



Equine Colors and Markings

Information in this lesson is sourced through the UC-Davis Veterinary Genetics laboratory , Animal Genetics Incorporated, and Equine Science: Basic Knowledge for Horse People of all Ages, by Jean T. Griffiths. (ISBN 978-1-929164-42-4) . In case of conflicting information, UC Davis was the deciding source of information. Please note: different breed registries and associations may use slightly different terminology.

Basic Definitions

There are several different things that help to determine the color of a horse. The first step is to identify the "base color", or the overall shade of the animal's hair that covers its body. Next is to identify the color or shades of the "points" as outlined in the photo. To be categorized as certain colors, such as bay, the points of the horse must be a different color that its base color. When determining the color of a horse, white markings on the face and legs are to be ignored.



There are a few key things to remember when naming what color a horse is:

1. Base color = coat color. Ignore any white markings when naming the coat color
2. Points= mane, tail, lower leg and ear rims.
3. A combination of base color and points help you determine the correct color name.
4. Describing the color of a horse includes the color name, and any additional markings.

Basic Coat Colors

There are four basic horse colors (bay, black, brown and chestnut) , and all other colors (except white) are a result of some type of modification of those colors. The first step to properly identifying the color of a horse is to identify the basic coat color.

Bay

The base coat of a bay horse is reddish brown and can vary in shades from a very light brown, to so dark it is hard to tell the difference between the body color and the points. They are distinguished by having black points, legs, mane and tail. The color is uniform across the body, without getting lighter around the muzzle, flanks or other areas. Bay horses often have white markings on the legs and face, but may be a solid color with no additional white.



Black

Black horses are different than bays in that their whole body is as black as the mane and tail. Although a black horse may have white markings, it cannot have any brown hairs. A horse that is true black won't turn brown in the sun, the black will just get dull. If the horse has any brown hairs, it is a shade of brown, not black. As you can see from this photo, a black horse can have a different colored foal. We will discuss how these things happen in the Advanced Colors learning module.



Brown

Brown is one of the colors recently identified as a basic coat color. For a long time, people thought that brown horses were black horses that had their coat color affected by a gene that causes a mealy effect, however, genetic research has shown that brown is a basic coat color, and is not a result of another gene acting on a black base color.



Chestnut (Sorrel)

A chestnut horse has a reddish brown coat that can vary in shades (e.g. dark, liver, red). Sorrel is another term for the same color that is used in certain breed associations, including the stock-type and draft breeds. The mane and tail can be the same color as the base coat or lighter, also known as flaxen.



White

Truly white horses are very rare, and white is not considered a basic coat color in horses, however, it is included in this section as it is not a modified or diluted color. White horses have pink skin and eyes can either be brown or blue. The color of the skin and eyes is very important in

telling a white horse, from a gray horse. We will talk more about gray horses later.



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Diluted Basic Coat Colors

Some colors result from a gene actually diluting, or reducing, the depth of the base color. The color can either be a single dilution or a double dilution on the base color. The single dilution color is always darker than the double dilution color. There are currently 5 genes that have been identified as dilution genes, and they create a variety of colors depending on what base color they are diluting. We will talk about the two most common, cream and dun, here. We will discuss the less common gene in the Advanced Coat Color module. These diluted colors can be seen in solid colored horses, as well as pinto patterned horse colors.

Cream dilution gene

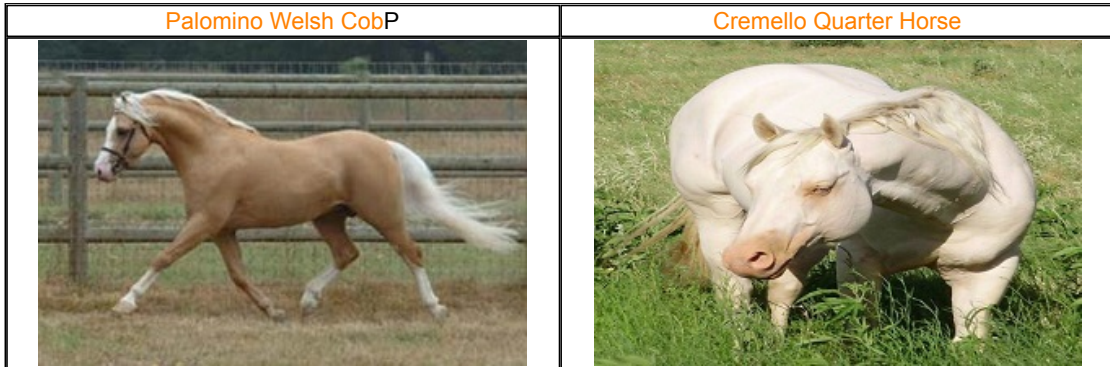
Buckskin and Perlino

The cream dilution gene can create two different colors on the bay base color. If there is one cream gene, the color is buckskin. Buckskins have a yellowish base coat, and the black points that are typically associated with a bay horse. A perlino is the bay base color with two of the cream genes (known as a double dilution). The perlino is a very light creamy color, with the points slightly darker, and sometimes having a reddish shade.



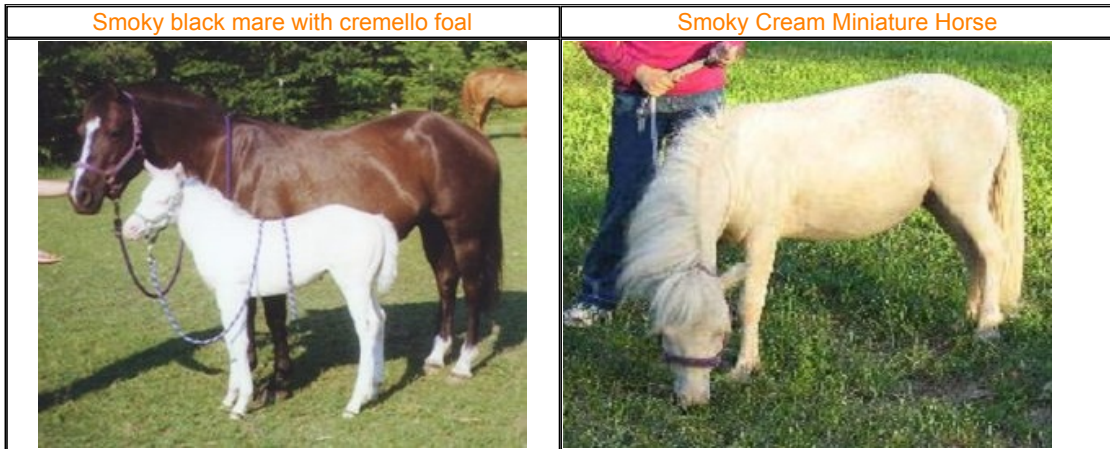
Palomino and Cremello

The cream dilution gene on a chestnut or sorrel base coat results in horses that are palomino (single dilution) or cremello (double dilution). A palomino has a light yellow to dark golden body, with a white mane and tail. Palominos cannot have dark hairs in their manes or tails. Cremellos are lighter than palominos, and almost white. They will have white skin and light colored eyes. Sometimes, it can be very difficult to tell a cremello horse from a white horse, but cremellos can have white markings, so if you look closely and see a difference in color on the legs or face, the horse is probably a cremello.



Smoky Black and Smoky Cream

Any base color can be diluted, including black. A single dilution of the black by the cream gene results in a horse that is smoky black; and a double dilution results in a smoky cream horse. As you can probably tell from these pictures, it can be very difficult to tell some of these colors apart. In the past, the only way to tell if the horse carried some of these genes was through seeing what colors their foals are, like in the photo below. Genetic tests are now commercially available, and many breeders of horses with dilution genes do have their breeding animals genetically tested so they know exactly what genes are present in the parents.




Dun dilution gene (also known as Dun Factor)

The dun gene dilutes the body color of the horse, but does not change the color on the points or head. It is also common to see primitive markings in dun horses. Depending on what the base color is, the dun can range from a very light apricot color to red dun, and very dark colors.

Red dun (diluted chestnut)	Bay dun (diluted bay)	Brown dun (diluted brown)	Grulla (diluted black)



[Align Activity](#)

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Modified Coat Colors

Some colors are created by a gene making a modification of a base coat color, or a change where the original color is still recognizable.

Gray (Grey)

Gray horses can be in many shades and varieties. Horses that are gray can be born in any base color, and then as they get older, they get more and more gray or white hairs in their coat. Some horses stay very dark for several years before becoming lighter, and some horses get gray very quickly. Foals will have a hair color of the base color when they are born, so you may not know for a while that they are going to be gray. There are a couple of good ways to tell if your colored foal is going to turn gray.

1. One of the parents must be gray. Gray is a dominant color, so if neither parent is gray, they cannot pass the gray gene on to their foal.
2. The foal starts to get white hairs around it's eyes and muzzle when it's foal coat starts to shed out.

There are many ways gray colors are described. One way to describe a gray is based on the base color.

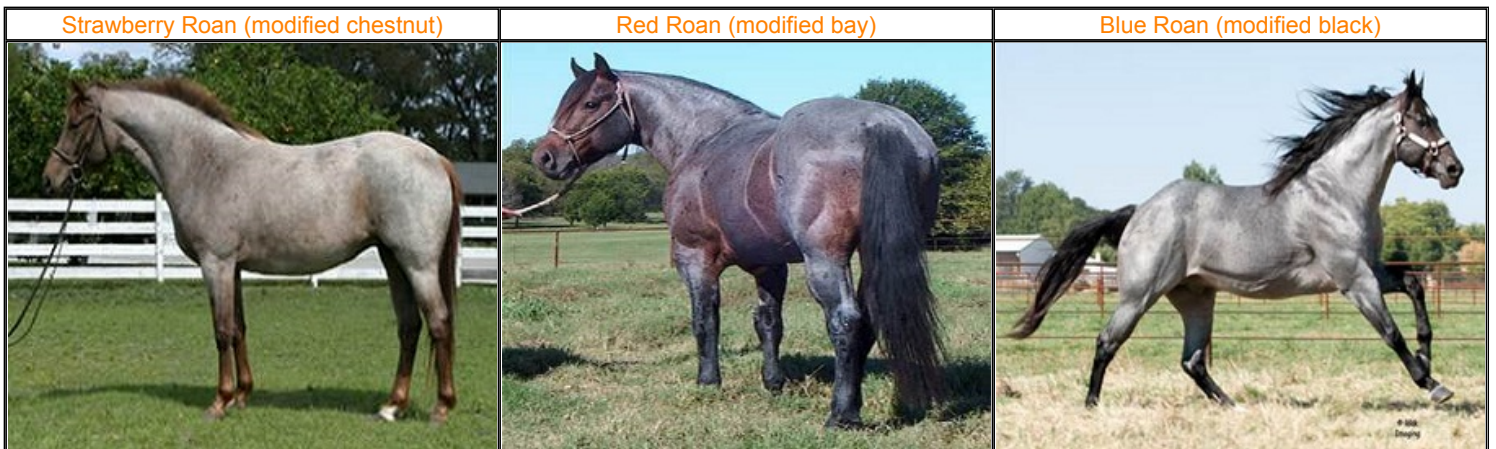



Grays can also be described with terms such as dappled, where the variation in the hair color is in a circular pattern, which you can see on both the rose gray and the steel gray above, and fleabitten. These specks do not get lighter as the horse gets older. The final thing to remember about gray horses is that they have dark skin and eyes. That is how you tell a gray horse from a white horse. Some horses when they finishing 'graying out' look to be completely white, but if they have dark skin and eyes, you know they are actually gray. Gray horses may also have white markings, but you often can't see them when the horse becomes more gray. You can tell if they had white markings by looking to see if they have pink skin on their legs and faces. Sometimes when a gray horse is wet, you can see where they have white markings. If you look closely at the horse below, you can see that he does have white leg markings, although they are hard to discern from his coat color.



Roan

Roan is another modification of the basic coat color, where white hairs are scattered throughout the basic coat color. Roan horses have heads and legs the color of the base coat, and the white hairs can either be uniformly scattered throughout their coat, or may be heavier in some areas than others. Unlike gray horses, roan horses do not become whiter and whiter as they get older. Although their coloring may be a little different in different seasons, and roan will always have the base color showing. Just as in grays, roan colors are identified differently depending on the base color.



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White Patterned Colors

The base color of a horse can also be affected by different types of white patterns. This section of the module will discuss some of the common white patterns that occur on the base coat color. When talking about these horses, the base color is stated first, and then the white pattern. So you could have a 'bay pinto'. Diluted versions of the base colors may also have white patterns on them.

Pinto

The pinto color pattern is one that is an irregular pattern of white and a base color. Although you may hear these horses also referred to as 'paints' the color pattern is actually pinto. The American Paint Horse is a horse of stock type breeding that must meet the registration requirements of the American Paint Horse Association. There are two general terms used to describe the color patterns of pintos, tobiano and overo. Pinto colors may be described as piebald or skewbald, but these terms have become less and less common, and you will more often hear the base color used to describe the horse instead of one of these terms.



Pinto pattern: Tobiano

Tobiano is the most common of the pinto patterns. The feet and legs are white while the head is mostly non-white with dark eyes. The white pattern generally crosses over the back from one side to the other, and there is a clearly defined line between the base color and the patches of white. The edges where the white meets the other color tend to be smooth. The legs and head may have recognizable markings similar to what would be seen on a solid colored horse.



Pinto pattern: Frame Overo

Frame is one of the three overo types. Frame horses have dark feet and legs, but a head that is mostly white. Blue eyes are common. White is generally found on the sides of the horse, and while they have a clear line between the base color and white, the line is more ragged than that of a tobiano. These horses also carry the Lethal White gene which causes foal death shortly after birth, referred to as lethal white syndrome.



Pinto pattern: Sabino Overo

Sabino horses are clearly distinguished from the other overo patterns by having extensive white covering the body; the head and legs are mostly covered. They are also easily determined by the jagged lines between the base color and white as well as displaying a speckled or flecked pattern. Sabino horses can have blue or partially blue eyes and birth to lethal white foals is possible.



Pinto pattern: Splashed White Overo

Splashed white overo horses have white legs and an underbelly, which can extend up the sides of the chest and/or neck with clearly defined white areas. They appear as though they were "dipped" in paint and generally have a large amount of white on the face. They often have blue eyes, and in rare cases where the ears are completely white and lacking pigment, may be deaf.



Identify Activity



Appaloosas

Appaloosa is a coat pattern, as well as a breed. Although in the United States the Appaloosa coat pattern is most frequently associated with the stock type Appaloosa breed, or the Pony of the Americas, there are several other breeds in the world that have the Appaloosa coat pattern, including the Knabstrupper and the British Spotted pony. The Appaloosa pattern may also be seen in Miniature horses. There are several spotting patterns that are characteristic of the Appaloosa color pattern.

Blanket

A blanket pattern is one where the solid coat color has a contrasting solid white area which covers the hips. This blanket may extend forward over the back and towards the withers. The blanket pattern can either be solid white (snowcap), or have spots that may be the same color as the contrasting coat, or a dilution or modification of that base color. For example, you could have a Red roan blanket pattern, or a palomino blanket pattern.



Frost

The frost pattern has a dark base color, and roaning that becomes more concentrated toward the back and hind quarter.



Leopard/ Few-spot Leopard

The leopard pattern is a white base coat with colored spots all over the body of the horse. The number, size and shape of the spots is highly variable. One pattern variation is primarily white, with a small number of spots, and that pattern is known as a 'few-spot leopard'.



Snowflake

The body color is a solid dark color, with white spots throughout the body. This color pattern may change as the horse continues to age.



Varnish Roan

The body is roan, either red or blue, with varnish marks on the face, hips, wither, elbows, stifle and knees or hocks. Some individuals will have additional spots on the body, and other will not. The roaning in the Appaloosa pattern is caused by a different gene (LP) than the modifier gene discussed earlier (Rn). This results in a color that progressively lightens each year, although the places with the varnish marks stay the original roan color.



With any of the white patterned horses, there are opportunities for horses to be born whose patterns do not fit neatly into the categories we have described. Here are a few examples of patterns that are not easily described.

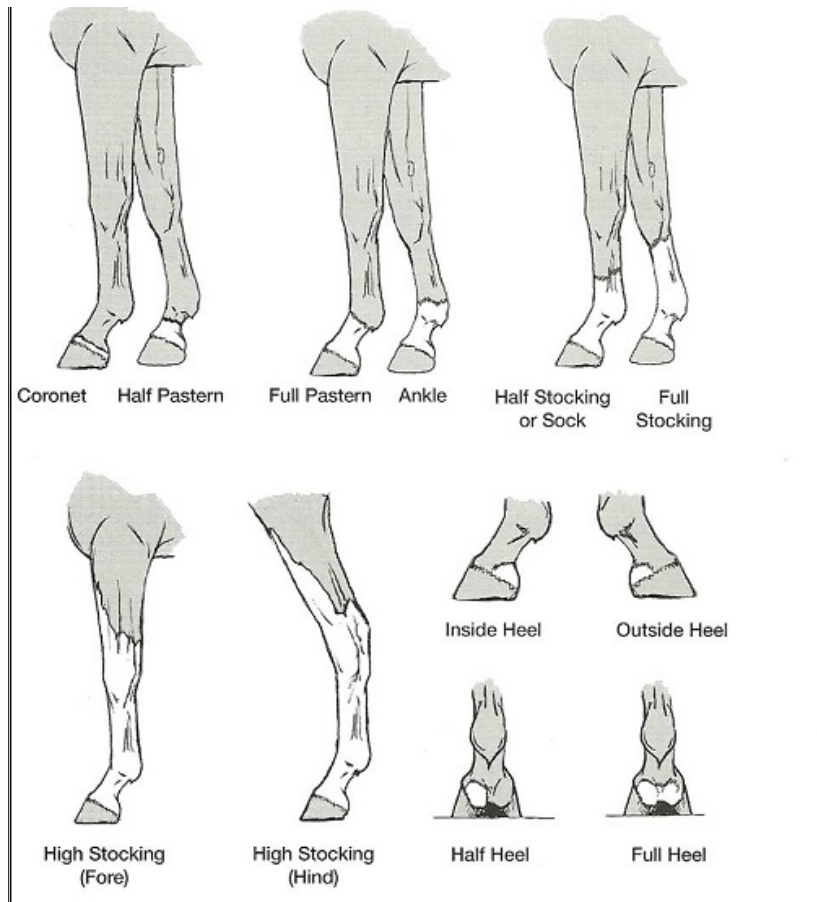
Markings

Horse color is described with a combination of the coat colors, which we have addressed earlier in this module, and markings. These markings help us to tell apart the many horses that share a base color. White markings on the legs and face of a horse are used as a form of identification for breed registries, as well as on veterinary forms such as health papers or Coggins tests. They are unique to each animal and the marking name is determined by the amount of white as well as the location on the body. These markings do not change over time, even on gray horses. As the gray horse becomes lighter, it may be difficult to see these white markings, but they are still there. It is important to keep in mind that the terms for markings can vary among breeds or disciplines and may be different from the those listed here.

Leg Markings

This image is from Equine Science by Jean T. Griffiths.





Coronet—thin band above coronet band of hoof

Half pastern—extends halfway up pastern

Full pastern—covers all of the pastern, not extending into the fetlock

Ankle—white on the fetlock, but below the cannon

Half stocking—white extends to any point on the cannon, above the fetlock and below the knee

Full stocking—white extends to knee, not above it

High stocking—white extends above knee/hock, onto forearm/gaskin

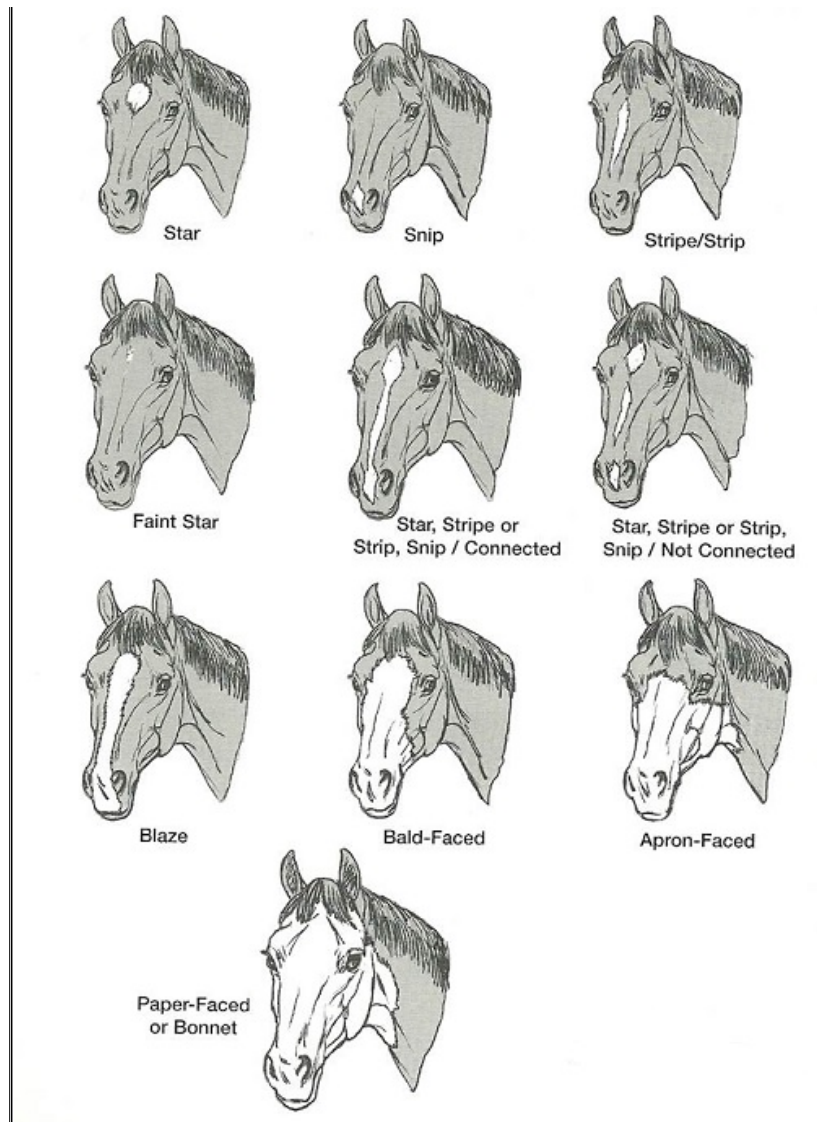
Full heel—white only on balls of the heel

Half heel—white only on half of heel, either inside or outside of foot

Face Markings

This image is from Equine Science by Jean T. Griffiths.





Star—small amount of white located on the forehead, not extending beyond or drastically below the eyes or past the ears

Faint star—very light, small star; may only be a few hairs

Snip—small amount located on nose, between the nostrils

Stripe/strip—thin stripe on bridge of nose below the eye but above the muzzle

**The above three markings can be combined to form a connected or disconnected "star, strip, and snip" marking (thinner than blaze)


Blaze—thick stripe that runs from the forehead to the nose, possibly to lower lip (thicker than star, strip, and snip)

Bald-faced—extension of a blaze that runs the width of the face not extending behind the eyes, may envelop muzzle

Apron-faced—extension of bald-faced; entire lower part of the head is covered as well as the lower throatlatch

Paper-faced/Bonnet—white covers entire face; extends to above and behind the eyes to the throatlatch, not past the ears, and covering the muzzle

Labeling Activity

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Other Distinguishing Markings

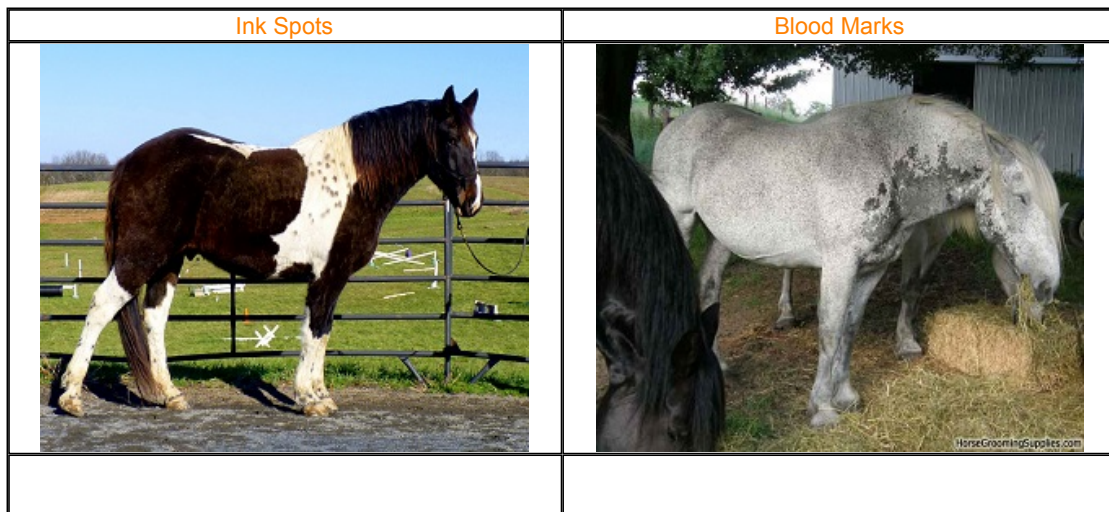
People most often think of white leg and face markings when they think of horse markings, but there are markings that are not white. Cobwebbing dorsal stripes, zebra stripes and wither stripes are all examples of primitive markings, which are seen in dun horses, and are one of the ways we tell dun horses from other diluted colors.



Dappling is another variation in the coat pattern that can be distinguishing. Although we often think of dappling in regards to gray horses, other colors can have the circular, or ring shaped, dapples.



The final markings we will discuss are dark markings on a lighter background. Blood mark is a dark colored patch on the coat. Although it is most commonly seen in lighter colored horses with a dark patch, dark base colored horses can also have an even darker patch. Ink spots (also called paw prints or bear paws) are dark colored spots in the white background of pinto horses.





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