CHAPTER VII

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

Poultry is a rural based industry and thousands of people are involved directly in it and lakhs of people are indirectly involved in production and marketing of poultry products. In this study, problems of poultry industry is stated as the statement of problem in the first chapter, related studies are reviewed in the second chapter and the profile of poultry is examined in the third chapter. The socio economic aspects and production aspects of farmers are studied in the fourth chapter. The role of wholesalers and retailers of poultry products are documented in the fifth chapter. The income and expenditure aspects of poultry are analyzed in the sixth chapter. Some of the important findings based on the analysis are given below:

SUMMARY OF FINDINGS

Among small farmers, 66.1 per cent are male and 33.9 per cent are female. Among large farmers, 66.7 per cent are male and the rest 33.3 per cent are female. It is inferred that around 2/3rd of farmers are male as per the statements provided by the respondents. Chi-Square test reveals that the gender of sample farmers does not significantly differ in relation to the size of the farm.

It is found that 40.2 per cent of the respondents are in the age group of 25-35. The mean age of small farmer is 38.64 years and that of large farmer is 41.52 years. The overall mean age is 39.67 years. The standard deviation is higher in the case of large farmers than that of small farmers. Chi-Square test reveals that the age of sample farmers has no significant relationship with the farm size.

As regards education, on the whole, 41.3 per cent have studied up to +2; 25.0 per cent are graduates; 20.7 per cent are post graduates and 13.0 per cent hold professional degrees. It is inferred that majority are graduates and many have studied more than graduation. Chi-Square test reveals that the educational qualification of sample farmers does not significantly differ in relation to the size of the farm. Among the small farmers, on the whole, 44.6 per cent have an annual income of less than Rs2.5 lakhs; 23.9 per cent have between Rs 2.5 lakhs and Rs 3 lakhs; 18.5 per cent have between Rs 3 lakhs and 4.5 lakhs and 13 per cent have income of above Rs 4.5 lakhs.
The mean income of small farmer is Rs.2.70 lakhs; the standard deviation is 0.48 lakhs. The mean income of large farmer is Rs.2.84 lakhs and the standard deviation is 0.62 lakhs. The standard deviation is higher in the case of large farmers than that of small farmers. ‘Z’ test reveals that annual income of sample farmers does not significantly differ in relation to the size of the farm.

It is identified that all sample farmers, 54.4 per cent have less than 10 years of experience and 45.6 per cent have more than 10 years of experience. It is inferred that majority are having less than 10 years of experience in as per the sample. Chi-Square test reveals that years of experience of sample farmers has no significant relationship with the farm size.

It is identified that all sample farmers, 42.4 per cent are sole traders; 21.7 per cent are in partnership; 18.5 per cent are private companies and 17.4 per cent are doing it on lease rental basis. It is inferred that majority are doing business in the form of sole trader or as partnership. Chi-Square test reveals that the type of organization of sample farmers does not significantly differ in relation to the size of the farm.

The prime occupation is agriculture in case of 39 per cent of small and 42.4 per cent of large farmers. It is inferred that majority are engaged in other occupations in addition to poultry. Chi-Square test reveals that the main occupation of sample farmers has no significant relationship with the farm size.

The heredity and relatives are the important inducers for this poultry farms. Chi-Square test reveals that the introducer to poultry for sample farmers does not significantly differ in relation to the size of the farm.

Majority of poultry farms are situated in villages. Chi-Square test reveals that the location of farm of sample farmers has no significant relationship with the farm size.

Analysis reveals that 42.4 per cent of farmers are living at a distance of less than 3 kms; 30.4 per cent of farmers are living at a distance between 3 kms and 6 kms; 9.8 per cent of farmers are living at a distance between 6 kms and 9 kms and 17.4 per cent of farmers are living at a distance of more than 9 kms. Chi-Square test reveals that the distance from home to farm of sample farmers does not significantly differ in relation to the size of the farm.
It is found that majority have undergone poultry training for less than 4 days. Chi-Square test reveals that the training undergone by sample farmers has no significant relationship with the farm size.

It is found that on the whole, 41.3 per cent of grow Babcock; 29.3 per cent grow Bovans; 12.0 per cent grow Loman and 17.4 per cent of grow Highline. It is inferred that majority of farmers breed either Babcock or Bovans in their farms in the study area. Chi-Square test reveals that the type of breed in the farm of sample farmers does not significantly differ in relation to the size of the farm.

Among the overall, 39.1 per cent select particular breed for more eggs; 16.3 per cent for resistance to diseases; 21.7 per cent for feed consumption and 22.8 per cent for price of chicks. It is inferred that majority of farmers select particular breed either for more eggs or for the price of chicks. Chi-Square test reveals that the reason for selecting particular breed by sample farmers does not significantly differ in relation to the size of the farm.

Regarding problem considering all sample farmers, 39.1 per cent say that time lag is the prime problem; 26.1 per cent say that high cost is the prime problem; 17.4 per cent say that low quality is the prime problem and 17.4 per cent say that rearing is the prime problem. It is inferred that time lag and high cost are the major problems in supply of chick. Chi-Square test reveals that the problem of chick supply of sample farmers has no significant relationship with the farm size.

For the method around 60.9 per cent of farmers follow cage system and 25.0 per cent of farmers follow Deep Litter System. The rest 14.1 per cent follow both systems. Chi-Square test reveals that the prime prominent system is Cage system in the study area. Chi-Square test reveals that the method of chick rearing by sample farmers does not significantly differ in relation to the size of the farm.

Analysis shows that on the whole, 28.3 per cent have employed up to 3 men; 34.8 per cent have employed 4 to 5 men; 16.3 per cent have employed 6 to 7 men and 20.7 per cent have employed more than 7 men. It is inferred that majority have employed less than 6 men in their farms. Chi-Square test reveals that the men workers employed by sample farmers do not significantly differ in relation to the size of the farm.
As per sample, 40.2 per cent have employed up to 6 workers; 20.7 per cent have employed 7 to 11 workers; 21.7 per cent have employed 11 to 13 workers and 17.4 per cent have employed more than 13 workers. It is inferred that majority have employed less than 11 workers in their farms. Chi-Square test reveals that the total workers employed by sample farmers significantly differs in relation to the size of the farm.

It is found that on the whole, 39.1 per cent have got loan from banks; 29.3 per cent have got loan from NBF companies; 18.5 per cent have got loan from relatives and 13.0 per cent have got loan from friends. It is inferred that majority have got loans either from banks or from non-banking financial companies. Chi-Square test reveals that the loan source of sample farmers significantly differs in relation to the size of the farm.

The study shows that on the whole, 41.3 per cent of farmers say that mortality rate is less than 5 per cent; 23.9 per cent say that it is between 5 and 7 per cent; 10.9 per cent say that it is between 7 and 9 per cent and 23.9 per cent say that mortality rate is 9 per cent and more. It is inferred that majority of farmers say that the mortality rate is up to or less than 7 per cent. Chi-Square test reveals that the mortality rate in sample farms does not significantly differ in relation to the size of the farm.

Analysis shows that on the whole, 40.2 per cent are in the 25-35 years age category; 31.5 per cent are in 35-45 years category; 19.6 per cent in 45-55 years category and 8.7 per cent in above 55 years of age category. It is inferred that 40.2 per cent are in 25-35 years age category. It is inferred that majority of farmers use plastic trays as container. Chi-Square test reveals that the type of containers used by sample farmers has no significant relationship with the farm size.

Analysis shows on the whole around 40 per cent of farmers sell only on cash basis. 30.4 per cent of farmers sell only on egg credit basis. 7.6 percent of the farmers sell in egg both cash and credit basis and 20.7 percent of farmers sell in same other methods. It’s inferred that most of the farmers sell egg only on cash basis. On the whole, around 40 per cent of farmers sell only on cash basis. Chi-Square test reveals that the basis of sale by sample farmers does not significantly differ in relation to the size of the farm.

The study reveals that on the whole on the whole 39.1 per cent of farmers fix rates as per NECC rates, 17.4 per cent of farmers fix rates on their own, 25.0 per cent if farmers
rates as per poultry owners association rate and 25.0 per cent of farmers fix rates by other methods. It is inferred that the egg rates are fixed by the committees or associations on the basis of demand and season and the farmers follow different methods. Chi-Square test reveals that the egg rates are fixed by the committees or associations on the basis of demand and season and the farmers follow different methods. Chi-Square test reveals that the method of sale rate fixation does not significantly differ in relation to the size of the farm.

Analysis shows that on the whole, 41.3 per cent sell eggs to private trades; 31.5 per cent to commission agents; 21.7 per cent on their own and 5.4 per cent to export agents. It is inferred that more than 40 per cent of sample farmers sell eggs to private traders. Chi-Square test reveals that the customer selection does not significantly differ in relation to the size of the farm.

Analysis shows that on the whole 37.0 per cent of farmers say that their channel is private traders, 28.3 per cent of farmers say that it is cheap, 17.4 per cent of farmers say that their channel is low risk and 17.4 per cent of farmers say other reasons. It is inferred that more than one third of the sample farmers select private traders, as their channel since it is simple in nature. Chi-Square test reveals that the reason for selection of channel significantly differs in relation to the size of the firm.

Higher capital problem is faced by 60 respondents; higher chick problem by 73; higher building problem by 54; higher electricity problem by 58, higher labour problems by 67; higher disease problems by 51; high unsold stock problems by 51; higher transport problems by 65; higher insurance problems by 51 and higher other problems by 62 farmers. The data are analyzed using Likert’s Five Point Scaling Technique. The study shows that the overall points scored for capital is 48, coefficient is 0.52; for chick points is 81, coefficient is 0.88; for building points is 34, and coefficient is 0.37. Similarly, the points for transport are 69 and coefficient is 0.75.

The prime problem is Chick; the second is Transport; the third is unsold stock and the fourth is labour. The least problems are diseases, insurance and electricity.

Poultry farming is a unique type of industry. Various factors influence the choice of poultry industry and continuance in the industry. Factor Analysis is a class of procedures identified for data reduction and summarization. There may be a large number of variables,
Relationship among sets of many interrelated variables are examined and represented in terms of a few underlying factors. Correlation matrix exhibits the relationship between different variables. It is found that positive correlation is highest among educational qualifications and years of doing business (+0.561), and occupation and type of breed (+0.440). Negative correlation is higher between introduction to poultry and type of breed (-0.428).

An important output from Factor Analysis is the factor matrix or Component Matrix or Factor Pattern Matrix. Factor 1 has high coefficient for Main occupation and type of breed in the farm. Factor 2 has high coefficient for Educational qualifications and years of doing business. Factor 3 has high coefficient for farmer type and gender of the farmer. Factor 4 has high coefficient for gender and location of firm. Factor 5 has higher coefficient for introducer to poultry and Distance from home. It is inferred that among Factor 1 main occupation plays a vital role in poultry industry. Among Factor 2, educational qualification has a vital role. Among Factor 3 farmer type has a higher role. Among Factor 4 Gender has a higher role. Among Factor 5, introducer plays a vital role.

Analysis shows that on the whole, 60.0 per cent are owned by male and the rest 40 per cent are owned by female. It is inferred that the majority of the wholesalers are male. Examination shows that on the whole, 72.2 per cent are owned by male and the rest 27.8 per cent are owned by female. It is inferred that majority of the retailers are male.

The study reveals that considering all sample wholesalers, 43.3 per cent are in 25-35 years age group; 20.0 per cent are in 35-45 years age group; 26.7 per cent are in 45-55 years age group and 10.0 per cent are in above 55 years age group. It is inferred that majority wholesalers are below 45 years of age. It is found that considering all sample retailers, 40.7 per cent are in 25-35 years age group; 31.5 per cent are in 35-45 years age group; 20.4 per cent are in 45-55 years age group and 7.4 per cent are in above 55 years age group. It is inferred that majority retailers are below 45 years of age.

Analysis shows that considering all sample wholesalers, 26.6 per cent have studied below +2; 36.7 per cent are graduates and 36.7 per cent are post graduates. It is inferred that majority of wholesalers are either graduates or post graduates. Considering all sample
retailers, 38.9 per cent have studied below +2; 2.1 per cent are graduates and 37.0 per cent are post graduates. It is inferred that majority of retailers are either graduates or post graduates.

It is found that considering all sample wholesalers, 26.7 per cent have an annual income of below Rs.2 lakhs; on the whole 26.7 per cent have an annual income between Rs.2 lakhs and Rs.3 lakhs; 30.0 per cent have an annual income between Rs.3 lakhs and Rs.4 lakhs and 16.7 per cent have an annual income of more than Rs.4 lakhs. It is inferred that majority of wholesalers have an annual income below Rs.3 lakhs. The mean income of small wholesaler is Rs.2.69 lakhs and that of large wholesaler is Rs.3.21 lakhs. The standard deviation of small wholesaler is Rs.0.51 lakhs and that of large wholesaler is Rs.0.44 lakhs. ‘Z’ test reveals that the annual income of sample wholesalers does not significantly differ in relation to the size of the firm.

It is found that considering all sample retailers, 40.7 per cent have an annual income of below Rs.1 lakh; 31.5 per cent between Rs.1 lakh to Rs.2.0 lakhs; 20.4 per cent between Rs.2 lakhs and Rs.3 lakhs and 7.4 per cent more than Rs.3 lakhs. It is inferred that majority of retailers have an annual income below Rs.2 lakhs.

The mean income of semi urban retailer is Rs.1.29 lakhs and that of urban retailer is Rs.1.25 lakhs. The standard deviation of semi urban retailer is Rs.0.51 lakhs and that of urban retailer is Rs.0.44 lakhs.

Chi-Square test reveals that the annual income of sample retailers does not significantly differ in relation to the area of business.

Analysis reveals that considering all sample respondents, 36.7 per cent are in this business for less than 5 years; 20.0 per cent are between 5 years and 10 years; 23.3 per cent are between 10 years and 15 years and 20.0 per cent are in this business for more than 15 years. It is inferred that majority are in this industry for less than 10 years. Analysis reveals that considering all sample respondents, 38.9 per cent are in this business or less than 5 years; 24.1 per cent are between 5 years and 10 years; 22.2 per cent are between 10 years and 15 years and 14.8 per cent are in this business for more than 15 years. It is inferred that majority are in this industry for less than 10 years.
It is found that 66.7 per cent of wholesalers are sole traders and the rest are in other forms of organizations. It is inferred that sole trader form is higher as regards poultry wholesalers. Chi-Square test reveals that the type of organization of sample wholesalers does not significantly differ in relation to the size of the firm.

It is found that on the whole, 40.7 per cent of retailers have individuals as major customers; 27.8 per cent of retailers have shops as major customers; 13.0 per cent of retailers have hotels as major customers and 18.5 per cent of retailers have others as major customers. It is inferred that majority have individuals and shops as major customers. Chi-Square test reveals that the major customer of sample retailers does not significantly differ in relation to the area of business.

Analysis reveals that it is inferred that majority of customers for the wholesalers are either retailers or exporters as per the sample. Chi-Square test reveals that the major customers of sample wholesalers do not significantly differ in relation to the size of the firm.

Analysis shows that for the introducer to poultry, on the whole, 53.3 per cent of wholesalers say as heredity; 23.3 per cent are introduced by relatives; 16.7 per cent are introduced by friends and 6.7 per cent on their own self. It is inferred that majority are doing it as heredity. The study shows that for the introducer to poultry, on the whole, 42.6 per cent of retailers say as heredity; 18.5 per cent are introduced by relatives; 16.7 per cent are introduced by friends and 22.2 per cent say as own self. It is inferred that majority are there in heredity.

The study reveals that on the whole, 66.7 per cent of sample wholesalers collect eggs through own labourers; 3.3 per cent of sample wholesalers collect eggs through agents; 6.7 per cent of sample wholesalers collect eggs at their door steps; and 23.3 per cent of sample wholesalers collect eggs by other means. It is inferred that majority of sample wholesalers collect eggs through their own labourers. Chi-Square test reveals that the method of collecting eggs by sample wholesalers does not significantly differ in relation to the size of the firm. Examination reveals that on the whole, 38.9 per cent of sample retailers buy eggs from market; 27.8 per cent of sample retailers buy from wholesalers; 11.1 per cent of sample retailers collect eggs from farmers; and 22.2 per cent
of sample retailers buy eggs by other means. It is inferred that majority of sample retailers buy eggs from market or from wholesalers.

It is found that on the whole, 36.7 per cent wholesalers fix rates on the basis of NECC; 20.0 per cent wholesalers fix rates on the basis of NEDA; 23.3 per cent wholesalers fix rates on the basis of poultry owners association and 20.0 per cent wholesalers fix rates on other basis. It is assumed that majority of wholesalers fix rates on the basis of either NECC rates or NEDA rates. It is found that on the whole, 40.7 per cent retailers fix rates on the basis of NECC; 18.5 per cent retailers fix rates on the basis of NEDA; 18.5 per cent retailers fix rates on the basis of poultry owners association and 22.2 per cent retailers fix rates on other basis. It is assumed that majority of retailers fix rates on the basis of either NECC rates or NEDA rates.

Analysis shows that on the whole, 53.3 per cent of wholesalers use their own vehicles for distribution of eggs; 20.0 per cent of wholesalers use their rented vehicles for distribution of eggs and 26.7 per cent of wholesalers use their own vehicles and rented vehicles for distribution of eggs. It is inferred that majority of wholesalers use their own vehicles for distribution of eggs. Chi-Square test reveals that the method of using vehicles for distribution of eggs by sample wholesalers does not significantly differ in relation to the size of the firm.

Examination shows on the whole, 40.0 per cent of wholesalers use paper trays; 23.3 per cent of wholesalers use plastic trays; 10.0 per cent of wholesalers use both trays and 26.7 per cent of wholesalers use other trays. It is inferred that majority of sample wholesalers use either paper or plastic trays. The study reveals on the whole, 42.6 per cent of retailers use paper trays; 27.8 per cent of retailers use plastic trays; 13.0 per cent of retailers use both trays and 16.7 per cent of retailers use other trays. It is inferred that majority of sample retailers use either paper or plastic trays.

It is found that on the whole, 36.7 per cent of sample wholesalers have obtained loan from banks; 20.0 per cent from Non banking financial companies; 13.3 per cent from friends or relatives and 30.0 per cent from other sources. It is inferred that majority have obtained loans either from banks or from non banking financial companies. Chi-Square test reveals that the source of loan of sample wholesalers does not significantly differ in relation to the size of the firm.
Analysis reveals that 16 sample wholesalers accept that pricing is done as per size and 10 do not agree with this view; 18 sample wholesalers accept that pricing is done as per colour and 9 do not agree with this view. 18 sample wholesalers accept that pricing is done as per weight and 5 do not agree with this view. 17 sample wholesalers accept that pricing is done as per breed and 9 do not accept this view. Points are calculated by assigning weights from +2 to -2 as per the intensity of opinion and the highest point is given for weight. The coefficient for weight is 0.90; for colour is 0.80; for breed is 0.77 and size is 0.63. It is inferred that the prime factor for pricing is weight of the egg and then comes the colour.

Analysis shows that the points scored for collection problem is 4; for price is 16; for package is 17; for transport is 3; for container is 28 and for government intervention is -14. The coefficient is highest for container (0.93); then comes spoilage and others (0.73) and the next is association. The least coefficient is for government intervention (-0.47).

It is inferred that the prime problem is with the containers and the second is spoilage and others. Then comes association and the next one is package. The problem is least for government intervention, storage, transport and collection as regards wholesalers.

The wholesalers face various problems in procuring and marketing their eggs. Discriminant function study is used in statistics for the classification of objects into two or more categories. This statistical tool is used when the independent or predictor variable is interval in nature and the dependent variable is categorical in nature. In this process, the variables will best discriminate between the categories of the dependant variable group by developing a Discriminant Function or linear combination of independent and dependent variables. Two groups of independent variables are considered for analysis in this study. The selected variables are the problem in collection, price, package, transport, container, storage, positioning, government interference, association, labour, distribution, insurance and others.

For small wholesaler respondents: \( D = -0.727 \times X_1 + 3.363 \times X_2 + 0.489 \times X_3 + 1.946 \times X_4 + 1.519 \times X_5 + 4.165 \times X_6 + 1.522 \times X_7 -0.110 \times X_8 + 0.189 \times X_9 - 0.108 \times X_{10} + 3.411 \times X_{11} + 2.452 \times X_{12} + 2.327 \times X_{13} - 26.938 \). For large wholesaler respondents: \( D = -1.769 \times X_1 + 5.574 \times X_2 + 0.242 \times X_3 + 0.822 \times X_4 + 3.278 \times X_5 + 6.700 \times X_6 + 1.348 \times X_7 -0.990 \times X_8 + 1.247 \times X_9 - 0.127 \times X_{10} + 3.282 \times X_{11} + 5.396 \times X_{12} + 2.951 \times X_{13} - 26.938 \); Whereas \( X_1 \)-problem in
collection, X2-price, X3-package, X4-transport, X5-container, X6-storage, X7-positioning, X8-government interference, X9-association, X10-labour, X11-distribution, X12-insurance and X13-others. It is inferred that for small wholesaler, greater impacts of problem are seen in relation to storage, distribution and price. For large wholesalers, greater impacts of problems are seen in relation to storage, price and insurance.

It is found that 26 sample retailers accept that pricing is done as per size and 12 do not agree with that view; 39 sample retailers accept that pricing is done as per colour and 12 do not agree with this view. 27 sample retailers accept that pricing is done as per weight and 15 do not agree with this view. 43 sample retailers accept that pricing is done as per breed and 8 do not accept this view. Points are calculated by assigning weights from +2 to -2 as per the intensity of opinion and the highest point is computed for breed. The coefficient for breed is 1.00; for colour is 0.98; for weight is 0.67 and size is 0.61. It is inferred that the prime factor for pricing is breed of the egg and then comes the colour.

Analysis shows that the points scored for collection problem is 62; for price is 46; for package is 9; for transport is 1 and for container is 39. The coefficient is highest for collection (1.15); then comes labour (1.11) and price (0.85) and the next is storage (0.80). The least coefficient is for transport and others (-0.47).

It is inferred that the prime problem is with the collection and the second is labour and the third is price. The problem is least for package, transport and others as regards retailers.

Analysis shows the correlation coefficients between different variables. It is found that the positive correlation coefficient is highest for Gender and marital status (+0.877). Negative correlation coefficient is highest for Age and Educational qualification (-0.458). Similarly, as regards problems, positive correlation is higher among problem of container and association (+0.540) and then comes problem of container and problem of transportation (+0.504) in the case of retailers.

The study reveals that on the whole, 48.9 per cent of small farmers own buildings worth below Rs.5 lakhs; 22.8 per cent of farmers own buildings worth between Rs.5 lakhs and Rs.10 lakhs; 15.2 per cent of farmers own buildings between Rs.10 lakhs and Rs.15 lakhs and 13.0 per cent own buildings worth more than Rs.15 lakhs. It is inferred that majority own buildings less than Rs.10 lakhs as per the sample respondents.
Chi-Square test reveals that the value of land and building owned by sample farmers significantly differs in relation to the size of the farm.

The study reveals that on the whole, 38.0 per cent of farmers have equipments of value up to Rs. 2 lakhs; 21.7 per cent of farmers have equipments of value between Rs.2 lakhs to Rs.3 lakhs; 14.1 per cent of farmers have equipments of value between Rs.3 lakhs to Rs.4 lakhs and 26.1 per cent of farmers have equipments of value more than Rs.4 lakhs. It is inferred that majority of farmers have equipments worth less than Rs. 3 lakhs. Chi-Square test reveals that the value of equipments owned by sample farmers significantly differs in relation to the size of the farm.

Analysis reveals that on the whole, 43.5 per cent have got loan until Rs.10 lakhs; 26.1 per cent have got loan between Rs.10 lakhs and Rs.20 lakhs; 13.0 per cent have got loan between Rs.20 lakhs and Rs.30 lakhs and 17.4 per cent have got loan more than Rs.30 lakhs. It is inferred that majority have got loan up to Rs. 20 lakhs. Chi-Square test reveals that the loan amount of sample farmers significantly differs in relation to the size of the farm.

Analysis shows that on the whole, 37.0 per cent say that cost per chick is Rs.20; 29.3 per cent say that the cost is between Rs.20 and Rs.21; 20.7 per cent say that the cost is between Rs.21 and Rs.22 and 13.0 per cent say that the cost is more than Rs.22 per chick. It is inferred that majority of farmers that the cost is below Rs.21 per chick. Chi-Square test reveals that the cost per chick for sample farmers has no significant relationship with the farm size.

The study shows that on the whole, 37.0 per cent say that the expense for first 20 weeks per 10000 chicks is up to Rs.60,000; 32.6 per cent say that the expense is between Rs.60,000 and Rs.65,000; 17.4 per cent say that the expense is between Rs.65,000 and Rs.70,000 and 13.0 per cent say that it is more than Rs.70,000. It is inferred that majority of farmers say that the expense for first 20 weeks per 10,000 chick is less than Rs.65,000. Chi-Square test reveals that the expenses of sample farmers for first 20 weeks for 10000 chicks significantly differ in relation to the size of the farm.

Analysis shows that on the whole, 32.6 per cent say that the expense for 21st week to 72nd week per 10000 chicks is up to Rs.6,00,000; 34.8 per cent say that the expense is between Rs.6,00,000 and Rs.6,50,000; 19.6 per cent say that the expense is between
Rs.6,50,000 and Rs.7,00,000 and 13.0 per cent say that it is more than Rs.7,00,000. It is inferred that majority of farmers say that the expense for 21st week to 72nd week per 10,000 chick is less than Rs.6,50,000. Chi-Square test reveals that the expenses of sample farmers for 21 to 72 weeks per 10000 chicks do not significantly differ in relation to the size of the farm. The study shows that on the whole, 32.6 per cent say that the medical expense comes upto Rs.15 per bird; 22.8 per cent say that the medical expense is Rs.15 to Rs.18 per bird; 20.7 per cent say that the medical expense is Rs.18 to Rs.20 per bird and 23.9 per cent say that the medical expense is more than Rs.20 per bird. It is inferred that majority of farmers say that the medicine expense is less than Rs.18 per bird. Chi-Square test reveals that the medicine expenditure per bird in sample farms does not significantly differ in relation to the size of the farm.

Analysis reveals that on the whole, 48.9 per cent say that electricity cost per bird is Rs.1.50; 21.7 per cent say that it is between Rs.1.50 and Rs.2.50; 8.7 per cent say that it is between Rs.2.50 and Rs.3.50 and 20.7 per cent say that electricity cost is above Rs.3.50 per bird. It is inferred that majority of farmers say that electricity cost per bird is below Rs.2.50. Chi-Square test reveals that electricity expenditure of sample farmers has no significant relationship with the farm size.

The study shows that it is inferred that majority of farmers spend less than Rs.20 per bird as other expenditure. Chi-Square test reveals that the other expenditure per bird does not significantly differ in relation to the size of the farm.

Analysis shows that in general, 35.9 per cent farmers get income up to Rs.2 lakhs; 28.3 per cent get income between Rs.2 lakhs and 3 lakhs; 19.6 per cent get income between Rs.3 lakhs and four lakhs and 16.3 per cent get income of more than Rs.4 lakhs by sale of eggs.

Chi-Square test reveals that income from sale of eggs for sample farmers significantly differs in relation to the size of the farm.

Analysis shows that 39.1 per cent get up to Rs.50,000 income from culled birds; 26.1 per cent get between Rs.50,000 and Rs. 1 lakh; 18.5 per cent get income between Rs.1 lakh and Rs.1.5 lakhs and 16.3 per cent get more than Rs.1.50 lakhs. It is inferred that majority of sample farmers get up to Rs.1 lakh as income from sale of culled birds.
The study shows that on the whole, 39.1 per cent get up to Rs.30,000 income from culled birds; 25.0 per cent get between Rs.30,000 and Rs. 60,000; 18.5 per cent get income between Rs.60,000 and Rs.90,000 and 17.4 per cent get more than Rs.90,000. It is inferred that majority of farmers get up to Rs.60,000 income by way of sale of manure. Chi-Square test reveals that income from manure for sample farmers has no significant relationship with the farm size.

The study reveals that on the whole, 37.0 per cent get up to Rs.40,000 income from gunny bags; 30.4 per cent get between Rs.40,000 and Rs. 80,000; 19.6 per cent get income between Rs.80,000 and Rs.1,20,000 and 13.0 per cent get more than Rs.1,20,000. It is inferred that majority of farmers get up to Rs.80,000 income by way of sale of gunny bags.

Chi-Square test reveals that the income from sale of gunny bags significantly differs in relation to the size of the farm.

Analysis reveals that on the whole, 56.7 per cent wholesalers spend up to Rs. 1000 for packing; 10.0 per cent spend between Rs.1000 and Rs.2000; 10.0 per cent spend between Rs.2000 and Rs.3000 and 23.3 per cent spend more then Rs.3000. It is inferred that majority of wholesalers spend up to Rs.1000 for packing. Chi-Square test reveals that the expenditure for packing by sample wholesalers does not significantly differ in relation to the size of the firm.

Analysis shows that on the whole, 66.5 per cent wholesalers spend up to Rs. 1000 for transportation; 13.3 per cent spend between Rs.1000 and Rs.2000 for transportation; 10.0 per cent spend between Rs.2000 and Rs.3000 for transportation and 10.0 per cent spend more than Rs.3000 for transportation. It is inferred that majority of wholesalers spend up to Rs.1000 for transportation.

The study shows that on the whole, 43.3 per cent wholesalers spend up to Rs. 1000 for labour; 20.0 per cent spend between Rs.1000 and Rs.2000; 16.7 per cent spend between Rs.2000 and Rs.3000 and 20.0 per cent spend more then Rs.3000. It is inferred that majority of wholesalers spend up to Rs.2000 for labour. Chi-Square test reveals that the expenditure for labour by sample wholesalers does not significantly differ in relation to the size of the firm.
The study reveals that on the whole, 70.0 per cent wholesalers spend up to Rs.1000 for rent; 13.3 per cent spend between Rs.1000 and Rs.2000; 6.7 per cent spend between Rs.2000 and Rs.3000 and 10.0 per cent spend more then Rs.3000. It is inferred that majority of wholesalers spend up to Rs.1000 for rent. Chi-Square test reveals that the expenditure for rent by sample wholesalers significantly differs in relation to the size of the firm.

Analysis shows on the whole, 50.0 per cent wholesalers spend up to Rs. 1000 for advertisement; 20.0 per cent spend between Rs.1000 and Rs.2000; 30.0 per cent spend between Rs.2000 and Rs.3000. It is inferred that majority of wholesalers spend up to Rs.1000 for advertisement. Chi-Square test reveals that the expenditure for advertisement by sample wholesalers does not significantly differ in relation to farm size.

As regards breakage on the whole, 30.0 per cent wholesalers spend up to Rs.1000 for breakage; 36.7 per cent spend between Rs.1000 and Rs.2000; 26.7 per cent spend between Rs.2000 and Rs.3000 and 6.7 per cent spend more then Rs.3000. It is inferred that majority of wholesalers spend up to Rs.2000 for breakage.

The study shows that on the whole, 46.7 per cent wholesalers spend up to Rs.1000 for other items; 26.7 per cent spend between Rs.1000 and Rs.2000; 3.3 per cent spend between Rs.2000 and Rs.3000 and 23.3 per cent spend more then Rs.3000. It is inferred that majority of wholesalers spend until Rs.2000 for other items.

It is found that on the whole, 56.7 per cent of wholesalers have invested up to Rs.1.5 lakhs; 3.3 per cent of wholesalers have invested between Rs.1.5 lakhs and Rs.2.5 lakhs; 26.7 per cent of wholesalers have invested between Rs.2.5 lakhs and Rs.3.5 lakhs and 13.3 per cent of wholesalers have more than Rs.3.5 lakhs. It is inferred that majority of sample wholesalers have invested up to Rs.1.5 lakhs in their business.

Chi-Square test reveals that the amount invested by sample wholesalers does not significantly differ in relation to farm size.

As regards loan, on the whole, 26.7 per cent of wholesalers have obtained loan up to Rs.1 lakh; 33.3 per cent between Rs.1. lakh and Rs.2 lakhs; 20.0 per cent between Rs.2 lakhs and Rs.3 lakhs and 20.0 per cent more than Rs.3 lakhs. It is inferred that majority of sample wholesalers have obtained loan up to Rs.2 lakhs in for business.
Analysis shows that on the whole, 37.0 per cent retailers spend up to 10 paise for storage; 18.5 per cent between 10 paise and 15 paise; 29.6 per cent between 15 paise and 20 paise and 14.8 per cent more than 20 paise per egg for transportation. It is inferred that majority of retailers spend up to 15 paise per egg for storage. Chi-Square test reveals that the expenditure for storage of egg by sample retailers does not significantly differ in relation to the area of business.

It is found that on the whole, 20.4 per cent get a profit of 10 paise per egg; 20.4 per cent get a profit of 15 paise per egg; 37.0 per cent get a profit of 20 paise per egg and 22.2 per cent get a profit of more than 20 paise per egg. It is inferred that majority of retailers earn a profit of more than 15 paise per egg.

Chi-Square test reveals that the profit per egg earned by sample retailers does not significantly differ in relation to the area of business.

As regards investment, examination shows that on the whole, 31.5 per cent of retailers have invested up to Rs.0.5 lakhs; 11.1 per cent of retailers have invested between Rs.0.5 lakhs and Rs.1.0 lakhs; 35.2 per cent of retailers have invested between Rs.1.0 lakhs and Rs.1.5 lakhs and 22.2 per cent of retailers have more than Rs.1.5 lakhs. It is inferred that majority of sample retailers have invested more Rs.1.0 lakhs in their business. Chi-Square test reveals that the amount invested in retailing by sample retailers does not significantly differ in relation to the area of business.

Break Even Analysis shows that ‘A’ category farms (5000 birds), the Break Even Point birds to be reared is 2554.29 or 2555 birds. For ‘B’ category farms (10000 birds), the Break Even point birds to be reared is 3433.63 or 3434 birds. For ‘C’ category farms (15000 birds), the Break Even Point birds to be reared is 4554.52 or 4555 birds. It is to be noted that the profit per bird in ‘A’ category farm is Rs.311.42; in ‘B’ category farm is Rs.359.75 an in ‘C’ category farm is Rs.337.81 as per the marginal cost statement.

**SUGGESTIONS**

Poultry industry is an extremely rising industry and the prospects are higher in the southern states of India. Developments in the poultry sector will help more and more people to be economically contented in the immediate future.
Young entrepreneurs are attracted towards this industry due to consistent profitability in this industry. Steps may be taken by the governments and Egg Councils to provide effective training in poultry to these young entrepreneurs.

Educational qualification helps to provide the attitude for the poultry industry. The industry has the potential to accommodate highly educated people also. The increase in profitability will help to retain high talents in this industry.

Standardized chicks are to be provided to poultry farmers and this will reduce the mortality rate in this industry.

Modernized medical facilities and improved use of medicine can enhance the health of the chicks and birds and hence the quality of eggs can be increased.

The problem of labour and shortage of labour can be reduced by utilizing modern automated egg collecting systems in the poultry firms.

Price fixation by the Egg organizations and committees should be reasonable and scientific and this will ensure consistent profitability for the farmers.

Better roads, modern road transport facilities and better storage facilities will help the farmers to a greater extent and reduce unnecessary losses.

The channels for distribution are highly rigid. Flexibility and competition in these channel methods can enhance quality in distribution of products.

The poultry products can be preserved well if there are sufficient cold storage facilities. The study area has least preservation facilities. Hence, provision of cold storage facilities in the study area may help to preserve the products and increase the profitability in the business.

The poultry production areas in India are divided into four zones i.e, North, East, South and West for the purpose of export aspects. The study area is in the southern zone. The southern zone is least prone to Avian Flu, which is a dreaded disease among birds. The export market is affected if any other part of the country is affected by flu. Hence, the importers should be educated about the non prevalence of flu among birds in the southern areas so that the export prospects are not affected.
The poultry farmers face shortage of medicines some times due to higher demand for medicines. This shortage can be reduced if steps are taken by the medical stores to stock adequate quantities of medicines throughout the year.

There are no laboratory facilities for testing the diseases for poultry birds. For example, the avian facilities to identify flu can be done only in Pune. Hence, a full fledged laboratory can be installed in the study area so that laboratory testing results could be better.

The concept of poultry insurance has declined to a large extent due to higher claims made by the poultry farmers. The revival of poultry insurance facilities can help the farmers to reduce their risk as regards mortality among poultry birds.

The transport problems are higher in relation to poultry products. This problem can be minimized only if the farmers’ cooperatives or the associations provide or get transport vehicles and collect the products from the farms in future.

Labour problem is increased in the southern states, especially in agriculture and agro based industries. Non availability of labour is higher with regard to poultry industry. This problem can be reduced only if scientific automated technology is used in the farms.

Government can start an exclusive special Board for Export of eggs and poultry products. This Export Board may provide continuous demand for the poultry products. Further, the proposed Board can act as collecting agents for exporters so that money is not locked up in foreign countries for a longer period.

There is least precaution for disposal of dead birds. This unprotected disposal create new diseases in the rural areas. Steps may be taken to dispose the poultry wastes and dead birds in a hygienic condition as done by many major hospitals for disposing of the hospital wastes.

Technology can be introduced in this industry and government may provide higher subsidy for changing the farms as an automated technology based industry.

Poultry medicines are sometimes costliest and they are scarce. The government can provide higher stock of medicines and provide them to the needy farmers in time.
CONCLUSION

The phenomenal growth in the egg production has led to the exploration of various economical marketing channels. The market should be expanded in such a way that the production equals consumption. It is interesting to note that a majority of the rural population have little religious taboo against consumption of eggs. This shows the tremendous potential for growth of the industry for two or three decades. India has achieved good progress in manufacturing the latest state. That state art technology in equipment for poultry management is used to sustain the quality of poultry products. It is necessary to create the needed infrastructure facilities for processing, packaging, preservation and marketing eggs. Attention is also needed to find out the ways of producing poultry feed at an economical cost and improving the service for the disease control measures. Availability of quality chicks should be ensured. Incentives and institutional finance combined with appropriate training and guidance are also necessary at present. There should be an organized and projected development with modern technology. A viable and efficient structure needs to be established at village, district and state levels for monitoring the poultry industry. The study area, Namakkal District is highly associated with poultry industry and the future is also very bright for this industry. Being an agro-based related industry, this farming provides employment opportunities to lakhs of people directly and indirectly. The products are also associated with health of human beings and hence, government patronage to this poultry industry is highly needed. Efficient and modern technology based management practices can increase the profitability of poultry farming. The problems faced by this industry can be reduced by utilizing the Business Process Re-engineering methods. Revamping measures taken on the basis of efficiency and quality can provide higher sustainability to the industry in this competitive environment.