

Dilutions

Dilution Genes

Dilution genes lighten or alter the base coat color.

Cream (CR)

Cream is an incomplete dominant dilution. One copy creates a single dilute, while two copies create a double dilute.

Single Cream

Base	Result
Chestnut	Palomino
Bay	Buckskin
Black	Smoky Black



Double Cream

Base	Result
Chestnut	Cremello
Bay	Perlino
Black	Smoky Cream



Palomino Variations

Standard Palomino



Dappled Palomino



Light Palomino



Buckskin Variations

Standard Buckskin



Golden Buckskin



Dark Buckskin



Light Buckskin



Dun (D)

Dun lightens the body while leaving primitive markings visible. Primitive markings include dorsal stripes and leg "zebra stripes"

Base	Result
Chestnut	Red Dun
Bay	Bay Dun
Black	Grulla



Primitive Markings

A horse may display primitive markings without being fully dun.

The Dun locus has three possible alleles:

Allele	Effect
D	Dun dilution + primitive markings
nd1	Primitive markings only
nd2	No dilution and no primitive markings

Dominance order:

D > nd1 > nd2

This means Dun overrides both nd1 and nd2, while nd1 overrides nd2.

Non-Dun 1 (nd1)

Non-Dun 1 is incredibly interesting because it is basically a "partial remnant" of the original Dun gene.

Horses with nd1 are **not diluted**, but they may still display primitive markings.

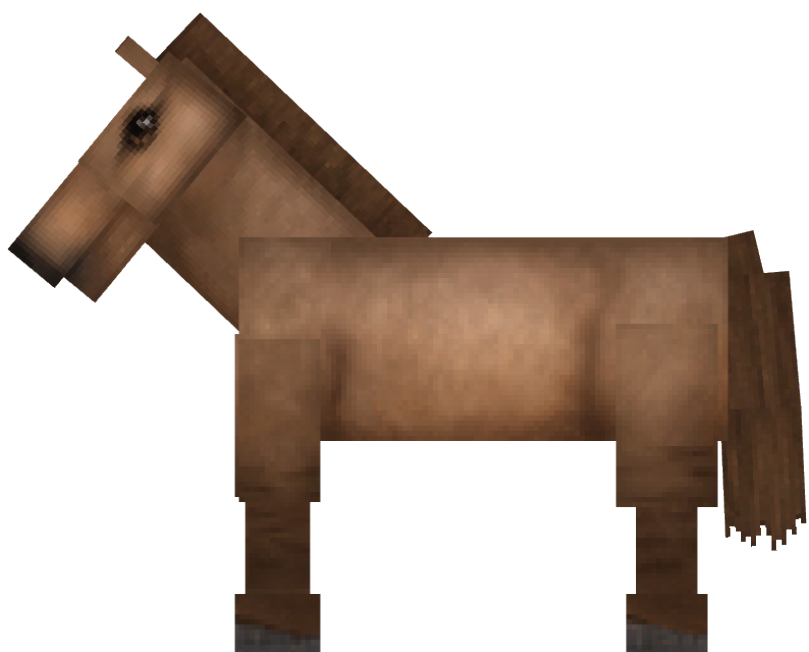
Genotypes

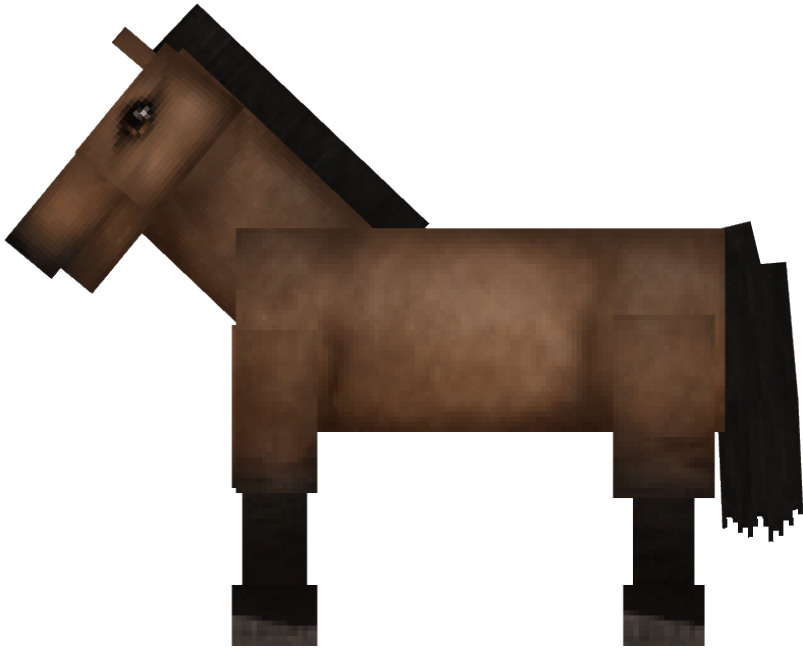
Genotype	Result
nd1/nd1	Primitive markings possible
nd1/nd2	Primitive markings possible

Traits:

- Dorsal stripe
- Leg barring

However, the body color remains undiluted.





Non-Dun 2 (nd2)

Non-Dun 2 is what most modern horses carry.

Genotype

Genotype	Result
nd2/nd2	Normal coat color

These horses:

- Are not diluted
- Do not naturally display primitive markings
- Cannot pass Dun unless bred to a horse carrying D

Champagne (CH)

Champagne dilutes both red and black pigment while creating lighter eyes and mottled skin.

Base	Result
Chestnut	Gold Champagne

Base	Result
Bay	Amber Champagne
Black	Classic Champagne

