Alpaca Coat Patterns
White Spotting Genes

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Several patterns of white spotting occur in alpacas (and most other animal species): tuxedo, piebald, dark-head-and-feet, appaloosa, gray, roan

Spotting can be overlaid on any base coat color or fleece type

The various spotting patterns are controlled by different and distinct genes

An alpaca can, and often does, display more than one type of white spotting

Spotting can be displayed at a minimum level (often not noted on a colored alpaca, it appears as stray white marks on the face and feet)

Spotting can be displayed to the full extent (these genetically colored but white spotted alpacas look white and are often confused with genetically white alpacas)

At minimum and maximum extremes, it is difficult to tell which white spotting gene pattern is being expressed – this can sometimes be deduced from coat patterns that may be more apparent in parents, siblings and progeny

Small, stray patches of white on the sides and belly are probably NOT related to white spotting genes and such animals can be used in a breeding program as though they were solid colored

A patch of white on the head or feet of a colored animal IS probably related to one of the white spotting genes and this has important ramifications to a breeding program concerned with color, coat patterns, or avoiding blue eyes and the sometimes-associated deafness.

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TUXEDO SPOTTING

Face is usually white, may be base coat color at minimal expression (face would NOT be described as having patches of colored fiber around the eyes)

**Base coat color on back of neck**

White on bib, tux, chest, belly

White on feet and legs

**Symmetrical appearance to animal’s pattern**

Thought to be a dominant gene
PIEBALD SPOTTING

Colored patches around the eyes (most noticeable in dark animals). Often the white face area looks like the letter “T” when viewed front-on

Often irregular or sporadic areas of both white and base coat color on the face

White usually circles the neck

White on feet and legs

Asymmetrical right-left appearance to animal’s pattern (if the white areas on the legs/feet look balanced, another white spotting gene is also likely present)

Now thought to be a dominant gene
(WHITE) WITH DARK FACE & FEET

Originally identified in white alpacas with dark face and feet. Named for these. The pure form is an alpaca that looks white with a dark color on the face and feet. This alpaca is actually genetically the dark color, with a white spotting pattern that covers 95% of the body.

HOWEVER, this pattern is very common in colored alpacas.

This pattern is also frequently accompanied by dark appaloosa-like spots and these animals are mistaken for appaloosas.

This pattern often accompanies a piebald pattern in colored alpacas, and is to be suspected in piebalds with balanced appearances and/or dark faces.

This pattern is found in many pintos.

This pattern can be carried in a dark animal that looks solid. Thought to be a dominant pattern, inheritance uncertain.

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<tr>
<th>Pure Form</th>
<th>With Spots</th>
<th>With Piebald</th>
<th>With Pinto</th>
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<td><img src="image1.png" alt="Pure Form" /></td>
<td><img src="image2.png" alt="With Spots" /></td>
<td><img src="image3.png" alt="With Piebald" /></td>
<td><img src="image4.png" alt="With Pinto" /></td>
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APPALOOSA

True appaloosas are **white/beige with fawn spots** – there are other speckled patterns sometimes called appaloosa but this is a misnomer.

Appaloosas are frequently classified as white if the spots are small or few.

Inheritance is dominant.

The pattern may be carried but not very visible in black and brown animals.
TRADITIONAL OR TUX GRAY SPOTTING

Face, bib, tux is white at full expression of the pattern; at minimal expression, there is a white spot somewhere on the animal’s face or feet.

White hairs are evenly interspersed in base coat; black base coat =silver gray (animal is genetically black) or brown base coat =rose gray (animal is genetically brown).

Amount of white hairs present determines whether coat color is classified as light, medium or dark.

Pattern can be carried in white and fawn alpacas.

Silver grays usually have several brown spots in the blanket.

Is a dominant pattern – these animals produce gray offspring bred to non-gray. May not exist in homogenous state (i.e. – two gray genes is though by some genetics experts and gray breeders to be lethal). Two of these animals bred together do not often produce blue-eyes.
BLACK-HEADED ROAN

These animals look gray in the blanket (often rosegray), but they do not seem to produce gray (unless bred to gray)

Their head and the front of lower legs are black

Can be carried and not noticed in a dark animal

Inheritance is not dominant - both parents must carry the genetics and both must contribute it to the cria