

ASPECTS OF QURBAN RITUAL IN PEKANBARU

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Abstrak

Penelitian ini dirancang untuk menghitung jumlah ternak yang digunakan pada penyembelihan hewan dalam Islam atau dikenal sebagai Ritual Qurban, jenis hewan yang disembelih dan jenis kelaminnya, jumlah daging yang diperoleh, termasuk tulang dan jeroan, pola distribusi, jumlah daging yang dialokasikan untuk panitia di tempat penyembelihan, teknologi yang diterapkan dalam penanganan daging, tindakan yang diambil untuk daging yang tidak dibagikan dan pelaksanaan standar operasional prosedur untuk menyembelih hewan. Penelitian ini dilakukan dengan memanfaatkan metode survei dengan sampel sebesar 390 masjid dan masjid kecil yang disebut musholla dan langgar. Hasil penelitian menunjukkan bahwa hewan ternak yang banyak disembelih yaitu sapi, kambing, dan kerbau dengan jenis kelamin laki-laki yang paling lazim. Proporsi daging dan lemak, tulang, dan jeroan yang diperoleh dari pengolahan ini mencapai masing-masing 63%, 24%, dan 13%. Hampir semua daging (99,70%) didistribusikan kepada masyarakat melalui sistem kupon meskipun ditemukan bahwa 21,80% dari kupon yang diberikan akhirnya tidak ditebus oleh penerima. Selain itu anggota panitia mendapat 8,48% daging. Sekitar dua pertiga (64,52%) dari responden menentang gagasan menyerahkan persentase tertentu daging kepada pihak ketiga untuk diproses lebih lanjut meskipun mereka sadar akan manfaat dengan pengolahan daging modern (74,02%). Temuan dari penelitian ini juga menunjukkan perbaikan yang diperlukan dari pelaksanaan Ritual Qurban di daerah-daerah kritis seperti pasokan ternak, manajemen komunikasi antar panitia untuk meminimalkan daging yang tidak dibagikan dan langkah-langkah yang diperlukan untuk meningkatkan upaya dalam mendistribusikan daging dalam bentuk olahan daging sapi.

Kata Kunci: Panitia, ritual Islam dalam penyembelihan hewan, dan daging

Abstract

The research is designed to calculate the number of cattles are used to slaughter in islam or it is well-known as Qurban, sorts of cattles, sex, the number of meat includes bones and bowels, the way of distribution, meat for board of Qurban in that place, technology used for taking care of meat, some steps are taken for indistributed meat also standard operational procedure of slaughtering the cattles. This research is done

by using survey method through the number of sample is 390 mosques. The result of research shows that the cattles are slaughtered such as cow, goat and buffalo, those are mostly virile. The proportion of meat, grease, bone and bowel are gotten from this processing is 63%, 24%, and 13%. Almost 99,70% of meat is distributed to people through such a coupon system, eventhough 21,80% of coupon which was given finally do not taken by receivers. Besides, board of Qurban get 8.48% of meat. Approximately 64.52% of respondents resist the idea of delivering certain meat to third party to be processed more. Even, 74.02% respondents aware that the function of modern processing the meat. The finding of this study also shows revision which is needed from ritual Qurban in several critical places like as cattle supplying, communication between boards of Qurban to minimize undistributed meat and such steps to increase efforts in distributing the bend of meat.

Keywords : board of Qurban, Ritual Qurban, meat

A. Introduction

The conduct of Qurban ritual of slaughtering livestock is a regular agenda which is closely observed by Moslems. The need for a ready supply of live cattle for sacrifice on this particular day of observance is comparable to a year's worth of supply.¹

Religions are rich with traditions around eating. For example Islam teaches that all animals are created by God², with some created specifically for man's benefits³ to domesticate and use for transportation and food⁴ God provided these animals for their edible parts as well as their useful by-products⁵. They are to be sacrificed for His own sake and the meat distributed to the poor⁶ who cannot on their own afford to buy and slaughter an animal for meat.

Efforts aimed at increasing the awareness of people to fulfill their pledge of animals for sacrifice have been accommodated by the availability of numerous initiatives to facilitate their pledge through what is known as animals for qurban savings drive organized by members of community or other schemes with same goals. Despite the prohibitive costs of livestock purchase people of middle income or lower income brackets have been proven not a deterrent factor to meet the requirements for this particular celebration regardless of their livelihood.

¹ Purnamasari, E., P. Suryani, E. Rahmadani, dan D.Fitra. 2013. A Model for Halal and Kosher based Principles of Agricultural Business System focusing on Animal Slaughter Methods in the mosques located in the Municipal city of Pekanbaru, Riau province. A report in Community Development Efforts. Department of Religion Office of Tertiary Education Level of the Republic of Indonesia.

² *Quran and Translations*, Bandung: Syamil Cipta Media, 24:45

³ *Ibid*, 36:71

⁴ *Ibid*, 23:21; 40:79

⁵ *Ibid*, 16:5, 80

⁶ *Ibid*, 22:34,36

Pekanbaru, which is one of the metropolitan cities in the island of Sumatra, has so far had about 1024 mosque.⁷ The number of Moslems who offer pledge of animal sacrifice is up 10% from the previous year (Purnamasari et al., 2013). Pekanbaru as a municipal city in the province of Riau is potential for agribusiness sector particularly in the ranching industry and the commodities of meat based processed foods. About 30% of the total demands for live cattle in Riau province are allocated for the city of Pekanbaru in order to meet the needs of the city's organizing committees for Qurban ritual from various mosques.

Currently, Moslems from various congregations of the numerous mosques still place significant emphasis on how many livestock are slaughtered in their site compared to livestock slaughtered at other mosques or sites. This attitude is commonly prevalent in spite of the fact that there are a lot of Moslems who have not received or been given their share of meat from the slaughter.

In the meantime, as people's life pace is becoming increasingly hectic, more and more people are turning to a more practical solution by handing over the arrangements of their pledge of animal sacrifice to a party that they deem capable and is willing to work out the arrangements of accomplishing the tasks for them. This is also frequently triggered by people's lack of skills in handling live animals for Qurban ritual, the procedures of animal slaughter, and the processing of the meat products gained. In addition it has been known that not every member of the organizing committees in charge of the Qurban ritual is appropriately equipped with the necessary knowledge and practical skills required in slaughtering animals properly and meat processing technology. This can be seen in the often poor choice of livestock for sacrifice as a result of lack of knowledge in making selections that are free from contagious diseases, inappropriate customary practices in handling live animals that often result in livestock suffering from rain, heat, stress deriving from unwelcome intrusion of people, and overfeeding prior to slaughter. A number of other aspects in the process of slaughtering itself seriously compromise the conduct of the ritual: people hovering around the site, carcasses suspended upside down, negligent placement of carcasses exposing them to a host of contaminants deriving from soil, blood, and their own fecal matters. Upon close observation at the sites, it was discovered that the meat was exposed to open air, extended time delay of meat distribution from the sites to end receivers, early signs of spoilage characterized by abnormal odors, discoloration and dryness of the meat cuts, packaging of meat and non meat items combined in

⁷ Regional Office of Religion Ministry of the Republic of Indonesia, 2013.

single containers (edible offal and bones). Producers must follow narrow definitions when grading carcasses and cuts for quality, but consumers' perception of meat quality is wide and subjective. It reflects regional and national differences, ethnicity and culture, political and economic considerations, individual beliefs and ideologies, and package labeling information and context (Fayemi and Muchenje, 2012; Grunert, 1997; Korzen and Lassen, 2010; Krystallis, Chryssochoidis, and Scholderer, 2007; Ndu, Muchenje, and Chimonyo, 2011⁸; Polkinghome, Nishimura, Neath, and Watson, 2011⁹; Thompson et al 2008¹⁰; Zepeda, Sirieix, Pizarro, Corderre and Rodie, 2013¹¹). Meat quality is also judged in terms of intrinsic or extrinsic, table or eating, visual or appearance, manufacturing or technological, nutritional or health, safety or reliance, expected or experienced, functional or chemical, physical or sensory and credence factors (Farouk, Beggan, Hafejee, Freke, and Bekhit, 2007; Grunert, 1997; Joo and Kim, 2011; Troy and Kerry, 2010).¹² These conditions adversely affect the overall quality of meat which results in the compromised quality of the nutritious elements in the meat itself possibly giving rise to potential diseases which eventually renders the meat non halal, unsanitary and unhygienic and may compromise the spiritual benefits to be gained from such practice. Meat quality is generally described in terms of its aesthetic, tactile, masticatory, functional, nutritional, health, convenience and environmental impact attributes. These can be affected by halal and kosher customs associated with pre slaughter, slaughter, and post-slaughter¹³.

Eventually the cut meats that have been processed and ready for distribution to end receivers are found to have suffered from quality decline to a certain extent. This

⁸ Ndu, S. P., Muchenje, V., & Chimonyo, M. Animal welfare in multipurpose cattle production systems and its implications on beef quality. *African Journal of Biotechnology*, 10(7), 2011. P.1049–1064.

⁹ Polkinghome, R. J., Nishimura, T., Neath, K. E., & Watson, R. Japanese consumer categorization of beef into quality grades, based on meat standards Australia methodology. *Animal Science Journal*, 82(2), 2011, P.325–333.

¹⁰ Thompson, J. M., Polkinghome, R., Hwang, I. H., Gee, A. M., Cho, S. H., Park, B. Y., & Lee, J. M. Beef quality grades as determined by Korean and Australian consumers. *Australian Journal of Experimental Agriculture*, 48(11), 2008, P.1380–1386.

¹¹ Zepeda, L., Sirieix, L., Pizarro, A., Corderre, F., & Rodie, F. A conceptual framework for analysing consumers' food label preferences: An exploratory study of sustainability labels in France, Quebec, Spain and the US. *International Journal of Consumer Studies*, 37, 2013, P. 605–616.

¹² Troy, D. J., & Kerry, J. P. Consumer perception and the role of science in the meat, 2010.

¹³ Farouk, M.M. Advances in the industrial production of halal and kosher red meat. *Meat Sci*. 95:805-820, 2013.

issue stems from the fact that the most common practice adopted in the distribution still relies on delivery carried out immediately after it is cut and divided. Meat is a source of fibrous food rich in nutrients yet easily perishable. Therefore, a new, faster processing method is required to expedite delivery to the people entitled to have the meat still in optimal condition. Saleh dkk (2012) states that there are a number of commonly known methods of physical treatment of meat (heating, cooling, drying, freezing, and irradiation) as well as chemical processing methods (food coloring agent, preservation, condensation, softening agent, flavoring agent or pickling), and microbiological processing (fermentation). A number of processed foods apply one or more methods simultaneously for example meatballs, nuggets, canned meat or corned beef, sausages, preserved curried meat and dehydrated beef floss.

House of Zakat Foundation has implemented a distribution method of meat derived from Qurban ritual of slaughter cattle through various treatments of processed meat such as corned beef. However, the deterrent factor in meat canning process is that it requires complex processes and the costs required to employ such technology is prohibitive. Organizing committees must have a considerable amount of fund available if such method is to be undertaken. On the other hand, there are a number of positive benefits gained from this method. One of the benefits is that the public will no longer receive spoilt meat. Already common practice of selling the meat for financial gain will be reduced. Finally, meat canning also allows for far reaching distribution that it would otherwise have.

The issue of uneven and ineffective distribution of meat may give rise to a number of divisive disputes among the Moslems themselves despite the fact that one purpose of conducting Qurban ritual is to strengthen the bonds among Moslems. There are some aspects to this issue that are deemed to be the causes for example inexistent information networking among the mosques organizing the slaughter of livestock, unavailable sufficient database providing data on the number of both people giving a pledge for Qurban ritual and the number of end receivers of meat. It is understood that this particular system calls for coordination among a host of relevant stakeholders such as government institutions, establishments organizing the act of animal slaughter, participation of the public itself and the involvement of private institutions that are willing and capable of providing the proper conduct of Qurban ritual of slaughtering livestock.

Through utilization of technology of meat processing, meat products can have a far reaching distribution to remote and rural areas as well as those affected by natural disasters compared with current practice of immediate delivery of fresh meat cuts. Another benefit gained from implementation of technology is drastically minimized meat waste. As a result, a preplanned, more focused program of distribution can be prepared well in advance.

In spite of the obvious benefits, professional crews necessary in handling the slaughter procedures and meat processing are an indispensable element. Some countries have imposed requirements that animal slaughter must be performed within the premise of licensed abattoirs. On the other hand, the limited number of trained individuals and well equipped facilities have thus restricted the implementation of this policy. The costs involved in the operation of meat processing equipment are another deterrent factor. Continual and sustainable training and consultation are essential in order to assure that meat products fulfill the principles of hygiene and sanitary (thoyyib) despite being halal or kosher meat.

The implementation of standards of halal or kosher food is set forth by Indonesian Ulema Association and monitored by Indonesian Food and Drug Administration. The time has come for a system which regulates mandatory inspection and approval upon set criteria including approved slaughtering venues and proven compliance to standardized animal handling and meat processing. Hence, Moslems critically need information system database readily available in a networking system that serves as a connecting hub among numerous organizing committees of Qurban ritual of animal slaughter that provides wide ranging information on the latest current market status of farm animals (price, age, types and sexes of animals). Furthermore, readily available information will significantly reduce speculative prices often pushed by speculators of farm animal vendors. The market database showing the availability of livestock will provide recommendations on the needed quantity for diversification of processed meat products ensuring the availability of food items that are both kosher and hygienic as well as sanitary (halal and thoyyib). As a result an optimal model conduct covering the aspects of Qurban ritual of animal slaughter which is particularly effective for the city of Pekanbaru will be derived.

There are several aspects pertaining to this issue that needs further reviewing including current data showing the production of livestock devoted for Qurban ritual (the number of animals required to meet the needs of the mosques throughout the

city of Pekanbaru, types of livestock requested, prices of livestock, sex of livestock supplied for the ritual) which is necessary to identify the rising and falling trends of Moslems' participation in the ritual, data covering the trends of meat distribution to assess the characteristics of distribution patterns and the necessary processed meat products typically suited for the need of any particular area.

This study is designed for the following purposes: assessing technical variables showing the percentage of livestock figures, the percentage of types of livestock, the percentage of sex of animals, percentage of final quantity of meat cuts, bones and edible offal, percentage of distribution patterns, percentage of meat allotted for members of organizing committees, percentage of use of technological implementation on meat processing, percentage of undistributed meat, and percentage of standard operational procedures enforcement in the ritual.

Finally, a specific formula aiming at deriving an estimate model on the conduct of Qurban ritual will be achieved through data collection in order to arrive at viable recommendation for the general public.

This research will propose a recommendation which competent and authorized institutions and/or foundations can take advantage of professionally and from which the general public particularly Moslems can benefit. Consequently, the improved communication will be established among various elements such as the general public and the government as the policy maker for meat supply that is safe, healthy, wholesome, and halal or kosher otherwise known as ASUH as well as other relevant institutions (meat processing plants, production management, and meat distribution establishments) and other relevant institutions pertaining to halal or kosher and hygienic meat supply.

The model conduct for Qurban ritual in Islam on animal slaughter implies the significance of strength, weakness, opportunity and challenges facing Moslems in relations to this annual ritual in Islamic calendar. It is with this particular thinking in mind that the research is also geared toward proposing strategic measures in the execution of the ritual that is professional resulting in halal or kosher and hygienic meat suited to the circumstances in the city of Pekanbaru. It is expected that the end result will improve the quality of the faith of believers to Allah SWT.

B. Research Methodology

The research was conducted in the months of June and July on all mosques and smaller scale mosques (mushollas and langgars) performing the act of slaughtering animals in 12 subdistricts throughout the city of Pekanbaru.

1. Research Materials

The instrument utilized in the survey is questionnaire methodology. The questionnaire consists of inquiries presenting respondents with types of questions that force them to make a choice although the alternatives are not always ideal. This is a multiple choice type of questions which allows respondents to choose answers according to available choices, and open-ended type of question where the respondents can answer the questions in their own words or give answers depending on their reality. Survey sheets are also devised in compliance with the Regulations of Minister of Agriculture of the Republic of Indonesia Number 144 or Pemetaan/PD.410/9/2014 concerning Standard Practices in Animal Slaughtering for Qurban Ritual in Islam and Fatwa or religious edict of Indonesian Ulema Association No. 12 the year 2009 on Halal Certification Guides on Islamic Standards of Animal Slaughter.

2. Research Methodology

a. Research Design

The design of this research is geared toward non experimental research using survey method. Information collection technique was carried out by compiling list of questions to be answered by respondents in order to establish characteristic or cause and effect correlation among variables without any intervention of researchers. The survey collected samples from 30% of the mosque population (from the available samples of 588 mosques, 337 smaller scale mosques called mushollas, and 99 langgars for a total of 1024 place of worship for Moslems in Pekanbaru). The questionnaire was the primary means of data collection. In the end representative responses of the respondents mostly from caretakers of the mosques were compiled and processed further.

b. Research Procedure

The research was carried out through one-on-one interview to caretakers of the mosques or members of organizing committees directly involved in the

act of animal slaughter. The interviewers then further collected primary and secondary data. Primary data are the data directly collected from the premises of the ritual through on-site collections scattered in the city of Pekanbaru and entered immediately in the prepared questionnaire. Meanwhile, secondary data are the data pertaining to the general aspects to slaughtering sites and other data connected to the research. Secondary data were acquired from Regional Office of Agriculture of the Municipal City of Pekanbaru and other relevant institutions (offices of heads of subdistricts and districts in the city of Pekanbaru).

c. Measured Variables

The variables observed in this survey are the percentage of the number of livestock, the percentage of the types of livestock, the percentage of sex of the livestock, percentage of quantity of meat, bones and edible offal, percentage of distribution patterns, percentage of meat allocated for the organizing committees, percentage of implementation of meat processing technology, percentage of undistributed meat, and percentage of implementation of standard operational procedures in animal slaughter.

d. Data Collection Technique

Data collection was carried out through conducting face-to-face interview while focusing on the concept of flexibility, appropriate response rate allowing for non-verbal behavior observation, control over surrounding during periods of giving responses, following sequences of questions with spontaneous responses, no possibility of cheating responses, necessity of independent response, complete questions and answers and having control over time given to respond. The results of interviews were then tabulated before they were further recapitulated based on the origin of regions giving responses from levels of sub-district, district, and municipal city levels.

e. Data Analysis

All of the responses collected from the respondents who responded with “yes” or “no” responses were recapitulated before they were converted into percentage terms against the total responses. The data were then presented in the forms of tables. Reviews were then done through descriptive analysis.

C. Results and Discussion

1. The Quantity of Animals for Slaughter in the Municipal City of Pekanbaru

There has been an increase in the quantity of livestock delivered for the ritual of Qurban. Table 1 shows the data of slaughtered livestock recorded in Pekanbaru city.

Table 1.

The Quantity of Livestock and Total Estimate for Demand of Livestock for Qurban ritual in Pekanbaru

Year	Quantity of Total Livestock	Estimate of Livestock for Qurban ritual
2011	3.390	11.300
2012	3.665	12.216
2013	3.723	12.410
2014	9.101*	

Remarks : * Data taken from 390 mosques (30% of the mosque population)

** Data taken from Religion Ministry of Pekanbaru

The given estimate on the quantity of livestock which were slaughtered in 2011 was 11,300. The figure was predicted to rise by 10% in 2012 and again in 2013. As many as 9,101 animals were slaughtered in conjunction with the ritual in 2014 according to the data issued by the Ministry of Religion of Pekanbaru city. If compared to the trends in the survey it appears that there was a decline in the number of animals slaughtered for the ritual from 2013 to 2014. However, this may result from the fact that data from the more recent mosques had not been monitored as well as they were supposed to be by the Religion Ministry of Pekanbaru city. The municipal city has about 1000 mosques in its jurisdiction. In 2010 there were 80 mosques in the district of Tampan. In 2014 that figure rose to 200. Another reason for the discrepancy in the figure of slaughtered livestock acquired from the survey and the figure issued by Office of Religion Ministry in Pekanbaru is that the data collected by the Religion Ministry were sourced from employees of Office of Islamic Matrimony Registry who frequently serve double functions as slaughtermen for the slaughter cattle. In marked contrast not all mosques take advantage of the services given by officers from this office. The discrepancy notwithstanding, the figures of animals for slaughter required

in the conduct of the ritual are always reported by Regional Office of Agriculture and Animal Health as continually increasing.

The rise in the quantity of animals for animal slaughter in the ritual goes hand in hand with the rise in economic growth of Pekanbaru city. Currently the growth is robust at 9% compared with the national average of about 6%. Moreover, there are a number of initiatives aiming to help people in their pledge of offering animals for sacrifice in the ritual. This usually comes in the forms of savings program, customary practice of collective savings schemes among the locals as well as the increasing visibility of institutions offering services specifically focusing in helping people fulfilling their pledge of animals for sacrifice in the ritual often organized by establishments affiliated with certain Islamic organizations known as zakat, infaq and shadaqah institutions. There has also been a significant increase in the people's awareness to offer pledge of animals for the ritual coinciding with the rise in the number of population in Pekanbaru. In addition there are other non-religion affiliated institutions which also provide similar role helping people to fulfill their pledge of offering animals for sacrifice such as educational institutions, private companies, and non-governmental organizations.

2. Types of Animals for Qurban ritual in Pekanbaru City

The most common animals frequently provided for the ritual in Pekanbaru city are ruminants with cows, buffalos and goats being the frequently u hews the proportions of types of animals slaughtered from 2011 to 2014.

Table 2.
Types of Livestock for Qurban ritual in Pekanbaru

Year	Cows	Buffalo	Goat
2011*	80	9	11
2012*	80	8	12
2013*	79	8	14
2014**	79	8	14

Remarks : * Data taken from 390 mosques (30% of the mosque population)

** Data taken from Religion Ministry of Pekanbaru

It can be seen that there is a slight alteration in the types of livestock slaughtered in the ritual. In 2012 the percentage of cows was the highest of all. On the other hand the figure for buffalos saw a slight decline compared with the figure in 2011. A slight rise was also shown by the figure for goats from 11% to 12% in 2012. In 2013 and 2014 the figure for goats also saw an increase of 2%.

A slight decline occurred in the type of livestock for animal slaughter, cows, which decreased from 80% to 79% over a period of 2 years (2013 and 2014). This was the result of production of live cows supply that was less than the demand figures whereas the available live cows were not particularly qualified. Based on the survey conducted by Purnamasari (2015) it was found that 10.53% of live ruminants did not satisfactorily meet the standard requirements required for animals in the fulfillment of Qurban ritual.

The decrease in the percentage of buffalos had been ongoing for the previous 3 years (2012 to 2014). The probable cause stated for this occurrence was the result of a decline in the population of this particular livestock while efforts aimed at pushing its production level did not materialize.

In the meantime, the trend for goats given as slaughtered animals saw a rise within the last 2 years. A cow pledged as an animal offered in Qurban ritual may represent up to 7 pledgers. A goat can also be given as an animal for sacrifice in Qurban ritual and in fact has become sort of a last resort in the event that the number of pledger is more than 7, the highest number of people allowed to be assigned to purchase a cow. Should this occur, a goat then will be assigned to the eighth person.

3. The Sex of Animals for Qurban Ritual in Pekanbaru City

Table 3 illustrates the percentage of animals based on the gender. Female Cows were also given for the ritual to a certain extent, in which the ones slaughtered were non-productive females. In 2012 and 2013 the percentage of female animals was very low in comparison to that of the males.

Table 3.
Sex of livestock for slaughter in Pekanbaru city

Year	Sex	Type of Livestock (%)		
		Cows	Buffalo	Goat
2011	Male	98	99	100
	Female	2	1	0
2012	Male	98	99	98
	Female	2	1	2
2013	Male	98	97	97
	Female	2	3	3

Some of the requirements for animals which must be met prior to slaughter are the animals must be male that have not been neutered, the scrotum of which must still be complete and symmetrical. Based on the table 3 above in 2011 the percentages of male cows, male buffalos and male goats were still much higher than those of female animals. The majority of slaughtered animals were still male with 98% male cows, 2% cows, 99% male buffalos, female buffalo 1%, 100% male goats while no female goat was slaughtered. Over the next two years in 2012 and 2013, slaughtering of male animals was also much higher than that of female animals.

As a matter of fact, slaughtering of female animals is prohibited as such measure will pose a threat to production rate of respective animal. Slaughtering of female animals is allowed only if they have period of productivity has been exhausted and they have entered their expired period. This period is characterized by inability to produce offspring, being sterile or being old.

4. The Quantity of Meat, Bones and Edible Offal

Carcass profile can be examined from the amount of meat, bones and edible offal yielded in the procedure of animal slaughter. The meat products were distributed to the public in packets consisting of meat, bones and edible offal. Table 4 shows the yield in percentage terms of meat, bones, and edible offal.

Table 4.
Percentage of Meat and Fat, Bones, and Edible Offal in Pekanbaru City

Year	Meat and Fat	Bones	Edible Offal
2011	63	24	13
2012	63	24	13
2013	63	24	13

Based on the percentage profile of carcasses from 2011 to 2013, it can be seen that meat was the primary product which had the highest percentage (63%). This is actually higher than the figure proposed by Forrest et al(1992) who argued that the percentage of meat produced in such event was 45-55% of the weight of live animals. This was caused by the fact that the muscle meat of the animals was not separated from its fat. As a result the public were given packages containing meat laden with fats.

The high percentage of meat was also the result of utilization of animals that were tapped locally. Local animals are known to have small built but high proportion of meat composition. In addition the meat of local animals also has good water holding capacity, low cooking loss of meat muscle, and denser meat texture and low level of intramuscular fat.

Organizers of animal slaughter ritual do not normally separate the fats from the meat cuts themselves. However, they do separate the meat, bones, and edible offal. Every cut is given to entitled individuals including the edible offal. Direct observation at the slaughtering sites discovered that parts of animals were simply mixed together and directly handed over to receivers. Indonesian people still consider edible offal as part of animals that is worth to be consumed.

5. Distribution Patterns of Slaughtered Meat in Pekanbaru City

Distribution is an important issue particularly around the time of Idhul Adha day, the day of Qurban ritual. One primary goal of animal slaughter ritual is achieving its distribution that is even and effective in order to avoid disputes among Moslems themselves.

Based on findings in the survey the proportion of distribution pattern utilization of voucher system featured predominantly (99.7%) rather than non-coupon system (0.3%). The coupon system was opted to help organizers monitor the distribution of the meat. At slaughtering sites where this system was not used, members of organizing committees personally delivered the meat packages to the households entitled to receive the meat products.

The coupons were distributed by the organizing committees prior to the day of the celebration. The residents registered as legal members of the community as recorded by the heads of neighborhood councils or heads of country were given coupons. Coupon system also serves another purpose, which is to prevent people from receiving more than what they are rightfully entitled and prevent excessive queue during handover. Currently, there has been coordination among the mosques belonging to same neighborhood councils to a certain extent. However, this program has not yet achieved a comprehensive coverage.

6. Meat Allocated for Consumption of Members of Organizing Committees

In addition to distribution to the public, the organizing committees also apportioned the meat products to be distributed among members of organizing committees themselves. This is because the whole activities took a long time from start to finish. Members of the organizing committees certainly need energy to accomplish the task at hand. A certain portion of the meat was given to them to be cooked on site for their consumption.

When respondents were asked whether the meat allocated for the organizing committees should be less than 30% of the yield or more than 30%, the majority of the respondents (91.52%) chose the former. Only a small percentage of them (8.48%) indicated the latter. The most common slaughter site for Qurban ritual in Indonesia is mosques. However, there are several types of mosques in Islam each possessing certain characteristics that dictate its eligibility for the conduct of the ritual. A mosque is not authorized to perform Qurban ritual unless it can accommodate at least 40 people during Friday worship. Therefore, the mosques whose organizing committees consumed more than 30% of the yield were those known as “mushollas”.

7. Undistributed meat packages

The majority of meat packages, 72.51% of them, were received by people through redemption of coupons. The remaining packages, 27.49%, were not redeemed. A number of factors have been suggested for this occurrence with people's busy daily activities being the most commonly assumed reason, lack of competence in performing the ritual and processing of fresh meat, and unavailable time to work on the meat.

The proportion of meat packages that failed to meet their end receivers was 21.80% according to findings in the survey. The most common course of action taken by the organizing committees was usually done by giving a second meat package to some people. From observation, it was found that a certain number of people actually received up to 7 packages of meat products. This situation led to far more meat than what they actually needed. It also often resulted in practices of selling meat, which has been a common norm. The financial pressure was frequently stated as an excuse. The money earned from sales of this meat was used to buy daily commodities such as rice, clothing, and other life's necessities.

8. Implementation of Meat Processing Technology In Qurban Ritual

Based on the result of the survey most of the meat yielded in Qurban ritual was handed over to receivers fresh (97.32%) while only 0.68% of the meat obtained was taken to meat processing plants in order to produce ready to eat food items notably corned beef or other canned meat products.

As has been previously mentioned, there have been third parties offering services for conducting Qurban rituals for the general public. One of them is House of Zakat Foundation. One of its annual programs is Super Gizi Qurban agenda whereby meat is processed in a processing plant in a form of sausage. The meat, usually that of cows, is packaged in a can of 325 gram and net weight of 180 gram. The procedures for meat processing in the Super Gizi Qurban cover the following aspects: 1) cows slaughtered, b). meat items sorted, c). meat processed into sausages, d). sausages canned. There are certain benefits that can be reaped from this initiative some of which are as follows: 1). It is performed according to Syari'i principles; cows are slaughtered in good health during the celebrated day of Idul Adha until 3 days post celebration known as tasyrik. 2). Convenient, safe, and easy for consumption, containers allowing for easy distribution and serving. The sausages are still good for consumption for 2

years without any use of preservatives. It is also manufactured by a company that has had a long standing reputation in packaging export food products adhering to standards set forth by Indonesian Ulema Association and Indonesian Food and Drug Administration. 3). More beneficial. Meat derived from Qurban ritual does not go to waste and its distribution can reach all regions throughout Indonesia. 4. Effective solution for nutrition improvement and quick food aid during emergency dispatch for children in orphanage, under privileged people, victims of disaster, and other circumstances. 5). A suitable tool for companies in accomplishing their Corporate Social Responsibility. By taking advantage of Super Gizi Qurban, companies can utilize this as a way of helping improve nutrition of the people in the nearby neighborhood. 6). It is hoped that this initiative will be a source of blessing for thousands of orphaned children who benefits from this.

So far modern meat processing technology has not had a major role in the stages of conduct of Qurban ritual. There have been no apparent efforts in fostering the implementation of appropriate technology for meat preservation either. There are technological measures which can be applied to add more benefits. This can actually improve the physical, chemical, and microbial circumstances of the meat. The majority of the respondents, 74.02% of them, indicated their familiarity with some products taking advantage of technologies in meat processing. About 25.98% of them stated their unfamiliarity with these products.

An established network of communication is required between numerous organizers of Qurban ritual among many mosques in Pekanbaru city. This network can provide information about everything pertaining to the running of Qurban rituals from the amount of meat and meat products produced at all slaughtering sites throughout the city, the number of people who receive meat packages, and the quantity of meat packages which are not delivered. Overall, it can be seen that the whole aspects of operation of Qurban ritual are in need of better coordination so that undelivered meat packages can be distributed to other areas that will benefit more from redundant meat.

However, about two thirds of the respondents (64.52%) did not approve of the idea of meat made into variety of processed foods. They preferred to have fresh meat instead. Only about a third or 35.48% indicated their agreement for the meat to be processed further.

Processed meat will actually simplify people's way of eating. The way people consume meat is increasingly changing nowadays. Eating habits that has been shifting from ready to cook to ready to eat is another factor as to why the practice of Qurban ritual should be improved. The geographical nature of Indonesia is also a reason for this choice. Indonesia is an archipelago country that is not particularly easy when it comes to logistics measures. It is also located in region prone to natural disasters which could call for quick food supply that canned meat can swiftly and conveniently provide. It is therefore an opportune time for implementation of meat processing technology.

Less than a third of the respondents or 28.78% agreed for 30% of the meat to be further processed by a third party while the majority of them disagreed. A thirty percent handover to a third party who will further process the meat into ready to eat food (corned meat, sausages, meatballs) is all part of spirit of sharing in Qurban ritual. There are efforts that need to be done in order to increase people's awareness of this spirit. Fulfilling the requirements on the Qurban day should not be limited to simply fulfilling the obligation to Allah SWT but also to help save people from moral degradation. Degradation in aqidah through continued distribution of processed meat from Qurban ritual accompanied by spiritual empowerment. To realize that goal, taking advantage of meat processing and meat preservation technologies is effective choice rendering meat beneficial to the highest degree.

9. Implementation of Standard Operational Procedures in Slaughtering Animals for Qurban Ritual

Based on the survey of implementation of standard operational procedures set forth by Agricultural Ministry of the Republic of Indonesia number 144/Pemetaan/PD.410/9/2014 and Indonesian Ulema Association pursuant to fatwa or religious edict of Indonesian Ulema Association number 12 the year 2012 is shown in Table 5.

Table 5.
Percentage of Implementation of Standard Operational Procedures Compliant in the Islamic Ritual of Animal Slaughter

Standard Operational Procedures	A	B
Implementation of requirements and handling of livestock for qurban ritual include meeting conditions set forth in the Islamic syari', meeting administrative requirements in the form of letter of animal health, fulfilling conditions for transportation of animals, resting place, slaughtering site, adequate management of place for handling meat, edible offal and waste.	89,47	10,53
Implementation of preparation measures for slaughtering livestock for Qurban ritual covering reception of animals, preparation of pre slaughter stage and slaughtermen	69,23	30,77
Implementation of slaughtering livestock for Qurban and handling of meat products from the slaughtering, post harvest, handling of meat products and packaging	85,71	14,29
Implementation of maintenance and monitoring measures including adherence to halal principles, monitoring sanitary and hygienic practices of veterinarians and municipal government implementation of sanitary measures for environment	50	50

Remarks: A : SOP Compliant (%), B : SOP Non Compliant (%)

It can be seen that there are certain aspects in the conduct of Islamic ritual of animal slaughter that are inadequate. Aspects of adherence to proper animal handling have been compliant to standard operational procedures at 89.74%. On the other hand, 10.53% of the whole procedures of this ritual have not yet been adherent to appropriate procedures of Qurban ritual. Many aspects of this operation are the result of lack of information on the available supply of animals adequate for Qurban ritual, full disclosure of their health, and current prices of animals themselves. What has been common practice among the Moslems in preparation for the purchase of animals for the ritual is a simple money savings paid in installments for animals whose specifications are not particularly clear. Moslems also do not particularly have strong bargaining position in this case compared with speculators. What's more, Moslems in general are confused

when they have to deal with issues of kosher and hygienic and/or sanitary meat if their animal die as a result of shooting or other factors beyond the control of organizing committees or in the event of incorrect cutting techniques applied to the animals that does not render a quick death. Another critical issue is aspects of contagious disease from animals to humans or vice versa which are not fully understood by the public in general. These circumstances certainly demand for complete, clear, and straightforward information easily accessed by all people.

About two thirds of implementation of principles in slaughtering animals according to standard operational procedures or 69.23% has been achieved. On the other hand, only about a third of the standard procedures in reception of animals, preparation of slaughtering, and slaughtermen still has not met the required standard operational procedures. This is largely due to limited facilities available, low number of trained personnel and lack of understanding of the public in general.

Implementation of Islamic ritual of animal slaughter and handling of meat products from the slaughter itself, post harvest, meat handling and packaging, 85.71% of them have met the required standards and the rest, 14.29% have not. During meat handling stages, the meat was found to be adversely exposed to open air, delayed distribution period that resulted in unnecessarily extended delay in meat delivery to end receivers, some even until late in the afternoon. Eventually meat experienced spoilage marked by abnormal smell or odor, discoloration, dryness, meat mixed with non-meat items (edible offal, bones) in one packaging. The high likelihood of meat contamination in the ritual calls for extra caution so as not to result in diseases. Therefore, it is the utmost importance that meat fulfills adherence to principles of halal or kosher and hygienic or *thoyyib* meat. Organizers' understanding of the appropriate conduct of *Qurban* ritual is required as more and more Moslems are demanding high quality kosher and hygienic meat.

Fifty percent of implementation of maintenance and monitoring measures of standard operational procedures has been fulfilled. This is actually lower than other aspects in comparison. This often comes from the people inspecting the animals in the market sites. There are about 20 sales points for animal market in Pekanbaru city. Other factors include the availability of trained animal and meat product inspectors. Further cooperation is necessary among various

institutions namely Indonesian Ulema Association, Regional Office of Agriculture and Animal Health and people from academic circles towards realizing optimal implementation of standard operational procedures.

D. Conclusion

The conduct of Islamic ritual of animal slaughter in the mosques and mushollas throughout the city of Pekanbaru in efforts of providing kosher and hygienic meat supply can be assessed through the number of animal, the types of animal, the sex of animal, the amount of meat, bones, and edible offal gained from such event, distribution pattern of meat, allocation of meat for consumption for organizing committees, implementation of technology in meat processing, undistributed meat packages and implementation of standard operational procedures of animal slaughtering.

The conduct of Qurban ritual is certainly in need of improvement from the aspects of animal supply, smooth communication among the numerous organizing committees from large number of mosques so as to reduce the quantity of undistributed meat, and efforts in processing undistributed meat to further produce into processed foods [.]

REFERENCES

- Farouk, M.M. Advances in the industrial production of halal and kosher red meat. *Meat Sci.* 95:805-820. 2013.
- Farouk, M.M., H.M. Al-Mazedi, A.B. Sabow, A.E.D. Bekhit, K.D. Adeyeni, A.Q. Sazili, and A. Ghani. Halal and kosher slaughter methods and meat quality: A review. *Meat sci.* 98:505-519. 2014.
- Forrest, J.C., E.D. Aberle, H.B. Hendrick, M.D. Judge and R.A. Merkel. *Principles of Meat Science* First Ed. W.H. Freeman and Co., San Francisco. 1975.
- Government's Edict of the Republic of Indonesia Number 22 the year 1983 on Health Issues pertaining to members of Veterinarian Society. Jakarta. <https://ororwww.ditjennak.pertanian.go.id>. Information accessed on the March 27 2014.*
- Ndu, S. P., Muchenje, V., & Chimonyo, M. Animal welfare in multipurpose cattle production systems and its implications on beef quality. *African Journal of Biotechnology*, 10(7), 1049-1064. 2011.

- Polkinghome, R. J., Nishimura, T., Neath, K. E., & Watson, R. Japanese consumer categorization of beef into quality grades, based on meat standards Australia methodology. *Animal Science Journal*, 82(2), 325–333. 2011
- Purnamasari, E. *Book of Daras: The Science and Technology of Meat Processing*. CV. Aswaja Pressindo, Yogyakarta. 2014.
- Purnamasari, E. Evaluation of Administrations of Islamic Ritual of Animal Slaughter within the premises of mosques throughout the Municipal City of Pekanbaru in conjunction with Halal and Kosher Meat Supply. Department of Agriculture and Animal Husbandry. State Islamic University of Sultan Syarif Qasyim, Riau Province. 2014.
- Purnamasari, E., P. Suryani, E. Rahmadani, dan D. Fitra. A Model for Halal and Kosher based Principles of Agricultural Business System focusing on Animal Slaughter Methods in the mosques located in the Municipal city of Pekanbaru, Riau province. A report in Community Development Efforts. Department of Religion Office of Tertiary Education Level of the Republic of Indonesia. 2013.
- Thompson, J. M., Polkinghorne, R., Hwang, I. H., Gee, A.M., Cho, S. H., Park, B. Y., & Lee, J. M. Beef quality grades as determined by Korean and Australian consumers. *Australian Journal of Experimental Agriculture*, 48(11), 1380–1386. 2008.
- Troy, D. J., & Kerry, J. P. Consumer perception and the role of science in the meat, 2010.
- Zepeda, L., Sirieix, L., Pizarro, A., Corderre, F., & Rodie, F. A conceptual framework for analysing consumers' food label preferences: An exploratory study of sustainability labels in France, Quebec, Spain and the US. *International Journal of Consumer*, 2013.