

## STATUS AND DISPOSAL PATTERN OF UNORGANISED MEAT SECTOR IN MATHURA DISTRICT OF UTTAR PRADESH

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### ABSTRACT

The present study was conducted to appraise the status of meat workers engaged in unorganized slaughter and sale of chicken, chevon and carabeef in Mathura District of Uttar Pradesh. The study was conducted with the objective to study the socio-personal and socio-economic profile of the respondents, to know the disposal pattern of meat and meat by products and consumers' perception about the meat and meat shop. A total of 34 functional meat shops were selected for the present study. The study revealed that 91.17 percent of meat business was owned by Muslim community person aged between 35-50 yrs. Majority of respondents were functionally literate and 70.59 percent were in opinion to carry forward the meat business to next generation. It was observed that majority of these persons carrying the meat business were experienced (10-20 yrs) and 47.06 percent were earning more than two lakhs annually. Seventy percent of the butchers were in possession of meat shops. There were no facilities of lairage, Ante-mortem (AM) and Post-mortem (PM) inspection in all of the meat shops though 38.23% meat shops were having the facility of refrigeration. Halal was the common practice of animal slaughter and source of animals for slaughter was nearby markets. The major by-products were processed and sold while rest were disposed directly as waste material. The study reveals that meat workers constitute the important stake holders in meat chain.

**Keywords:** Carabeef, Chevon, Chicken, Disposal pattern, unorganised meat sector, Uttar Pradesh

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Meat industry in India is not growing with its full pace due to negative attitude of public towards meat on account of misinformation campaigns and socio-political considerations. Generally small animals (sheep, goats and pigs) are slaughtered in unregistered slaughter houses in small numbers ranging from 2–10 by the individual butchers and the meat is sold fresh on the same day.

India ranks fifth in world meat production, with present meat production of 8.11 million tonnes in which buffalo meat production contributes about 19%, cattle and pigs contributes about (5%), sheep (5%), goat (14%) and poultry (50%) in total meat production (DAHD, 2019). Annual growth for meat production in India was reported 5.99% in 2018-19. Top five meat producing states in India are Uttar Pradesh (15.1%), Maharashtra (12.6%), West Bengal (10.2%), Andhra Pradesh (9.6%) and Telangana (9.3%) respectively which contributes around 56.9% of total meat production in country. India's export of animal products was Rs. 26,383.99 Crores/3,694.29 USD Millions, which include the major products like buffalo Meat (Rs. 22668.47 Crores/3175.09 USD Millions), sheep/ goat meat (Rs. 646.69 Crores/ 90.77 USD Millions) and poultry products (Rs. 574.58 Crores/80.36 USD Millions) (APEDA, 2019). In spite of such a lucrative growth rate, majority of Indian meat industry is governed by unorganized sector.

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There are about 8000 registered and more than 20,000 unregistered slaughter houses in country and most of them are devoid of basic amenities, outdated, inadequately equipped and unhygienic. Most consumers purchase meat from traditional meat shops, where butchers slaughter limited animals for sale of meat throughout the day. Most of the meat for domestic consumption comes from poultry, sheep and goat that are slaughtered in unorganized/unregistered premises/meat shops. Nutritionally meat prepared after cooking, roasting, frying revealed better consumer preference (Singh *et al.*, 2012). Meat selling through small retail shops is the most common way in rural settings and towns of India (Ranjhan and Rawat, 2011). In fact, very high proportion (98.00%) of food animals slaughter and selling is still being handled by wholesalers and small retail shops in India (PFA, 2012). Consumers' preference for freshly cut birds/animals along with poor refrigeration facilities are probable factors for existence of retail meat shops in India. The shops are managed by meat sellers/butchers, who form an integral part in the marketing channel of meat selling activity. In fact, butchers act as system nodes in meat selling as entire meat trade passes through butchers till sell of the products (Kumar and Keshav, 2010). Keeping these aspects, the present study was planned with the objective to study the socio-personal and socio-economic profile of the

respondents, to know the facilities available at the meat shops, disposal pattern of meat and meat by products and consumers' perception about the meat and meat shop.

## MATERIALS AND METHODS

This study was conducted in Mathura District of Uttar Pradesh state with an ex-post facto research design. Meat sellers having their own meat shops were randomly selected to assess the status and disposal pattern of meat and meat by products in unorganised sector. The researcher initially visited the meat shops and prepared a list of these shops. Finally, a total of 34 meat shop owners were randomly selected from the list of 62 meat shops. The Information was personally collected with the help of a well developed interview schedule and respondents were categorised by using mean and standard deviation. View of 100 consumers who were visiting the meat shops, was also collected on meat and meat shops for ten major factors which can influence the consumers' decision to purchase fresh meat from meat shops. The response from each item were collected in three point continuum i.e. Strongly Agree, Agree, Disagree and given weightage of 2, 1 & 0. After duly recording their judgments, the statements were considered for the analysis by calculating their Weighted Mean Scores (WMS).

$$\text{Consumer perception} = \frac{\text{(Actual scores obtained for the statement)}}{\text{Maxi possible scores obtainable for the statement}} \times 100$$

The weighted means score of the statement was calculated and the statements were ranked accordingly.

## RESULT AND DISCUSSION

### Socio-personnel and socio-economic profile of respondents

**/butchers:** The details of socio-personal and socio-economic profile of meat sellers were presented in Table 1. The study revealed that age of the respondents/butchers were in the range of 18 to 61 years and majority of them were in medium age group (35 to 50 years). It indicated that butchery business requires active and energetic members of the society. The same findings for people engaged in slaughter business were indicated by Adzitey *et al.* (2011). Average aged persons engaged in slaughter business could be due to their better procurement ability and in a traditional society the resources are passed on through inheritance, thus it becomes family liability and responsibility of the individual. It was seen that majority of respondents belonged to muslim community (91.17%) and only 8.83% of butchers belonged to Hindu community. These persons were engaged in butcher's business either as inherited professional activity or undertook it as their first activity without switching on the other profession. This is

because of traditional society where resources are passed on through inheritance (Ngore *et al.*, 2011). The meat business is mostly owned and run by the functionally literate members of the households or a particular community. This is because butchery business is perceived as a menial job meant for the uneducated and/or the unemployed youth. As a result, slaughter business is unorganised and is suffering from lack of management skills. This fact was supported by Robinson and Sexton (1994) because they perceived that the education level is found directly related to management skills. All the slaughter business owners were landless and they were solely dependent on this business. It was observed that majority of respondents involved in the business were earning a good amount as 41.17 % of the respondents belong to medium income group and 47.06% belong to high income group. However, the range considered for high and medium income group cannot compete today with the higher income group as per present Indian standards. The larger family size and distribution of the earnings among all the family members for their day to day requirements hampers their standard of life style. The work experience of butchers in slaughter business was quite higher (10-20 years). It is based on the belief that slaughter business is a skilled business and person engaged in this job can get expertise only by the experience.

**Facilities available at meat shop:** It was observed that 70.58% of the respondents owned the premises and rest were carrying the business in rented shops. The owned premises were having poor facilities and rented houses had threats to discontinue the business. This indicated that around 29.42% butchers were having resource constraints as they were not able to afford to their own business premises. The butchers were having limited resources for investment on the premises and facilities required for quality meat production. Similar constraints were reported by Ngore *et al.* (2011) about the respondents involved in slaughter business. The study indicated that no meat shop in study had facility of lairage for animal rest, facility for ante-mortem and post mortem examination as well. It clearly indicated that traditional practices for slaughter of chicken, goat and buffalo were followed by the respondents. The lairage facility is essential to provide proper rest to animals intended for slaughter. Ante-mortem and post-mortem examination was also not carried out in these shops by any expert professional. It always posed the problems of transfer of zoonotic diseases to butchers as well as to the consumers. Therefore, it can be summarized that quality meat production in these meat shops was a distant target to achieve. The same findings were also indicated by Thakur *et al.* (2014). It was evident that only

**Table 1**  
**Socio-personal and socio-economic profile of meat seller**

| Variables                               | Category              | Frequency | Percentage |
|---|-----------------------|-----------|------------|
| Age (Years) Range: 18-61                | Low (< 35)            | 10        | 29.41      |
|   | Medium (35-50)        | 17        | 50.00      |
|   | High (>50)            | 7         | 20.59      |
| Education                               | Illiterate            | 1         | 2.94       |
|   | Functionally literate | 15        | 44.11      |
|   | Primary               | 11        | 32.35      |
|   | Middle                | 2         | 5.89       |
|   | Secondary             | 4         | 11.77      |
|   | Intermediate          | 1         | 2.94       |
|   | Graduate              | 0         | 0.00       |
| Family size Range: 3-9                  | Low (<4)              | 9         | 26.47      |
|   | Medium (4-6)          | 18        | 52.94      |
|   | Big (>6)              | 7         | 20.59      |
| Occupation                              | Only butcher          | 32        | 94.11      |
|   | Butcher + labour      | 2         | 5.89       |
| Annual income (Rs.) Range: 36000-500000 | Low (<59430)          | 4         | 11.77      |
|   | Medium (59431-194088) | 14        | 41.17      |
|   | High (> 194089)       | 16        | 47.06      |
| Butchers Experience (Years) Range: 2-40 | Low (< 10)            | 5         | 14.71      |
|   | Medium (10-20)        | 17        | 50.00      |
|   | High (> 20)           | 12        | 35.29      |

n=34

**Table 2**  
**Slaughtering status of chicken for consumers**

| S. No. | Slaughter factor  | Category  | Frequency | Percentage |
|--------|-------------------|-----------|-----------|------------|
| 1.     | Source of animals | Market    | 11        | 100.00     |
|        |                   | Producer  | 0         | 0.00       |
| 2.     | Age group         | Broiler   | 11        | 100.00     |
|        |                   | Layer     | 0         | 0.00       |
| 3.     | Slaughter method  | Halal     | 9         | 81.81      |
|        |                   | Jhatka    | 2         | 18.19      |
| 4.     | Time of slaughter | Whole day | 11        | 100.00     |

38.23% meat shops were having refrigeration facilities. It might be due to lack of finances or due to lack of awareness about the benefits of refrigeration in these meat shops. Another possible reason could be due to lesser chances of any unsold meat left at the end of the day at the meat shop.

**Slaughter status of different animals:** Slaughter status of different animals was studied in terms of source & age of animals, slaughter method adopted and time of slaughter. Chicken for slaughter were procured from local poultry farms (Table 2). It is the common source of raw material for chicken slaughter houses of India and other countries Ranjhan and Rawat, (2011). The broilers accounted for

cent percent chicken meat production. National Chicken Council Report (2016) also indicated that major chunk of chicken meat is from broilers. The halal practices for chicken slaughter indicated 81.81% share in total slaughter practices as a major chunk goes to Muslim consumers or butchers' shop was owned by Muslim personnel. The goats were procured from local market and most preferred one are buck/castrated buck (Table 3). Preferred time of slaughtering the animal was morning as suggested by Singh *et al.* (2014). Castration of male goat is widely used not only to eliminate or reduce the unwanted goaty odours but can improve its meat quality, as well as facilitating easier handling of these animals. Buffaloes were procured from local market and preferred choice of age (88.24%) of animals for slaughter was heifers (Table 4). It is due to the choice of meat by the local consumers. No specific preferences were observed for sex and castrated/uncastrated animals. It might be due to the availability of such animals for slaughter. The preference of carabeef was hundred percent halal meats. It clearly indicated the demand of carabeef by Muslim community and the business was also in the hands of this community (Bonne and Verbeke, 2006).

**Disposal pattern of meat and meat by products from slaughter of different animals:** The detailed disposal

**Table 3**  
**Slaughter status of goat and buffalo for consumers**

| Slaughter factor  | Category    | Goat      |            | Category    | Buffalo   |            |
|-------------------|-------------|-----------|------------|-------------|-----------|------------|
|                   |             | Frequency | Percentage |             | Frequency | Percentage |
| Source of animals | Market      | 6         | 100.00     | Market      | 15        | 88.24      |
|                   | Producer    | 0         | 0.00       | Producer    | 2         | 11.76      |
| Age group         | <1 year     | 6         | 100.00     | calf        | 0         | 0.00       |
|                   | 1-2 year    | 0         | 0.00       | Heifer      | 15        | 88.24      |
|                   | >2 years    | 0         | 0.00       | Adult       | 2         | 11.76      |
| Preferred sex     | Male        | 6         | 100.00     | Male        | 1         | 5.88       |
|                   | Female      | 0         | 0.00       | Female      | 8         | 47.06      |
|                   | Both        | 0         | 0.00       | Both        | 8         | 47.06      |
| Castration status | Castrated   | 6         | 100.00     | Castrated   | 0         | 0.00       |
|                   | Uncastrated | 0         | 0.00       | Uncastrated | 0         | 0.00       |
|                   | Both        | 0         | 0.00       | Both        | 17        | 100        |
| Slaughter method  | Halal       | 5         | 83.33      | Halal       | 17        | 100        |
|                   | Jhatka      | 1         | 16.67      | Jhatka      | 0         | 0.00       |
| Time of slaughter | Morning     | 6         | 100.00     | Morning     | 17        | 100        |
|                   | Evening     | 0         | 0.00       | Evening     | 0         | 0.00       |

**Table 4**  
**Disposal pattern of meat and meat by products from slaughter of different animals**

| Type of meat and by product          | Mode of disposal | Sale price range (Rs/kg) | Sale price average (Rs/kg) |
|--------------------------------------|------------------|--------------------------|----------------------------|
| Chicken                              | Sale             | 150-160                  | 154.54                     |
| <b>Chicken meat by products</b>      |                  |                          |                            |
| Liver, Gizzard, Heart                | Sale             | 150-160                  | 154.54                     |
| Head and claws                       | Sale             | 20-50                    | 38.63                      |
| Feather and blood                    | Disposed         | -                        | -                          |
| Goat meat                            | Sale             | 350-450                  | 390.91                     |
| <b>Goat meat by products</b>         |                  |                          |                            |
| Liver, Kidney, Heart                 | Sale             | 200-400                  | 333.33                     |
| Head (Unit)                          | Sale             | 100-300                  | 225                        |
| Feet (Unit)                          | Sale             | 50-80                    | 65.00                      |
| Skin (Unit)                          | Sale             | 50-300                   | 128.33                     |
| Cleaned stomach and intestine (Unit) | Sale             | 80-150                   | 126.67                     |
| Blood                                | Disposed         | -                        | -                          |
| Buffalo meat                         | Sale             | 160-180                  | 174.70                     |
| <b>Buffalo meat by products</b>      |                  |                          |                            |
| Liver                                |                  | 80-180                   | 92.35                      |
| Kidney                               | Sale             | 50-180                   | 79.41                      |
| Heart                                |                  | 50-180                   | 80.58                      |
| Udder                                |                  | 40-60                    | 39.41                      |
| Tongue                               |                  | 40-60                    | 38.23                      |
| Head (Unit)                          | Sale             | 120-600                  | 436.47                     |
| Feet (Unit)                          |                  | 80-100                   | 91.18                      |
| Hide (Unit)                          |                  | 800-1500                 | 617.64                     |
| Cleaned stomach and intestine (Unit) | Sale             | 80-150                   | 126.47                     |
| Bones and hooves                     | Sale             | 2-7                      | 3.11                       |
| Blood                                | Disposed         | -                        | -                          |

**Table 5****Consumers' perception regarding meat and meat shops**

| S. No. | Perception characteristics  | Mean % | Rank score |
|--------|---|--------|------------|
| 1.     | Availability of fresh meat at shop  | 82.35  | I          |
| 2.     | Preference due to reliable cost of meat                                     | 79.41  | II         |
| 3.     | Shop is preferred due to proximity of reach/approach                        | 73.52  | III        |
| 4.     | Colour and appearance of meat from the shop is desirable                    | 58.82  | IV         |
| 5.     | Availability of meat by guaranteed halal/jhatka method                      | 44.11  | V          |
| 6.     | After cooking meat has required amount of flavour, juiciness and tenderness | 44.11  | V          |
| 7.     | Availability of preferred cut to the consumer                               | 29.41  | VI         |
| 8.     | Monitoring of proper hygienic means during dressing                         | 20.58  | VII        |
| 9.     | Preference due to availability of variety meat                              | 17.64  | VIII       |
| 10.    | Consumers satisfaction regarding facilities at shop                         | 11.76  | IX         |

pattern of meat and meat by products obtained from slaughter of different animals is presented in Table 4. The demand was basically decided by the seasons and consumers' willingness. The fluctuation in demand was higher in festive and non-festive seasons, winters and summers etc. The price of meat was also dependant on the seasons and demand of meat by the consumers. The meat prices observed in study were almost similar to the report submitted by FICCI (2014). The average sale price of chicken, chevon and buffalo meat was Rupees 154.54, 390.91 and 174.70 per kilogram. The major by-product utilized during production of chicken meat was giblets. The sale price of giblet was same as the sale price of meat which may vary with the season and demand of the chicken meat. The other by-product were head and claws which fetched Rs. 20-50 per g. depending on the demand and need of the consumers. The organs (liver, heart and kidney), head, feet, cleaned stomach and intestines etc. of goat and buffalo were in demand. The reason might be for food purpose and other utilities as poor persons cannot afford high priced goat meat. Buffalo organs such as liver, kidney, heart, udder etc were found in high demand with good remunerative prices and was utilised as a source of food. Other buffalo body parts utilized by the persons in area were head, feet, cleaned stomach and intestines etc. The inedible body parts like hide, bones, hooves were sold and were supplied to the traders. The blood was simply disposed off to the drains which were unethical because it

posed environmental hazard due to higher biological oxygen demand.

**Consumers' perception about the unorganized meat sector:** Total 100 consumers' views on meat and meat shop were collected and the data were compiled and presented in Table 5. Ten major factors were identified which influenced the consumers' decision to purchase fresh meat from meat shops. Among all factors, availability of fresh meat at shops was one of the most influential variables impacting on the consumers. The same preference was also suggested by Munoz (1998) and Verbeke and Viane (1999) during purchase of meat. Price of meat was also a considerable point after availability of fresh meat. It was a factor to attract consumers in a meat shop because meat purchasers belonged to broad economic groups. The availability of variety of meat i.e. offer of choice meat to the consumer's accounts in sale of meat but their choice was second last among all the preferences. No shop in the study was found for supplying choice meat to the consumers.

**CONCLUSION**

The study concluded that majority of meat business were in middle age group with family size of 4-6. They were earning substantial income, satisfied with their job and were even willing to carry forward the business to next generation. Most of the meat shop owners had their own premises but no butcher shop was having facilities' like lairage, AM and PM examination. Major meat by-products were also sold to the traders and rest were disposed. The consumer perception was mostly influenced by availability of fresh meat at shop, availability of variety of meat i.e. offer of choice meat to the consumer's accounts in sale of meat but their choice was second last among all the preferences.

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