fleece growth. Artifacts in modern breeds are those individuals that have a roo line in their fleece, which is considered a fault.

Long fleeces are important to the breeder as it means more yield per sheep. But shorter fleeces are easier to spin and such long fleeces are not as important to the spinner. Fleeces that are 2 to 3 lbs. sell the best, as spinners don't want to buy excessive amounts of one kind of fiber.

Open fleeces like Icelandic can be held together for neat rolling by placing tissue paper between the folded layers. For showing, the fleece should be spread out on a table cut side down. Each side is folded in by 1/3. Then the fleece is rolled tightly from rump to neck. Leave the backs in the fleece for showing purposes but take the backs out if they are weather damaged for selling to a spinner.