

MUTATION **USELESS KNOWLEDGE**

WOOLLY • WOOLY WOOLIE • WOOLLIE

**WOOLIE
(WO/WO)
IS NOT:
ANYTHING
FRIZZLED (F)**

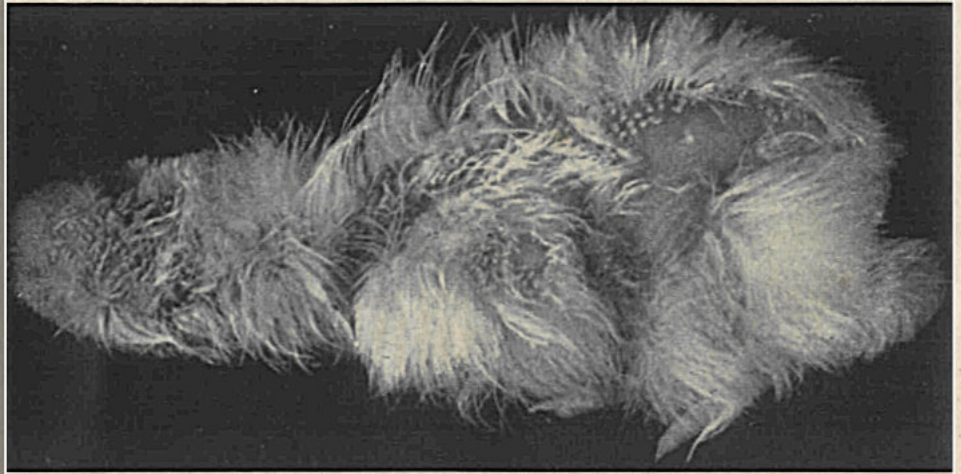
The story begins in 1948 in the laboratory of the South Dakota Agricultural Experiment Station. Breeding trials are conducted with white Plymouth Rocks which are highly inbred (breeding to close relatives). It is Jones and Kohlmeier who notice that there are some strange chickens among them. Jones and Morgan will investigate it.

The woolly/woolie chick

The chicks all show abnormal down, some have bare patches, as if feather tracts or strips of feathers on the body (see chapter on naked neck in Genetics of chicken Extremes pages 40-41) are gone. These are feather strips on the back and belly beyond the breastbone, on the side of the belly and on the shoulders covering the wings. Some appear normal and others have much shorter down or so-called 'nodules' of down, curled balls of down visually. For identifying affected chicks, the easiest way is to see if they have feet and legs and, in particular, the back of the legs and the underside of the feet look shiny and smooth.

WOOLLY FEATHERING IN THE FOWL

D. G. JONES AND WALTER MORGAN*



TYPICAL WOOLLY CHICK

Juvenile and adult feathers

Juvenile and adult feathers are normal in quantity and where they are, unlike chick down. However, the individual feathers are deformed. At first glance, the feathers look normal, but they are not soft or nicely smooth like normal feathers. They look rough

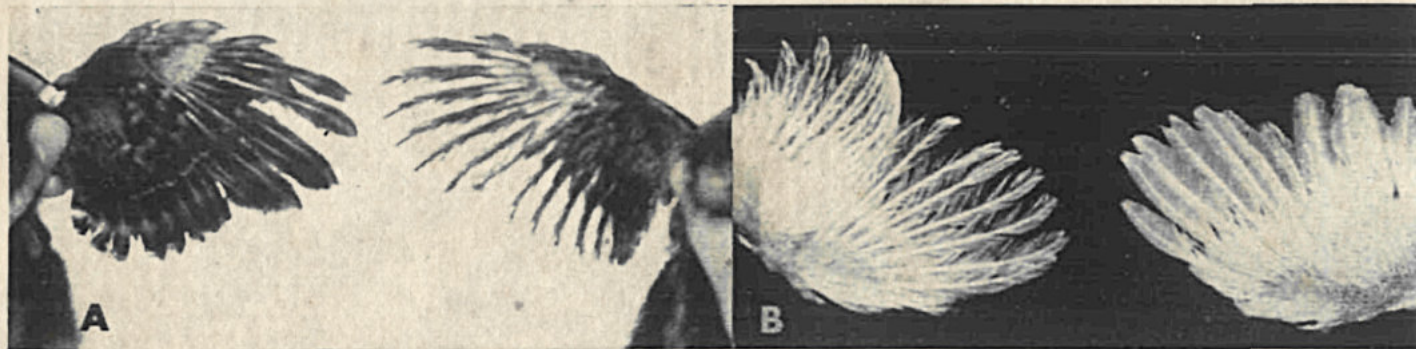
and incomplete and they are not symmetrical. The barbs do not interlock like normal feathers. So the barbs are not held together as a closed web like normal feathers.



SCRAGGLY CHICKS



WING FEATHERS



WING FEATHERS OF BARRED AND WHITE CHICKS

Under the microscope, you can see that the barbules (the hooks) are parallel to the barbs instead of semi-angular. Feather hooks are also missing or malformed.

Inheritance

To state upfront: woolies are born from normally feathered parents. When the woolies are mated, they give 100% woolies. In other words, it is a single autosomal (not sex-linked) recessive gene. The inheritance is the same as any other autosomal recessive gene, like recessive white or lavender.

Higher embryo mortality in the last 3 days

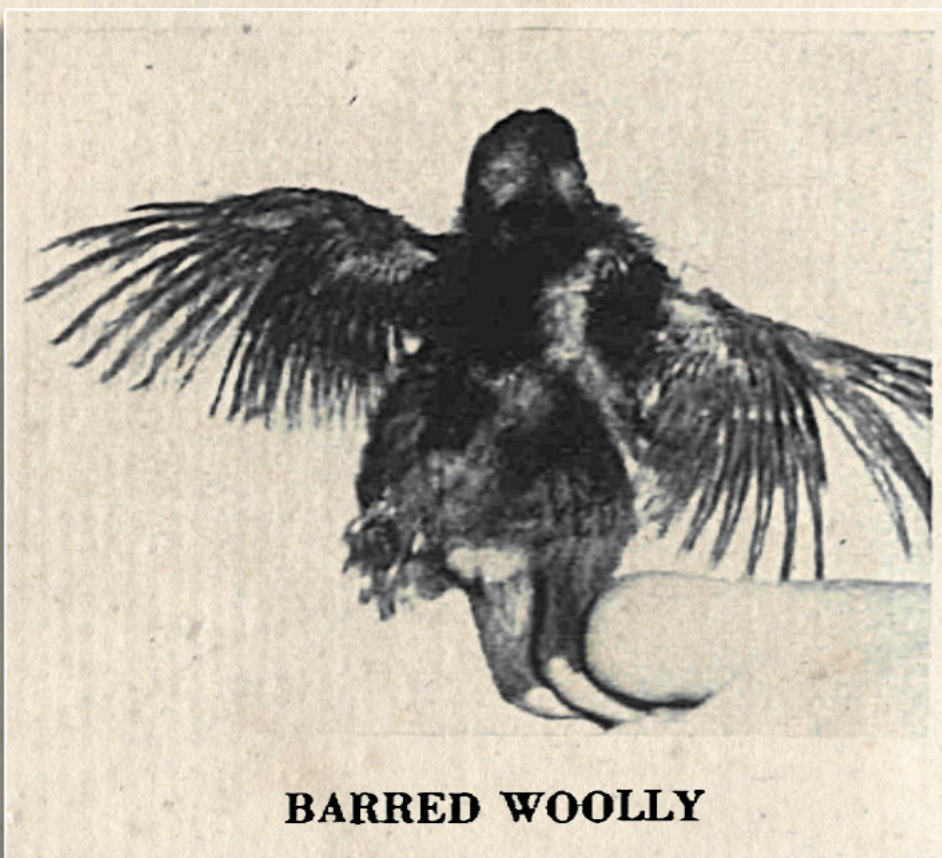
Woolie chicks are weak when born. A part of the embryos dies between day 19 and 21 in the egg.

- Woolie x Normal : 0 dead embryos.
- F1 x F1: 23% dead embryos in the last 3 days before hatching.
- Woolie x F1: 39% dead embryos on day 19-21.

When the parents have good hatching rates (in ease), then hatching is unaffected, of live chicks that is. With chickens in which hatching does cause problems, the percentage struggling to hatch will be higher.

The woolie chicks

The wo/wo chicks were reared together with normal chicks. They seemed less active immediately after hatching and were 'pushed around' by the other chicks. The woolie chicks stood near the heat source most of the time. This made it clear that they needed more warmth compared to normal chicks. Of the wo/wo chicks, more died during the first two weeks than the normal chicks. Out of 104 chicks of each, 5.8 per cent of the normal chicks died



BARRED WOOLLY

and 12.5 per cent of the woolies. Still, the survival rate of these scruffy-looking chicks was as high as 87.5 per cent.

Rearing of woolies

Woolies have only their few and tatty-looking juvenile feathers. A rainstorm is a tragedy because the water does not drip off them, they get soaked to the skin. Hypothermia often resulted in death.

Fertility and breeding of woolies.

The survivors so far. Reaching sexual maturity was not a problem in the woolies, when comb development of the cocks is used as a yardstick. Secondary sex characteristics of woolies also developed normally. The

actual fertility of cocks, i.e. producing working sperm, was similar to that of normally feathered cocks.

In hens, it was different, they laid their first egg later than normal hens.

Adult woolie chickens are smaller than normal chickens of their breed. Not only in terms of appearance because of the rough feathers but they also weighed less compared to normal chickens. As an indication, a normal cock weighs almost 8 pounds against a woolie 6. Among the hens, it is 5.4 pounds for a normal hen against 3.8 pounds of a woolie hen.

The eggs were also smaller from the woolie hens compared to the normal hens of the same line.

Comparisons to other feather mutations For details, see the

Extremes book. The ball shaped down of woolies is very similar to the 'clubbed down' mutation. The description of chicks with the mutations 'ropy' and also the 'stringy' also resembles woolie. That down doesn't get 'fluffy' either. However, regarding those two mutations, adult woolies did not show the characteristic feather problems. If you compare woolie to another feather mutation, it is most similar to 'frayed' (Warren) except that all feathers of woolies are abnormal instead of just the wing and tail feathers. Hutt's 'ragged wing' mutation is also nothing like it, for the tail and wing feathers of woolies are not shorter.

The 'wo' gene.

Woolie affects both embryos, chick down, also juvenile and adult feathers look rough in the homozygous w/w chicken. It also negatively affects survival and also reproduction. There is no advantage to this gene, neither heterozygous nor homozygous. Rather the opposite. Therefore, any serious breeder will remove this gene from her/his animals as soon as possible. Of course, it is difficult to remove a recessive, i.e. invisible in heterozygotes, from a breeding line. Therefore, strong interbreeding is not recommended when wo/wo chicks are born. This obviously applies to any recessive mutation you don't want in your chickens.

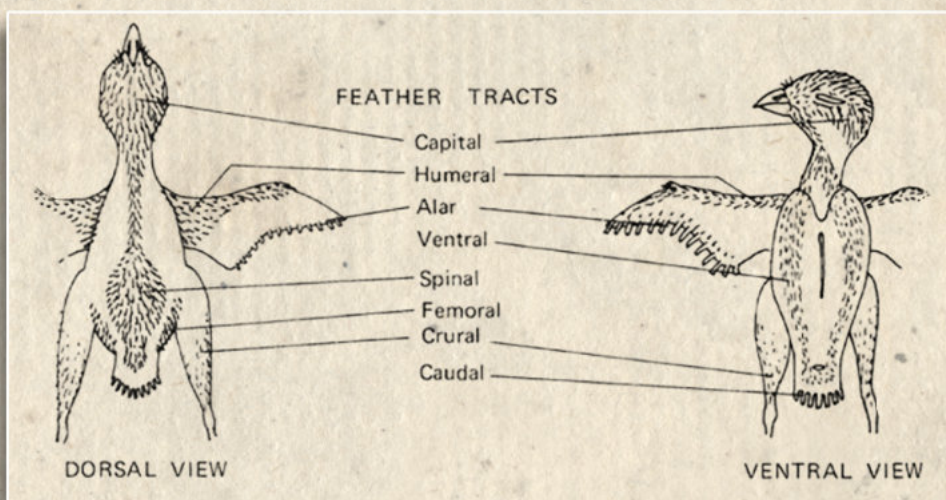
In conclusion

No modern research can be found on woolie. The research used for this article is by Jones and Morgan from 1956. Another study was also published in 1950, in which woolie was only mentioned alongside other feather mutations.

In short, woolie, woolly, or however you write it, is not a double frizzle. Such a name suggests a resemblance to the sheepskin, its curls and wavy character.

That's the woolie's story, no frizzled feather in sight, just a harmful feather mutation. In that respect, double frizzled and woolie are similar, because both are preventable.

The End



For reference when you decide to read the original article. At <http://people.eku.edu/ritchisong/feathers.html>, there are more names of how the strips of feathers are called.

WOOLLY FEATHERING IN THE FOWL by Jones and Morgan.

TORTURE-BREEDING

The extremely frizzleds sometimes shown on social media are failed chickens, bred by ignorance or with the malicious intent to get attention. Spread as much knowledge as possible about the damage that frizzle (autosomal dominant see my earlier article on my website) does to the chicken.

Not that this will stop the attention-hungry persons from having a 'cute' looking chicken that gets balder with every moult and is unprotected without closed plumage and is sure to meet an untimely death. In response, there are plenty of claims that 'their' double frizzle had a long and happy and never lost its feathers and never had to face life wearing porcupine looking 'feathers'.

There are those who don't care about the life and suffering of others, be it a chicken or any other animal (women e.g.). The best thing to do is to tell others (not the person showing off the F/F chicken) that there is nothing 'cute' about a disabled chicken, similar to torture-bred dogs/horses. The chicken was hopefully born by accident, due to ignoring the negative consequences when breeding frizzled (F) incorrectly or out of ignorance. Showing it on social media for likes and hearts is just insensitive. It shows that you cannot breed and the virtue-signalling effect of your 'rescue' has exactly the opposite effect: breeding accidents are normalised. How stupid can you be, unless you caption it in capital letters: TORTURE-BREEDING. It is torture-breeding indeed and best to call it as such. Because otherwise the 'rescue frazzles' will never end.

I'm sure this will bring me negative comments because who the hell am I? So be it. It isn't the first time I write about animal welfare. It has to be said: double frizzle (F/F) is torture. Don't breed with frizzles if you don't have your stuff in order, both the pens and your brain. Be kind to chickens.