25 Comparison of Kosher, Halal, and Vegetarianism

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CONTENTS
Meat of Animals Killed by the Ahlul-Kitab........................................................... 262
Kosher Laws........................................................................................................... 263
Halal Laws ............................................................................................................. 263
Kosher Dietary Laws.............................................................................................. 264
Allowed Animals for Kosher ................................................................................. 264
Prohibition of Blood ............................................................................................ 265
Prohibition of Mixing of Milk and Meat ............................................................... 266
  Kosher: Special Foods....................................................................................... 267
  Passover Requirements ..................................................................................... 268
  Equipment Kosherization.................................................................................. 268
Halal Dietary Laws ................................................................................................ 268
  Prohibited and Permitted Animals ................................................................ 271
  Prohibition of Blood ....................................................................................... 271
  Prohibition of Alcohol and Intoxicants ........................................................... 272
  Halal Cooking, Food Processing, and Sanitation ............................................. 273
Kosher and Halal .................................................................................................... 273
  Gelatin ............................................................................................................... 273
  Biotechnology ................................................................................................ 274
Vegetarianism ......................................................................................................... 275
  Food Standards for Vegetarians....................................................................... 276
  Animal Products ............................................................................................... 276
  Kitchen and Hygiene Standards....................................................................... 276
Comparison of Kosher, Halal, and Vegetarian ....................................................... 276
References .............................................................................................................. 279

Why are we discussing kosher and vegetarian issues in a halal book? There are two reasons:

  • Permitted food of the Jews is called kosher. There are both similarities and differences between kosher and halal. Similarly, many halal consumers might think that because vegetarian products are from vegetable sources, they are halal. But again there are important differences (Regenstein et al., 2003).
  • Many people in the U.S. food industry are familiar with the word kosher and what is required to make the products kosher. By comparing halal with
kosher, food industry professionals can understand each concept better and provide foods that better serve both communities.

- Before undertaking a more comprehensive comparative discussion, the permissibility for Muslims to eat of the meat of animals killed by the Ahlul-Kitab (Jews and Christians) will be discussed.

**MEAT OF ANIMALS KILLED BY THE AHLUL-KITAB**

There has been much discussion among Muslim consumers as well as Islamic scholars about the permissibility of consuming meat of animals killed by the Ahlul-Kitab (people of the book), meaning mainly Jews and Christians. (There are few small sects in the Middle East that also would qualify.) This generally implies that the animal was killed by an Ahlul-Kitab, but the Islamic method of slaughter while invoking the name of God as required under the Islamic guidelines was not followed.

In the holy Quran [Arabic text and English rendering by Pickthall (1994)] this issue is presented only once, in the following words:

This day are (all) good things made lawful for you. The food of those who have received the Scripture is lawful for you, and your food is lawful for them.

This verse addresses the Muslims and seems to have been set in a social context where Muslims, Jews, and Christians had to interact with each other. It points to two sides of the issue, first, “the food of the people of the book is lawful for you,” and, second, “your food is lawful for them.”

**Chapter V, Verse 5**

As regards the first part of the ruling, Muslims are allowed to eat the food of the Jews and Christians as long as it does not violate the opening statement of the verse, “This day all good and wholesome things have been made lawful for you.”

The majority of Islamic scholars are of the opinion that the food of the Ahlul-Kitab must meet the criteria established for halal and wholesome food, including proper slaughtering of animals. They believe that the following verse from the Quran establishes a strict requirement for Muslims.

And eat not of that whereupon Allah’s name hath not been mentioned, for lo! It is abomination.

**Chapter VI, Verse 121**

However, some Islamic scholars such as Al-Qaradawi (1984) are of the opinion that this verse does not apply to the food of Ahlul-Kitab. They opine that meat of halal animals sold in Western countries is acceptable for Muslims. They contend that God’s name may be pronounced at the time of eating rather than at the time of slaughtering of an animal. Note that additional issues need to be considered. The method of kosher slaughter of animals is functionally the same, while the secular slaughter is not. Even in the U.S., one cannot assume that the secular slaughter person is someone who is a Christian. On the other hand, the Jewish slaughter person
does invoke the name of God before slaughtering a group of animals. In addition, some major American rabbis have given permission for the Jewish slaughter person to say the Takbir in Arabic at the time of slaughter over each animal. Regulatory agencies in halal-food-importing countries, halal certifiers, or individual Muslim consumers can accept or reject products based on this reasoning.

For Muslims who want to strictly follow the requirements of Chapter VI, Verse 121, no meat containing products of the Ahlul-Kitab meets the Islamic standard. According to Jackson (2000), most kosher food processors think that Muslims accept kosher as meeting halal standards and requirement other than meats and alcohol containing products. Religiously, Muslims prefer not to accept kosher certification as a substitute for halal certification although they will note a kosher certification, which means that many of the issues being discussed with respect to halal have been accounted for.

**KOSHER LAWS**

Kosher dietary laws determine which foods are fit or proper for consumption by Jewish consumers who observe these laws. The laws are Biblical in origin, coming mainly from the original five books of the Holy Scriptures (the Torah). At the same time Moses received the Ten Commandments on Mount Sinai, Jewish tradition teaches that he also received the oral law, which was eventually written down many years later in the Talmud. This oral law is as much a part of Biblical law as the written text. Over the years, the meaning of the Biblical kosher laws have been interpreted and extended by rabbis to protect Jews from violating any of the fundamental laws and to address new issues and technologies. The system of Jewish law is referred to as Halacha (Regenstein and Chaudry, 2001; Regenstein et al., 2003).

**HALAL LAWS**

Halal dietary laws determine which foods are lawful or permitted for Muslims. These laws are found in the Quran and the books of hadith (the traditions). These guidelines are referred to as Islamic laws and has been interpreted by Muslim scholars over the years. The basic principles of Islamic laws remain definite and unaltered. However, their interpretation and application might change according to time, place, and circumstances. Some of the issues Muslim scholars are dealing with include biotechnology, unconventional sources of ingredients, synthetic materials, and innovations in animal slaughter and meat processing (Department of Standards Malaysia, 2009; Qureshi et al., 2012).

Although many Muslims purchase kosher food in the U.S., these foods, as shown later, do not always meet the needs of Muslim consumers. The most common areas of concern for Muslim consumers when considering purchasing kosher products are the use of various questionable gelatins in products produced by more lenient kosher supervisions and the use of alcohol in cooking food and as a carrier for flavors.
KOSHER DIETARY LAWS

Kosher dietary laws predominantly deal with three issues, all focused on the animal kingdom:

- Allowed animals
- Prohibition of blood
- Prohibition of mixing of milk and meat

Additionally, for the week of Passover (in late March or April) restrictions on chometz, the prohibited grains (wheat, rye, oats, barley, and spelt), and rabbinical extensions of this prohibition lead to a whole new set of regulations, focused in this case on the plant kingdom. In addition, separate laws deal with grape juice, wine, and alcohol derived from grape products; Jewish supervision of milk; Jewish cooking, cheese making, and baking; equipment kosherization; purchasing new equipment from non-Jews; and old and new flour (Regenstein and Chaudry, 2001; Regenstein et al., 2003).

ALLOWED ANIMALS FOR KOSHER

Ruminants with split hoofs that chew their cud, traditional domestic birds, and fish with fins and removable scales are generally permitted. Pigs, wild birds, sharks, dogfish, catfish, monkfish, and similar species are prohibited, as are all crustacean and mollusc shellfish. Almost all insects are prohibited such that carmine and cochineal (natural red pigments) are not used in kosher products by most rabbinical supervisors. With respect to poultry, traditional domestic birds such as chicken, turkey, squab, duck, and goose are kosher. Birds in the ratite category (ostrich, emu, and rhea) are not kosher as the ostrich is specifically mentioned in the Bible. However, it is not clear as to whether the animal of the Bible is the same animal that is known today as an ostrich. A set of criteria is sometimes referred to in trying to determine whether a bird is kosher. The kosher bird has a stomach (gizzard) lining that can be removed from the rest of the gizzard. It cannot be a bird of prey. Another issue deals with tradition, for example, newly discovered or developed birds might not be acceptable. Some rabbis do not accept wild turkey, whereas some do not accept the featherless chicken.

The only animals from the sea that are permitted are those with fins and scales. All fish with scales have fins, so the focus is on scales. These must be visible to the human eye and must be removable from the fish skin without tearing the skin. A few fish remain controversial, probably swordfish being the most discussed (Regenstein and Regenstein, 2000; Regenstein et al., 2003).

Most insects are not kosher. The exception includes a few types of grasshoppers, which are acceptable in the parts of the world where the tradition of eating them has not been lost. Edible insects are all in the grasshopper family identified as permitted in the Torah due to their unique movement mechanism. Again, only visible insects are of concern; an insect that spends its entire life cycle inside the food is not of concern. The recent development of exhaustive cleaning methods
Comparison of Kosher, Halal, and Vegetarianism

to prepare prepackaged salad vegetables eliminates a lot of the insects that are sometimes visible, rendering the product kosher and, therefore, usable in kosher foodservice establishments and in the kosher home, without requiring extensive special inspection procedures. Although companies in this arena go through a great deal of effort to produce an insect-free product, some kosher supervision agencies remain unconvinced and only certify those products (or particular lots) that meet their more stringent requirements (Regenstein and Regenstein, 1988; Regenstein et al., 2003). The prohibition of insects focuses on the whole animal. If one’s intent is to make a dish where the food will be chopped up in a food processor, then one may skip the elaborate inspection of fruits and vegetables for insects and assume that only insect parts are present rather than whole insects, which does not render the food non-kosher. There are guidebooks describing which fruits and vegetables in particular countries need inspection; recommended methods for doing this inspection are included. Kosher consumers have appreciated the use of pesticides to keep products insect-free as well as the use of prepackaged vegetables that have been properly inspected. Modern IPM (integrated pest management) programs that increase the level of insect infestation in fruits and vegetables can cause problems for the kosher consumer. Examples of problems with insects that one might not think about include insects under the triangles on the stalks of asparagus, under the greens of strawberries, and thrips on cabbage leaves. Because of the difficulty of properly inspecting them, many Orthodox consumers do not use Brussel sprouts (Regenstein and Regenstein, 1988; Regenstein et al., 2003).

PROHIBITION OF BLOOD

Ruminants and fowl must be slaughtered according to Jewish law by a specially trained religious slaughter person (shochet), using a special knife designed for the purpose (chalef). The knife must be extremely sharp, without any nicks, and have a very straight blade that is at least twice the diameter of the neck of the animal to be slaughtered. The animal is not stunned prior to slaughter. If the slaughter is done in accordance with Jewish law and with good animal-handling practices, the animal will die without showing any signs of stress. With respect to kosher supervision, slaughtering is the only time a blessing is said, and it is said before commencing slaughter. The slaughter person says a traditional blessing. The blessing is not said over each animal. The rules for slaughter are very strict and the shochet checks the chalef before and after the slaughter of each animal. If any problem occurs with the knife, such as even one small nick, the animal becomes treif (not kosher). The shochet also checks the cut on the animal’s neck after each slaughter to make sure it was done correctly. Slaughtered animals are subsequently inspected, particularly the lungs, for defects by rabbinically trained inspectors. If an animal is found to have a defect, the animal is deemed unacceptable and becomes treif. There is no trimming of defective portions as generally permitted under secular law. The general rule is that the defect would not lead to a situation where the animal could be expected to die within a year (Regenstein et al., 2003). Consumer desire for more stringent kosher meat inspection requirements in the U.S. has led to the development
of a standard for kosher meat that meets a stricter inspection requirement, mainly with respect to the condition of the animal’s lungs. As the major site of halachic defects, the lungs must always be inspected. Other organs are spot-checked or examined when a potential problem is observed. Meat that meets this stricter standard is referred to as glatt (smooth) kosher, referring to the fact that the animal’s lungs do not have any adhesions (sirkas). The bodek (inspector of internal organs) is trained to look for lung adhesions in the animal both before and after its lungs are removed. To test a lung, the bodek first removes all sirkas and then blows up the lung by using normal human air pressure. The lung is then put into a water tank and the bodek looks for air bubbles. If the lung is still intact, it is kosher. In the U.S., a glatt kosher animal’s lungs generally have fewer than two adhesions, which permit the task of lung inspection to be done carefully in the limited time available in large plants (Regenstein and Chaudry, 2001; Regenstein and Regenstein, 1979, 1988; Regenstein et al., 2003). Any meat that is declared treif, if it passes secular inspection, is moved into the secular meat supply.

Meat and poultry must be further prepared by properly removing certain veins, arteries, prohibited fats, blood, and the sciatic nerve. In practical terms, this means that only the front quarter cuts of kosher red meat are used in the U.S. and most Western countries. Again, the hindquarters are moved to the secular meat supply. However, some of this meat is also moved to the halal market, with or without a blessing over each animal. Although it is very difficult and time consuming to remove an animal’s sciatic nerve, necessity demands that this deveining be done in parts of the world where the hindquarter is needed in the kosher food supply. In some animals such as deer, it is relatively easy to devein the hindquarter. However, if there is no tradition of eating any hindquarter meat within a community, some rabbis have rejected the deer hindquarters for their community. To further remove the prohibited blood, red meat and poultry must then be soaked and salted within 72 hours of slaughter. The salted meat is then rinsed three times (Regenstein and Chaudry, 2001; Regenstein and Regenstein, 1988; Regenstein et al., 2003). Any ingredients or materials that might be derived from animal sources are generally prohibited because of the difficulty of obtaining them from kosher animals. This includes many products that might be used in foods and dietary supplement, such as emulsifiers, stabilizers, and surfactants, particularly those materials that are derived from fat. Very careful rabbinical supervision is necessary to ensure that no animal-derived ingredients are included. Almost all such materials are available in a kosher form derived from plant oils (Regenstein and Chaudry, 2001; Regenstein et al., 2003). This is where kosher inspections and the extensive infrastructure globally to determine the status of products starting in many cases at the field level, can serve the interests of the Muslim consumer.

PROHIBITION OF MIXING OF MILK AND MEAT

“Thou shalt not seeth the kid in its mother’s milk.” This passage appears three times in the Torah and is therefore considered a very serious admonition. The meat side of the equation has been rabbinically extended to include poultry. The dairy side includes all milk derivatives.
Comparison of Kosher, Halal, and Vegetarianism

To keep meat and milk separate in accordance with kosher law requires that processing and handling of all materials and products fall into one of three categories:

- Meat product
- Dairy product
- Pareve (parve, parev), or neutral product

The pareve category includes all products that are not classified as meat or dairy. All plant products are pareve along with eggs, fish, honey, and lac resin (shellac). These pareve foods can be used with either meat products or dairy products. However, if they are mixed with meat or dairy, they take on the identity of the product they are mixed with; for example, an egg in a cheese soufflé becomes dairy.

To ensure the complete separation of milk and meat, all equipment, utensils, pipes, steam, and so on, must be of the properly designated category. If plant materials (e.g., fruit juices) are run through a dairy plant, they will be considered a dairy product religiously. Some kosher supervision agencies permit such a product to be listed as dairy equipment (DE) rather than dairy. The DE tells the consumer that it does not contain any intentionally added dairy ingredients, but that it was made on dairy equipment (see discussion on allergy). If a product with no meat ingredients is made in a meat plant (e.g., a vegetarian vegetable soup), it may be marked meat equipment (ME). Although one may need to wash the dishes before and after use, the DE food can be eaten on meat dishes and the ME food on dairy dishes. Thus, the equipment used in kosher productions are carefully monitored and fairly comprehensive procedures are required to change the status of equipment. Again, this means that the equipment used for pareve or dairy productions, along with non-labeled food ingredients, are carefully checked.

A significant wait is normally required to use a product with dairy ingredients after one has eaten meat [i.e., from one to six hours depending on the customs (minhag) of the area the husband came from]. With the DE listing, the consumer can use the DE product immediately before or after a meat meal but not with a meat meal. Following dairy, the wait before eating meat is much less, usually from a rinse of the mouth with water to one hour. Certain dairy foods require the full wait of one to six hours; for example, when a hard cheese (defined as a cheese that has been aged for over six months or one that is particularly dry and hard, such as many of the Italian grating cheeses) is eaten, the wait is the same as that for meat to dairy. Thus, most companies producing cheese for the kosher market usually age their cheese for less than six months, although with proper package marking this is not a religious requirement. If one wants to make an ingredient or product truly pareve, the plant equipment must undergo a process of equipment kosherization (Regenstein and Chaudry, 2001; Regenstein et al., 2003).

**Kosher: Special Foods**

Rules governing grape products, yashon (old) and chodesh (new) flour, Jewish milk, and other foods are beyond the scope of this chapter.
PASSOVER REQUIREMENTS

The Passover holiday comes in spring and requires observant Jews to avoid eating the usual products made from five prohibited grains: wheat, rye, oats, barley, and spelt (Hebrew: chometz). Those observing kosher laws can eat only the specially supervised unleavened bread from wheat (Hebrew: matzos) that is prepared especially for the holiday. Once again, some matzos (schmura matzos) are made to a stricter standard with rabbinical inspection of the wheat beginning in the field. For other Passover matzo, supervision does not start until the wheat is about to be milled into flour. Matzo made from oats and spelt is now available for consumers with allergies including “schmura” matzos.

Special care is taken to ensure that the matzo does not have any time or opportunity to rise. In some cases, this literally means that products are made in cycles of less than 18 minutes. This is likely to be the case for handmade schmura matzo. In continuous large-scale operations, the equipment is constantly vibrating so that there is no opportunity for the dough to rise (Regenstein and Chaudry, 2001; Regenstein and Regenstein, 1988).

EQUIPMENT KOSHERIZATION

There are three ways to make equipment kosher or to change its status back to pareve from dairy or meat. (Rabbis generally frown on going from meat to dairy or vice-versa. Most conversions are from dairy to pareve or from treif to one of the categories of kosher.) There are a range of process procedures to be considered, depending on the equipment’s prior production history. These are at least equal to modern sanitation requirements but also include covering the entire equipment with boiling water or using a blow torch to heat all relevant surfaces.

HALAL DIETARY LAWS

Halal dietary laws deal with the following five issues; all except one are in the animal kingdom:

- Prohibited animals
- Prohibition of blood
- Method of slaughtering and blessing
- Prohibition of carrion
- Prohibition of intoxicants

Islamic dietary laws are derived from the Quran, a revealed book; the hadith, the traditions of Prophet Muhammad (PBUH); and through extrapolation of and deduction from the Quran and the hadith by Muslim jurists.

The Quran states:

Forbidden Unto you (for food) are carrion and blood and swine-flesh, and that which hath been dedicated unto any other than Allah, and the strangled, and the dead through
beating, and the dead through falling from a height, and that which hath been killed
by (the goring of) horns, and the devoured of wild beasts, saving that which ye make
lawful (by the death-stroke), and that which hath been immolated unto idols. And
(forbidden is it) that ye swear by the divining arrows. This is an abomination. This day
are those who disbelieve in despair of (ever harming) your religion; so fear them not,
feast Me! This day have I perfected your religion for you and completed my favor unto
you, and have chosen for you as religion AL-ISLAM. Whoso is forced by hunger, not
by will, to sin: (for him) Lo! Allah is Forgiving, Merciful.

Chapter V, Verse 3

The Quran also states:

Ye who believe! Eat of the good things wherewith We have provided you, and render
thanks to Allah, if it is (indeed) He whom you worship.

Chapter II, Verse 172

Eleven generally accepted principles pertaining to halal (permitted) and haram
(prohibited) in Islam provide guidance to Muslims in their customary practices:

- The basic principle is that all things created by Allah are permitted, with a
  few exceptions that are prohibited. Those exceptions include pork, blood,
  meat of animals that died of causes other than proper slaughtering, food
  that has been dedicated or immolated to someone other than God, alcohol,
  and intoxicants.
- To make lawful and unlawful is the right of Allah alone. No human being,
  no matter how pious or powerful, may take it into his or her own hands to
  change things.
- Prohibiting what is permitted and permitting what is prohibited is similar to
  ascribing human partners to Allah. This is a sin of the highest degree that
  makes one fall out of the sphere of Islam.
- The basic reasons for the prohibition of things are impurity and harmful-
  ness. A Muslim is not supposed to question exactly why or how something
  is unclean or harmful in what Allah has prohibited. There might be obvious
  reasons and there might be obscure reasons. Some of the reasons that have
  been proposed are indicated below although many of them may not be con-
  sistent with modern scientific thinking.
- Carrion and dead animals are unfit for human consumption because the
decay process leads to the formation of chemicals harmful to humans
(Awan, 1988).
- Blood that is drained from an animal contains harmful bacteria, potentially
  harmful products of metabolism, and toxins (Hussaini and Sakr, 1983).
- Swine serves as a vector for pathogenic worms to enter the human body.
  Infections by Trichinella spiralis and Traineiasolium are not uncommon
  (Awan, 1988). Intoxicants are considered harmful for the nervous system,
  affecting the senses and human judgment, leading to social and family
  problems, and might even lead to death (Al-Qaradawi, 1984; Awan, 1988).
• These reasons and other similar explanations may sound reasonable to a layperson but become more questionable under scientific scrutiny (Sakr, 1991). If the meat of dead animals were prohibited due to harmful chemicals in decaying meat, then dead fish should have been prohibited. If pork contains *Trichinae*, beef might contain *E. coli*. If pork fat is bad, so are trans fatty acids. The underlying principle, it seems, behind the prohibitions is not scientific reasons but the divine order “forbidden unto you are.”

• What is permitted is sufficient and what is prohibited is then superfluous. Allah prohibited only things that are unnecessary or dispensable, while providing better alternatives. People can survive and live better without consuming unhealthful carrion, unhealthful pork, unhealthful blood, and the root of many vices—alcohol.

• Whatever is conducive to the prohibited is in itself prohibited. If something is prohibited, anything leading to it is also prohibited.

• Falsely representing unlawful as lawful is prohibited. It is unlawful to make flimsy excuses, to consume something that is prohibited, such as drinking alcohol for supposedly medical reasons.

• Good intentions do not make the unlawful acceptable. Whenever any permissible action of the believer is accompanied by a good intention, his action becomes an act of worship. In the case of haram, it remains haram, no matter how good the intention or how honorable the purpose. Islam does not endorse employing a haram means to achieve a praiseworthy end. Islam indeed insists that not only the goal be honorable, but also the means chosen to achieve it be lawful and proper. Islamic laws demand that right should be secured through just means only.

• Doubtful things should be avoided. There is a gray area between clearly lawful and clearly unlawful. This is the area of “what is doubtful.” Islam considers it an act of piety for the Muslims to avoid doubtful things, for them to stay clear of unlawful. Prophet Muhammad (PBUH) said: “The halal is clear and the haram is clear. Between the two there are doubtful matters concerning which people do not know whether they are halal or haram. One who avoids them in order to safeguard his religion and his honor is safe, while if someone engages in a part of them, he may be doing something haram.”

• Unlawful things are prohibited to everyone alike. Islamic laws are universally applicable to all races, creeds, and sexes. There is no favored treatment of a privileged class. Actually, in Islam, there are no privileged classes; hence, the question of preferential treatment does not arise. This principle applies not only among Muslims, but between Muslims and non-Muslims as well.

• Necessity dictates exceptions. The range of prohibited things in Islam is quite limited, but emphasis on observing these prohibitions is very strong. At the same time, Islam is not oblivious to the exigencies of life, to their magnitude, or to human weakness and capacity to face them. A Muslim is permitted, under the compulsion of necessity, to eat a prohibited food in quantities sufficient to remove the necessity and thereby survive (Chaudry, 1992; Regenstein and Chaudry, 2001; Riaz, 1999a).
Comparison of Kosher, Halal, and Vegetarianism

Prohibited and Permitted Animals

Meats of pigs, boars, and swine are strictly prohibited, and so are meats of carnivorous animals such as lions, tigers, cheetahs, dogs, and cats, and birds of prey such as eagles, falcons, ospreys, kites, and vultures.

Meat of domesticated animals such as ruminants with split hoof, such as cattle, sheep, goat, and lamb, is allowed for food, and so are meats of camels and buffaloes. Also permitted are meats of birds that do not use their claws to hold down food, such as chickens, turkeys, ducks, geese, pigeons, doves, partridges, quails, sparrows, emus, and ostriches. Some of the animals and birds are permitted only under special circumstances or with certain conditions. The animals fed unclean or filthy feed such as feeds formulated with sewage (bio-solids) or protein from dead animals must be kept separate and placed on clean feed for 3 to 40 days (Awan, 1992).

Foods from the sea, namely fish and seafood, are the most controversial among various denominations of Muslims. Certain groups accept only fish with scales as halal, while others consider everything that lives in water all the time as halal. Consequentially, prawns, lobsters, and clams are halal for most Muslims but may be detested (makrooh) by some and hence not consumed.

There is no clear status for insects established in Islam except that the locust is specifically mentioned as halal. Among the by-products from insects, use of honey was very highly recommended by Prophet Muhammad (PBUH). Other products such as royal jelly (from bees), bee’s wax, shellac, and carmine are acceptable to be used without restrictions by most Muslims; however, some might consider shellac and carmine makrooh or offensive to their psyche.

Eggs and milk from permitted animals are also permitted for Muslim consumption. Milk from cows, goats, sheep, camels, and buffaloes is halal. Unlike kosher, there is no restriction on mixing meat and milk (Chaudry, 1992; Regenstein and Chaudry, 2001).

Prohibition of Blood

According to Quranic verses, blood that pours forth from an animal when it is slaughtered is prohibited for consumption. It includes blood of permitted and non-permitted animals alike. There is general agreement among Muslim scholars that anything made from the blood of any animal, including fish, is unacceptable. Products such as blood sausage and ingredients such as blood albumin are either haram or questionable at best, and should be avoided in product formulations (Riaz, 1996).

Proper Slaughtering of Permitted Animals

There are special requirements for slaughtering animals:

- Animal must be of a halal species.
- Animal must be slaughtered by an adult and sane Muslim.
- The name of Allah must be pronounced at the time of slaughter.
- Slaughter must be done by cutting the throat in a manner that induces rapid and complete bleeding, resulting in the quickest death. The generally accepted method is to cut at least three of the four passages in the neck, that is, carotids, jugulars, trachea, and esophagus.
• The meat of animals thus slaughtered is called zabiha or dhabiha meat. Many Muslims do not want halal meat slaughtered in a facility that also slaughters pigs, even if that is done on a different day and the facility has been properly cleaned.

Islam places great emphasis on gentle and humane treatment of animals, especially before and during slaughter. Some of the conditions include giving the animal proper rest and water, avoiding conditions that create stress, not sharpening the knife in front of the animals, and using a very sharp knife to cut the neck. After the blood is allowed to drain completely from the animal and the animal has become lifeless, only then may dismemberment begin. Unlike kosher, post-slaughter religious inspection, deveining, and soaking and salting of the carcass is not required for halal. Hence, halal meat is treated no different than commercial meat. Animal-derived food ingredients such as emulsifiers, tallow, and enzymes must be made from animals slaughtered by a Muslim to be halal.

Hunting of permitted wild animals, such as deer and elk, and birds, such as doves, pheasants, and quails, is permitted for the purpose of eating, but not merely for deriving pleasure out of killing an animal. Hunting by any means by tools such as guns, arrows, spears, or trapping is permitted. Trained dogs or birds of prey may also be used for catching or retrieving the hunt as long as the hunting animal does not eat any of the prey. The name of Allah may be pronounced at the time of ejecting the hunting tool rather than the actual catching of the hunt. The hunted animal has to be bled by slitting the throat as soon as it is caught. If the blessing is made at the time of pulling the trigger or the shooting of an arrow and the hunted animal dies before the hunter reaches it, it would still be halal as long as slaughter is performed and some blood comes out. Fish and seafood may be hunted or caught by any reasonable means available as long as it is done humanely.

The requirements of proper slaughtering and bleeding are applicable to land animals and birds. Fish and other creatures that live in water need not be ritually slaughtered. Similarly, there is no special method of killing locusts.

The meat of a permitted animal that dies of natural causes or diseases, from being gored by other animals, by being strangled, by falling from a height, through beating, or by being killed by wild beasts is unlawful to be eaten unless one saves such animals by halal slaughtering before they actually become lifeless. Fish that dies of itself, if floating on water, or if lying out of water, is still halal as long as it does not show any signs of decay or deterioration.

An animal must not be slaughtered after dedication to someone other than Allah and immolated to anybody other than Allah under any circumstances. This is a major sin (Chaudry, 1992; Regenstein and Chaudry, 2001; Chaudry and Regenstein, 2000).

**PROHIBITION OF ALCOHOL AND INTOXICANTS**

Consumption of alcoholic drinks and other intoxicants is prohibited according to the Quran as follows:

Ye who believe! Strong drink and games of chance and idols and divining arrows are only an infamy of Satan’s handiwork. Leave it aside in order that ye may succeed.

*Chapter V, Verse 90*
Satan seeketh only to cast among you enmity and hatred by means of strong drink and games of chance, and to turn you from the remembrance of Allah and from (His) worship. Will ye then have done?

Chapter V, Verse 91

The Arabic term used for alcohol in the Quran is khamr, which means that which has been fermented, and implies not only to alcoholic beverages such as wine, beer, whiskey, or brandy but also to all things that intoxicate or affect one’s thought process. Although there is no allowance for added alcohol in any beverage such as soft drinks, the small amount of alcohol contributed from food ingredients might be considered an impurity and hence ignored. Synthetic or grain alcohol can be used in food processing for extraction, precipitation, dissolving, and other reasons as long as the amount of alcohol remaining in the final product is very low, generally below 0.1%. However, each importing country has its own guidelines that must be understood by exporters and strictly adhered to (Chaudry, 1992; Regenstein and Chaudry, 2001; Riaz, 1997). More details can be found in chapter 16 on alcohol.

**Halal Cooking, Food Processing, and Sanitation**

There are no restrictions about cooking in Islam, as long as the kitchen is free from haram foods and ingredients. There is no need to keep two sets of utensils, one for meat and the other for dairy, as in kosher.

In food companies, haram materials should be kept segregated from halal materials. The equipment used for non-halal products has to be thoroughly cleansed by using proper techniques of acids, bases, detergents, and hot water. As a general rule, kosher clean-up procedures are adequate for halal too. If the equipment is used for haram products, especially pork, it must be properly cleaned, sometimes by using an abrasive material, and then be blessed by a Muslim inspector by rinsing it with hot water seven times (Regenstein and Chaudry, 2001).

**Kosher and Halal**

**Gelatin**

Important in many food products, gelatin is probably the most controversial of all modern kosher and halal ingredients. Gelatin can be derived from pork skin, beef bones, or beef skin (Cheng et al., 2012; Hermanto and Fatimah, 2013; Jaswir et al., 2009). In recent years, some gelatins from fish skins have also entered the market. As a food ingredient, fish gelatin has many similarities to beef and pork gelatin, such as a similar range of bloom strengths and viscosities (Schrieber and Gareis, 2007). However, depending on the species from which fish skins are obtained, its melting point can vary over a much wider range of melting points than beef or pork gelatin (Gómez-Estaca et al., 2009; Karim and Bhat, 2009). This offers some unique opportunities to the food industry, especially for ice cream, yogurt, dessert gels, confections, and imitation margarine. Fish gelatins can be produced kosher and halal with proper supervision, and be acceptable to almost all the mainstream religious supervision organizations.
Most of the currently available gelatin—even if called kosher—is not acceptable to the mainstream U.S. kosher supervision organizations and to the Muslim community. Many gelatins are, in fact, totally unacceptable to halal consumers because they might be pork based.

A recent development has been the manufacture of kosher gelatin from the hides of kosher-slaughtered cattle. It has been available in limited supply at great expense, and this gelatin has been accepted by the mainstream kosher supervisions and even some of the stricter kosher supervision agencies. The acceptability of this gelatin would presumably follow the acceptability of al-kitabe meat products.

The gelatin companies produce gelatins of different bloom strengths, and both soft and hard capsules of various sizes. This is an important new development that should be of interest to nutraceutical and drug markets. Similarly, at least two major manufacturers are currently producing certified halal gelatin from cattle bones of animals that have been slaughtered by Muslims. Halal-certified hard and soft gelatin capsules are available at competitive prices. Hard, two-piece and soft, one-piece capsules made with different vegetable materials are also available, most of which are certified as halal, kosher, and vegetarian (Al-Mazeedi et al., 2013; Blech 2008; Regenstein 2012; Regenstein et al., 2003).

One finds a wide range of attitudes toward gelatin among the lenient kosher supervision agencies. The most liberal view holds that gelatin, being made from bones and skin, is not being made from a food (flesh). Further, the process used to make the product goes through a stage where the product is so unfit that it is not edible by humans or dogs, and as such becomes a new entity. Rabbis holding this view might accept pork gelatin. Most water gelatin desserts with a generic K follow this ruling.

Other rabbis permit gelatin only from beef bones and hides, and not pork. Still other rabbis only accept “Indian dry bones” as a source of beef gelatin. These bones, found astray in India, are aged and become degreased over time and are considered “dry as wood” by rabbis. Kosher religious laws exist for permitting these materials. Again, none of these products is accepted by the mainstream kosher or halal supervisions, and therefore, they are not accepted by a significant part of the kosher and halal community (Regenstein and Chaudry, 2001; Riaz, 1999b).

**Biotechnology**

Rabbis and Islamic scholars currently accept products made by simple genetic engineering; for example, chymosin (rennin) was accepted by rabbis about a half a year before the Food and Drug Administration (FDA) accepted it. Production conditions in fermenters must still be kosher or halal; that is, the ingredients, the fermenter, and any subsequent processing must use kosher or halal equipment and ingredients of the appropriate status (Malaysian Standard 1500, 2009). A product produced in a dairy medium, for example, extracted from cow’s milk, would be kosher dairy. Mainstream rabbis may approve porcine lipase made through biotechnology when it becomes available, if all the other conditions are kosher. The Muslim community is still considering the issue of products with a porcine gene; although a final ruling has not been established, the leaning seems to be toward rejecting such materials. Religious leaders of both communities have not yet determined the status
of more complex genetic manipulations (Chaudry and Regenstein, 1994; Kurien, 2002; Regenstein and Chaudry, 2001; Riaz, 1999a). An interesting question that the Muslim community may need to address is the status of a porcine (pig) gene that was created in the laboratory, that is, knowing the sequence of a gene, it can be produced totally synthetically.

**VEGETARIANISM**

Vegetarianism encompasses a variety of options and choices, based on lifestyles, philosophies, and religions. The preferences vary from eating nothing but the parts of plants that be picked without destroying the plant to eating everything except flesh (red meat and poultry).

According to a nationwide survey in 2006, approximately 2.3% (4.9 million) of adults are following a vegetarian diet, and never eat fish, meat, or chicken; 1.4% of the U.S. adult population was vegan. According to a report of nationwide survey in 2005, 3% of children between the ages of 8 and 18 and adolescents were vegetarian, and close to 1% were vegan (Stahler, 2006, 2009). Types of vegetarians vary from lenient to the most strict include (The Vegetarian Society, 2002):

- **Pesco vegetarians**: Eat fish, eggs, and dairy products, but avoid poultry and meat products, i.e., products that are generally categorized as being slaughtered.
- **Lacto-ovo vegetarians**: Consume all types of vegetable products, eggs, and milk products, but avoid all forms of flesh, including meat, poultry, and fish. People who do not eat eggs but eat dairy products are called lacto-vegetarians, whereas ovo vegetarians consume eggs but not dairy products.
- **Vegans**: Do not eat anything of animal origin. A vegan therefore avoids all meats, poultry, and any other animal products and their derivatives, such as gelatin, eggs, milk, cheese, yogurt, and other dairy products; and fish, shellfish, crustaceans, and other marine animal products. Vegans also try to avoid honey, royal jelly, and cochineal and other insect-derived products. In addition, vegans do not knowingly consume hidden animal ingredients (Craig and Mangels, 2009; The Vegan Society, 2002).

Fruitarians follow a type of vegan diet of fruits, vegetables, seeds, and nuts that is minimally processed or cooked. Fruitarians believe that only plant foods that can be harvested without killing the plant should be eaten (Craig and Mangels, 2009; The Vegan Society, 2002).

Vegetarianism is not a particular religion. Believers of many religious denominations including Muslims, Jews, Seventh Day Adventist, Christians, Latter Day Saints (Mormons), Hindus, Buddhists, and Jains might practice vegetarianism to some extent.

Mainstream vegetarianism is usually defined as lacto-ovo; however, veganism is becoming more popular in the West. The comparison to be made here is limited to vegan and lacto-ovo vegetarianism rather than other types of vegetarianism.
FOOD STANDARDS FOR VEGETARIANS

ANIMAL PRODUCTS

For both vegans and lacto-ovo vegetarians, all products of animal flesh including food ingredients from meat, poultry, and seafood must be avoided. Moreover, for vegans, products and by-products from live animals, such as milk and eggs, and products from insects, such as honey and royal jelly, must also be avoided. Lacto-ovo vegetarians who consume egg and dairy products avoid incidental ingredients of animal origin, including enzymes such as rennet. However, most of the enzymes for cheese manufacture at least in the U.S. are from microbial or genetically modified microbes, which has found acceptance among this group (Lea et al., 2006).

Ingredients not acceptable as vegetarian include vitamin D from sheep wool, gelatin used in juice processing for clarification, and anchovies in Worcestershire sauce (The Vegan Society, 2002). However, the source of such ingredients may not be carefully traced in products that claim to be vegan unless they are subject to certification by a vegan certifying body that indicates that it checks such issues (Lea et al., 2006).

KITCHEN AND HYGIENE STANDARDS

Dishes and utensils used for preparing and serving vegetarian products must be separate from non-vegetarian dishes or at a minimum must be thoroughly washed. It is recommended that cross-contamination from non-vegetarian food be avoided. But how well this is enforced in practice must be ascertained by any Muslim considering vegetarian or vegan foods (Wilson et al., 2011).

COMPARISON OF KOSHER, HALAL, AND VEGETARIAN

The view of kosher present here are those of the Orthodox Jewish community and not those of the Conservative or Reform movements. Table 25.1 gives a fairly complete list of kosher, halal, and vegetarianism. There are both similarities and differences, especially between kosher and halal. In both religions, pork and pork products derived from pigs and swine are prohibited. Also, carnivorous animals and birds are not allowed in either religion. Because it is understood that animal products are against the philosophy of vegetarianism, there is no need to mention vegetarianism specifically in this comparison.

Of the permitted animals, ruminants and poultry have to be killed by a Jew to make them kosher and killed by a Muslim to make them halal. In kosher, all animals have to be hand-slaughtered without stunning. However, an animal may be stunned after slaying to facilitate bleeding in some cases, but it is not acceptable as glatt kosher by the normative mainstream, that is, only the liberal Orthodox and Conservative communities accept post-slaughter stunning. The Reform Movement generally does not consider kosher issues. For halal, interventions using the non-penetrating captive bolt or by reversible electrical stunning is accepted by some Muslims as long as the animal is alive at the time of slaughter. For halal, many halal certifiers accept mechanical slaughter of poultry if supervised by a Muslim with the
### TABLE 25.1
Comparative Summary of Kosher, Halal, and Vegetarian Guidelines

<table>
<thead>
<tr>
<th></th>
<th>Kosher</th>
<th>Halal</th>
<th>Vegetarian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pork/pig/swine and carnivorous animals</td>
<td>Prohibited</td>
<td>Prohibited</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Ruminants and poultry</td>
<td>Slaughtered by a trained Jew</td>
<td>Slaughtered by an adult Muslim</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Blessing/invocation</td>
<td>Blessing before entering slaughtering area. Not on each animal.</td>
<td>Blessing on each animal while slaughtering</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Slaughtering by hand</td>
<td>Mandatory</td>
<td>Preferred</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Mechanical slaughtering</td>
<td>Not allowed</td>
<td>May be done for poultry under supervision</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Stunning before slaying</td>
<td>Sometimes permitted</td>
<td>Permitted</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Stunning after slaying</td>
<td>Permitted</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td>Other restrictions about meat</td>
<td>Only front quarters used Soaking and salting required</td>
<td>Whole carcass used No salting required</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Blood of any animal</td>
<td>Prohibited</td>
<td>Prohibited</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Fish</td>
<td>With scales only</td>
<td>Most accept all fish, some only with fish scales</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Seafood</td>
<td>Not permitted</td>
<td>Varying degree of acceptance</td>
<td>Not accepted</td>
</tr>
<tr>
<td>Microbial enzymes</td>
<td>Accepted</td>
<td>Accepted</td>
<td>Accepted</td>
</tr>
<tr>
<td>Biotech-derived enzymes</td>
<td>Accepted</td>
<td>Accepted</td>
<td>Accepted</td>
</tr>
<tr>
<td>Animal enzymes</td>
<td>Kosher slaughtered only</td>
<td>Accepted sometimes</td>
<td>Sometimes accepted</td>
</tr>
<tr>
<td>Porcine enzymes</td>
<td>Maybe accepted</td>
<td>Not accepted</td>
<td>Sometimes accepted</td>
</tr>
<tr>
<td>Cattle gelatin</td>
<td>From Kosher-slaughtered animals</td>
<td>From halal-slaughtered animals</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Fish gelatin</td>
<td>Kosher fish only</td>
<td>Any fish</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pork gelatin</td>
<td>Allowed by liberal orthodox rabbis</td>
<td>Not permitted</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Dairy products</td>
<td>Made with Kosher enzymes</td>
<td>Made with halal enzymes</td>
<td>No restrictions</td>
</tr>
<tr>
<td>Whey</td>
<td></td>
<td></td>
<td>No restrictions</td>
</tr>
<tr>
<td>Addition of cheese culture</td>
<td>Must be added by a Jew</td>
<td>No restriction</td>
<td>No restrictions</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Permitted</td>
<td>Not permitted</td>
<td>Accepted</td>
</tr>
<tr>
<td>Combining meat and dairy</td>
<td>Not permitted</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Insects and by-products</td>
<td>Grasshoppers accepted. By-products not accepted</td>
<td>Locusts and by-products accepted</td>
<td>By-products acceptable</td>
</tr>
</tbody>
</table>

(Continued)
back-up person, namely, the person slaughtering any birds that were missed by the mechanical equipment, being a Muslim.

In kosher, a blessing is made before the start of the slaughter operation. However, for halal, an invocation of the name of God must be made at the time of slaughtering each animal. Only front quarters of ruminants are used for kosher meat. Meat is also soaked in water, and covered with salt for an hour to remove the blood. For halal, the entire animal is permitted to be consumed. There is no requirement for soaking or salting of meat for halal. Blood and blood by-products are not permitted under kosher as well as halal rules.

Among fish and seafood, only fish with fins and removable scales are kosher, whereas all fish and seafood that spend their entire life in the water are halal. However, some Muslim denominations do not accept fish without scales or seafood, or both, as halal.

Enzymes derived from microbial or biotech (GMO) sources are acceptable as kosher, halal, and vegetarian. Enzymes extracted from kosher-killed animals are accepted as kosher and enzymes extracted from halal-killed animals are accepted as halal. Some liberal Orthodox rabbis might accept enzymes from non-kosher-killed animals as well as porcine enzymes. Enzymes from non-halal-killed animals might be accepted by some groups and countries, but not all. Porcine enzymes are generally not accepted by Muslims (Riaz, 1999a).

Gelatin prepared from kosher-killed animals is accepted by Orthodox rabbis as kosher and gelatin from halal-slaughtered animals is acceptable as halal. Some countries also accept regular bovine gelatin under certain conditions. Gelatin from fish with removable scales is kosher, but gelatin from any fish is halal.

For dairy ingredients and cheese, the reader is referred to the discussion on enzymes (Chapter 11). Additionally, for cheese to be kosher, a Jew must add the cultures to the milk for mainstream kosher. There is no such restriction for halal, in which any person may add the cultures to the milk.

Alcohol, especially alcoholic drinks, is not allowed for Muslims, but Jews consider alcohol as kosher; however, some restrictions exist about the source of alcoholic drinks in kosher. All alcoholic products are vegetarian. It is also important for kosher not to combine meat and dairy products, but no such restriction exists for halal.

### TABLE 25.1 (CONTINUED)

<table>
<thead>
<tr>
<th>Plant materials</th>
<th>Kosher*</th>
<th>Halal**</th>
<th>Vegetarian***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All permitted</td>
<td>Intoxicants and alcohol not permitted</td>
<td>All acceptable</td>
</tr>
<tr>
<td>Sanitation of equipment</td>
<td>Cleaning</td>
<td>Thorough cleaning</td>
<td>Thorough cleaning</td>
</tr>
<tr>
<td></td>
<td>Idle period required</td>
<td>No idle period required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kosherization/ritual cleaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special occasion</td>
<td>Additional restrictions during Passover</td>
<td>Same rules apply year-round</td>
<td>Same rules apply year-round</td>
</tr>
</tbody>
</table>
The equipment for halal and vegetarian production must be thoroughly cleaned and can be used immediately after cleaning. For kosher, after thorough cleaning, the equipment might have to be left idle for a period of up to 24 hours as explained earlier in this chapter.

Insects are not kosher (except grasshoppers and locusts), or not vegetarian. Insect by-products such as carmine and cochineal are not considered kosher by the majority of Orthodox rabbis, but some rabbis permit them. Some insect by-products are considered halal.

All plant materials are kosher and vegetarian; however, some restrictions exist in kosher regarding insect infestations and sources of certain alcoholic products, as explained earlier in this chapter. Plant materials are halal as long as they do not contain significant amounts of alcohol or intoxicants.

The rules for halal and vegetarianism apply year-round; however, for kosher, during Passover, additional rules might apply beyond everyday kosher. Table 25.1 show a comparative summary of kosher, halal, and vegetarian guidelines.

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Regenstein, J. M. (2012). The politics of religious slaughter-how science can be misused. In 65th Annual Reciprocal Meat Conference at North Dakota State University in Fargo, ND.


