

THE COMMERCIALISATION OF HALALAN TAYYIBAN LUWAK COFFEE

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Abstract

Luwak coffee is one of the most rare and expensive coffee in the world, with the selling price between USD250 to USD1200 per kilogram. Realizing the profitable opportunity, its production has been commercialised via SME initiatives. Nevertheless, the commercialisation of luwak coffee and its shariah point of view has been limitedly discussed in the literature, as compared to its scientific analysis. Thus, this article elaborates on the systematic, halalan tayyiban commercial production of luwak coffee via case study and participant observation of a farm in Bandung. Finally, this article discovers three significant halal critical control points in the process of feeding, washing and drying, to maintain the halal status, safety and hygiene of luwak coffee.

Keywords: Halalan, Tayyiban, Civet, Luwak, Coffee.

INTRODUCTION

Coffee is known as one of the most favourite drinks of all nation (Birsen Yilmaz et al., 2017; Prakosa, 2019). It is first served during the ninth century in Ethiopia and was reported to spread to Egypt and Yemen, from the Islamic world, into the European continent and America. The love of coffee is linked to its high status and often reflected in a habit among coffee lovers (Mohd Zaffrie et al., 2016). There are a variety of coffee beans, but the most exotic, rare and expensive is palm civet coffee, scientifically known as *Paradoxurus Hermaphroditus*, which has been indigenously called 'luwak coffee' by the Asean people. Nevertheless, the palm civet coffee is also known as *Ca Phe Cut Chon* in Vietnam, *Kape Alamid* in the Phillipines (Deutsch & Murakhver, 2012) and *Kafe Laku* in Timor Leste (Juniaty & Bambang, 2015), which similarly refers to palm civet coffee or *kopi tahi musang* by the Indonesians, in their respective native languages. The palm civet coffee is among the most expensive coffee which refers to the coffee beans found in civet droppings which then will be cleansed and processed (Muzaifa et al., 2019).

The production and serving of luwak coffee started in Indonesia more than 200 years ago, in congruence with the plantation of coffee by the Dutch during their occupation in Indonesia (D'Cruze, 2014). Historically, the locals served the estate managers and they received some payment for the unique beans (Schoenholf, 1999). Since then, palm civet coffee has been familiarised as among the most expensive and exotic drink all over the globe.

The unique coffee is 'produced' by the Asian civet 'cat' which occupies South East Asian countries especially Indonesia and the Philippines as their natural habitat. The civets uniquely hone in ripe coffee berries, typically at night, and enjoy the pulp around the beans.

Remarkably, after going through the digestive system, the beans finally defecated but stay completely intact. These beans are properly cleansed and processed. Due to its high selling price of more than \$50 per cup, people are hunting for civet droppings for the worthy beans (Halevy, 2011).

The flavor is described as earthy, musty, syrupy, smooth, and rich with both jungle and chocolate undertones, as described by Marcone (2004). The palm civet coffee tastes less bitter with only around 0.5% to 1.0% caffeine as compared to other types of coffee (Hamizah & Mohd, 2018). Besides that, scientifically, the coffee is less fat and less acidity, hence physiologically less harmful (Marlena, 2013). Even though the beans come together with the droppings, it is edible after a thorough process of cleansing, frying and roasting with specific temperatures that remove and destroy the harmful microorganisms (Sucipto, 2013; Halevy, 2011).

The palm civet coffee is a unique type of coffee as it is produced by the internal fermentation of the digestive system of the palm civet (scientifically named the *paradoxurus hermaphroditus*). According to Liang et al. (2015), the internal digestive enzymes produces a unique flavor or aroma of coffee, different from other types of coffee. The study also discovered that a controlled fermentation process imparts desirable attributes and prevents undesirable fermentation that generates off-flavors. Controlled fermentation can be done by proper breeding of palm civets, as practiced by several farmers in Bandung, Indonesia. On top of that, the Muslim ruling authority has gazetted the permissibility of palm civet coffee which has influenced the commercialisation of the coffee.

The unique production process and taste of palm civet coffee are among the main reasons for its high price; between USD300 to USD400 per kilogram (Sastia et al., 2015; Carder et al., 2016). Mohd Harisudin (2013) further adds other factors including the global high demand for luwak coffee, difficulties in breed-farming of the palm civets as well as the lacking of technological advances in luwak coffee production. Furthermore, only palm civets could be used as the medium of production (Hadipernata & Nugraha, 2017).

A research by Marcone (2004) discovered that civet coffee beans were harder and more brittle in structure as compared to other beans, which indicates that digestive juices or proteolytic enzymes were penetrating into the beans, causing substantial browning color as well as flavor and aroma profiles. Nevertheless, in a recent development, research and development efforts have been conducted and a bioreactor is proposed to be utilised to produce luwak coffee. On top of that, scientific research performed by Udi et al. (2013) proposed a scientific method for determining the authenticity of palm civet coffee.

As most research has delved into scientific research and development (R&D) of luwak coffee, there is a dearth of published materials discussing on the halal status or shariah perspective of luwak coffee consumption. Thus, this article explores the potential in commercialising a halal and tayyib production of luwak coffee. For that purpose, this article analyses the economic potentials of luwak coffee industry and consequently narrates a halal and tayyib process of luwak coffee production as endorsed by a recognised authority in Indonesia.

LITERATURE REVIEW

The Luwak coffee Industry

Economically, palm civet coffee is a profitable industry as the type of coffee is very rare and expensive (Hadipernata & Nugraha, 2017). With a price tag of £265 per kilogram and £26.50 per box of 100 grams (Eleven Coffees, 2022), undisputably, it is the most rare and expensive coffee or beverage in the world (Marcone, 2004). In Indonesia, luwak coffee has been systematically commercialised and has become a profitable business opportunity. In the district of Bali, the demand of luwak coffee is reported to be imbalanced with its production (Yogi Winantara et al., 2014), as shown in Table 1. The situation is worsened with the production of artificial products which affect the consumers' trust towards luwak coffee entrepreneurs. Nevertheless, the recognition of luwak coffee halal status by the National Council for Islamic Religious Affairs Malaysia (Majlis Kebangsaan Bagi Hal Ehwal Uagama

Islam Malaysia) in 2012 and Majelis Ulama Indonesia (MUI) in 2010 had significantly increased its demand by 20-30% per day (Aini, 2012).

Table 1: Total market and selling performance of luwak coffee from 2015 to 2019 in Bali.

Year	Demand (kg)	Supply (kg)	Difference (kg)
2015	3,266	3,222	44
2016	3,894	3,684	210
2017	4,658	4,283	375
2018	5,592	5,059	533
2019	6,734	6,064	670

Source: Yogi Winantara et al. (2014)

Based on a research conducted by Carder et al. (2016), luwak coffee industry is expanding rapidly since 2012 with 48 wild-caught common palm civets housed in 16 tourist-orientated coffee plantations in Bali. They further concluded on the importance of basic welfare of the civets which are somehow overlooked and needed further attention especially on eight husbandry factors including mobility, hygiene, surfaces, shelter, noise, food, water and social interactions, suggesting further scrutiny on the legal structures involving the issue of captivity, breeding and trading. Although the issue is marginally researched, public concern was reported to increase regarding ethical production system involving animals and farm animal welfare (John et al., 2022), particularly their feeding, housing, health and emotional states (Botreau et al., 2007). According to the world Organisation for Animal Health (OIE, 2019), good animal welfare constitutes an animal which is healthy, comfortable, well nourished, safe, not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviors that are important for its physical and mental state.

Muslim Consumption of Luwak coffee

Theoretically, the Muslims are urged to consume the good and beneficial and avoid the filthy and hazardous items, as repeatedly reflected in several Quranic verses; *“O mankind, eat from whatever is on earth [that is] lawful and good and do not follow the footsteps of Satan. Indeed, he is to you a clear enemy”* (al-Qur’an. al-Baqarah: 168), *“And eat of what Allah has provided for you [which is] lawful and good. And fear Allah, in whom you are believers”* (al-Qur’an. al-Maidah:88) and *“Forbidden to you are carrion, blood, the flesh of swine, the animal slaughtered in any name other than Allah's, the animal which has either been strangled, killed by blows, has died of a fall, by goring or that devoured by a beast of prey - unless it be that which you yourselves might have slaughtered while it was still alive - and that which was slaughtered at the altars”* (al-Qur’an. al-Maidah: 3).

Based on the above verses, it is imperative to analyse the jurists’ opinions on the issue of palm civet coffee. The previous *mufti* (a Muslim legal expert who is empowered to give rulings on religious matters) of Wilayah Persekutuan (a state in Malaysia), in his series of explanation highlighted on the opinion of Imam Nawawi quoted as; any seed eaten by animals and exited from its stomach in its original condition (intacted), then the seed is considered pure, with the condition; it grows once it is being planted (muftiwp.gov.my, 2016). Similarly, Ar-Ramli (2012), a Muslim jurist, concluded that the seeds are not considered as filthy (*najis*) if the seed is unaffected and remains in its original condition and grows after being planted. Similar conditions of intactness and ability to grow are also elaborated in *Hashiah I’anatu al-Talibin Sharh Fath al-Mu’in* (Al-Bakr, 1995) concurring that it should not be considered as filthy.

For the Muslims, palm civet coffee is pure and permissible to be consumed as the coffee beans has been cleansed and processed further which transforms beans covered with faeces into clean beans, without any traces of filthy odor, color or flavour (Mokhtar & Munir, 2017). For that similar reason, the National Fatwa Council of Malaysia had gazetted a *fatwa*

(ruling) on this matter, stating the permissibility of palm civet coffee with specific conditions (JAKIM, 2015):

- i. The beans must be in a complete and good condition without any holes or crack and still intact and it can grow if it is put in the ground.
- ii. The beans must be cleansed from any filth or faeces, in the first place.
- iii. Producers of palm civet coffee must be certified with JAKIM or State Islamic Religious Council prior to the marketing of the product to consumers.

Technically, the ruling is grounded on two relevant qawaid fiqhiyyah or Islamic legal maxims (established legal principles that are used to derive rulings);

- i. "The original law of something useful is permissible and the original law of something harmful is illegal."
- ii. "The original law of something is permissible as long as there is no recognized proposition that forbids it."

Based on both legal maxims, the palm civet coffee is permissible since it originated from pure resources (the beans eaten by the palm civets) and undergone a fermentation process in the stomach of palm civets, but finally remains intact without any transformation or damage to its original structure.

Similarly, the Indonesian Ulama' Council had gazetted that the palm civet coffee is permissible and thus halal to be consumed provided that the beans undergo a cleansing process, as it is considered as *mutanajis* (Irsyad Fatwa, 2016). *Mutanajis* referred to something that has been touched by filth. In this case, the beans are considered *mutanajis* as it undergo the enzymatic process in the intestines of palm civets before exiting via the anal. Nevertheless, the filth element is vanished as the beans are cleansed and processed before being eaten or drink. Thus, it is imperative to have a proper and meticulous process of palm civet coffee production in order to ensure it is pure, safe and halal to be consumed. A halal and certified produce of palm civet coffee will not only boost the confidence of Muslim consumers but the overall consumers as well since it symbolizes a safe and non-hazardous beverage.

METHODOLOGY OF RESEARCH

In the process of narrating answers to the research questions, this study employed a case study via an on-site observation. In social science, case study has been acknowledged as a research methodology sensible and applicable in the pathway to exploring and understanding certain issues, phenomena, processes, flow, or outcomes (Zaidah, 2007). Therefore, case study is valid and reliable in producing a comprehensive and holistic description or an appropriate solution to the observed case (Tellis, 1997).

In this research, participant observation has been performed in order to understand the applied process for producing luwak coffee. As explained by Thomas (2019), participant observation refers to the method of 'being on-site' for the purpose of data collection as the researcher directly takes part in the particular social setting. Corresponding to that, Van Aeken (2011) describes such observation enables proper investigation for poorly defined or ambiguous areas of study. As in this study, the production of luwak coffee from Islamic perspective is an ambiguous topic and scarcely published, as compared to its scientific analysis.

In case study, the researcher acquire data through direct involvement with the elements (or respondents) being studied. 'Being there', the researcher collects first-hand information from activities of the subject. The researcher may use various techniques including observation, listening, collecting things and personal experience disclosed before the researcher, all written down in field notes. Via these techniques, the researcher has less control as he or she is much occupied to be able to participate in the process (Thomas,

2019). Similar techniques were applied in this study. Therefore, prior to analyses and discussion, findings from the observation are comprehensively narrated in this article. As explained by Thomas (2019) reporting of a participant observation may take the form of narrative report writing, which is similar to narrative internship report writing. Thus, this article applies a narrative reporting style of the researcher as participant observation. The reported process was then compared with the relevant jurisprudence guidelines deduced from the authorised and authentic sources of Islamic law.

ANALYSIS AND DISCUSSION

This section reports a production process of palm civet coffee in a small and medium enterprise (SME) breeding farm located in Bandung Indonesia, which specifically rears palm civets to cultivate the palm civet coffee. Bandung is located in the West Java province, well-known for its geographical highlands structure with 768m elevation from the sea and relatively cool weather. Bandung is famous for its green tea plantations. During the Dutch colonial era in the 20th century, Bandung was known as the favorite resort of wealthy tea and coffee planters and was dubbed as the Paris of Java (Wonderful Indonesia, 2016).

There are many informative facts shared in the surrounding environment of the farm, including the menu given to the palm civets, the halal status, the overall process of palm civet coffee production as well as the health benefits of the coffee. Besides that, the farm offers a clean environment whereby visitors can tour around the cages, processing area and the coffee house. There is also a prayer room provided for Muslim tourists.

The breeding farm has begun its operation in 2012 and since then has not only produce and market coffee but also educating the visitors about the production process. The farm has a certain schedule for the visitors to have a touch and feel of the animal or experience the traditional process of coffee. Physically, the farm is clean, airy and spacious as the farm supports the concept of animal welfare. According to the world Organisation for Animal Health (OIE, 2019), good animal welfare constitutes an animal which is healthy, comfortable, well nourished, safe, not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviors that are important for its physical and mental state. In the farm, the cage is also clean and spacious where the palm civets can be seen wandering and climbing around. The farm also has a certain timing and menu for the palm civets which depicts the well-treatment of the animals. The palm civets also have periodical checkups with the veterinarian.

Initially, the farm only breeds ten palm civets as a pilot project to observe its habitat, norms, feed, wellness, diseases as well as its reproductive system, but later expands into a proper and systematic farm. The farm is also equipped with a coffee house whereby the customers can have a sip of palm civet coffee while enjoying the aroma and picturesque scenery of the green mountains surrounding the area. Apparently, the producers of palm civet coffee also has the opportunity of involving in ecotourism and edutourism which are trending nowadays. Visitors has the ability to tour around the cage while listening to the explanation about palm civet coffee, or reading information exhibited along the way.



Figure 1: A palm civet in the cage



Figure 2: The well-maintained cages



Figure 3: The coffee house

The civets are properly bred and being fed systematically with maintained cleanliness. The civets are given a balanced and scheduled diet in order to maintain their health status hence preserving the quality of beans. Within a week, the palm civets are being fed twice per day. In the morning they will be fed with bananas, papayas and milk. Meanwhile, in the evening, they will be fed with coffee, chicken egg or chicken as a source of protein. And most importantly, within twice a week, the palm civets will be fed with coffee beans. The scheduled feeding is shown in Table 2.

The production process starts from the scheduled feeding of selected beans to the palm civets. Then they are left for the natural enzymatic process which occurs in the civets' stomachs where acids interact with the beans. Once the beans exit together with the faeces, the beans will undergo six procedures before it can be consumed as a drink. The beans will be washed until clean, without any traces of faeces in physical, odour and taste. Then, the beans will be dried until the moisture content reaches the level of 12%. The skin of the beans will be peeled off followed prior to sorting whereby the beans are separated according to shape and size. Finally, the beans are roasted and grinded before being weighed and packed to be marketed.

Table 2: Daily Feed Schedule of the Palm Civets

Day	Menu	Time	
		Morning	Evening
Monday	Feed Drink	Banana Milk	Coffee Honey
Tuesday	Feed Drink	Banana Milk	Chicken egg Water
Wednesday	Feed Drink	Papaya Milk	Papaya Water
Thursday	Feed Drink	Banana Milk	Coffee Honey
Friday	Feed Drink	Papaya Milk	Chicken egg Water
Saturday	Feed Drink	Banana Milk	Chicken Water
Sunday	Feed Drink	Papaya Milk	Papaya Water



Figure 4: The dried beans



Figure 5: The process of drying beans

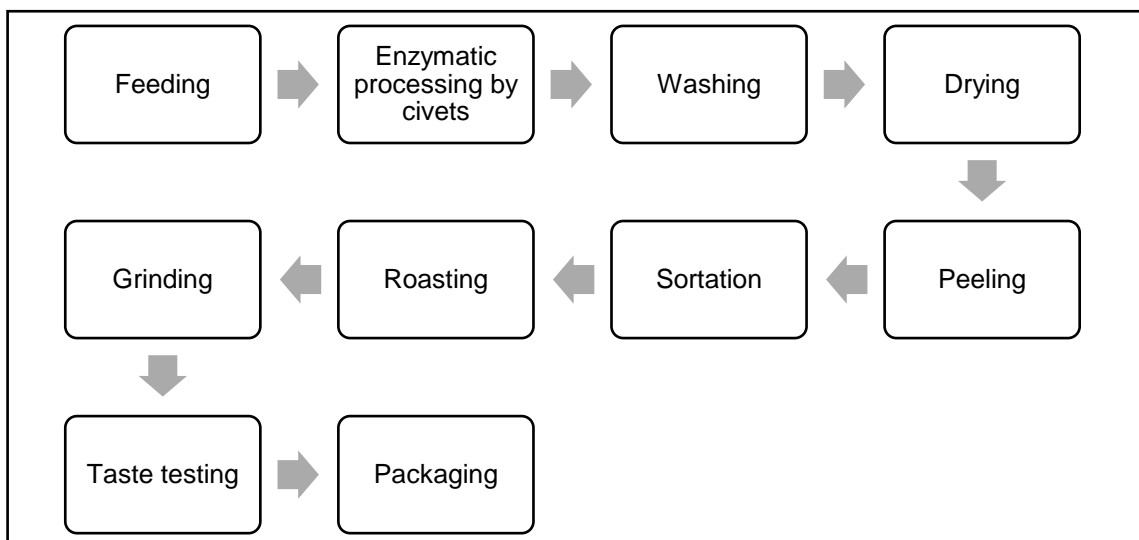


Figure 6: The SOP of Luwak coffee Production

As illustrated in Figure 6, the SOP (Standard Operating Procedure) of luwak coffee production starts with feeding and ends with packaging the coffee to be marketed. Each process needs to be critically executed in order to preserve the quality of coffee. The SOP should also be well-documented as it is an important evidence on the quality and halal status of the coffee. Furthermore, the SOP is also an important document for halal auditing purposes reflecting the halal commitment of the product, should the coffee would like to apply for halal status from other halal certification bodies across the globe. Based on an analysis on the process, this article propose three major Halal Critical Control Points (HCCP) in the production process of luwak coffee, particularly in the feeding, washing and drying process, as shown in Table 3.

The feeding process should target to ensure only quality, good, clean and wholesome items are fed by the palm civets. In Islam, there is a special clause for *jallah* animals, or animals that are permissible to intake but are being fed with filthy items, which need to be quarantined for a certain period of time to ensure its purity (Mohammad, Mohd & Suhaimi, 2014). Build on this premise, the items that are fed by the palm civets should be monitored and the diet menu are followed. Besides feeding, washing is another critical process as the beans exited from the anal and need to be ensured free from any traces of filth. Thus, the beans need to be inspected after washing. In addition, the types of equipments used in the process of washing also need to be ensured free from any filth

elements. The process of drying is also critical especially if it is done traditionally in open space under the sun. If this is so, specific measures are needed to avoid any physical or microbiological contamination.

Table 3: The Proposed HCCP for Luwak coffee Production Process

The HCCP	Control Measures	Supporting documents
1. Ensure good and quality feeding items	-Ensure the diet menu are followed -Perform inspection on the feeding items	-Relevant and proper working instructions
2. Ensure hygienic and proper washing (free from traces of faeces)	-Appoint a checker to inspect on the output after being washed -Ensure proper maintainance of equipments used	-SOP for specific procedures -Job specifications which inform workers on how work is done
3. Ensure proper drying process to avoid contamination	-Ensure the dry yard is free from any elements that have the possibility to contaminate the beans	

These halal critical control points are significant not only to ensure the halal status of luwak coffee but at the same time to guarantee its hygiene and safety, to be deemed as halalan tayyiban from shariah point of view. The HCCP can be systematically maintained via proper measures of in process quality control.

The systematic and conserved process of palm civet coffee production is actually aligned with the concept of sustainable agriculture. Sustainable agriculture is aligned with the implementation of sustainable development, that has been globally recognized since 1982, as the result of Brundtland Commission (Shariff, Hamidi & Osman, 2020). The Brundtland Commission was an independent organisation of the United Nations (UN) with the message to balance up between economic development and sustainable development. Albeit the dissolution of the Brundtland Commission in 1987, the United States Farm Bill (1990) highlighted sustainable agriculture as “an integrated system of plant and animal production practices that will, over the long term: (a) satisfy human food and fiber needs; (b) enhance environmental quality; (c) make efficient use of non-renewable resources and on-farm resources and integrate appropriate natural biological cycles and controls; (d) sustain the economic viability of farm operations; and (e) enhance the quality of life for farmers and society as a whole.”

Item (c) of the United States Farm Bill (1990) coincides with MacRae et al. (1989), referring sustainable agriculture to the natural process that conserve all resources, minimize waste and environmental impact and mitigate environmental issues by promoting a resilient, self-regulated, innovative agroecosystem which can provide sustained production of agriculture produce for the nourishment and fulfilment of man. In agreement, Siti (2020) discusses the objective of sustainable agriculture to provide healthy environment, economic profitability, as well as social and economic equity, besides fulfilling the present and future necessity of food. Similarly, Christen & O'Halloranetholtz (2002) highlights that sustainable agriculture is an equilibrium of food production, safety, profitability, social responsibility and environmental care.

In a nutshell, sustainable agriculture preserves the safety and health of agricultural produce, which similarly emphasized in the concept of halal and tayyib food. The Malaysian government has taken one step ahead by introducing MyGAP (Malaysian Good Agricultural Practices) certification for farmers to encourage sustainable agriculture activities. The certification, initiated and purviewed by the Ministry of Agriculture and Food Industry, put emphasis on 16 aspects including traceability, record keeping and internal audit, site

management, harvesting, workers management and environmental issues (mafi.gov.my). These aspects can be aligned to ensure a the halal and tayyib commerciliation of palm civet coffee, which in turn, will increase its production and sales as well as satisfying the consumers' confidence, at large.

CONCLUSION

The consumption of halal food is compulsory for the Muslims. In the religion of Islam, the term halal is not restricted to the purity of food from forbidden elements but extends to its hygiene and safety, or largely known as halalan tayyiban (the permissible and wholesome). In the process of luwak coffee production, the proper and monitored process ensures on its safety and hygiene, as well as its halal and tayyib status. Based on the rule of thumb in the fiqh (jurisprudence) perspective, luwak coffee is halal provided that the beans are intact and the seeds can be grown, reflecting that beans are free from filth. The production process has been approved by the Majelis Ulama Indonesia, the authorised body for halal certification in Indonesia. Additionally, the permissibility of luwak coffee lies within the parameter of relevant legal maxims; "the original law of something useful is permissible and the original law of something harmful is illegal" and "the original law of something is permissible as long as there is no recognized proposition that forbids it". In fact, the beans can be commercialised and marketed to the Muslims as long as it fulfils three conditions outlined by the Malaysian National Fatwa Council; the beans must be in a complete and good condition without any holes or crack and still intact and it can grow if it is put in the ground; the beans must be cleansed from any filth or faeces, in the first place, and the producers must be certified with JAKIM or State Islamic Religious Council prior to the marketing of the product to consumers. On another note, animal welfare should also be preserved for a promising and ethical luwak coffee industry, in tandem with the rising public concerns on ethical animal farming. The commercialisation of luwak coffee is not only significance for Muslim consumption, but also for the involved entrepreneurs.

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