

Brownies & khakis

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... and the many faces of dun colour...

It seems the new fashion colour in chicken wardrobe is dark brown. Which one?

There are two ways to get those fancy colours. The first you've read in the Chocoholics article (will follow later on this site), a few Orpingtons, Wyandottes, Japanese, Silkies and lots of Seramas are dressed in it. But there is a look-a-like colour: dark brown dun colour.

Where chocolate is a bit of a complicated colour, although pure an easy one, dun colour is, like blue, segregating in many shades, depending on the amount of black that's diluted by the dun gene.

Chocolate, dun colour and blue are diluters of black. Did I forget lavender? Nope, lavender is acting different, so skip it here.

As you read in the Chocoholics article chocolate (choc) is sex-linked recessive. Genes come always in pairs, one dose from mom and one dose from daddy. In chocolate that's different, its like gold and silver, the male can have two doses and the female only one, because its on the sex chromosome. So a chocolate cock has two doses of the chocolate gene to express it (its recessive so one dose won't express!) and the female needs only one dose to be chocolate to express it.

The counterpart of sex-linked is called 'autosomal', that means on both sexes the same expression of a gene. Most genes for colour and other traits are autosomal, it doesn't matter if the male or female carries it and such an autosomal gene always comes in two doses because its not on the sex chromosome.

Sex linked recessive chocolate is the same gene that gives dark brown in Muscovy ducks, therefore I try to push the other name for chocolate to prevent mix up with dark brown dun which is already called chocolate in de fancy: bronze!

Dun colour

Dun colour is autosomal, it looks/acts the same on the hen and the cock. Easy. Dun colour is a bit of a weird gene because its located on the site where dominant white is located too. In difficult words: dun colour is an allele of dominant white. What can you do with

it? Nothing, just knowledge. You won't get a dun coloured from dominant white birds, unless its already in the bird or you have a spontaneous mutation in your pen. That's how it once went. It popped up and is preserved by some breeders because they thought its a nice colour variation. Dun colour is dominant, its dominant over dominant white and black and thus it will dilute black.

Do we know dun colour?

Yes, in game its known as 'fawn' for decades, or centuries? There are several breeds in which dun colour is a standard colour variety. On game and also on the Tsjechian Vogtländer, a rare breed on the Continent. Its also present in the re-created Burmah bantams (single comb), Polands (USA) and in Seramas (miniature chickens). Its in lots of experimental colours now, like dun mille fleur in Belgian bantams, Cochins bantams etc. You can make any combination because its a rather simple black diluter.

In America it popped up in Araucanas and from there it was 'transplanted' into white crested black Polands which are known under the hobby names khaki and chocolate.

Those Polands came to Europe several years ago and they are bred in large quantities and shown on club shows. Also derivatives as dun cuckoo are made.

How does dun work?

Best comparison is with blue. One dose makes the dark brown dun, hobby name chocolate in the Polands. Two doses make dun splash, hobby name khaki in the Polands. Dun colour breeds as follows:

Two doses (dun splash or khaki) breed true, so 100% dun splash or khaki.

Dun splash x black will give dark brown dun (100%).

Dun splash x dark brown dun gives dun splash (50%), dark brown dun (50%).

Dark brown dun x dark brown dun gives dun splash (25%), dark brown (50%) and black (25%).

Dark brown dun x black gives 50% dark brown dun and 50%



White crested Poland bantam cocks in dun splash or khaki and dark brown dun colour.



White crested Poland bantam hens in black, dark brown dun and left is khaki or dun splash.

black. You see, its easy to compare with the way blue inherits. Dun is diluting black to a cold dark brown colour when there is no (autosomal) red in the feathers present. It doesn't work on red or gold, only on black. Like in blue, ornamental feathers in cocks are darker than body feathers, this is especially in dark brown dun and due to the feather structure.

What's the difference between dun colour and chocolate/bronze?

You can only tell that by breeding the colour, so when in 10 years from now there are lots of dark brown birds, you need to know the recipe otherwise test breeding is the only solution.

When the dark brown is chocolate/bronze and you cross such a male to a black female all cockerels will be black and all pullets will

Burmah bantams in dun colour, left dun splash or khaki, right a shade inbetween, bottom dark brown dun colour. Gold and autosomal red are not influenced by the dun gene.



Top: A dun splash or khaki Poland bantam hen and a Vogtländer hen, almost the same shade.

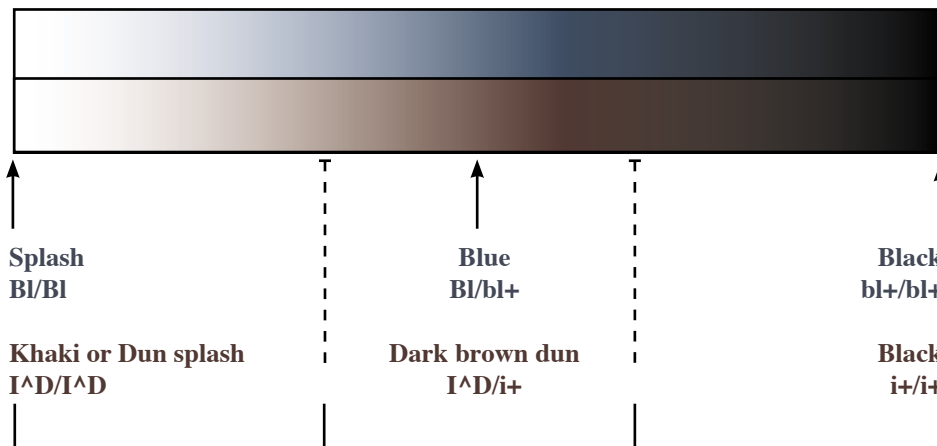
A dun splash/khaki and a dark brown dun Vogtländer.



Left an OEG, right a Vogtländer cock.



Segregation of blue and dun colour.



be chocolate/bronze. When the dark brown is dun colour and you cross a dark brown male to a black female you get both cockerels and pullets in black and dark brown dun.

As soon as there is born one black pullet or one dark brown cockerel from a dark brown daddy and a black mom its dun colour and not sex linked recessive chocolate or bronze.

Recipes of dun colour and chocolate/bronze
Dun splash or khaki is written I[^]D/I[^]D.
Dark brown dun is written I[^]D/i+.
Black is written as i+/i+.
Chocolate/bronze on a cock is written as choc/choc.

An impure cock (he is black) is written as choc/Choc+.
 A chocolate/bronze hen is choc/-.
 The plus indicates 'point-zero' which is how Red Jungle Fowl looks, and its the counterpart of the gene. The plus is old fashioned, but for us fancy breeders, its more easy to understand how the gene works and what its counterpart is because we all know the colours of Red Jungle Fowl.



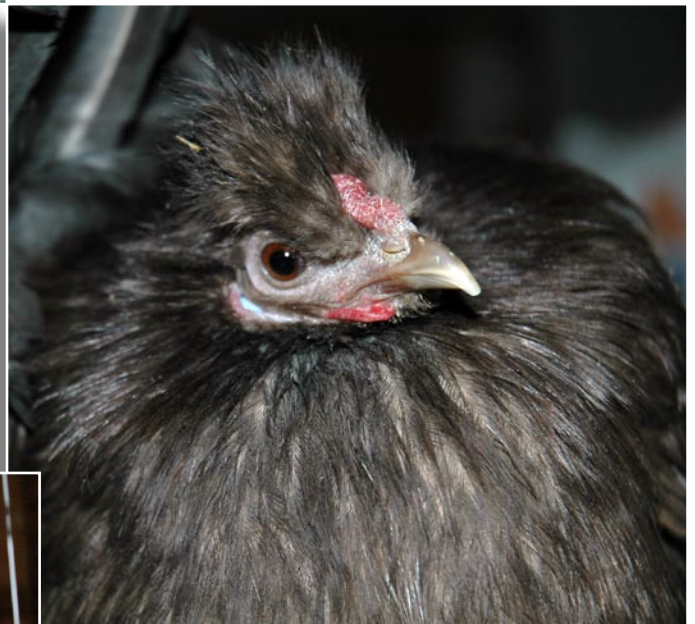
Top: Left a chocolate/bronze SilkieRama (F1) and right a Serama.



Left: left a chocolate/bronze SilkieRama (F1) and right a dark brown dun Poland chick. The dark brown of dun colour is a more steel like colour, its cooler in shade than chocolate/bronze.



A few dun coloured Burmah bantams.



Portrait of an F1 SilkieRama hen.



Top: first Japanese in chocolate /bronze. Right: the mottled variety. Its a matter of taste but I like the mottled above even coloured since chocolate/bronze is just as sensitive to UV radiation as blue and dun colour causing an uneven shade when feathers start to bleach (in between moulting) and at the end of the Summer.





April 2009, the first even coloured chocolate/bronze cockerels are born in smooth and silkied. Goal was an even coloured, mottled and silver pencilled in both smooth and silkied.



April 2009, choc silver pencilled is 'preserved', as from the original roosters. Here a pullet, note the autosomal red as in her granddad top right.



This is one of the (two identical) chocolate/bronze Serama roosters I did not breed with because of the lousy type. One day I thought: is this dun colour or recessive sex linked choc?

So I paired both ugly roosters to handsome black Serama hens and all daughters were brown and the sons black(ish). It is only this year (2009) the first dark brown cockerels are born because it takes two breeding rounds to get the males pure. I crossed split roosters to brown hens hoping 50% of them would be chocolate/bronze and they are. I created 4 different lines.

Imagine how excited I was when I found out it was recessive choc which is only in the English Orpingtons, and recently in the Wyandottes over there. I have now chocolate silver pencilled, chocolate mottled, chocolate even coloured, and both in smooth and silkied feathered in the Seramas.

Disturbing factor in chocolate/bronze breeding is the autosomal red as you can see on the shoulder of one of the original roosters. They both have it.

Bottom: two chocolate/bronze silkied Seramas of the same age.

