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## Challenges in small-scale broiler production in Botswana

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A study was carried out to investigate marketing constraints in small-scale broiler production in 13 centres of Botswana. A total of 138 farmers and 178 retailers were interviewed using a structured questionnaire. The results showed that 70% of producers slaughtered their chickens in the backyards, and/or under trees, indicating that hygiene was a major challenge. Also, chickens were sold live to the public. These results imply that producers did not have slaughter facilities resulting in hygiene standards not being met in accordance with Livestock Meat Industries Act of 2007. Forty-seven percent of the farmers said halaal was a major constraint to market access. Other constraints included low prices offered by chain stores, lack of slaughter facilities, high feed cost, high cost of veterinary drugs, high chick mortality, high utility costs, lack of services and lack of refrigerated transport. Similarly, 47% of the traders said they purchased only halaal meat. These results suggested that halaal requirement by some retailers and lack of slaughter facilities could be a hindrance to market access by small-scale broiler producers.

**Key words:** Chicken meat, halaal, hygiene, LIMID, Livestock Meat Industries Act

### Introduction

The poultry sub-sector of Botswana can be broadly categorized into commercial and traditional (also referred to as family poultry). The commercial enterprise can be further categorized into small-scale ( $\leq 20\,000$  birds), medium-scale (20 001 to 50 000 birds) and large-scale ( $> 50\,000$  birds). According to Poultry Annual Report (2000, 2001), one of the major constraints in small-scale poultry production is lack of slaughter facilities. Given this, Government has put in place financial support schemes such as Livestock Management and Infrastructure Development (LIMID) to assist citizen poultry meat producers (Ministry of Agriculture 2006, 2010) put up poultry slaughter facilities across the country to enhance market access and hygiene. In spite of the potential benefits of small-scale poultry production and Government support, the

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industry faces challenges including lack of market access, high cost of feed and veterinary drugs, lack of utilities (electricity, water and telephones), halaal, low prices offered by wholesalers and retailers and lack of slaughtering facilities (Poultry Annual Report 2000, 2001; Moreki, 2010).

Currently, Botswana is self sufficient in chicken meat requirements (Anon, 2008). However, the poultry industry is dominated by a few large-scale producers who account for less than 10% of the total producers but supply over 80% of the market requirements. Badubi *et al.* (2004) state that small-scale broiler producers have difficulties in gaining access to big retail outlets because they cannot offer a regular supply of broiler meat. The workers contend that small-scale poultry farmers do not have economies of scale to compete with the large-scale commercial enterprises and therefore remain marginalized. According to Anon (2004), supermarkets (chain stores) do not buy products from small-scale broiler producers under the pretext that birds are not slaughtered hygienically and in accordance with the halaal ritual. As a result, Government came up with Statutory Instrument No. 9 of 2009 (Control of Goods (Marking and Labelling of Halaal and Non-Halaal Meat Products) Regulations) to promote sale of halaal and non-halaal poultry meat products side by side. Section 3 of the Statutory Instrument states that meat and meat products shall be marked or labeled “halaal” or “non-halaal” in such a way that it is clearly identifiable. In Botswana, hygiene standards for the slaughter of poultry for human consumption are controlled and set under the Livestock and Meat Industries Act (Cap. 36:03).

According to Halaal Food Authority (2010), halaal means permitted, allowed, lawful or legal according to the Islamic faith. In relation to food or drink, it means that the food or drink is lawful, permitted or allowed for Muslims. The Islamic dietary laws define what food and drinks are halaal. According to Toronto Public Health (2004), for meat and poultry to be halaal, animals must be slaughtered according to Islamic dietary laws (Zabihah). Halaal calls for animals to be prayed for before slaughter and be slaughtered in a way that allows full bleeding. The opposite of halaal is haraam, which means prohibited, not allowed, unlawful or illegal under Muslim religion. Halaal food is considered to be healthy for consumption by Muslims. Few studies on marketing constraints of small-scale broiler producers have been carried out. Therefore, a study was carried out to ascertain marketing challenges faced by small-scale broiler producers in 13 centres (3 towns and 10 rural) of Botswana.

The overall objective of the study was to ascertain the challenges to market access by small-scale broiler producers. The specific objective was to assess the extent to which halaal requirements hinder market access by small-scale broiler producers and recommend ways of enhancing markets by small-scale poultry meat producers.

### Materials and methods

Data collection occurred from 9<sup>th</sup> to 23<sup>rd</sup> January 2009 and was performed using a structured questionnaire and through direct observations. Secondary sources of data were also reviewed. The study targeted small-scale broiler producers and retailers/wholesalers in 13 centres (Lobatse, Ramotswa, Kanye, Tlokweng, Mogoditshane, Gaborone, Mochudi, Molepolole, Mahalapye, Palapye, Serowe, Francistown, Selibe Phikwe, and Maun). A total of 138 small-scale broiler producers were interviewed (Table 1) and the majority of the respondents were from Francistown which has a large number of producers compared to other centres covered in this study. In addition, 178 traders were interviewed.

**Table 1.** Number of broiler producers interviewed in 13 centres

Centre	No. of respondents	Percent
Francistown	40	29.0
Selebi Phikwe	7	5.07
Lobatse	11	7.97
Mahalapye	10	7.25
Palapye	8	5.80
Serowe	7	5.07
Mochudi	10	7.25
Metsimotlhabe	3	2.17
Molepolole	15	10.9
Maun	4	2.90
Ramotswa	4	2.90
Tlokweng	9	6.52
Kanye	10	7.25
Total	138	100

Data were analysed using Microsoft Excel. Descriptive statistics such as means and percentages were used to summarize the results.

## Results and discussion

### *Producers' knowledge of halaal*

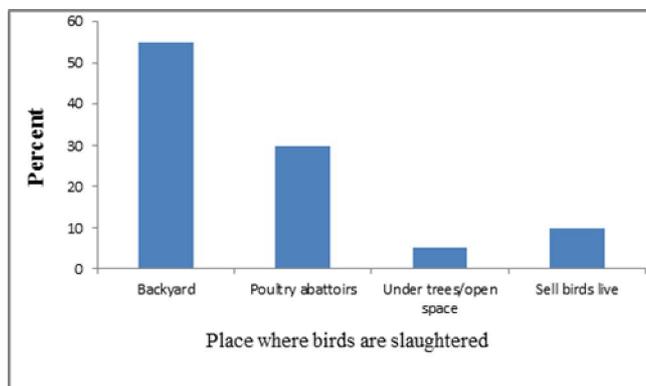
Data on the respondents' knowledge of halaal are given in Table 2. According to Table 2, the majority (32.6%) of the respondents said they knew nothing about halaal, 29.7% referred to halaal as praying before slaughter, 23.4% said halaal was slaughtering chickens in accordance with Muslim religion, whereas 1.4% said halaal was a trade mark for the Muslims. These results show that the majority of respondents had some knowledge of halaal.

**Table 2.** Producers' knowledge of halaal

Responses	No. of respondents	Percent
Trade mark for Muslims	2	1.45
Slaughtering chickens according to Islamic religion	32	23.2
Knew nothing	45	32.6
Praying before slaughter	41	29.7
Other	18	13.0
Total	138	100

### *Chicken slaughter facilities*

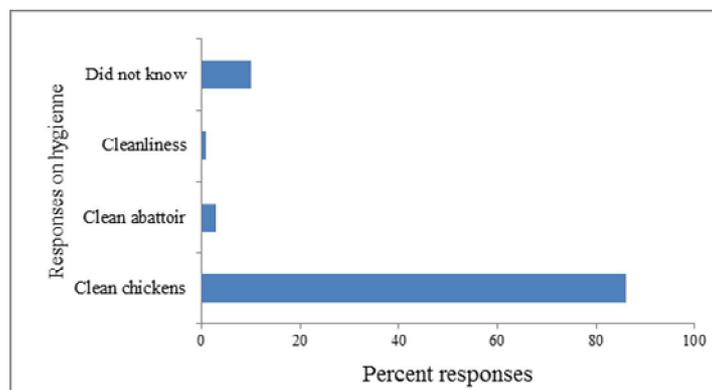
Fifty-eight percent of the producers said they slaughtered chickens in the backyard (small/single rooms built for that purpose or kitchens in the house), 30 % in the abattoirs and 5% under trees or open space within poultry farms. In addition, about 10% of the birds were sold live to individual customers as seen in Figure 1. It is clearly revealed that over 70% of producers slaughtered their chickens in the backyards, and/or under trees or sold them (birds) live to the general public. This result is consistent with Mosinyi (1999) who argued that chicken meat is not inspected in Botswana. The fact that most small-scale producers slaughtered birds in the back yards implies that producers do not practice halaal ritual because of its associated high expense and lack of slaughtering facilities which contributed to hygiene standards not being met during meat processing. In recognition of this constraint, government is assisting small-scale poultry farmers through LIMID support scheme to construct cooperative abattoirs across the country to enhance access to the market. According to Ministry of Agriculture (2010), assistance is given to farmers who have formed themselves into a cooperative society.



**Fig 1.** Slaughter places for chickens

***Understanding of hygiene***

Responses on the producers’ understanding of hygiene are illustrated in Figure 2. About 90% of the producers said that they understood hygiene while the remainder (10%) said that they had no idea or knew nothing about it. These results indicated that producers did have some understanding of hygiene. The respondents referred to hygiene as cleanliness of the facility, health status of employees and freezing of chicken meat. The present results point to the excellent work performed by the extension service in teaching farmers about hygiene.



**Fig 2.** Producers’ understanding of hygiene

***Buyers of chicken meat***

The buyers of chicken meat distributed across the 13 centres are presented in Table 3. The small-scale broiler producers supplied mostly individuals (47.8%) followed by individuals and vendors, and all (individuals,

vendors, retailers and wholesalers). Only 2.17% and 1.45% of the respondents said that they sold their produce to Government institutions and traders (retailers/wholesalers), respectively. Badubi *et al.* (2004) argued that small-scale farmers are forced to sell their birds live because they lack refrigeration facilities. In general, the prices offered for the live market are lower than those for dressed birds resulting in losses. These results were consistent with Anon (2004) who reported that the only market for small-scale poultry producers is through selling to individuals, community junior secondary schools, take-away outlets and food vendors.

**Table 3.** Market outlets for small-scale poultry meat producers

<b>Customers</b>	<b>No. of respondents</b>	<b>Percent</b>
Individuals	66	47.8
Vendors	3	2.17
Retailers	8	5.80
Individuals and vendors	18	13.0
Vendors and retailers	4	2.90
Retailers and wholesalers	2	1.45
Individuals and retailers	11	7.97
Government institutions	3	2.17
Individuals & Govt. institutions	5	3.62
All	18	13.0
Total	138	100.0

### ***Some constraints in small-scale broiler production***

The majority of respondents (47%) said that halaal was a major constraint in small-scale broiler production. This finding is consistent with Moreki (2010) who reported that halaal requirement by the majority of retailers denies small-scale producers access to the market as they do not have money to pay Muslims slaughterers who are salaried higher than other farm employees. In addition, 36% of the respondents said they did not have marketing challenges while 17% cited some challenges besides halaal. The respondents in the present study mentioned that Muslim slaughterers had higher salary than most farm employees. Given the high salary of Muslim slaughterers the majority of whom are foreigners it appears that it is not economically feasible for small-scale broiler producers who are cash-strapped to adopt the halaal practice. Generally, it was observed that hygiene standards in most farms visited were not in accordance with the Livestock Meat Industries Act, indicating that halaal cannot be used as a basis of good hygiene.

The results of this study suggested that halaal is not practised in small-scale poultry production, as it is perceived by small-scale poultry producers to be costly. Whande (2007) stated that a permit worth BWP5 000 (USD770) per year was required for one to be allowed to engage a Muslim slaughterer to perform the halaal ritual. However, there were divergent views on subscription fees paid to Muslim Association of Botswana. For instance, some farms said that they did not pay for the license, whereas others indicated that they did pay some money. This indicates that differences in the application of the halaal ritual between farms do exist. Such differences are noted also in the duration of the license, which ranged from 6 to 12 months.

The response “other” that accounted for 17% encompassed low prices dictated by chain stores that are usually lower than production costs, high feed costs, high costs of veterinary drugs, high chick mortality, high utility costs, and lack of refrigerated transport. Thirty-six percent of the farmers said they did not have supply problems. Mosinyi (1999) cited high costs of feeds, veterinary requisites and poultry equipment, as well as, lack of utilities (i.e., water, electricity and telecommunications) as some major constraints in Botswana’s poultry industry. Also, Badubi *et al.* (2004) reported high feed expense and low prices offered by chain stores to be some major constraints in small-scale broiler production. Additionally, the workers reported that feed quality was variable in quality and that its supply was irregular. Badubi *et al.* (2004) reported that poultry feed represents a serious problem to the farmer and prevents birds from achieving maximum growth. High chick mortality reported in this study might be attributed to poor brooding practices, lack of health management practices including inadequate biosecurity measures and feeding birds with poor quality feeds.

#### ***Traders (retailers and wholesalers)***

##### ***Suppliers of chicken meat***

Forty-seven percent of traders said that they bought chicken meat exclusively from the suppliers who offered halaal products, while 53% said they did not. These results showed that the majority of traders did not stipulate halaal requirement, indicating that meat from small-scale producers could still find its way into these markets. However, the fact that 47% of the respondents indicated that they required halaal products suggests that the halaal requirement could be a barrier to trade, especially for small-scale farmers who can not afford the services of a Muslim slaughterer.

### ***Perceptions about halaal chicken meat***

A total of 109 retailers representing 61% said that most of their customers were not particular about halaal with a few exceptions. On the other hand, 38% of the respondents indicated that their customers were particular about halaal, i.e., they required only halaal meat, whereas 1% of the respondents were not sure if they were particular about halaal or not. The retailers said that Muslims, the majority of whom are Asians were particular about halaal. On the other hand, Whites and indigenous Batswana were not particular about halaal. These results suggest that the majority of consumers (61%) in research sites did not mind eating halaal meat.

To address the constraints faced by small-scale broiler producers, the following recommendations are suggested:- (a) in awarding government tenders, priority should be given to small-scale poultry slaughter facilities that conform to the required hygiene standards, (b) Government should consider subsidizing chicken feed and veterinary drugs for small-scale poultry producers (both broiler and layer) only, and (c) Government should as a matter of urgency consider allocating serviced land to small-scale broiler producers who do not have adequate resources to bring utilities such as electricity and water to their farms.

A high proportion (47%) of small-scale broiler producers mentioned that halaal was a major constraint to market access (Figure 3). Other constraints included lack of slaughter facilities, high costs of feed and veterinary drugs, low prices offered by buyers, failure to win government tenders, lack of refrigerated transport and unavailability of utilities (water and electricity) on farms.

Compliance with hygiene standards was a major challenge to poultry slaughter facilities in the present study. Currently, all broiler producers, including large-scale producers, do not meet the required hygiene standards set out in the Livestock Meat Industries Act of 2007. As a result, most poultry slaughter facilities across the country operate under temporary licenses which last for 12 months. This is meant to allow slaughter facilities to raise their hygiene to the level required by the Livestock Meat Industries Act. Construction of poultry abattoirs requires that environmental impact assessment (EIA) studies to be performed prior to the disbursement of the grant. EIA studies are costly and time consuming, and have proved to be another hindrance towards construction of poultry abattoirs.

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