

# Study on Constraints and Problems Faced by the Farmers and Traders in the Marketing of Broiler in Shahdara, Delhi NCR

## ABSTRACT

The present investigation was carried out in a Randomized Block Design having 3 replications and 8 treatments (seven insecticides and one control) during *Kharif* season 2023 conducted at the (CRF) Central Research Farm, Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj, (U.P.) to evaluate the field efficacy of certain chemicals and botanicals against fall armyworm [(*Spodoptera frugiperda*)] on maize [(*zea maize* Linn.)]. The order of effectiveness was observed in Chlorantraniliprole 18.5% SC (3.25) > Spinosad 45 SC (3.46) > is found to be the next best treatment followed by Lambda-cyhalothrin 5% EC + Chlorantraniliprole 18.5% SC (3.99) > followed Emamectin benzoate 5% SG (4.16) > Lambda-cyhalothrin 5% EC (4.44) > followed by Flubendiamide 39.35% SC (4.87) > Neem oil 1500 ppm (5.18) is found to be least effective but comparatively superior over the control. Among all the treatments the most economical treatment and highest Benefit Cost ratio was recorded in Chlorantraniliprole 18.5% SC with of (1:2.96) followed by Spinosad 45 SC (1:2.82), Lambda-cyhalothrin 5% EC + Chlorantraniliprole 18.5% SC (1:2.60), Emamectin benzoate 5% SG (1:2.53), Lambda-cyhalothrin 5% EC (1:2.36), Flubendiamide 39.35% SC (1:1.81), Neem oil 1500ppm (1:1.74) respectively as compared to untreated Control plot (1:1.52).

*Keywords: Broiler chicken; garrett's ranking; marketing channels.*

## 1. INTRODUCTION

In order to maintain a balanced diet for humans, poultry meat is a significant source of high quality proteins, vitamins, and minerals. Farms that produce eggs, and farms that raise pullets for meat production comprise the contemporary poultry farming industry, which is a sizable one. Chicken farms were the main subject of this study. It can be further subdivided into two sub-sectors: one with a highly organized commercial sector accounting for about 80% of the total market share (roughly Rs.64,000 crore) and the other with an unorganized sector accounting for about 20% of the total market share (roughly Rs. 16,000 crore). Backyard poultry, another name for the unorganized sector, is a vital source of additional income, jobs, and nutrition for the poorest of the poor. Small and medium-sized farmers, On the other hand, are primarily involved in contract farming systems under larger integrators. More than five million people in the nation have direct or indirect jobs in the poultry industry, which generates over Rs 400 billion in revenue annually. As poultry consumption rises, there is also significant potential for the industry to create gainful employment. The demand for poultry products has been rising steadily due to the high income elasticity of demand and high per capita disposal income(Economic Survey, 2009–10). Over time, the marketing structure for perishable goods such as poultry products has gradually changed and grown to meet the demands of consumers in

Delhi's National Capital Region (NCR). Given that human nutritionists estimate that an average adult needs 10 kg of chicken and 180 eggs annually for good health, the Indian poultry market offers a plethora of opportunities. Adults in most developed countries eat more than 240 eggs and 20 kg of chicken annually. From the mid-1990s onwards, there has been a discernible change in the kinds of products available, along with modifications to their packaging and sales strategies, marking the emergence of globalized markets. The goal of this study was to study the constraints and to identify the major problems faced by the farmers and traders and coexists in the National Capital Region (NCR) of Delhi. The value of broiler meat has declined due to increased urbanization and disposable income levels. In the past, broiler meat was considered a luxury good. Rather, chicken meat is now regularly eaten.

## 2. MATERIALS AND METHODS

The study was carried out in Delhi's NCR, which is one of the most significant regions for broiler production and area. One urban area (Shahdara) was purposefully chosen from the NCR based on the largest area under broiler chicken consumption. Total 35 respondents (farmers) were selected for the study on the basis of the operational size of the landholdings. Selected farmers provided the necessary primary data for the agricultural year 2023–2024. The necessary secondary data was gathered from a variety of published sources, including books, block development offices, reports, related websites, and official government records. Interviews with personnel from the broiler chicken seller and consumer revealed consumer behavior and product preferences.

**Research Instruments:** Pilot Test was conducted to finalize the schedule.

### 2.1 Tools and Formula

Several analytical tools were used to analyze the data, which are tabulated and shown in the following section.

#### 2.1.1 Chi square test

A chi-square statistic tool is one way to show a relationship between two categorical variables. The chi-squared statistic is a single number that tells you how much difference exists between your observed counts and the counts you would expect if there were no relationship at all in the population. It is used for data that consist of variables distributed across various categories and is denoted by  $\chi^2$ . This formula will be used for identifying the demographic pattern of the consumers.

$$\chi^2 = \sum (O_i - E_i)^2 / E_i$$

Where,

$O_i$  = observed value (actual value)

$E_i$  = expected value.

#### 2.1.2 Garrett ranking

To find out the most significant factor which influences the respondents, garrett's ranking techniques will be used.

$$\text{Percentage} = 100(R_{ij} - 0.5) / N_j$$

Where,

$R_{ij}$  = rank given for  $i$ th item by  $j$ th individual.

$N_j$  = Number of ranked by  $j$ th individual.

### 3. RESULTS AND DISCUSSION

This chapter covers the study's outcomes and other aspects, which are bolstered by a succinct analysis of the research's conclusions. This information may be useful to readers. The commencement of the study was solely based on the predetermined objectives. The information was gathered, categorized, examined, evaluated, summarized, and deliberated in an organized manner.

**Table 1. Distribution of respondents according to their farm size**

| Sr. No.      | Category | Frequency | Percentage    |
|--------------|----------|-----------|---------------|
| 1.           | Small    | 22        | 62.85%        |
| 2.           | Medium   | 8         | 22.85%        |
| 3.           | Large    | 5         | 14.28%        |
| <b>Total</b> |          | <b>35</b> | <b>99.98%</b> |

Table 1 Reveals that of the total number of respondents, 22 (62.85%) had small farms, 8 (22.15%) had medium-sized farms, and the remaining 5 (14.28%) had large farms. Farm size plays a crucial role in market-related research because it influences consumers' purchasing decisions. Farm size tends to have different buying conclusions because of differences in perception and socialization.

**Table 2. Distribution of respondents according to their age**

| Sr. No.      | Particulars         | Small     | Medium   | Large    | Total           |
|--------------|---------------------|-----------|----------|----------|-----------------|
| 1.           | Young(20-35 years)  | 15        | 3        | 1        | 19(54.28%)      |
| 2.           | Middle(36-50 years) | 5         | 3        | 2        | 10(28.57%)      |
| 3.           | Old(above 50 years) | 2         | 2        | 2        | 6(17.14%)       |
| <b>Total</b> |                     | <b>22</b> | <b>8</b> | <b>5</b> | <b>35(100%)</b> |

Table 2 Reveals that the 19 respondents (54.28%) are young, 10 respondents (28.57%) are middle-aged, and 6 respondents (17.14%) are elderly. As a result, the younger age group comprises the majority of respondents.

**Table 3. Distribution of farmers according to their family type**

| Sr.No.       | Particulars | Respondents |          |          | Total           |
|--------------|-------------|-------------|----------|----------|-----------------|
|              |             | Small       | Medium   | Large    |                 |
| 1.           | Nuclear     | 8           | 3        | 3        | 14(40%)         |
| 2.           | Joint       | 14          | 5        | 2        | 21(60%)         |
| <b>Total</b> |             | <b>22</b>   | <b>8</b> | <b>5</b> | <b>35(100%)</b> |

Table 3 Reveals that the Family has a crucial correlation in market-related research since it influences purchasing decisions. Joint families and nuclear families typically come to different purchasing decisions because of the differences in their perceptions and socialization. Of the total, 21 out of the 35 respondents (or 60%) are from a joint family, and the remaining 14 respondents (or 40%) are from a nuclear family.

Table 4 Reveals that the Seven (20%) of the 35 respondents in the table below were found to be illiterate. The majority of respondents had completed their primary school education. These make up 12 (34.28%), 8 (22.85%) were found to be qualified through primary school, 5 (14.28%) were found to be qualified through intermediate school, and 3 (8.57%) were found to be qualified through graduation and beyond. Thus, it is evident that the primary category, which is 12 (34.28%), has the majority among all.

- I. Producer-Wholesaler- Dresser-cum-Retailer – Consumer.
- II. Producer- Supplier-Wholesaler-Dresser-cum-Retailer-Consumer.
- III. Producer- Commission Agent-Supplier-Wholesaler-Dresser-cum-Retailer-Consumer.

**Table 4. Distribution of farmer according to their education**

| Sr.No.                | Particulars       | Respondents |        |       |            |
|-----------------------|-------------------|-------------|--------|-------|------------|
|                       |                   | Small       | Medium | Large | Total      |
| 1.                    | Primary           | 8           | 3      | 1     | 12(34.28%) |
| 2.                    | High School       | 5           | 2      | 1     | 8(22.85%)  |
| 3.                    | Intermediate      | 3           | 1      | 1     | 5(14.28%)  |
| 4.                    | Graduation &above | 2           | 0      | 1     | 3(8.57%)   |
| <b>Total Literate</b> |                   | 18          | 6      | 4     | 28(80%)    |
| 5.                    | Illiterate        | 4           | 2      | 1     | 7(20%)     |
| <b>Total</b>          |                   | 22          | 8      | 5     | 35         |

**Table 5. Reveals the preferred marketing channel by the respondents**

| Sr.No.       | Channel Type | No. of Respondents | Percentage (%) |
|--------------|--------------|--------------------|----------------|
| 1.           | Channel-I    | 20                 | 57.14%         |
| 2.           | Channel - II | 7                  | 20%            |
| 3.           | Channel-III  | 8                  | 22.85%         |
| <b>Total</b> |              | 35                 | 100%           |

**Table 6. Problems faced by the farmers and traders**

| Sr.No. | Particulars   | Frequency | Ranking |
|--------|---|-----------|---------|
| 1.     | Frequent price fluctuation.                                 | 35        | II      |
| 2.     | Outbreak of Diseases and High mortality rate                | 28        | V       |
| 3.     | Lack of information about government schemes and subsidies. | 20        | VI      |
| 4.     | High Transportation Cost.                                   | 32        | III     |
| 5.     | Lack of amenities and facilities in the market.             | 15        | VIII    |
| 6.     | High Commission Charges.                                    | 21        | I       |
| 7.     | Lack of Refrigerated transportation facility.               | 20        | IX      |
| 8.     | Lack of proper infrastructure in market.                    | 30        | IV      |
| 9.     | Poor monitoring of Food Safety.                             | 18        | VII     |
| 10.    | Poor Quality norms in manual processing.                    | 27        | X       |

### 3.1 Problems Faced by the Farmers and Traders

Table 6 Reveals that that there are ten marketing constraints that affect in marketing of Broiler Chicken in Shahdara (Urban Area) of Delhi NCR are High Commission charges with 21 respondents response ranked I, Frequent price fluctuation with 35 respondents response ranked II, High transportation cost charges with 32 respondents response ranked III, Lack of proper infrastructure in market with 30 respondents response ranked IV, Outbreak of Diseases and High mortality rate with 28 respondents response ranked V, Lack of information about government schemes and subsidies with 20 respondents response ranked VI, Poor monitoring of Food Safety with 18 respondents response ranked VII, Lack of amenities and facilities in the market with 15 respondents response ranked VIII, Lack of Refrigerated transportation facility with 20 respondents response ranked IX, Poor Quality norms in manual processing with 27 respondents response ranked X.

## 4. CONCLUSION

Broiler chickens are the best for poultry meat. Broilers resemble regular chickens in many ways. Still, science was used in the design of this broiler to produce more meat in less time. It is most profitable for large farm groups (those with an area of more than 3000m<sup>2</sup>) to produce broiler chickens. The marketing of broiler chicken in Shahdara, an urban area, is the main topic of this study. Analyzing the sample respondents' socioeconomic characteristics, and production and marketing constraints are its main objectives. The results indicate that the respondents had a moderate socioeconomic background, with a primary education and a stable economic background that allowed them better access to all the resources. The most of respondents were selling broiler chicken through channel I (Producer-Wholesaler-Dresser-cum-Retailer-Consumer), when comparing channel II (Producer-

Supplier-Wholesaler-Dresser-cum-Retailer-Consumer) to channel III (Producer-Commission Agent-Supplier-Wholesaler-Dresser-cum-Retailer-Consumer). Channel I has more marketing efficiency than Channels II and III combined. Channel I has the highest producer share in consumer rupees, followed by Channels 2 and 3. The primary barriers to production and marketing were determined to be the following: expensive transportation; price fluctuations frequently; disease outbreaks; high mortality rates; a dearth of refrigeration facilities; and a lack of awareness of government subsidies and programs.

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