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# Policy on Halal Slaughtering Availability for Halal Chicken Needs Makassar City Indonesia

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## Abstract

The need of broiler chickens in Makassar is showing the elevating tendency directly with population growth rate. The base problem is low number of halal broiler chickens caused by low number of halal slaughter man (JULEHA). The purpose of this research is to design the needs of JULEHA so it fulfill the need of halal broilers chickens and mapping the existence of chicken slaughterhouse in Makassar. This Research used observation method and deep interview method with analysis of simulation of system dynamics. Result showed the need of halal broiler chicken very high are 45.000 heads/day, while amount of JULEHA only 60 person from 20 halal slaughterhouse. The ability of one person of JULEHA for slaughter is 150 heads chicken/day it means 9000 heads/day, it only covers 20% of daily needs of halal broiler chicken. it means that product of 36.000 broiler chickens is doubt. In the future Makassar needs a number of JULEHA to be trained and certified. Conclusion of this research is availability of halal broiler chickens must be supported by government through trained and certified JULEHA. Government must encourage and support with the right policy for halal broiler chickens can meet the needs of consumers in Makassar.

**Keywords:** Slaughtering, Halal Chicken

## 1. Introduction

Halal management system SNI 99001 set up the requirement animal slaughtering organization in every step. It covers buying, accepting, pre-slaughtering, slaughtering, post-slaughtering, packaging, labeling, storing, transportation, facility, hygiene and sanitation in producing halal broiler chickens. This process also includes the other product chicken slaughteringhouse. Organization should set up building location, human resources, and slaughtering equipment separated from non halal slaughtering. Organization must guarantee standard procedure to handling of dead poultry and separating non halal carcass poultry from halal product chain. [1]

Broiler chickens have been consumed by many people for the need of halal product is high. Researcher observed in the market and found slaughtering not following Islamic syaria, unproprieate post-slaughter handling. Those facts are emerging the research about broiler chickens. Halal MUI certificate has been acknowledged in the Muslim world through the halal standard launching by Vice President Republic of Indonesia on January 16th, 2012. MUI Halal standard is becoming reference by other halal organization all over the world. [2]

People have a tendency to shopping at the supermarket in the term of more comfortable than traditional market. But, in fact the

product at the supermarket has some problem, for example broiler chicken without halal certification. [3]

### 1.1 Research Problems

Broiler chicken always has connection with daily people consuming, there for the quality broiler chickens are important. The quality of broiler chicken including health aspect, safety and halal aspect. From 2015-2017 we found only 20 slaughtering house have LPPOM MUI certified. Other slaughterhouse are illegal. It means, to improve quality broiler chicken in Makassar need human resources trained and certified halal.

### 1.2 Objectives

To design number of the supply of halal slaughter man in order cover the need of halal broiler chicken. and also for mapping slaughterhouse in Makassar.

## 2. Literature Review

Slaughterhouse is a building with special design and construction that meet technical requirement and hygiene requirement use for slaughtering chicken for public consumption. [4].

Chicken poultry is every kind of bird raised and used for food, including chicken, duck, turkey, goose, pigeon and quail. Poultry

carcasses are part of the body of poultry after slaughter, removal of feathers and discharge of innards, whether included or without head-neck, and / or legs starting from the tarsus, and / or the lungs and kidneys. While the term in animal slaughterer is a person who performs slaughter of poultry and has met the requirements of legislation. [5].

The term Juleha (Halal slaughterer) is part of the slaughterer who has been certified as a slaughterer based on Islamic Shari'a. Furthermore [6] explains that every slaughtering event must have Halal Provider ie Person responsible for slaughter in halal process. Halal Slaughter Processing Process in RPA shall understand and ensure the halal critical point in the poultry slaughter process for the purpose of ensuring halal, quality control and ensuring traceability. Slaughter is an activity to kill animals until perfect

mortality is achieved by slaughtering that refers to the rules of animal welfare and sharia of Islam. This standard specifies the requirements and procedures in purchasing management, pre-sale, labeling, storage, transportation, facilities, hygiene and sanitation in the process of producing halal poultry including byproducts in slaughterhouses. [7]. Meanwhile, [8] in the Sadar Halal states that the slaughter performed is an attempt to kill the animals by flow bleeding in halal flesh, which is done with Thayyib (good) and Tatmim (perfect). Done between Dzabh (neck end) and Nahr (base of the neck, usually on camels). The Halal Slaughter Process Flow at RPA should take care and ensure the halal critical point in the poultry slaughter process for the purpose of securing halal, quality control and ensuring traceability. Here is a flowchart of the chicken slaughter process

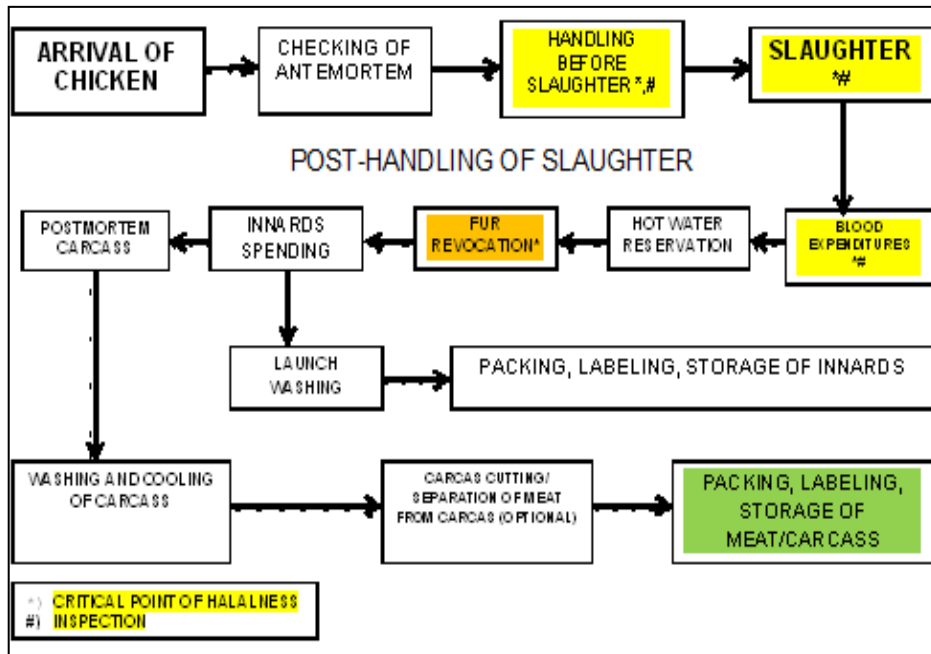


Fig 1: Flow Chart of Chicken Slaughtering Process

(Source: BSN, 2016)

Furthermore, the framework of further research towards the great demand of halal slaughterers in the future, it must be mapped and designed diagram flow starting from the current and future needs of juleha that directly to halal chicken production and quality of chicken pieces. It refers to center of halal chicken production. Confidence in RPA institutions should be supported by consumers

and government, Halal certification bodies such as BPJPH (Halal Product Assurance Guarantee Board), APKAHI (Association of Indonesian Halal Studies Center) scattered around 40 Halal Center Centers in leading universities in Indonesia.

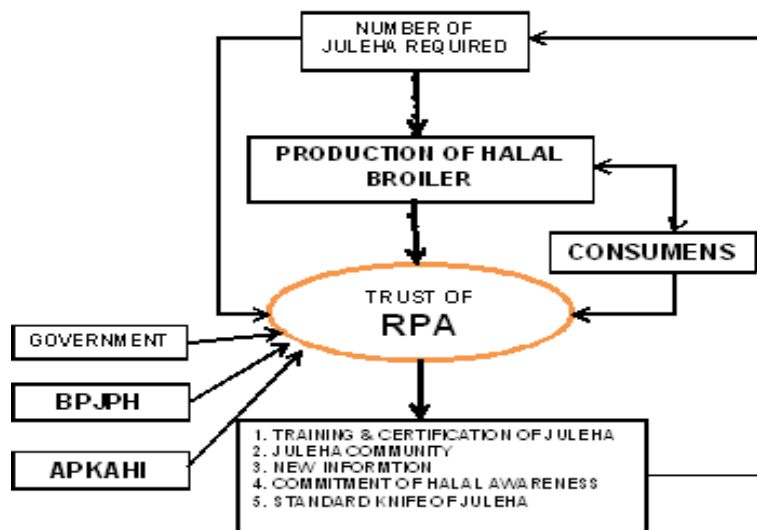


Fig2: Framework for thinking of JULEHA needs

(Source: Nusran, 2017)

Linkages to System Dynamics in managing the needs of Juleha, modeling is the process of mapping the problems that come from the real world into the model world, modeling can also be interpreted as simplification of the real world. [9] mentions that dynamic systems are very effectively used on systems that require a high level of data management. With the flexibility it will help in the process of model formulation, model boundary determination, model validation, policy analysis, and model implementation. [10]. System Dynamics model form that represents the structure of the feedback diagram is a causal diagram or commonly known as Causal Loop Diagram. [11].

To be able to apply the Dynamic System method has been conducted research on the model of halal certification policy using dynamic system simulation approach [12]. From a number of writings published in the article The Importance of Halal Conscious Movement [13] and a number of presentations at National and International seminars [14] and [15] on halal issues and policies as implemented at Halal Center - Universitas Muslim Indonesia Makassar year 2013 and implemented by LPPOM MUI respectively at First [16] and Second Halal [17], it turns out that the level of halal awareness is still very low. Therefore Halal Socialization Must Be Improved [18].

## 2.2 Helpful Hints

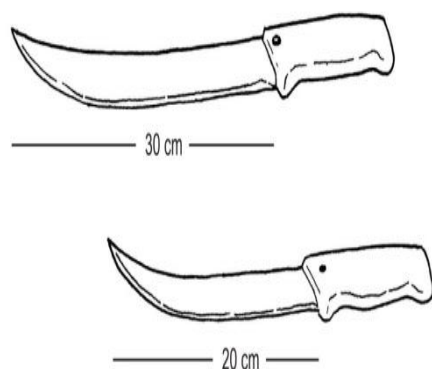
In this study used a number of methods of in-depth interviews and data retrieval methods in the process of Broiler chicken productions. Data taken in connection with the number of Halal Certified chicken products, the needs of chicken products in Makassar, Mapping of slaughtering centers, Implementation of education system and halal certification.

## 3. Result

Whereas from the survey data conducted in a number of RPA, it was found that around 20 RPAs that have Halal certificate from LPPOM MUI, other RPA are illegal. This means that to handle the needs of Broiler chickens pieces in Makassar it takes many Juleha (Halal slaughter man) who already have a certificate as a halal slaughter. As for Juleha who has been trained by LPPOM MUI as many as 60 peoples. Juleha's ability to chop around 150 chickens

per day, while the need for chicken pieces in Makassar is 45,000 heads per day. Meaning only about 9,000 tails per day is still very far from expectations, so the illegal slaughter man who are in the markets are around 240 peoples of juleha that will be needed to meet broiler chicken meat halal.

The need for clear information from the government and also the producers of halal chicken products is so feasible for the consumption. Factor validity of the way of cutting, because it will determine the quality and halal of chicken products cut. Besides, with this research we will get the mapping from the slaughtering center and certification of the slaughterers, so that the dominant Muslim community will feel the serenity in consuming chicken products. The slaughterhouse system should have a written procedure to ensure a certified halal chicken product trace. This system should be proven that chicken products are produced from halal broiler chickens, cut with the right halal method, at cutting facilities in accordance with the requirements of halal. Needs juleha in Makassar is very urgent, because it is closely related to the number of halal chickens products that produced. The more juleha the greater the production of halal chopped chicken. So this juleha factor becomes the determinant of the number of halal chicken products circulating in the city of Makassar. The needs and facilities for juleha are very important to program because they are significantly related to the quantity of halal chicken products. The programs and facility are like Juleha Training and Certification, Juleha Community, Latest Info for Juleha, Halal Conscious Commitment and the Standard of Knife for Juleha to be used in RPA. So related to the slaughtering tools such as knives, it is necessary to design a knife model that matches the needs juleha. For Equipment in Slaughtering Process, one of the elements that determine the halalness of the slaughter is with the slaughtering knife which is in accordance with the provisions of sharia namely the material does not contain elements of nails, teeth and bones, very sharp means able to cut easily and simultaneously all channels are mandatory without excessive force, which is produced to be so smooth that it does not hurt the animal much and does not induce blood clotting factor, size: long enough to ensure that all elements are cut off perfectly, the shape of the tip of the knife curved outward to avoid repetitive incisions at the time the reciprocal motion of the blade is done, and forbidden to sharpen the knife near the animals. Suggested blade size as shown below



**Fig.3:** Knife Size of Slaughter that Suggested

The design of the slaughter knife will be followed up with ergonomic design, including the shape and the length of the knife and allotment for both the chicken and the cow and the like. The

way to test the sharpness of the knife that is by slicing paper and cut without a straight downward obstacle like the following picture example

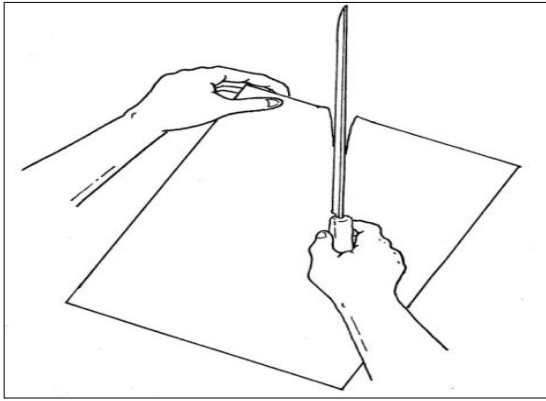


Fig. 4: How to test knife sharpness

#### 4. Discussions

[19] states that the Organization shall ensure that all stages of the slaughter process meet the Islamic Shari'a and are under the control of halal providers. If non-compliant slaughter is found, halal providers must separate as unlawful products. Similarly, in terms of feed, the Organization shall ensure that the feed given to poultry meets halal requirements in accordance with the laws and regulations.



Fig.5: Kind of Slaughter Household

(Source: supratikno, 2017)

After slaughter, the animals to be consumed will be skinned and cleaned. The tools used in this process, such as knives, buckets, basins, etc. should be holy, clean and lawful, not used for cleaning up the unclean meat. Water used for washing should also clean and holy water purify. This process should be done carefully, should not be mixed with ingredients or animal flesh that is unlawfully consumed. How to store and present, In storing halal food, should be stored well so as not to be exposed to unclean or mixed with unclean food. Similarly when presenting, the tools used to present, such as plates, bowls, spoons, forks, etc., must be clean from unclean and mixture of illicit materials. The attire of the person who presents also must be clean and free from unclean.. In Law No.33 of 2014 on JPH (Halal Product Guarantee) on Halal Production Process is mentioned in Article 21 that in Article 1. Location, place and tool of PPH (Halal Food

[20] states that the slaughtering process consists of 2 inseparable parts namely how to process and How to store and present, with the explanation as follows:

How to process, Animals that can be consumed by humans can not be directly eaten away, but must go through a process of slaughter, cleaning and cooking. When a species of animal that wants to be consumed is halal in substance, then the processes to make it can be eaten must also fulfill the principles of halal which is set by Islam. Except for fish and grasshoppers, all the animals that are kosher eaten must pass through the slaughtering process. This process can not be done carelessly but has several conditions that if reviewed in terms of health will bring enormous benefits for human health.

Some of these requirements include an animal must be slaughtered by Muslims, baligh, rational and know the procedure of slaughter in Islam. When to slaughter must be read Basmalah by the slaughterer. The animal to be slaughtered must still be alive, because if the animal to be slaughtered is dead it has become a carcass and its status becomes haram for consumption. When slaughtered, animals are faced with the Qiblah, slaughter is done in the neck (vein) until the animal's blood is radiated.

The tools used for slaughtering should be sharp, this includes regulation in treating animals, because if the blunt slaughter tool can torture the slaughtered animal before the animal dies.

Production) shall be separated by location, place of slaughtering and processing , storage, packaging, distribution, sale and presentation of halal products. Article 2 stipulates that the location and means of PPH as meant in paragraph (1) shall: (a) be hygienic and hygienic, (b). Free from unclean and (c). Free of unlawful material [21]. Slaughtering techniques on an industrial scale with two ways that is hung upside-down back to the slave interpreter and hung upside down facing the slaughterer. Principle of mercy and halal requirements Chicken has different neck bone structure with mammals, Chickens have different neck blood structure with mammals and slaughtering location is a critical point in terms of halal and welfare principles. Different cutting techniques will result in different cross sections. Injunctive cuts that can not meet each other and the distance between slaughtering with hot water that dipped

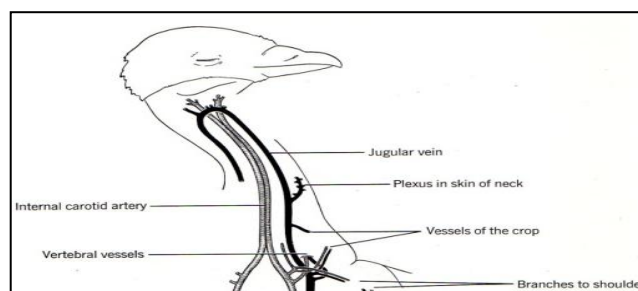


Fig6: Circulatory System in Poultry

(Source: Modification from Miller 1974 in Supratikno, 2017)



Several errors in slaughtering in traditional slaughter by one slave man wings are pulled back so that the excessive shoulder joints are excessively extended, the neck and head are too extensible to the rear, before the bleeding is over and the chickens die, the

chickens are already put into a shelter or even dipped directly into in hot water.



Fig. 7: Slaughter from the front (too up)

Table 1: List Halal Certified from RPA

No	Company Name	Types of Products
1	SURYA MITRA SEJATI	Chicken House (RPA)
2	CV. ALAM JAYA	Chicken House (RPA)
3	DEPOT RESKY	Chicken House (RPA)
4	CAHAYA MAWANG	Chicken House (RPA)
5	CV. AZRA REKADAYA	Chicken House (RPA)
6	US. MAIWA	Chicken House (RPA)
7	UNGGAS MITRA SESAMA	Chicken House (RPA)
8	CV. ABI	Chicken House (RPA)
9	RPA AL-AMIN	Chicken House (RPA)
10	RPA AS-SALAM	Chicken House (RPA)
11	UD. MAHARANI RESTU	Slaughterhouse (RPH)
12	PT. TRI TUNGGAL ABADI	Chicken House (RPA)
13	CV. SHIDQIYAH FAIQA	Slaughterhouse (RPH)
14	PAUL AYAM	Chicken House (RPA)
15	RPA. WAWAN AYAM	Chicken House (RPA)
16	PT. CIOMAS ADISATWA	Chicken House (RPA)
17	CV. ALAM JAYA	Chicken House (RPA)
18	UD.HARCO	Fresh and Frozen Chicken Meat

Source: LPPOM-MUI SOUTH SULAWESI (2017)

From the fact of slaughter in the field, the method of slaughter in the field is very far from the treatment of halal and ihsan on animal slaughter. There is a chicken that is cut, his slaughter doing while smoking. There are also chickens that have not died, directly inserted into hot water for the process of removal of feathers. So that the dead chickens not because slaughtered as the initial cause, but died of hot water. This all affects the quality of the meat. According [22] in [23] that the physiological status of animals greatly affect the quality of meat produced. Unpleasant handling before and during the slaughter process will cause stress and activate the sympathetic system. At the time of blood stress will be more flowing to the brain and skeletal muscles and sympathetic system will work. If the animal in this condition is slaughtered then the death process becomes very long, the animal thrashed so that the meat becomes bruised and blood is left in the meat. Further, [24] says that in animals with prolonged chronic stress, muscle glycogen reserves are so low that the process of formation of lactic acid is very low and the pH of the meat remains high: DFD meat is dark, firm and dry. Animals that are acute stress just

before slaughter will occur high glycogen breakdown which will lead to the formation of lactic acid and decrease pH too quickly in the first hour after slaughter: PSE meat means Pale, soft and exudative. A critical point in Chicken Slaughter. According to [25], there are a number of critical points in the RPA that had been observed carefully as follows: In slaughtering conditions, where the slaughtering is slaughter does not say "bismillah" when it will slaughter, causing the finished product haram, as well as on a less sharp slaughtering tool, Difficulty, the practice of slaughtered animals has not been dyed, Revoked feathers, the practice of chickens put into hot water before the chicken is dead, haram contamination, un clean and blood on hot water in the process of pulling the fur, there is contamination on chicken products, the practice of using chicken blood to make the meat look fresh, so the product looks fresh. This practice is not recommended at all. Data processing with Simulation Approach of System Dynamics, begins with creating variables that are linked to a number of other interconnected variables such as the following figure

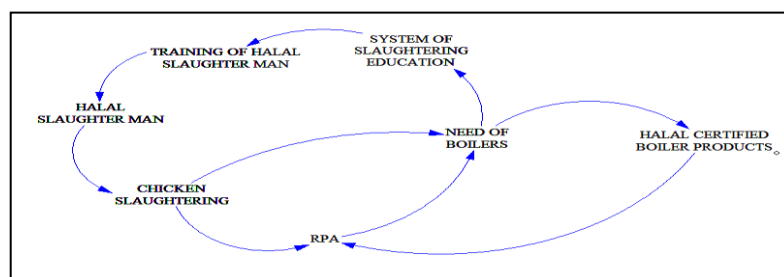


Fig8: Diagram of variable in RPA System

(source: Result of Research, Kemenristek dikti,2017)

Data processing with Dynamics System Simulation Approach, will be implemented in year -2 and year-3. But the description that can be given on the amount of data that has been obtained, shows

the flow of the diagram of connectedness between variables. By using ventura simulator (Vensim) 2nd version Professional obtained diagram with stock flow and can be run as follows

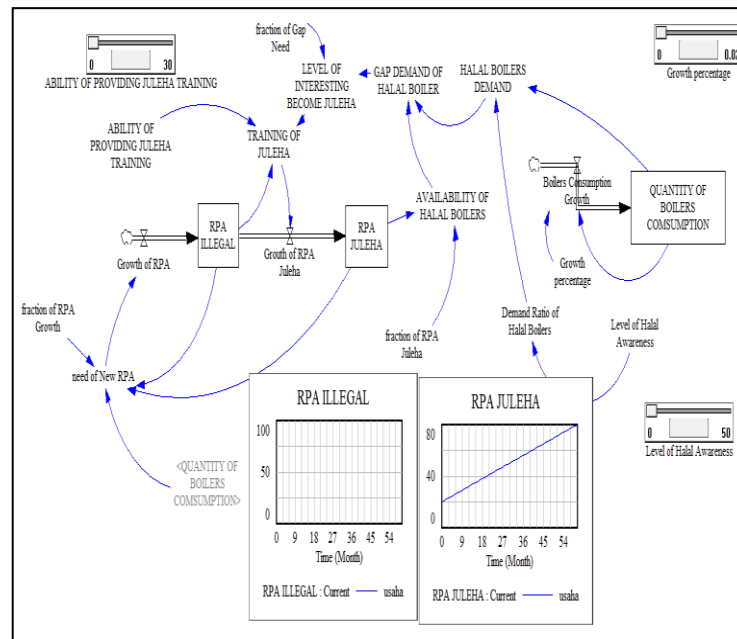


Fig 9: Policy Model of Broilers Product

(source: Result of Research, Kemenristek dikti, 2017)

Forms of Halal Slaughter Career (JULEHA). The form of education of Juleha is to invite a number of owners of RPA both who already have Halal Certificate of MUI and who is processing Halal certificate by giving 1-2 days training covering theory and practice as conducted by researchers at LPPOM MUI of South Sulawesi. After they are trained with theory and Practice is given the certificate that they have followed the training system of Islamic sharia slaughter. The targeted findings are the mapping of chicken slaughter centers, the policy model that will be proposed to the Government and stakeholders to get anticipated policies, forms of education and the system of slaughtering certification and the form of halal awareness that is expected to be evenly distributed in a number of RPA around Makassar. The fundamental contribution that will be given is the establishment of a uniform awareness of RPA and the centers of chicken slaughtering in Makassar as a policy model to be applied. Benefits that will be generated that will help the policy of halal certification of chicken products for the government and the authorities in Makassar, increasing consumer confidence in halal certified chicken products that will give birth to the creation of consumer loyalty will be chicken products circulating in Makassar and surrounding areas with the sense of security, image and consumer support in consuming the halal certified chicken products.

## 5. Conclusions

The policy model obtained based on the simulation of System Dynamics shows that from about 80% of chickens still slaughter by uncertified slaughterers, it has not been guaranteed halalness from the slaughtering process. So the level of public awareness (consumer) affects the consumption of halal chicken consumption. In increasing the significance of halal certified chicken in Makassar, there are still a number of policy issues such as uneven syar'i slaughtering process, Broiler Chicken Quality factor, which producers can not display chicken products as halal products and guaranteed halal. Training Juleha increased the certainty of halal chicken production, because the need of halal chicken products increasingly shows a significant increase. Study

and mapping of chicken slaughter in Makassar, from 2 locations of chicken slaughtering in Antang and Bara-baraya area in Makassar City. the process of management or slaughtering chicken in Makassar is good enough category.

## Acknowledgment

It is advisable to make a Research on Product development in the form of a standard Juleha blade in accordance with Shari'a instructions. Socialization of Halal Slaughter, became the key to success in producing Halal Chicken products

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