

## **Chicken Feathers Utilization as Halal Consumer Goods in Al-Syafi'i Fiqh Discourse**

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### **Abstract**

This article aims to identify the benefit of utilization of chicken feathers as a halal consumer goods from the perspective of al-Syafi'i's fiqh discourse. The qualitative method were employed by thorough various type of document analysis. The analysis found that the keratin is a good source of protein and safe for general consumption due to the absence of any unfavourable gastrointestinal or other acute onset illnesses when taken up to 40 gd-1 for 5 days. It proves the uniqueness of keratin and, thus, widely used as bio sorbent, animal feeding, cosmetics, animal feeding, decorative items, biofertilizer, biomedical application, diet supplements, and nutrient supplements. From the syariah perspective, the al-Syafi'ie jurists hold that it is halal to consume poultry feathers whether it is separated prior or after its death and therefore it is considered as pure.

**Keywords:** Chicken Feather, Benefits, Halal, Consumer Goods, Shariah Perspectives

### **Introduction**

The poultry industry has gained significant importance worldwide, particularly in the Gulf Cooperation Council region, due to the high demand for poultry meat and eggs (Al-Nasser et al., 2020). In countries with large Muslim populations, such as Indonesia, the consumption of poultry products is a crucial source of halal protein. (Paputungan et al., 2020) However, the management of poultry farms, especially during challenging environmental conditions, remains a significant challenge. (Paputungan et al., 2020) Addressing this challenge requires an understanding of the principles of halal food production, which are rooted in the Islamic jurisprudence (fiqh) discourse. This research paper explores the potential utilization of chicken feathers as halal consumer goods, with a focus on the al-Syafi'i's fiqh perspective.

### **Literature Review**

The concept of halal in the food industry has gained increasing attention in recent years, driven by the growing demand for halal products among Muslim consumers. Halal refers to

what is permissible or lawful according to Islamic law, and it encompasses various aspects of food production, including the sourcing, processing, and handling of raw materials. (Man & Sazili, 2010) The halal food industry is not limited to meat and dairy products but also includes other consumer goods, such as cosmetics, pharmaceuticals, and even textiles. (Haleem et al., 2021)

Within the halal food industry, the utilization of by-products, such as chicken feathers, has been a topic of interest. Chicken feathers are a readily available by-product of the poultry industry and have the potential to be used in various applications, including the production of consumer goods. The utilization of chicken feathers as halal consumer goods has been explored in the context of the al-Syafi'i's fiqh discourse. According to this school of Islamic jurisprudence, the use of chicken feathers in the production of consumer goods is generally considered permissible, provided that the feathers are obtained from halal-slaughtered chickens and the processing methods do not involve any haram (forbidden) substances or practices (Man & Sazili, 2010).

### **Methodology**

Document analysis is a qualitative research method used to analyze documents, such as books, articles, reports, and other written materials. (Bowen, 2009) It involves systematically reviewing these documents to identify key themes, patterns, and insights relevant to the research question. (Bowen, 2009) The process typically includes skimming, reading, and interpreting the content. In this regard, the fiqh ruling on the utilization of chicken feathers as halal consumer goods was explored through the analysis of relevant fiqh literature, including books, journal articles, and other scholarly sources. The al-Syafi'i masterpiece on jurisprudence, namely "al-Majmu' Syarh al-Muhadhdhab," is referred to as primary source of this study.

### **Discussion and Conclusion**

#### *Benefit of Chicken Feather*

Keratin consists of around 90% of keratin found in bird feathers (Izabela Sinkiewicz, 2016, B Y Alashwal, 2019). The most abundant structural fibre protein is keratin, which is found in hair, skin, bristles, horns, hooves, and bird feathers. Keratin materials have a promising future in the manufacturing of biodegradable packaging due to their biodegradability and strong mechanical strength. The extraction of keratin from feather waste and the use of soluble keratin to create new, beneficial bioproducts is extremely beneficial for reducing environmental issues. Previous studies show that hydrolytic procedures are safer and more productive than solubilization through the removal of disulphide bonds for obtaining soluble keratin helpful for biodegradable film creation for food applications (Department of Standards Malaysia, 2012) and therefore capable of being broken down by living organisms, such as bacteria, fungi, or water moulds, and reabsorbed by the natural environment ([www.britannica.com](http://www.britannica.com)). The most abundant structural fibre protein is keratin, is found in hair, skin, bristles, horns, hooves, and bird feathers. Especially in the wool textile sector and in chicken slaughterhouses, millions of tonnes of keratinous waste are produced each year. There are about 89105 tonnes of feather offal are produced annually globally. It is typically dumped in landfills. The feathers should be treated right away because of the wide range of microorganisms, including infections, that are there. Although incineration is the primary

option for disposing of feather waste, it is not preferred due to its high energy consumption and significant carbon dioxide emissions (Chaitanya, 2021).

The existing research found keratin is a good source of protein and a useful ingredient in the beauty and pharmaceutical industries. The characterization of keratin extracted from chicken feathers was successfully carried out using the 3 analyses which are FTIR, SEM, and XRD (Izabela Sinkiewicz, 2016). Another study found that several techniques, including chemical hydrolysis, enzymatic and microbiological treatment, dissolution in ionic liquids, microwave technique, steam explosion technique, and thermal hydrolysis or superheated process, can be used to extract keratin (Chaitanya Reddy Chilakamarry, 2021). Keratin supplements are safe for general consumption because they did not result in any unfavourable gastrointestinal or other acute onset illnesses when taken up to 40 g/d for 5 days. Participants in the study were 17 men with an average age of 30 years, a height of 182 cm, and a weight of 79 kg. The casein- or keratin-based drink and bar were given to participants for 14 days in pre-packaged daily portions. The results show evidence in a controlled setting that daily use of protein sources generated from keratin is safe (Stuart Houltham, 2014).

Poultry feathers have been used in a proprietary controlled hydrolysis process that produces a novel keratin product (KER). Humans can safely consume up to 40 g of soluble KER per day when adding it to a healthy diet. The study compared the effects of a (KER) supplement to casein (CAS) protein on anthropometric, blood, cardiorespiratory, and performance variables in physically fit adults after 4 weeks of aerobic exercise. 15 trained male cyclists between the ages of 18 and 50 were chosen for this study from the regional triathlon and cycling communities. KER has the potential to be used as a high-protein supplement because it was well tolerated by participants. To gain lean body mass while also engaging in an aerobic training program, soluble KER may be a better protein supplement option than CAS (B Y Alashwal, 2019).

Feathers are high in the protein keratin and account for 7% of the weight of a living bird, resulting in a significant mass that can be transformed into a valuable meal. A feather meal is a good source of escaping protein as well. Due to the high keratin content and strong disulphide bonding of the amino acids, raw feathers are very intractable and have a low digestion of only 5% (Alabi 2021, Chand, 2017). Alpha ( $\alpha$ ) and beta ( $\beta$ ) keratins are two different types of keratins. All vertebrates contain beta ( $\beta$ ) keratin proteins, whereas alpha ( $\alpha$ ) keratin proteins are only present in the feathers of birds and reptiles. Keratin can be extracted from chicken feathers, and the characterization of keratin was performed using FTIR, SEM, and XRD analyses (B Y Alashwal, 2019). Besides that, keratin is a good source of protein. The study was done in which chicken feather keratin was extracted, changed into powder, and dried under vacuum for use in keratin protein-based biomedical, pharmaceutical, and cosmetic products. It also can be a useful ingredient in the beauty and pharmaceutical industries (B Y Alashwal, 2019).

Besides, keratin has a promising future in the manufacturing of biodegradable packaging due to its biodegradability and strong mechanical strength. Biodegradable packaging materials may offer an alternative to synthetics, which are currently employed for this purpose most frequently and pollute the environment (Izabela Sinkiewicz, 2016). A biodegradable is a substance or chemical that can be changed to a harmless natural state by the action of

bacteria and will therefore not damage the environment. On the other side, keratin supplements are safe for general consumption because they do not result in any unfavourable gastrointestinal or other acute onset illnesses when taken up to 40 g d<sup>-1</sup> for 5 days (Stuart Houltham, 2014). The several uses of keratin are biosorbent, animal feeding, cosmetics, animal feeding, decorative items, biofertilizer, biomedical applications, diet supplements, and nutrient supplements (Chaitanya, 2021).

#### *Al-Syafi'i's Fiqh Perspective on the Use of Chicken Feather*

Numerous characteristics of animals are declared in the Quran, including their role and purpose in creation, their superiority over other species, and the methods for treating them (L Safitri, 2022). Islam sees all living things as creations of Allah hence it is appropriate to treat all living things with respect and regard, including people, animals, birds, and insects. Islam imposes a strict rule to not abuse and must instead treat animals with care (Javaid Aziz Awan, 2018). The majority of those engaged in this, including butchers, animal handlers, and those involved in animal transportation, are Muslims. Modern biotech technology is used to generate a wide variety of contemporary food products nowadays. Some of these contemporary food products are made using halal ingredients, while others have najis (impure) sources in them. Halal animals are frequently genetically altered as well.

The products that are halal fall into two categories. The first category relates to animals that have undergone genetic modification using genes from halal animals that were either obtained while the animals were still living or were not slaughtered in accordance with Islamic law. Animals genetically altered with genes from non-halal sources fall into the second category. One example of this is the transgenic lamb with mouse genes. Various perspectives exist among Islamic scholars about the interpretation of istihalah, the process that converts an impure substance into a pure and clean one. The Shafie and Hambali schools of thought firmly argue that the first steps of the procedure can decide whether or not a product is acceptable. If halal materials were used in the production process, the finished product is likewise halal. Regardless of its new characteristics, a product that was made using najis and haram components is still najis and haram. However, scholars of the Maliki and Hanafi jurists claim that najis that have undergone alteration to the point that their nature has entirely changed are no longer considered to be najis (Mohd Izhar Ariff Mohd Kashim, 2020).

#### *Chicken feather according to Shafi'i's Fiqh Discourse*

The determination of halal and haram food additives according to the jurisprudence of Imam al-Shafi'i's is based on his jurisprudence method in determining halal food. Basically, any food that is not impure and not harmful is lawful and good (Muda, 2019). According to Shafi'i's scholars, all parts of the carcass, namely bones, flesh, skin, hair, fur, and so on are unclean because according to them they are inseparable when alive. Animal fur that is obtained from an animal that is halal to consume, whether it is separated during life or after death that is slaughtered in accordance with Syariah law, is pure (Sri Kartika Sari, 2021).

According to Bakharuddin (2021), the Shafi'i school of scholars holds that whether it is separated during life or after death that is slaughtered according to syariah law, animal fur that is taken from an animal that is halal to consume is pure. This is explained by Al-Nawawi:

“The original law on anything that is separated from the living (animal) is impure except edible animal hair that is shaved while alive, includes thick fur, thin fur and wing feathers and all of them are pure according to the consensus of the scholars.”

According to (Muthi'i, 2009) in *al-Majmu' Syarh al-Muhadhdhab*, al-Syirazi claims that every animal that is impure due to its death makes their hairs and furs impure. The different opinions on this matter can be divided into three:

1. Hair becomes unclean because of death, as one opinion because it is a part related to animals, then it becomes unclean because of death like other parts or organs of their bodies.
2. Some correct the view that claims human hair is impure leading to the establishment of two perspectives on hair. First, all are considered impure. Second, is pure, as the hair is not sensitive to pain. Hair is therefore not connected to impurity because of death.
3. According to some opinions, this riwayat serves as an impurity correction specifically on human hair. Then, two perspectives on hair are established. First, everything is dirty. The second point is that everything is dirty, but human hair is different because it has its own glory.

As for the law relating to this issue, it can be concluded that this school of thought declares the najas of the hair of carcasses other than humans and establishes the purity of human hair. This is a summary of the issue. Al Qadhi Abu Ath-Thayyib and others said hair, bird feathers, camel hair, bones, horns and hooves are halal when they are alive, and become unclean when they die. Narrated by Al Buwaithi, Al Muzani, Ar-Rabi' Al Muradi and Hannalah. Hair, camel hair and feathers become unclean because of death. This is what was narrated from Shafi'i's in his books which were quoted from him by the majority of adherents of his school of thought, namely Al Buwaithi, Al Muzani, Ar-Rabi' Al Muradi, Harmalah, and the adherents of the old version of their school of thought (Muthi'i, 2009).

According to As-Syirazi if the hair is shaved from the animals, must be observed; if it's from an edible animal, then it's not najas, because shaving the hair is like slaughtering the animal. If an animal is slaughtered, it is not najas. As well as if the hair is shaved. If it is from an animal that is not edible to be eaten, then the law is the same as animal law. If that animal is slaughtered then it will become a carcass, as well as if his hair is shaved of course will be considered as a corpse (Muthi'i, 2009). If hair, animal fur, or bird feathers, are separated from the edible animal, during their life, or being pluck in, there are several opinions about this:

- i. His opinion is valid and confirmed by Imam Al Haramain Al Baghawi, and the majority of scholars that it is holy.
- ii. It is unclean, whether separated by itself or by being plucked. This opinion was expressed by Ar-Rafi'i and others that it is not pure unless it is shaved.
- iii. It is pure if it falls on its own. If it is revoked, it is najas since it is away from the recommended course of action. Aside from that, it harms animals because of certain actions that are similar to strangling them. Al Qadhi Husain, Al Muwalli, Ar-Ruyani, As-Syasyi, and others have all stated this opinion. The majority of scholars have verified the selected opinion, which holds that it is holy because it refers to shaving. It is like when someone slaughtered with a dull dagger and is then labelled halal even though it is unfavourable.

### **Purity of Halal Animal Furs And Feathers According to the Ijma' of the Jurist**

- i. According to Shafi'i's school of thought, hair or fur that comes from a living thing that is not consumed is considered impure; human hair, on the other hand, is considered pure. If fur or hair comes from animals whose meat is edible, it is also pure (Al-Juzairi, 2015).
- ii. According to the Hanafi school of thought, carrion meat and skin that animals cannot live without is najis. Unlike the bones, nails, beaks, claws, horns, and feathers, except sea urchins, are sacred because they do not affect life (Al-Juzairi, 2015).
- iii. According to the Hambali School, all parts of the carcass that make it alive are unclean, except for wool, hair and fur are sacred (Al-Juzairi, 2015).
- iv. According to the Maliki School, the parts of the carcass that are inseparable from life are unclean such as flesh, bones, sinews, skin, and the like. Unlike hair, wool, and fluff, it does not affect life, it is not unclean (Al-Juzairi, 2015).

### **Chicken feathers perspectives according to Malaysian fatwa**

The status of the fur of an animal whose meat is halal to eat is pure whether the fur is separated during life or separated after the death of the animal slaughtered according to Shariah law. Therefore, chicken feathers not only can be used for external use but can even be eaten if the chicken feathers are used as an alternative food ingredient and also able to provide protein and have no harmful effects. Therefore, chicken feathers that are used as food raw materials must be ensured through the process of production, preparation, handling, storage, processing, and packaging until delivery so as not to be contaminated by faeces (Bakharuddin, 2021)

### **Halal Consumer Goods**

According to Department of Standards Malaysia (2013), consumer goods including items like clothing, accessories, and toys. For medical use, food, and cosmetic products are excluded from this category. Consumer goods, or the parts of them, that are allowed under Shariah law should meet the following requirements:

- a) Do not include any items made from animals such as pigs, dogs, or their derivatives.
- b) Free from najis, as required by Shariah law.
- c) Safe to utilize and not dangerous to human health.
- d) Not produced using tools or materials that are najis-contaminated, as required by Shariah law.
- e) Do not include anything prohibited by Shariah law, such as human parts or their derivatives.
- f) The goods must be kept separate from other goods that don't meet the requirements in items (a), (b), (c), (d), or (e), or from anything else that Shariah law has classified as najis, throughout the preparation, processing, packaging, storage, or transportation.

The approved animal hair is fur from halal animals that have been slaughtered in accordance with Islamic law and halal animal hair that has been taken during life. As for the prohibited animal fur, fur obtained from a non-halal animal, whether it is alive or dead, is regarded as najis and is not permitted to be used. It is also prohibited to utilise fur taken from a dead halal animal that was not slaughtered in accordance with Shariah law because it is (Department of Standards Malaysia, 2013).

Following Good Manufacturing Practices (GMP) or Good Hygiene Practices (GHP), consumer goods must be processed, packaged, and hygienically stored in licenced facilities. Before being processed into consumer goods, animal bones, skin, and hair must be cleaned. The skin cleaning procedure should come after the tanning procedure. Hair and bones must go through a proper washing procedure that complies with Shariah law. Bone, skin, and hair that is not clean should be stored separately (Department of Standards Malaysia, 2013).

First, all mucus, meat, and moisture should be removed from the skin of animals other than dogs, pigs, and their offspring and derivatives. Secondly, the skin must be cleansed of any debris and najis. Even after the dibagh procedure, an animal's skin is still filthy if there are any physical materials, such hair, on it. As a result, the skin's hair must be removed. Thirdly, the material to be used must have the ability to eliminate moisture, meat, and mucus from the skin. Plant-based items like acacia leaves (qaraz), oak gall ('afs/manjakani), pomegranate peel (qusyur ar-rumman), and chemicals like alum (al-syabbu) are a few examples of materials that can be employed. Next, to eliminate najis, skin that has undergone the tanning procedure needs to be cleansed with clean water. Fifth, just sun-drying, covering the skin with dirt, freezing, and pickling the skin does not finish the tanning process (Department of Standards Malaysia, 2013).

### **Conclusion**

The use of chicken feathers as a source of halal consumer goods provides a promising opportunity to harmonize industrial practices with Sharia principles while promoting sustainability and economic efficiency. According to the Shariah perspective, the transformation of chicken feathers which are a by-product of halal slaughtered chickens into a beneficial product can be considered permissible (halal) if the process complies with the ethical and legal guidelines set by syariah.

Shariah emphasizes the importance of minimizing waste and maximizing the utility of resources, which aligns with the practice of repurposing chicken feathers into valuable goods such as textiles, biodegradable materials, and other consumer products. The process must ensure that the feathers are sourced from an edible animal, because shaving the hair is like slaughtering the animal. If an animal is slaughtered, it is not najis. As well as if the hair is shaved. If it is from an animal that is not edible to be eaten, then the law is the same as animal law. If that animal is slaughtered then it will become a carcass, as well as if his hair is shaved of course will be considered as a corpse (Muthi'i, 2009)

In addition, the production of halal consumer goods from chicken feathers contributes to environmental protection, a core principle of Shariah, by reducing waste and promoting sustainable resource management. By adhering to these ethical and legal guidelines, the industry can create products that meet the needs of Muslim consumers while supporting the broader societal goals of sustainability and responsible consumption.

In conclusion, the use of chicken feathers as halal consumer goods not only complies with Shariah principles but also offers a path to innovation and sustainability in the halal industry. This approach underscores the potential for aligning industry practices with Islamic values, which benefit the environment and the global Muslim community.

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