

**EMPLOYEES' PERCEPTION OF TOTAL QUALITY MANAGEMENT
AT KERALA FEEDS LIMITED, KALLETUMKARA THRISSUR**

by

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(2016-31-018)

MAJOR PROJECT REPORT

Submitted in partial fulfilment of the
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Faculty of Agriculture

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COLLEGE OF CO-OPERATION, BANKING AND MANAGEMENT

VELLANIKKARA, THRISSUR- 680656

KERALA, INDIA

2018

DECLARATION

DECLARATION

I, hereby declare that this project report entitled **EMPLOYEE'S PERCEPTION OF TOTAL QUALITY MANAGEMENT AT KERALA FEEDS LTD, KALLETUMKARA THRISSUR** is a bonafide record of work done by me during the course of project work and that it has not previously formed the basis for the award to me for any degree/diploma, associateship, fellowship or another similar title of any other University or Society.

Place: Vellanikara

Date:



Anjana T T

(2016-31-018)

CERTIFICATES

CERTIFICATE

Certified that this project report entitled **EMPLOYEE'S PERCEPTION OF TOTAL QUALITY MANAGEMENT AT KERALA FEEDS LTD, KALLETUMKARA, THRISSUR** is a record of project work done independently by **Ms. ANJANA T T (2016-31-018)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, fellowship, or associateship to her.

Place: Vellanikkara

Date:



Dr Binoo P Bonny

Professor

Dept. of Agricultural Extension





KERALA FEEDS LTD.

(A GOVERNMENT OF KERALA UNDERTAKING)
KALLETUMKARA - 680 683, THRISSUR DIST., KERALA

CIN: U15331KL1995SGC009521

An ISO 9001 : 2008 Livestock Feed Company

CFPP/54/96(A) / L-1407/18

20th December 2018

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Anjana T.T**, MBA student of **College of Co- operation, Banking & Manangement, Vellanikkara** has completed her Project Work at Kerala Feeds Limited under the topic "**Employee's Perception of Total Quality Manangement at Kerala Feeds Limited, Kallettumkara**" during the period from 13.08.2018 to 13.09.2018. This certificate is issued enabling her to keep in project report.

for KERALA FEEDS LIMITED

[Signature]
20/12/18

DY. MANAGER (P&A)

for MANAGING DIRECTOR



6

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For any errors or inadequacies that may remain in this work, of course the responsibility is entirely my own.

Anjana T T

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LIST OF ABBREVIATIONS

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BIS	-	Bureau of Indian Standards
CITU	-	Kerala Feeds Employing Association
EDP	-	Electronic Data Processing
FAO	-	Food and Agriculture Organization
HRD	-	Human Resource Development
HSN	-	Harmonized system of Nomenclature
IFIF	-	International Feed Industry Federation
KFL	-	Kerala Feeds Limited
TQM	-	Total Quality Management
WTO	-	World Trade Organization

Chapter 1

DESIGN OF THE STUDY

CHAPTER – I

DESIGN OF THE STUDY

1.1 INTRODUCTION

In today's global competition and economic liberalization, quality has become one of the important factors for achieving competitive advantage. Total Quality Management is a management approach that originated in the 1950's and has steadily become more popular since the early 1980's. Total Quality Management (TQM) is a firm- wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customer's needs and expectations to enhance customer satisfaction and firm performance.

TQM is a management philosophy that builds customer driven learning organizations, dedicated to total customer satisfaction with continuous improvement in the effectiveness and efficiency of the organisation .it is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices. TQM views an organisation as a collection of processes. It maintains that organizations must strive to continuously improving these processes by incorporating the knowledge and experience of workers. The simple objective of TQM is "Do the right things, right from the first time, every time"

Implementation of Total Quality Management helps the companies to identify weaknesses, faults, areas for improvement and strengths. This gives the company the ability to set standards, make adjustments as needed and to offer greater value overall to their customer base. Although the approach to solving quality issues varies with different programs, the goal remains the same to create a high quality, high-performing product or service that meets and exceeds internal and external customer expectations. When companies focus on quality management, they create a plan for success.

1.2 STATEMENT OF THE PROBLEM

The change in consumer behaviour has made most producers of goods and services to tailor their products to meet the requirement of potential buyers. Thus, most organisations are concerned about how to satisfy their customers. Even as organisation strives to meet customer's expectation, there still exist some flaws in the process involved in product delivery. As the companies tend to adopt a Total Quality Management ideology, it will increase customer satisfaction with the product offerings. The improvement in quality can result in increased market share and profitability.

A successful TQM environment requires committed and well- trained work force that participate fully in quality improvement activities. Such participation is reinforced by reward and recognition systems which emphasize the achievement of quality objectives. Only if the employees from lower grade; i.e. from workers to middle level and top level are aware of the TQM practices and its advantages, company can thrive among the competitors and achieve customer satisfaction.

Thus a study is conducted to understand the employee's perception of TQM practices implemented in Kerala Feeds LTD for the improvement of the production process of goods and services thereby increasing the business quality and also the extent of employees' awareness in TQM activities. Here function of awareness of employees about TQM Implementation and its effect on companies' performance as perceived by its employees were studied.

1.3 OBJECTIVES

The objectives of this study were:

- To study the extent of awareness of employees in TQM activities of KFL
- To analyse outcome of TQM implementation in the company as perceived by its employees

1.4 METHODOLOGY

1.4.1 Location of the study

The location for the study is Kerala Feeds LTD, Kallettumkara, Thrissur District

1.4.2 The period of study

The study was conducted from September to October, 2018.

1.4.3. Sample size and method of sampling

Stratified random sampling technique were used to select 60 employees of Kerala Feeds LTD from different hierarchical levels (officers to workers)

1.4.4 Type and source of data

Both primary and secondary data were used for the study.

Primary Data: Primary data were collected through structured interview schedule developed for the employees of Kerala feeds Ltd.

Secondary Data: Secondary data were collected from journals, annual reports, magazines and books.

1.5 STATISTICAL TOOLS FOR ANALYSIS

Appropriate measurement tools like perception index and percentages were used to analyse the personnel variables and parameters determining the perception of employees towards the Total Quality Management in Kerala Feeds Limited.

The level of perception of the employees was analysed on the basis of 15 selected parameters for officers and 12 parameters for workers. These parameters include various statements which are graded in Five point Likert scale. The scores allotted for the responses are in the following manner.

Responses	Score
Strongly Agree(SA)	5
Agree(A)	4
No Opinion (NO)	3
Disagree(DA)	2
Strongly Disagree (SD)	1

Based on these scores, index of each parameter and statements were calculated. The index for both workers and officers were calculated separately. The formula for calculating index is:

$$\text{Index for the statement} = \frac{\text{Total score obtained for the statement}}{\text{Maximum obtainable score for the statement}} \times 100$$

Maximum obtainable score for the statement = Maximum score obtainable for the opinion x Total number of respondents

When the individual index was calculated, the next step is to find out the overall index of the parameters. It is calculated using the formula;

$$\text{Overall index for a parameter} = \frac{\text{Total score obtained for the statement} \times 100}{\text{Maximum score} \times \text{Number of respondents} \times \text{Number of statements}}$$

The level of perception was categorised as High, Good, Moderate, Poor and Very poor based on the index obtained.

Index	Level of Perception
>80	High
60-79	Good
40-59	Moderate
20-39	Poor
<20	Very poor

1.5 OBSERVATIONS MADE

1. Quality Consciousness and awareness of TQM
2. Quality assurance & Quality standards of organisation
3. Quality certification in the organization
4. Preventive maintenance in the organization
5. Employees feedback system
6. Innovative technologies adopted by the company
7. Product rejection
8. Customer friendliness and safety
9. Supplier relationship
10. Working environment in the company.
11. Team work
12. Management acceptance of suggestions.
13. Communication and decision making

14. Waste management

15. HRD practices

1.6 SCOPE OF THE STUDY

The study covers the perception of the employees about Total Quality Management in Kerala Feeds Limited. The study helps the company to evaluate the current quality control practices prevailing in the company with respect to their product and process and thus can able to implement suitable quality control practises in order to compete with the product of the competitors.

1.7 LIMITATIONS

- Employee of the organisation may hide the fact
- The management did not agree to disclose all the confidential data
- It is only possible to contact with the employees during their relaxation time.

1.8 CHAPTERISATION

This project report is divided into five main chapters.

- Chapter 1 is *Design of the Study*. This chapter gives the details about the statement of the problem, objectives, methodology, observations, scope of the study, and limitations of the study.
- Chapter 2 is *Review of Literature*. This chapter gives the brief summary of various works carried out related to the present study.
- Chapter 3 is *Kerala Feeds Ltd. A profile*. This chapter gives the full profile of Kerala feeds Ltd. Kallettumkara.
- Chapter 4 is *Analysis and interpretation*. In this chapter the various data collected from the survey has been analysed and inferred.
- Chapter 5 is *Summery of Findings, Suggestions and Conclusion*. This chapter gives the summery of findings, suggestions for the company and the conclusion of the project.

Chapter 2

REVIEW OF LITERATURE

CHAPTER -II

REVIEW OF LITERATURE

A review of past research helps in identifying the conceptual methodological issues relevant to the study. This would enable to collect information and subject them to sound reasoning and meaningful interpretation. A brief review of the earlier research work related to this present study is presented in this chapter. Many studies were conducted on the topic employee perception and TQM practices. Few of them are listed here.

Crosby (1979) defined steps for quality improvement, including the zero-defect philosophy. Crosby's essential points in his definition of quality are (1) it is necessary to define quality.(2) one must know what the requirements are and be able to translate these requirements into measurable product or service and (3) it is necessary to measure the characteristics of a product or service to determine whether it is of high quality.

Deming (1982) proposed his 14 principles to improve quality in organisation. His essential arguments are (1) quality must be defined in terms of customer satisfaction (2) Quality is multi-dimensional where it is impossible to define quality the quality of a product or service in terms of a single characteristic or agent.

Ishikawa (1985) emphasized the importance of quality circles as a method to achieve continual improvement. Ishikawa makes it clear that consumer's needs and requirements change continuously, therefore the definition of quality is ever changing and the price of the product or service is an important part of its quality.

Deming (1986) argued that reward needs to be tied to team work or department rather than individual. The failure of organisations to implement the rewards to group might lead to internal competition amongst employee and this will have a negative impact on team performance which TQM promotes

Juran (1986) noted that whereas the 20th century became famous for world productivity, his 21st century would become well recognized as the "century for quality" Juran defined quality as "fitness for use".

Sparrohe (1989) analysed eight critical success factors as those things that must go right in order to ensure the successful implementation of TQM. They are top management leadership, role of quality department, training, product design, supplier quality management, process management, and quality data reporting, and employee relations.

Collinson *et al* (1992) identified seven factors critical to quality process: influence, responsibility / authority, innovativeness, desire to change, satisfaction, teamwork, and common vision/benchmarking.

Juran and Gryna (1993) stressed that training and development are a key factor in any quality continuous improvement program, enhancing that employees should be provided with the main skills and knowledge compatible with the role they are concerned with, searching higher commitment levels towards quality improvement, and in the last instance, higher levels of efficiency and effectiveness.

Hackman and Wageman (1994) stated that TQM is a management approach to improve the effectiveness, flexibility and competitiveness of a business as a whole. The techniques of TQM can be applied throughout the departments of a company so that people from different departments, with different priorities and abilities will be communicate and help each other.

Dale (1994) on his own assessment claims that the adoption of incompatible quality approach by organisations results in the failure of TQM implementation, he further stressed that the delegation of quality leadership by managers might lead to the development of TQM bureaucracies that are ineffective like other functional departments. TQM is an approach that enables the organisation in order to improve their competitiveness, increased effectiveness for the whole organisation.

Rousseau (1995) posits that training and development should not be seen as a one-time event but a lifelong process. Many organisations recognise today that due to the massive changes taking place in the business world. Booster shots of training and development are needed throughout employee careers. This will help them to acquire the necessary skills to initiate improvement strategies that would add value to customers.

Maheew (1996) noted that constant improvement in the effectiveness of operation is essential but not a sufficient factor for organisation to be profitable. Implementation of TQM further ensures that organisation change how they perform activities so as to eliminate inefficiency, improve customer satisfaction and achieve the best practice. There is a need for managed to drive the ideology of TQM posses in order to encourage employee to follow and also to prove to them about management's commitment to quality.

Dale (1997) emphasized that employees are in the best position both to recognize problems and to find improvements, if they are interested, and sufficiency empowered to take steps to make improvements.

Arvinder and Michael (1997) for TQM to be institutionalized, employees at all levels ned to be trained, empowered, and rewarded for teamwork. Above all, the top management needs to create an environment that fosters learning, open communication, teamwork, to achieve better organizational performance through TQM. People-based strategies requires more than cosmetic changes, implying high commitment in doing things differently, such as training employees in multiple skills, organizing workers in teams, instituting suggestion systems, organizing problems, solving mechanisms like quality circles and so forth.

Geirhybein (1998) observes that a typical scenario in most organisations is that senior management of the organisations treat quality management implementation with scepticism, lack of enthusiasm, marked unwillingness to commit resources, and a short term perception. The core objective of TQM is to guarantee that every employee is conscious that he belongs to an internal continuous chain of customer- supplier relationships and that his full involvement is essential for quality improvement.

Mohanty and Lakhe (1998) found that TQM is applied the world over for attaining customer satisfaction, reliability, productivity, market share, profitability and even survival; which are directly affected by the quality of an organization's products, services and performance

Campbell (1999) found that teamwork in the organisation provides employees cooperation among each other and among other departments which increases self-

efficiency and ultimately leads towards job satisfaction among employees. Teamwork contributes to the generation of improvements that are proposed by employees.

To them, the proposed improvements have a way of changing the attitudes of employee that are resistance to change.

Collard (2000) highlighted that a total quality management strategy was most effective when supported by significant training, founding, and support for the frequency claimed prescription that more training is helpful in TQM's implementation. Since there is a strong commitment to TQM principles, otherwise investment and commitments to training will not have significant impact on firms' earnings.

Rehman (2001) stresses TQM provides a vision that focuses on everyone in the organisation to be involved in the improvement of quality. The pursuit of quality improvement is not only requested by the market but also driven by the need to survive. Employee's involvement may provide the foundation for quality efforts and strategy development, and ensure that practices implemented conform to quality requirements that are followed by everyone in the organization.

Antonioni et al (2002) states that the successful implementation of TQM will result in improved employee involvement, improved communication, increased productivity, improved quality and less reward, improved customer satisfaction, reduced costs of poor quality, and improved competitive advantage.

Stah (2002) Total Quality Management (TQM) is a strategy that embodies the belief that the management process must focus on integrating the customer- driven quality throughout an organisation. Employees 'involvement/commitment, and quality training and development are key factors for TQM's successful implementation. Increasingly, companies' shift toward philosophies focused on quality continues improvement like TQM, lead firms to develop and implement initiatives directed at employees' training and development.

Besterfield (2004) defined TQM as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organisation. It is the application of quantitative methods and human resources to improve all the processes within an organisation and exceed customer needs now and in the future

Lewis (2004) TQM stresses continuous improvement of product quality and service delivery while taking into cognisance the reality that in order to achieve this goal,

Employee relations need to be equally addressed, as the customer cannot get the satisfactory service delivery from ill-motivated employees.

Srivatsava et al. (2006) TQM is a philosophy with worldwide appeal and the principle of TQM have received wide spread attention over the last two decades in many organizations- large or small, profit or non-profit, commercial or Government, manufacturing or service.

Slerming (2007) noted that TQM has a strong predictive power against quality performance but however, the harmonisation of other implementation of the TQM techniques is appropriate for enhancing the organisational performance.

Scheurich (2007) said that TQM helps in improving the quality of products and also reduces the scarp, rework and the need for buffer stock by establishing a stable production process. He argued that TQM will reduce the cost of production and time of production. Many other TQM practices such as training, information system management, relationship with suppliers etc. have a positive impact on operational performance.

Tom Noone (2008) said that the researchers have done research on various parameters of TQM ranging from quality assurance, curriculum development, administration, stakeholders, and leadership.

Zakuan et al. (2010) have developed a model of TQM implementation in relation with organizational performance. Eight constructs of TQM, namely, quality leadership, customer focus and satisfaction, quality information and analysis, human resource development, strategic planning management, supplier quality management, quality results, and quality assurance have been identified by them. Satisfaction level and business results measure the organizational performance in their study. The study showed a positive impact of TQM effectiveness on organizational performance

Kumar et al. (2011) identified management commitment, customer satisfaction, continuous improvement, teamwork, employee's empowerment, training, feedback, and effective communication as few success factors for both manufacturing and service industries.

Camphell (2013) the study reveals that the managers' mind set and management policy are more consistent with Taylor's scientific theory. According to Taylor employees are likely to work harder when they are being pressurized and supervised closely to ensure the maximum expected output from them.

Hassan et al. (2014) examines the association of TQM practices like leadership, employee fulfilment, continuous improvement, process management, learning, cooperation and customer focus with quality performance.

Romle et al (2015) described the ways by which quality entails a variety of perception of different people, things and the way it was defined.

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Chapter 3

ORGANIZATION PROFILE

Chapter -III

INDUSTRY PROFILE

The cattle feed segment is also a segment for potential growth given the fact that India is largest producer of milk in the world. Production is expected to grow 4% at annual basis. India's yearly production of 91 million tons of milk ties that the potential market for cattle feed should be approximately 45% million tons annually. However the vast majority of cattle and buffalo in India are fed through grazing and the use of basic mixes and concentrates and the market for compound feed is estimated to be around 5.5 million tons. The private players produce around 1.2 million tons; the dairy co-operative sector produces around 205 million tons of low cost feed that is sold to member farmers involved in milk production. The rest is produced by home mixers. Dairying is an important source of subsidiary income to small / marginal farmers and agricultural labourers. The manure from animals provides a good source of organic matter for improving soil fertility and crop yields. The gobar gas from the dung is used as fuel for domestic purposes as also for running engines for drawing water from well. The surplus fodder and agricultural by-products are gainfully utilized for feeding the animals. Almost all draught power for farm operations and transportation is supplied by bullocks. Since agriculture is mostly seasonal, there is possibility of finding employment throughout the year. The main beneficiaries of dairy programmes are small / marginal farmers and landless labourers. Even more profit can be earned depending upon the breed of animal, managerial skills and marketing potential.

In India cattle, livestock's and poultry are among the basic building blocks of the rural economy. Over the years, these have been affected by a scarcity of quality fodder other nutritious feed. Ever sensitive to India's agrarian sector, the company launched 'pashudan' a balanced diet for the cattle. The optional blend of protein carbohydrates, fats, vitamins and minerals in this pellet-formed compound cattle feed helps the rural folks to increase their milk production capacities and in turn their lifestyles.

Global scenario

Livestock rising and the consumption of animal products make a crucial contribution to the economic and nutritional wellbeing of millions of people around the world. Animal feeds play a leading role in the global food industry and feed is the largest and make

important component to ensuring safe, abundant and affordable animal proteins. World compound feed production is fast approaching an estimated 1 billion tone annually. Global commercial feed manufacturing generates an estimated annual turnover of over US \$ 370 billion commercial production or sale of manufactured feed products takes place in more than 130 countries and directly employs more than a quarter of a million skilled workers, technicians, managers and professionals.

IFIF (International Feed Industry Federation) and its members are keenly aware of the demographic and sustainability challenges which lie ahead of the food and feed industry. The UN Food and Agriculture Organisation (FAO) estimates that the world will have to produce 60% more food by 2050 and we believe that animal protein production will grow even more meats (poultry/swine/beef) will double, as well as dairy, fish production will almost triple by 2050. One of the challenges is that on top of the almost 1 billion tons of feed produced by the feed industry, around 300 million tons of feed is produced directly by on farm mixing. This poses challenges as food safety authorities do not regularly audit mixing by farmers and regularly authorities early inspect when there is problem. IFIF believes it is vital for the feed industry and for the sustainability of the whole feed and food chain that clear standard applies throughout the whole feed chain. We believe both industrial and on farm mixes should be controlled and inspected on a regular basis.

The last years have continued to see an increase in the demand for animal protein worldwide, including for livestock, dairy and fish. Generally we have seen a growth of production particularly in the developing world with the developed world remaining more or less stable. 2012 was a challenging year for the feed industry, with the US and Brazil feed production slightly lower than the in 2011(USA-1.5%, Brazil-3%) and the EU (European Union) 27 having stable production.

Growth in 2013 will depend on the global grain production, befouls policies and export demand in terms of feed availability and affordability. Globally we export modest growth of around 2% for the industry. The pet food industry and the aquaculture industries will continue to grow strongly.

Indian scenario

The Indian feed industry is about 35 years old. It is mainly restricted to dairy and poultry feed manufacturing, the beef and pork industry is almost non-existent. The

quality standards of Indian feeds are high and up to international levels. Raw materials for feed are adequately available in India. The industry's production is about 3.0 million tonnes, which represents only 5 percent of the total potential, and feed exports are not very high. The feed industry has modern computerized plants and feed exports are not very high. The feed industry has modern computerized plants and the latest equipment for analytical procedures and least-cost ration formulation, and it employs the latest manufacturing technology. In India, most research work on animal feeds is practical and focuses on the use of by-products, the upgrading of ingredients and the enhancing of productivity.

The country has entered into a period of liberalization and this is bound into a period of milk, eggs and broiler meat will grow. The Indian feed industry is undergoing a very existing phase of growth for the next decade.

Uttar Pradesh tops in milk production in India. There are as many as 25 of cattle and six well defined breeds of buffaloes in India. A few breeds are the dairy type in which females yield a large quantity of milk and males work. A majority of the breed are the draught type where females don't produce much milk but bullocks are of a high quality. There are also "dual purpose" breeds where females yield a moderate quantity of milk and males are good working bullocks. Well defined breeds are found in dry parts of the country while cattle in areas of heavy rainfall like south and east India usually do not belong to any definite breed.

Cattle feeding routines are quite traditional. Farmers select their own mixtures of feed. The productivity of cattle is restricted because of their poor genetic makeup. This means that even if such cattle were offered high quality composed feed (industry feed), productivity may not see an increase.

Oil cakes. Maize and cereal by products are important ingredients of cattle feed. Coarse grains and cotton seed are usually added to make a balanced feed mixture other products like mango seed kernel, mahowa cake, neem cake, soya pulp, wheat bran, pollard, broken rice, wheat germ and whey powder may also be used for feeding livestock. Commercial cattle feed consists of raw material such as cornstarch liquid glucose, dextrose, sorbitol, fibrillose, malt dextrin, corn gluten meal, soya meal and rape meal. Intake of cattle supplements improves the general health condition of cattle and leads to a high yield of good quality milk that is rich in fat, protein and sweetness.

Kerala scenario

Production of cattle feed is an important activity in rural and semi urban areas. Even today in rural India, particularly eastern region agriculture is largely cattle based. Very little activity is mechanized. Apart from farming activity, a large part of rural livelihood depends on cattle. It is the only source of milk, organic manure and fuel requirement is also met from the excreta of the cattle. Entire dairy industry and meat industry is dependent fully on the cattle- rearing. Therefore, the requirement of cattle feed for both domestic animal as well as commercial cattle are huge.

The dairy sector in Kerala could maintain a higher growth rate of 4.2% in the 1990's, compared to the national level of 4.2% in spite of a weak fodder base. During the period 2002-03 to 2006-07(10th plan period), a negative growth rate was recorded in the milk production of Kerala (-4.6%) from 3.7% in 9th plan at all India level then growth rate declined to 4% from 4.3% in 9th plan period. For the periods 2007-2008 to 2011-12 a recovery has been marked in milk production of Kerala with an average annual growth rate of 5.1%. This is reasonably high rate compared to 4.4% at all India level.

Total milk production in the state which was 24.2 lakh tones in 2003 declined to 21.1 lakh tones 2004 and increased to reach 27.2 lakh tones in 2011-2012. At the same time, over the period, at national level the milk production which was 2.4% during 2003-04 showed a declining trend and reached to 2.1% during 2011-12

Present status of the industry

The feed industry has modern computerized plants and the latest equipment for analytical procedures and least cost ratio formulation, and it employs the latest manufacturing technology. In India, most research work on animal's feeds is practical and focuses on the use of by products, the upgrading of ingredients and the enhancing of productivity. The quality standards of Indian feeds are high and up to international levels. Raw materials for feeds are high and up to international levels. Raw materials for feed are adequately available in India. The industry's production is about 3.0 million tones, which represents only 5 percent of the total potential, and feed exports are not very high. The country has entered into a period of liberalization and this is bound to influence the livestock industry. The per capita consumption of milk, eggs and broiler meat will grow. The Indian feed industry is undergoing a very exciting phase of growth for the next

decade. Today, the Indian feed industry is worth approximately Rs 45 billion, that is about US\$1 billion.

Cattle feed industry

Earlier days the commercial production cattle feed was not an important one. Most of the farmers depend upon the traditional feeds like grass, hay, coconut cakes, rice bran etc. But the researchers in this area have shown that the cattle get insufficient nutrition from this. Thus the first effort for commercialization the cattle feed by adding more nutritious ingredients.

The Indian feed industry is about 35 years old. It is mainly restricted to dairy and poultry feed manufacturing. Feed manufacturing on a commercial and scientific basis started around in 1965 with the setting up of medium sized feeds plant in northern and western India. The quality standards of Indian feeds are high and up to international level. Raw materials for feed are adequately available in India. The feed industry has modern computerized plants and latest equipment for analytical procedures and least lost ration formulation. The feed manufacturing companies stressed on their brand image. It was healthy change in the feed market. The latest step was pelletized feed.

Kerala feed headed in the pelletized by introducing the cooking process. Increasing livestock farmers began to concentrate on milk production and preferred high yield crossed female animals. In three decades after a major cross breeding program was launched with Swiss assistance the proportion of cross breed animals in the total cattle population in the state rose to 68%. The country has entered into period of liberalization and this has bound to increase the livestock industry. Today, the Indian feed industry is worth approximately Rs. 45 billion.

India is an agricultural country and is very important in the agricultural operation in our country. But in other countries, cattle are mainly used for milk and meat purposes. Besides cattle's provides wide varieties of products such as milk, butter, ghee and other food products. These are valuable in our country because most of the people in our country are vegetarians. Milk and milk products are only the source through which the people consume vitamins and protein. However attempts were taken to improve the growth of cattle's by providing them better quality feed. The majority of the Indian cattle are seriously underfed particularly in rural area.

Cattle Feed

Cattle feed practices are very traditional. Farmers use their own ingredients and prepare their own formulation, believing that by these means they are able to pay more individual attention to their cattle. The productivity of the cattle is limited because of their poor genetic makeup, so high quality compound feed (industry feed) may not necessarily generate a significant improvement in productivity and this has hampered growth of the cattle feed industry because most farmers are reluctant to use compound feed fully. Instead they compromise by using such feed and proportion of 50 to 60 percent, making up the balance with their own formulations. It is only in the case of highly productive animals that compound feeds have been able to show its real potential and the importance of the technology has been demonstrated.

The share of compound cattle feed manufactured by the industry, in relation to the overall potential, is low for the following reasons:

- ❖ The cattle population is fragmented and spread over large parts of the country. Farmer's low level of education and strong traditional beliefs mean that there is generally little awareness of compound cattle feed.
- ❖ More than 50 percent of the country's total milk production comes from a very large number of low yielding cows and buffaloes. A further 25% of milk production comes from buffaloes and only the remaining 25% of the total is produced by crossbreed and improved cows.
- ❖ Industrial manufactured compound cattle feed has proved its value for cross-breed cows and buffaloes but not for low-yielding cattle because of their genetic limitations. Home-mixed feed is very frequently used for buffaloes and low yielding cattle.

Poultry Feed

Poultry feed divided into layer and broiler feed. In the case of layer feed, cost is the main constraint in using compound feed. An innovative high-value compound feed can result in increased number of eggs, but the risks are too high because of bird's long life cycle.

Compound feed has however, made a contribution to broiler feeding. This is an example of excellent coordination among instrument technology, formulation and use of

feed additive and supplements are greater than the cost increases and the bird's life cycle is short.

Two types of poultry feeds are prepared. One is ready-made and in the form of mash or pellets. The second is concentrated form for mixing with an energy source. Concentrates are protein sources, balanced in amino acids and containing vitamins, minerals and feeding additives. They are mixed with energy sources such as maize, sorghum or bare to prepare poultry rations.

The quality assurance of compound feed

The Indian feed industry employees the services of qualified nutritionist. Members of the industry have their own analytical laboratories and either have their own research and development facilities or have access to the research laboratories of agricultural universities or government institutions. The industry is fully committed to quality and their technical staffs are knowledgeable about the nutrition of cattle, buffaloes, layer and broilers. As well as the normal proximate principles, other analyses are regularly carried out, such as amino acids, aflatoxin, ochratoxin, castor, tannis and urease activity.

Issues in the industry

Standardization and regulation of animal feed manufactures

As already mentioned, BIS has produced guideline feed standards and the industry also has its own guidelines. Currently there is no use BIS standards, but the central government has been advising states to introduce their own regulatory standards. The industry however is resisting this move. One of the major reasons for opposition is that the government wants to legislate regulation under the essential commodities Act 1955 which is considered draconian and totally inappropriate in this context.

There is no shortage of compound animal feeds anywhere in the country. In fact, the organized sector of the compound feed industry is facing serious problems resulting from a huge idle capacity, to the extent of percent or more new capacities are being added by global players in the feed business and by national as well as multinational integrators. The nature of animal feeds and the animal feed industry has completely changed.

Increasingly, products including new products are being excluded from the purview of the essential commodities Act 1955. Major raw materials for compound animal feeds, such

as groundnut, soybean, rapeseed and sunflower meals and cottonseed and rice bran extract, which are exported, are not covered by the Act. There is therefore no reason for it to cover the animal feed manufactured with these raw materials.

Furthermore, the industry has several reservations about implementing BIS standards. There is a lack of flexibility in these standards and they have not been revised for 30 years, while the BIS standards for poultry are obsolete

Another feed standards issues that worries both the government and industry is that any changes to existing standards will be slow and difficult to arrive at because of participative conflicts and various lobbying groups. However, the industry's principal concern about compulsory standards is that they will disturb efforts to innovate and upgrade feed production in order to improve the productivity of the animals. This is because all innovations would have to be passed by BIS, and such a process is likely to take several years to complete.

Classifications of animal feed supplements/additives for import

The classification of feed additives is a major hindrance to the Indian feed industry. Worldwide, animal feed supplements and additives are covered under chapter 23 09 of the harmonized system of Nomenclature (HSN), to which Indian is a signatory. In the HSN, all feed ingredients are listed under the "free" category for import, but the Indian government put them into the "restricted" category in October 1995. Since then, there have been continues discussions among the drug control authorities, the Director-General of Foreign Trade and the central Excise Department, all of which want to bring feed additives under their administration so as to increase their own revenues. The industry, represented by CLFMA, has made several representations to the government, but these have been round various government departments. Appellate tribunals, the High court and the Supreme court without providing any useful results for the industry.

Countervailing duty on amino acids

The essential amino acids, such as DL- Methionine, L-lysine and L- threonine are not manufactured in India. These products are vital ingredients of compound animal feed for improving the quality of the final feed and making it conversion-efficient. With a view to bringing about the rapid development of animal husbandry in India, the government reduced the import duty on essential amino acids to the present level of 10 per cent

customs duty, so that the feed price to livestock farmers would be economic. However, with the imposition of countervailing duty (CVD) and other duties, the objectives of helping to promote animal husbandry has been defeated.

Local sales tax

Another threat to the industry as caused by local sales taxes. It must be noted that the feed industry is mainly commodity-oriented and, although it is value-added, it cannot support the burden of any kind of taxation. The industry has made several representations so the government and some state government have accepted its point of view and reframed from levying any tax on animal feeds.

Import and export

Indian feed was exported to the near east during the 1980's but the export demand was reduced when feed mills were set up in the near east. At present, India exports about 25000 tons of feed to the near east as general animal feed.

There is no import of animal feed as such into India. However, the country does import certain chemicals, feed additives, amino acid and essentials for aquaculture feed

Future of the industry

At the beginning of the 20th century is so broad that changes in population dynamics are not perceptible. The population may stabilize by sometime between 2030 and 2040 if all sections of society support family planning wholeheartedly. The purchasing power of the middle class is growing (the middle class accounts for approximately 300 million people) and food habits are also changing.

The Indian economy is growing at rate of 6-8 percent per annum. The livestock industry is second large contributor to gross domestic product after agriculture, and accounts for 9% of the total. Consumption is likely to increase as follows per capita milk from 240 to 450 g per year, per capita eggs from 40 to 100 per years; and per capita broiler meat from 1000 to 2000 g per year

A major change is occurring in India on the economic front. The country has adopted a model that lays midway between liberal and public sector production, but growth has been affected by the poor performance of most of the public sector units, rising government costs and fiscal deficit and the economy has suffered. A process of

liberalization was set in motion by the government and has been implemented for the last eight to ten years. This has caused India to open up and invite investment from multinationals, liberalize import, reduce government expenditure and remove public sector business. It also means that the days of nationalization, unnecessary government controls and restrictions will soon be over thanks to progress in country's economy.

India has entered into an agreement with its trade partners under the World Trade Organization (WTO). The changes brought about by the liberalization process will be slow but certain, the government is opening up imports in a phased manner and it is expected that this process will be completed by April 2003. In the meantime about 930 items including agricultural products will be open for import under open general license from April 2001 making it possible to import dressed chicken, milk and milk products.

Various livestock industry associations have taken issue with such imports in an attempt to protect their members. If the livestock industry is affected, the feed industry will also be affected. The government of India has raised the tariff on all poultry and poultry products from 35 percent to the WTO boundary level of 100 percent. It therefore appears that there will be a level playing field.

In view of the expected rise in per capita consumption chicken, meat, milk and eggs livestock production and productivity will grow. The dairy industry, which is corporative based, is growing with the increase capacities of milk processing units.

The population of cross breed cattle and buffaloes is also growing. Milk is very popular in India. The poultry industry is developing towards vertical integration and a few multinational companies have already entered the Indian poultry business. Although the live bird market currently accounts for about 90% of the total market, it is expected that the consumption of dressed chicken will grow in the next five years from the existing 10 percent to 25 percent or more. This would mean establishing very hygiene and scientific processing units. Cold chains and branded chicken cuts etc. will be introduced and depending on the success and consistent quality consumer preference for dressed meat will grow.

The next decade will be significant changes in restructuring, mergers, acquisitions, amalgamation, joint ventures, diversification, integration and efficient service chain, e-commerce and use of the latest information technology in global tenders, trading, and

import/export and other commercial activities. At the root of all these developments of feed manufacturing technology. The Indian feed industry will increasingly use biotechnology. The Indian feed industry will increasingly use biotechnology, more scientific formulations, and natural and herbal products to improve animal productivity. Indian agriculture will also use biotechnology and genetically modified organisms (GMOs) to support the feed industry, which is entering a very exciting phase to growth for the next decade

COMPANY PROFILE

When the environment takes as precedence over the profit, the installation of a feed mill in a developing country is an unusual risk. Kerala government faced with this challenge, when Kerala feeds limited, Kalletumkara commissioned a feed mill aimed at improving the lives of small farmers. Developing the country side and helping to combat the growing depopulation. As a consequence of this, Kerala Feeds Limited, a Kerala government company, was set up in 1995, incorporated under the companies Act.

The cattle feed plant with 500 TPD capacity was commissioned in late 1998 and commercial production started in January 1999, with one shift only. The second and third shift operations were commenced in June 1999 and July 2000 respectively. The unit is located in Kallettumkara Village in Mukundapuram Taluk of Thrissur District beside the Palihat – Ernakulam Railway line and about 7 Km from chalakudy and 9 Km from Irinjalakuda. The plant is situated in 27 acres of land and has sufficient scope for further scope.

The company is headed by Chairmanship of the Secretary to Government (Animal Husbandry & Dairy Development), Government of Kerala. The organization has procured and developed material handling systems in tune with its requirements to lighten the burden of the employees. Some of the machineries installed in this plant are imported and these machines have helped the company to produce quality pellets and capture the market, which was hitherto in the hands of the private sector companies. Kerala Feeds has been instrumental in not only increasing the quality of the feed available in the market but also has been able to stall the spiralling tendency of the feed prices. The raw material checked for its quality, stored in the go down, filled into the bins, drawn in fixed proportions, ground to fine particular size, mixed homogeneity, cooked for better digestibility and pelletized keeping the need of the cattle in mind.

Features

The only balanced cattle feed which is produced by M.M.C.P technology

- Cooking of the feed up to 80C removes the moisture hence increases the shelf-life of feed and helps easy digestion of the feed.
- The raw materials are tested for quality at the fully equipped laboratory which also ensures that least loss occurs while handling the feed, which intern ensures cleanliness.
- Raw materials like coconut cake, cotton seed cake, rice included in our compounded feed. Hence it is not necessary to feed the cattle separately with the said items.
- For increasing the milk yield protein, fat, vitamin and minerals are included in the correct proportion
- Kerala Feed Ltd. Being a govt. Undertaking is committed to continual improvement of the product.
- Uniformity in M.R.P. throughout Kerala.

Vision

Kerala Feeds is committed to produce and market quality livestock in pellet form enhance customer satisfaction through a quality system which registers continual improvement by selling and over viewing function wise quality objectives.

Mission

- Educate and train the livestock farmers to practice scientific feeding to optimize livestock productivity.
- To support the development of knowledge based on network on feed related activities
- To achieve turnover of Rs 600 cr.
- To evolve a culture of innovation and creativity amongst employees.
- To be an active partner in community development programme
- Increase the production of balanced compounded cattle feed (BCCF) in pellet form 650 MT per day.
- To produce 300 MT per day of other livestock feed (Goat, Buffalo, Elephant, Laboratory animals & pet feed) and poultry feed.
- To manufacture appropriate type of feed and supplements for different stages of livestock.

Laboratory animals & Pet Feed

- To manufacture appropriate type of feed and supplements.
- To become a market driving company from market driven company.
- Educate and train manufacturing, setting up of feed analytical labs. The livestock farmers to practice scientific feeding to optimise livestock productivity.
- To support the development of knowledge based network on feed related activity.
- To offer consultancy services for procurement of feed ingredients, logistic solutions and feed
- To achieve turnover of Rs.350 cr.
- To evolve a culture of innovation and creativity amongst the employees.
- To be an active partner in community development programs.

Trade unions

- Kerala Feeds employing union (AITUC)
- Kerala Feeds employing association (CITU)
- Kerala Feeds workers union

Competitors of Kerala Feeds

- ❖ Kerala Solvent Extraction Ltd.
- ❖ Godrej Feed Ltd.
- ❖ Milma.
- ❖ Sunandini Feeds.
- ❖ Prima Feeds Ltd.

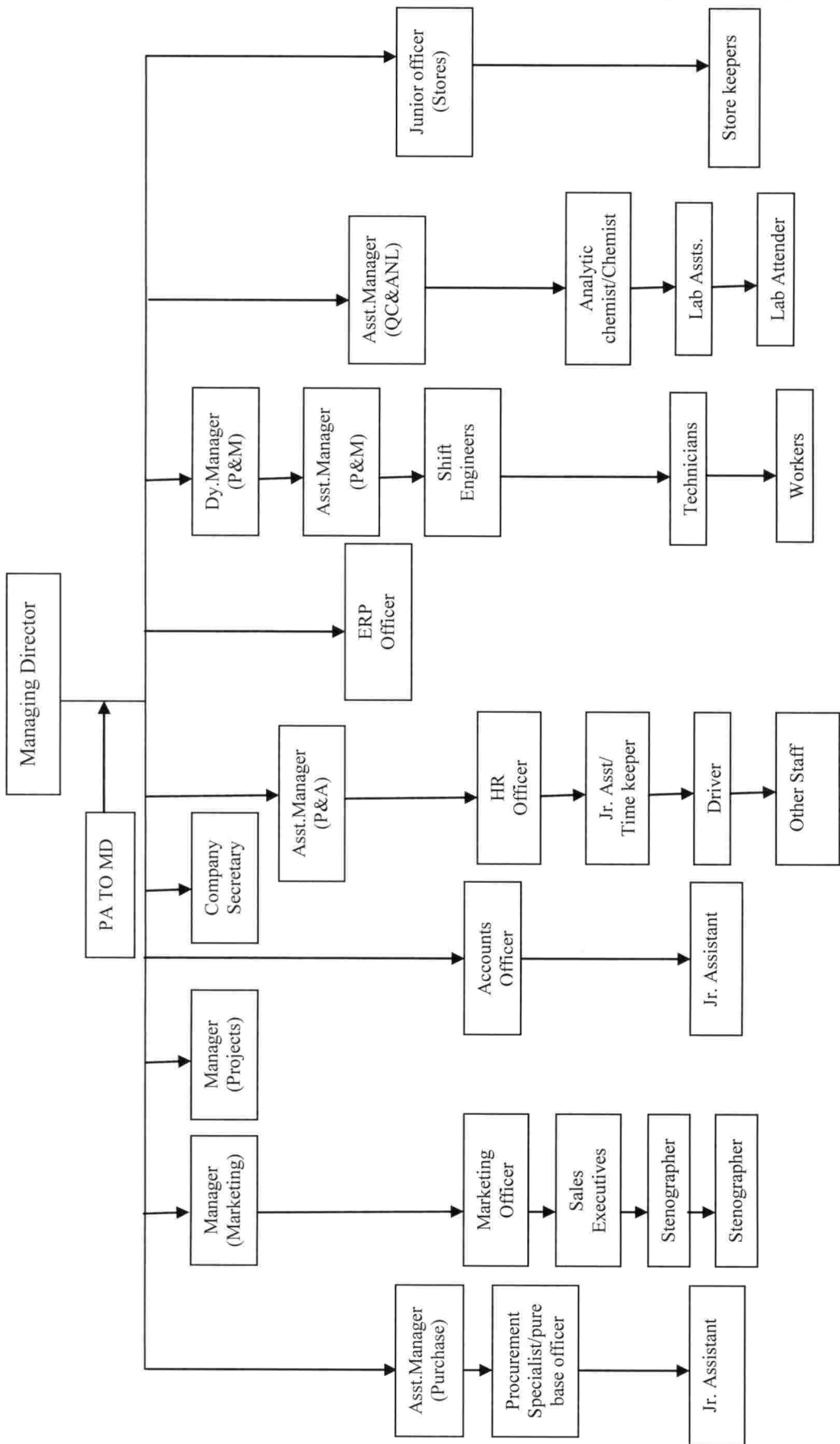
Table 1.1**PATRONS**

Adv.K.Raju	Minister For Forests, Animal Husbandry, Zoos And Dairy Development
Sri.K.S.Indusekharan Nair	Chairman
Dr.B.Sreekumar	Managing Director

Table 1.2**Board of Directors**

Smt. Mini V.R.	Deputy Secretary, Finance Department
Smt. Kshithi V. Das	Deputy Secretary, Animal Husbandry
Dr.N.N.Sasi	Director, Animal Husbandry Dept.
Sri. Abraham Joseph	Director, Dairy Development Board
Dr. Jose James	Managing Director, Kerala Livestock Development Board
Sri. James P Jacob	Sr.Manager (P&I&QC) KCMMF (Milma)
Dr. Vinod John	Managing Director, Kerala State Poultry Development Corporation
Dr. Bijulal A.S.	Managing Director, Meat Products Of India Ltd
Sri. C.K. Chandran	Director

ORGANIZATIONAL STRUCTURE



Market share

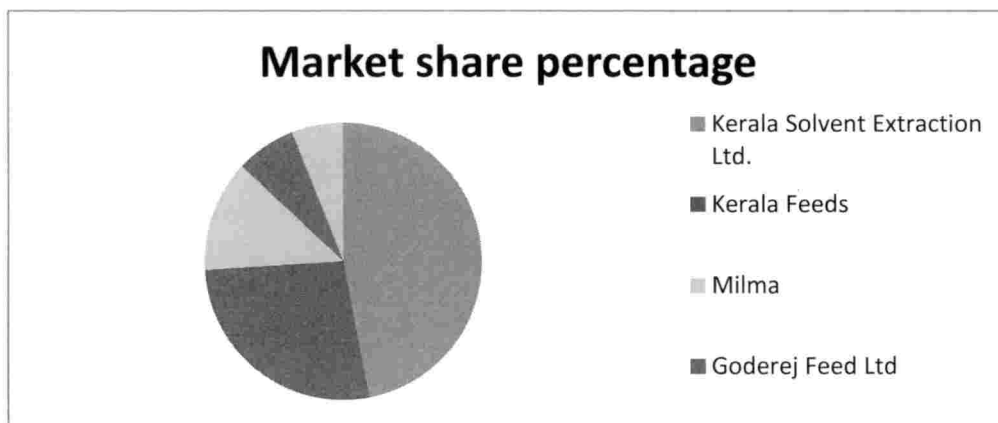
Kerala Feeds Limited is a public sector Livestock feed manufacturing company under the government of Kerala and was setup in 1995 the market share of the product is 27%

TABLE: 1.2

Market share of Kerala Feeds Ltd.

Company	Market share
Kerala Solvent Extraction Ltd.	47%
Kerala Feeds	27%
Milma	13%
Goderej Feed Ltd	7%
Others	6%

GRAPH:1.1



Share capital

The percentage authorized share capital of the company in 30 crore divide into 30000 equity shares of Rs.10000 each. The issued subscribed and paid up capital ia Rs.27, 405 crore. 95% of the shares of Kerala Feeds Company is held by Government of Kerala and the rest of 5% is shared by Kerala Milk Marketing Federation (KMMF), Kerala Livestock Development Department Board. Farming Corporation of India, Oil Production India Ltd, Plantation Corporation Of Kerala And Milk Corporative Society.

Highlight of Kerala Feeds Ltd.

The major highlights of KFL are

- Advanced technology
- Computerized technology
- Follow MMCP technology
- Quality product is ensured from collection of raw materials up to the finished feed.
- The moisture content is removed by heating at 80c which cause easy of digestion and keep for long time
- The pelletized form helps to keep the environment clearly.
- Standard of product is improving continuously 24hrs working of plant
- The cattle feed is free from all types of germs

Employee workforce

The company has a good number of skilled labours for carrying out their process.

The company has 29 officers and 162 workers

Growth of the company

- 1998 started production on experimental basis
- 1999 started production with single shift official inauguration
- 2000 third shift started
- 2002 implemented various social welfare programs in Aloor panchayat
- Received ISI mark. extension counter of Canera Banks started in company premises as a part of social welfare schemes
- 2003 monthly sales touched 10000 tons, foundation stone lying of KSEB substation
- Received ISO 9001:2000
- Received Kerala state energy conservation certificate
- 2004 launch new product Keramin
- 2005 first phase of expansion foundation stone lying
- 2006 establishment of dedicated electricity substation 150 TDP plant
- 2007 Received National Productivity Council Award (Agriculture)
- Foundation stone lying of mineral mixture plant in Malappuram

- 2008 entered in R&D agreement with BARRC to exploit benefits radiation treatment in manufacturing
- 2010 foundation stone lying of 300 TPD cattle feed manufacturing unit at Karunagapilly in Kollam Dist.
- 2011 official inauguration at Mineral mixture plant in Malappuram. Official inauguration of 300 TPD cattle feed manufacturing unit at Karunagapilly in Kollam Dist

Functional departments

There are several types of functional departments existing in Kerala Feeds Ltd. Each department has to perform several functions in the organisation

Following are the different departments in Kerala feeds Ltd.

1. MATERIAL DEPARTMENT
2. HUMAN RESOURCE DEPARTMENT
3. PRODUCTION DEPARTMENT
4. PURCHASE DEPARTMENT
5. QUALITY CONTROL DEPARTMENT
6. FINANCE DEPARTMENT

1. MATERIAL DEPARTMENT

The material department has an important role in maintaining the quality of the final product. Material department gives almost care in uploading only the good quality materials and keeping them without losing quality and issuing only good quality materials.

Objectives of Material Department

- Ensure continues process by manufacturing ready flow of raw materials to production departments.
- Ensuring identification and traceability of raw materials
- To reduce the loading and unloading time of finished feed and raw material to be minimum possible time.

Functions of raw material department

- Receipt of raw material
- Checking and keeping the raw materials to the production
- Storage of raw material, finished products and maintenance
- Issue of raw materials to the production
- Dispatch of finished foods as per marketing indent
- To maintenance of various stock statements, ledgers
- To forwarding the stock report of raw materials, finished feeds and sales to the relevant departments.

1. HUMAN RESOURCE DEPARTMENT

Human resource department includes Assistant manager P&A, human resource officer, stenographer, care taker and office attenders. It consists of many objectives and functions for an employee or workers of an organization and to provide training programs for an efficient performance to workers during the working time in the organisation.

Objectives of Department

- Ensuring effective infrastructure of human resource by identifying strength and weakness of human resource
- To provide proper training programs for improvement
- Ensuring the provision of infrastructure for proper resource management
- Creation of conducive work environment and HR atmosphere to encourage team work by employee through various committees constituted.
- Ensuring the presence of workers and employees during the working hours.

Department functions

The following are the main functions in personal

i. Functions:

- Recruitment, selection and placement of the employees within the approved man power strength of the rules and regulations applicable to the company.
- Performance evaluation of employee
- Training needs assessment for employees

- Personal Wage and salary administration
 - Maintenance of personal records.
- ii.** Welfare functions
- Administration of canteen
 - Issue of uniform, safety shoes, towel, soap etc.
 - Administration of personal loan from bank/LIC under salary administration
- iii.** Administration function
- General administration of the company includes liaison work with statutory revenues authorities, policy department, telecom department other social organization etc.
 - Administration of clearing maintenance and housekeeping of office and plant.
 - Administration and maintenance of company premises garden and estate including guest house and company quarters, purchase and maintenance of office stationary and equipment.
 - Administration vehicles, telephones, fax, computers, receipt and dispatch of mails/courier service and security staffs.
- iv.** Recruitment
- v.** Identification of training need assessment and its effectiveness evaluation

2. **PRODUCTION DEPARTMENT**

The function of production department is to convert raw materials into finished products; the function of production department begins from bringing the raw materials in to factory to the packing of materials. Each stage is controlled and monitored through programming logic control.

Functions

The functions of production department include planning and execution of production schedule, maintenance of equipment and machineries. Department also initiate development works related to R & D for supporting plant activities and under new projects.

MMCP technologies

It is one of most important advantages of the production unit of KFL, Mining, Mixing, Cooking, and pelleting. In this process the sample of the products passed to feed analytical lab.

Later qualities of complete material, grinded material, mash pellets etc. are being checked.

- **Milling**

The milling technology granules are ground and screened by 3mm sieve. The materials are fed to the grinder are powered by the rotating heaters and passed through the screens (3mm) provided at the bottom side of the grinding chamber.

The hammer mills of 30T together used.

- ❖ **Mixing**

The raw materials will be mixed thoroughly with an accuracy of 1:1 by using horizontal mixer of capacity 6m³

- ❖ **Cooking**

The mixer/homogenizer carry out mixing while the mash is being moved forward and added with dry saturated steam. High efficient steam traps are used steam line for obtaining by saturated steam. Cooking is carried out a temperature of 80c using pressure dry saturated steam.

- ❖ **Pelleting**

The pelleting mill die by rotating drays the mixture of mash and steam towards the roller, which press it and consequently compel it to pass through the hole of the die. The compression causes an increase in density of the mixture which together with the heat generated by the dry saturated steam facilities the extension of the pellet. Two pellet mills of capacity 15T/s hrs each are used.

3. PURCHASE DEPARTMENT

Objective

The main objective of purchase dept is ensuring the supply right quality of material at right time and place.

- Right quality materials increase the quality of the materials
- Right time increases the delivery rating of the material
- Right price maintains the right price of the different materials

Other objectives

- Ensuring mutually beneficial supplier relationship
- Ensuring minimum lead period of engineering item
- The Department is trying to reduce the lead period between the makings of order

Purchasing activities

Purchasing activities of Kerala feeds can be classified into four major categories

- purchasing of raw materials
- purchasing of engineering items
- purchasing of packing materials
- purchasing of miscellaneous materials

4. QUALITY CONTROL DEPARTMENT

Kerala feeds Ltd is the most modernized cattle feed plant in south Asia and the main feature is its uncompromised quality standards maintained throughout its inception to the past fourteen years of its production. This is the attached by keeping the quality standard prescribed by BIS and other reputed agencies. The quality of the final product is directly related to the quality of the incoming raw material at the time of arrival and there after storage is the main function.

1. Incoming raw material inspection
 - a. Preliminary inspection
 - b. Raw material physical quality inspection during unloading
 - c. Chemical analysis of the incoming raw material

2. In process product inspection
 - a. Physical quality inspection
 - b. Physical quality inspection of mash sample for proportionate practical size
 - c. Physical quality inspection of in process product
3. Finished product inspection
 - a. Physical quality inspection of finished products
 - b. Quality inspection of finished products bags
 - c. Chemical analysis of finished product

5. FINANCE DEPARTMENT

The role of a finance department in any type of organization is to ensure that adequate funds are for the resources that are required to help achieve the organizational objectives. The departmental also ensures that the costs are controlled, that there is an adequate cash flow, and also that it establishes and further controls all profitable levels.

Objectives

- prepare the financial statements such balance sheet, profit and loss a/c
- Funds are utilized in an effective manner without and engaging financial solvency of the company
- To ensures prompt payment to creditors
- To make advance payment to supplier of materials and others

Departmental function

- a) Account function involves day to day account of several transactions namely receipts and disbursements of money, transaction relating to purchase, inventories, production, sales, other incomes, fixed assets, salaries, and wages and other expenses such as manufacturing administration selling and distribution.
- b) Finance functions involve procurement of funds and effective utilization of the same in the business. Control over expenses is ensured by comparing actual expenses with that of budgeted figures. By constantly monitoring various operational activities cost control and cost reduction are facilitated.

6. **MARKETING DEPARTMENT**

Marketing department is needed by organization which offer to the consumers some goods and services of commercial value and nature. The development of local markets as well as markets over a given area might have been facilitated by the evolution of some common tokens of exchange value like the concept of exchange or trade links its origin in the fact that in some cases, more goods were produced than the quality for which ready demand was available and, conversely, more demand existed for some goods than were produced. This resulted in laying the foundation for the process of marketing.

Kerala feeds Ltd. Sells their product through

- Private dealers
- Cooperative society
- Government firms
- University and other

Objectives of marketing department

- To enhance the customer satisfaction
- To increase the dealers satisfaction
- To maintain brand image
- To ensure the availability of product at market
- To develop the developmental activities to achieve the organisational goal
- To reduce the feed complaints

Functions of marketing department

- a. The arrangement of logistics for distribution of need at optimum cost
- b. Decision regarding proposals for a new product based on the consumer need
- c. Building of brand image and corporate image
- d. Formulation of marketing strategy
- e. Managing of products within and outside Kerala
- f. Managing of market information system
- g. Formulation of prospectus fixing and managing changes in selling prices in the changing price scenario
- h. Maintain both consumer and dealer satisfaction.

7. INFORMATION TECHNOLOGY DEPARTMENT

Information technology is rewriting the rules of business. Customer service, logistics operations, and product & marketing strategies, are heavily and sometimes entirely dependent on information technology. Thus IT is an essential ingredient for the success of any business organization.

Objectives of IT department

Prompt redressal of hardware and software and software complaints as per the following time frame.

- Critical complaints within 2 days
- Major complaints within 1 days
- Minor complaints within 1 hour

Functions of IT department

- a) Electronic data processing (EDP) of the company in vital areas, such as purchase, materials, marketing and management information system et.
- b) Development and maintenance EDP solution in the company
- c) Maintenance of software and hardware
- d) Timely up gradation of software and hardware

PRODUCT PROFILE

Kerala feeds Ltd. Produces cattle feed in the form of pellet, which is semi cooked and contains least moisture. In Kerala pellet type of feed is introduced by Kerala Feeds. The product of the company is marketed in the brand name Kerala Feeds.

Type of product:

- ❖ Ordinary
- ❖ Special Pellet
- ❖ Keramin

❖ ORDINARY PELLETT

- Moisture (Max) - 11%
- Protein (Min) - 20%
- Fibre (Max) -12%
- Fat (Min) -2.5%
- Sault (Max) -2.0%
- Phosphorous (Min) -0.5%
- Sand and silica(Max) -4%

❖ SPECIAL PELLETT

- Moisture (Max) - 11%
- Protein (Min) -22%
- Fiber (Max) -7%
- Fat (Min) -3%
- Sault (Max) -2.0%
- Phosphorus (Min) -0.5%
- Sand and Silica(Max) -4%

❖ KERAMIN

Animal's specific requirement for minerals, these requirements are based on the type, weight, and age as well as the rate of performance Weight gain, level of milk, production, and pregnancy expected on the animals.

Minerals imbalance and/or deficiencies can result in decreased performance, decreased disease resistance and reproduction failure, which result in serious economic losses. If 30gm-50gm of Keramin is mixed with the feeds and given to the cattle these, the problem will be rectifying. Minerals contain in Keramin are Calcium, Sodium, Phosphorous and magnesium.

Chapter 4

DATA ANALYSIS AND INTERPRETATION

Chapter – IV

ANALYSIS AND INTERPRETATIONS

Keeping the objectives of the study in view, data were collected and subjected to analysis and interpretation. In order to derive more exclusive inferences, the profile of the responses and all major relevant information were also analysed. The responses were broadly categorised as for officers and workers. The findings are organised under the following major headings.

- Socio-economic profile of officers
- Quality consciousness and awareness of TQM
- Quality assurance & Quality standards of organisation
- Quality certification in the organisation
- Preventive maintenance in the organisation
- Employees feedback system
- Innovative technologies adopted by the company
- Product rejection
- Customer friendliness and safety
- Supplier relationship
- Working environment in the company
- Team work
- Management acceptance of suggestions
- Communication and decision making
- Waste management
- HRD practices

4.1 Perception of officers on the Total Quality Management (TQM) of KFL

Officers' perception of TQM in KFL was measured in terms of a Quality Perception Index (QPI). QPI used 16 independent parameters of TQM viz Socio-economic profile of officers, Quality consciousness, Quality assurance & Quality standards of organisation, Quality certification, Preventive maintenance, Employee feedback system, Innovative technologies adopted by the company, Product rejection, Customer friendliness and safety measures, Supplier relationship, Working environment in the company, Team

work, Acceptance of suggestions by management, Communication and decision making, Waste management, HRD practices. The performances of KFL on these parameters are presented under the following subheads.

4.1.1 Socio-economic profile of officers

The empirical finding on the analysis of socio-economic characteristics of the officers is presented as Table 4.1. Socio-economic factors describe the characteristics of the officers' on age, gender, education and work experience in the company.

Table 4.1 Socio-economic profile of officers

(n=20)

1. Age			
Particulars	Number of officers	Percentage	Average (years)
20-30	0	0	
30-40	6	30	
40-50	9	45	
50-60	5	25	
Mean age			37
2. Gender			
Particulars	Number of officers	Percentage	Gender Average
Male	12	60	
Female	8	40	-
Gender ratio = 12:8=1.5:1			10
3. Education			
Particulars	Number of officers	Percentage	Average
Graduate	9	45	
Post graduate	11	55	
Mean			5
4. Experience			
Particulars	Number of officers	Percentage	Average
10-15 years	3	15	
15- 20 years	17	85	
Average experience of the company			13.5 years

Source: Primary data collected for the study

4.1.1.1 Age

The results from Table 4.1 indicated 45 per cent of the officers belonged to in the age group of 40-50 years with an average age of 37 years. Thirty per cent of officers had 30-40 years and the remaining 25 per cent had age above 50 years. This indicated that the officers were relatively young and therefore in the active stage of the work phase which can be useful to the company.

4.1.1.2 Gender

The gender wise classification of the officers indicated that 60 per cent of the officers were male, and the 40 per cent officers were female. The male – female ratio is 1.5:1 which though not in favour of women employees. However it indicated a reasonably fair representation for them in the company.

4.1.1.3 Education

Regarding the educational qualification of the officers 55 per cent officers were post-graduates and the remaining 45 per cent were graduate degree holders. This indicated that officers at Kerala Feeds Limited, Kallettumkara were well educated were capable of contributing effectively to company's policies and management.

4.1.1.4 Experience

A total of 85 per cent of the officers were working in the company for more than 15 years, whereas 15 per cent of officers had work experience between 10 to 15 years. This indicated that organisation had an average work experience of 13.5 years which is beneficial to the company.

4.1.2 Quality consciousness

Quality consciousness refers to employee's awareness concerning the quality of products and services they produce. Here, officer level employee's awareness of TQM concept followed and perceived effect of quality grading prevailing on products of KFL were analysed.

Table 4.2 Perception of officers in TQM in terms of quality consciousness
(n=20)

Sl no	Statement	Score	Perception level
1	Awareness of Total Quality Management concept followed in the company	76	Good
2	Perceived effect of quality grading prevailing in the organisation on product	76	Good

Source: Primary data collected for the study

From table 4.2 it is clear that the officers of Kerala Feeds Limited have awareness of TQM concept. The total score 76, which indicated the perception level were good. The employees agreed that KFL is having quality grading for the products and which is greatly helpful in achieving desired level of quality in the product.

4.1.3 Quality assurance and Quality standards of organisation

Quality assurances refer the maintenance of a desired level of quality in a product, especially by means of attention to every stage of the process of production. Quality standards gives a set of statements for improving quality of TQM in KFL were analysed.

Table 4.3 Perception of officers in TQM in terms of quality assurance and quality Standards of organisation.

(n=20)

Sl no	Statement	Score	Perception level
1	The current quality assurance system is sufficient for the products	77	Good
2	The current plant capacity is sufficient for the storage of the product	78	Good
3	Standard quality techniques are followed in the organisation	80	High
4	Advanced technologies for the improvement of the product is preferred	78	Good

Source: Primary data collected for the study

From the table 4.3 it is clear that the perceptions of officers were good towards the current quality assurance and plant capacity is sufficient for the product and storage of the product. The quality assurance system in KFL includes raw material inspection, final product evaluation and sample testing and the perception of standard quality techniques followed in the organisation were high. Standard quality techniques like scheduling inputs for the production like raw materials, ingredients, and staff required. Good perception level for advanced technologies preferred as the organization focus on customer needs and improved products.

4.1.4 Quality certification

Certifying the knowledge of individuals and certifying a company’s system of quality management. Here Quality certification essential for a cattle feed manufacturing company and the present quality certification in the company is enough to capture a strong position in the market were analysed.

Table 4.4 Perception of officers in TQM in terms of quality certification

(n=20)			
Sl no	Statement	Score	Perception level
1	Quality certification essential for a cattle feed manufacturing company	83	High
2	The present quality certification in the company is enough to capture a strong position in the market	73	Good

Source: Primary data collected for the study

From the table 4.4 it is clear that the perception level of the employees there is necessary for the quality certification for cattle feed manufacturing company were high. This indicated that the employees very well known the importance of quality certification in the company. Total score is 73 implies that the perception level of employees were good. KFL having ISO 9001:2000 certificate and received Kerala state energy conservation certificate, in employees view this certification is enough to capture a strong position in market.

4.1.5 Preventive maintenance

The work carried out on equipment in order to avoid its breakdown or malfunction. It is a regular and routine action taken on equipment in order to prevent its breakdown. Here officer level employees perception of proper care and servicing by personal of maintaining equipment are working in the company and advanced technologies for the improvement of the product of KFL were analysed.

Table 4.5 Perception of officers in TQM in terms of preventive maintenance (n=20)

Sl no	Statement	Score	Perception level
1	Proper care and servicing by personal of maintaining equipment are working well in the company.	79	Good
2	Advanced technologies for the improvement of the product are preferred	81	High

Source: Primary data collected for the study

From the table 4.5 it is clear that the perception level were good of the employees regarding proper care and servicing by personal of maintaining equipment are working well in the company. And high perception levels towards advanced technologies for the improvement of the product are preferred in the company. For the purpose of maintenance of equipment, proper care and servicing were done by personal in order to prevent the hindrance during the production process. Also planned maintenance actions are done for the prevention of breakdown and failure of equipment before it actually occurs.

4.1.6 Employees feedback system

Feedback can help an employee get better at what they do. Here strong feedback mechanism from officer level employees are in place and their opinion are considered in the decision taking of the company were analysed

Table 4.6 Perception of officers in TQM in terms of employees' feedback system (n=20)

SI no	Statement	Score	Perception level
1	Strong feedback mechanism from employees are in place	65	Good
2	Employees opinion are considered in the decision taking of the company	66	Good

Source: Primary data collected for the study

From the table 4.6 it is clear that for both statements, the perception level of officers were good. This indicated that management treating the employees in a good manner. Most of the suggestions from the officers level employees are taken in to consideration by the management and also some of opinion from the officers are considered in decision taking of the company.

4.1.7 Technologies adopted by the company

Technology focuses on the intersection of business, its application, dissemination and impact. Here perceptions of officers in terms of automated machines are used in the processing and system ready to adopt new technology for the improvement of the product in KFL were analysed.

Table 4.7 Perception of officers in TQM in terms of technologies adopted by the company.

(n=20)

SI no	Statement	Score	Perception level
1	Automated machines are used in the processing	86	High
2	System ready to adopt new technology for the improvement of the product	82	High

Source: Primary data collected for the study.

From the table 4.7 it is clear that the company is using automated machines for the processing since the perception level of officers were good. From the employees point of view KFL is ready to adopt new technologies for the improvement of the product which is clear from the perception level.

4.1.8 Product rejection

The result of product rejection is efficient means of delivering 100 per cent quality assured products to your customer without impacting on your productivity. Here perception of officers in terms of product rejection with respect to quality in the company and corrective action is taken immediately for product rejection of KFL were analysed.

Table 4.8 Perception of officers in TQM in terms of product rejection (n=20)

Sl no	Statement	Score	index	Perception level
1	Product rejection with respect to quality in the company	59	59	Moderate
2	Corrective action is taken immediately for product rejection	76	76	Good

Source: Primary data collected for the study.

From the table 4.8, it is clear that as the perception level of product rejection in the aspect of quality in the company were moderate; the products of KFL were not facing rejection from the customers. Corrective actions are taken immediately if any such rejection occurs which is clear from their good perception level.

4.1.9 Customer friendliness and safety measures

Customer friendly is a term for products, services and experiences that are designed from the customer's point of view and safety measures are activities and precautions taken to improve safety. Here perception of officers in terms of customer friendliness and safety measures of KFL were analysed.

Table 4.9 Perception of officers in TQM in terms of customer friendliness and safety measures

(n=20)

Sl no	Statement	Score	Perception level
1	Organisation is committed to satisfy the customers' needs and wants	79	Good
2	Proper methods of customer survey are used for the identification of changing needs of the customer	68	Good
3	Customer complain redressal mechanism is very effective	67	Good
4	In built organisation mechanism to respond quickly to customers complaints are in place	66	Good
5	Sufficient safety measures are used by the company	77	Good

Source: Primary data collected for the study.

From the table 4.9, it is clear that KFL is committed to satisfy the most of the needs and wants of the customers. Also company used proper methods for the identification of the changing needs of the customers. KFL have contact with the customers and inquire their requirements frequently. If any complaints are there from the customers, company take it as feedback and responds quickly to the complaints by taking necessary action at the time of production.

4.1.10 Supplier relationship

Supplier relationship is a discipline of strategically planning for all interactions with third party organisations that supply goods and services. Here perception of officers about company depends on relatively few dependable suppliers who are evaluated and selected based on their capacity & commitment to product, service quality and value for money and periodic examination of the materials supplied in taken up to ensure conformity with the standard specification of KFL were analysed.

Table 4.10 Perception of officers in TQM in Supplier relationship**(n=20)**

Sl no	Statement	Score	Perception level
1	Company depends on relatively few dependable suppliers who are evaluated and selected based on their capacity & commitment to product, service quality and value for money.	72	Good
2	Periodic examination of the materials supplied in taken up to ensure conformity with the standard specification	76	Good

Source: Primary data collected for the study.

From the table 4.10, Supplier relationship is maintained by the company in a good manner. Company depends on the suppliers who are evaluated and selected based on their capability, service quality and value for money. And company conducts periodic examinations of the materials supplied to ensure conformity with standard specifications, seems to be good. It showed that company is following the standard specification in a good way.

4.1.11 Working environment in the company

Working environment means all surroundings when working also includes the physical aspects of how work is organised. Here perception of officers about job security and the working condition creates a learning environment in KFL were analysed.

Table 4.11 Perception of officers in TQM in terms of working environment in the company**(n=20)**

Sl no	Statement	Score	Perception level
1	I am satisfied with the security that my job provides me	63	Good
2	The working condition creates a learning environment in the organisation	66	Good

Source: Primary data collected for the study.

From the table 4.11, it is clear that the score lies in between 60-79 which implied that the perception on working condition of the company by officers were good. Officers was satisfied with the job security provided by the organisation and had a good learning environment in the company.

4.1.12 Team work

Team work is the collaborative effort of a team to achieve a common goal or to complete a task in most effective and efficient way. Here perception of officers in terms of organisation promotes teamwork & cooperation among each other and teams are framed to solve quality issues and other problem in KFL were analysed.

**Table 4.12 Perception of officers in TQM in terms of team work
(n=20)**

Sl no	Statement	Score	Perception level
1	The organisation promotes teamwork & cooperation among each other	77	Good
2	Teams are framed to solve quality issues and other problem	71	Good

Source: Primary data collected for the study.

From the table 4.12, the perception levels towards that Kerala Feeds promotes teamwork and cooperation among the employees were good. And in order to solve the issues arises in the company; suitable teams were framed by the management among the workers itself.

4.1.13 Acceptance of suggestions by management

Here perceptions of officers in terms of suggestion for improvement in the organisation is discussed among the employees and implemented in KFL were analysed.



Table 4.13 Perception of officers in TQM in terms of acceptance of suggestions by management.

(n=20)

Sl no	Statement	Score	Perception level
1	Suggestion for improvement in the organisation are discussed among the employees and implemented	64	Good

Source: Primary data collected for the study.

From the table 4.13, it is clear that the perception of the officers regarding the suggestions are considered by the management were good, they also can take part in discussions. This implies that suggestion for improvement in the organisation were discussed among the officers and implemented in a good manner.

4.1.14 Communication and decision making

Effective communication is important for the development of an organisation. It is something which helps the managers to perform the basic functions of management and decisions are made at every level of management to ensure organisational goals are achieved. Here perception of officers in terms of communication and decision making of KFL were analysed.

Table 4.14 Perception of officers in TQM in terms of communication and decision making.

(n=20)

Sl no	Statement	Score	Perception level
1	The employees share knowledge & expertise with the other employee	73	Good
2	Proper corrective measures are taken by the management in case of any issues in the work	71	Good
3	Equal participation is done among all levels of employees if any decision is taken	60	Good

Source: Primary data collected for the study

From the table 4.14 officer level employees' were used to share their knowledge and expertise with the other officer level employee according to the situations, the perception of proper corrective measures are taken by the management in case of any issues in the work were good, this indicated that the management take care of employees' problem as the problem of the company and proper actions are taken in the case of work. And equal participation among all levels of the employees was not at all high; but it was a good manner the decision is taken with respect to the company.

4.1.15 Waste management

Waste management are the activities and actions required to manage waste from its inception to its final disposal. Here perception of officers in terms of the current waste control measures in the organisation are sufficient for the waste production of the product and aware of waste control measures like poke yoke & 5s philosophy of KFL were analysed.

Table 4.15 Perception of officers in TQM in terms of waste management (n=20)

Sl no	Statement	Score	Perception level
1	The current waste control measures in the organisation are sufficient for the waste production of the product	82	High
2	Aware of waste control measures like poke yoke & 5s philosophy.	60	Good

Source: Primary data collected for the study.

From the table 4.15 it is clear that the employee's perception level is high regarding that the organisation's waste control measures are enough for the liquid and solid waste generated during the production process. Officers have awareness regarding the waste control measures like poke yoke which focus on mistake proofing mechanism and 5s philosophy focus on sort, stabilize, shine, standardize and sustain that improves safety, work efficiency, productivity and ownership.

4.1.16 HRD practices

It is the frame work for helping employees develops their personal and organisational skills, knowledge, and abilities. Here perception of officers in terms of employee achievement are shared and promoted and performance is recognized and rewarded at KFL were analysed.

Table 4.16 Perception of officers in TQM in terms of HRD practices

(n=20)

SI no	Statement	Score	Perception level
1	Employee achievement are shared and promoted	65	Good
2	Performance is recognized and rewarded	60	Good
3	On the job skill upgradation facilities and incentives available that help to remain updated	68	Good

Source: Primary data collected for the study.

The table 4.16 showed that the perception levels of the officers towards employee achievements are shared and promoted were good. The research indicated that the management promoted the employees achievements and they were recognised and properly rewarded for good performance. It also indicated that there were adopted on job skill upgradation facilities and incentives for remain updated.

4.17 Quality perception index of officers

Officers' perception of TQM followed in KFL was measured in terms of a quality perception index were consolidated here.

Table 4.17 Quality perception index of officers in KFL

Sl. No	Parameters	Perception Index	Perception Level
1	Quality consciousness	76	Good
2	Quality assurance and quality standards of organisation	78.25	Good
3	Quality certification	78	Good
4	Preventive maintenance	80	High
5	Employees feedback system	65.5	Good
6	Innovative technologies adopted by the company	84	High
7	Product rejection	67.5	Good
8	Customer friendliness and safety measures	71.4	Good
9	Supplier relationship	74	Good
10	Working environment in the company	64.5	Good
11	Team work	74	Good
12	Acceptance of suggestions by management	64	Good
13	Communication and decision making	68	Good
14	Waste management	71	Good
15	HRD practices	64.3	Good
OVERALL PERCEPTION INDEX		72.03	Good

Quality perception index of officers in KFL

Perception index of 15 parameters of TQM in KFL is consolidated in the given figure 4.1

Figure 4.1 Quality perception index of officers in KFL

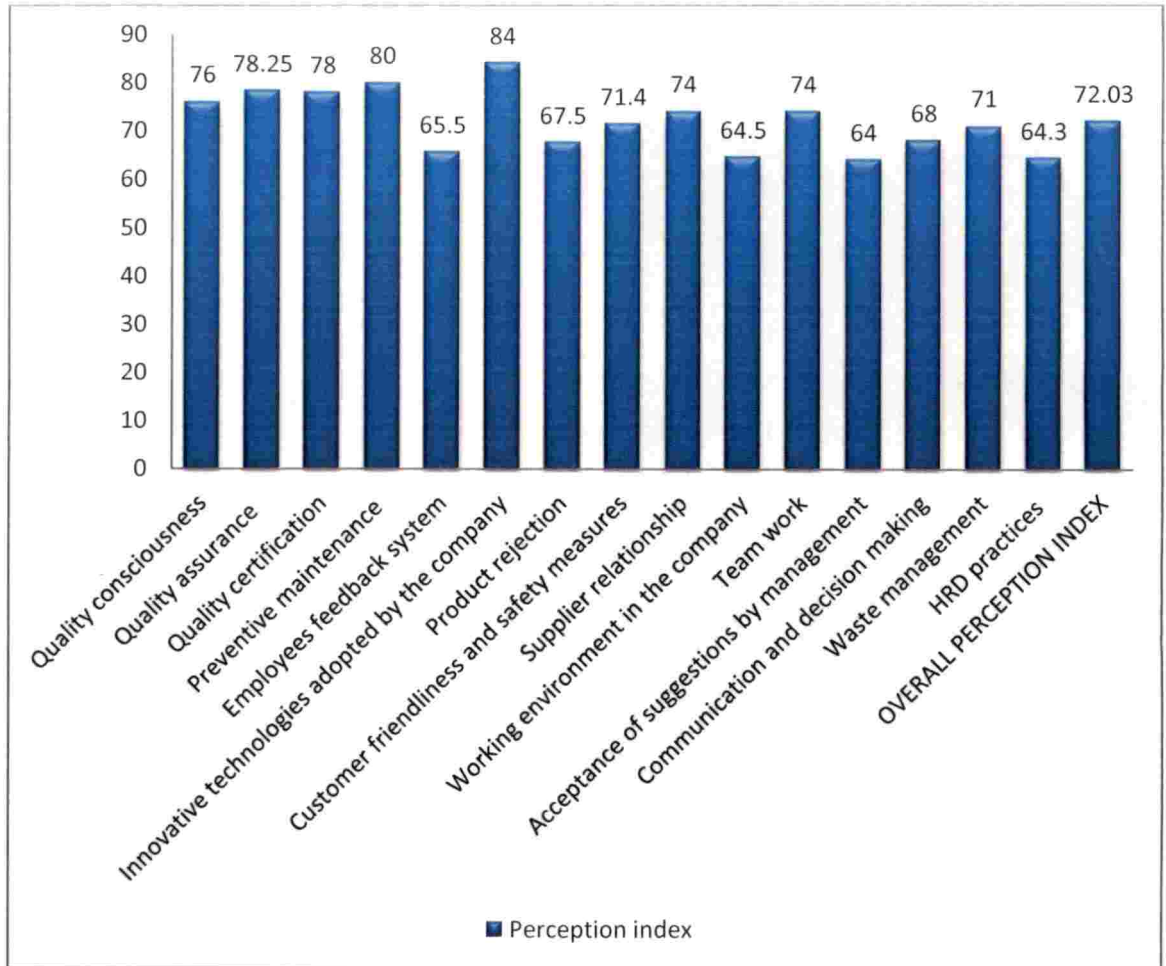


Table 4.17 revealed that officer level employee's perception on two parameters of TQM viz preventive maintenance and technologies adopted by the company were high, The Company is ready to adopt new technologies for the improvement of the product which is clear from the perception level.

Perception levels in the case of product rejection not happened in the company were good. Usually there were less any product rejection happened in the company. If any such cases occur, they will take corrective action immediately.

The perception level of all other parameters like Quality consciousness, Quality assurance & quality standards of organisation, Quality certification, Employees feedback

system, Customer friendliness and safety measures, Supplier relationship, working environment in the company, Team work, Acceptance of suggestions by management, Communication and decision making, Waste management, HRD practices showed good. This indicated that employees were having good awareness of the TQM concept and they agree that quality grading prevailing in the organisation were good.

The officers have knowledge about the waste control measures like poke yoke or 5s Japan philosophy which focus on sort, stabilize, shine, standardise and sustain. The overall perception of the officer level employees regarding the implementation of TQM in Kerala Feeds Limited, Kallettumkara were good.

4.2 Parameters for finding out workers' perception at Kerala Feeds Limited, Kallettumkara.

Workers' perception of TQM followed in KFL was measured in terms of a Quality Perception Index. QPI used 13 independent parameters of TQM viz Socio-economic profile of workers, Awareness of TQM, Working environment in the company, Skills and knowledge, Motivation, Training, Team work, Acceptance of suggestions by management, Decision taking, communication, Waste management, Product rejection, Technology. Here these all parameters of Kerala feeds limited were analysed.

4.2.1 Socio-economic profile of workers

This section presents the empirical findings on the analysis of socio-economic characteristics of the workers'. Socio-economic factors describe the characteristics of the workers' age, gender, education and work experience in the company.

Table 4.18 Socio-economic profile of workers**(n=40)**

1. Age			
Particulars	Number of workers	Percentage	Mean
20-30	0	0	
30-50	10	25	
40-50	6	15	
50 -60	24	60	
Average age of workers =			48.5
2. Gender			
Particulars	Number of workers	Percentage	Mean
Male	40	100	
Female	0	0	
Mean =			40
3. Education			
Particulars	Number of workers	Percentage	Mean
Education			
Matriculate	33	82.5	
Higher secondary	5	12.5	
Graduate	2	5	
Post graduate	0	0	
Mean=			5
4. Experience			
Particulars	Number of workers	Percentage	Mean
10-15 years	4	10	
15-20 years	36	90	
Mean=			14

Source: Primary data collected for the study

4.2.1.1 Age

Ages of 60 per cent of workers were above 50 years. 15 per cent of workers were between 40-50 years. That is age of 75% of workers were above 40. It means that most of the workers were senior workers, only 25 per cent of workers were young that is they were in the age group of 30-40 years. Average age of workers is 48.5 years. Company need to improve number of young workers who can deal manual or physical work well.

4.2.1.2 Gender

In case of gender wise classification of workers indicated that, all workers in the sample were male workers. According to the requirement of the company's physical work, male workers were most essential.

4.2.1.3 Education

Regarding the educational qualification of the workers, from the total of 40, 82.5(%) workers were matriculate. And 12.5(%) workers had higher secondary education and only 2 workers had undergraduate degree. No one was post graduate among the workers. This indicated that the workers at Kerala Feeds seems to be less educated as they are doing jobs that required less skills compared to the officer level employees. UG and PG holders are operators and chemists.

4.2.1.4 Work Experience

From the total of 40 workers 50 per cent of the workers had an average experience of 10-15 years. It is good for the company. Experience of workers is an asset to the company. 40 per cent of the workers had an average experience of 15-20 years. That is a lot of senior workers were worked in the company. Average experience of workers is 14 years, it also good in the name of experience. But company need to keep a good balance between young and senior workers.

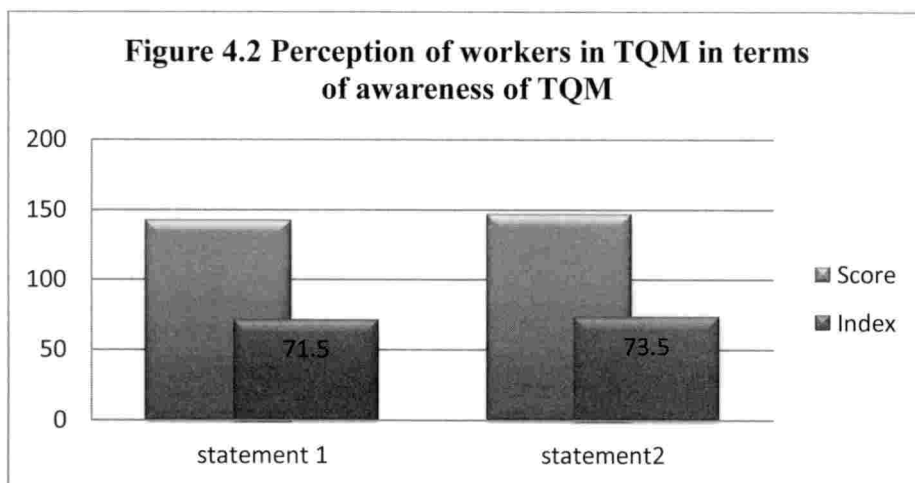
4.2.2 Awareness of TQM

Total quality management consists of organization-wide efforts to install and make permanent a climate where employees continuously improve their ability to provide on demand products and services that customers will find of particular value.

Table 4.19 Perception of workers in TQM in terms of awareness of TQM (n=40)

Sl no	Statement	Score	Index	Perception level
1	Familiar with the Total Quality Management	143	71.5	Good
2	Quality with respect to product is only considered in TQM	147	73.5	Good

Source: Primary data collected for the study



From the table 4.19 it is clear that the perception level of the workers regarding the both the parameter were good. The workers are familiar with the TQM concept. And the workers were aware of the need and importance of TQM in the organisation

4.2.3 Working environment in the company.

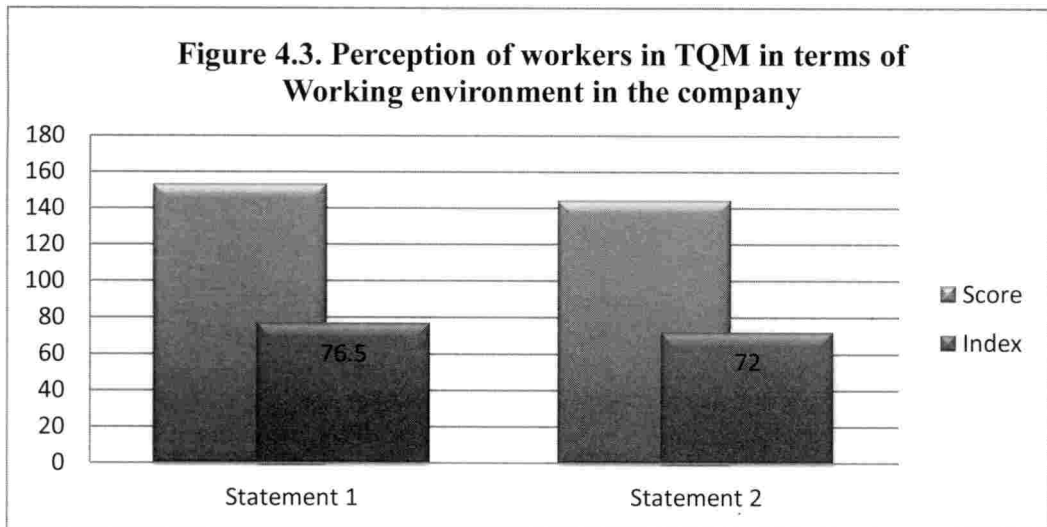
Working environment means all surroundings when working also includes the physical aspects of how work is organised. Here perception of officers about job security and the working condition creates a learning environment in KFL were analysed.

Table 4.20 Perception of workers in TQM in terms of working environment in the company.

(n=40)

Sl no	Statement	Score	Index	Perception level
1	I am satisfied with the security that my job provides me	153	76.5	Good
2	The working condition creates a learning environment in the organisation	144	72	Good

Source: Primary data collected for the study.



From the table 4.20 it is clear that the perception of working environment in the company were good. The workers in KFL are not fully satisfied with the security of the job, the working condition creates a learning environment, it is clear that majority of the workers have not much satisfied. But somewhat overall was good perception for the working environment.

4.2.4 Skills and knowledge

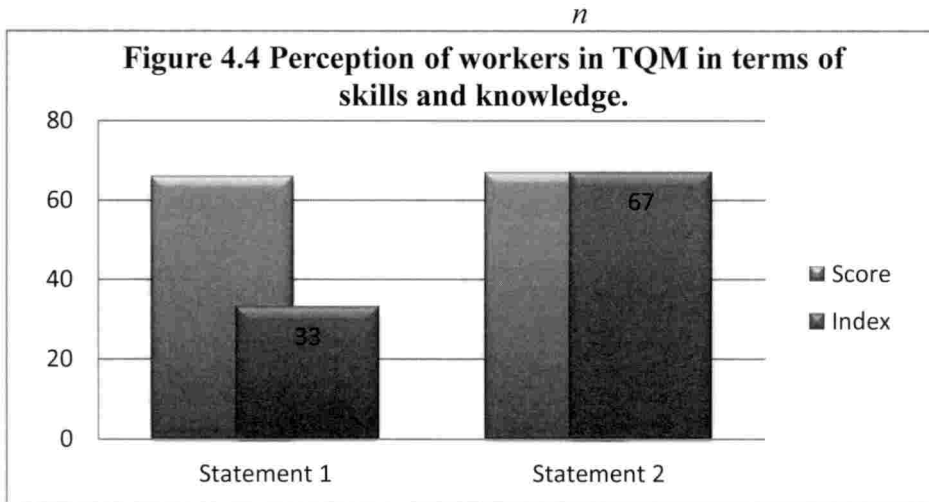
Perception of workers in terms of the company is utilising the skills and knowledge of the workers well and Company gives the platform to develop your skills well were analysed.

Table 4.21 Perception of workers in TQM in terms of skills and knowledge.

(n=40)

Sl no	Statement	Score	Index	Perception level
1	The company is utilising the skills and knowledge of the workers well	66	33	Poor
2	Company gives the platform to develop your skills well	67	67	Good

Source: Primary data collected for the study



From the table 4.21, it is clear that the perception level of workers regarding the company utilising the skills and knowledge of the workers well were poor. Company not much utilising workers skills and knowledge. But company providing platform to develop the workers skill in a good manner.

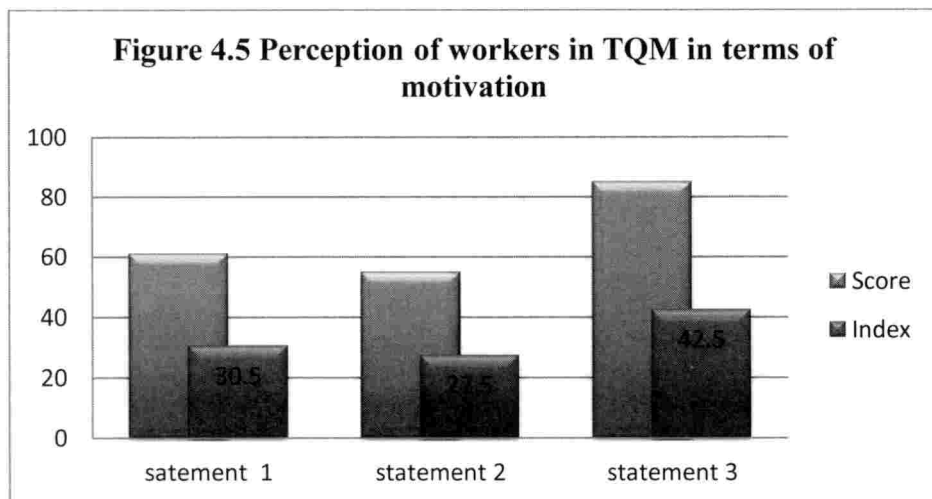
4.2.5 Motivation

Motivation describes ways in which managers promote productivity in their employees. Here perception of workers towards performance is recognised and rewarded, Appreciation in terms of promotion or wages are given on achievement, salary is a means of motivation in KFL were analysed.

Table 4.22 Perception of workers in TQM in terms of motivation
(n=40)

Sl no	Statement	Score	Index	Perception level
1	Performance is recognised and rewarded	61	30.5	Poor
2	Appreciation in terms of promotion or wages are given on Achievement	55	27.5	Poor
3	Salary is a means of motivation in the company	85	42.5	Moderate

Source: Primary data collected for the study



From the table 4.22, perception regarding, the company not recognised the performances of the workers and rewarded and appreciation in terms of promotion or wages are given on achievement were also poor. Proper rewards were not being given to them. Salary given was not the means of motivation of the workers. So the salary is a means of motivation in the company were moderate level.

4.2.6 Training

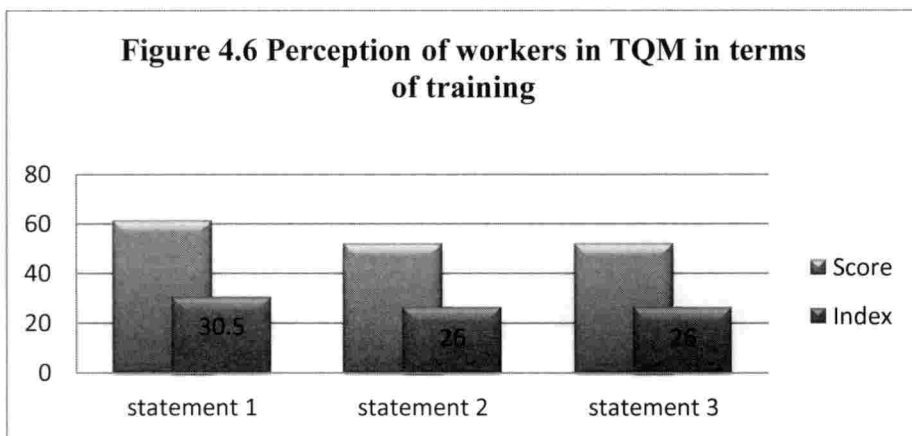
Training is a high useful tool that can bring an employee into a position where they can do their job correctly, effectively and conscientiously. Here perception of workers towards training on statistical quality tools to measure the variations is conducted in the organisation, quality enhancement training programme is being conducted in the organisation and the organisation encourages and provides resources for training at KFL were analysed.

Table 4.23 Perception of workers in TQM in terms of training

(n=40)

SI no	Statement	Score	Index	Perception level
1	Training on statistical quality tools to measure the variations is conducted in the organisation	61	30.5	Poor
2	Quality enhancement training programme is being conducted in the organisation	52	26	Poor
3	The organisation encourages and provides resources for training	52	26	Poor

Source: Primary data collected for the study.



From the table 4.23 indicated that the management were not given proper training for workers on the quality tools and adequate training should be provided to workers also along with the higher level employees, as the perception level of workers were poor. It showed that there is the need for the quality enhancement training programme in the company for the workers. All these indicated that the company not encouraged their workers and facilitates the resources for training.

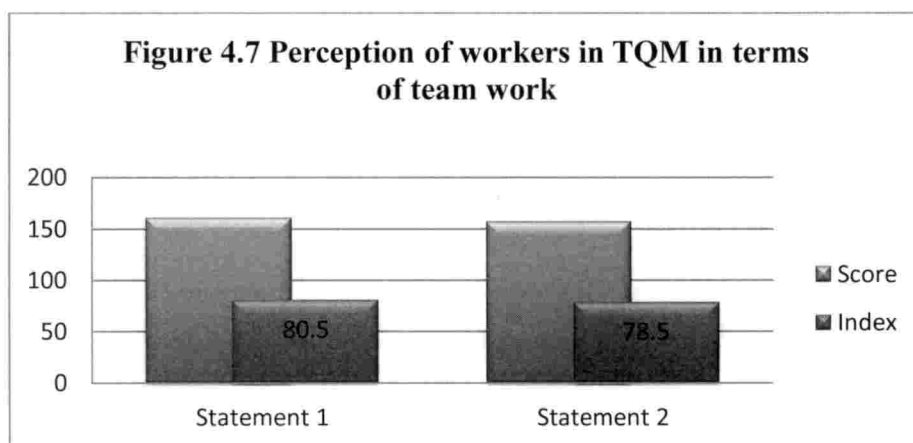
4.2.7 Team work

Team work is the collaborative effort of a team to achieve a common goal or to complete a task in most effective and efficient way. Here perception of workers in terms of organisation promotes teamwork & cooperation among each other and Teams are framed to solve quality issues and other problem in KFL were analysed.

**Table 4.24 Perception of workers in TQM in terms of team work
(n=40)**

SI no	Statement	Score	Index	Perception level
1	The organisation promotes teamwork & cooperation among each other	161	80.5	High
2	Teams are framed to solve quality issues and other problem	157	78.5	Good

Source: Primary data collected for the study.



From the table 4.24 the perception level indicated that the Kerala Feeds promotes team-work and cooperation among employees were high. The perception level of workers, were good about in order to solve the issues arises in the company; suitable teams were framed by the management among the workers itself

4.2.8 Acceptance of suggestions by Management

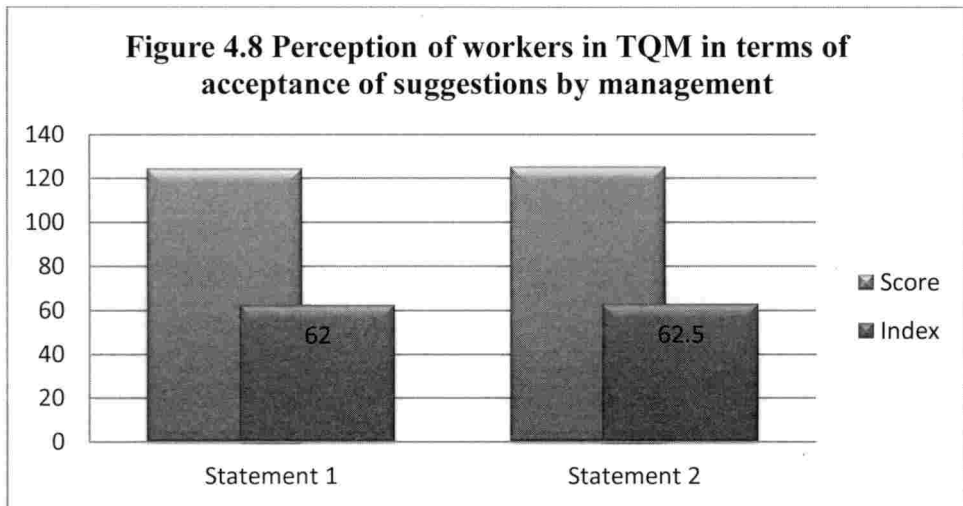
Here perception of officers in terms of Suggestion for improvement in the organisation is discussed among the employees and implemented in Kerala feeds limited were analysed.

Table 4.25 Perception of workers in TQM in terms of acceptance of suggestions by management

(n=40)

SI no	Statement	Score	index	Perception level
1	Suggestions from workers are considered by the management	124	62	Good
2	Suggestion for improvement in the organisation are discussed among the employees and implemented	125	62.5	Good

Source: Primary data collected for the study



From the table 4.25 it is clear that the perception of the workers. In the case of workers, their suggestions are considered by the management. They can also take part in discussions. The perception level of the workers about suggestion for improvement in the organisation are discussed among the workers and implemented also was good.

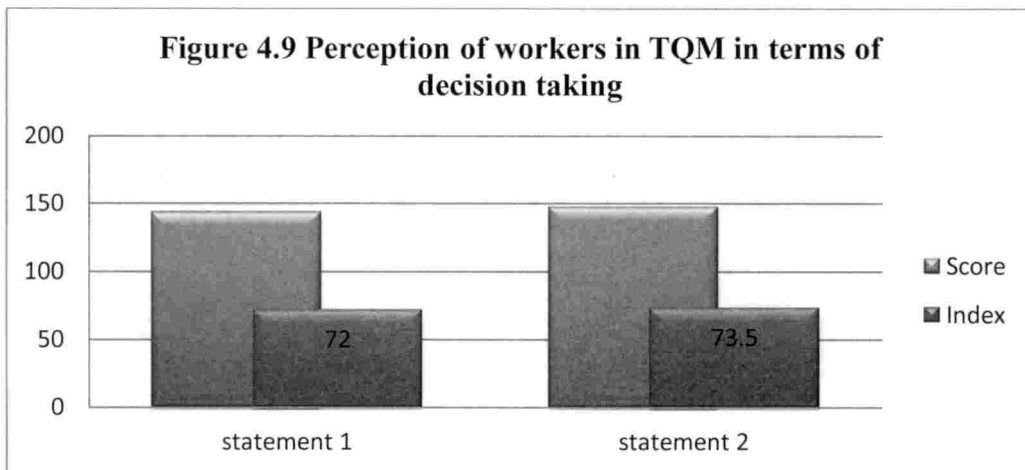
4.2.9 Decision taking

Decisions are made at every level of management to ensure organisational goals are achieved. Here perception of workers towards, workers and other higher level employees are treated equally by the management and equal participation is done among all levels of employees if any decision is taken at KFL were analysed.

Table 4.26 Perception of workers in TQM in terms of decision taking (n=40)

Sl no	Statement	Score	Index	Perception level
1	Workers and other higher level employees are treated equally by the management	144	72	Good
2	Equal participation is done among all levels of employees if any decision is taken	147	73.5	Good

Source: Primary data collected for the study



From the table 4.26, it is clear that workers and officer level employees are treated equally by the management as the perception levels of the workers were good. Here also some workers have different opinion. Equal treatment will generate a sense of belongingness and help to create commitment to the organisation. Equal participation among all levels of the employees is in a company if any decision is taken with respect to the company were in a good manner. The higher level employees are given priority in case of decision making in the organisation than workers.

4.2.10 Communication

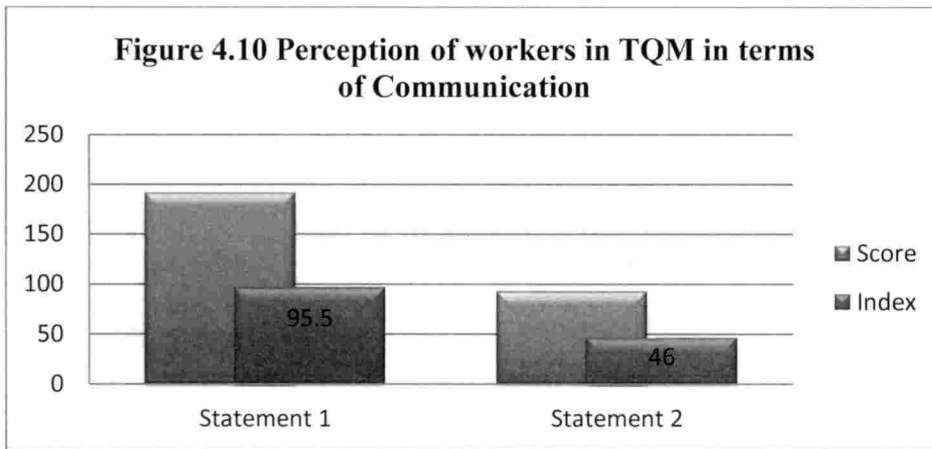
Effective communication is important for the development of an organisation. It is something which helps the managers to perform the basic functions of management. Here freedom for workers to say any difficulties in the work to the management and proper corrective measures are taken by the management in case of any issues in the work at KFL were analysed.

Table 4.27 Perception of workers in TQM in terms of Communication

(n=40)

Sl no	Statement	Score	index	Perception level
1	Freedom for workers to say any difficulties in the work to the management	191	95.5	High
2	Proper corrective measures are taken by the management in case of any issues in the work	92	46	Moderate

Source: Primary data collected for the study



From the table 4.27 as the perception level of management has given freedom for the workers in case of any difficulty in their work and can report freely to the management anytime were good. The perception of proper corrective measures are taken by the management in case of any issues in the work were moderate. This indicated that the management take care of worker's problem is not in a good manner. Corrective actions are not taken in the case of any issues in the work. Some of the workers opined that sometime management is just hearing the problem and not properly takes care.

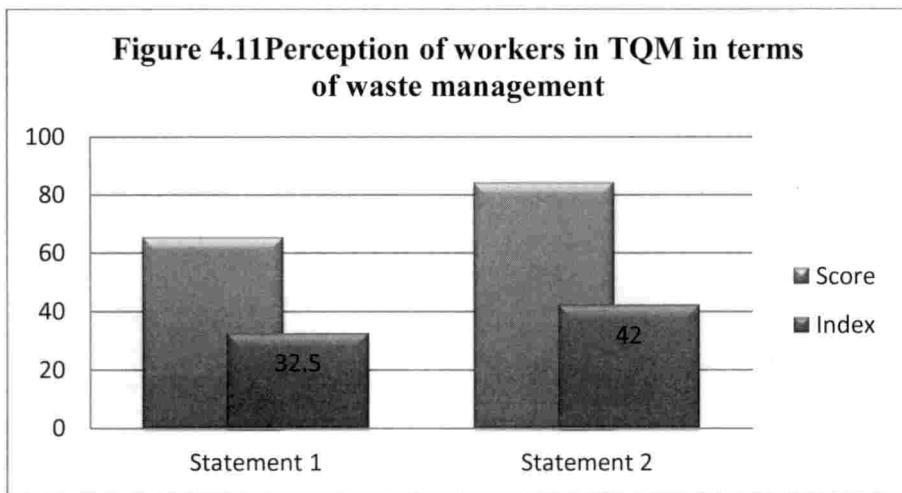
4.2.11 Waste management

Waste management are the activities and actions required to manage waste from its inception to its final disposal. Here perception of workers in terms of the current waste control measures in the organisation are sufficient for the waste production of the product and aware of waste control measures like poke yoke & 5s philosophy of KFL were analysed.

Table 4.28 Perception of workers in TQM in terms of waste management (n=40)

Sl no	Statement	Score	Index	Perception level
1	The current waste control measures in the organisation are sufficient for the waste production of the product	65	32.5	Poor
2	Aware of waste control measures like poke yoke & 5s philosophy.	84	42	Moderate

Source: Primary data collected for the study



From the table 4.28, it is clear that the worker's perception level poor regarding the organisation's waste control measures are not enough for the wastes generated during the production process. They are not much aware of the waste control measures of Japan philosophy. Workers of the lab know somewhat but other workers are not familiar with those measures.

4.2.12 Product rejection

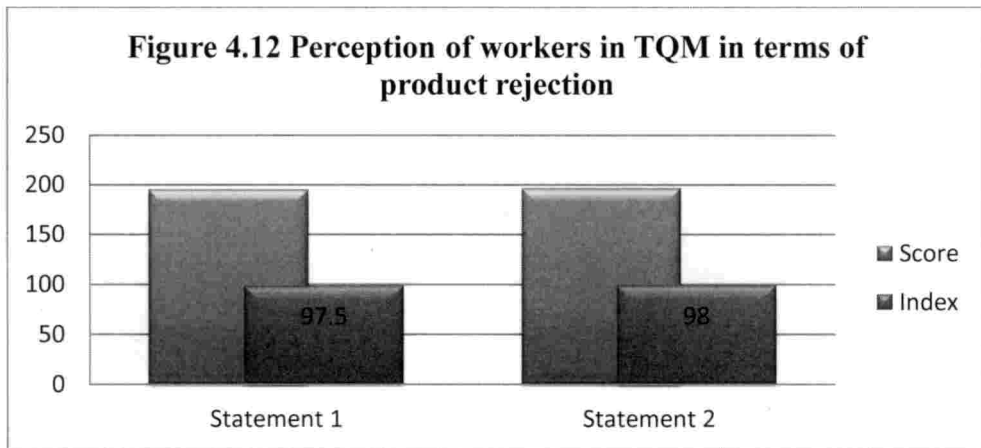
The result of product rejection is efficient means of delivering 100 per cent quality assured products to your customer without impacting on your productivity. Here perception of workers in terms of product rejection with respect to quality in the company and Corrective action is taken immediately for product rejection of KFL were analysed.

Table 4.29 Perception of workers in TQM in terms of product rejection

(n=40)

Sl no	Statement	Score	Index	Perception level
1	Product rejection not happened with respect to quality in the company.	195	97.5	High
2	Corrective action is taken immediately for product rejection	196	98	High

Source: Primary data collected for the study



From the table 4.29, it is clear that as the perception level of the product rejection not happened in the aspect of quality in the company were high level, corrective actions are taken immediately if any such rejection occurs which is also clear from their perception level. But normally such situation is rarely happened there.

4.2.13 Technology

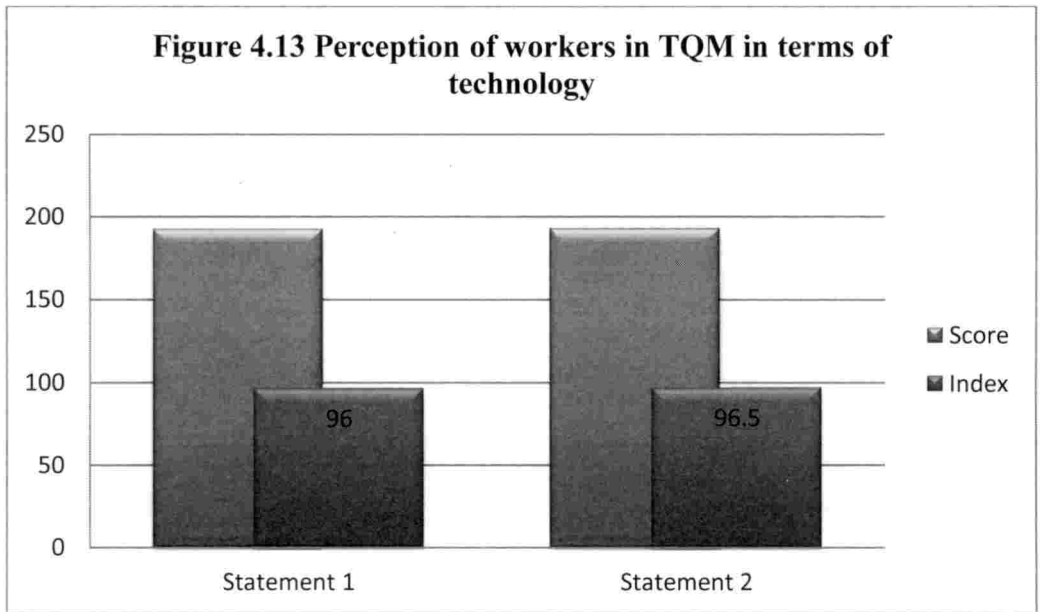
Technology focuses on the intersection of business, its application, dissemination and impact. Here perceptions of workers in terms of automated machines were used in the processing and advanced technologies for the improvement of the product are preferred at KFL were analysed.

Table 4.30 Perception of workers in TQM in terms of technology

(n=40)

Sl no	Statement	Score	Index	Perception level
1	Automated machines are used in the processing	192	96	High
2	Advanced technologies for the improvement of the product are preferred	193	96.5	High

Source: Primary data collected for the study



From the table 4.30, it is clear that Kerala Feeds is using automated machines as well as manpower for the processing since the perception level of the workers were high. The perception level of the workers is high for the statement advanced technologies for the improvement of the product are preferred

Table 4.31 Quality Perception index of workers

Worker's perception of TQM followed in KFL was measured in terms of a quality perception index were consolidated here.

Sl.No	Parameters	Perception Index	Perception Level
1	Awareness of TQM	72.5	Good
2	Working environment	74.25	Good
3	Skills and knowledge	50	Moderate
4	Motivation	33.5	Poor
5	Training	27.5	Poor
6	Team work	79	Good
7	Acceptance of suggestions by management	62.25	Good
8	Decision making	72.75	Good
9	Communication	70.75	Good
10	Waste management	37.25	Poor
11	Product rejection	97.75	High
12	Technology	96.25	High
OVERALL PERCEPTION INDEX		64.47	Good

Quality perception index of workers in KFL

Perception index of 12 parameters of TQM in KFL is consolidated in the given figure 4.13

Figure 4.13 Quality perception index of workers in KFL

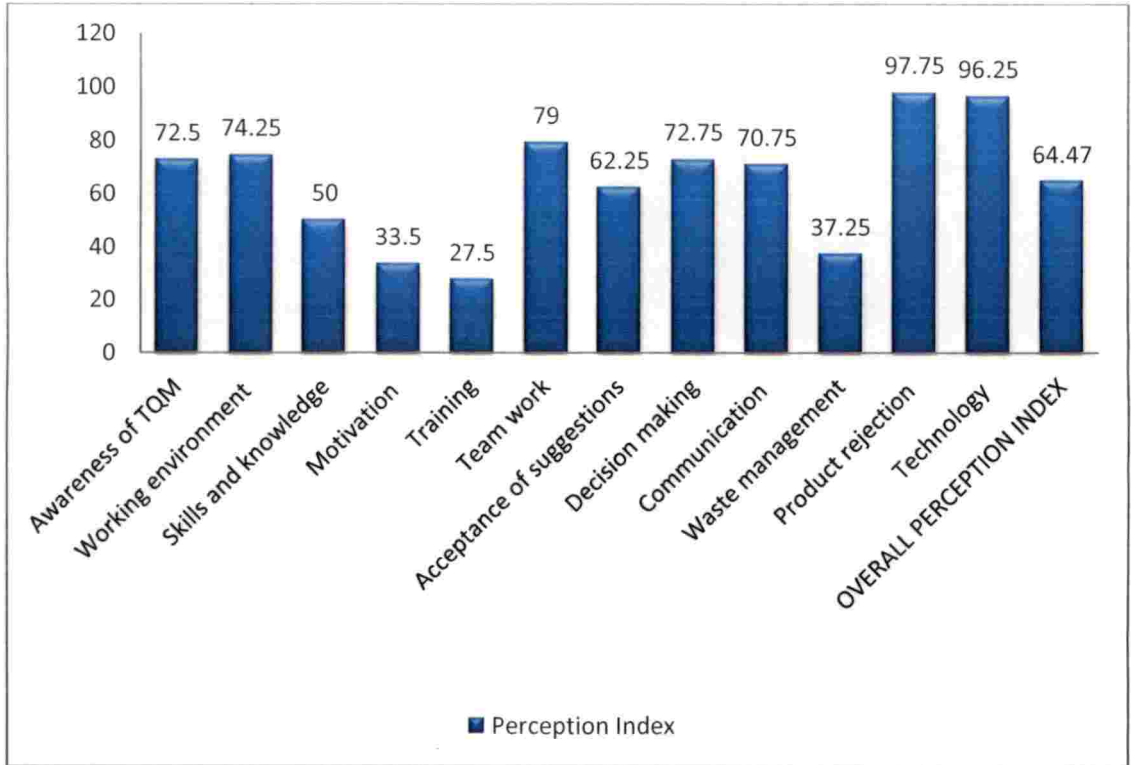


Table 4.31 reveals that workers perception level of certain parameters were poor. So KFL should give more emphasis on these parameters in order to make the organisation ready to implement TQM in all aspect. The parameters are motivation, training for the workers, waste management. From the workers opinion motivation and training for the workers regarding incentives, statistical quality tools or quality enhancement training programmes is not conducted in the organisation. In workers point of view waste management is not properly carried in the company.

The perception level of skills and knowledge is moderate level company use not much of the skills and knowledge of workers.

The parameters like Awareness of TQM, Working environment, Team work, Acceptance of suggestions by management, Decision making, Communication towards these perception level is good. Workers are just familiar with the TQM concept.

The management encourages the team-work and cooperation among each other. Management provide platform participate workers for decision making process.

Management has given freedom for the workers in case of any difficulty in their work and can report freely to the management anytime.

In the perception index table, only two out of 12 parameters i.e. product rejection and technology show high perception which means that product is not rejected in the case of quality inspection and automated machines as well as manpower for the processing since the perception level of the workers is high.

The overall perceptions of workers regarding the implementation of Total Quality Management in the Kerala Feeds Limited were good.

Chapter 5

***SUMMARY OF FINDINGS, SUGGESTIONS
AND CONCLUSION***

Chapter – v

FINDINGS, SUGGESTIONS & CONCLUSION

Implementation of Total Quality Management helps the companies to identify weaknesses, faults, areas for improvement and strength. This gives the company the ability to set standards, make adjustment as needed and to offer greater value overall to their customer base. In this context, the study entitled 'Employees perception of Total Quality Management' was undertaken with the following objectives: -

- To study the extent of awareness of employees in TQM activities of KFL
- To analyse outcome of TQM implementation in the company as perceived by its employees

This study was conducted in Kerala Feeds Limited (KFL), Kallettumkara of Thrissur district. Based on the data through a sample of 60 employees that included both officers and workers by administrating a structured interview schedule. Analysis was done using appropriate statistical tools. The major findings, suggestions and conclusion of the study were summarized and presented in this chapter.

5.1 MAJOR FINDINGS

5.1.1 Awareness of TQM implementation among officers of KFL

The major findings of the study relating to the perception of officer level employees were as follows:

1. Most of the officers' (76 per cent) had good awareness about TQM concept implemented in KFL.
2. Majority of the officers (80 per cent) were aware of the standard quality techniques followed for the improvement of the product.
3. Most of the officers (77 per cent) agreed that the current quality assurance system is sufficient for the products. KFL have a clear quality vision and the employees are properly communicated their vision.
4. Most of the officers (78 per cent) had sufficient knowledge about the quality certification procedures related to ISO 9001:2000 and the importance of quality certification for a cattle feed manufacturing company.

5. Most of the officers (84 per cent) in Kerala Feeds preferred advanced technologies for the improvement of the product.
6. Eighty-six per cent of officers prefer automated machines whereas remaining 14 per cent work done by manually
7. Sixty seven per cent of officer's reported about the corrective measures in place in the company to rectify any case of product rejection from customers.
8. The result also showed (64 per cent) that the company had mechanisms to take into consideration some of the opinions from the officers in decisions of the company.
9. Most of the officers (71 per cent) not have much knowledge about the waste control measures like poke yoke or 5s Japan philosophy which focus sort, stabilize, shine, standardise, sustain.

5.1.1 Awareness of TQM implementation among workers of KFL

1. Twenty eight percent of workers were not very well familiar with the TQM concept and they are not aware of the need and importance of TQM in the company.
2. Almost all workers (96 percent) fully aware of advanced technologies preferred by KFL
3. Most of the workers (77 per cent) were satisfied with the security of the job provided by KFL
4. Majority of the workers (74 per cent) were satisfied with the working environment in the company.
5. Company only used the skills of few workers (50 per cent). Company not much utilising all the skills and knowledge of the workers well.
6. Only few workers (30 per cent) got some reward. Company not recognised the performances of the workers and not rewarded.
7. Very less workers (27 per cent) got some appreciation. Workers usually not get much appreciation in terms of promotion or wages.
8. Only few (30 per cent) workers got training on statistical quality tools and only 26 per cent got training on quality enhancement training programme that is organisation not used to encourage workers by providing training.

9. Seventy nine per cent of the workers had the opinion that KFL promotes team work very well.
10. Most of the workers (70 per cent) reported KFL used to maintain a good communication with all employees.
11. In the opinion of some of the workers (46 per cent) solutions of the problem usually not fully taken in care by the management.
12. Only 37 per cent of workers were satisfied with current waste management prevailing in the company.

5.2. SUGGESTIONS

From the discussion with the officers and workers and from their opinion, certain suggestions are proposed.

1. All levels of employees should be familiarised with the Total Quality Management concept then only the implementation of total quality management is successful.
2. Training regarding the quality tools is to be provided for both the officer level employees and workers.
3. Familiarise all levels of employees with the waste control measures like 5s and poke-yoke so that it improves work efficiency, productivity and quality of the products in the company.
4. Suggestions or any other report on difficulties from employees should be taken care of by the company then only employees sincerely feel that their part is important for the company's growth.

5.3 CONCLUSION

From this study, employees' perception regarding, the awareness of TQM activities and outcome of TQM implementation in Kerala Feeds Limited, it can be considering several parameters like awareness of TQM, quality consciousness, preventive maintenance, technology etc..The officer level employees and workers perception regarding these parameters were good. Company is not fully utilising the skills and knowledge of the workers the company needs to give training for workers on the quality tools.

Both officer level employees and workers were aware of the quality assurance mechanism prevailing in the organisation. Also they were aware of the quality standards to be used. The officer level employees in Kerala Feeds very well know the need of quality certification like ISO for their company. Considering all these the awareness of employees towards TQM techniques were good. Most of the parameters considered are supporting Total Quality Management practices in the company. The officer level employees were having more awareness regarding the different parameters considered in Total Quality Management compared to the workers.

It was clear from the study that Kerala Feeds uses TQM concepts in a good manner. Kerala Feeds had adopted continuous improvement process and sample testing of the product is done before it reaches to the market for sales. Management should consider involvement of workers with the involvement of officer level employees. They also have to be aware of the importance of TQM.

Successful implementation of TQM is possible from top management to low level worker, have a clear idea about the concept of TQM and also its needs and importance. So the study reveals that even though the officer level employees and workers of Kerala Feeds take part in TQM activities, workers are not fully aware of the concept so need to give awareness programmes for them. Otherwise Kerala Feeds is adaptable for the implementation of TQM i.e., outcome of TQM implementation was successful in Kerala Feeds Limited, Kallettumkara Thrissur.

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APPENDIX

APPENDIX-1

KERALA AGRICULTURAL UNIVERSITY
COLLEGE OF CO-OPERATION, BANKING AND MANAGEMENT



EMPLOYEE'S PERCEPTION OF TOTAL QUALITY MANAGEMENT AT
KERALA FEEDS LTD

INTERVIEW SCHEDULE FOR EMPLOYEES

SOCIO-ECONOMIC PROFILE

1. Name:
2. Age :
 - a) 20-30
 - b) 30-50
 - c) 50 and above
3. Sex : Male Female
4. Educational qualification:
 - a) Matriculate
 - b) Higher secondary
 - c) Graduate
 - d) Post graduate
5. Department:
6. Designation:
7. How long have you been working in this company?
 - a) Below 1 year
 - b) 1-5 years
 - c) 5-10 years
 - d) More than 10 years

1. Quality consciousness

a) Awareness of Total Quality Management concept followed in the company

Strongly agree Agree No opinion Disagree Strongly disagree

b) Perceived effect of quality grading prevailing in the organisation on product

Strongly agree Agree No opinion Disagree Strongly disagree

2. Quality assurance & Quality standards of organisation

a) The current quality assurance system is sufficient for the products.

Strongly agree Agree No opinion Disagree Strongly disagree

b) The current plant capacity is sufficient for storage of the product

Strongly agree Agree No opinion Disagree Strongly disagree

c) Standard quality techniques are followed in the organisation

Strongly agree Agree No opinion Disagree Strongly disagree

d) Advanced technologies for the improvement of the product are preferred

Strongly agree Agree No opinion Disagree Strongly disagree

3. Quality certification

a) Quality certification essential for a Cattle feed manufacturing company

Strongly agree Agree No opinion Disagree Strongly disagree

b) The present quality certification in the company is enough to capture a strong position in the market

Strongly agree Agree No opinion Disagree Strongly disagree

4. Preventive maintenance

- a) Proper care and servicing by personal of maintaining equipment are working well in the company.

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Advanced technologies for the improvement of the product are preferred

Strongly agree Agree No opinion Disagree Strongly disagree

5. Employees feedback system

- a) Strong feedback mechanism from employees are in place

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Employees opinion are considered in the decision taking of the company

Strongly agree Agree No opinion Disagree Strongly disagree

6. Technologies adopted by the company

- a) Automated machines are used in the processing

Strongly agree Agree No opinion Disagree Strongly disagree

- b) System ready to adopt new technology for the improvement of the product

Strongly agree Agree No opinion Disagree Strongly disagree

7. Product rejection

- a) Product rejection with respect to quality is high in the company

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Corrective action is taken immediately for product rejection

Strongly agree Agree No opinion Disagree Strongly disagree

8. Customer friendliness and safety measures

- a) Organisation is committed to satisfy the customer's needs and wants

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Proper methods of customer survey are used for the identification of changing needs of the customer

Strongly agree Agree No opinion Disagree Strongly disagree

- c) Customer complain redressal mechanism is very effective

Strongly agree Agree No opinion Disagree Strongly disagree

- d) In built organisation mechanism to respond quickly to customers complaints are in place

Strongly agree Agree No opinion Disagree Strongly disagree

- e) Sufficient safety measures are used by the company

Strongly agree Agree No opinion Disagree Strongly disagree

9. Supplier relationship

- a) Company depends on relatively few dependable suppliers who are evaluated and selected based on their capacity & commitment to product, service quality and value for money

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Periodic examination of the materials supplied in taken up to ensure conformity with the standard specification

Strongly agree Agree No opinion Disagree Strongly disagree

10. Working environment in the company

a) I am satisfied with the security that my job provides me

Strongly agree Agree No opinion Disagree Strongly disagree

b) The working condition creates a learning environment in the organisation

Strongly agree Agree No opinion Disagree Strongly disagree

11. Team work

a) The organisation promotes teamwork & cooperation among each other

Strongly agree Agree No opinion Disagree Strongly disagree

b) Teams are framed to solve quality issues and other problem

Strongly agree Agree No opinion Disagree Strongly disagree

12. Acceptance of suggestions Management

a) Suggestion for improvement in the organisation are discussed among the employees and implemented

Strongly agree Agree No opinion Disagree Strongly disagree

13. Communication and decision making

a) The employees share knowledge & expertise with the other employee

Strongly agree Agree No opinion Disagree Strongly disagree

b) Proper corrective measures are taken by the management in case of any issues in the work

Strongly agree Agree No opinion Disagree Strongly disagree

c) Equal participation is done among all levels of employees if any decision is taken

Strongly agree Agree No opinion Disagree Strongly disagree

14. Waste management

- a) The current waste control measures in the organisation are sufficient for the waste production of the product.

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Aware of waste control measures like poke yoke & 5s philosophy

Strongly agree Agree No opinion Disagree Strongly disagree

15. HRD practices

- a) Employee achievement are shared and promoted

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Performance is recognized and rewarded

Strongly agree Agree No opinion Disagree Strongly disagree

- c) On the job skill upgradation facilities and incentives available that help to remain updated

Strongly agree Agree No opinion Disagree Strongly disagree

Other comments or suggestions if any:

THANK YOU FOR YOUR CO-OPERATION

APPENDIX-11

KERALA AGRICULTURAL UNIVERSITY
COLLEGE OF CO-OPERATION, BANKING AND MANAGEMENT



EMPLOYEE'S PERCEPTION OF TOTAL QUALITY MANAGEMENT AT
KERALA FEEDS LTD

INTERVIEW SCHEDULE FOR WORKERS

SOCIO-ECONOMIC PROFILE

1. Name:
2. Age :
 - a) 20-30
 - b) 30-50
 - c) 50 and above
3. Sex : Male Female
4. Educational qualification:
 - a) Matriculate
 - b) Higher secondary
 - c) Graduate
 - d) Post graduate
5. Department:
6. Designation:
7. How long have you been working in this company?
 - a) Below 1 year
 - b) 1-5 years
 - c) 5-10 years
 - d) More than 10 years

1. Awareness of TQM

a) Familiar with the Total Quality Management

Strongly agree Agree No opinion Disagree Strongly disagree

b) Quality with respect to product is only considered in TQM

Strongly agree Agree No opinion Disagree Strongly disagree

2. Working environment

a) I am satisfied with the security that my job provides me

Strongly agree Agree No opinion Disagree Strongly disagree

b) The working condition creates a learning environment in the organisation

Strongly agree Agree No opinion Disagree Strongly disagree

3. Skills and knowledge

a) The company is utilising the skills and knowledge of the workers well

Strongly agree Agree No opinion Disagree Strongly disagree

b) Company gives the platform to develop your skills well

Strongly agree Agree No opinion Disagree Strongly disagree

4. Motivation

a) Performance is recognized and rewarded

Strongly agree Agree No opinion Disagree Strongly disagree

b) Appreciation in terms of promotion or wages are given on Achievement

Strongly agree Agree No opinion Disagree Strongly disagree

c) Salary is a means of motivation in the company

Strongly agree Agree No opinion Disagree Strongly disagree

5. Training

a) Training on statistical quality tools to measure the variations is conducted in the organisation

Strongly agree Agree No opinion Disagree Strongly disagree

b) Quality enhancement training programme is being conducted in the organisation

Strongly agree Agree No opinion Disagree Strongly disagree

c) The organisation encourages and provides resources for training

Strongly agree Agree No opinion Disagree Strongly disagree

6. Team work

a) The organisation promotes teamwork & cooperation among each other

Strongly agree Agree No opinion Disagree Strongly disagree

b) Teams are framed to solve quality issues and other problem

Strongly agree Agree No opinion Disagree Strongly disagree

7. Acceptance of suggestions by Management

a) Suggestions from workers are considered by the management

Strongly agree Agree No opinion Disagree Strongly disagree

b) Suggestion for improvement in the organisation are discussed among the employees and implemented

Strongly agree Agree No opinion Disagree Strongly disagree

8. Decision taking

a) Workers and other higher level employees are treated equally by the management

Strongly agree Agree No opinion Disagree Strongly disagree

b) Equal participation is done among all levels of employees if any decision is taken

Strongly agree Agree No opinion Disagree Strongly disagree

9. Communication

a) Freedom for workers to say any difficulties in the work to the management

Strongly agree Agree No opinion Disagree Strongly disagree

b) Proper corrective measures are taken by the management in case of any issues in the work

Strongly agree Agree No opinion Disagree Strongly disagree

10. Waste management

- a) The current waste control measures in the organisation are sufficient for waste production of the products

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Aware of waste control measure like poke-yoke & 5s Japan philosophy

Strongly agree Agree No opinion Disagree Strongly disagree

11. Product rejection

- a) Product rejection in the aspect of quality is high in the company

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Corrective action is taken immediately for product rejection

Strongly agree Agree No opinion Disagree Strongly disagree

12. Technology

- a) Automated machines are used in the processing

Strongly agree Agree No opinion Disagree Strongly disagree

- b) Advanced technologies for the improvement of the product are preferred

Strongly agree Agree No opinion Disagree Strongly disagree

Other comments or suggestions if any:

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THANK YOU FOR YOUR CO-OPERATION