

Naked neck

The absence of neck feathers is the main phenotypic trait for some pigeons. Representative for this trait are Romanian naked-neck pigeons.



Naked neck pigeon ash-yellow (Expo Lugoj 2009 // D. Mergeani) (B*A, d//., C*T//C*T, na//na)
Naked neck pigeon ash-red (Expo Cluj-Napoca 2009 // D. Mergeani) (B*A//?, C*T//C*T, na//na)



Naked neck pigeon ash-yellow (Expo Lugoj 2009 // D. Mergeani) (B*A, d//., C*T//C*T, na//na)
Naked neck pigeon ash-red (Expo Cluj-Napoca 2009 // D. Mergeani) (B*A//?, C*T//C*T, na//na)

The absence of neck feathers is not a total one because the feather follicles are functional. This is easily observable after each moult, for each follicle, there is a feather's rachis. At one point, it stops the growth to a normal feather, it atrophies and falls.



Naked neck pigeon ash-yellow (Alex Marean, Alba Iulia // A. Marean) (na//na)
Naked neck pigeon ash-yellow (Alex Marean, Alba Iulia // A. Marean) (na//na)

Rarely, such atrophied feathers can be seen after moult.



Naked neck pigeon ash-red (Expo Cluj-Napoca 2007 // D. Mergeani) (B*A//?, C*T//C*T, na//na)
Naked neck pigeon ash-red (Florin Oprea, Constanța // F. Oprea) (na//na)

The absence of feathers in the neck is a character that has a monogenic transmission, being determined by a incomplete dominant gene - Naked neck ("na"). Thus, the cross with a pigeon with normal plumage at the neck, the first generation will obtain copies of the neck partially naked (see picture below) and cross the first generation offspring ("F1") will be the second generation ("F2") a proportion close to 1:2:1 among the pigeons with normal plumage, partly naked neck pigeons and pigeons with completely naked neck.



F1 Naked neck pigeon X Takla, cu gâtul pațial gol (Florin Oprea, Constanța // F. Oprea) (na//+)
F1 Naked neck pigeon X Orbețean, cu gâtul pațial gol (D. Mergeani // D. Mergeani) (na//+)

There are pigeons with a incomplete nacked neck out from pigeons with complete naked neck. Frequently, these changes disappear after the first moult.



Naked neck pigeon ash-yellow (Florin Oprea, Constanța // F. Oprea) (na//na)
Naked neck pigeon ash-yellow (Alex Marean, Alba Iulia // A. Marean) (na//na)

Also, there are pigeons with the effect of Naked neck gene extends at head (pictures below present the same pigeon).



Naked neck pigeon ash-red (Florin Oprea, Constanța // D. Mergeani) (B*A//B*A, C*T//C*T)

Naked neck pigeon ash-red (Florin Oprea, Constanța // F. Oprea) (B*A//B*A, C*T//C*T)

These recessive characters mentioned above and emerging occasionally (especially in lofts with a high degree of consanguinity) explains why it is difficult to transfer naked neck to other races or to introduce new colors to the naked neck pigeons. They also support the idea that the emergence of a completely naked neck pigeon may occur other recessive modifier gene that modulates the effect of Naked neck gene.

To stabilize a good expression of this feathers trait (naked neck) after a cross with a normal feathered neck pigeon are necessary least three generations. Thus, pigeons following expressed Spread gene in their phenotype, a dominant gene not present usually in genotype of naked neck pigeons. The presence of this gene is the result of a cross with a black pigeon (Spread) with several generations ago followed by repeated back-crossing so that, today, pigeons below have a completely naked neck.



Naked neck pigeon ash-red Spread (strawberry) (Expo Nitra, Slovakia 2009 // D. Mergeani) (B*A//., C*T//C*T, S//+)

Naked neck pigeon ash-red Spread (dilute lavender) (Expo Braşov 2007 // D. Mergeani) (B*A,d//., C*T//C*T, S//+)

What is surprising to following pigeon photo below, pigeon that has both parents naked neck, is the presence of all the feathers of the neck. This observation suggests that the gene "Naked neck" leading to lack of feathers on the neck acts only if the neck feathers are colored.



Naked neck pigeon ash-red without naked neck out of nest (Alex Marean, Alba Iulia // A. Marean) (z*wh/z*wh, na//na)

Naked neck pigeon ash-red without naked neck after moult (Alex Marean, Alba Iulia // A. Marean) (z*wh/z*wh, na//na)

In support of this conclusion come the pictures below with a white plume in the neck and also signs of white pied markings in the neck and head. Do not forget that a few Romanian breeds closely related to Naked neck pigeons have a white crescent or a white collar.



Naked neck pigeon ash-red (Florin Oprea, Constanța // F. Oprea) (na//na)

Naked neck pigeon ash-yellow (Alex Marean, Alba Iulia // A. Marean) (na//na)

Pigeon on the right has some white feathers at the backhead. Instead, pigeon on the left has white spots in the chest and in the abdomen. The abdominal white spot is an area that is frequently seen in association with a white patch in the neck (crescent).



Naked neck pigeon ash-red (Florin Oprea, Constanța // F. Oprea) (na//na)

Naked neck pigeon ash-yellow (Alex Marean, Alba Iulia // A. Marean) (na//na)

The best support for this assumption is given by pigeon below. This naked neck F1 have a white patch on the right side of the neck area due to a pied marking inherited from the pied father. Like all naked neck F1, he presented small areas featherless neck. In him, these areas are located just to the left (with red plumage) but not to the right (with white plumage).



F1 Naked neck pigeon X Magpie lassy tumbler with white crescent (D. Mergeani // D. Mergeani) (na//+, pied)



F1 Naked neck pigeon X Magpie lassy tumbler with white crescent (D. Mergeani // D. Mergeani) (na//+, pied)

Since the color of feathers is given by melanic pigments transfer from melanocytes to keratinocytes surrounding the insertion point of the feathers and then from keratinocytes to growth feathers and because the melanocytes are missing in some white areas of the body caused by some pied genes, we conclude that the effect of gene "Nacked neck" is conditioned the presence of melanocytes. This effect could consist in an abnormal functioning of these melanocytes characterized by production of substances not yet known, a substance blocking effect of an enzyme that is involved in the growth of feathers. This substance, when it transferred to the surrounding cells with melanic pigments, inhibit the growth of feathers in this area of the body, causing the appearance of the naked neck. It is quite likely that just melanic pigments are those who have a "toxic" effect on the growing feathers. Thus, the "Nacked neck" gene effect would be to transform these melanic pigments in the keratinocytes surrounding the point of growth of feathers to a blocker of feathers growth.

According to the above particulars, it is unlikely that we can get bull-eyed white pigeons (homozygous for the Recessive white gene) that also have naked neck.