

Consumers' Perspective on Dual-Purpose Chickens

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ABSTRACT

The usage of dual-purpose chicken breeds is one of the discussed alternatives to prevent cockerel chicks of laying hens from being killed for economic reasons. Therefore, the aim of this study is to analyse consumers' perspective on dual-purpose chickens. To get an insight into the consumers' perspective, we initially conducted six focus groups with German citizens focussing on chicken meat and egg preferences, perception of chicken farming and attitudes towards dual-purpose chicken breeds. The results show that most of the participants were aware of the killing of day-old chicks. However, alternatives were scarcely known. After giving the participants information about the dual-purpose chicken, they were generally in favour of this chicken breed. Some participants raised concerns regarding the economic efficiency and the higher product prices. For others, ethical values predominated. All in all, the results demonstrate that the discussants have specific expectation regarding a dual-purpose chicken.

Keywords: *consumer; dual-purpose chickens; perception; focus groups; day-old chicks*

1 Introduction

In Germany more than 40 million male chicks are killed after hatching each year. The killing of day-old chicks is common practice in the commercial production of laying breeds because the fattening of layer-type males is unprofitable. And it is a practice that is done in conventional as well as ecological farming. Sex determination in the egg, the fattening of layer-type males or dual-purpose breeds are alternatives to the killing. Breeders of dual-purpose chickens are facing the problem that meat growth and the number of eggs are negatively correlated. Therefore, the hens lay fewer, smaller eggs and the cockerels put on less meat and need more time and feed to grow. Consequently, eggs and meat from dual-purpose chickens have a foreign appearance to consumers and are more expensive than products from hybrid chickens. Therefore, this study focusses on the societal acceptance of the last named alternative.

Thus, several research questions arise. First, are consumers aware of the killing of day-old chicks and do they have morals concerns? Second, what is the reaction to the concept of the dual-purpose chicken breed? Third, whether and under which conditions would consumers buy products from dual-purpose chickens and would they be willing to pay a surcharge?

2 Background

Since the 1950s the industrialization and prosperity of society led to a growing demand for animal products. The increasing demand for chicken meat and eggs and new opportunities in sexing at hatch resulted in a specialization in chicken breeding. Nowadays, there are genotypes specialized in meat growth and genotypes that are specialized in egg production (GRASHORN, 2013; LEENSTRA et al., 2010). As a result, the fattening of layer type males is unprofitable due to the negative correlation of meat growth and laying performance. For this

reason, it is common practice that male layer types are killed as day-old chicks, in conventional as well as organic farming (RAUTENSCHLEIN, 2016).

In Germany, the consumption of chicken meat and eggs is still slightly increasing. In 2015 the average uptake of chicken meat was 11.6 kg per person (STATISTA, 2017). Additionally, the Germans consumed on average 223 eggs in 2015 (BLE, 2016). At the same time, animal husbandry is in the focus of public criticism. Especially the keeping of laying hens and broiler production are seen more sceptical than other animal husbandries (VERBEKE and VIAENE, 2000; VANHONACKER and VERBEKE 2009; HENG et al. 2013). Besides critical aspects like stocking density, antibiotics and farm size, the society is becoming increasingly aware of the killing of day-old chicks. This practice raises moral concerns not only among consumers but is also an issue on the political agenda. That is why the German Ministry of Food and Agriculture (BMEL) is funding research in the field of sex determination in the egg as well as in the field of dual-purpose chicken with the aim to stop the killing of chicks (BMEL, 2017).

Dual-purpose chickens are one alternative to the killing of day-old chicks. They can do both: produce meat and lay eggs. The hens lay fewer eggs and the cockerels put on less meat and need more time and feed to grow which can be explained by the negative correlation between meat growth and laying performance (DAMME, 2015). Consequently, eggs and meat from dual-purpose chickens have a foreign appearance to consumers and are more expensive than products from hybrid chickens. To a great extent the eggs are smaller (mainly size S) and coloured beige. The meat of the cockerels has a firmer consistency and a darker colour (GRASHORN, 2013; RAUTENSCHLEIN, 2016).

LEENSTRA et al. (2011) conducted a study focussing on the public opinion on alternatives to the killing of day old chicks in the Netherlands. With the help of focus groups and an online survey they found out that 58 % of the respondents were not aware of the killing of day-old chicks. Regarding the concept of dual-purpose chickens, the results show that it was seen positive but also unrealistic on grounds of the two-fold increase in prices for eggs and chicken meat. In a ranking with other alternatives, the dual-purpose chicken was ranked second from five potential alternatives directly after the sex determination in the egg. The study has also revealed the complexity of this topic.

3 Method

To generate qualitative data, we conducted focus groups. Focus groups are an empirical research method with focus on group dynamics and interactions between participants (FINCH and LEWIS, 2003). According to MORGAN (1997: 6) "focus groups are a research technique that collects data on group interactions on a topic determined by the researcher". The aim of focus groups is to create an atmosphere that fosters an almost natural conversation setting with diverse opinions and statements (LAMNEK, 2005). Furthermore, by responding to other participants the conversation setting leads to deeper insights in motivations and justifications (FINCH and LEWIS, 2003).

With the help of experts in the field of chicken farming we created a questioning route. The questioning route was semi-structured in order to get comparable results but also with the aim to stay flexible and to keep the explorative character (LAMNEK, 2005). Discussion topics were preferences for chicken meat and eggs, the perception of chicken farming, known alternatives to the killing of day-old chicks and the concept dual-purpose chicken including advantages and disadvantages as well as purchase criteria.

In June 2016, we conducted six focus groups with each 6 to 8 participants in Berlin, Munich and Cloppenburg (intensive poultry region in Lower Saxony). All participants were consumers of eggs as well as chicken meat. People with a professional background in agriculture, food industry or market research were not recruited.

The discussions were scheduled for 90 minutes and the participants received an allowance. The participants were identified by a market research company and all of them were consumers of poultry meat and eggs. In addition, quotas concerning age, gender and employment were fulfilled. The discussions were documented by audio and video and after that verbatim transcribed. The transcripts of the focus groups were content-analytically evaluated. To avoid that participants prepare themselves for the discussion the topic was not

announced in advance. Even if questions were raised directly to the moderator they were not answered during the discussions and no additional information was given.

4 Results

4.1 Purchase criteria for chicken meat and eggs and consumption habits

At the beginning of the discussions the participants were asked for their consumption habits and purchase criteria regarding chicken meat and eggs. According to the discussants chicken meat was purchased mainly in supermarkets and discount stores or sometimes in organic food stores. Some stated that they would buy the meat directly on the farm or on the market. The most named purchase criteria were the meat colour, the best-before date and regional origin. Organic production was an aspect which was also named frequently. Some participants stated that they would not be able to afford organic chicken meat and would therefore buy conventionally produced chicken meat. On this aspect, it was also mentioned that husbandry conditions would be difficult to understand based on the packaging. With respect to consumption habits it became clear that the discussants prefer cuts like chicken breast or wings to a whole chicken. Reasons that were mentioned were "it is too much meat for me alone"¹ or "I do not like bones". Few discussants said that they would sometimes buy a whole chicken primarily to cook chicken soup.

Eggs were also purchased by all discussants. According to the participants, eggs were bought in supermarkets and discount markets, on the market, organic food stores or when possible directly on the farm. Regarding the husbandry system some discussants said that they would not pay attention to it. To other discussants this aspect was very important and they looked especially for free-range or organic eggs. An interesting point was that some participants differentiated between eggs for cooking and baking and boiled eggs for breakfast. The egg colour was not indicated as a relevant purchase criterion. Few discussants stated that they would buy explicitly white or brown eggs because of their association with the husbandry conditions. Regarding the egg size, the opinions were more diverse. Some discussants stated that they would not pay attention to egg size whereas others said they would look for preferably big eggs. One discussant was unaware that different egg sizes exist. All in all, besides the husbandry system, regional origin, the best-before date and the intactness of the eggs were named as purchase criteria for eggs.

4.2 Perceptions of chicken farming in general

The perception of chicken farming was dominated by terms like "factory farming", "lack of transparency" and "greed for profit". Regarding the husbandry of laying hens the discussants were mainly concerned about the feed. It was presumed that the hens would be fed with "rubbish" and this is reflected in the egg quality. The topic beak trimming was also mentioned in this context. The picture of hens in battery cages, where the hens are packed together and have no space to move was present. The fattening of broilers was associated with broilers that have to eat all day to gain weight. The discussants assumed also that there would be no human-animal interaction and that the stable workers would not handle the animals appropriately. The prophylactic use of antibiotics was also often mentioned by the discussants and harshly criticised when they were asked for their perception of chicken farming in general. According to some participants, free-range husbandry best meets their expectations.

4.3. Moral concerns and reactions to the concept of dual-purpose chickens

The topic killing of day-old male chicks was addressed in every focus group without being mentioned by the moderator. Most of the participants stated to know about this practice. Regardless, many discussants expressed their disgust at the killing of day-old chicks. Statements such as "imagine, they were humans. Shredding the boys and feeding them to animals. That's terrifying" or "they kill all the men" underline that humanization of farm animals and also plays a role when it comes to this topic. Most of the discussants agreed that the killing of chicks is clearly unacceptable from the moral point of view and they demanded to stop the practice. Others claimed that the chicken would be killed anyway and that it does not matter if sooner or later.

¹ Citations were translated from German into English.

Discussing the reasons, it was assumed that “it’s for profit reasons” and “they don’t have enough meat growth”. It was also mentioned that consumers could not change the situation because they would be powerless compared to the industry.

Asked for alternatives few were known by the participants. Sex determination in the egg was the alternative that was mostly known. Some participants also mentioned the fattening of layer type males as a potential alternative to the killing of day-old chicks whereas the use of dual-chicken breeds was not mentioned once. When the participants were asked if they have an idea what is meant by the “dual-purpose chicken” few could think of any. The participants responded for example: “I have no idea what could be meant. Do they have two heads?” or “it sounds like they were produced in a factory”. The discussants agreed that the naming is inappropriate and causes misleading associations.

Since the focus of this study is on consumers’ perspective on dual-purpose chickens, at this stage of discussion the concept of this chicken breed was explained to the participants. After the concept was presented, the reactions were mostly positive but concerns were also raised. The positive aspects that were named were primarily ethical and moral aspects that save the life of the males. Others presumed that the meat quality could be better due to a longer fattening period and slower meat growth. The most frequently named negative aspect was the higher price for meat and eggs from the dual-purpose chickens. Some participants described a dilemma between saving the life of male chicks and having to pay more for chicken meat and eggs. Other aspects that were named in this context were the presumption that the fattening of the cockerels would be economic inefficient and one discussant remarked that too many resources would be used to produce meat. Another important point that was stressed by some discussant was the fear that genetic engineering would be used to breed dual-purpose chickens.

4.4 Purchase criteria for products from dual-purpose chickens

In a next step, it was discussed whether and under which conditions the participants of the focus groups would buy meat and eggs from dual-purpose chickens. The most often named purchase criterion was a clear labelling as dual-purpose chicken associated with consumer information. Some discussants suggested an indication of origin, e.g. “the address of the chicken farm on the package”. During the discussions it became clear that for many participants the prevention from killing day-old chicks is not enough and they would only buy products from dual-purpose chickens if the husbandry conditions would be improved as well. As examples for better husbandry conditions “good feed”, “no antibiotics”, “much more space” and “litter” were named.

When the discussants talked about the prices of dual-purpose chicken meat and eggs the majority of the discussants stated that they would pay a surcharge for meat and eggs on the grounds of “sympathy with the chicks” or “to eat meat with a good conscience”. “It depends on how much more I have to pay” was also often mentioned by the discussants. In the case of eggs some discussants indicated to be willing to pay a surcharge of 50 percent. For meat the willingness to pay a surcharge seemed not that high. “I would pay a surcharge of 20 percent if the meat tastes better” and “I would not pay additional 10 Euro”. Paying more money for the meat and therefore reduce the consumption of meat was seen as the solution by several discussants. Few participants said that they would not be able or willing to pay a surcharge.

5 Discussion

Although all participants of the focus groups were consumers of chicken meat and eggs, the perception of chicken farming was mainly negative and associated with words like “factory farming” and “antibiotics”. Compared to the study of LEENSTRA et al. (2011) where only 42 % of the respondents knew about the killing of chicks, our discussants stated to be mostly aware of the killing of day-old chicks. One reason could be that the topic was very present in the media at that time and the issue is increasingly addressed by politicians, NGOs and in the media. Most of the discussants refused to accept the practice on the grounds of moral concerns and got indignant about it. However, alternatives to the killing were scarcely known.

After presenting the concept of dual-purpose chickens, the participants had difficulties to imagine what is meant by the name dual-purpose chicken (Zweinutzungshuhn). In general, the participants were in favour of

the dual-purpose chicken breed but they also raised concerns, for example they presumed that genetic engineering is used or that the fattening of the cockerels is economic inefficient. Identified purchasing criteria were a clear labelling of meat and eggs from dual-purpose chickens and improved husbandry conditions for the chickens. Regarding the willingness to pay, the opinions were diverse. Most of the participants said that they would be willing to pay an additional charge with the aim of eating meat and eggs with a good conscience. Some stated not to be willing or able to pay more for products from dual-purpose chickens. However, it should be noted that these statements have to be interpreted with caution as it can be often observed that there are inconsistencies between attitudes and actual purchasing behaviour (attitude-behaviour-gap).

In conclusion, the findings show that the participants were interested in the topic and that they have specific expectations (e.g. labelling or husbandry conditions) regarding products from dual-purpose chickens. Therefore, it is important to take the consumer's perspective into account when discussing alternatives to the killing of day-old chicks.

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