

What Wattles...?

Text: Sigrid van Dort

Photos: Angela Schouten, Sigrid van Dort and archive Ringnalda

A Silkie with a walnut comb has a dewlap or keel ridge and no wattles.

Nevertheless a lot of standards demand for a walnut comb.

A Silkie should have a rose comb, wattles and not a dewlap.



P/P

Photo: Angela Schouten

Silkie Standard comb and beard:

Comb: Walnut - male and female: set firmly and evenly on the head, almost circular in shape, preferably broader than longer, with a number of small prominences over it, a slight indentation or furrow, transversely across the middle, rising at a point just forward of the nostrils and extending backwards to a point parallel with the front of the eyes.

Wattles: male: Non-bearded - medium size, concave, nearly round, fine in texture, free from wrinkles or folds. Bearded - very small, almost concealed by beard. Female: Non-bearded, small concave, forming a half circle, fine texture, free from wrinkles or folds. Bearded - very small to nonexistent, almost concealed by beard.

Crest: male: medium size, soft and full, as upright as the comb will permit, having a few silky feathers streaming gracefully backwards from lower and back part of crest. The hen a full, compact, soft, globular, well balanced. Defect (not a DQ): horns protruding from comb.



R/R

Showgirls show in full glory their bold throats. Cuckoo showgirl, rose comb. Photo: Angela Schouten.

Facts:

In many standards is mentioned the Silkie should have a walnut comb. This is a pea/rose comb. This can be pure or impure: (P/P, R/R) (P/p+, R/r+) (P/P, R/r+) and P/p+, R/R). All these combinations will give a 'kind of' similar result. Both genes are incomplete dominant, which means they show also when they are not pure (breeding). Remember genes are biology and not mathematics, expression may vary.

Pleiotrophy

... means that a gene has extra effects next to its own action. The pleiotrophic effect of P (pea) in the walnut comb is shrinking of the wattles, the comb mass becomes smaller and a keel ridge or dewlap as seen on Shamos, Brahma etc. There are less feathers on the breast bone because the feathers are wider apart resulting in bold skin. Pea comb can also have little hairs in the face and on the comb itself. Its proven how pea comb reduces the size of the comb and wattles (Wright, Andersson, 2009).

Copy number Variation in Intron 1 of SOX5 causes the pea-comb phenotype in chickens

Its shown that gene SOX5 is responsible for the pleiotrophic effects of pea comb. SOX5 is a growth stop of the facial accessories in an early embryotic stage and has influence of the growth of collagen of comb and wattles. Rose comb doesn't have this effect because SOX5 is not located in the region where rose comb is, the wattles stay the same as in single comb and there is no dewlap, nor a breast ridge or less feathering on the breast bone



P/P



P/P

On a showgirl you can see they have no wattles when they have a walnut comb, and a dewlap. Photo: Angela Schouten

Short explanation and support of the (supposed) present comb genes:

Pea comb (P): Pea comb is a breed characteristic of the Braham, Araucana, Twenthe fowl, Sumatra and other breeds. Pea comb is also called tripple comb because of the three rows. Pea comb is low and elliptic in shape with three in the length situated rows with points from forth to back on the head. The middle row may be slightly higher and most prominent. Pea comb inherits autosomal (same on both sexes) and is incomplete dominant (impure visible in action as well as pure) (Bateson 1902). Partial dominance is not very obvious when crossed to single comb, with small wattles. But when crossed to Mediterranean breeds or breeds with large wattles, the middle row on the comb develops, when impure, to a prominent middle ridge and two lateral ridges on both sides with points (Punnett 1923). Munro and Kosin (1940) found that pea comb birds have ridge of thickened skin (dewlap) that runs from the chin to the breast bone. This dewlap and or ridge was only found in birds carrying P, and is therefore a manifestation of the gene. Crawford (1961) verified the relationship between P and the ridge/dewlap in walnut combed birds which also have P. He found it an easy way to distinguish rose combed and walnut combed in young animals of which the comb wasn't enough developed.

Walnut comb (P, R). This comb type is the result of the action of rose and pea (Bateson, Punnett 1905, 1906, 1908). Therefore pea combed birds can have more recipes (see Facts). This combtype is seen on Chantecler, Kraaikoppe, Malay and Orloff etc. The Chantecler has a so called cushion comb and the Malay a strawberry comb. These names are only descriptive for the fenotype and the differences amongst them although the same genetic make up. The walnut comb is smaller than the rose or pea comb. There is a transverse groove which devides the 1/3 front from the rear part. In one day old chicks small hairy feathers can grow in this furrow. Sometimes in older birds these little hairs become feathers. Because of the small comb mass, this comb type is interesting for breeds which are located in cold circumstances because they don't suffer easily from frost bite (Wilfred, 1927, Petrov, 1935).

Rose comb (R)... knows serveral appearances in many breeds. The rose comb is relatively flat and covered with prominences. The comb ends in a spike pointing up or down. The length and width varies per breed. Rose comb is dominant to single comb (Bateson 1902, Hurst 1905, Davenport 1906, Bateson and Punnett 1908).

The surface can be **rough or smooth**. This is caused by the gene He+ (Cavalié and Mérat, 1965). The dominant He+ gives a rough surface and causes more pronounced bulges. Its recessive counterpart 'he' smoothens the surface. He+ and he have influence on the amount of spikes on the single comb of which the 'he' birds show less spikes and He+ birds more (Cavalié and Mérat, 1967). It looks like He+ also has influence on the walnut comb and that 'he' is the cause of the smooth surface of the cushion comb.

Trifid rose comb is known from the tassled Watermael. This rose comb has three little thorns at the end of the comb of which the middle one is a bit larger. Punnett (1923) suggested the Silkie comb is a modified rose comb of which the shortened comb and the little thorns are caused by the crest gene (Cr), while the thorns are probably caused by another gene.

Cunningham (1912) and Bonhote (1914), Dunn and Jull (1927, Jull 1930), showed the presance of crest is responsible for the shortening of the comb and the presance of the little thorns. The Watermael comb is identical to the Silkie comb and its the result of crest x rose comb and therefore 'modified'.

Somes (not published) studied the trifid rose comb in non-crested birds. When the trifid rose comb was crossed to trifid rose comb, F1 consisted of: 72 single thorn, 155 multiple thorns. When the trifid rose comb was crossed to single comb, there were 109 with a single thorn and 91 multiple thorns. This last group could be devided into two and three thorns. These results show its a dominant gene which causes the multiple thorned rose comb. More testing hasn't been done.

Muffs Beard (Mb), bearded consists of two whiskers on both sides of the face and a beard which grows verticle downwards below the beak. Muffs and beard are always together when the gene is pure, so its one trait. Expression varies when Mb isn't pure. Its shown that the presance of Mb causes shrinking of the wattles (Mérat, 1962). Beard is studied by Davenport (1906), Serabrovsky and Petrov (1930) and others. All showed its a dominant autosomal gene.



Impure beard, rose comb with wattles which are shrunk by beard.



Full beard, parents had impure rose comb and/or rose died, so single comb which happens in all rose combed breeds now and then. This bird can be used in breeding if its good in other aspects e.g. shape and colour. An impure rose comb doesn't look much different from a pure one. Note the twist in the comb on 1/3 of the front. In pea and rose comb this is the place of the transverse groove. This groove has to do with the comb bumping into the crest. Eye colour is a bit lighter in lemon due to the Di (dilute) gene by which black pigment enters less good skin tissue (and iris) although the bird has Fm (fimbriation, black skin). This hen has too light eyes but her colour is correct, lemon is difficult to breed without a (distracting) pattern, so even coloured. Her type is good as well. Breeding is combining with the other sex. A single comb isn't a problem, offspring will have a rose comb again.

Test crosses on shrinking of wattles by Mb:

Mb is more effective in shrinking wattles than pea comb. Own crosses gave the following results:

Single comb, impure Mb: bit reduced wattles (app. 1 cm section).

Single comb, pure Mb: very reduced wattles (1 mm intersection). This is better visible on roosters since they have larger wattles.

Cross 1:

Single comb, pure Mb x pea comb, without Mb: the P/p+, Mb/mb+ birds had strongly reduced wattles similar to the pure Mb birds with single comb above mentioned.

Cross 2:

Single comb, pure for Mb x pure rose comb, non-bearded: heterozygous birds (R/r+, Mb/mb+) had wattles similar to the above mentioned single comb impure bearded (r+/r+, Mb/mb+): app. 1 cm intersection.

Non-bearded Silkies and walnut comb don't go along

Silkies without beard should not have a walnut comb (P, R), because pea comb reduces the wattles strongly, and also impure (P/p+) because pea comb does express when its impure. This means non-bearded Silkies should have a rose comb and not a walnut comb otherwise they don't have the required wattles as written in the Standard.

Bearded and non-bearded are crossed....

Beard reduces the wattles but less when the bird has a single or an impure rose comb (R/r+). When beard is impure, the wattles will reduce less strongly. This explains some kind of wattles on bearded Silkies. These have a rose comb or they are impure for beard.

Thorns...

The little thorns on the end of the comb had to do with trifold rose comb in the past (and still). A rose combed bird is less fertile and will throw single combed birds. Thorns is a phenotype of rose comb in combination with crest/tassel in the presence or not of He+, the comb roughener. See Watermeal bantams which have a modified rose comb with He+. The Watermeal bantam's recipe can be therefore: Cr/Cr, He+/He+, R/R. This is identical to the examined and described Silkies in the past century, the Silkies have three thorns in origin. The trifold rose comb was never an issue till the 1980's in which Germany started a witch hunt for the thorns. Which created the fiction that a Silkie should have a walnut comb is unknown to me. The Italian Standard asks for a mulberry comb, the German is speaking about 'looking like a half walnut in shape and structure without a thorn and preferably with a groove'. The French (bantam) standard asks for a cushion comb without thorns. The English asks a round shaped walnut comb, broader than long, with some prominences and a fold in the first 1/3 part. And for all non-bearded Silkies are required: medium sized wattles below the beak...

When all Silkies should have a walnut comb, one must settle for non-bearded Silkies without wattles, or very rudimentary ones.

When crossing bearded x non-bearded and the walnut comb is present, inbred F2 will have reduced wattles without always the expression of beard. Selecting further to obtain non-bearded, the wattles won't come back as long as pea comb is present. These are called 'bred from bearded' in the fancy, of which beard is blamed for the absent wattles. So there is said: 'never breed non-bearded to bearded because it goes wrong'. It won't go wrong if there is no pea comb present (walnut comb). So this legend is a realm of fantasy as so many things in the fancy.

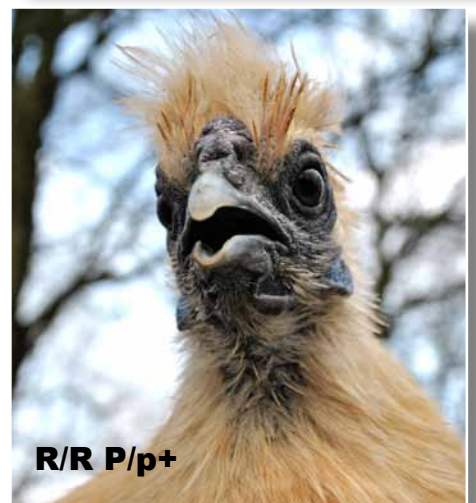
Impure beard can cause confusion when its not expressing clearly, but, the reduced wattles and the dewlap can be an indication. If the Silkie had a rose comb, the wattles would be there and the chin would be tight.

This all is pretty confusing because you have no indication if the Silkie shows not a pronounced beard but is still Mb/mb+ (impure), or the beard is gone and the Silkie has a walnut comb.

The transverse groove is no indication, we see it in both rose and walnut combed because its caused by the comb bumping into the crest.



Walnut comb with impure beard, wattle rudimentary and a dewlap.



Two photos of the same hen. Walnut comb, probably impure (P/p+, R/R) without beard and almost non-existing wattles, dewlap.

How do I recognize the comb type of my Silkie?

Because there are non-bearded Silkies with wattles, the comb description 'walnut comb' in the standard is wrong for the non-bearded.

First you've to find out which comb is preferred for the Silkie non-bearded, which have (too) small wattles. There is also a keel ridge or dewlap visible. How do you recognize the impure bearded with small wattles, or the unwanted walnut comb? Cross the bird to a single combed, inbred F1 and you have the answer.

History

The non-bearded (original) Silkies had normal wattles and today there are still who have. In the 1960s there were occasionally birds with shrunken wattles. The older photos are taken from the Best Silkies, otherwise they wouldn't have been photographed. Remember also they are pullets and cockerels. Pullets will show less wattles (dito tassel) when they aren't sexually mature, cockerels are 'ready' during the Winter shows.

Something else which should be considered is the duplex comb. The Silkies were crossed to Paduas in North America because the tassel was too small and the crest should be larger. Along with this the beard was introduced and these Silkies came to Europe as the first bearded. Next to the crest also the vault was added. There is no vault without a crest.

There can be a crest without vault, but less big. In discussions how the original Silkie looked (which lead to a disqualification of vaulted Silkies in Belgium in the early 90s), are doubtfull when it comes to the vault. If the vault isn't allowed historically in the bearded Silkie, neither the bearded should exist. Then the whole cross to Padua should be turned back.

The original Silkie had a rose comb with thorns and a tassel (not a crest) including or not a vault (mostly hens).

Interesting is 'On inheritance of some characters of the Silky Fowl, Dunn, Jull 1927'. I can send you the pdf. The test-rooster used wasn't totally pure: vulture hocks while these were not present in F2 nor on the bird itself (this is correct, its recessive). The mentioned vault (which wasn't present on the test-bird) was probably the suppressed Padua/Polish version. The expression was sex-linked and seemed restricted to females, males with a vault died as embryo on day 20.

This seems to describe the vault which goes along with crest (Cr) in the Polish and Padua, in which in this case another gene seems to be the cause the vault won't express on male birds.

The vault in F2 of Silkie x Leghorn looks like the vault which is described by Blumenbach in 1805. The vault in F2 wasn't always as large as seen on Polish and Padua at that time. This might be correct because of the existence of 'variable expression', although the gene is incomplete dominant. Variable expression occurs by the interaction of (an)other gene (unknown or known), think of SOX5 which prevents collagene growth and which goes along with pea comb. From a lot of things which look different from what they supposed to look like, we don't know the cause. But from more and more we do know the cause because science is interested since a few years in ornamental fowl.

A long time ago only the female Polish and Padua had a vault and not the males. After times went by also males were seen with the vault, perhaps because the suppressor disappeared. Even today there is mention of a vault on mostly female Silkies, also born from parents without a vault, only the females and not the roosters. This makes you think...

A full beard, autosomal inheriting vault and making a crest from a tassel, are all added the same time in history via the Padua for the bearded variety and Polish from the non-bearded.

Long time, next to rose and pea comb there was duplex comb in the European Silkies as long as they had American blood. There are still born vaulted Silkies in Europe which also might be an indication the duplex comb can be around, but this can't be proved without test crosses. In the US duplex comb is still in the Silkies (2010, Genomic regions associated with Dermal Hyperpigmentation, Polydactyly and other morphological traits in Silkie chicken - Dorshorst, Okimoto, Ashwell).

If duplex comb (mega crest) is bred out, the amount of birds with wattles will be reduced as well. Only the combination roze/pea will persist. Duplex comb reduces the comb mass but not the wattles. The duplex comb came into the Silkies together with Crest. When in Europe was chosen for a smaller crest in order to restore eye sight, there was selected for small crest and therefore rose comb. How pea comb came into the Silkies is a guess.

Vulture hocks came due to crosses with Sultan. In the above mentioned research from 2010 was also shown that in the region of East-Turkey Sultan and Silkie were blended. The five toe trait of Sultan and Silkie is similar and not identical to the five toes of the Dorking. This could be seen by a 'genetic marker', and blending took place over a



Dutch lavender rooster, impure or very poor pure beard, **rose comb because he has wattles.**



Non-bearded rooster with **malformed wattles and a dewlap so walnut comb**, in 2009 in Brugge Belgium on the European Silkie Show. Winner...



Winning pullet from the 1950s, **rose comb, normal wattles no dewlap.**

Paint bantam rooster with beard, too little to be pure and too much to be impure. **Rose comb with beard gives a bit more wattle** compared to walnut comb and full beard. The latter will have reduced wattles till a strip of elevated skin. Impetus to trifid rose comb. No dewlap.



R/r+
he/he



R/r+
he/he



R/R
He+/he



P/P
He+/He+



P/P
He+/He+

This (smooth showgirl rooster) called The Cockatoo, has **a rose comb and therefore wattles and no dewlap.**



R/R
He+/he

Rudimentary wattles (how many?), **non-bearded, walnut comb with keel ridge.** This is a non-bearded with walnut comb and therefore too small wattles. Hopeless on a show if there's been judged according to the standard? Not, non-bearded 'just don't have no wattles or very small ones'. **The dewlap is ignored on shows.** Why is there a standard?

Compare comb surface of these 2 roos (1,2) with the lemons: blacks rose comb with he/he (smooth), lemon He+ (rough). Both have a rose comb. Folds in the comb are due to the crest.



**R/R
he/he**

Haan 1



**R/R
He+/He+**

Haan 3



Haan 1

**R/R
he/he**



**R/R
He+/He+**

Haan 3



Haan 2

**R/R
he/he**



Haan 1



**R/R
He+/He+**

Haan 4



P/P



**R/R
he/he**

Allebei de hennen zijn baardloos, de ene met en de andere zonder lellen. De kale links heeft een walnootkam want ze heeft een wam en geen lellen.

Hierboven twee hanen (3 en 4) in citroenkleur: ruwe rozekam R/R of R/r+ (getuige de enkelkammige citroen hen op pag. 2. He+/He+ dus een ruwe kamstructuur, nog nèt geen kamdoorn.

Alleen met een rozekam is het mogelijk een lel op een baardloze te krijgen. Een keelwam is geen raseigenschap van het Zijdehoen.

thousand years ago. Later crosses to Sultan might be the cause of the unwanted vulture hocks. A vulture hock has nothing to do with leg feathers, its a separate (recessive) gene. Back to the walnut comb...

Its a choice...

There should be made a choice: non-bearded Silkies without wattles or rudimentary ones with a walnut comb, or non-bearded with wattles and therefore a rose comb (R/R or R/r+ with he/he to reduce the thorns).

Because breeders mix bearded and non-bearded in the more rare colours, bearded could have a walnut comb resulting in non-bearded without wattles.

The question is: which comb shape should the bearded Silkies have?

Another question is: are there enough non-bearded Silkies with wattles per colour to maintain a healthy population?

And another question: has there been an inventory how many non-bearded do have wattles?

I can tell you there are a very few non-bearded with normal wattles in Holland as seen on the Dutch Silkie Club meet September 2010.

Answer: walnut (P, R) or rose comb (R/R)? Rose will give a bit more wattles on the bearded compared to birds with a walnut or pea comb. See the photos for examples how this looks because there are plenty bearded Silkies with a rose comb.

So, non-bearded with wattles and no dewlap is?

Rose comb! The comb shape of non-bearded Silkies with wattles is not a walnut comb. This is proven now. These birds have a rose comb. The existence of two or three thorns is part of this (trifid) rose comb and should be tolerated as before, as long as they're not visible from outside the cage (for instance, for the ones who become physically sick of seeing a thorn) and the bird is correct in all other aspects. It is possible to reduce the thorns by breeding out He+ which can also be a cause of thorns. This has been done in non-bearded Silkies with wattles (or bearded with visible little wattles) which don't show distinct thorns and have a smooth comb. Impure rose comb seems to give more incidence of having thorns (seen often in mixes of single x rose comb).

Disadvantage of rose comb is less fertility of the rose comb fraction in sperm. This might lead to more single combed, and in the worst case in less chicks as in all rose combed breeds, next to the fact you don't see a difference between R/R and R/r+ due to the twist in the comb caused by bumping into the crest. Single combs are very rare in walnut combed, because these animals will still show a 'walnut comb' when rose is dead (they have a pea comb then). When R gets lost because the parents were impure, it can be seen the 'walnut comb' is a triple row comb when they have He+. These rough combed are pure or impure for pea comb. Can you still follow all of this? Well, I loose track all the time, because of a wrong standard description. You can say: a standard is only descriptive, so phenotype. This doesn't hold true, its saying something but meaning something else. Be clear in what's required. Breeders are confused otherwise they don't struggle with absent wattles, a dewlap, bad breeding results, punishments on shows of non-bearded making them less attractive etc. A walnut comb is a walnut comb, the genetical one, to breeders as well, otherwise lots of non-bearded Silkies wouldn't have reduced wattles and a dewlap which isn't mentioned as a breed characteristic in the Standard either. The larger naked parts on the breast of walnut combed birds is not an issue since its not visible from outside, they are fluffy enough to conceal this.

I am surprized no breeder, nor a judge made an issue of the shrunken or rudimentary wattles of non-bearded Silkies. Its over looked or there is said: 'its the total balance of the bird' , 'its just like that as it is'. No action, no investigation, no historical perspective, no nothing. But why is mentioned in the standard non-bearded Silkies should have medium sized wattles? Why is a nice non-bearded beautiful bird in any aspect DQd in Europe when it has a miniature thorn on its comb? And only set back a few points when it has no wattles and a dewlap? The dewlap isn't even mentioned in the standard, because its not a breed characteristic of the Silkie. Incomprehensible to an outsider like me.

So what to do with the Silkie comb?

An alteration of the Standard which mentions a walnut comb: Silkies should have a rose comb not a walnut comb otherwise the non-bearded won't meet the standard requirements concerning wattle size. There is no dewlap on Silkies and they do have wattles in origin. Unless the Silkie must be rebuilt different from how it is for over a thousand years.

The standard could mention a different formulation, for instance pointing on phenotype like in the German standard: looking like a half walnut in size and structure (rough??).



1930, *rozekam, lellen en geen keelwam.*



1937, *rozekam met kamdoorntjes door de kamverruwer He+. Mooie kinlellen en geen keelwam.*



1937, *fraaie lellen want rozekam, geen wam..*

Nothing is said about what the comb should be genetical, and thus breeders are not confused and will monkey the comb till it fits without distractions because breeders are not stupid and read this as well. The ABA comb description is asking for a walnut comb as well. And a pea comb is known on the American Silkies. Is this the reason why the non-bearded are less popular and almost extinct? Because its nearly impossible to breed correct ones? Do the American judges see they have reduced wattles and a dewlap and therefore judge them low? Like the never 'matching' greys of which the standard description is wrong as well?

When there are only bearded Silkies left in the world, nobody bothers about absent wattles, until a rare individual wants to boost his original non-bearded Silkies and uses the same breed, the bearded one, which will lead to some 'problems'.



*At the end of the 1920s the non-bearded Silkies had still a **rose comb** and therefore **wattles** and no dewlap.*



*1885, **rose combed Silkies with wattles** and without dewlap.*



*American standard 1947. **Rose comb** and no a walnut comb, both have **wattles**.*

About pea comb an reduced wattles

There are several breeds with a pea comb and wattles, take for instance the Brahma. Although there is a tendency the roosters have too large wattles, this shows its possible to have wattles on a pea combed breed.

BUT... when you compare the wattles of a Brahma rooster to, for instance, the wattles of an Orpington or large Cochins, they are considerable smaller.

How large would the wattles be of a Brahma rooster with a single comb or rose comb? They would have been so excessively large he would stumble over them.

If you want to have visible wattles which may carry the name 'wattle', you have to select for them and choose all the time for roosters (and hens) which have, regardless the action of pea comb to shrink comb and wattles, wattles of considerable size. This is called: selection. Take the Yamato breed, it has a huge dewlap, much larger than an average other pea comb breed. Is this solely the action of pea comb. Nope, its selection for birds with bold faces and lots of skin. When you compare the wattles of the Brahma to the shrunken and absent wattles of pea combed non-bearded Silkies you compare apples with pears. First breed a Brahma without pea comb and look what the true size of the wattles is without the pea comb gene including SOX5 which causes the extra effects of pea comb like the dewlap, bold breast bone and small comb and wattles.

When you put SOX5 in a single combed or rose combed bird, you will have the same extra effect as pea comb. Its just that SOX5 doesn't go along with the other comb types.

Back to Brahma, along with the 'over sized' wattles which are seen, the comb alters too. Birds with larger wattles have a pronounced,

higher middle ridge with smaller rows going along on both sides. This could also be an indication of impure pea comb (P/p+) since Brahma are crossed to the large Cochins a lot and impurity is less visible because pea comb is an incomplete dominant. Its the breeder or the judge who determines what a 'too large' comb, or too large wattles are on a Brahma.

Because judges and breeders didn't mind the non-bearded Silkies had no or very reduced wattles, its the 'eye' which determines what is according to the standard or not.

Everything is relative therefore, but it doesn't tell about the genetical make up and the ways of selection. Selection is gene expression directed by man. Which genes the birds have can only be seen by searching for the gene characteristics which are in play, which isn't relative but pretty exact because we can use scientific observations done on universities (not backyards). Interpretation can be relative again, and all is confusing enough when there are more traits which reduce wattles and cause thickened skin below the beak: beard in Silkies (Brahma don't have a beard, only a dewlap).

I tried to tell these two traits: beard and comb type apart by observation, nothing more, nothing less and concluded the non-bearded Silkies are different from the non-bearded in the recent past (and still today) and not according to the standard description which is based on how the Silkie should look. Its up to breeders and judges to rebuild the non-bearded Silkie if they like to, and ignore the original non-bearded Silkie. Times change, just like fashions, nice example is the tassel of the original Silkie which became a huge crest in some countries. This is exactly the same issue. So what is a Silkie anyway?

Van Gink drew Silkies with and without beard and a rose comb, with wattles and the current thorns when the rose comb is rough.



R/R
He+/He+



Afb. 37. Ideale witte Zijdehoenders van de Europese fokrichting

Drawing of Van Gink before the witch-hunt for the trifid rose comb started. In this drawing the rooster has a thorn as well.

Rose comb R/R or R/r+, no dewlap

non-bearded

bearded

wattle rooster



wattle hen



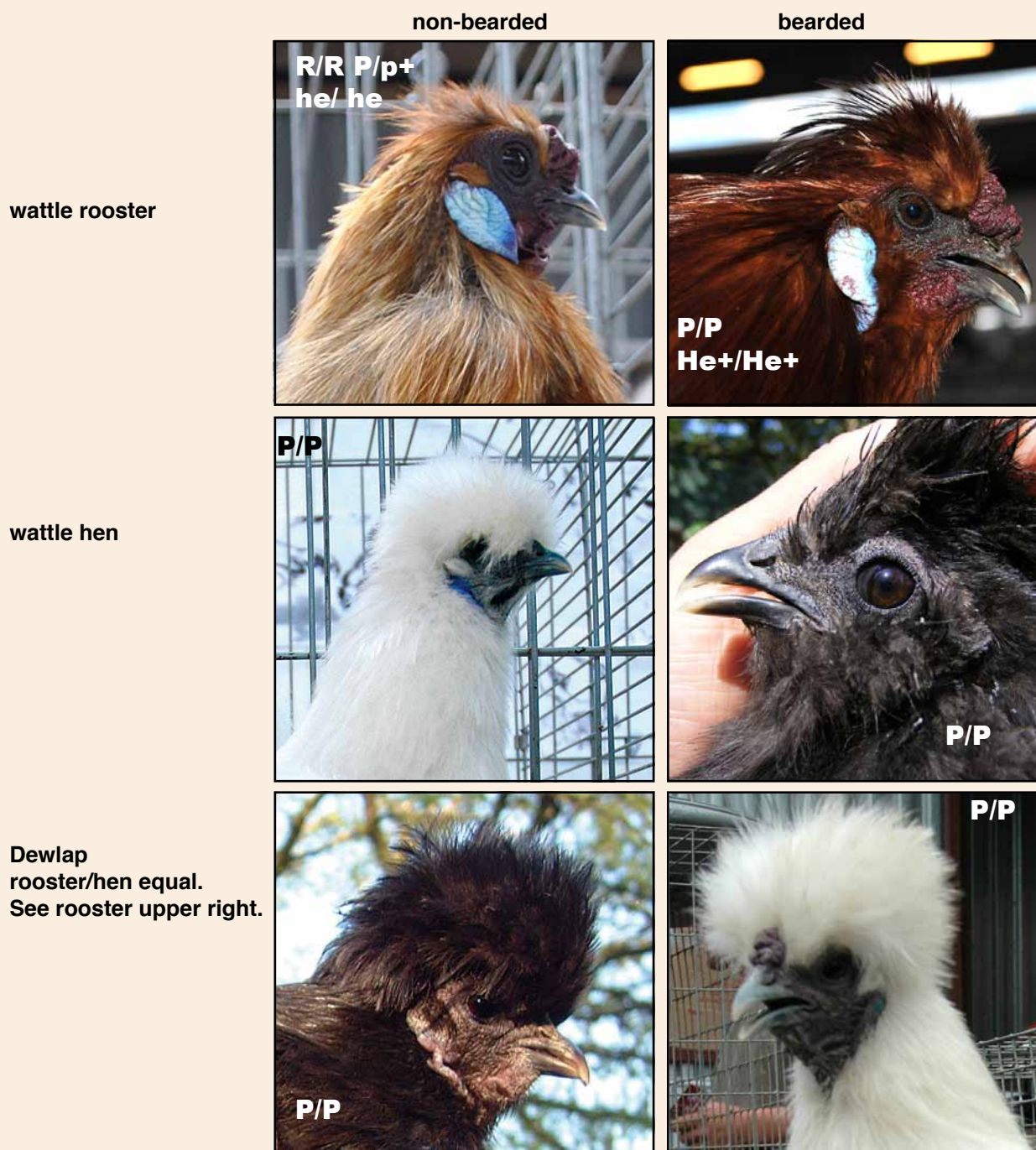
With He+ the comb roughener bearded and non-bearded equal, as well as for hen and rooster.



With he, comb smoothener for bearded and non-bearded equal, as well as for hen and rooster



Walnut comb P/P, R/R or Pea comb P/P, dewlap



The comb roughener or smoother seems to have different effect on the walnut comb of the Silkie, but they can't be proved. The red rooster top right seems to be P/P, R/R, He+/He+ and the hen bottom right he/he instead of He+.

Possible relationship between comb shape/mass, crest, size wattle, dewlap, tassel and (small) vault. Scheme below is based on breeding results and literature. D^ΔV is duplex comb.

++ strong, + - present, - - absent, first mentioned most common.

Comb shape	crest	wattle	dewlap	tassel	vault
R rose comb	+ -	++	--	+ -	+ -
R P walnut	+ -	--	++	+ -	+ -
P/p+ impure walnut	+ -	+ -/- -	+ -	+ -	+ -
single comb	--	++	--	++	-- / + -
D ^Δ V R duplex rose	++	++	--	--	+ -/+ ++
D ^Δ V R P duplex walnut	++	+ -/- -	+ -/+ +	--	++
D ^Δ V duplex	++	++	--	--	+ -/+ +



Club day of the Dutch Silkie bantam club 2010, young animals are shown. Photo 1 cockerel, 2 & 3 pullets, **walnut combs** on the partridge bantams, **no wattles, dewlaps** not very large yet but present. These birds did score high. Should there be a dewlap on Silkies?

Some examples...



Healthy Silkies are culled because of 1, 2 or 3 pieces of meat sized less than the back of a matchstick. How much respect for life is shown in this practice?

A F (very good, continental European judging system) in 2010, the wattle is drawn on the photo as it should be to deserve a F for a non-bearded. It seems the interpretation of history and the standard description is adjusted to what is seen today. Or 'not' seen. Where did it went wrong?



Rudimentary wattles and a thick throat due to the dewlap: **walnut combs**.

These are breeding birds for black bantams. Due to walnut comb and the dewlap they have inelegant thick throats as a Brahma. Seen from below it looks horrible. The hen in the photo below came from one of the two mothers on the left. She was Winner on a show although she has rudimentary wattles and a thick throat. All have a **walnut comb**.





R/R
P/P

1966, creation of the bantams...
without wattles, walnut comb.



R/R

1968, *with wattles* is possible.
Wheaten bantam, the starting of buff
colour, *roze comb*.

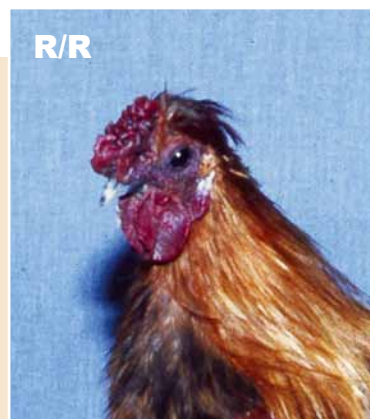


R/R
P/p+

2009, bantam hen, too small
wattles, hen is 2 years old..
Walnut comb with dewlap.



R/R



R/R

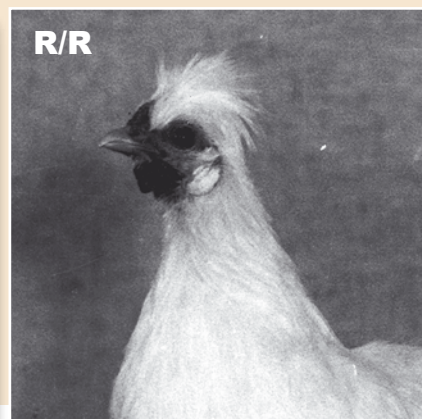
The 80s, all correct, all *rose
combs with wattles* on these
non-bearded.



R/R



R/R



R/R



R/R

1998, an early buff... *rose comb*.



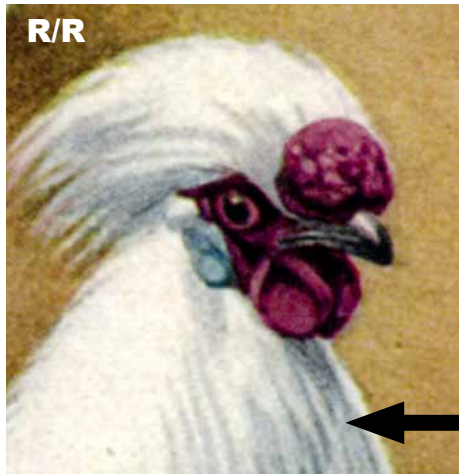
R/R

2010, partridge bantam cockerel with
rose comb.

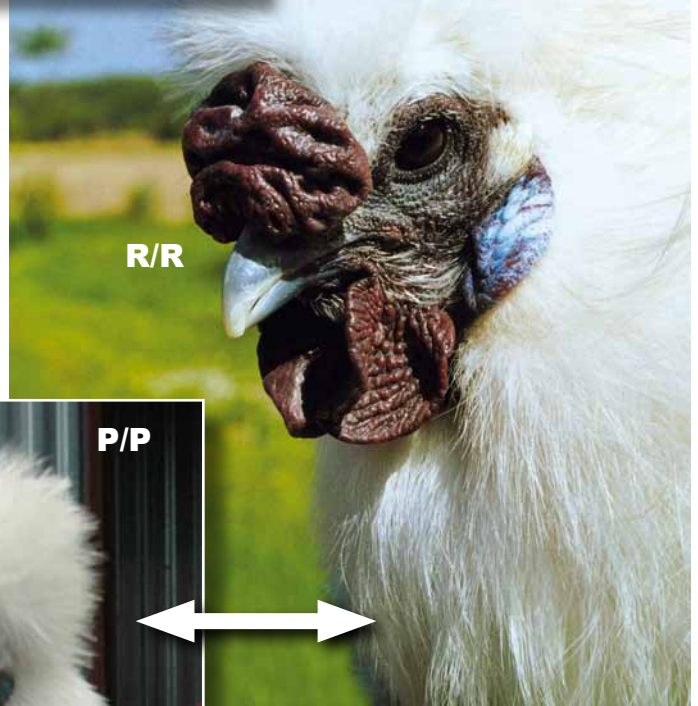


R/R

2000, *rose comb*, Germany.



Find the differences...
The rooster on the right has an **impure walnut comb** (**P/p+**, **R/R**) and his **wattle is deformed** therefore but not gone. The Delin drawing isn't showing a nice rooster.



Find the differences...

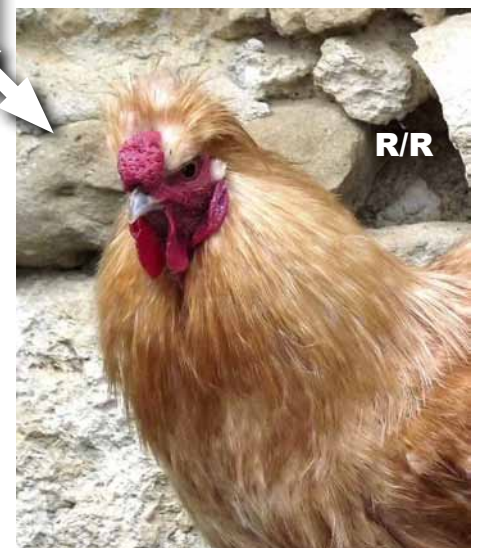


Find the differences...



Lady with a **walnut comb** so **no wattles** and a piece of skin (**dewlap**) under the beak running to the breast.

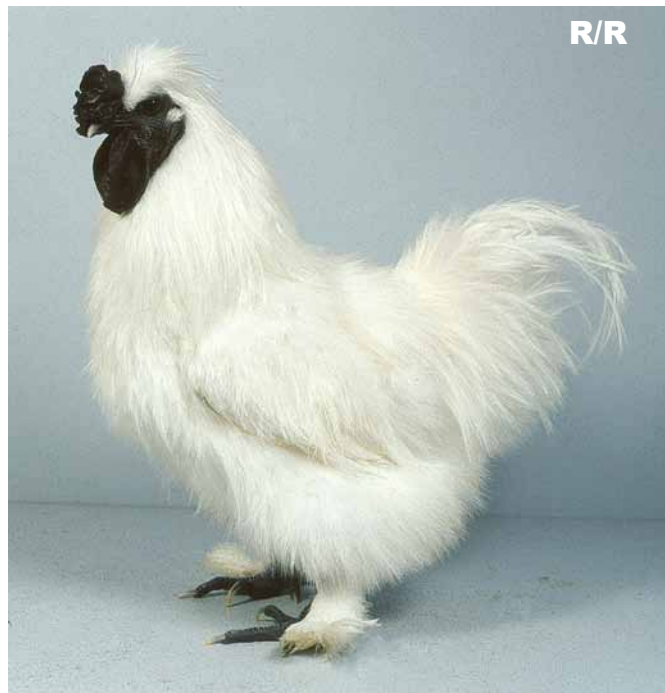
This hen has a **walnut comb**, **dewlap** and **rudimentary wattles**, non-bearded.



Creation of buff Cuckoo non-bearded in France, beautiful **rose comb** and **wattles**.



The English non-bearded have a nice round **rose comb** and corresponding **wattles**. By allowing some black in feathers (black tailed buff) this buff rooster has a very melanized skin.

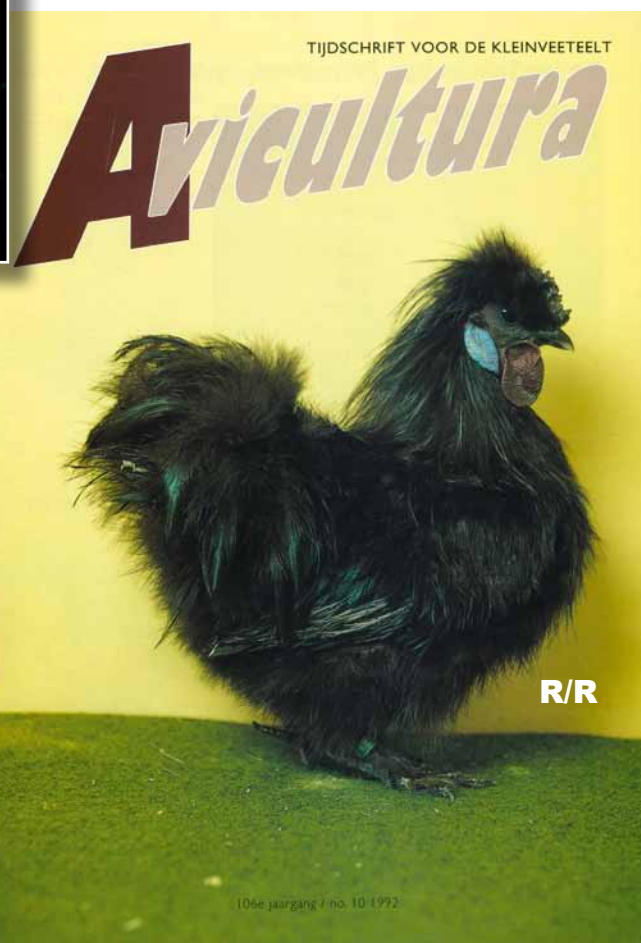


Another English Silkie, which shows uniformity in comb type/shape (rose comb). Both photos are from the former English standard.



Australian splash bantams non-bearded with correct wattles. **Rose comb**. Note the trifid rose comb on the rooster. Due to splash black pigment is less in skin, esp. in roosters because of their hormones. These look like brother and sister.

Below: in 1992 there were still **rose combed** Silkies **without beard**. This one has a rough comb (He+/He+).



White bantam cockerel in September (not fully grown) with correct comb: **rose comb** and therefore **wattles**.

Bearded, different comb types and the wattles...

R/R



2008, creation of large red bearded Silkie by Angela Schouten. Cross to Rhode Island REd one time inbred therefore F2. **Although a half beard, a rose comb and smaller wattles.** Photo: Angela.

R/R



2006, right: red bantam rooster, wattles shrunk by pure beard, therefore a **rose comb** (has a thorn).

R/R



2010, creation of buff cuckoo in Holland. Cockerel, **half beard, rose comb, wattles.** Photo: Aliene Donkersteeg.

R/R

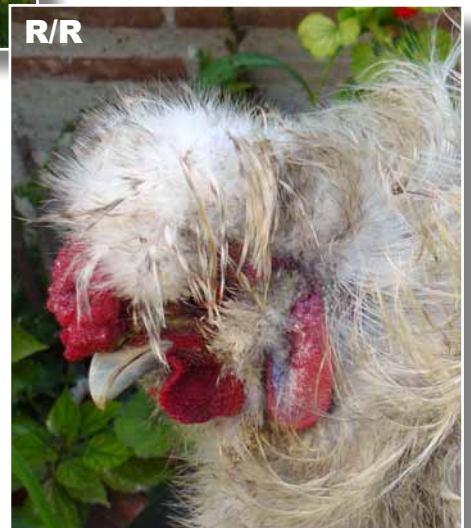


R/R



Silver wheaten with half beard and **rose comb**. Photo: Angela Schouten.

R/R



2010, creation of frizzled cuckoo, **half beard, rose comb, wattles.** France. Frizzled Silkies are made with frizzled Cochins bantams, so this is a crossed based on single comb x rose.

P/P



Half beard, wrong comb: walnut, wattle is gone and dewlap hard to see because of beard.



2010, silver wheaten hen with half beard in France, **the beard made the wattles shrink, but they are still present. Rose comb.** Photo: Angela Schouten.



A Japanese Ukokkei, **impure** for everything, **beard** and **rose comb**. But also Fm (black skin). Nice wrinkle in the impure rose comb, you see it bump into the tassel.



What to think of this? A very early red bantam. Half beard or non-bearded? Too little wattles, walnut comb? This is a migrant, result of using pea comb in a breed.



Half beard with wattle, so rose comb. This one can be used in a cross of bearded x non-bearded. Select for non-bearded and the wattles will return.



Not a photo but a painting. This is how the **wattle** should look like on a **non-bearded** pullet, so she has a **rose comb**.



If this is a half beard, then we should see wattles? What is this? **Walnut comb.**



The isabel (for US porcelain) on the left has a **walnut comb** and therefore **no wattles**. Compare with the cuckoo pullet.

A few monsters... crosses show what comb genes are doing...



Is this a monster? Its a Wushan (Chineseese production) Silkie with a **rose comb** like nails, a kind of half beard? and therefore only **slightly reduced wattles**.



This is a monster like on the first page. Creating showgirls in Holland. This is a very nice impure **pea comb**, (from Turken) uhhh **walnut comb**. Can't be used because **without wattles** and with **dewlap**.



Brazilian game hen, **pea comb**.



Continued to breed with the **rose comb** showgirl mixes. Look at that rooster! He's brother of the Cockatoo, these are Tjernobyl **wattles**! Showgirls should be bred with the bowtie otherwise they loose 30% of their feathers when pure for naked neck (Na).

Rose comb with wattles and trifold. This is a cross: Silkie/ Serama/Japanese bantam, selected for rose comb to create non-bearded choco/ bronze Silkie bantams.



Another wrong **walnut** comb on a non-bearded choco/bronze bantam cross.

Breasts: rose comb normal feathered, walnut (pea) more bold and bold breast bone as on Shamo...



The **rose comb breast** with covered breast bone and more profuse feathering compared to walnut breast (below), smooth rose comb (he/he) with nicely suppressed **thorns** which are only visible when the crest is tightly drawn back, **perfect wattles** under the chin; from outside the cage: a beauty. This is a paint Silkie bantam hen and pretty dirty. Photos of comb and face are made lighter in order to show details in the darker parts.

A **bold walnut or pea comb breast** with a broad bold part over the breast bone, the black one is even more bold. The head of the paint hen shows a **huge dewlap** and **rudimentary wattles**. The comb is rounded and smooth. In the show cage not a beauty because of the absence of wattles and the dewlap.



Right: because of the broad feathers the breast is moisted a bit to show the broad bold piece of skin covering the breast bone. Also the flanks of a walnut or pea combed bird are less feathered compared to rose comb birds. The black one is bold from dewlap till the end of the breastbone and flanks as well.

