



One of the first paints, note the comb, they come from far...

**UNIQUE UPDATE
ON BREEDING BY
INTERNATIONAL
COOPERATION:
LEARN FROM
USA BREEDERS!**

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PAINT SILKIES NEW INFO

Two different kinds of paints.

When you invest a lot in your social contacts and contribute yourself too, you learn more compared to keeping all your experiences to yourself, or when you only take and give nothing.

In 2010 the book *Silkies and Silkie bantams* appeared. This book was based on the Dutch Silkie book which Ringnalda and I made in 2005 and which I rewrote for 90% for the English edition. Only the history part was left unaltered. Other subject went through my mincer and reinterpreted and complemented. The result is a wealth of knowledge for the English speaking Silkie World.

Paint Silkies in the USA

It was the Summer of 2010 I got an email from Brenda they found paints in America. She and a friend drove over, some 1000 kms from Texas. In real time Brenda sent me (in Holland) the photos she and Deb made at Judy Lee's place of the American paints. It was here a hot Summer and it became a wake night, we were soooooo enthusiastic about the discovery...

I asked for the details, based on my knowledge of Dutch paints. First there was some doubt (because too good to be true) whether the paints were heavily spotted splashes. As the flow of photos grew, it was perfectly clear: these were American paaaaaints!!!!

Where did they come from? The whole story how they came is not important here, this article is an excerpt of the new things we found about the USA paints, which can be of a benefit for European paint breeders. Of course we continue, in

The colour paint in the large Silkies in Europe is a guess for many years and I like to bethink all sorts of theories about it. After the publication of the book *Silkies and Silkie bantams* in North-America in which paint is discussed, the ball started to roll and it became bigger and bigger. The paint Silkies in the US have a different origin than the ones in Holland. The Dutch story goes like: a white Leghorn is the basis, stories mostly lead a life of its own.

Was the addition of dominant white really the cause of paint? Or was this the most notable fact which the creator remembers and did he miss the real cause? Unknown, unloved (known unloved too ;-)) and what is known will be remembered, could the cause be something else? Thinking this way is called: thinking out of the box... lets start to do this!

the USA, first share these findings from the American Silkie breeders because this is not known in Europe... let's come to the point!



Above Adam in faded Summer suit 2010, who gave the first paint, he himself has a mixed colour of blue, black and silver. This was the rooster Judy Lee got.



Adam is famous, although not a beauty.

Adam in 2013, born in 1999 and passed away in April 2014.

ADAM



Adam was paired to a recessive white hen. From this all sorts of colours were born. Also a silver leaking black rooster (Daddy Mac). He was paired to a recessive white hen. One chick from this mating had a spot. This chick was a hen and she was paired back to her father and this continued, back to recessive white and so on until more and more chicks had black dots. In the fourth year there were four dotted chicks and later this year there were fourteen, and so on...



FACTS STRAIGHT...

1. GRAY OFFCOLOUR

...associated with dominant white, this is based on the grey offcolour in mostly roosters and sometimes also hens, seen in more breeds with dominant white i.e. with silver. New: this grey offcolour is also seen on bobtail coloured Cochin bantams. About bobtail colour I will come with an update later. Also leaking red is something from dominant white in homo- and heterozygous. The dominant white story is based on the first story of the Dutch Silkie from white Leghorn, and there still are facts which support this, although I have to make it genetical fit by new findings and not by conventional thinking, no: thinking out of the box... why isn't it recessive white?

PAINT: Grey offcolour and grey offcolour seem to be sometimes two different things. There is the khaki coloured offcolour in lower hackle of roosters (as on dominant white and bobtail) and another sort of offcolour which is not a specific hackle thing. This offcolour can change on roosters from khaki to gold, to light gold which is hardly visible and disappears the next moult. Is this passed on to offspring? Not always. Should you give time to greyish/khaki cockerels to develop? Yes, when he is a great Silkie, give him some time.

White on paints is less crisp white compared to recessive white Silkies. A cross paint x recessive white from blacks based on S/S or S/-, you will get a few more blacks compared to paints. The paints will be way more white than from paint x paint cross. The roosters from silver based black recessive white x paint suffer less from grey offcolour compared to the roosters from paint x paint. There will be born more in % without the offcolour. For the use of recessive white birds applies the same as mentioned hereafter: only the best, to improve the paints. From recessive white x paint there will be born also whites which have a (partial) red comb. These are often roosters, a hen is possible too but less. You will get paints with nice black spots and a crisp white ground colour.

Bobtail colour on Cochin bantams.

Offcolour in paint Silkie.



Left: recessive white paint, right normal paint.



A normal paint is ivory white instead of crisp snow white.

Recessive white paint chick and its 'normal' recessive white father, on the photo above he just turns around the corner.





Recessive white paints...



A khaki coloured cockerel which lost the offcolour after moult.

2. PIGMENT HOLES

... these are typical for paint chickens, why? What has skin pigmentation to do with feather pigmentation? The holes look reversed to the white sheet with holes covering the feathers (as I compared paint alike appaloosa colour in horses). There is something not right, or is it right? The pigment holes are caused in dermal melanin and not in feather melanin, the mutation causing paint inhibits *id+* (dark legs) and *id+* in its turn is necessary for the expression of black skin (fibromelanosis). The pigment holes (pink) appear in skin and the iris (yellow to brown) where's also a lot of black pigment.

PAINT: it is possible to select against pigment holes. Parents with holes give more children with holes than parents without. It helps more heavily melanizing the paints by crossing to megablack birds. What helps even better is a cross to recessive white of which the parents come from black based on silver. Also breeding to black paints (from paint) which don't show pigment holes improves melanization. Eye colour problems are almost history when you apply these two techniques. Judy Lee could show the first pigment hole-less



2010, at Judy Lee's during the discovery of the American paints, talking about pigment holes... also in splash from paint.



legs after severe selection in 2012, the white nails, uh, those occur still sometimes. By a cross to recessive white even the nail of the middle toe can be black Brenda showed.

3. EXPRESSIONS OF PAINT

Paint can be 'white paint', these are the paints we know as paint: white birds with black spots, and: 'black paint', the



Paint from recessive white is the recipe to mute the pigment holes.

Below: also normal paints can have hole-less pigment, its a long way of selection with casualties.



blacks from paint x paint or paint x black, which can have pigment holes and/or a few white feathers (crest, toes, wing tips, the extremities of the chicken) or be solid black. There seems to be not much in between, there is not such a thing as 50/50 black white distribution on paints.

In Holland the blacks from paint are considered as waste or collateral damage because they can't be used for black bearded Silkie breeding (LF).

PAINT: genetically there is no difference between the white and the black paints, its gene expression. The black paints can have some leakage in hackle

(roosters), be solid black or with a little white in it, which I also saw in 'my time' in the Dutch paints.

The white paints have generally small spots when they come from paint x paint. In the USA there should be a clear difference between paint and splash, which is an accepted standard colour variety in Silkies. Paint shouldn't mimic splash.

This means the spots on white should be bigger than the flecks on splash with a very light ground colour (there's an article on USA Silkie splash in the pipeline).

In Holland there was/is a time the breeders strive/d for larger spots on paint (I have no contact with Dutch breeders).

A wild pattern is caused by using blue in paint, you'll get a kind of pinto pattern as on horses (paint x appaloosa).

Blue is accidentally crossed into the paints a few times in Holland (or deliberate). Result: very dark blue black paints which give splash paints when paired. On the show of the Dutch Silkie club I saw several 'black spotted paints' which were splash paints, seen from the pattern.

In my book Silkies and Silkie bantams I wrote about this splash-paint in 2010. Cross to blue should be avoided in countries where splash is accepted in the Silkies and paints which look splashy should not be used for breeding.

Paint x paint gives a lot of small spots and a few large ones on fixed locations. Just like in Holland, the American paints have a black band on the saddle. This phenomenon makes me think paint is a mutation of the neural crest in the embryo because the saddle region plays more often a role in mutations, which has to do with the (dorsal) migration of pigment cells during development. This article is not the place to discuss and substantiate my suspicion further.

Paint x normal black, primary goal of this cross was to improve the paints. Only the best blacks were used in the USA to improve Judy Lee's first paints. It were mainly wing problems which had to be fixed, a commonly seen 'Silkie issue' worldwide. In Holland blacks were used to stop the splay legs (due to inbreeding) and usual wing problems and as also in the USA hoping the pigment holes would go away, eye colour improved along with larger spots by more melanization. Only for improving the quality of the Silkie, normal black is interesting, for the bird, not the colour on the first place.



In a country where splash is also an accepted colour, a 50/50 colour distribution between black and white is the best to have. How do you make this?



Paint x paint gives small spots with a few larger ones.



Paint x black paint. Yes you read this correct. The blacks from paint were/are of no use in Holland.



Brenda consistently uses the best blacks and whites in her paints to improve the type. All used blacks and whites are winners. For her, the Silkie is #1 and colour is #2, this is alternated in her breeding every year.



The blacks from paints in the USA are kept so see how they develop as bird, next to colour. The idea arose, because black paints also have pigment holes, they are actually the same as the white paints (with spots), only the colour is a kind of reverted or expressing less white and more black. Therefore the suggestion to breed black paint x paint so see if this was a way to enhance melanization. Black paints without pigment holes of course. The last couple of years the quality of the USA paints has improved so much, the solid blacks from paints are showed to see how they are doing. By showing a black paint you'll hear if its type is good enough to use it for breeding. We don't like waste-birds or bin-birds or too many 'pet-birds': best is to breed only birds you can work with. And the 'useless' black paints (with good type, skin/eye colour) have a place now. Side-effect, and this is utterly pleasurable in the United States, is that you get huge spots! Bigger compared to normal black x paint and sure bigger than from paint x paint. The percentage of black offspring (paints) can be compared to normal black x paint...

Breeding paints is not only breeding spots, you also need a good Silkie!



Breeding with black paints is relatively young, the striving is for 50/50 black and white, so what will give black paint x black paint? Or continue breeding good black paint x paint? And what will give black paint x normal black? The future will tell.

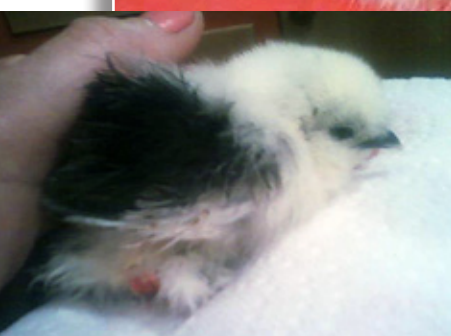
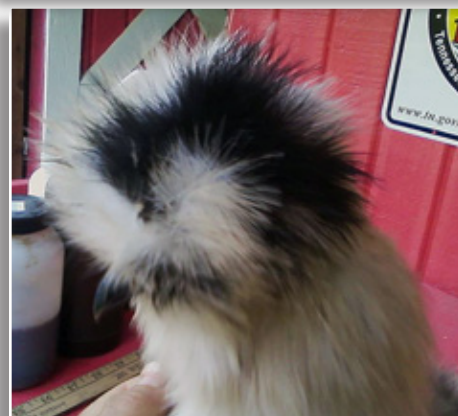


Judy started rather early using black paints.

Black paint, preferably based on silver, is used to enlarge spots. With or without leakage black paints can be found on shows as well. Why not?



Solid white paint, these exist too and I call them few spots, after homozygous appaloosa in horses. Appaloosa horses with a lot of spots are heterozygous, appaloosa colour is incomplete dominant with variable expression.



Big spots from black paint x normal paint.

A homozygous appaloosa is white with only one spot and almost no other markings. The one spot can be found on the lower part of the horse in a lot of cases. This inheritance looks a bit like blue and splash (splash = washed away colour). The solid white paint with perhaps a tiny black feather, inherits as a normal paint. The percentages of solid white paint are app. the same as if used a normal paint. In paint, inheritance is not the same as in appaloosa horses or splash (blue), or this is due to a huge variable expression (a lot of difference between black paint and normal paint and solid white paint) in pure birds. How does the homozygous paint look? The same as paint?

Red paint, or better be called the mystery of red paint. Sometimes (less and less) there are paints which grow red feathers, mostly on the shoulders and in wings. You would think: rooster thing.

It is not, it also happens in hens. There is something going on in the paints which show red. Also in Holland red paints were born in the early days of paint history, I've seen them (too many). The Dutch breeder Willem de Hartog did extensive test breeding on the red paints and the khakis. Probably red paint died silently as also in America and perhaps France (see Silkie book)?

What is going on in the red paints? This was analysed too. In most of them there is partridge 'below' paint. A full substantiation is too long and too technical so



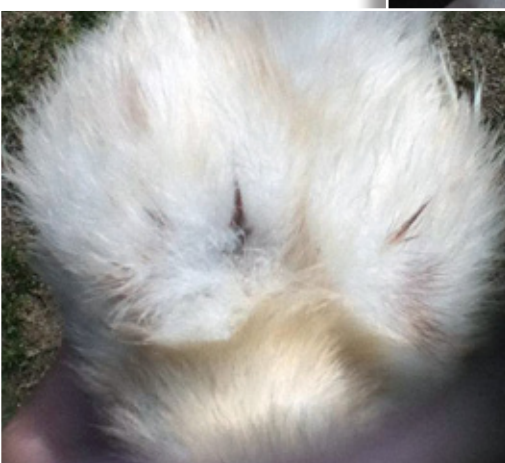
shortly said: becoming 'red' in paints is not limited to the shoulders, also gold can break through in the primaries and secondaries which look buff. These paints have white feathers and did or did not show partridge in chick down, or they come from lines in which before red popped up. Since 2012 they are fought, because this make up also causes red on the shoulders or paint rooster. Red is indeed a rooster thing. Chicks which show partridge, chipmunk stripes or diluted stripes, are expelled from breeding. Also the parents and sibs are not suitable for crisp white and black paints; you just want this in your paints! Becoming red, is something different from offcolour khaki or grey, it does can coexist with it. They are separate things.



Partridge patterned chicks from paint x paint. In most cases siblings show red in more or lesser degree (sisters). In the project 'red paint' they occurred frequently.



There is also a mix: a kind of buff with red.



Red punching through on the shoulders in cockerels with a partridge background or not enough melanization.



Last word

Not mentioned are the experiments which did not result in expected results based on a theory. A longer article will appear later with more substantiation, which can be read on my English website chickencolours.com. Some experiments are still going on.

I hope breeders of paint Silkies in Holland could be helped with the experience which has been built up by teamwork of American breeders of paint Silkies. It is knowledge which is not available in Holland because here it is severally, each on his/her own and share nothing. The above is the result of almost five years of extensive contacts between a group of breeders which grows and grows on the other side of the ocean due to the added value of social interaction by sharing experiences. Together, positive results are much quicker achieved compared to individuals, lots focus on one part of the paint mix and by sharing others learn.

Breeding alone won't give the massive pack of information as you read here. Sharing gives more joy compared to keep everything to yourself hoping you can ruff your fellow breeders with: I know this and that (most of the time its stolen knowledge with which they dress themselves up, you hear back a lot...). Without sharing knowledge and experiences you don't have a sounding board. You do need social and knowledgeable people around you which are prepared to cooperate and who can curb their egos and self-profiling. Above results come from a group paint breeders and I'm proud to have them as friends and could share my enthusiasm for genetics with them. Oh boy, what do I say now?



Splash paint, although I think it is, note the blue feather in the secondaries, it is not always very obvious.



Crisp white paint from paint x paint, it is possible, and sometimes there is blue in them.

Below: chicks with good pigmentation from recessive white rooster (black silver below recessive white) x paint hen.



Eye issues occur in the USA as well, although not the jewel-eye, this is just not enough black pigment.