

EXAMINING OPPORTUNITIES FOR AND THREATS TO A NICHE  
MARKETPLACE: RECOMMENDATIONS FOR NEXT STEPS IN A PROPOSED  
DESIGNATED HALAL MEAT PROCESSING FACILITY IN CENTRAL  
MINNESOTA

A Thesis

by

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## ABSTRACT

A group of Somali halal consumers in the state of Minnesota desire more culturally appropriate halal meat and prefer fresh goat meat from local suppliers produced and harvested in specific ways. Prior research recommended the development of a designated halal meat processing facility as a solution for this unmet need. This thesis uses the case study method to describe an existing domestic halal meat processing model, understand constituent perspectives of a designated halal meat processing facility project, and offer recommendations for next steps in its design and implementation. Results identified themes to be considered within the design, development, and implementation of the project including appropriateness of the products and project, funding and sustainability, trust and social development, and economic opportunities. Among other recommendations, collaborative efforts with Somali leadership with a concern for project sovereignty, system model exploration, and business planning emerged to guide next steps for development of the project.

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## NOMENCLATURE

AURI	Agricultural Utilization Research Institute
FAO	Food and Agriculture Organization of the United Nations
Greater Minnesota	Identifies regions of Minnesota not included in the 7-county metropolitan area surrounding Minneapolis-St. Paul
Halal	A Muslim faith practice which relates to lifestyle choices and behaviors, including practices involving food
MDA	Minnesota Department of Agriculture
RSDP	Regional Sustainable Development Partnerships
Shariah	Islamic law set forth by the Quran
Tayyib	Arabic for “good”
UMN	University of Minnesota
Zabiha	Arabic for the strict guidelines related to halal meats

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## 1. INTRODUCTION

Each year the United States welcomes people from many foreign countries as these immigrants and refugees seek new opportunities. As new communities develop, infrastructure development that meets the cultural and religious needs of each community has the potential to afford these communities improved livelihoods and integrated establishment within the U.S. The Somali American population, among other groups who practice Islam, is interested in the opportunity to develop a domestic halal meat supply chain system that could improve social, economic, and environmental conditions in the regional community. As scientists and researchers within higher academia and industry, we have a responsibility to extend our expertise and resources to best serve these new Americans sensitively within their cultural contexts.

### **1.1. Literature Review**

#### ***1.1.1. Need for Halal Meat in Minnesota***

A 2020 report of a study by a team of researchers from the Minnesota Department of Agriculture (MDA), the Agricultural Utilization Research Institute (AURI), and University of Minnesota (UMN) Extension assessed halal and kosher markets in the state of Minnesota (Kagan et al., 2020). The report aimed at understanding the broad scope of the religious meat markets in Minnesota, and findings of the assessment led to several recommendations including the development of a designated halal meat processing facility in Central Minnesota. A designated halal facility would fulfill the desires of local halal consumers as indicated by the report and could help to relieve the current issue of a lack of small- to mid-sized livestock

processing facilities within the state (Kagan et al., 2020). In support of this development, researchers indicated the need for exploring various co-ownership and other models. Further, they recommended that thoughtful consideration of vertical integration be given to mitigate concerns such as loss of product integrity (Kagan et al., 2020). The importance of close relations between producers and consumers was emphasized, and it was recommended that the development of such a market be meticulously researched before becoming established (Kagan et al., 2020).

To appreciate the significance of this project, one must understand Somali establishment within the U.S. as well as religious and cultural practices that influence lifestyle choices and behaviors of members of this community. Somalian resettlement to the U.S. has remained consistent since 2014 at around 9,000 refugee arrivals each year (Population Movements, 2018). The country of Somalia recognizes Islam as the state religion, and nearly all Somalis are Muslim (Population Movements, 2018).

Traditionally, people of the Islamic faith practice halal in all aspects of their lives (Kagan et al., 2020). As 92% of Muslims in a study conducted by Public Agenda stated the U.S. would be their permanent home, the need for access to halal products in U.S. food markets will increase as Muslim American populations become established and continue to grow (Bittle & Rochkind, 2010). Although the Somali American population in Minnesota is the largest group of Muslims in the state, there are also other substantial Muslim populations from a variety of descents (Kagan et al., 2020). Because of differences in observation of halal among ethnic groups who practice Islam, there are differences in the preferences for halal meats (Kagan et al., 2020). However, halal

remains important to all these consumers, and even non-Muslim consumers may take interest in halal meats (Kagan et al., 2020).

Kagan et al.'s (2020) report is not the only of its kind; previous studies have been conducted in the United States to understand Somali community preferences for halal meats including a case study assessment in Columbus, Ohio and a preference survey in the Minneapolis-St. Paul metropolitan area of Minnesota, both of which are communities with significant Somali establishment (Trechter & Parks, 2005; Worley et al., 2004). Trechter and Parks' (2005) findings are consistent with those of Kagan et al.'s (2020) report, indicating a strong trend and the expectation for Somali preferences of specific halal meat characteristics despite the elapse of more than 15 years between inquiries. Furthermore, Worley et al.'s (2004) Ohio case study sought to determine whether establishment of a halal goat slaughter facility would be feasible by understanding the Somali meat market in the area. The study found that the market for halal goat meat existed and would continue to exist as these consumer populations developed and grew, but pointed to issues in producer profitability and establishment of organizational structure for the market (Worley et al., 2004). While demand for halal meat, especially goat meat, among Somali and other Muslim consumers is reliable, efforts to understand the marketplace from supply chain and organizational perspectives has yet to reveal all and offer solutions for some of the barriers faced within this niche marketplace.

### ***1.1.2. Islam and Halal Foods***

Unlike dietary requirements dictated by allergies or personal preferences, consuming food is considered a form of worship to the Muslim person and is truly a way

of life (Riaz & Chaudry, 2019). The term halal originates from holy teachings within Islam and is defined by the divine book, the Quran, as anything permissible (Kagan et al., 2020). Halal foods are those that are good and clean as dictated by the Quran and include everything except for items specifically identified by the holy law and teachings from prominent prophets in the Muslim faith which are considered haram (Riaz & Chaudry, 2019). As a way of life, halal is practiced to varying degrees within decisions and behaviors attributed to food, finances, work, clothing, social relationships, and other aspects of life (Kagan et al., 2020; Riaz & Chaudry, 2019).

In the context of animal products, halal applies both to the slaughter of the animal and to the animals' life and growth within a healthy and clean environment (Alserhan, 2010). Decisions regarding the consumption of halal meats are considered among people practicing Islam because there are a variety of guidelines within the Quran and as taught by prophets regarding consuming the meat and other products from an animal. In multiple passages the Quran provides directions for the consumption of animals and essentially teaches both of halal (permissible) and haram (unlawful) practices in food animal consumption. Typically, haram animal products include dead animals (those that have been stunned or were found deceased prior to appropriate slaughter and processing), animals that were not slaughtered by an approved person in the name of God and done in a specific manner with specific tools, swine (pork) products and their byproducts, cross-contaminated animals within the same slaughter facility, and flowing blood (Riaz & Chaudry, 2019). Further, halal does not necessarily apply only to the slaughtering of the animals but can apply also to the entire production

process, from the birth of the animal, through its growth and life, within the slaughter and processing procedures, to its purchase as a food product (Hanzaee & Ramezani, 2011). Considerations in animal welfare have long been fixated on during the production of halal animals (Riaz & Chaudry, 2019). In Islam, animals are believed to be individuals that experience life similarly to humans and therefore deserve similar consideration. However, because of advanced cognitive understanding above animals given to humans, humans therefore have rights and responsibilities over an animal's contribution to the food supply chain (Riaz & Chaudry, 2019). This life-long adherence to halal standards is an especially important aspect in consideration of the halal meat project development within the Somali American population in Minnesota as conventional certification may not provide enough scrutiny over how animals were raised. Though these conventional certification systems may be sufficient for certain populations, additional considerations may be appropriate in developing a halal market.

Determination of whether a product meets these standards is often left to the discernment of the individual consumer during the purchasing process, especially if a halal meat source is not attainable in a local market through conventional supply chains (Kagan et al., 2020). In today's marketplace, consumers often don't play a role in the sourcing of food products unless they are buying directly from a producer. Instead of purchasing halal meat products from large department stores, Somali halal consumers in Minnesota indicated a preference for purchasing products from smaller Somali-owned grocers local to their area (Kagan et al., 2020). However, this preference was not consistent across generations; this generational difference should be considered in the

development of the halal meat supply chain as well. Somali halal consumers in Minnesota emphasized their trust in local, small halal grocers and preferred to purchase halal meat from another Somali rather than another Muslim in general (Kagan et al., 2020). Because of an emphasis on strong inter-community connections, Somalis typically will trust that halal meat sold through another Somali person meets their expectations (Kagan et al., 2020).

Though individual consumers may trust local grocers, a challenge within the greater halal food supply chain is that of integrity. Stratification of the halal supply chain in the U.S. has often removed the consumer from the process of verification, instead relying on grocer verification of halal compliance based on a halal certification and accreditation system unique to that supplier's practices (Khan & Haleem, 2016). Verifying the integrity of halal products can include considerations such as welfare but most often consists mainly of compliance with slaughter practices. Halal food certification is conducted by a variety of food certification bodies across the globe. Although this large global network of suppliers and certifiers exists, halal food production requirements and standards are not always well understood in the U.S., and halal food integrity is a major concern among halal markets globally (Tieman et al., 2012).

From the beginning of the production process until the product is consumed or used, all halal products must be held to acceptable integrity standards throughout each production step (Tieman et al., 2012). These production steps can include practices throughout the life of the animal, processing, transportation methods, and final sales

(Tieman et al., 2012). The difficulty of achieving integrity within the halal food supply chain is based on the lack of existing certification entities and successful localized supply chain models and is also challenged by the current majority imports of halal meats into the U.S. (Tieman et al., 2012). Small and mid-sized livestock processors could serve as an integral part of domestic halal meat supply chain development and provide greater opportunity for confirmed integrity through traceable operational strategies. Understanding integrity management of existing halal meat processors could lead to improved knowledge when considering the development of a designated halal meat processing facility in Minnesota (Kagan et al., 2020).

### ***1.1.3. Halal Meat Preferences and Sourcing***

Improving halal meat access for Muslim communities in the U.S. is important as the food comprises a significant component of Muslim diets and is eaten most days, especially during religious holidays and celebrations, and because of its importance within Islam as a central tenet for protecting religious freedom (Kagan et al., 2020). Goat meat is of special interest to Somali halal consumers and was the focal point for the Minnesota market assessment report by Kagan et al. (2020), as well as the preference study conducted by Trechter and Parks (2005) and a case study in Columbus, Ohio by Worley et al. (2004). A study which involved focus groups from multiple Islamic centers in Ohio also found that fresh goat meat was preferred by 86% of respondents over frozen, and that respondents would pay more for fresh if it were available (Fisher et al., 2009). An alternative perspective offered by Fisher et al. (2009) was that those interviewed did not necessarily identify as Somali but from the Middle Eastern countries

of Lebanon, Palestine, and Iran, indicating a desire for fresh goat meat products among additional Muslim groups which would support market development to a greater degree. While goat meat follows a somewhat cyclical demand curve, halal meats are substantial components of Muslim consumer diets throughout the year (Trechter & Parks, 2005). Of subjects interviewed or who participated in focus groups within Greater Minnesota, which comprises the largest Somali population in the U.S., the average family estimated their halal meat product purchasing at \$300-500 per household per month, comprising a significant amount of the household's expenditures (Kagan et al., 2020). Approximately 75% of this expenditure was on goat meat alone, indicating a strong need for this product specifically (Kagan et al., 2020). Most halal meats available in retail stores in the U.S. are frozen products shipped from countries such as New Zealand and Australia due to their low import costs and high supply capacity (Kagan, et al., 2020). Somali halal consumers indicate a preference for fresh meats, especially goat, but often do not have the option to purchase these goods which would be customary in Muslim-majority countries with existing halal markets, and consumers are left with the ability to purchase only frozen halal meat (Kagan et al., 2020). Goat meat is especially difficult to find, and the Minnesota halal market report team identified only one grocer carrying fresh halal meats in St. Cloud, MN. Though fresh goat meat is desired, its wholesale price makes it difficult for store owners to carry and market to consumers who are often unwilling to pay elevated prices (Kagan et al., 2020). Unfortunately, imported halal meat is not readily traceable for consumers to understand its integrity, and little is known about the way the livestock were raised or how they were slaughtered (Kagan et al., 2020).



Though somewhat variable across groups, certification bodies, and individuals, halal slaughter is agreeably conducted by a certain set of standards and rules. Frequently, animals sourced from Australia and New Zealand destined for halal markets are stunned before slaughter, which is traditionally seen as incoherent with faith standards but may be accepted by some, depending on the source of the product (Kagan et al., 2020). This disparity could offer an opportunity to U.S. livestock producers and processing facilities to serve this market, expanding the marketplace for small- to mid-sized processing facilities which need reconsideration and revitalization in the state and were recommended to be explored for their unique ability to serve the specific demands of this regional halal meat consumers (Kagan et al., 2020).

As indicated previously, of particular interest to the Somali halal consumer population in Minnesota is the quality of life for the animals sourced for halal meats, as it is for other Muslim consumers as well. As directed by the faith, halal is intended to preserve animal welfare and the practices employed in halal slaughter are meant to enhance the considerations related to quality of life and products (Kagan et al., 2020). This deeper level concern for halal meat processing is known as *zabiha*, the strict guidelines applied to halal meat slaughter. Some Muslims use the term “*tayyib*” to indicate qualities of wholesomeness or purity (Alzeer et al., 2017). *Tayyib* refers to how the livestock animal was raised prior to slaughter including environmental, welfare, feed, and other aspects of livestock husbandry (Kagan et al., 2020). Consumer interest in *tayyib* halal meats intersects with grass-based agricultural systems as most Somalis prefer that the halal meats they consume come from animals raised without grain but

with access to pasture (Kagan et al., 2020). This type of management could be considered to produce livestock for halal consumption in the state of Minnesota, potentially offering a dual benefit to the local environment in addition to supporting local communities. As agricultural producers face pressures to reduce climate impact, increasing inquiry has been pursued regarding the potential for grazing systems to counter negative climate impact occurring within other livestock and agricultural management practices. Grazing animals can have positive effects on soil health, water quality, and other aspects of the ecosystem, ultimately improving producer economic sustainability (Kagan et al., 2020). Furthermore, current research investigates the impacts of intensively managed grazing systems on total potential carbon sequestration. It has been found that intensive management practices in grass-based systems can potentially sequester more soil organic carbon than do continuous grazing systems (Stanley et al., 2018). If a local halal meat supply system is in consideration for development, to maximize beneficial impacts beyond the realm of social and community benefits and take a more holistic approach, system designers may take into consideration grazing management practices employed by the producers supplying livestock to the system.

An important lesson learned through the Minnesota halal report was that clarification of halal standards should take priority in the development process of a local halal meat supply chain (Kagan et al., 2020). It is evident that halal criteria go beyond the statements of the holy book Quran as interpretations vary amongst and within Muslim halal consumer groups, including Somali populations within the state of

Minnesota. Involving the local halal consumer community in the conversation surrounding development of this market is paramount in its design and should take precedence in subsequent stages of development.

#### ***1.1.4. Food Insecurity and Sovereignty***

Though current research is limited pertaining specifically to the Somali refugee populations in the U.S., a variety of literature indicates a trend of food insecurity among resettled populations in the country. Food insecurity can be defined as a limit of access to nutritionally sound and safe food, as well as the inability to acquire acceptable food in socially acceptable ways (Dharod et al., 2013). Seventy-two percent of Somali mothers indicated their household was food insecure, and 40% of respondents in a study investigating the experience of food insecurity among refugees in the U.S. indicated that they experienced difficulty in locating preferred foods within the food supply chain (Dharod et al., 2011; Hadley et al., 2010). This suggests that accessible and appropriate food is a concern among U.S. Somali populations and therefore should be considered by researchers as they assess the group's quality of life. The challenges outlined by prior research of food preferences and insecurities among resettled Somali refugees in the U.S. suggest that additional research be conducted to identify possible solutions for combating these issues. The development of a designated halal meat processing facility in Minnesota could offer a potential solution to the issue of food insecurity. Though Somali ownership was not indicated to be necessary by all informants in Kagan et al.'s (2020) study, this solution could lend to achieving not only improved food access but also food sovereignty to halal consumers living in this community. Individuals may have

the opportunity to become involved in the development and operation of the facility rather than depending on market forces already in existence to take on the production of halal meats.

#### **1.1.4.1. Studies on Community Engagement and Food Sovereignty**

The issue of food sovereignty and community input should not be taken lightly as it relates to the potential development for a designated halal meat processing facility. Consideration of the culture for which a system is being developed is crucial in its ultimate success. Two studies in particular assist in understanding this importance and offer methods through which community engagement may be modeled and enhanced.

A study by Alkon and Mares (2012) offered a framework for the development of a designated halal meat processing facility in Minnesota by defining considerations for food sovereignty projects in general. This ethnographic study attempted to identify challenges faced in the improvement of food sovereignty in two specific community projects. The study aimed to understand two food movements by analyzing and speculating on the potential for building a joint movement which would challenge and transform the food and agricultural systems through a food sovereignty approach. Similar to the indications laid out in the Kagan et al. (2020) study to the challenges of corporate vertically integrated systems in the development of a designated, community-owned halal meat processing facility, Alkon and Mares (2012) found that food sovereignty must oppose the corporate food regime and neoliberalism. In contrast, food security and food justice movements do not necessarily operate under the assumption that neoliberalist forces must be opposed, but rather work parallel or even within them

while still attempting to remedy existing marginalization (Alkon & Mares, 2012). The authors suggested more radical strategies than food security and justice approaches be developed and implemented to address political influences on social issues in agriculture and food (Alkon & Mares, 2012). For example, Alkon and Mares (2012) recommended providing resources in the form of supplies, tools, and land to allow consumers to cultivate their own food, and asked community individuals for their insight and input if they had previous relevant knowledge within the development's components. In the consideration of developing the designated halal meat processing facility, researchers and developers must understand the degree to which constituents involved value the concept of food sovereignty within this development. Developers such as MDA, AURI and the UMN Extension teams have worked to provide resources and educational support to the community developing this project, but understanding other successful markets and identifying additional community and developer recommendations would assist in enabling these developers to provide what is most needed by the community.

The issues of culturally appropriate food innovation and community input were studied within a senior-level undergraduate course offered at Montana State University (Kuo et al., 2020). This study followed a recommendation by the United Nations for strengthening and diversifying food systems by aligning with the community's food heritage (Kuo et al., 2020). It was found that a missing critical competency in food science graduates is the ability for observation, application, and reinforcement of community culture in food innovations (Kuo et al., 2020). The study's aim was to intertwine community culture within a nutrition course at Montana State University

using ideation, prototyping, and storytelling. Particularly, the study used the participatory action research (PAR) model which is typically used to increase community engagement in the system change being proposed (Kuo et al., 2020). Student researchers developing the innovative food product established partnership with tribal members in a local community and conducted focus groups, visiting on several occasions with the individuals to carry out the ideation process (Kuo et al., 2020). Through the prototyping process, the students gathered extensive recommendations and guidance from community members to design a product that would most appropriately fit the needs and desires of the community. Because of the significance of specific traits such as family cooking to the preservation of the community's culture, the students elected storytelling to portray their food product's recipes for marketing purposes. Results of the study identified the need to restructure the approach to teaching food innovation through incorporation of community culture in ideation, prototyping, and storytelling (Kuo et al., 2020). Through taking time to understand cultural considerations, interacting during ideation within focus groups and field trips, and prototyping and storytelling, the students were able to perform ideal design development to meet the needs of the culture which they were serving, experiencing interactive cultural learning, optimizing the prototype, and conveying the culture appropriately (Kuo et al., 2020). Ultimately, the study emphasized the importance of taking into careful consideration the cultural implications and desires of the community in which new system is being designed and implemented through involvement with and

engagement of the community members who have a stake in or interact with the designed system.

## **1.2. Scope of the Study**

Among halal consumers interviewed as part of the Kagan et al. (2020) report, an echoed interest was in the development of a designated halal meat processing facility to meet the demand of the local community and solve issues caused by the supply chain to alleviate religious and preferential discrepancies. This study is an attempt to both identify an existing domestic halal meat processing model and understand constituent perspectives of the recommended designated halal meat processing facility project to offer recommendations for next steps in the design and implementation process.

Because of the multi-tiered nature of this thesis study, I chose a two-article method as the primary strategy for the research. While both components contribute to the overall understanding of next steps to be taken, each study is unique in that it analyzes different cases using distinct frameworks and driven by distinct purposes. I have written the thesis based on two sequential studies: one that identifies a model for domestic halal meat processing and provides insight into this logistical aspect of the design of the project, and another that reports and interprets interviews with constituents and stakeholders involved in the project.

## **1.3. Statement of Positionality**

My positionality, though not fixed but changing as the study has emerged, requires my reflexive engagement and self-evaluation (Holmes, 2020). As the human instrument within this qualitative study and a novice researcher, I understand that my

perspective of the study may impact my analysis of the inquiry. With a critical theory lens, I acknowledge the social oppression that may exist resulting from political influences and socio-economic disparities faced by Muslim populations and therefore attempt to approach my discussions of the results with an eye for improving sovereignty among these groups rather than for solely improving markets. Additionally, due to the limited scope of this study, I recognize the need for additional research of the same order of inquiry to achieve transferability of findings. Furthermore, as an individual unrelated to and physically and demographically distanced from the population for which this project was undertaken, my relationships with gatekeepers who were close to the social system allowed for more accurate insight to the system, but I recognize the need for both sensitivity and the elapsing of time to foster relationships which lead to the most rich, descriptive data to be obtained. If a master's degree allowed for and funded more time to the student, I would continue this work through the design and implementation process. Perhaps someone who is as passionate about the multi-level, exciting opportunities presented through globalization in this positively diverse country, will.



## 2. THE NICHE MARKETING STRATEGY AS A CONCEPTUAL MODEL FOR A CASE STUDY: A GUIDE IN THE DEVELOPMENT OF A DESIGNATED HALAL MEAT PROCESSING FACILITY IN MINNESOTA

This study is the first in two sequential studies to aid in the research, development, design, and implementation of a designated halal meat processing facility in Central Minnesota.

### **2.1. Rationale**

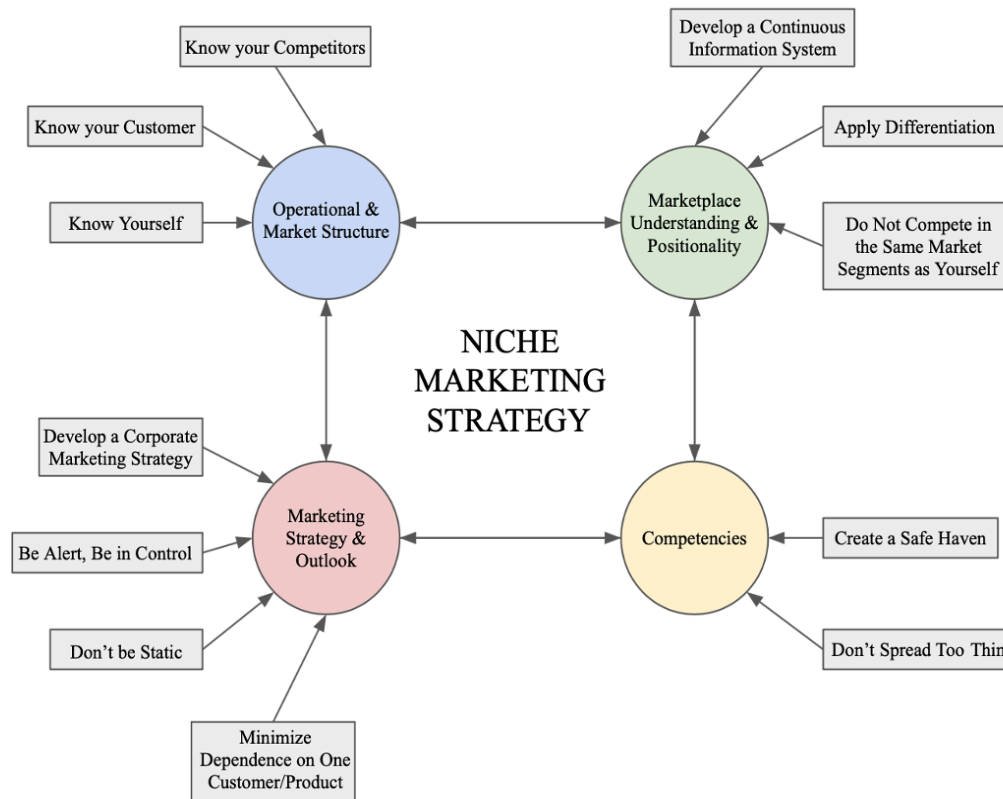
A domestic supply of halal meat is desired in communities with high halal product demand (Kagan et al., 2020). The Somali community residing in St. Cloud, Minnesota, as well as other communities in the surrounding areas which practice Islam, exhibit high halal food product demand because of primary faith practices that are crucial to individual's lifestyles (Kagan et al., 2020). Kagan et al.'s market report recommended the development of a designated halal meat processing facility as a potential solution because there currently exists a failure of the supply chain to meet the needs of local halal consumers (Kagan et al., 2020). Such a facility could also improve the bottleneck issue caused from a lack of small- to mid-sized livestock processing facilities within the state (Kagan et al., 2020). Kagan et al. reported that an exploration of varying co-ownership and other market models could assist in the successful design and subsequent implementation of a designated halal meat processing facility. Though it is known that most halal meats for wholesale and retail purchase in the U.S. are sourced internationally, little is known about existing domestic halal supply chains. Domestic

processing facilities have not been evaluated because those in operation are either not well known or they simply do not exist, and literature related to these models is difficult to find. A study that evaluates an existing domestic halal meat processing facility could offer insight into the methods of procurement and marketing, and could evaluate the model's coherence with the community's desired system characteristics to provide context and understanding for the design of the proposed designated halal meat processing facility in Minnesota.

## **2.2. Conceptual Framework**

Dalgic and Leeuw's (1994) niche market strategy conceptual model offers an outline for exploration as applied through a case study. The practical guidelines for developing a niche market strategy (Figure 1) could be utilized as methods to gather information about a halal meat processing facility in a manner that is designed to inform the development of a community owned and operated halal meat processing facility. This model was created to assist in developing a sound marketing system and can also be used to investigate existing markets, later applying learned concepts to new market development (Dalgic & Leeuw, 1994). By framing questions related to each of the major conceptual areas as adapted from Dalgic and Leeuw's (1994) niche market strategy conceptual model, a researcher could gain insight into the strategies the processor is employing to serve the domestic halal meat market. These findings could have the potential for application to the development of a designated halal meat processing facility, especially with a lens for increasing food sovereignty among domestic halal consumers.

**Figure 1.** *An Adaptation of Dalgic & Leeuw's Niche Market Strategy Guidelines (1994) as a Conceptual Model*



### 2.3. Purpose and Objectives

The purpose of this study was to identify an existing U.S. halal meat processor and determine the methods used for its market operations. The findings were expected to aid in the direction and development for the design process of a designated halal meat processing facility in Minnesota. The study sought to determine the “how and why” for this domestic meat processing facility practices halal slaughter in its operations, including livestock procurement and product marketing. Findings were expected to describe an existing successful halal meat processing facility and provide a framework

for future development of the proposed project in Minnesota. Specifically, the study objectives were to determine what operation and market structures exist and how they operate, how the respondent understands and perceives their facility's marketplace positionality, how the facility develops its competencies, and what strategies the facility employs regarding marketing and outlook.

## **2.4. Methods**

I chose the single case study as the methodological approach to understanding the niche market strategy of a domestic halal meat processing facility. A single case study is useful in gaining deeper insight into and pertinent details of the operational strategies of an existing domestic halal meat processing facility (Merriam & Tisdell, 2016). Use of a single case study also allows for greater depth of analysis. A common case study approach was used to analyze obtained data (Yin, 2018).

### ***2.4.1. Unit of Analysis***

A single sample, the "case," was selected for this study. I selected a purposive sample based on a facility's ability to meet the following criteria: The facility was

- (a) a U.S. meat processing facility, currently in operation;
- (b) currently conducting halal slaughter practices on a regular basis (at least one period of time annually); and
- (c) marketing the halal meat products domestically or internationally, to secondary processors, wholesalers or distributors, retailers such as restaurants or grocery stores, or direct to consumers (Merriam & Tisdell, 2016).

The candidate was sought through contact with professional informants in the halal foods industry including people who identified as halal food critics, halal foods certification agencies, halal meats distributors, and other gatekeepers, as well as simple internet searches and cold-calls and emails. Ultimately the candidate was identified by word-of-mouth indication and a cold-contact method. Recruitment materials were given to the candidate and described the nature and scope of the study, its purpose, and why the contacted person represented an eligible candidate. Upon agreement to participate, the respondent was asked to schedule an interview.

#### ***2.4.2. Research Design***

The respondent and I scheduled the interview as a virtual meeting via Zoom. The protocol (Appendix A) consisted of a semi-structured interview format in which the respondent answered open-ended questions related to their operational and marketing strategy (Merriam & Tisdell, 2016). The questions were predetermined, but the conversation was largely guided by the respondent. The interview questions were divided into two parts, beginning with a section aimed at getting to know the respondent's role in their respective operation, as well as key identifying elements to describe the nature of the facility. The remaining questions targeted specific details about the operation's procurement processes, marketing strategies, and other traits as pertinent to the niche marketing strategy. Probing questions were asked when key points needed clarification or when development of content was deemed beneficial for the data analysis (Merriam & Tisdell, 2016). The respondent was also offered the opportunity to openly discuss their thoughts on the outlook of the halal meat processing facility in

which they work, challenges faced by them within the industry, their perception of potential expansion of the marketplace for halal meat processors in the U.S and to comment on the Minnesota designated halal meat processing project.

#### ***2.4.3. Data Analysis and Trustworthiness***

The data collected were coded and analyzed by narrative analysis and through the constant comparative method to identify key points and overarching themes as discussed by the respondent (Merriam & Tisdell, 2016). As a single case study, there was the unique opportunity to analyze and describe in depth the conversation between the respondent and me. I conducted a narrative analysis of discourse that fell within the niche marketing strategy conceptual framework to describe the strategies in use by the respondent's facility. The narrative analysis was structured to include pertinent information for understanding the context in which the niche marketing strategy is applied in the case of this respondent. The single case allows for improved understanding of facility-specific traits. I kept an audit trail and reflexive journal to record the code, and the interview was audio and video recorded with respondent permission for referential adequacy (Merriam & Tisdell, 2016). The video was reviewed multiple times, including rewinding the footage and slowing down the audio, to ensure transcription accuracy. The transcription was then combed for recurring statements or phrases that comprised important themes and key points gleaned from the respondent regarding the domestic and global halal meat markets.

#### **2.5. Results**

To understand the respondent's positionality within the niche marketing strategy and domestic halal meat industry, I used two methods of narrative and constant comparative analyses. These analyses unpack the respondent's facility history and development and includes themes that are explored further within the discussion. Results were expected to provide a loose framework that could be selectively applied to the development of a new halal meat processing facility and that could also point to important considerations or concerns regarding, including opportunities and threats to, the prospective project.

#### ***2.5.1. Narrative Analysis***

The respondent began development of their company approximately eight years ago around the year 2013 after winning a business plan competition. Earnings from the competition, as well as locally raised funds from roughly 40 investors, were allocated toward purchasing an existing packing slaughter facility in the Midwest U.S. which was renovated and began operations between the years 2014 and 2015. Together with two other engineers, the respondent spent twelve months making plans for the facility writing approximately 500 programs in order to prepare for operations. Programs included standard operating procedures as they related to regulatory considerations such as hazard analysis critical control points, inventory systems, procurement plans, and others. The respondent emphasized the rigidity of the requirements for these plans in order to achieve successful operation. The packing facility has been exclusively designated as a halal slaughter facility since its beginning. Though processing only cattle for halal beef, the respondent repeatedly throughout the interview stated that they had tried multiple

niche marketing strategies—including other religious meat processing—to capitalize on their output and earnings. Despite these attempts, the respondent stated that the operation's current halal beef procedures were the only ways to be profitable, stating about any other possible niche that “if it made money, we would do it.”

In the context of the respondent's facility operations, halal slaughter is different from the conventional slaughter system only in the way that the animal's life is ended. To meet halal compliance, the respondent's company employs three slaughtermen who are each Muslim, and these employees conduct the slaughter of each animal by use of a knife. In contrast to halal standards, death by stunning is customary in conventional slaughter systems. The slaughtermen are trained by the company's certifier, the Islamic Food and Nutrition Council of America (IFANCA), which also monitors the process through physical and video-recorded auditing. The certifier ultimately determines what deems the product halal, and currently IFANCA requires that the facility adhere to the knife kill method only. In commodity halal systems the respondent indicated that certifiers may only require tactics such as a sign on the door or a prayer over loudspeaker.

Because the kill method marks the only certifiable component of halal product compliance for IFANCA, the respondent's company has never had concern for how the animal was raised from the perspective of a halal consumer's preference. The respondent sources their livestock through a variety of sellers located within about a 200-mile radius of the facility and slaughters 100-200 head per day. These livestock come from many local Amish farms, but the respondent indicated that the facility would source livestock



from “everywhere,” aligning with the respondent’s discussion of the halal market’s heavy price sensitivity, indicating less concern for the source of the meat and more emphasis on market driven forces. Because the market is price sensitive, the respondent stated that they have not found that adding on a designation such as *grass-fed* or *natural* works in terms of meeting sustainability and therefore chooses not to pursue other designations within the halal product line. Though the respondent indicated failure in attempting to market to other niches, they also stated on multiple occasions throughout the interview that they would attempt other niche markets if those strategies were operationally feasible and would lead to financial success. Ultimately, the company approaches its market strategy through mostly international and high-end markets because, according to the respondent, in order to scale and commercialize their business, this is the only way to be sustainably profitable.

The respondent ships halal beef to 18 foreign countries including Saudi Arabia, of which the respondent’s company is one of only two halal meat suppliers. The company also ships to some Southeast Asian countries in which they are one of only a handful of suppliers. The respondent is able to conduct this kind of business because of carrying a high-end product to supply to these high-end markets. In other words, the respondent’s company does not carry commodity products but rather niche market products in the form of halal beef. Due to the strict nature of processor programming according to U.S. and foreign regulations, the respondent’s company experiences 50 audits per year. Examples of regulatory audits include those from the USDA

Agricultural Marketing Service, FDA Hazard Analysis Critical Control Point, Veterinarian Consumer Safety Inspectors, OSHA, and Foreign Auditors, among others.

As a packer, the respondent's facility offers boxed meat consisting of standard sub-primals (the most basic cuts and first division of a carcass). On average this facility packs meat at a twenty-piece per animal parameter. The respondent's facility's positionality is within primary processing and its products are shipped to the next market's secondary processing. In this sense, the respondent's facility's products will go through an additional processing step before reaching consumers, and the facility does not typically sell any products directly to consumers as this approach does not fit within their business model. However, when asked if local halal consumers inquire about purchasing halal meat directly off the company, the respondent indicated that they would "help them out," but that supplying local halal consumers will never be part of a larger business plan.

Recent market events as influenced by the global COVID-19 pandemic affected the respondent's company, as they stated that the pandemic "significantly" impacted the company through incredible growth. The reflection of market expansion brought about a smile and laughter by the respondent, indicating their exasperation and amazement at the change in the market sphere and overall advantage it has given their company.

In consideration of competitors and growth opportunities, the respondent identified one competitor in the industry as being the biggest, processing upwards of 1,000 head of cattle per day and diversifying within other niche markets as well. To achieve growth like this, the respondent pointed to the challenges of startup and

program-writing as obstacles in the way of expansion, especially emphasizing the multitude of audits faced by the facility each year in order to stay in operation. This time-consuming part of operation was described as the biggest hurdle to expansion. When asked about the potential for a Somali owned and operated facility becoming established such as that in development in the state of Minnesota, the respondent indicated personal interest in supplying such a facility as its primary source of halal meat. In this scenario the respondent suggested the facility in Minnesota become a secondary processing facility, further processing products shipped from the respondent's packing operation for subsequent sales into the community. As indicated by the respondent, this type of facility would be successful only if its operations were driven by local Islamic religious leaders who lay out an operational plan and comply with price increases that would be required by the packer in order to make an adequate profit.

#### ***2.5.2. Overarching Themes***

A recurring theme was that of the desire of packing facilities to avoid any form of publicity due to the risks of public opposition. This was made apparent early in the interview when, after being asked about the choice to pursue halal slaughter, the respondent said that the idea came from "regulation." When asked to elaborate, the respondent replied with "...this part I would prefer not talked about," indicating a hesitancy to public transparency. Later in the interview I inquired about competitors, and when pointing out the facility's biggest competitor the respondent stated that "they're not gonna talk about it," "they're not gonna talk," "they're very closed," and "they don't let anything out there," again adding to the aura of hesitancy within the industry to

communicate with outsiders about operations. Because the respondent had two separate company names, when I asked for clarification, their response was “I prefer that nobody knows who we are” before clarifying the brand names. Again, later in the interview the respondent stated that “as a packer...we don’t want to be known,” and “we don’t do interviews...less is more on our side.” At the request for additional explanation, the respondent indicated that a packer’s single biggest threat is the Humane Society of the United States, as this is an agency that will successfully campaign to put out of business these packers, especially those practicing halal slaughter. “Being loud in this is not good, is not good at all,” the respondent said, repeatedly making the statement and even nervously laughing about the issue.

Another frequently identified concept was that of the price sensitivity of the halal meat market and challenges that issue poses on development within the halal meat processing industry. The respondent discussed on numerous occasions throughout the interview the complexity of regulatory impediments including audits and other considerations in facility development. Regulations through the certifier allow for operational procedures that may differ from other conventional styles of slaughter operations in the U.S., but also place a potential constraint on operations as the process of achieving regulation compliance is often extremely time consuming. Paperwork and audits were stated to be the most time-consuming activities for the facility, creating a work environment that required practices the respondent at one point stated they “hate.” Market prices and regulatory practices seemed to drive the majority, if not all, of the respondent’s daily facility operations and consume the most time.

## **2.6. Conclusions, Implications, and Recommendations**

Utilizing Dalgic and Leeuw's (1994) niche marketing strategy as a conceptual framework for niche market adherence to assess the strategies of a halal meat processing facility in the U.S. served as an applicable approach. However, I found that facility adherence to the niche marketing strategy does not necessarily conclude that a facility meets the needs of local communities and can serve as a successful model for developing a designated halal meat processing facility in Central Minnesota. Results of this study suggest that this operational model for a packing facility that ships mainly to foreign countries and secondary processors would not address the needs of local Somali or halal consumer community members in food access issues and does not align with a food sovereignty framework approach.

Furthermore, hesitancy in participation in the study among halal processors inhibited comprehensive analysis of active halal slaughter facility models within the U.S. Increased time for developing relationships amongst researchers and facilities may be imperative in lending to successful inquiry for future work. Additional inquiry into existing market models may prove useful for development of the designated halal meat processing facility in Minnesota but it is recommended that gatekeepers be included, such as researchers with existing connections to and relationships with processing facilities and halal consumer constituents, that could provide additional insight and more efficiently promote and advance the planning process.

Groups conducting research on the development of a designated halal meat processing facility in Minnesota such as MDA, AURI and UMN Extension might

consider conducting needs assessments of surrounding community constituents actively participating in its development. Further research should focus on community perceptions of the ways in which a designated halal meat processing facility should aid in community establishment, engagement, happiness, and prosperity in order that developers may take an informed approach to allocating resources toward the development of such a facility. Community member needs assessments should incorporate input from a variety of stakeholders including local Islamic leaders, halal consumers, investors, and other organizers. Moving beyond solely market and model assessment, researchers would benefit from continuing to learn directly from community members who are working within and supporting the development of the designated halal meat processing facility in Minnesota and could assist in advancing its development within a critical theory lens of food sovereignty achievement among Somali Americans. Furthermore, researchers from these entities and those who are currently working on aspects of the halal meat project in Minnesota could provide crucial insights to the nature of the project, and understanding their collective learning could enhance the continuation of the project as it moves toward design and implementation stages.

### 3. COMMUNITY PERSPECTIVES OF THE PROPOSED DEVELOPMENT OF A DESIGNATED HALAL MEAT PROCESSING FACILITY IN CENTRAL MINNESOTA: EVALUATING THE NEEDS AND CONCERNS OF LOCAL CONSTITUENTS

This study is the second in two sequential studies to aid in the research, development, design, and implementation of a designated halal meat processing facility in Central Minnesota. The study was conducted to build upon the implications identified through the previous study and original recommendations for the project.

#### **3.1. Rationale**

Kagan et al. (2020) pointed to a strong interest among consumers for the development of a designated halal meat processing facility local to their region. Developing a more robust halal meat supply chain in Central Minnesota could be considered an innovation; the system would be new to both suppliers and consumers, and should be evaluated according to its relative advantage, compatibility, complexity, potential for reinvention and observed effects (Rogers, 2003). As noted by Rogers (2003) in his *Diffusion of Innovations*, evaluation of an innovation does not need only to occur after the innovation is adopted. During the research and development phases data can be collected to inform those people involved in the design process to better understand how the innovation will ultimately be adopted and therefore make informed decisions about its design (Rogers, 2003). Because the holistic success of a designated halal meat processing facility is desired, studying constituent needs and preferences for

the development of a designated halal meat processing facility could provide useful recommendations for next steps in the project.

### **3.2. Conceptual Framework**

Recognizing that decisions and activities affecting the adoption of an innovation process occur well before its initial diffusion, this study is concerned with the research and development activities that have taken place during the innovation-development process (Rogers, 2003). The innovation-development process involves six main stages: Recognizing a problem or need, basic and applied research, development, commercialization, diffusion and adoption, and consequences (Rogers, 2003). Through literature review and especially by recommendation from the Kagan et al. (2020) report, the identified problem is a lack of access to fresh halal meat, especially goat, by Somali Americans in Central Minnesota. Basic and scientific research has been conducted to better understand, define, and frame the existing problem, but additional applied research is necessary to inform the third stage—development. Therefore, this study settles on the second stage of Rogers' (2003) innovation-development process and secures its foundation on his recommendation to overcome the pro-innovation bias by conducting research on diffusion prior to the adoption of an innovation. This could provide key insights into the desired outcomes of such an innovation and ultimately aid in the design and implementation process of the prospective halal meat processing facility.

Another framework for evaluating change in this food system is the Food and Agriculture Organization of the United Nation's (FAO) Sustainability in Food Systems

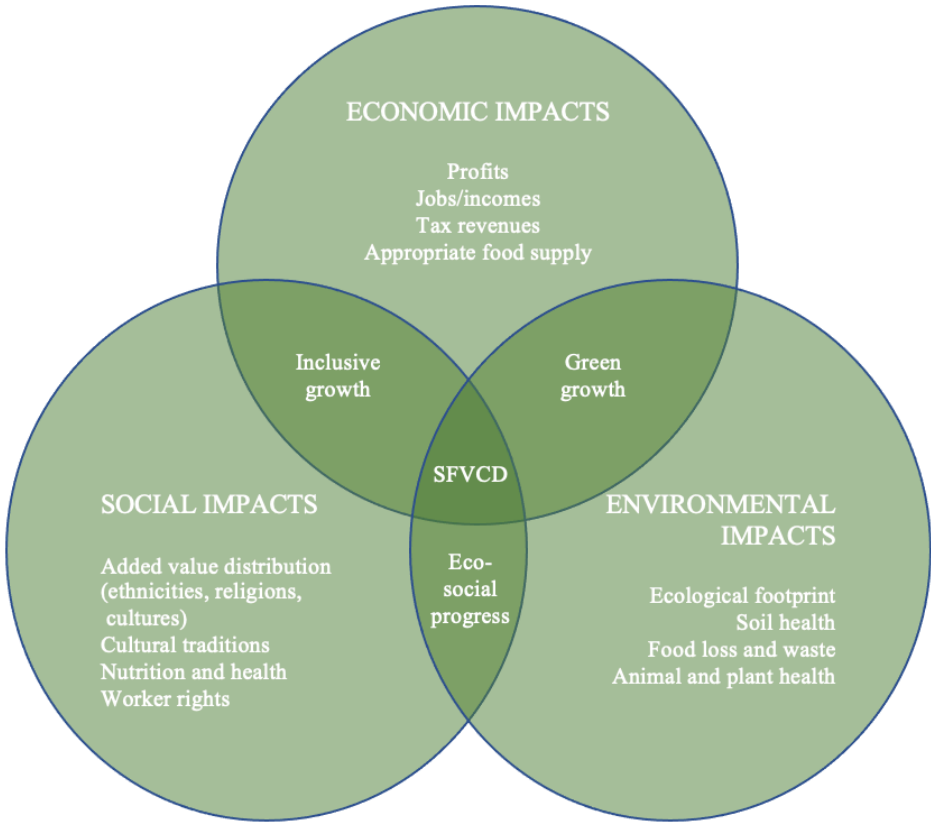


model (Figure 2). The Sustainability in Food Systems model is particularly well-suited to the issue of local halal meat access development for multiple reasons. According to this model, sustainability is investigated holistically for sustainable food system development (FAO, 2014). This holistic approach allows for broadening the framing and analysis of an issue within a food system and considers external links and feedback systems (FAO, 2014). To enact transformational and sustainable food system change, the Sustainability in Food Systems model investigates causes and consequences of all social, environmental, and economic impacts of the system (FAO, 2014). This model affords the food system a broader scope in project development and compliments the food sovereignty framework by considering all causal components impacting the system rather than narrowly assessing issues that are not root causes to the main problem.

Kagan et al. (2020) identify social, economic, and environmental impacts of both the foundational need for, and outcomes of the development of, a designated halal meat processing facility in Central Minnesota. Socially, a designated halal meat processing facility could provide a means of carrying out cultural and religious traditions important to Somali customs. Consumer's desired animal welfare outcomes could also result from the development of the facility if it is concerned with source verification and standards of animal husbandry within the supply chain. These livestock management practices also have the potential to impact the environment through grazing systems which may benefit the local ecosystems. Furthermore, a processing facility could open the door to increased economic activity through secure jobs and a robust supply chain. Consumers will be motivated to purchase products which are more culturally appropriate

and fall accordingly into their budget, stimulating demand and bringing business to local stores where community members are investing in their local communities, and strengthening community links to local sources, offering a bridge between otherwise culturally distant communities.

**Figure 2.** *An adaptation of the Sustainability in Food Value Chain Development model, FAO (Neven, 2014, p. 24).*



### 3.3. Purpose and Objectives

The purpose of this study was to identify constituent perspectives of the prospective development of a designated halal meat processing facility, referred to as the project within this study, in Central Minnesota. My objectives were to speak with researchers, developers, and halal consumers who are involved with or may be impacted

by the design and implementation of a designated halal meat processing facility. I attempted to gather information that could provide insightful direction to the future research, development, and design efforts as related to the project. Both structural and logistical recommendations, as well as philosophical and value considerations have emerged as guiding forces for this study.

### **3.4. Methods**

Because the designated halal meat processing facility project has a complex positionality within a supply chain intertwined with social, economic, and environmental considerations, a case study provides an appropriate method to follow for a study of constituent and stakeholder perceptions. In an effort to study both the phenomenon (the designated halal meat processing project) and its context (a holistic view of all components involved in both development and consumption, as well as other potential variables to emerge), I chose a case study because it allowed for detailed data collection and analysis from a variety of variables of interest within the scope of the case (Yin, 2018). Because case studies are not bound by any single mode of inquiry, specific approaches to data collection and analysis techniques were able to be adjusted according to the respondent (Yin, 2018). Additionally, the bounds of the case itself are malleable during the study process, which allowed for greater inclusion of data and data sources (Merriam & Tisdell, 2016).

#### ***3.4.1. Unit of Analysis***

Because the boundaries of the case are malleable, the selection of participants evolved, and determination occurred as respondents were recommended and contacted

for participation (Yin, 2018). I worked very closely with a gatekeeper to connect me with people who had at least one of the following characteristics:

- (a) The individual had been involved in the research and development of the halal meat project;
- (b) the individual had a significant economic or social interest in the halal meat project; or
- (c) the individual was a local halal consumer interested in the halal meat project.

The candidates were sought with the assistance of the gatekeeper whom I identified because of their work directly with the populations and the report from which the candidates associate, or through cold contact after searching for individuals meeting the criteria. The gatekeeper had previously assisted in discussion of and guidance for my studies and had offered to assist me in contacting potential candidates for data collection. The gatekeeper was part of the research team responsible for the Kagan et al. (2020) Minnesota halal meat market assessment report and was subsequently working on halal meat projects related to the report. My hope in utilizing this person as a gatekeeper was that potential candidates would be more likely to participate because of the familiarity and established trust with the gatekeeper as a member of their social system (Rogers, 2003). If participants were identified by the gatekeeper, contact was made initially by the gatekeeper through multi-way calls or multiple-recipient emails to establish virtual introductions. I then corresponded with the candidates by replying to the emails or responding to the phone calls respectively and answering questions before candidates agreed to participate. If a candidate was identified by me, I contacted that candidate by

cold calling or cold emailing. When a candidate expressed interest in participating, I provided materials including an information sheet recommended by IRB. Recruitment materials described the nature and scope of the study, its purpose, and why the individual was an eligible candidate. Upon agreement to participate, I scheduled a time to meet virtually with the respondents for interviews.

A total of 10 participants were interviewed over 8 virtual interview meetings. Each interview consisted of one-on-one virtual meetings with me, the primary researcher, except for one interview that consisted of 3 participants. A total of 8 researchers and/or editors of either the original report by Kagan et al. (2020) or more recent research projects within the issue were interviewed over Zoom. Researcher and/or editor participants were identified through the gatekeeper or from past contact, and by contacting individuals listed as contributing members on the report. These participants are known as “researcher participants” in the remainder of this study. A total of 2 community members, each of whom would be considered stakeholders to and/or would be involved with the development of the project, were interviewed over the phone. Community member participants, titled “Somali community participants” in this study, were identified by the gatekeeper who also made initial contact with the individuals to discuss this study.

#### ***3.4.2. Research Design***

Interviews with the participants lasted from 35 minutes to more than an hour. The protocol (Appendix B) consisted of a semi-structured interview format in which the respondents answered open-ended questions related to logistical considerations and

social components of the halal meat project. The questions were predetermined, but the conversations were largely guided by the respondents as they offered insight based on their unique positionality within the project. The questions were adjusted to best fit the respondent's position. Interview questions were divided into two major sections, the first of which focused on logistical considerations for the design of a designated halal meat processing facility, and the second of which consisted of prompts regarding the social impacts and other considerations within the proposed project. Probing questions were asked when the development of content was deemed beneficial to the overall understanding of the respondent's input (Merriam & Tisdell, 2016). The respondents were given the opportunity to share additional information that they deemed important for me as it related to the project.

#### ***3.4.3. Data Analysis and Trustworthiness***

Each interview was audio- and video-recorded with approval of the respondent(s) for ease in accuracy of transcription and retention of important verbal and non-verbal cues which contribute to the richness and referential adequacy of the data collected (Merriam & Tisdell, 2016). I used a program called Descript, a transcription software that downloads audio and produces draft transcriptions which can then be more easily reviewed and edited for accuracy. The audio recordings were slowed and rewound for transcription accuracy, and the transcripts were uploaded into documents before being placed into data analysis software. Additionally, I kept an audit trail and reflexive journal to aid in accurate recording of respondent details and communication channels, as well as to record the code. Data collected through transcription were coded and

analyzed using the constant comparative method to identify key points and overarching themes as discussed by the respondents. I used a data analysis software called MAXQDA in which unlimited codes can be created and filled with unlimited occurrences with data from transcripts (Merriam & Tisdell, 2016). MAXQDA is used in analyzing both qualitative and quantitative research methods and I, the primary researcher, have used the software in the recent past in a study which assessed the application of the design thinking process to build college students' employability skills (Odom et al., 2021). Odom et al. collected student assignments, individual data were coded into sub-categories, and the resulting analysis examined program outcomes (Odom et al., 2021). Using the MAXQDA analysis software for this study, I coded data and analyzed them similarly, identifying recurring statements among respondents, and identifying significant themes to be considered in my conclusions and recommendations. To assess credibility, another academic researcher peer-debriefed the data and my analyses.

### **3.5. Results**

The results of the study consist of two parts, the first of which identifies major categories and sub-categories into which raw data were placed, and the second of which identifies themes emerging from the data.

#### ***3.5.1. Part One: Major Categories and Sub-Categories***

The data were coded into major categories based on questions addressed from the interview protocol and consisted of the following: General thoughts about the processing facility/project, facility ownership and structure, location of the facility, product demand,

product supply, halal consumer and Somali preferences, influence of price, roles in continuation of the project, concerns for project development, and needs and next steps. Within each of these major categories, units of data were grouped and assigned to sub-categories. Sub-categories were organized in descending order of volume to visualize the quantity of units within each sub-category. All sub-categories are developed further within this analysis. Efforts were made to ensure that categories and sub-categories were relevant to the purpose of the research, exhaustive and mutually exclusive, sensitive, and congruent conceptually to ensure the data are accurately represented within the findings (Merriam & Tisdell, 2018).

#### **3.5.1.1. Major Category: General Thoughts Regarding the Facility/Project**

The participants were asked to provide their general thoughts related to the proposed development of a designated halal meat processing facility in Minnesota. A total of 155 units of data were placed in this major category and from which 7 sub-categories were developed.

##### ***3.5.1.1.1. Benefits to the Community***

This sub-category held the highest volume of data units for the major category and consisted mainly of comments regarding community cohesion and connection with diverse representation, economic benefits and growth, and general benefits to all. Additionally, access to culturally and appropriate foods and nutrition, improving the market for producers, and environmental benefits were discussed. Market opportunity, increased community employment and additional jobs, new markets for producers, thriving businesses, improved housing markets, and development of infrastructure were



discussed as economic impacts. Statements about embracing diversity, building a coalition, the transfer of solutions to other communities, connection, increased diversity, and synergy emphasize the project's potential for social development. Frequently stated "benefits to everyone" describes the perceived holistic benefit of the project, and mention of ecological impacts and regenerative farming practices indicate the perceived environmental benefits. Participants shared a wide variety of benefits, indicating the project's perceived potential for far-reaching and systemic beneficial impact.

#### ***3.5.1.1.2. Importance/Relevance***

Designing and implementing a designated halal meat processing facility in some form was identified as being important and relevant to the participants. As "an integral part of this whole supply chain," a meat processing facility has the potential to provide a model for other food system meat improvement projects, would meet the needs of the community, would provide the development of a more robust supply chain, could offer opportunities for communities to be bridged, and would help to smooth differences between community groups. Additionally, many participants believe the demand exists and therefore the project is feasible. For many of the reasons outlined in the sub-category "benefits to the community," this project was deemed an important and worthwhile development as perceived by the respondents.

#### ***3.5.1.1.3. Challenges***

In general, challenges to the development of a designated halal meat processing facility were identified among participants when asked their general thoughts. Specific challenges included the development of trust and relationships, uncertainty of supply

logistics, the existing halal meat supply chain and agricultural system, collaboration and effort among groups, and expenses.

#### ***3.5.1.1.4. Identified Need for the Facility***

Many needs for the facility were discussed when participants were asked for their general thoughts on the development of a designated halal meat processing facility.

Because of the current bottlenecks faced by producers in the supply chain, the facility could help to alleviate some of these issues. Additionally, demand for fresh halal meats was identified, and providing culturally appropriate products was an expected outcome of the facility. Improving the lives of halal consumer community members was also identified as a need that the facility could address.

#### ***3.5.1.1.5. Compliance***

The ability for a designated halal meat processing facility to assure its consumers of its integrity according to halal standards, through relationships and trust-based systems, was discussed among several participants.

#### ***3.5.1.1.6. Things to Consider***

Participants also expressed concerns over considerations for the facility, including building trust, ensuring product integrity, providing economic viability, recognizing ecological and climate considerations, and finding solutions to the problematic conventional meat processing system in the U.S.

#### ***3.5.1.1.7. General Functions***

Some respondents discussed some general functions the facility should employ and consider including infrastructure and scale, providing resources and tools to community members, and using a third-party certifier for integrity.

#### **3.5.1.2. Major Category: Facility Ownership and Structure**

The participants were asked to provide their opinion of how the facility could and/or should be structured including ownership and modeling strategies. A total of 76 units of data were placed within this major category. The major category was further divided into 15 sub-categories.

##### ***3.5.1.2.1. Somali Ownership***

Most frequently mentioned was the intention for Somali ownership. This method was seen to be “ideal,” addressing any issues of ensuring halal integrity, enhancing community growth, eliminating problems of trust, and allowing for sovereignty.

##### ***3.5.1.2.2. Co-Operative Model***

The co-operative model was identified as an option for structuring the facility. Respondents saw this model as being appropriate for promoting the most community engagement, increasing group cohesion and diversity, and incorporating all aspects of the system into holistic management where all components have a voice, especially considering producers. However, a respondent with significant professional experience with co-operative models within the food industry cautioned against their high-failure rate but recommended this option to remain on the table: “...processing facilities have...not thrived under a co-op business model...I still think we need to have them in the room.”

#### ***3.5.1.2.3. Additional Ownership Considerations***

Participants were keen to discuss additional components of ownership including coming to a larger consensus, the need for trust in relationships for successful ownership strategies, the importance of its influence on the availability of culturally appropriate products, and the need for identifying sources of funding and supply.

#### ***3.5.1.2.4. Need for Diversity***

In ownership, some participants discussed the need for a diverse group of people to create stronger administration and promote the potential for strong relationships built with trust. Diversity was understood among these participants as a way to preserve and encourage greater achievement for the facility.

#### ***3.5.1.2.5. Small-Scale Locker Model***

One participant pointed to the small-scale meat locker model framed after processing facilities that existed decades ago in which community members, many of whom may struggle with space or budget to store and purchase large quantities of meat at once, could visit the locker to pick up smaller quantities of meat at appropriate times.

#### ***3.5.1.2.6. Marketing Strategy***

Marketing was considered by a few participants to be a consideration for facility structure, emphasizing the importance of marketing halal products in ways that could attract non-halal consumers as well. Thus, the products could enhance local markets including retailers like local grocery stores and restaurants.

#### ***3.5.1.2.7. Broker Model***

Some participants offered a broker model as a potential solution to supplying goats, which can be difficult to source, to the facility. This model was adamantly opposed by another participant, however, as they believed the broker model would strip the system of potential profits and increase wholesale and retail prices.

#### ***3.5.1.2.8. Secondary Processing Model***

A secondary model of processing was discussed with some participants. This model would consist of purchasing processed sub-primal cuts of meat that would be frozen and processing them further before distribution. It would eliminate the slaughter process from the proposed facility. Somali community members indicated that this would be an appropriate option, as did one researcher participant, and could be an alternative to fresh so long as the products were still produced locally. Although characteristics of local production were not defined within the scope of this study, local generally refers to the exclusion of foreign imported halal meat products and was considered by Kagan et al. (2020) specifically as within the state of Minnesota and surrounding region for development of this food system.

#### ***3.5.1.2.9. Locally Contributing***

When discussing the ownership and structure of the facility, both a researcher participant and a Somali participant indicated that the facility should positively contribute to the community in which it is located, especially considering contributions such as economic development through Somali-owned business and community investments, and community wellbeing.

#### ***3.5.1.2.10. On-Farm Processing Model***

A researcher participant and a Somali community participant enjoyed the idea of an on-farm processing model in which livestock would be raised and slaughtered on site.

#### ***3.5.1.2.11. Somali Employment***

Both a Somali community participant and a researcher participant indicated their preference for mostly Somali employment within the designated facility.

#### ***3.5.1.2.12. Rent or Use Space in an Existing Facility Model***

One group of participants identified the idea of renting space within an existing processing facility to ease the burden of new facility investments, and when mentioned to another participant regarding models of operation, they agreed it could be a great idea, indicating that a friend of theirs already uses this method.

#### ***3.5.1.2.13. Additional Research on Ownership Recommended***

When initially asked about operational ownership, many participants indicated more research would be necessary to ultimately determine this aspect as some research was currently being conducted regarding this question, and there was not a consensus.

#### ***3.5.1.2.14. Family Ownership Model***

One researcher participant recommended that the facility consider a family ownership model because it is shown to work in smaller-scale food systems.

#### ***3.5.1.2.15. Employee Ownership Model***

Lastly, one researcher participant indicated the potential use of an employee-ownership model in which the employees would own shares and/or be vested in the company. This could be utilized within a variety of the previous models discussed.

### **3.5.1.3. Major Category: Location of the Facility**

Participants were asked to provide an indication of a specified location for the facility. A total of 16 units of data were placed within this major category from which 4 sub-categories developed.

#### ***3.5.1.3.1. Access to Resources and Infrastructure***

One researcher participant echoed what several others mentioned when they said that finding “the sweet spot for the producers, the consumers, you know, different access points along the supply chain” was the most important consideration for the location of the facility. Many respondents agreed that proximity to cities, locating along easy transportation routes, and with access to both consumers and producers made the most logical sense for the development of a facility.

#### ***3.5.1.3.2. Central Minnesota***

One researcher participant and both Somali community participants indicated a preference for the facility to be located in Central Minnesota, specifically St. Cloud. Both Somali community participants responding to the study lived and operated businesses within St. Cloud, and the researcher had conducted most consumer studies within that location as well.

#### ***3.5.1.3.3. Uncertain About Location***

Some researcher participants indicated an uncertainty about the location, speaking to the challenge of access to supply and lack of participant knowledge of these logistics.

#### ***3.5.1.3.4. Dependent on Business Model***

One researcher participant indicated a need to determine the business model prior to determining the location of the facility.

#### **3.5.1.4. Major Category: Product Demand**

Although fresh goat meat had been a primary desired product in the outcomes from the halal meat market assessment report, participants were asked to provide any additional suggestions or details pertaining to the demand for halal meat products (Kagan et al., 2020). Specifically, participants were asked to provide feedback about the types of products desired, the preferred source(s) of those products, and other considerations for the demand of halal meats within this project. A total of 45 units of data were placed in this major category from which 9 sub-categories were developed.

##### ***3.5.1.4.1. Goat Meat***

Respondents agreed with the trend identified in Kagan et al.'s (2020) report that goat meat was the preferred product from this facility. For the Somali community, goat meat is consumed year-round and having consistent access to high-quality, fresh goat meat was predominantly recommended.

##### ***3.5.1.4.2. Livestock Other Than Goat***

Some respondents indicated a desire for livestock products other than goat meat, such as sheep and cattle. Somali participants indicated that other halal meats would be great but were not necessarily available (such as the meat of a camel). Diversity of products was indicated as potentially beneficial for the facility's profitability and sustainability.

##### ***3.5.1.4.3. Importance of the Source***



As identified by several participants, a facility through which consumers can identify the source of the products was indicated as important. This was believed to enhance trust within the consumer population as consumers could verify the product's halal integrity and understand its quality.

#### ***3.5.1.4.4. Economic Feasibility***

Some participants claimed that the demand was strong and therefore feasibility for such a facility existed. However, other participants cautioned against claiming the demand is sufficient for sustainability and believed that the development of operational models and marketing strategies were necessary to determine its feasibility.

#### ***3.5.1.4.5. Fresh Meat Products***

Fresh meat products were predominantly preferred among participants, but frozen was deemed an appropriate alternative if necessary.

#### ***3.5.1.4.6. Additional markets***

Several participants indicated the potential for the facility to serve additional markets, such as other Muslim communities within the geographic area or into other cities and states with high product demand. Further, some participants believed that non-Muslim consumers may take interest in halal meats because of their indication of humane, environmentally, and socially appropriate methods of operations and processing.

#### ***3.5.1.4.7. Frozen Meat Products***

One researcher participant said that a frozen meat option would be acceptable so long as it was raised locally, which was echoed by another researcher participant who

identified as Muslim when they reported they would not purchase frozen halal meat if it were from foreign countries.

#### ***3.5.1.4.8. Demographics of Consumers***

When the Somali community participants were asked about the demographics of halal consumers who would be purchasing the products from a local designated halal meat processing facility, both indicated that older generations or middle-aged and older people of Somali descent would be mainly purchasing the products because they believed older generations cooked more than younger generations. The Somali community participants believed that younger generations prefer to eat out or eat with their families rather than purchase and cook food themselves. “Most of the young people are with their family...and they don’t buy a lot of uncooked food...They go to the restaurant and buy what they eat” said one Somali grocery store owner. Therefore, the demand for halal meat products may be specifically influenced by how they are being purchased among different Somali generations.

#### ***3.5.1.4.9. Product Characteristics***

For one researcher participant who identified as Muslim, their demand was specifically for wholesome products that they could identify as from healthy livestock that were raised appropriately.

#### ***3.5.1.5. Major Category: Product Supply***

Participants were asked to indicate preferences and/or perspectives on the sourcing of the livestock for the proposed designated halal meat processing facility. A

total of 49 units of data were collected within this major category from which 9 sub-categories were developed.

#### ***3.5.1.5.1. Local***

Overwhelmingly, when asked about the source of livestock for the designated halal meat processing facility, respondents indicated a desire for local procurement. This would allow for transparency as consumers could know the producers and understand their livestock husbandry practices, introducing trust into the system and allowing for the upholding of integrity. Local supply was also thought by respondents to represent smaller farms which are preferred over conventional, large farm operations. However, some participants urged consideration on this idea of local sourcing, as it could be too expensive to provide a sustainable option, or simply may not be possible with high demand and constraints on supply.

#### ***3.5.1.5.2. Solutions to Supply Issues***

Some solutions to perceived supply issues, as indicated by respondents, were to conduct further research on the local and national goat supply and to consider sourcing from other parts of the country.

#### ***3.5.1.5.3. Meat Goat Supply Challenges***

Although goat meat was the most popular product as indicated by the respondents, many pointed to the issues of this livestock group. The capacity for farmers in Minnesota to produce goats year-round was questioned as winters are harsh living conditions for goats in the state. Some researcher participants indicated that the meat

goat supply in the state was simply too minimal to support the demand that would be required by such a facility, and that supply could even be an issue nation-wide.

#### ***3.5.1.5.4. Supply as a Challenge***

In general, many participants pointed to supply as simply a main challenge in the establishment of a designated halal meat processing facility.

#### ***3.5.1.5.5. Integrity Challenges***

Current issues with tracing the integrity of the halal supply chain from foreign countries fuels the need for a localized system such as the designated halal meat processing facility being proposed. Through a localized system consumers are expected to build better trust with their suppliers.

#### ***3.5.1.5.6. Satisfaction with Current Supply***

One participant, a researcher who identified as Muslim, indicated satisfaction with the current availability of halal meats. It is important to note that this individual is situated within a large metropolitan area which is demographically different than the area in which the majority of considerations for the facility are being made in Central Minnesota.

#### ***3.5.1.5.7. Producer Contracts***

As an opportunity for the designated halal meat processing facility to best serve its suppliers, one researcher participant identified contracts as a means to secure supply lines.

#### ***3.5.1.5.8. Facilitating Producer Supply***

The same researcher participant indicated that the facility would need to work with the producers to ensure they are content with the system so as to secure their future supply.

#### ***3.5.1.5.9. Non-Options***

One researcher participant identified poultry processing as a non-feasible option because it requires its own kind of facility designation and permitting for operational considerations.

#### **3.5.1.6. Major Category: Halal Consumer and Somali Preferences**

While discussing product demand, supply, and general thoughts about the facility, participants frequently identified preferences specific to the Somali and other halal consumer groups that involved data which could not be placed into solely logistical considerations for the previously mentioned major categories. A total of 43 units of data were placed into this major category from which 10 sub-categories were developed.

##### ***3.5.1.6.1. Understanding the Source***

Most frequently emphasized was the importance for the consumers to understand the source of the products produced by this facility. Transparency of process and trust in the system were crucial components within halal integrity for consumers, and a local supply would remove uncertainty about a product's integrity. When asked about seeing animals on a farm, a Somali community participant did not believe seeing the farm prior to slaughter was necessary for a consumer because they would trust that the facility was appropriately sourcing the animals.

##### ***3.5.1.6.2. Halal and Cultural Appropriateness***

The appropriateness of the product, mainly described in terms of non-conventional, non-factory farm, and accessible to these groups, was an important facet of Somali preferences for the product. Meeting cultural needs was seen by one participant as a way to reflect models that were trusted within a consumer's traditional home country markets and would ensure that the consumers are able to choose products that reflect their cultural desires.

#### ***3.5.1.6.3. Wholesomeness***

Two participants mentioned the wholesomeness of a product to be important to the Somali halal consumers as well as for other halal consumers. Wholesomeness was described by one researcher participant to encompass halal values as well as its religious standards and by another participant researcher who identified as Muslim to pertain to the product's "very deep and broad sense of...goodness."

#### ***3.5.1.6.4. Grass-Based/Pasture-Raised***

Researcher and Somali community participants alike indicated the preference for animals raised on pasture, whether for nutritional consideration or that of the environment as part of the holistic system.

#### ***3.5.1.6.5. Fresh***

One Somali community participant, a grocery store owner, emphasized over many points that fresh meat was the most desirable as he had experienced amongst his store customers shopping for halal meats.

#### ***3.5.1.6.6. Trusted Certification***

Based on trust, the local facility would be seen as containing integrity for halal standards by the consumers.

#### ***3.5.1.6.7. Livestock Species***

As previously identified and echoed by the Kagan et al. (2020) report, goat meat was preferred among Somali community members for this facility to produce.

#### ***3.5.1.6.8. Purchasing Preferences***

Purchasing preferences were not discussed by many, but the owner of the grocery store indicated that their customers mostly purchased cuts of meat by the pound and preferred it to be fresh rather than frozen.

#### ***3.5.1.6.9. Enjoyment***

The preference for and ability to obtain fresh meat would lead to enjoyment during the purchasing and consumption processes for the consumers, as indicated by one group of researcher participants.

#### ***3.5.1.6.10. Price Appropriateness***

Participants indicated that the facility ought to consider its price points as the feasibility of meat prices within a halal consumer's budget was important to understand for developing the processing facility.

#### **3.5.1.7. Major Category: Influence of Price**

Although there was not a specific question within the interview protocol about the price of the products to be marketed from the proposed facility, discussions about the influence of price on the project's feasibility secured its independent placement as a

major category. A total of 32 data units were placed into this major category from which 3 sub-categories developed.

#### ***3.5.1.7.1. Price Considerations***

Price considerations is a sub-category that consists of items to consider because price influences feasibility. For example, it was indicated by one researcher respondent that if products are “available for reasonable price, they will go for it,” explaining that consumers will support the supply chain and processing facility if the products are marketed at a price that fits the budgets of the consumers and is worth the product’s value. Currently, discussions among leaders within the project and pilot programs are tackling this issue of price. Models were predicted to influence price, especially in the example of a broker model in which one researcher respondent argued that the price would be driven too high for consumers. To attain achievable prices, some researcher participants recommended sourcing goats from outside of the state. Both researcher and Somali community participants saw the low price of foreign imported meat as a potential barrier to creating a price appropriate for sellers within this local system.

#### ***3.5.1.7.2. Producer Concerns/Needs***

A local designated meat processing facility was largely seen as a benefit to producers, especially in its ability to guarantee market prices for producers who choose to supply the facility. Introducing a supply chain which is not as fragmented as the traditional conventional markets for livestock animals in the U.S. was seen as a benefit to producers by one researcher participant, but careful consideration of price was outlined by many participants as it relates to producers to create a sustainable supply.



#### ***3.5.1.7.3. Price Concerns***

Some general price concerns were outlined by several participants as well. A researcher respondent indicated that the Somali community is very price conscious, meaning that if a price doesn't "resonate" with the consumer, it will be difficult to sustain a halal meat processing facility. Products must be perceived as affordable by the halal consumers, and participants indicated the need for understanding this price point to ease in feasibility and sustainability of a processing facility.

#### **3.5.1.8. Major Category: Roles in Continuation of the Project**

Each participant was asked what they perceived or hoped their roles to be in the continuation of the project. A total of 31 units of data were placed into this major category from which 2 sub-categories developed—R&D roles and Somali community roles.

##### ***3.5.1.8.1. R&D Roles***

Researcher participants identified a variety of roles they hope to pursue based on their positionality within the project's past and/or current endeavors. One researcher participant who has assisted with the project since its inception has in the past mobilized the community and stakeholders around the issue. This respondent hopes to continue serving as a catalyst and facilitator for the project's development, "supporting the community in their efforts" and ultimately leading the project to a position where it can be led primarily by the community itself. Additionally, in the near future this participant hopes to develop educational materials to share with farmers and begin more fruitful conversations with potential suppliers. Another researcher participant who is an

agricultural producer wants to facilitate the building of a coalition which can be a voice for the project, developing the supply chain and emphasizing the importance of connection, communication and collaboration. One researcher participant who identified as Muslim indicated the hope that their organization could utilize this project as a sounding board for bridging gaps between Muslim and non-Muslim communities, acting as a catalyst for new conversations between the groups. One researcher participant told me of the power we have while seated in positions in higher academia roles as white people, indicating the need to leverage that position for good. Yet another researcher participant sees their role as a community connector and facilitator, continuing to make connections between research and this project. Finally, a Somali community participant believes that R&D can play a significant role in the development of this project as researchers can get a “full picture of what’s going on and what will be the benefit.”

#### ***3.5.1.8.2. Somali Community Roles***

The grocery store owner, a Somali community participant, believed their role in the project would be to inform others of the good work of the facility. The other Somali community participant, an individual who directs a non-profit organization that helps the Somali community become settled and thrive within the area, wants to support the project by continuing to connect with farmers and assisting in the development of employment opportunities to be produced by the facility.

#### **3.5.1.9. Major Category: Concerns for Project Development**

Participants were asked to describe any fears or concerns they might have regarding the project's development. A total of 31 units of data were coded into this major category from which 11 sub-categories were developed.

#### ***3.5.1.9.1. Identifying Investments/Funding***

When asked about concerns or fears regarding project development, several researcher participants indicated that investments were a major concern. A project like this facility would require substantial investments, and finding willing investors is a challenge according to one researcher participant. Another researcher participant said that agencies such as the MDA needed to assist in finding funding, but that "funders just don't get excited about slaughtering animals," indicating a difficulty in securing these funders. Unfortunately, it was indicated by two researcher participants that recently announced federal funds for the development of meat processing facilities of the caliber to which the designated halal meat processing facility would ascribe are incredibly difficult to obtain and belonged to a confusing system at best. Identifying means of obtaining these funds was a concern shared among researcher participants.

#### ***3.5.1.9.2. Disunity/Duplication***

One researcher participant emphasized their fear that individuals within the scope of this project were acting independently of each other and worried that a duplication of efforts would use resources poorly. This participant spoke about communication and sharing of ideas as keys to success. Another researcher participant was concerned that the stakeholders may not be understanding each other.

#### ***3.5.1.9.3. Ethnocentrism***

A variety of researcher participants shed light on their concerns about who is taking main interest in the project, acknowledging that the researchers are mainly non-Somali community members or halal consumers, and therefore may have ethnocentric tendencies and fail to acknowledge the importance of sovereignty among the Somali community. Questions about how to engage the community more in the solution were considered and avoiding building inappropriate human capital around an issue that belongs culturally to another group were mentioned as concerns.

#### ***3.5.1.9.4. Energy for Project Development***

Conflicting opinions of the energy, or human engagement and efforts, surrounding the program emerged. For some researcher respondents, the energy seemed high and was even something that should be “tempered” so as not to develop a system that lacks in crucial components. Another researcher participant, however, thought that energy among the Somali community was quite low as few of the community members seem to be making efforts in the project’s work.

#### ***3.5.1.9.5. Somali Community Member Concerns***

The grocery store owner, a Somali community participant, voiced concerns regarding the model of the facility. This individual was worried that a meat processing facility would take business away from their store. However, when I expressed to them that the processing facility could be structured to be a wholesaler of halal meats to their store, the individual became very excited. The individual was worried about losing customers to a facility which retails directly to consumers, but their concern was

appeased by the opportunity to purchase from the facility as a wholesaler and protect their profits.

#### ***3.5.1.9.6. Funder Motives***

One researcher participant expressed concerns about potential malicious motives of investors based on personal experiences that individual had faced. A concern for verifying investor intent was described.

#### ***3.5.1.9.7. Complexity of Meat Processing***

One researcher participant pointed to the innate complexity of meat processing as it exists and identified this reality as a threat to development of the designated halal meat processing facility.

#### ***3.5.1.9.8. Sustainability***

Two researcher participants discussed concerns about the sustainability of such a facility. The concern of one researcher was that developing a facility like the one proposed and placing individuals in positions of responsibility within its operations could damage their economic resilience and leave them in an even more disadvantaged position than they had been in before if the facility were to fail. The other researcher was concerned about the sustainability of a facility when trust was a major pillar within the business aspects of the community supporting the facility.

#### ***3.5.1.9.9. Failure to Address Root Causes***

One researcher participant pointed to the possible overlooking of the issue's main causes which could thwart any efforts to treat system symptoms. "I wonder if we've sort

of narrowed in on this halal problem without having figured out the broader issue which is regional meat production and processing, and halal is such a small part of that.”

#### ***3.5.1.9.10. Human Resources***

Another concern was that of human resources, as one researcher participant indicated a need for additional personnel to be working on the project.

#### ***3.5.1.9.11. Co-Op Model Failures***

A final concern addressed was that although the co-operative model was seen as a potential opportunity for the facility, a researcher participant had seen these models fail within the meat processing business. The participant worried that because of the historical failure of these models within meat processing, individuals would be unwilling to participate through investments and other means of support.

### **3.5.1.10. Major Category: Needs and Next Steps**

Participants were asked to share what they believed to be the needs for the project’s development and success, as well as what they recommend for next steps in the development process. A total of 203 units of data were placed into this major category from which 22 sub-categories were developed.

#### ***3.5.1.10.1. Solutions and Ideas***

Researcher participants offered a variety of potential solutions when asked about next steps for the development of a facility. Structural models like mobile processing units, using a broker system, renting stalls or bays at existing slaughter facilities, and co-operative models were all suggested. One researcher participant was enthusiastic about the potential for design thinking, a “human-centric, structured, collaborative problem-

solving approach that produces innovative products, processes, or experience solutions to address wicked problems” (Jamal et al., 2021, p. 1). This respondent advocated for securing grant funding which would allow organizers to bring together many of the stakeholders in the project to conduct exercises focused on generating ideas and solutions for the project. The respondent believed that bringing people together through design thinking to produce outcomes would temper unnecessary “enthusiasm and idealism” and make business modeling the focal point for next steps. A joint-force, community-based collaboration was echoed by others. The design thinking method according to the researcher participant would follow a co-op model, and the same respondent argued against the use of a broker system to eliminate unnecessary members, and therefore loss of profits, within the supply chain. However, a solution offered by other researcher respondents was to utilize a broker to assist in product procurement and sourcing. These participants also recommended that the project consider renting spaces in existing slaughter facilities to reduce expenditures and protect sustainability of the efforts. The option of exporting to other domestic markets was seen as a potential solution to increasing market diversification and sustainability as well. All participants emphasized the importance of collaboration, leadership, and community-centered solutions.

#### **3.5.1.10.2. Barriers**

Many participants were quick to point out potential barriers to the project’s success. “One of the problems with a designated halal processing center is that meat processing in general is incredibly difficult to get right.” With the complexity of meat

processing and the added layer of difficulty in religious slaughter, participants mirrored this statement of one researcher participant in their discussions of project barriers. A variety of barriers were discussed. For some researcher participants, local and national goat supply was a great limiting factor for the project's success, and they cited lack of accurate data as a major barrier to understanding the marketplace. Additionally, raising goats in Minnesota is seen to be difficult work, especially with harsh winters, producing issues of seasonality. Furthermore, slaughter and processing is a very challenging operation and requires a person or people who are willing to do the hard work. A Somali community participant mentioned that there were other "financial issue(s)" faced by the community, and a researcher participant also mentioned the problems of infrastructure and housing as barriers. Among many participant responses was the discussion of a lack of collective community action toward project progression. The difficulty in creating a business plan, along with concerns about funding, were described to contribute to a general lack of "synchrony" among stakeholders. However, one researcher participant who identified as Muslim but not of Somali descent praised the East African community for being so tightly knit while also acknowledging the challenge this brings for those outside of the community who are trying to promote this project to make progress.

#### ***3.5.1.10.3. Collaboration and Additional Research***

Somali community and researcher participants alike settled on the importance of continued research on the economics and feasibility of such a project as being the most important avenue to pursue. Identifying a way to infiltrate into the closely-knit and sometimes closed-off community was recommended by a researcher participant.



Overarchingly, participants agreed that collectivity and collaboration were necessary to bring this project to its next steps.

#### ***3.5.1.10.4. Making Others Aware***

An emphasis on communication of project goals and outreach to parts of the system that aren't actively involved in project was shared by many participants. Particularly, one researcher participant who works within an agency that attempts to foster connection between Muslim and non-Muslim groups identified the project's potential for bridging these groups, expressing desire to incorporate these types of conversations into the design process of the project's development. Outreach to producers was also heavily emphasized by some participants as this knowledge could help with whole-system involvement in the development process.

#### ***3.5.1.10.5. Identifying Funding***

The need for identifying funding sources was echoed among Somali community and researcher participants alike. As indicated by one researcher participant, the Somali community is willing and able to contribute human capital to the project but needs financial investments to match that effort. Problems in acquiring recently released federal funds were discussed by some researcher participants, and efforts to obtain these funds were noted as necessary. Ultimately, figuring out how to secure and sustain investment power was deemed important by many participants.

#### ***3.5.1.10.6. How R&D Can Assist***

Some researcher participants offered ideas for researchers and developers to continue development of the project. One researcher participant recommended that an

investigation in the form of a feasibility study be conducted to understand the complex economic components of the project. This participant said that data lead to informed decisions, project sustainability, and awareness. Another researcher participant emphasized the strength in building relationships and social capacity for stakeholder groups to jointly problem-solve, ultimately creating strong rural coalitions whose work benefits many. Other researcher participants identified coordinating collective action and outreach as important roles for researchers and developers, encouraging infiltration of the project personnel into producer communities. Additionally, these researchers recommended an organized platform be created for all interested in the project to convene and learn, such as a main project website.

#### ***3.5.1.10.7. Farmer Interaction and Outreach***

Researchers opined that many producers were unaware of halal and what it could mean for producer markets; multiple researcher participants recommended that efforts to communicate with and create materials for producers be explored.

#### ***3.5.1.10.8. Identification of a Coordinator***

Both Somali community and researcher participants indicated a need for a person to step up either in the collective organization of the project or in the meat processing role specifically. Identifying a person who would be able to take on the project would provide a catalyst for its progression, coordinating the “collective action amongst stakeholders” and focusing “their time and energy on this work.”

#### ***3.5.1.10.9. Planning***

Bringing people together, creating a business plan, and using it to secure funds and support was discussed by many participants as an important aspect needing attention within the project. Creating a “sound contract” was important to a Somali community participant.

#### ***3.5.1.10.10. Sovereignty***

All comments regarding the need for the project to be community-led, supported by the Somali community and with Somali community members as the primary leaders and operators in this endeavor indicated the need for sovereignty. One researcher participant emphasized the importance of asking the community if this was a project they want to be engaged in, ensuring that the work of these R&D personnel is guided by the vision of the community, and not from an ethnocentric lens.

#### ***3.5.1.10.11. Models/Pilots/Demonstrations***

A variety of researcher respondents indicated a need to identify models and resources and to attempt some of these models as smaller-scale pilots in order to understand the feasibility of producing and processing local livestock for halal meats and its potential for scalability.

#### ***3.5.1.10.12. Consumer Needs***

One set of researcher participants stated that the Somali clients in their previous study desired a greater understanding of policies which would affect the development of halal meat processing. Additionally, a Somali community participant claimed that the need for halal meats will always exist. When I asked if this participant worried about the

demand for halal meats in the future, they stated “Maybe the cooking could change. The cooking is likely to change. But they still need the halal food.”

#### ***3.5.1.10.13. Human Resources/Capital***

Developing the funding to support further research and involvement was deemed important by several researcher participants to secure manpower and informative decision-making for the project.

#### ***3.5.1.10.14. Marketing***

One researcher participant emphasized the need for influential marketing which shares the perceived good qualities of the products and operations of the processing facility project.

#### ***3.5.1.10.15. Supporting Existing Models***

A researcher participant explained a current model in which a local Muslim person was slaughtering and processing halal meats for sales into local grocery and restaurant markets. This participant also discussed another small-scale Somali slaughterman who processes about a dozen goats each week and delivers the meat within a 100-mile radius of their operation. The researcher participant felt conflicted about attempting to develop a new system or simply find ways to support individuals who were already serving this community market in some small-scale way: “I go back and forth between, like, ‘we gotta fix the system stuff’ and then being like, can we just get [slaughterman] a freezer truck?”

#### ***3.5.1.10.16. Develop Somali Businesses/Community***

The need for the project to assist in developing community businesses and economic strength was repeated by researcher and Somali community participants alike. Developing distribution channels, assisting store owners, and starting new businesses were seen as needs for the projects, allowing Somali people within these communities the opportunity to “make some savings” and “live the American dream.”

#### ***3.5.1.10.17. Supply Chain Development***

Creating a more “robust supply chain” through “communication between processing facilities and producers” within supply chain management was considered important by two researcher participants.

#### ***3.5.1.10.18. Connecting with Somali Community***

One Somali community participant indicated a need for project developers to connect with their community, asking questions that clarify the community’s desire for product and process quality.

#### ***3.5.1.10.19. Commitment***

While efforts and funding were the first identified needs for the project’s continued development by a researcher participant, the participant also emphasized commitment from both the community and the project’s organizers.

#### ***3.5.1.10.20. Speak to Environmental Benefits***

One researcher participant believed that potential ecological benefits were “part of this story, too,” indicating their preference that a holistic approach be taken to the thoughtful dissemination of the project’s work and outcomes.

#### ***3.5.1.10.21. Flexibility***

Another researcher participant pointed out that what works for the facility in terms of sourcing, marketing, and operational strategies may change from year to year, emphasizing the need of organizers and leaders to be adaptive to external forces that change the environment.

#### ***3.5.1.10.22. Balance***

Lastly, a researcher participant stated there would need to be a careful balance between what organizers believed to be ideal outcomes and what was expected by policy regulations and standards.

#### ***3.5.2. Part Two: Themes***

After all units were coded into major categories and sub-categories, they were also assessed and grouped into thematic categories of anticipated outcomes and potential impacts of, as well as considerations for, project development. Fourteen themes consisting of a minimum of 10 data units were identified and are described within this section. Themes represent several interview questions and discussion points.

##### **3.5.2.1. Product and Project Appropriateness for the Somali Community**

Most heavily addressed across all participants was the issue of the project's ultimate appropriateness for the community for which it is being developed to serve. Phrases stated by participants like "culturally sensitive," "culturally appropriate," and "meet their cultural needs" envelop this theme at its most basic level. Additionally, a recurrence of "providing services into all of the great diversity of the current community" in the form of supplying the desired "fresh meat" and establishing secure jobs for the community were important aspects of the project's development.

Understanding that this is a permanent and new home for many people within the local Somali community, having a system which meets the needs of those individuals was imperative to its success. How the system fits within the context of the culture is explained well by one Somali community participant:

“They come here as a second country and are adopted as citizens as a second country. And they want to figure out how to live in this new country. And then the first need is you can understand where to live, house, and then where to get a job, to get food on the table...and where to send the kids to get education. And the second is...they think how they can improve a little bit and make some savings and start small business and then go from there. Live the American dream!”

Furthermore, discussions about specific products, location, sourcing, price, ownership and structure, and other considerations regarding logistical aspects of the project were considered within the context of how well they fit within the cultural needs and expectations within the community. With many Muslim people residing in the state of Minnesota, halal meat processing facilities were deemed by respondents to be “critical,” and the importance of consumer involvement in and knowledge of the project were considered paramount to securing its relevance to the community and adherence to cultural standards.

#### **3.5.2.2. Investment, Profitability, Sustainability, and Feasibility**

Discussions about the project’s feasibility, concerns and needs for investments, the project’s potential for profitability and ultimately sustainability broadly reached

across many responses to protocol questions. “You have to get the business model to work and that’s based on supply flow and profitability—and that’s really hard,” said one participant. Comments about investments and funding were often centered around the need for infrastructure and personnel development for both operations and continued research. Having additional data on the project’s feasibility was believed to be a way to inform the project’s development, making it “more successful and sustainable.” Finding investment dollars was described as particularly difficult by several researcher respondents in the case of obtaining federal funds that have recently been allocated toward meat processing development. “I feel like it’s a big opaque mystery blob,” explained one participant referring to the federal funds, also describing these funds as “fuzzy,” “amorphous,” and “completely inaccessible.” Feasibility of the project from the perspective of both the supply chain and demand for the products was considered by multiple respondents, some indicating that the demand “seems like it’s there” but also that “supply is a big issue, not only in Minnesota, but like, all over the U.S.” Practicality of sourcing enough local goats for the demand was seen as a threat to the project’s sustainability. “Locally sourced is preferred, but it’s not practical based on the available goats... We just don’t have enough.” Therefore, these researchers consider sourcing goats from a further distance to offer greater sustainability to the project.

Price of the products was seen to be a potential factor in determining the project’s ultimate profitability and sustainability among many participants. Running pilot operations and conducting feasibility studies were cited by respondents as solutions to determine the project’s ultimate success. Researchers “saw a need for sort of proving



out the pricing because clearly price point is an issue here,” stated one researcher participant. Researchers prompted questions like “how much are they willing to pay,” “what kind of volume are they buying,” and “what are the impacts of that in terms of profitability and feasibility?” Another participant indicated that the price of the products would need to “resonate” with the consumers, and that if the products are “very expensive” to the point that the community cannot afford them, consumers will ultimately “buy other options because they’re more affordable,” indicating careful consideration must be given to products produced from the facility in considering its potential feasibility. Like any business, the participants are highly concerned with these principles because they ultimately determine the project’s success.

#### **3.5.2.3. Social and Community Development**

The importance of developing this project from the perspective of holistically improving community wellbeing, both within the Somali community as well as within the broader regional community, was evident among discussions with participants. Allowing the community to become more self-sufficient and increasing diversity and cohesion were beliefs shared by one participant. “It will benefit...you know, all the people in the community, and what could be better than that?” the participant asked. Labeling a new processing facility as a “nice step forward in building the supply chain,” one participant explained that it had the potential to provide an “opportunity to build new relationships and social capacity among groups of people that are right now not engaged in joint problem-solving.” This participant, among others, also pointed to the opportunity to develop a model from this project that could be used by other minority

groups seeking innovative approaches to culturally appropriate food systems.

Establishing relationships among community members which are “positive, productive, and...mutually appreciated” were said by this respondent to have the potential to promote greater understanding among people and benefit “lots of people.”

Other respondents echoed the belief that this project could have far-reaching positive outcomes not only for the Somali and local halal consumers but for other parts of the system such as producers and non-Muslims because of its varying effects on the development of the local economy and improvements of social systems. “I think this is a very positive story...” a respondent said, “an example of how the local Muslim community is benefiting, you know, Minnesotans, generally speaking.” Using this project as a platform to bridge gaps among Muslim and non-Muslim groups was a potential opportunity afforded by this project according to one participant. “It would be really thrilling to have a new venue to speak with new people,” the respondent said, “to maybe challenge some of those...Islamophobic ideas or biases that they might have about Muslims.”

Additionally, some researcher participants thought that the project could become “a rallying point” to help the community grow further, developing new infrastructure and business to improve wellbeing. This project was also believed by some participants to have the ability to increase diversity, bringing “people closer together because they’re going to be business partners, they’re going to be friends.” The project was also believed to have the potential to contribute to “greater sustainability, economically and socially” by one participant, and furthermore contributing to environmental sustainability. The

Somali grocery store owner shared their belief that the project could bring people besides the halal consumers to their store, speaking to the greater potential community reach of the project.

#### **3.5.2.4. Local Economic Development**

The project's potential contributions to local economic development were discussed frequently among participants. Making the market more predictable for local producers, for example, was one way in which the local economy was said to be potentially strengthened. Furthermore, multiple mentions by participants of the project's potential to create jobs, making the community more self-sufficient, indicate the project's potential to help "low-income communities" and develop stronger local economies through workforce development. Increased employment could enhance the economic stability of some families and result in increased infrastructure as well. The project could create additional "market opportunity" and ultimately develop a sound halal meat processing supply chain in the state according to multiple participants. Capturing the market locally, as stated by one participant, has "enormous potential" as it would reduce dependence on the foreign meat supply and re-allocate that economic activity within the community. Providing products to "retail and local markets" would further advance the positive economic impacts within the community according to some participants, providing "a source of income for the community," potentially boosting the population to support further economic capacity and growth. Another participant agreed that whatever model is best suited for the "bulk of the economic returns to contribute to the economic wellbeing of the people involved" was important in the project's design

and implementation. Economic improvements could ease the “financial issue” mentioned by one Somali community participant and is evidently a pillar to the project’s ideal success.

#### **3.5.2.5. Connection**

“Food is so fundamental to our connection to other people and to the place that we live on a daily basis” stated one researcher participant. The opportunity of the halal meat processing project to provide a means of community connection and enhanced relationships was articulated by the respondents. Community was described by some as networks within the Somali halal consumer group, within the supply chain system group, and even through other external groups who can learn from the project. An emphasis on communication and coordination through connection was also evident. “We gotta make sure people are communicating about this work and staying in contact,” one respondent said, mentioning their hope for the developers to remain “coordinated” throughout the development of the project. As halal consumers often desire a connection to their food in terms of understanding its origin and cultural appropriateness, the project was seen by one participant to be a means of achieving this desire. This respondent said that there was a potential for a value-added approach to the marketing of the project and its products, stating that the project is “taking a more connected approach to the whole process” of the holistic food system. This same participant also discussed the project’s ability to provide additional platforms for community connection, informing people of Muslim values and helping to break down perceived differences.

Connection is seen as a highway to community development. The need for “hyper-localized, trust-based relationships” to be developed was identified by one participant as a crucial step in project sustainability. Community connection was seen by one Somali community participant as providing the ability to “share back and forth” among groups, explaining that a connected system would mean “whatever I get, whatever you get, we can communicate to each other.”

#### **3.5.2.6. Trust**

The concept of trust was a familiar theme among all participants interviewed. Trust was seen by many as a necessity for project success. While discussing ownership, one researcher participant said that “trust needs to be built” to secure sound decisions and allow for group cohesion within project leadership. The respondent reiterated that building relational trust was “time consuming” but necessary in considering project ownership and administrative structure. This respondent mentioned trust seven times throughout the interview, indicating its strength and value to this participant. Another participant spoke from their perspective as a halal consumer, explaining that they were “entirely confident going to any Somali market and buying the meat there because if these brothers are confident, then that’s enough for me.” Trust in the instance of this respondent meant that they felt confident in purchasing halal meats, feeling assured by their “brothers” in faith about the product’s integrity. “That’s more comforting to me,” the respondent said, “than...the halal stamp,” confirming the value of consumer choices based on personal relationships over distant certification bodies. Other researchers expressed that while interacting with clients there were discussions about trust through

communication and visualization of processes, and they indicated that trust could be difficult to build if livestock such as goats had to be sourced from other states due to goat production supply issues. Further, these participants described a consensus within Somali groups they interviewed regarding the preference for Somali ownership of the facility, feeling confident that a Somali person would be trustworthy as someone who “knows the halal process and sticks to it.” Trust was seen to be lacking among participants when they discussed the industry’s reliance on foreign markets like products from New Zealand and Australia, and this project was thought to enhance trust because of its ability to make “the whole buying experience better from the consumer’s point of view.”

Another researcher participant told a story of an encounter they had experienced while visiting a small halal processing facility with a group of Somali people. The person conducting the slaughter utilized methods that could be interpreted by some as negating a product’s halal integrity, but after lengthy discussion the Somali people decided that it was in fact a halal product because according to them, the person who slaughtered the animal is “a good person and I trust him” as told by the participant. This same participant explained that even though there may be a great deal of discussion about what deems a product halal—similarly to how other consumers might consider how “natural” or “organic” a product might be—at the end of the day many consumers simply rely on their trust in the product and the source rather than needing to verify it for themselves.

A different researcher participant questioned the “impact of scrutiny on a trust-based system,” concerned that differences in conventional versus the Somali trust-based way of business could have implications for the project. This participant also cautioned against progressing the project along too quickly, emphasizing the importance of taking it slowly to “be attentive to relationships along the way and the trust dynamics” that might not be fully understood. From a Somali community perspective, visiting farms was not likely to be necessary as they believed most consumers would trust the processing facility in ensuring halal product integrity. One Somali community participant even stated that they personally envisioned “several Somali businesses I trust to put an investment in,” meaning trust was an important factor in the funding aspect of the project to this individual. Because of the wide variety of ways in which trust was discussed amongst participants, it is integrated within many aspects of the project’s development.

#### **3.5.2.7. Holistic System**

Though seldom mentioned directly, elements of holism were found among many responses from participants. Descriptions of systems as “circles” and “cycles” paint a picture of interconnectedness, as well as the discussion of external forces playing a role in the project’s development such as infrastructure and climate. Some participants described the project as belonging to a larger sustainable food system. Others explained the project’s holism in terms of how it could incorporate social, ecological, and economic aspects of the community. One Somali community participant described the project as delivering the ability for an individual to develop skills and find a job, receive

proper nutrition, and partner with farmers and local businesses. The project was seen by these respondents as having the potential to impact many people and systems beyond the scope of simply the halal consumers and Somali people of the area.

#### **3.5.2.8. Collaboration**

An emphasis on collective action through relationships and collaboration among many groups was a familiar theme among many participants. Collaborative efforts between funders, farmers, business owners, and others were described as next steps within the development of the project by one participant and was similarly mentioned by one Somali community participant. Avoiding “silos” and building a coalition to have a “stronger, better rural voice” was deemed important to one participant. “Let’s actually bring everybody together in the room...and get to know each other’s issues and hopes and aspirations and...build relationships” that participant proposed. Working together can foster “elegant solutions that don’t involve us creating empires,” according to the same participant, explaining that staying coordinated and avoiding duplication of effort would be the most efficient and appropriate means for continued project development because of the value of learning from each other’s mistakes and successes.

One group of researcher participants indicated that they felt a severe lack of coordinated effort, pointing to the need for a single person to step up in leadership and take the project to its next steps. “One role that...we feel is strongly lacking...” a participant said “...is someone to kind of coordinate the collective action amongst stakeholders...and get everybody talking to each other.” These respondents said that the



collaboration issue “is really huge” in project development success and proposed filling the coordinator role to promote project development.

#### **3.5.2.9. Existence of a Broken System**

Throughout the conversations with participants, many alluded to the struggles of the current conventional systems of meat slaughter and processing, pointing to a failure within the meat industry and the halal meat project’s potential at alleviating some of these problems. Further, the foreign import system for acquiring halal meats was not seen to be very congruent with halal practices. “With frozen meat imported from overseas...” one participant said, “there is no opportunity to say...or articulate...whether you are satisfied, or you’re dissatisfied, with the quality of meat,” and the participant mentioned that the existing facilities simply weren’t meeting the needs of the halal consumers within that community. Other researcher participants pointed to the evident bottlenecking of the meat supply chain in processing facilities as a major inhibitor to small-scale production, providing the halal meat project as a solution to this problem. Some participants discussed the failures of the conventional system to produce meat products that originate from livestock managed in a way that is suitable to a halal consumer, stating that a smaller halal meat processing facility would be “much more pleasant than the current system we have.” Others yet mentioned that there’s “no slack in the system,” meaning that current processors are “overrun” with demand for processing and not enough facilities or personnel to meet the need, again indicating the halal processing facility’s potential ability to alleviate some of this “crunch.”

#### **3.5.2.10. Environmental Opportunities**

Due to its concern with the methods by which livestock for halal meats are raised, a halal meat processing facility was explained by some participants to have the potential to improve the environment. “It’s a way we can take better care of the land,” explained one participant, “by making it easier to have more livestock on the land...in a small-farm kind of way.” Further, participants indicated that the project’s delivery messages should be framed with consideration for positive environmental outcomes as part of its communication strategy. According to one participant who identified as Muslim, words like “halal and zabiha and tayyib” indicate the products should be organic, pasture raised and humanely raised meats. “You’re turning grass,” they said, “into food for human beings...and you’re doing it in a way which is sensitive to the animals and the land,” the participant explained.

One group of participants briefly mentioned the need for the project to “minimize the footprint of a facility,” identifying environmental impacts as important to its development. One participant asked how developers might “get slaughter and processing to be a part of the sustainable ag[riculture] conversation.” The same participant said that having grazers on the landscape and building systems where food is eaten locally or at least regionally would be “a plus.” Further, the incorporation of grazers on the landscape for improvement of ecological functions was thought by one participant to have the potential to produce social connections as well. Somali community participants also emphasized their preferences for grass-fed and grazing animals.

#### **3.5.2.11. Improvements for Producers**

The potential project was discussed by many of the participants as having the potential to improve markets for local producers. Locally sourced livestock was indicated as preferred in the Kagan et al. (2020) report and was reiterated among participants in this study. However, one group of participants discussed concerns over local and even national supply of goats to meet the needs of both demand and for facility feasibility and profitability. Despite this concern, other participants discussed the potential for the project to improve outlet conditions for producers because of adding capacity to the small- and mid-sized processing facility network. Livestock producers were stated to be having troubles getting “an appointment for a year out,” as explained by one participant, meaning local producers who wanted to have their livestock processed in smaller meat processing facilities were not able to have that done even while planning a year in advance due to the bottlenecks in part created by implications from the pandemic. A halal meat processing system could potentially provide an outlet for these producers giving them more opportunities to market their livestock. One participant saw the project was a way to “keep the small farmers...alive...” as they just can’t compete with the “bigger and bigger farms.” This participant also explained that they believed the “Muslim demand for...halal meat is really driving...a lot of business towards these small farms,” promoting a sense of development for producers who would choose to be involved in the market. Economic benefits to local farmers were seen as an outcome of the project as farmers would be “motivated to produce more goats” because “this facility can accommodate their needs and they can take as many livestock as they...can produce” according to one participant’s vision for the project. The hurdle

identified by one participant was that of keeping the price at a level that satisfies both producers and consumers in addition to the issue of supply.

#### **3.5.2.12. Sovereignty**

One statement from a researcher participant captures a sentiment expressed by several of the participants.

“I do worry that a lot of us who are engaging in this work are white and are looking at this as like a solution for farmers and maybe aren’t necessarily...looking at the perspective of the consumers and the community base.”

Another participant phrased it differently, saying “there are a lot of cultural differences between specifically the Somali community and...white folks raising goats, for example.” A consensus of concern for the project to be led by the community which it is intended to serve was evident among participants, yet none of the researchers who participated in this study and have been integral parts of the project previously in some fashion identify as Somali Muslims within the Central Minnesota region where the project has been proposed. Participants have questions about getting this community involved in the work and in the vision that is believed to belong to them. One participant recommended that grant funding be sought to hire a Somali individual to take over the project. Another participant indicated that they would be eager to hire someone to work on this project full time, but they were concerned about “building human resource capacity around somebody else’s problem,” indicating a hesitancy in having community outsiders developing the project without involving its intended audience more

appropriately. Participants indicated that the project should be “community run” and “community led,” with support for “the community in its efforts” to be the place in the future for researchers and developers who want to continue working with the project. “Don’t exclude people from participating,” said one participant, “but as much as possible, have the owners be from the community.” One participant described the ideal mindset of a Somali-owned facility as being “our facility run by our community for our community,” reiterating the importance of a community-led and focused project.

Bringing the conversation of sovereignty further, one participant described their vision of a system which not only is led and operated by the Somali community, but one which allows for “Somali immigrants and immigrants in general on the land being farmers.” This participant agrees that if investments were to be made for this to be a component of the solution, it would be possible. The participant stated that “land ownership is the best way to create intergenerational wealth,” pointing the importance of developing a sustainable system that is supported by the community so that improvements for the social system are broader and experience longevity beyond just access to culturally appropriate foods. Allowing the Somali community to take ownership of the project was supported by many of the participants in a multitude of ways.

#### **3.5.2.13. Traceability**

Product traceability is an integral part of halal products in general. The proposed designated halal meat processing facility is described as a way to achieve this traceability as consumers could potentially visit the facility and farms from which the

product is sourced and processed, or at the very least might have trust relationships built which would authenticate the product's traceability and halal integrity. In addition to trusting the products, one participant explained that if a consumer can visit the farm, visit the slaughter facility, and understand how the transportation and other companies involved, source verification is simpler. Current halal meat buying largely relies on foreign products for which customers have "no means to investigate where this meat is coming from, where it was processed," and they don't have a way to "know their producers," important aspects for Somali halal consumers. Knowing producers personally is important to these community members because that way "they can articulate their expectations," confirming the importance of consumer understanding of the origin of their meat products. When asked about alternative options, a participant explained that frozen could be an option, but only if it was produced locally, again identifying the importance of product tracing. Integrity is said to come ahead of economics according to one participant, indicating its high value among consumers. Another participant discussed their own buying practices as a Muslim halal consumer, explaining that "personal assurance of where it comes from" was adequate in understanding the source of their meat products. On the other hand, one participant said that in the case of meats from New Zealand or Australia, there would be no way to determine if it is truly halal because of difficulty in tracing the products, therefore indicating that local products could ease issues in product tracing.

#### **3.5.2.14. Transparency**

Encompassing traceability is transparency, which gives outsiders the ability to see and understand what happens within a system. “Transparency is the main thing,” said one respondent, explaining that outsiders should be able to see and understand the process. The existing supply chain from foreign markets is explained to be more “opaque” than transparent by one participant, signaling that the localized meat processing could be an avenue to improve this facet. Some researcher participants had discussed with Somali community members the importance of both trust and visual components through communication efforts and found that consumers were skeptical of foreign meat because they were fearful of chemical additives or other issues that they weren’t able to verify for themselves. Transparency through thoughtful development of this project as part of the holistic food system was often discussed in congruence with traceability and was considered by multiple participants.

### **3.6. Recommendations for Research and Development, Design, and Implementation Efforts**

This study identified constituent perspectives of many considerations for the proposed designated halal meat processing facility in Minnesota. Although multiple discussions and themes were developed from the findings, all of which may provide useful to certain considerations for the project, this section identifies concepts to be foremostly considered by people and teams who wish to work within the development of this project.

#### ***3.6.1. Necessities for Project Progress***

Within the discussions with both researcher participants and Somali community participants, strong indications for the immediate and future needs for the designated halal meat processing facility emerged. Immediately, identifying and securing funds remains one of the greatest challenges to the project which is exacerbated by a lack of organization and coordination. While funds are needed to create continued forward momentum, the development of a business plan to guide objectives is necessary to organize resources and create attainable project goals. Developers may consider planning for pilot programs to measure and predict feasibility of a scaled system in order to determine which model(s) will be used in the scaled system. Investments and feasibility studies are likely to guide developers in decision-making and ultimately allow these organizers to implement solutions which are likely to be sustainable. To achieve these immediate and long-term needs, it is imperative that all components of the development resources work together in an effort of collaboration and collective action, connecting over shared work and the project's goals. Ideally, to promote sovereignty a Somali community leader with business and organizational experience would be appointed to an administrative leadership role within the project, and it may be appropriate to assign project leads over the multiple aspects and areas of the project to ensure cohesion and avoid duplication. Appointing individuals from the Somali community, at least in addition to "outsiders" on the development teams, would provide and protect trust among business relationships and ensure aspects such as traceability and transparency are achieved.

### ***3.6.2. Social, Economic, and Environmental Considerations***



Throughout the interviews it was evident that the designated halal meat processing facility is believed to carry many benefits in social, economic, and environmental impacts. These three themes were developed independently within the analysis as unique concepts within the data and can be considered guides as the project progresses.

The components of social, economic, and environmental considerations which are contained in the FAO's sustainability in food systems model indicate the project's potential for providing a lasting solution to a food system problem within this community. By increasing social and community development, to include Somali community development and social connections into the other components of the food system, improving economic functions and prosperity within the system's geographic area, and promoting environmental stewardship through careful livestock and land management practices on farms, the designated halal meat processing facility's impact can be incredibly holistic. These components should be encouraged to collaborate through increased interaction and engagement with the others through strategic problem-solving activities to produce outcomes that can be immediately used. Allowing these groups of developers and community members, financial investors, and farmer producers to remain siloed is not conducive to collective action and could lead to duplication or halted movement in the project's progress. Organized collaboration between these components with a critical lens for holism will allow for unity and ultimately promote sustainability in the system.

### ***3.6.3. Sovereignty***

Sovereignty is an umbrella that must be considered over all aspects of project progress. Sovereignty does not exclude community outsiders from participating meaningfully in the project but allows for the community the project is intended to serve to become key in all strategic and operational considerations of the project, ensuring the outcomes serve this community in a way that matches their specific needs. Keeping in mind the elements necessary for determining sustainability listed above, all involved parties must consider the appropriateness from the context of the community of each decision and development. One participant recommended stewardship of Somali farmers as part of the development of this system, but it is unknown if Somali people wish to become farmers and producers of this product. While the project may search for funding as it is an immediate need, careful consideration must be placed on the designation of these funds, what types of agreement are pursued, and how sources of funding may influence the project's outcomes. It is imperative that careful consideration be placed on decisions regarding funding and leadership as any inauthentic pieces could dishevel the potential for appropriate outcomes of the entire project. Rather, developers should encourage Somali community members to come forward as leaders within the project, sharing with them the holistic benefits that could come from the project as identified within research and development endeavors, and allowing for their independent action going forward.

#### 4. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The outcomes of each study are collectively informative in the research, development, and other considerations within the proposed designated halal meat processing facility in Minnesota. Results provide the opportunity for newly informed research and practice to assist in the development of the project. The study results concur with the findings of Kagan et al. (2020) that the development of a system that provides access to fresh goat meat is a concern and an interest among Somali and researcher groups in Central Minnesota. Careful cultural understanding produced through the establishment of genuine relationships is necessary within this project as was recommended by Kuo et al. (2020) related to concerns about sovereignty. Clarifying halal standards and expectations throughout the supply chain remain necessary to produce processing models and solutions that comply with both regulatory and consumer faith expectations (Kagan et al., 2020).

The limitation of capital resources continues to create a barrier for forward movement in the design and development processes necessary for the project. In the case reviewed for the first study, it was found that adherence to a niche marketing strategy in the operation of a designated halal meat processing facility does not predict the facility's role in serving domestic markets in culturally desirable ways. Future research should be conducted that evaluates alternative models for both marketing and processing that could better suit the needs of the Somali community in Central Minnesota. Furthermore, Kagan et al. (2020) recommended the consideration of a co-ownership model to facilitate the establishment of trust, but this model should be evaluated for its efficacy

among other similar food systems and discussed within stakeholder groups to determine its applicability and suitability to the specific issue of access to fresh halal meat.

Researchers and developers may consider identifying funding opportunities and should assist Somali community leaders in the project in acquiring funds and potential investors in providing educational and other relevant resources. Inquiries to conventional small- to mid-sized meat processing facilities in the state of MN may lead to or assist in developing feasibility studies for the halal meat project as well.

Researchers are recommended to conduct producer inquiry studies identifying goat producers and providing them with resources while assessing their production capacities, existing and expected marketing profitability, and needs for expansion of goat production in the state and integration into the halal food system. Furthermore, as sovereignty was identified as a component of developing sustainable models for halal meat processing, researchers should seek to understand the desires of the Somali community pertaining to their involvement within the food system across the entire supply chain.

Several areas of practice are suggested to inform the continued research regarding this food system's development. Pilot programs including all aspects of the supply chain—from sourcing livestock to goat production expansion and identifying processing model alternatives—should be employed to assess feasibility and scalability of a designated halal meat processing facility. Local Somali community members, leaders, and food system stakeholders should be consulted at all levels of piloting to assess the program's adherence to cultural expectations and to allow for insightful and

important cultural considerations to be part of the programs' development and evaluation. Leaders in both the Somali community and food systems development teams should organize to develop pilot programs and write plans to submit for the request for American Rescue Plan funds issued by the USDA and President Biden in 2021. Funds could be requested for the development of new processing models or the enhancement of existing processing facilities to meet the needs within pilot programs and final development decisions. The stakeholder group should consider the use of design thinking methods within this collaborative approach to identify solutions and build and test prototypes, leading to deployment of a final vetted solution (Jamal et al., 2021). Ultimately, the consideration of time and patience in building relationships and fostering trust among stakeholders should encompass the entirety of the project's continued development to ensure agreed-upon and equitable solutions are embraced by all facets of the unique halal meat food system and those involved in its development and fruition.

## 5. REFERENCES

- Alkon, A. H., & Mares, T. M. (2012). Food sovereignty in U.S. food movements: Radical visions and neoliberal constraints. *Journal of Agriculture and Human Values*, 29, 347-359. <https://doi.org/10.1007/s10460-012-9356-z>
- Alserhan, B. A. (2010). Islamic branding: A conceptualization of related terms. *Journal of Brand Management*, 18(1), 34-49. <https://doi.org/10.1057/bm.2010.18>
- Alzeer, J., Ulrike, R., & Hadeed, K. A. (2017). Rational and practical aspects of halal and tayyib in the context of food safety. *Trends in Food Science and Technology*, 71, 264-267. <https://doi.org/10.1016/j.tifs.2017.10.020>
- Bittle, S., & Rochkind, J. (2010). *A place to call home: What immigrants say now about life in America*. Public Agenda. <https://files.eric.ed.gov/fulltext/ED513490.pdf>
- Dalgic, T., & Leeuw, M. (1994). Niche marketing revisited: Concept, applications and some European cases. *European Journal of Marketing*, 28(4), 39-55. [https://doi.org/10.1007/978-3-319-13159-7\\_32](https://doi.org/10.1007/978-3-319-13159-7_32)
- Dharod, J. M., Croom, J., Sady, C. G., & Morrell, D. (2011). Dietary intake, food security, and acculturation among Somali refugees in the United States: Results of a pilot study. *Journal of Immigrant & Refugee Studies*, 9(1), 82-91. <https://doi.org/10.1080/15562948.2011.547827>
- Fisher, J. C., Mangione, D. A., Nye, L. A., & Stock, R. (2009). Cultural and preference understanding to develop halal niche markets. *Journal of the National Association of County Agricultural Agents*, 2(1). <https://www.nacaa.com/journal/index.php?jid=10>
- Hadley, C., Patil, C., & Nahayo, D. (2010). Difficulty in the food environment and the experience of food insecurity among refugees resettled in the United States. *Ecology of Food and Nutrition*, 49, 390-407. <https://doi.org/10.1080/03670244.2010.507440>
- Hanzaee, K. H., & Ramezani, M. R. (2011). Intention to halal products in the world markets. *Interdisciplinary Journal of Research in Business*, 1(5), 1-7. [https://www.academia.edu/6019170/Intention\\_To\\_Halal\\_Products\\_In\\_The\\_World\\_Markets](https://www.academia.edu/6019170/Intention_To_Halal_Products_In_The_World_Markets)

- Holmes, A. D. G. (2020). Researcher positionality: A consideration of its influence and place in qualitative research – a new researcher guide. *International Journal of Education*, 8(4), 1-10. <https://doi.org/10.34293/education.v8i43232>
- Jamal, T., Kircher, J., Donaldson, J. P. (2021). Re-visiting design thinking for learning and practice: Critical pedagogy, conative empathy. *Sustainability*, 13(2), 964. <https://doi.org/10.3390/su13020964>
- Kagan, A., Olive, R., & Draeger, K. (2020). *Halal and kosher Minnesota meat market assessment: Analysis, implications, and recommendations*. Agricultural Utilization Research Institute; Minnesota Department of Agriculture. [https://auri.wpengine.com/wp-content/uploads/2020/02/Halal-and-Kosher-Report\\_FINAL-published-v2-6-23-2020.pdf](https://auri.wpengine.com/wp-content/uploads/2020/02/Halal-and-Kosher-Report_FINAL-published-v2-6-23-2020.pdf)
- Khan, M. I., & Haleem, A. (2016). Understanding “halal” and “halal certification & accreditation system” - a brief review. *Saudi Journal of Business and Management Studies*, 1(1), 32- 42. <https://www.researchgate.net/publication/303459476>
- Kuo, W., Kim, S., & Lachapelle, P. (2020). Incorporating community culture in teaching food innovation: Ideation, prototyping, and storytelling. *Journal of Food Science Education* 19(4), 292-307. <https://doi.org/10.1111/1541-4329.12201>
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation*. Jossey-Bass.
- Neven, D. (2014). *Developing sustainable food value chains: Guiding principles*. Food and Agriculture Organization of the United Nations. <https://www.fao.org/3/i3953e/i3953e.pdf>
- Odom, S. F., Stoddard, K., Dunlap, K., Donaldson, J. P., & Stoltzmann, R. (2021). Utilizing design thinking as a teaching method for building college students’ employability skills. *North American Colleges and Teachers of Agriculture (NACTA) Journal*, 65(1).
- Population Movements. (2018, August 9). <https://www.cdc.gov/immigrantrefugeehealth/profiles/somali/populationMovements.html>
- Riaz, M. N., & Chaudry, M. M. (2019). *Handbook of halal food production*. CRC Press, Taylor & Francis Group, LLC.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). The Free Press.

- Stanley, P. L., Rowntree, J. E., Beede, D. K., DeLonge, M. S., & Hamm, M. W. (2018). Impacts of soil carbon sequestration on life cycle greenhouse gas emissions in Midwestern USA beef finishing systems. *Journal of Agricultural Systems*, 162, 249-258. <https://doi.org/10.1016/j.agsy.2018.02.003>
- Tieman, M., Van der Vorst, J. G., & Che Ghazali, M. (2012). Principles in halal supply chain management. *Journal of Islamic Marketing*, 3(3), 217-243. <https://doi.org/10.1108/17590831211259727>
- Trechter, D. & Parks, D. (2005, January). *Somali goat meat preference survey*. Institute for Agriculture and Trade Policy. <https://www.iatp.org/documents/somali-goat-meat-preference-survey>
- Worley, C. T., Ellerman, J., Mangione, D., West, T., & Yang, Y. (2004). Meat-goat market analysis: A pilot study of the Somali market in Columbus, OH. *Journal of Food Distribution Research*, 35(1), 182-187. <https://ageconsearch.umn.edu/record/27114/files/35010182.pdf>
- Yin, R. K. (2018). *Case study research and applications: Designs and methods* (6th ed.). Sage Publishing.



## APPENDIX A

### COMPREHENSIVE INTERVIEW PROTOCOL, FIRST STUDY

#### Demographics

1. What is your name?
2. What is the name of the facility with which you are affiliated?
3. Tell me a little about your facility.
4. What is your title?
5. Describe the nature of your position. What duties do you perform?
6. Is there anything else you would like me to know about your position?

#### Facility-Specific Questions

1. Where does the facility get its livestock?
2. What kinds of livestock does the facility take in to process halal?
3. What kinds of livestock does the facility take in to process conventionally?
4. Who buys the halal meat?
5. How do they purchase their meat?
6. Are there other types of customers?
7. Are there any other facilities like yours nearby?
8. Does your facility experience any challenges because of other halal meats available to its customers?
9. How does the facility keep track of its customers and sales?
10. How does the facility grow its customer base or reach new customers?
11. Does the facility have someone who is in charge of customer relations and service?
12. What does the facility do to make their halal meats competitive?
13. What do you think the facility does well in making the halal products competitive?
14. What do you think is important for halal meat processing facilities to do in order to be successful?
15. How does the facility create an environment in which every employee works for the same goals?
16. What does the facility do in order to keep a good relationship with its customers and not lose them to competitors?
17. Does the facility do other types of processing besides halal?
18. How does the facility manage it all?
19. How does the facility make sure it is meeting its goals?
20. Has it struggled to meet these goals? Why or why not?
21. How well does the facility respond to changes in its market.
22. How does it plan for these predictable and unpredictable changes?
23. Does the facility ever consider or work toward providing new and different products? If so, what are some examples?
24. What does the facility do if the demand for halal meats drops?
25. Does the facility use other niches to stay profitable? If so, what are they?

## APPENDIX B

### COMPREHENSIVE INTERVIEW PROTOCOL, SECOND STUDY

#### Processing Facility Development

1. What are your thoughts about developing a halal meat processing facility here?
2. Who should own the facility? Why?
3. Who should not own the facility? Why?
4. Where should the facility be located? Why?
5. Who should work at the facility? Why?
6. What types of livestock should be slaughtered in the facility?
7. Should the facility slaughter live animals? If so, where should the livestock come from and who should raise the livestock? If not, do you think the facility should purchase meat from other halal packing and slaughter facilities and eliminate the slaughter component all together? Why or why not?
8. What else should developers consider with regard to sourcing livestock or meat products for the facility?
9. What types of meat products should be made?
10. Where should those products be sold?
11. How should the products be sold?
12. Who will buy the products?
13. What role would you like to play in the development and operation of this facility?
14. What roles should other community members play in its development and operation?

#### Food Sovereignty and Community Engagement and Development

1. How do you think this halal meat processing facility could help the community?
2. In what ways do you think this will improve the livelihoods of halal consumer community members?
3. In what ways will this facility affect you personally?
4. How could this facility benefit everyone – not just the Somali community – in Central Minnesota?
5. Is it important to you that Somalians own the facility? Why or why not?
6. Is it important to you that Somalians supply the livestock? Why or why not?
7. How is having a local halal meat processing facility better than relying on imported halal meat?
8. How can researchers and developers best help in the project?
9. What are your concerns about this project?
10. What other options can you think of that may be more beneficial for halal meat consumers here?
11. Please share anything you think is important for people to know about this facility and its impact on the community.