

# THEORY AND PRACTICE IN THE CREATION OF THE BLUE SALMON COLOUR IN WYANDOTTE BANTAMS

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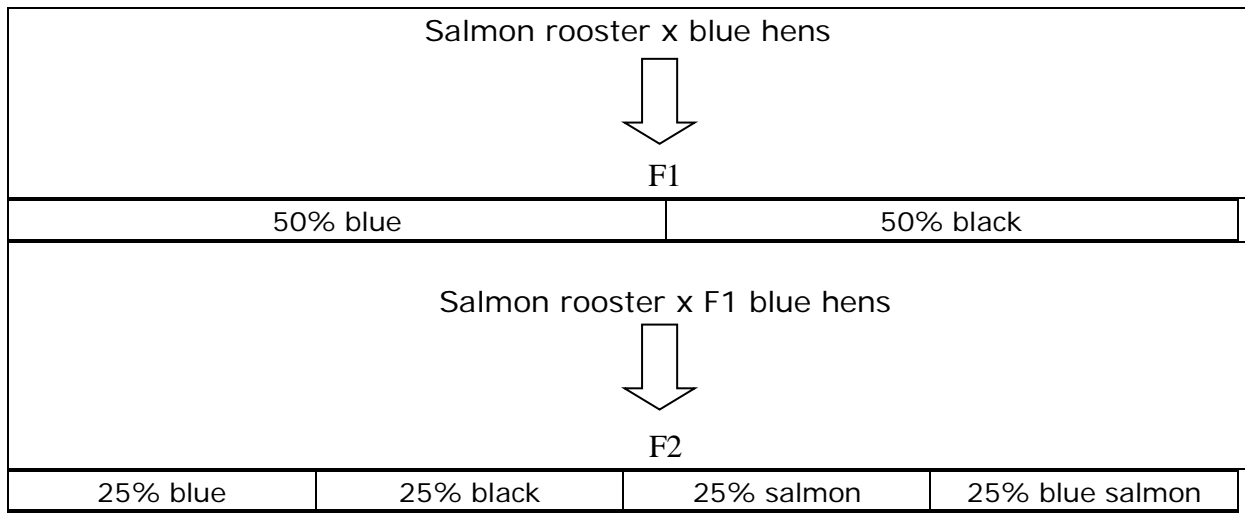
**Above: Blue salmon Wyandotte rooster and hen.  
Photo courtesy of: kippenencyclopedie.nl**

The salmon colour is one of my favorite chicken colours. Over the years I had the standard and miniature Faverolle and a German type salmon Wyandotte bantam during the years. The thing that impresses me is the blue variety of salmon colour. As we know, the blue salmon colour is created and standardized only in Faverolle bantams.

In Bulgaria during those years I could not find a blue salmon Faverolle bantam, and my efforts to import hatching eggs from Holland were a complete failure. Then my friend Ron Hamann sent me eggs from salmon Wyandotte bantams, from which some very good birds hatched, these were the first salmon Wyandottes in Bulgaria. I had blue Wyandottes that I was raising for several years. Then I got the idea to create a blue salmon colour variation in this worldwide popular miniature breed. I gave all my Faverolles to a friend and started the "blue salmon Wyandotte project". During the year 2010/2011 I could not find any information concerning that colour in the breed, so this was a great challenge for me as a breeder.

Blue is one of the most difficult colours for breeding and anyone who has been engaged in exhibition poultry knows what a challenge it is. On the other hand the combination of salmon colour with dilution *Bl* gene gives us a very beautiful combination ... a real feast for the eyes. Close to it is the blue wheaten colour, which is more popular than blue salmon.

Before I started working on the creation of this colour I did a theoretical calculation using the available salmon and blue birds. The available online genetic colour calculator, prepared by Henk Meijers (NL), is freely available and easy to use. Here you can find a lot of useful information regarding pre-testing of future projects: <http://kippenjungle.nl/kruising.html>. According to my calculations for two generations, I had to have a sufficient number of salmon and blue salmon birds by the following scheme (Fig. 1).



**Figure 1.**  
**Scheme for creation of blue salmon colour with using of blue and salmon birds.**



I gathered the flock and started the crossing in the Autumn of 2011 (not really a good time for chicks, but I could not wait until the spring of 2012). I used a salmon rooster which hatched from eggs sent to me by Ron Hamann (Germany) and my blue Wyandotte bantams, imported from Holland (Fig. 2).

**Figure 2. A part of the breeding group for the creation of F1 birds.**

**Figure 3. F1 blue birds, made by the crossing of salmon and blue Wyandotte bantams.**

In the first generation (Fig. 3) everything was according to my expectations and the theoretical prediction: half black and half blue chicks. They had hatched a large number of F1 birds, from which I was able to select the best blue hens. Phenotypically the males had blue or black ground colour with straw-yellow in



shoulders, hackle and saddle feathers. The hens were with blue and black plumage without any other impurities.

**Figure 4. A breeding group for F2 birds.**



I chose the best F1 blue females and gathered them with their father – the salmon Wyandotte bantam for the second backcross (Fig. 4). Here theoretically 50% of the chicks should be salmon or blue salmon colour, but actually there was a large degradation in the plumage colour in F2.

Of over 40 hatched chicks were only two females with salmon colour and a few



**Figure 5.  
Different colours  
of F2 birds.**

male but with a poor colour of the wings triangle and yellowish neck and saddle. The other birds were black, blue, birchen, golden birchen and colombian colour (Fig. 5). Here I was very disappointed with the result, frankly ... I was not sure of the success of my project.

Another big problem appeared in my efforts to import hatching eggs from salmon Wyandotte bantam so I could use them in the F2 cross with the blue salmon birds (which did not appear in F2). First Ron Hamann sent me a large number of eggs from his birds, but my incubator baked them in the last days of incubation due to electric shock! Then I tried to import eggs from Serbia, but during my trip there the birds had started to moult and there were no hatching eggs. Even this did not discourage me; I ordered hatching eggs from a German Wyandotte breeder, which I loaded into a new incubator and some of them under a hen. Unfortunately, only one egg from all 30 eggs had a developing embryo. Luckily one chick hatched, which was male, not a very good specimen, but it would carry fresh blood for my birds. When this German cockerel survived the winter of 2012/2013 (which was very severe here in Bulgaria) it has reached sexual maturity and was completed with two salmon F2 hens, which were lovely hens- one of them was slightly brighter than the other (Fig. 6).

**Figure 6.**  
A breeding group for creation of F3 birds: salmon male with F2 salmon-like hens.

Shortly before I began to collect hatching eggs, the health of the German cock deteriorate and he died. In that time I had collected only 6 eggs which I put under one of the F2 hens with salmon colour and Colombian gene. In the fall of 2013 one chick had hatched from those 6 eggs, which to my delight it turned in blue, and a little later I saw it was a blue salmon colour.

One of the brighter hens from F2 turned out to be a blue salmon colour and accidentally the hatched chick was her son, luckily the *Bl* allele which she wore in the heterozygous state was combined with wild-type allele from the salmon cock in crossover. A unique stroke of luck which was a happy ending of the string of bad luck.

**Figure 7.**  
Blue salmon cockerel from F3 generation with salmon and blue salmon hens (Right) and blue salmon female (Left).

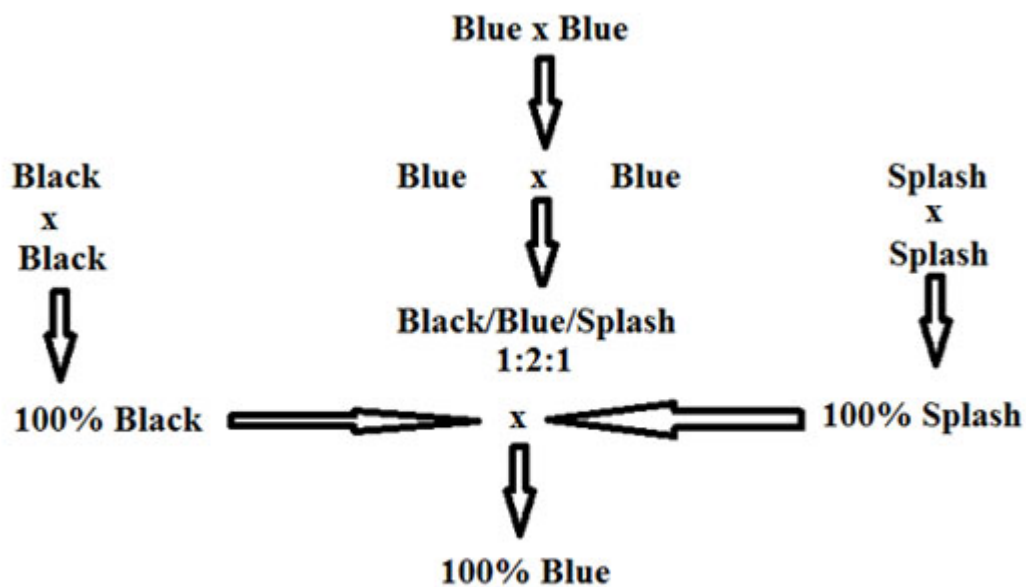


Today, this cock is sexually mature and I gathered him with his mother and aunt to get splash, blue and standard salmon F4 chicks. In the incubator there are more than 20 eggs of them and the collection continues. In the beginning of April I've hatched the first 12 F4 chicks (Fig. 8), so maybe there is some great blue or splash salmon bird, we will see .... I have also salmon Wyandotte bantams imported from Austria to cross with the possible splash or blue salmon birds from F3, where I can have the opportunity to make a selection and gradually improve both the exterior and the colour of birds.



**Figure 8.**  
F4 salmon/blue salmon  
Wyandotte bantam chicks.

By using this scheme, each breeder of the salmon Wyandotte bantams could try to diversify the range of colours in the breed. The good news is that once produced the salmon blue colour can cross with salmon on the familiar Mendels scheme with Andalusian hens (Fig. 9).



**Figure 9.**  
Scheme for inheriting of the blue colour in the *Gallus gallus domesticus*.

With this article I don't want to take a credit for the creation of a blue salmon colour in Wyandotte bantam, but to show to my colleagues how they could improvise with their birds. On the other hand, this is a way to show that despite a series of failures, when a person is persistent can achieve its goals. In the end I would like to thank all my friends who supported me in this endeavor.

PHOTO UPDATE MAY 2014

**Left:**  
**Blue salmon female chick F4.**

**Below:**  
**Blue salmon male chick F4.**



**Left: Another blue salmon male chick.**  
**Below: To compare: salmon and blue salmon male chickens.**





**Below:**  
Colour and marking of various blue salmon feathers.



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