

The value of Halal food production

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Food consumed by Muslims meets the Islamic dietary code and is called Halal food. Muslims use two major terms to describe food: Halal and Haram. Halal means permitted or lawful. Haram means forbidden or unlawful.

Other terms used are makrooh, mash-booh and dhabiha. Makrooh is an Arabic word meaning religiously 'discouraged' or 'disliked.' Mashbooh is also an Arabic word meaning 'suspected;' it covers the grey area between Halal and Haram. Dhabiha means 'slaughtered' and implies that the animal has been slaughtered according to the Islamic method.

Why Halal?

Several progressive food companies have recognized that there is a large Muslim community whose essential requirement of consuming only Halal products must be fulfilled. Islam is the world's second largest and fastest-growing religion, practiced by about 1.4 billion people. It is estimated that the international Halal food trade exceeds \$150 billion per year and continues to grow, opening the doors of economic opportunities.

The Halal food market potential in the world is not limited only to Muslims. Because of consumer awareness of quality and nutrition, many companies are looking at Halal as a new concept in marketing.

Halal food markets

The world has truly become a global super-market and the demand for Halal food products is on the rise. To satisfy this demand creates both a challenge and an opportunity for entrepreneurs in the countries with surplus food. Recognizing the importance of Halal food to international trade, the U.S. Department of Agriculture's Food Labeling Division, Regulatory Programs, established guidelines during the

1990s regarding the use of Halal labels on meat and poultry products. Similarly, the Codex Alimentarius Commission also adopted guidelines on the use of the term Halal to assure fair practices in the trade of Halal foods across country boundaries.

North American Halal market

The buying power of Muslims for food in North America is estimated at more than \$12 billion. In the United States, there are a number of areas where providers of Halal products are active. Exports to Asia and other markets accounts for the bulk of Halal products. Domestically, ethnic food marts, schools, prison systems, hospitals, and airlines are the visible centers of Halal activity. As Muslims become more aware of their rights as consumers and voice their opinions, insightful suppliers will meet their demands.

Halal food demand is not only confined to the free market. The U.S. government has realized the importance of serving proper food to Muslims, Jews, and vegetarians serving in the military, and in recent years food that meets their dietary needs has been available to them.

International Halal market

Presently, the two strongest markets for Halal products are Southeast Asia and the Middle East. These areas represent nearly 25% of the Muslim consumer base. All major U.S. poultry processors export to these markets, while secondary suppliers provide beef. The primary sources of beef in those markets are Australia and New Zealand.

Opportunities for global marketers of Halal products are also increasing. Muslims around the world are starting to blend the best of Western-style foods with their generally Eastern values and habits. Whereas in the past

Muslims simply avoided foods that did not meet their dietary needs, today, they actively seek out processed Halal foods.

In the late 1980s and early 1990s, the potential of the Southeast Asian and Middle Eastern markets for Halal foods started to be realized. This has expanded into South Asia, the Mediterranean, Europe, and Central Asia. Even in countries like Singapore and South Africa, where Muslims are a minority, the Halal food business is good business. For example, although the Muslim community is only 16% of the 3.8 million population of Singapore, McDonald's, A&W, Kentucky Fried Chicken and Taco Bell restaurants in that country that are 100% Halal.

Halal differs from kosher

Halal laws are similar to kosher laws in terms of slaughtering rituals of animals and avoidance of pork and pork derivatives. But the similarities end there. Kosher and Halal are two different sets of principles and practices based on different philosophies, which is evident from the way Halal or kosher certification is done.

Kosher certification, which meets the requirements of Jewish dietary laws, is not compatible with Muslim dietary laws. There is a philosophical difference between Halal and kosher certification, and Halal may never overlap with kosher.

One of the major differences between kosher and Halal is alcoholic drinks. Muslims are prohibited from drinking alcohol, whereas wine and other alcoholic drinks are kosher and may even be a part of ritual ceremonies. Kosher and Halal also differ in the permissible sources of gelatin. Whereas Muslims may not accept pork gelatin, there are instances where products made with pork gelatin may be accepted as kosher. Some of the other similarities and differences between Halal and kosher are summarized in Table 1.

Manufacturing Considerations

There are two main considerations in producing Halal products: use of proper ingredients and the avoidance of cross contamination. In the production and transportation of fats, oils, and fatty chemicals, the biggest challenge is maintaining the purity and integrity of each.

Animal fats. Animal fats such as tallow are Halal only when the animals are slaughtered according to the Halal requirements. Lard can never be Halal or kosher because of the porcine origin, and any other oils or fats contaminated with lard become Haram. Popular marine oils are inherent of Halal without any specific method of killing the animals. Butter and butterfats from Halal animals is also Halal.

Vegetable oils. All pure vegetable oils are Halal, however, incidental ingredients such as mono and diglycerides or antioxidants must also be from Halal sources.

Petroleum/mineral oils. All food grade mineral oils and their further derivatives are also Halal.

Fatty Chemicals. Food chemicals derived from fats and oils, as long as purity of the chemical is maintained, would also fall under the above categories. The origin of mono- and diglycerides, fatty acids, fatty salts, lecithin, glycerine, and other chemicals derived from vegetable oil are Halal. However the ones derived from animal fats are mashbooh unless made with Halal tallow.

Muslim scholars may differ about the permissibility of the derived chemicals because some scholars are of the opinion that these chemicals have been altered from their original state. Muslim consumers are similarly split over the acceptance of fatty chemicals derived from animal sources.

Emulsifiers like mono- and diglycerides are manufactured from fats and oils. Commercially available mono- and diglycerides may be manufactured from vegetable oil, beef fat, lard, or marine oil. Typical food containing mono- and diglycerides are bread, cake, pastry, ice cream, and candies.

Enzymes. Enzymes may also be used in the manufacture of fats and oils. The sources of the enzymes are animals, plants, or microbes. Only enzymes from plants or microbial origin should be used in the production of oils and fats.

Alcohol. Alcohol is prohibited as a beverage, but it may be used in food production. Some flavors are extracted with alcohol, but the residual alcohol level is very low. Usually these come under incidental additives—substances that are present in a food or drink at insignificant levels and do not have any technical or functional effects in that food.

Halal certification

In addition to its religious significance, many food companies consider Halal a seal of quality as Halal food is perceived by consumers as supervised at all stages of preparation and processing to achieve the highest standards of wholesomeness and hygiene. A food company wishing to introduce Halal products should obtain Halal certification of their food products. The Halal certification is an authoritative, reliable, and independent testimony that a manufacturer's product meets the Halal requirements.

Many Muslim countries require that food products imported to their countries be certi-

fied Halal by recognized certifying organizations. Halal certification involves an intention of the company to go Halal, inspection of the production facility, review of sanitation, review of ingredients and labels, and training the company personnel in understanding and meeting the Halal requirements.

Are GM foods Halal?

There is no specific mention of genetically modified (GM) or genetically engineered food and ingredients in the Muslim scripture, because these scientific developments are very recent. So, the products are qualified according to conventional Halal guidelines.

Kosher & Halal Food Processing Requirements

	Kosher	Halal
Pork	Prohibited	Prohibited
Ruminants & Poultry	Slaughtered by a Jew	Slaughtered by a Muslim
Blessing	Blessing before entering slaughtering area. Not on each animal.	Blessing on each animal while slaughtering.
Slaughtering by hand	Mandatory	Preferred
Mechanical slaughtering	Not allowed	Poultry yes, but not mammals
Stunning	Allowed sometimes	Allowed
Restrictions	Only front quarters Soaking & salting required	Whole carcass No salting
Blood	Prohibited	Prohibited
Gelatin		
Skin and bones	From Kosher animals	From Halal animals
Dry bones	Maybe	Halal bones only
Fish	Kosher fish only	Any fish
Pork	Allowed by liberal orthodox rabbis	Not allowed
Enzymes		
Microbial	Accepted	Accepted
Biotech-derived	Accepted	Accepted
Animal	Kosher slaughtered	Halal slaughtered
Porcine	May be accepted	Not accepted
Addition of Cheese Culture	Must be added by a Jew	No restriction
Alcohol	Permitted (depending on source)	Not permitted
Fish	With scales only	Most accept all fish, some only with scales
Seafood	Not permitted	Varying degree of acceptance
Combining Meat & Dairy	Not permitted	Not an issue
Sanitation of Equipment	Cleaning Idle period required Kosherization/ritual cleaning	Thorough cleaning No idle period required
Special Occasion	Additional restrictions during Passover	Same rules year-round

(Mian Riaz, Prepared Foods, 168(10)81–85)



GM products with genes from Haram animals would usually not be accepted by Muslims. For example, since pork is prohibited, by extension any product made with pig genes is considered Haram by many scholars and may not be accepted by Muslim consumers.

Since a scientist can explain a new development, and a religious scholar can interpret whether or not the development violates any of the tenets of Islam, the following points are good to keep in mind when dealing with GM food.

- Safety of GM foods is a key issue. Haram is usually associated with what is harmful and unhealthful. If it were determined beyond doubt that any of the foods or ingredients developed through genetic modification were harmful and unhealthful, they would not be approved by Islamic organizations.
- There is always a better replacement for something that is Haram. Science has given us better replacements for many ingredients, for example, microbial rennet used in cheese production.
- Good intentions do not make Haram into Halal. This would apply to pigs and other Haram animals. Even if scientists try to make pigs disease-free, they would still be Haram.
- Doubtful things (mashbooh) are avoided by Muslim consumers. If a Muslim consumer feels that GM foods are doubtful, then he or she must avoid them. Presently, doubtful GM foods are the ones modified with the use of the genes from prohibited animals or cloned animals.

Biotechnology

Biotechnology is an extension of plant and animal breeding, which have been practiced for centuries. Plants were bred with closely related plants and animals with closely related animals. One example of animal breeding dates back to prehistoric times when a donkey and a mare were crossbred to produce a mule. The

meat of a donkey is not accepted as Halal food, and, therefore, neither is the meat of a mule.

Since genes were identified, scientists have learned how to take a gene from one species and move it to a more distant species. Currently, genes from fish, insects, or pigs can be introduced into a plant

species without affecting the appearance or the taste while improving the plant's nutritional content and disease resistance. This technology was not available at the inception of Islam.

Muslim scholars are striving to come to an acceptable decision on some of the issues facing us today. At the inception of Islam, almost 14 centuries ago, Islamic dietary laws were the only regulations for the safety and wholesomeness of food products, because there were no government food safety regulations. Today, Muslim scholars are only concerned with the religious aspects of GM foods and leave the food safety to the government. It is interesting to note that two government agencies in Malaysia, Institut Kefahaman Islam Malaysia and Jabatan Kemajuan Islam Malaysia, concur that GM food is Halal as long as genes used are from Halal sources and production methods are Halal compliant.

Looking forward

As the fats and oils industry develops products, it will be important to consider how

decisions will affect the Halal and kosher status. Consumer demand for certified Halal and kosher certified products is on the rise, and will increase significantly as people realize they can ask for these food products.

Suggested Reading:

Halal Food Production, M.N. Riaz and M. M. Chaudry, editors, CRC Press, 2004.

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Key points in Halal food production

1. Animals fats should be from naturally Halal animals, such as cattle, goat, or sheep and slaughtered according to Islamic rites. Specifically, a mentally sound adult Muslim must perform the act.
2. Halal tallow should be stored, transported, and used while maintaining purity of Halal.
3. All vegetable oils must be free of any substance or ingredient taken or extracted from a Haram animal or ingredient. In other words, all the raw material and ingredients used must be from pure vegetable sources.
4. Halal products should be made, processed, produced, manufactured, and/or stored by using utensils, equipment, pumps, and pipes dedicated to the production of Halal products, or that have been cleansed according to Islamic law. This is especially important where both Halal and Haram oils are handled at a transfer station.
5. Halal chemicals should be free of contamination and must not come into contact with Haram substances during preparation, production, manufacture, processing, and/or storage.
6. Halal ingredients must not be mixed with objectionable ingredients.

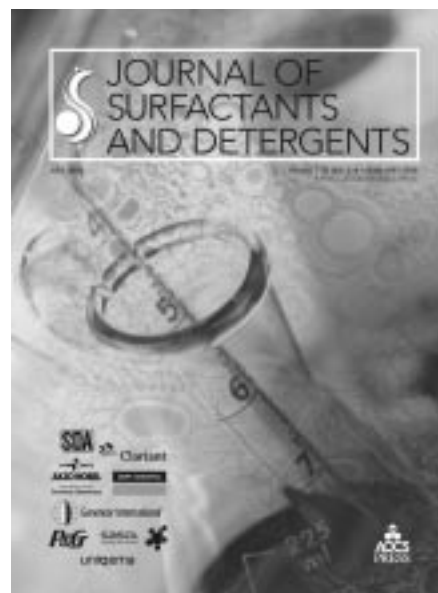
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