Biosecurity Approaches in Commercial Layer Poultry Farming: A Gujarat Perspective

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INTRODUCTION

The poultry industry in Gujarat has become a significant contributor to global chicken meat and egg production, fostering notable growth. However, challenges such as disease transmission, antimicrobial resistance (AMR), and foodborne pathogens necessitate robust biosecurity measures.

OBJECTIVE

The study assesses the state of biosecurity protocols in commercial layer poultry farms in Gujarat, aiming to enhance the existing practices.
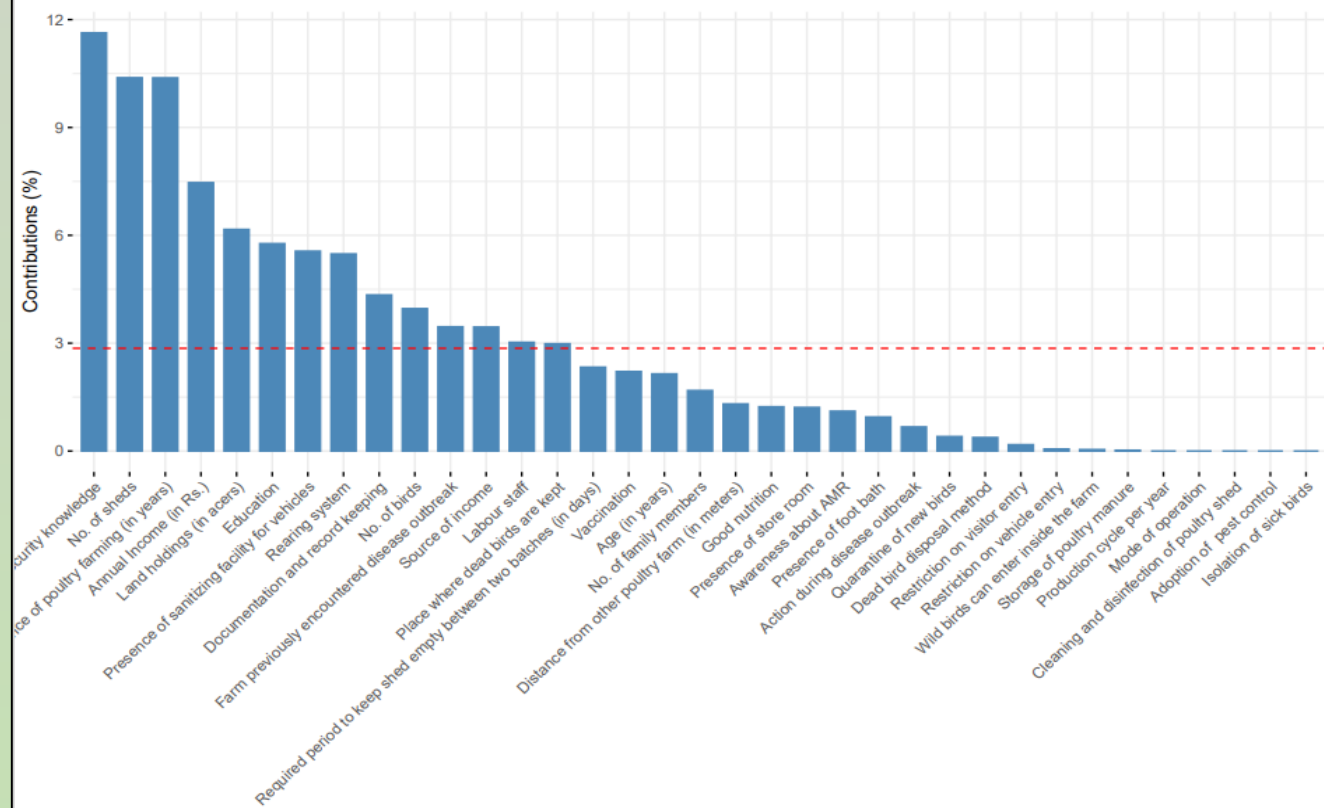

Anand

Gundicha
Navli
Vadod
Indral
Borsad
Ahmedabad

Mahuva

Mahuva
Umaniyavadar
Bhanvad
Nana Jadara
Talgajarda
Vadli
Bhandra
Bhadrod

Two training programs conducted in Anand and Mahuva involved 47 farmers, with 35 participants (34 male and 1 female) responding to pre- and post-training questionnaires.

❖ Descriptive Analysis
❖ Likert's Scale Analysis
❖ FAMD

Contribution of variables to Dim−1

Descriptive analysis:
- Middle-aged farmers (35-50) are 48.57%.
- Only poultry industry as income: 65%.
- Using own land: 94.29%.
- Commendable level of adherence to biosecurity measures, like the presence of a store room (97.14%), foot bath (74.29%), sanitizing facility at the entry point for vehicles (80.00%), fencing (91.43%), and disposal facility (100.00%).
- Poultry is a male-dominated industry (34 male; 1 female).
- Poultry is the sole source of income for around 65% of the farmers.
- Frequent diseases present in the layer farms are **colisepticaemia**, **avian influenza**, and **Ranikhet**.

RESULTS

FAMD:
- Variables causing the most variation: knowledge of biosecurity, number of sheds, and experience in poultry farming.

Farmers also identified different epidemiological points during training, covering farms, transport, and markets that contribute to disease transmission in the poultry industry.

Likert Scale:
- Limitation in implementing biosecurity measures: lack of awareness, knowledge, and manpower.

CONCLUSIONS

- This study provides a nuanced exploration of biosecurity practices in commercial layer poultry farms, emphasizing demographic insights, economic reliance, and the impact of training. The findings contribute to fortifying biosecurity measures, ensuring the resilience and efficacy of the poultry industry in Gujarat. A high satisfaction rate signifies the effectiveness of the training program (80% excellent; 20% very good).
- Variables such as the number of birds, labor staff, number of sheds, experience, and annual income exhibit substantial variations. This indicates areas where **targeted interventions** or **management** strategies can be implemented to optimize productivity and efficiency in layer farming.

Limitations while implementing biosecurity measures

Limitation	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Lack of Knowledge		-10.26	-5.13	15.38	69.23
Lack of control			5.13	38.46	48.72
Lack of awareness			1.28	28.21	66.67
Lack of Man power			2.56	23.08	69.23
Lack of Finance/ need investment	-17.95	-3.85		46.15	28.21
Lack of Skilled manpower	-2.56			43.59	43.59

Legend: Agree, Strongly agree, Neutral, Disagree, Strongly disagree