



Perception Analysis of the Factors Influencing the Farmers to Get Into Contract Japanese Quail Farming

KEYWORDS

Contract Japanese quail farming –perception- multidimensional scaling

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ABSTRACT

This study was conducted to analyse the factors influencing the farmers to get into contract Japanese quail farming in Tamil Nadu based on their perception mapping. The primary data for the study was collected through a pre-tested interview schedule from the contract Japanese quail producers in western zone of Tamil Nadu. The factors influencing the farmers to get into contract Japanese quail farming by the multidimensional scaling and the results revealed that the variables like Extending technical knowhow and Forecasting disease outbreak are the more influencing perceptual factors as primary determinant in contract Japanese quail farming. The factors like Averting wide price fluctuation, Removal of exploitation by middle men and Remunerative price were also the more influencing factors as secondary determinants.

INTRODUCTION

Poultry is one of the important components of animal husbandry, which provides additional means of employment opportunities to a large number of people with the new approaches practiced. One of the innovative approaches getting popular now is an institutional arrangement that enables farmers to access markets called as 'Contract Farming'. Contract farming is fastly evolving as a mechanism of alternative marketing in India. Punjab, Karnataka, Maharashtra, Madhya Pradesh and Tamil Nadu have proved to be the front-ranking States in this respect (Paty, 2005). In southern part of India, the process of integration of poultry began in mid 1990s and accelerated rapidly as independent growers found guaranteed returns from contract farming inspite of vagaries of market returns. As integration expanded, some independent hatcheries and feed millers became integrators themselves or else they felt the risk of going out of poultry business. Poultry integrators expanded rapidly in southern India, particularly in and around Coimbatore area of Tamil Nadu (Subramanian, 2006).

Among different types of contract poultry farming, contract Japanese quail farming is relatively a new venture in Tamil Nadu. No systematic study was carried out to find the perceptual factors influencing the farmers to go for contract Japanese quail farming. Keeping the factors in mind, the present study was designed with the objective of analysing factors influencing the farmers to go for contract Japanese quail farming.

DATA AND METHODOLOGY

For the present study, the western zone of Tamil Nadu was purposively selected. Since, the districts in this zone (Erode, Tiruppur and Coimbatore) have high concentration of Japanese quail farming activities. The primary data for the present study was collected from thirty each of the contract Japanese quail producers and non-contract or individual producers with a well designed pre-tested interview schedule.

Multidimensional Scaling

Multidimensional scaling (MDS) is an important analytical tool for the purpose of grouping. In general, the goal of the analysis is to detect meaningful underlying dimensions that allow the researcher to explain observed similarities or dissimilarities (distances) between the investigated objects. With MDS one may analyse any kind of similarity or dissimilarity matrix.

MDS is a procedure to "rearrange" objects in an efficient manner, so as to arrive at a configuration that best approximates the observed distances. In more technical terms, it uses a function minimization algorithm that evaluates different configurations with the goal of maximizing the goodness-of-fit (or minimizing "lack of fit"). The most common measure that is used to evaluate how well (or poorly) a particular configuration reproduces the observed distance matrix is the stress measure. The raw stress value Phi of a configuration is defined by:

$$\text{Phi} = \partial [d_{ij} - f(\partial_{ij})]^2$$

In this formula, d_{ij} stands for the reproduced distances, given the respective number of dimensions, and ∂_{ij} (δ_{ij}) stands for the input data (i.e., observed distances). The expression $f(\partial_{ij})$ indicates a non-metric, monotone transformation of the observed input data (distances). Thus, it will attempt to reproduce the general rank ordering of distances between the objects in the analysis.

Interpreting the Dimensions

The interpretation of dimensions usually represents the final step of the analysis. As mentioned earlier, the actual orientations of the axes from the MDS analysis are arbitrary, and can be rotated in any direction. Two-dimensional solutions can be illustrated graphically. In this study a list of 7 perceptual factors influencing the farmers to get into contract Japanese quail farming, which are weighted in five point scale were taken for MDS analysis.

List of perceptual factors taken for analysis

Sl. NO	Variables
1	Remunerative price
2	Timely input supply
3	Extending technical know how
4	Forecasting disease outbreak
5	Creation of infra structure
6	Averting wide price fluctuation
7	Removal of exploitation by middle men

Results

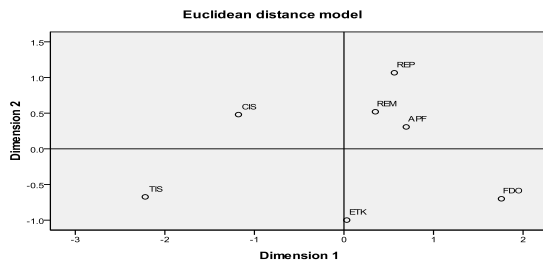
The results of the MDS shows that the Stress value calculated by Kruskal's stress formula 1 for the matrix is 0.09698

indicating the good fit between data and the RSQ is 0.9434 illustrating that 94.34% of variance in the model is explained by the two dimensions.

Configuration derived in 2 dimensions

Stimulus Number	Stimulus Name	Stimulus Coordinates	
		Dimension 1	Dimension 2
1	REP	0.5625	1.0661
2	TIS	-2.2193	-0.6737
3	ETK	0.0313	-0.9988
4	FDO	1.7579	-0.7003
5	CIS	-1.1781	0.4799
6	APF	0.6951	0.3070
7	REM	0.3505	0.5197

Derived Stimulus Configuration



The results of the analysis can be extracted from the Euclidean model in the two dimensional graph. On observation of the two dimensional graph it could be inferred that the variables like Extending technical knowhow and Forecasting disease outbreak are the more influencing perceptual factors as primary determinant in contract Japanese quail farming. The factors like Averting wide price fluctuation, Removal of exploitation by middle men and Remunerative price were also the more influencing factors as secondary determinants. The other factors were known to be less influencing perceptual factors in getting into contract Japanese quail farming.

CONCLUSION

The results of the study to analyse the factors influencing the farmers to get into contract Japanese quail farming in Tamil Nadu based on their perception mapping showed that the variables like Extending technical knowhow and Forecasting disease outbreak are the more influencing perceptual factors as primary determinant in contract Japanese quail farming. The factors like Averting wide price fluctuation, Removal of exploitation by middle men and Remunerative price were also the more influencing factors as secondary determinants.

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