

LAMB BIRTH COAT ASSESSMENT

Shepherds of Karakuls know these sheep have numerous distinct features, but historically it is young lamb birth coats that have made them so unique in the ovine world. Americans have not marketed Persian lamb in over sixty years; however, breeding for birth coat quality is *highly* encouraged to retain Persian lamb genetics.

This document is a simple overview of Chapter 5 of *The Karakul Handbook*. This paper was developed as a guide for breeders to assess lamb birth coats and to assist with registration details. *The Karakul Handbook* describes over 12 categories of the birth coat. The Alliance has chosen five, considered to be **the most important** Persian lamb categories: **CURLS**, **LUSTER**, **TEXTURE**, **PATTERN**, **DEVELOPMENT**.

These five birth coat attributes establish a **Star-quality rating**, with *5-Stars* the highest possible for a lamb. **Top-quality sub-categories are in blue**. Enter comments on the **Lamb birth coat: line** of the *Application for Registration*, then submit birth coat photo(s) to info@karakulshepherds.org for evaluation by 3 Advisors and rating as a *Star-coat*. Ratings are voluntary, but highly encouraged. The Alliance is placing emphasis on retaining Persian lamb genetics, *the Karakul heritage*. **Disqualifiers are in rust; they disqualify a sheep from registration**.

AGE at assessment: Evaluations are best made within the first 6 days of birth. Most categories are not reliable after the lamb is 2 weeks old.

1. CURLS TYPE: There are seven types of curl. They may blend from one type to another, sometimes be inter-mixed, or occur in different parts of the birth coat. For multiple curl types label the three most prominent for coverage 1st, 2nd, 3rd.

Pipe Curls: Or pencil curls. The tip of the individual fiber points back down towards the surface of the birth coat. Collectively they form a circular pattern into a hollow tube or pipe. May be long (associated with ribbed patterns) or short pipes (corrugated patterns). Example: ∞∞

Walnut Curls: AKA pea or rose curls, are *very short* random pipes, mixed with other curl types. These twists and swirls create an effect of shelled walnut halves placed on a table, viewed from above. Many of the curls do not form a circle, but curve in many ways making beautiful patterns. Ex: ∞ξ∞

Waves: Most often associated with moiré/watersilk patterns. Waves are shallow, pressed to the skin Ex: ~≈

Open Curl: Does not mean loose curl. It is a *lack of curl in a group of fibers* showing *plateau-like formations*. These are essentially areas of no curl, but with some depth. Example: f Γ

Flat Curl: This is a *lack of curl, flatter* than open curl. The fibers lie more or less parallel to the skin surface, with no depth. Seen frequently with waves when the lamb has a moiré pattern. Ex: cccc

Corkscrew: These are overdeveloped curls, appearing as ringlets. The fiber emerges from the follicle forming a circle at right angles to the skin surface. Instead of pointing downward as in the pipe curl, the tip curves upward again and forms one or more circles that lie parallel to the surface.

Nappy: These are small corkscrew curls that are tight and kinky.

Also important, CURL SIZE: Curl size is the diameter of the curl formations.

Small about 3/16"

Medium about 1/4"

Large about 5/16"

And,

CURL DEPTH: Depth in a curl is the distance from the skin surface, giving any birth coat its third dimension.

Deep ∞∞ The curl is in the form of an oval with the long axis at right angles to the skin.

Normal ∞∞ The depth of the curl is approximately the same as its width.

Pressed ∞~ When the long axis of the curl is parallel to the surface, depth is subnormal.

2. LUSTER: Luster is a matter of light reflection of two kinds—one coming from the individual fiber and the other from the curl locks and the birth coat as a whole. For high luster, the individual fibers in the birth coat should be formed into smooth-lying locks and the pattern *set up* to allow the fibers to group themselves, so that the birth coat surface reflects light better. High luster is an incredible shine, apparent even away from sunlight.

Can be **High Good Average Low**

True Karakul fiber has smooth scalation, making it capable of reflecting a high degree of light, much like a mirror. A wooly fiber has rough and uneven scales, does not reflect much light and catches much dirt. The contrast in fibers is like the difference between a mirror mosaic and a shingled roof.

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3. TEXTURE: This is the effect caused by the **size of the fibers**, not the density of the coat, the smaller diameter being the most silky. It can be determined by feel and by general appearance. Stroke the lamb's coat from *back to front* - from the rump to the head. Choose one; or if description seems to fall in-between, chose two adjoining items, such as silky/strong

- Silky** - Fibers are small in diameter; very soft feel to the birth coat. Lambs can feel almost slippery.
- Strong** - Fibers are a bit larger in diameter; coat has a feel of strength and often lacks a metallic luster present in the silky/soft birth coat.
- Coarse** - Fibers are large and the birth coat feels a bit rough, although it may have luster.
- Harsh** - Fibers are very large; the birth coat feels almost wiry and lacks pliability; it may or may not have luster and may have kemp hairs.
- Wooly** - Fibers are of small diameter, crimpy, and soft, but lack curl forming ability and have no luster.

4. PATTERN: This is the **arrangement of the curls** that gives the general style of the birth coat (not curl type).

- Geographic** - Pattern resembling a relief map of mountainous country with plateaus, valleys and hills.
- Moiré** - Also called water silk; a shallow, wavy pattern, often very lustrous. Curls become tighter and more pronounced up to 10 days, occasionally more than 2 weeks.
- Ribbed** - Long pipe curls follow more or less parallel lines at right angles to the center line.
- Corrugated** - Shorter pipe curls that are quite uniform in length, frequently stacked along the spine
- Horseshoe** - Pipe curls formed in a semi-circle over the back with the open end towards neck or tail (rare)
- Monotonous** - Lacks any definite pattern, uninteresting.
- Slight** - Small in amount or extent.

5. DEVELOPMENT: The number of days it takes curls to unravel is stage of development. It describes the degree of birth coat maturity and fiber length.

- Broadtail:** 10 days to 2+ weeks before curls open. *Very short* stage; curls and waves on these lambs actually get more pronounced up to about 7 or 8 days AFTER birth, then remain for another 3 to 6 days. These curls have very short fibers and can take over 10 days before opening, sometimes longer. They are the famous water silk or moiré birth coats.
- Persian Broadtail:** Up to 8 days before curls open; *Short or shallow* stage
- Persian Lamb:** 2 to 4 days curls start to open; *Normal* stage; fully matured birth coat
- Half Persian:** Fairly long fiber; over developed curls; curls are starting to or have already opened.
- Caracul:** *Very long stage*; usually continuous corkscrew curls; also a term for crossbred lamb birth coats.

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Two other important birth coat attributes:

**6. CARRY:** This is the extent to which the main pattern covers the whole birth coat. Some birth coats 'run out', others will change in pattern and texture from place to place, usually indicative of fleece type changes on adults.

- Excellent** The pattern covers the whole birth coat including the neck, down the thighs *and* the belly.
- Good** The pattern covers much of the birth coat, but the thighs, neck and belly 'run out' or are different.
- Poor** The main pattern only covers a small portion of the lamb, then changes dramatically on thighs, neck and belly. Chances are the adult fleece type will not be uniform.

**7. DENSITY:** Density is the total number of fibers per unit of birth coat surface. The higher the count, the less space between fibers and (frequently, but not always) the finer the coat. Density is determined by feel and touch.

- High (thick)** The birth coat feels firm and springy.
- Average** Soft but springy.
- Low (thin)** Coat feels soft and shallow.

Discussions and photo plates can be found in *The Karakul Handbook-Selecting and Breeding Karakuls for Fur Improvement*. Lowry Hagerman 1951, available for purchase through the Alliance.