ANALYSIS AND FUNDAMENTATION OF NORMATIVE INTERFACES BETWEEN HALAL AND ORGANIC IN SUSTAINABLE FOOD PRODUCTION

ANÁLISE E FUNDAMENTAÇÃO DE INTERFACES NORMATIVAS ENTRE HALAL E ORGÂNICO NA PRODUÇÃO SUSTENTÁVEL DE ALIMENTOS

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Abstract

Knowing that both Halal system and organic food production system have as purpose the environmental and social sustainability, this research started from the hypothesis of the existence of significant interfaces in norms and practices that govern these two systems. The objective of this research was to identify, analyze and support possible normative interfaces between these two systems. The norms related to the halal system were investigated within the Sharia, or Islamic Law, and the norms related to the organic system were researched within International Federation of Organic Agriculture Movements (IFOAM) and in guidelines of certifiers operating in Brazil. This research was classified as qualitative and exploratory in all its execution phases. The results allowed to identify five relevant interfaces: (a) nature of both halal and organic product; (b) guarantee of both halal

Resumo

Sabendo-se que tanto o sistema halal como o sistema orgânico de produção de alimentos têm como finalidade a sustentabilidade ambiental e social, esta pesquisa partiu da hipótese da existência de interfaces significativas em normas e práticas que regem esses dois sistemas. O objetivo desta pesquisa foi identificar, analisar e fundamentar prováveis interfaces normativas entre esses dois sistemas. As normas relacionadas ao sistema halal foram investigadas dentro da Sharia, ou Lei Islâmica, e as normas relacionadas ao sistema orgânico foram pesquisadas dentro da International Federation of Organic Agriculture Movements (IFOAM) e em diretrizes de certificadoras que atuam no Brasil. Esta pesquisa foi classificada como qualitativa e exploratória em todas as fases de execução. Os resultados permitiram identificar cinco interfaces relevantes: (a) naturezas do produto halal e do produto



and the organic product; (c) contaminated animal and illegal for consumption; (d) genetically modified food; and (e) slaughter of animals. Although they are interfaces, they do not have enough elements to match in fundamentals these two systems. It is concluded that, despite being sustainable, there are normative interfaces between the halal system and the organic system that show fundamental differences between them.

Keywords: animal; certification; Islam; Sharia; sustainability

orgânico; (b) garantia do produto halal e do produto orgânico; (c) animal contaminado e ilegal ao consumo; (d) alimento geneticamente modificado; e (e) abate de animais. Embora sejam interfaces, elas não apresentam elementos suficientes para igualar em fundamentos esses dois sistemas. Concluise que, apesar de serem sustentáveis, existem interfaces normativas entre o sistema halal e o sistema orgânico que mostram fundamentais diferenças entre eles.

Palavras-chave: animal; certificação; Islã; Sharia; sustentabilidade.

Introduction

Both halal and organic products have sustainability as their goal, which is reflected in the norms guiding their respective production processes. However, these production processes present striking differences and similarities that coexist in interfaces that are not yet well established. The interfaces between the halal system and the organic system are expressed, in principle, in the norms that govern each of these processes, and their study presents notable complexity with a large number of variables. Thus, interfaces are characteristics and present similarities and differences.

Studies of the interfaces of the halal system concerning the organic system can lead to the understanding of sustainability in different social cultures, in which the religious aspect prevails in halal as opposed to the "commercial ecological" aspect that predominates in organic.

Finding interfaces in each of these food production systems that connect them in normative and practical terms can represent an advance concerning environmental sustainability in an environment that is still very little explored. Furthermore, one cannot fail to visualize the facilities that could arise for agribusiness, which could represent millions of dollars.

The normative and practical interfaces between the organic and halal systems can help explain the environmental sustainability of both and one to the other. However, it is not intended to say which system is better or worse.

It is also important to highlight that for this article, the reference to the Prophet Mohammad was adopted by his own name and not by Prophet Mohammed. This is because, in Portuguese-speaking countries, it is common to refer to the Prophet Mohammad as Mohammed or Prophet Mohammed. However, this is a practice considered offensive to some Muslim communities, as, according to them, it is a name that should not be translated.

This research aimed to identify, analyze, and substantiate probable normative interfaces between the halal and organic food production systems, considering the common identity between them, which is environmental and social sustainability.

1 Research methodology

This research considered as a hypothesis the existence of normative and practical interfaces between the production of foods of animal origin in the halal system compared with the organic system. As described in this article, norms include organic food production guidelines, halal food production rules, and laws related to these activities in Islamic countries and Brazil. The guidelines for organic food production are expressed in certifiers and accreditors, and the rules for halal food production were researched in Sharia (Islamic Law), delimited as the Holy Quran, texts of the Sunnah, Hadith, and Fatwa, the latter as Islamic jurisprudence.

According to Gil (2010) and Severino (2007), this research can be classified as exploratory. For Marconi and Lakatos (2010) and Michel (2015), it follows the qualitative line. A survey was conducted (SPADOTTO, 2015) to test the initial feasibility of the procedures. As data was collected, they were placed in tables by subject and in chronological order, a procedure aiming to facilitate visualization for applying deductive reasoning followed by inductive reasoning (MEZZARO-BA; MONTEIRO, 2014; SPADOTTO, 2015).

The presence of a common subject in organic and halal norms was the indicator of a possible interface. However, the presence of the interface was only accepted for this research after surveys and similarities found in Sharia and organic guidelines. Enabling the technical comparison between Sharia and organic norms required applying deductive logic. Once the interfaces were established, as described above, inferences that could enable analyses and conclusions were searched, which required applying inductive logic (MEZZAROBA; MON-TEIRO, 2014; SPADOTTO, 2015).

Islamic legislation was consulted on official websites available in countries such as Brazil, Saudi Arabia, Egypt, Qatar, Kuwait, Morocco, Pakistan, and Indonesia. Scientific articles were consulted without country restrictions and in Arabic, English, Portuguese, and Spanish.

The development period for this study was from June 1, 2022, to January 10, 2023. The data collection and search for Islamic documents stage covered the period from January 13, 2015, to January 9, 2023, which also applied to organic guidelines.

2 Terminological adjustment

Considering the importance of some Islamic terms linked to the halal system and their relative unavailability in communication in the West, this topic will present and discuss those most pertinent to this research. It should be noted that this presentation of terms will have a didactic evolution, not constituting a mere random sequence. Here are the main ones:

- Sharia: also spelled as Xaria, is the legal system of Islam. As a whole, Sharia is constituted by the Holy Quran, the Sunnah (Suna or Sunna), the Hadith (Hadices), and the Fatwa, among other sources. It is also called Islamic Law (SHARIA..., 2022).
- Sunnah: means the path that Prophet Muhammad took as the messenger of Allah. Sunnah is always authentic, whereas Hadith can be authentic or an interpretation. The Sunnah has been passed down from one generation to another.
- Hadith: the sayings of the Prophet Muhammad, as remembered and narrated by those close to Him. It is the Prophet Muhammad's tacit approval of a behavior or a way of acting. This is what has been interpreted by scholars of Islam.
- Fatwa or fátuas, in the plural, in Portuguese, are interpretations of the Words
 of Allah and the Prophet Muhammad by Islamic authorities constituted for
 this purpose. A fatwa can be scientifically referenced as a law in the West and
 presents itself as a part of what is considered jurisprudence.

When interpreting Sharia, the technician must consider, in principle, the determinations of the Holy Quran and the Sunna in that order. The Quran is the holy book of Muslims and contains moral, religious, and political codes. The Sunna contains the sayings and approvals of the Prophet Muhammad, i.e., everything He said, did, or approved during his time as God's messenger. Therefore, it is considered that there is a "normative hierarchy" between the Holy Quran and the Sunna. The same can be said when relating the Holy Quran with other sources of Islamic norms, in which supremacy always rests on the Holy Book.

In this context, it must be emphasized that "Islamic Legislation", unlike what

happens as a rule in Western countries, has a religious basis. Therefore, its interpretation must be followed with great caution. A practical implication that must be considered concerning Sharia is that if it is contradicted, there can be two consequences: contradicting the norms in legal terms and contradicting religiosity. However, there are variations in the interpretation of Sharia in some countries.

Halal, concerning food, corresponds to that legally approved for human consumption within Sharia. However, in fact, this concept must be improved, as the more profound interpretative sense informs that halal is that which is not prohibited within Sharia. What is explicitly prohibited is called haram, and the following text allows us to discuss and clarify better the concepts of halal and haram.

> The word halal has entered English dictionaries. It literally means lawful. In technical terms, it means the name given to the legal category of things permitted in Islam. Halal has been made lawful through the Holy Quran or the Sunnah of the Beloved Prophet (peace and blessings of Allah be upon Him). According to Islam, "The first principle established by Islam is that the things that Allah has created and the benefits derived from them are essentially for the use of man and are therefore permissible. Nothing is haram except what is prohibited by a solid and explicit Nass (verse of the Quran or clear, authentic, and explicit Hadith) of the Lawgiver". This leads us to understand that the sphere of prohibited things is tiny, while the sphere of permitted things is extremely vast (THE DOUBTFUL..., 2018, free translation).

In Islamic regulations, however, the fatwas detail many matters, making legal interpretation quite complex and laborious. As new scientific discoveries are presented, the fatwas incorporate them into the Islamic vision, which denotes the dynamics of Islamic norms and their complexity, as mentioned above. Thus, something that is halal on one date may be haram on a subsequent date. This, in fact, is not a flaw in the Islamic normative system but shows a virtue, which is to be in harmony with scientific advances.

3 Nature of the halal product and the organic product

Islamic legislation establishes that a product is considered halal when it receives the certification seal from a certifier accredited by entities linked to Islam. Furthermore, the halal food production system has solid foundations for environmental and social sustainability (AZHAR; TU, 2021; BUX et al., 2022). Likewise, a duly accredited certifier must grant this seal to organic or biodynamic products. The fundamental difference between organic and halal certifications is that the certification process is based on Islam.

When the product is meat, it will only be halal if there is Zabiha, which

is an Islamic religious ritual of slaughtering animals for Muslim consumption. This ritual begins by invoking the "Name of God", and the operator must pay close attention to the animal's suffering. Only an adult Muslim of sound mind is authorized to perform Zabiha. In Islamic Legislation, all meat is considered to be prohibited (haram) until it is proven to be halal.

When the product is not meat but milk and its derivatives, eggs, honey, and wool, for example, the halal certification process occurs normally, but obviously, without Zabiha. The role of the halal certifier typically occurs by issuing the certificate to the product.

Through fatwas, Islamic Legislation establishes details of what is prohibited for consumption as halal. However, in general terms, there are four restrictions: pork (swine) and derivatives; foods containing alcohol; blood or products made from blood; and animals slaughtered outside of Islamic Law. Furthermore, Islamic norms prohibit the mixing of halal food with haram food, which is considered illegal.

Generally speaking, fatwas are equivalent to jurisprudence in the civil law legal system. Thus, what is meant by halal and haram can be defined as follows, per Fatwa 10887 (ISLAM, 2000):

Haram is what the one who does it may be punished, and the one who abstains from it will be rewarded if the reason for his abstinence is to follow Allah's prohibition. Halal is what has no sin in doing it and no sin in not doing it, but if a person intends to increase his obedience to Allah by doing it, then he will be rewarded for that intention.

As previously stated, halal certification is essentially religious, which differs from organic certification, which does not have this characteristic. According to Fatwa 10887 (Islam, 2000), "the basic principle of religion is that halal is what Allah and His Messenger have permitted, and haram is what Allah and His Messenger have prohibited".

As they are considered legal within the scope of Islamic Law, the concepts of halal and haram were previously established in the Islamic Religion. They were later applied in the daily lives of Muslims. In this sense, the Muslim jurists define halal. According to Butt (2020):

Muslim jurists have used various expressions to define halal. Some have defined halal as what is permitted in Sharia. This definition includes the recommended, the permissible, and the reprehensible in the sense that it is permissible to perform and is not prohibited in Sharia.

When playing the role of accreditor in Brazil, the Ministry of Agriculture,

Livestock, and Food Supply (currently the Ministry of Agriculture and Livestock) presents a definition of what is considered an organic product:

Under Brazilian legislation, an organic product, whether *in natura* or processed, is considered to be obtained in an organic agricultural production system or comes from a sustainable extractive process that is not harmful to the local ecosystem. To be sold, organic products must be certified by bodies accredited by the Ministry of Agriculture, Livestock, and Food Supply (BRASIL, 2021).

According to Kamali (2021), the "religion and law" interface for the concepts of halal and haram are clear. Therefore, such concepts are loaded with spirituality that culminates in the Muslim's daily life when they choose a food to eat.

Since the Most High has determined halal and haram for the benefit of people, this becomes the basic cause and logic behind all Sharia laws on halal, haram, and Tayyib (Tayyib as an attribute of Allah). [...] In general terms, everything that is purely or predominantly harmful and repulsive is haram, and whatever is purely or predominantly beneficial and clean is halal (KAMALI, 2021).

Furthermore, it is observed that, concerning organic production systems, current legislation stipulates that products must be free from contaminants that could put human health and the environment at risk. However, despite these general regulations, the guidelines from accredited certifiers will really define what to do and what not to do for a product to be considered organic. If the certifier classifies a product as non-organic, it will be legally unfit for consumption as such, which is similar to the product illegal for consumption in the halal certification system. This is an interesting interface between the halal and organic systems, as both rely on legality and illegality to approve or disapprove their products.

4 Halal product and organic product guarantee

The guarantee to the consumer of a halal or organic product is officially given by certification that culminates in stamping a seal on the product, in addition to all supporting documentation. The halal and organic systems declare sustainability as a goal to be developed (BRASIL, 2007; 2003; AZHAR; TU, 2021; BUX *et al.*, 2022).

In addition to the guarantee of official certification, a halal product also receives a moral guarantee based on Islamic religious precepts. Thus, Muslims and non-Muslims involved in the entire halal production process are expected to comply, from a moral point of view, with the religious precepts that support their actions in this activity.

In this aspect, profit must take second place compared to what is at stake since it concerns religious precepts. For example, a product's price cannot be reduced by producing it in a way that is incompatible with halal standards. In this case, the moral aspect means that halal is more than an official certification supported by human laws. It is doing what is right in the Muslim understanding. It cannot be said, however, that in the case of organic products, there is no such moral guarantee, only that, in this case, there is not necessarily a religious aspect.

Halal certification helps ensure that products are made according to Sharia. However, there are questions about flaws in these guarantee systems, just as they exist in the organic system, despite being carried out by reputable personnel. The issue is practical, i.e., when transferring the theory to many people. This must also be clear: there are no problems within halal or organic certification but in the certification process (mechanism). Much less can it be said that there are normative flaws in Sharia or the laws applied to the organic system.

The certification process implies the rights and duties of all those involved. It is, fundamentally, a contractual relationship that ties its participants directly, establishing a line of rights and duties that, in summary, presents itself as follows: the accreditor, the certifier, the supplier, and, finally, the consumer.

In the Islamic sphere, contracts follow some particular rules that differ, for example, from the rules of Brazilian Civil Law. In the general certification process – halal or organic – there are contractual ties between the participants. These contracts have different objects, but by analyzing the process as a whole, it is possible to identify a primary purpose for such contracts, i.e., to guarantee the consumer something with specific characteristics. Thus, the consumer guarantee can be divided into the following components: contractual, moral, and ethical.

4.1 Contractual component in certification

In this case, these are the vehicles supported by the legislation in force in each country where the participants in the certification or accreditation are located. A certifier installed in Brazil certifying a supplier/producer from the same country will have Brazilian contractual rules. The same occurs in the case of a certifier contracting with an accreditor, both located in the same country: the contractual rules will be those of the country of location.

However, the certifier may be in a different country than the accreditor. If no legal conflict prevents contracting, the contractual rules of the accreditor's country, to which the certifier submits, generally prevail.

On the other hand, the contractual rules of the consumer's country prevail over other certification participants. It should be noted that the creditor is generally "located" where the consumer is, which facilitates the entire contractual process. This is the case when production is in Brazil, and the product is sold to Islamic countries such as Saudi Arabia, Egypt, Qatar, Kuwait, Morocco, Pakistan, or Indonesia.

In practice, the consumer's duty is to pay the price. All other participants in the certification process must arrange themselves to serve the consumer fully. It is not the consumer's duty to know whether the certifier is doing its role correctly, whether the accreditor controls the entire process, or whether the supplier has fulfilled its obligations. It is up to the consumer to check whether the product has a halal or organic seal and pay the price.

4.2 Moral component in certification

The moral component varies from one society to another since morality is a social understanding at a given time. Breaking an agreement, in the case of a halal or organic certification agreement, can mean a breach of trust, which strongly affects business non-continuity. Therefore, a participant in the certification process who becomes known as untrustworthy will have difficulty doing future business. The decision to no longer work with those "untrustworthy" can result from moral distrust, reflected in contracts.

The market itself ends up regulating this decision-making along the lines of certification: in case of something like "don't buy, don't certify, and don't believe" concerning a particular participant, it is because it is morally incorrect. This could be even worse than the eventual breach of a typical contract.

The moral component can go beyond country borders, and in halal certification, this happens frequently. When a consumer discovers that they have been deceived and purchased haram, the entire certification chain is compromised, which will only be alleviated when the culprits are identified and punished. In the case of halal, the negative moral impact is even more significant than in organic, as the halal certification process is not only about general quality but involves the religious component, as seen previously.

4.3 Ethical component in certification

The ethical component of halal certification is powerful because a violation in this aspect affects a very cohesive group, which is made up of Muslims. In this way, the religious issue – as well as the moral component – gains prominence. This is not just a violation of social customs that change quickly over time but a religious position that has been violated. Therefore, this ethical violation is, at the same time, social and religious. In the case of organic, a similar effect is observed, as those who consume organic tend to be conscious about what they want to consume, especially in the case of food and concerning the issue of sustainability.

Due to this scenario, there are aggravating factors in the attribution of responsibilities when there is a violation of the ethical component. The result is that punishment is closer to occurring, as halal is legal within Sharia.

What is described above regarding the ethical component of halal and organic certification is of fundamental importance for technical professionals who think about sustainability and do not know the basis of these production systems. The vision of this professional when entering the halal and organic field, especially in animal production, should not be that of someone who evaluates from a purely social perspective in the common sense of societies currently established in the world. This professional needs in-depth knowledge regarding the roots of these production systems, as this is the only way to work with the routine and occasional variables that invariably arise in everyday life.

5 Animal contaminated and illegal for consumption

The concepts and their foundations on animal contamination presented here refer to a view of the Islamic Law on halal animal production and organic guidelines.

Animal contamination means the non-suitability of products of animal origin, or the animal, for Muslim acceptance or consumer acceptance of organic products. Therefore, a contaminated product or animal is one that a Muslim cannot consume and that a consumer of an organic product would not buy, based on current norms.

Contamination of the animal or products of animal origin is generally the result of a reaction in successive stages within the halal or organic production chain. The technician, if carrying out the production project, may have choices that will facilitate the avoidance of contamination. However, if the project is already underway, there remains the possibility of correcting it over time so that the production chain becomes less susceptible to contamination.

It is necessary to remember that halal or organic production of foods of animal origin will always seek what is most natural for the animals and the consumer.

Therefore, constant and artificial measures to keep animals theoretically healthy are not desired. In halal or organic production, more than in many "types" of animal production, natural prevention is recommended (BRASIL, 2007; ISLAM, 2015).

As a rule, there must have been some type of contamination of the animal, whether its water, food, or habitat, for it to require halal purification necessarily. In this case, as observed in Sharia, what is understood is the responsibility of everyone involved in the halal system, which is not limited only to the Muslim community. Therefore, those who produce halal are responsible for delivering halal within the limits of their actions. In a production chain, if each person responsible does what is halal, the result at the end of that chain will be halal. It is up to those who sell halal to make sure they have actually purchased halal from a reputable supplier. The same understanding can be established for organic products.

Another point to know about animal contamination and purification refers to the fact that Muslims understand food to have nutritional and spiritual value. The foundation of this understanding can be taken from the understanding of life as a whole, i.e., it has its material and spiritual aspects (ALCORÃO, 2014, 6:12). Concerning organic food, this spiritual value does not have the same relevance as halal.

In the Islamic view, unlike the common Western view, the animal is endowed with consciousness like human beings, albeit to a lesser degree (ALCORÂO, 2014, 6:38). This understanding, in practice, means that many points must be differently oriented when handling animals. It turns out that Westerners, in general, notice this characteristic when observing their pets, attributing this awareness only to them. So the question is: What about farm animals?

5.1 The concept of contaminated or illegal animal

A primary issue that is contained in the concept of food not suitable for Muslims today concerns the feeding of animals with impure or unnatural foods. In Islamic Law, animals fed this way are called al-Jallalah, i.e., contaminated animals. A similar, however, non-religious concept applies in the case of organic production.

The fundamental decision regarding the intake, by Muslims, of impure foods, i.e., on the issue of al-Jallalah, is observed. The following narration can be found in Hadith no. 3785, narrated by Imam Abu Dawud: "The Messenger of Allah prohibited eating the animal that feeds on dirt and drinking its milk" (MUFLIH et al., 2017).

According to Fatwa 231261, in principle, all food is permitted in Islam except those expressly prohibited (Islam, 2015), which indicates that halal food should not contain any part of non-halal animal products. Furthermore, it must not contain any impure ingredients or harm health. According to Fatwa 22341, it must also be processed in equipment free of residues of any material prohibited in halal production (ISLAM, 2001).

Land animals are suitable for human consumption. Therefore, they can be part of halal animal production. However, this authorization does not apply when animals are slaughtered in a way not recommended by Islam (ALCORÁO, 2014, 6:121; ISLAM, 2022).

Islamic Law generally prohibits pigs (swine), pests, insects, dogs, carnivores, birds of prey, and animals whose ears are not external, in addition to wild boars and cats, from the human diet. Dead meat, that is, meat not appropriately slaughtered, is prohibited. Among insects, the grasshopper is considered suitable for consumption. In general, insects such as bees, ants, lice, and flies are prohibited as food. Amphibians, animals that live on land and in water, and toads, frogs, turtles, and crocodiles are prohibited. Considering the Islamic legal rule (by analogy) that whatever is forbidden to kill is forbidden to eat, frogs are not recommended as food by many halal-related schools. Furthermore, it is prohibited to kill bees, woodpeckers, ants, and spiders, among others.

Despite all the care that is usually taken in halal inspection, there have been reports of illegalities, many of which were identified in the halal system through DNA tests, particularly in the case of mixtures of beef and pork.

Similarly, contamination of animals and their products also occurs in the organic system. Organic norms are explicit regarding whether food is suitable or unsuitable for consumption. The certifiers' guidelines are detailed, including listing the most common substances that can make a product illegal under this certification. The same can be said about procedures and techniques in animal husbandry.

6 Genetically modified food

The interface between the halal system and the organic system concerning genetically modified foods (GMO) presents an interesting point for study. It is worth highlighting that interface does not necessarily mean agreement.

The halal and organic systems present an interface between foods produced from genetically modified plants (GMO) with marked differences. For the

organic system, based on the position of the International Federation of Organic Agriculture Movements (IFOAM) - or simply Organics International IFOAM -, any genetically modified food is prohibited according to its regulatory norms. This standardization practically affects all certification bodies around the world.

On the other hand, the halal system regulates the issue of genetically modified organisms in an almost antagonistic way compared to the organic system. With current legislation, genetically modified organisms are released for halal production, as noted in Fatwa 119830 (ISLAM, 2009a). It is even legal to consume plants and animal products that have been fed with genetically modified organisms.

However, the researcher must be aware that this release is conditional. The imposed condition denotes that "until it is proven that they are harmful, genetically modified organisms are released", as also expressed in the fatwa mentioned above. This Islamic normative procedure is supported by the Sharia foundation that, in principle, all food is permitted except those that are expressly prohibited, according to Fatwa 231261 (ISLAM, 2015).

Another essential point of the Islamic Law on genetically modified organisms is a recommendation contained in Fatwa 119830 (Islam, 2009a) for research into possible harm to humans to be updated and monitored. Furthermore, the fatwa mentioned above emphasizes that if such damage is proven, genetically modified organisms will be prohibited in the halal system.

7 Animal slaughter

Another controversial interface between the organic and halal systems refers to the slaughter of animals. In this case, there are also normative divergences that are controversial worldwide and in Brazil.

Firstly, it must be understood that the slaughter of animals for consumption, as treated in both the organic system standards and the halal system guidelines, begins with the shipment (for this purpose) at the production units, going through transportation, reception, pre-slaughter handling and ending with butchering and bleeding. The regulations for all these stages are identical in the halal system, and in the organic system, i.e., animal well-being must be guaranteed. However, the normative difference that stands out and has suggested many international debates concerns whether or not animal stunning is carried out. To distinguish between these two types of slaughter, the final act of the process, "humane slaughter", is the one in which the animal is stunned moments before its throat is cut and bled. "Religious slaughter" is one in which this stunning is not carried out.

The organic system regulates humane slaughter as legal. The Ordinance of the Ministry of Agriculture, Livestock, and Food Supply – Secretariat of Agricultural Defense No. 365/2021, in the *caput* of its Art. 5, treats the slaughter of animals as follows (BRASIL, 2021): "Every animal intended for slaughter must be subjected to humane pre-slaughter and slaughter handling procedures".

In Art. 4, X, of the same ordinance, reads (BRASIL, 2021): "Humanitarian pre-slaughter and slaughter management procedures: a set of operations based on technical criteria that ensure the well-being of animals from shipment on the property of origin until the moment of slaughter, avoiding unnecessary pain and suffering [...]".

Art. 42 defines the permitted method of slaughter: "Only the slaughter of animals using humane methods is permitted, using prior stunning, followed by immediate bleeding, except animals slaughtered under religious precepts" (BRA-SIL, 2021).

However, the same norm in Art. 6 makes an exception for religious slaughter, i.e., without stunning the animals (BRASIL, 2021):

The slaughter of animals according to religious precepts is permitted as long as their products are intended in whole or in part for consumption by a religious community that requires them or for international trade with countries that make this requirement.

Single paragraph. It is exclusively the responsibility of the competent religious certifying entity and the slaughter establishment to comply with the slaughter precepts set out in the *caput*.

Finally, Art. 56: "The official inspection service's assessment of humane slaughter procedures does not cover the specific aspects related to the religious precepts of slaughter provided for in Art. 6" (BRASIL, 2021).

Regarding humane slaughter, Organics International IFOAM states: "Each animal must be effectively stunned before being bled to death. The equipment used for stunning must be in good working order" (IFOAM, 2017).

According to the halal meat production system, based on Fatwa 128286, if the animal is not slaughtered correctly, it will be illegal and contaminated for consumption (Islam, 2009b). Halal slaughter, or Zabiha, is a sacrificial ritual that must be practiced according to Sharia precepts. When invoking the name of God, forgiveness is asked; the aim is to feed, and this act should never be for fun or sadism. Slaughter is a source of contamination as it causes unnecessary suffering to animals. Halal slaughter is a way to reduce this suffering and, consequently, the

toxins that may contaminate the meat, according to Muslim customs.

According to Fatwa 0934, both the utensils used and the equipment used in this practice must be exclusive to this type of butchering, without stunning the animal and the slaughter knife must be sharp so that bleeding is carried out in a single step in a single act (ISLAM, 1997).

An adult Muslim duly trained to accompany the slaughter will be responsible for complying with Islamic Law in this act. Whoever carries out the slaughter must be authorized to do so. In this case, immediately before the slaughter, these words must be pronounced: "In the name of God, God is greater (Bismillah Allahu Akbar)" (SHARIA..., 2022).

During the actual slaughter, the slaughter must cut the trachea, esophagus, arteries, and jugular vein; all of this to hasten the bleeding and death of the sacrificed animal. Next, according to Fatwa 22341, it must be ensured that blood depletion is spontaneous (ISLAM, 2001).

Therefore, religious slaughter is an exception to humane slaughter, which involves stunning large or small animals. However, it must be clear that both religious slaughter and humane slaughter must consider animal well-being in pre-slaughter management, i.e., from shipment in the production area to the moment of butchering and bleeding. In both the organic and halal systems, norms are applied in such a way as to constitute significant differences between these systems.

Final considerations

Fundamentally, both the halal and organic systems concerning food production have environmental and social sustainability as their goal. For the limits of this research, these two systems presented the following normative interfaces: (a) the natures of the halal product and the organic product; (b) the guarantee of the halal product and the organic product; (c) contaminated and illegal animal for consumption; (d) genetically modified food; and (e) animal slaughter. Although they are interfaces, they do not present enough elements to equate these two systems fundamentally. One of the foundations found in the interfaces that distinguish these two systems is their primary purpose: the purpose of halal is religious. In contrast, the purpose of organic is ecological and commercial, although the secondary commercial aspect of halal cannot be ignored.

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