A STUDY ON THE MARKET POTENTIAL FOR KOTHARI FERTILIZERS IN COIMBATORE DISTRICT

Thesis submitted in part fulfilment of the requirements for the Degree of

Master of Science (Agriculture) in Agricultural Marketing Management

to the Tamil Nadu Agricultural University,

Coimbatore

By

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1998

CERTIFICATE

This is to certify that the thesis entitled **"A STUDY ON THE MARKET POTENTIAL FOR KOTHARI FERETILIZERS IN COIMBATORE DISTRICT"** submitted in part fulfilment of the requirements for the degree of **MASTER OF SCIENCE (AGRICULTURE)** in **AGRICULTURAL MARKETING MANAGEMENT** to the Tamil Nadu Agricultural University, Coimbatore, is a record of bonafide research work carried out by **Mr.K.RAJU** under my supervision and guidance and that no part of this thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and that the work has not been published in part or full in any scientific or popular journal or magazine.

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Date : 28.5.98

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D. SHRIJAY DEVARAJURS


Dedicated to
my Beloved
Parents

Acknowledgement

ACKNOWLEDGEMENT

With biosterous gay and hilarious glee I am so elated to keep on record my heartfelt thanks to my beloved Chairman **Dr.N.SRINIVASAN, Professor and Head,** Department of Agricultural Economics, for his incessant and stead fast inspiration, laudable counselling and surpassing guidance who conceived, detailed and shaped the problem and provided insightful and indomitable lead with much care and affection through out the study.

Ineffable and glowing gratitude is due to the honourable members of the Advisory Committee **Dr. P. Subramanian, Associate Professor,** Department of Agricultural Economics, and **Dr.P.RAJENDRAN, Professor of Agronomy** for their mellifluous love and poignant affection on me, which fostered in maintaining the much pignancy and mirth in pusuit of my educational ambitions.

I owe a debt to **Mr. Rabindran Swamidasan, Marketing Manager,** Kothari Industrial Corporation Ltd:, for suggesting the topic and supporting throughout the study. I am also thankful to **Mr.Pandian, Branch Manager,** Kothari Fertilizer Division, Coimbatore for providing me with all the basic amenities for the conduct of the study.

Words seem to be inadequate to express the sense of gratitude surging in me towards my **family members** whose devotion and love enbhuse me all the way in my life.

Though it is unusual of me to thank my friends **R.Ramesh, Velavan, S. Ramesh, Elangovan, Sankaran, Aroul, Sherine, Sham** and **Ramakumar**, I can't but express with gratitude their sustained support through out the study. I also like to extend my thanks to all **other staff members in the Department of Agrl. Economics, classmates and junior friends** in this occassion for their continued support.

A sincere word of appreciation for the expertise of **Sowmiya Communications** in the neat typing of the thesis on a record time.

These, of course are only a few among the many without whose help, encouragement and time, this task would not have been possible. To all of them, wherever they are, goes my thanks and with them the assurance that their assistance have not been forgetten.

K. RAJU

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CHAPTER I

INTRODUCTION

Setting

The role of chemical fertilizers as a key to the success of green revolution and consequent self-sufficiency in food production was recognised without ambiquity even two decades ago. Increase in food production is basic to the country's food security in view of the continued unabated growth in the population. It was estimated that by 2000 A.D., the population in India would be over 100 crores. To feed this huge population, 225 million tonnes of food grains are needed[1].

This can be achieved only by increasing the use of fertilizers, cropping intensity, and productivity. As stated by Gunvant M.Desai and Bruce Stone, "accelerated growth of fertilizer use is critical to the future technical transformation of Indian agriculture. The level must reach about 20 million tonnes by 2000 A.D. to raise the production of food and other commodities to the need based levels.

What is needed to achieve this target is a new organisation in policies. The future growth of fertilizer use must be accomplished with greatest economic efficiency[2]. With the spread of new technology, uptake of fertilizers had registered a steady up-trend especially since the mid 60's.

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1. G.M.RamaRao, "Fertilizer Demand and Supply in Eighth Plan," **Fertilizer News**, August, 1989, pp.21-25.
2. G.M.Rama Rao, **Op.cit.**, pp.21-25.

Production and Consumption of Fertilizers in India

Indian fertilizer industry has been accorded with a high priority in the development plans of India and today the country is the third largest fertiliser producer in the world. At present India has 61 large size fertilizer units manufacturing a wide range of nitrogeneous and phosphatic fertilisers[3]. From Table I, it could be seen that, the total installed capacity has gone upto about 95.12 lakh metric tonnes (MT) of nitrogen and 28.51 lakh metric tonnes of phosphate during 1995-96 from mere 0.90 lakh tonnes of nitrogen and 0.78 lakh tonnes of phosphate in 1951-52. The production also has gone upto 87.39 lakh metric tonnes of nitrogen and 25.33 lakh metric tonnes of phosphate during 1995-96 from mere 0.29 lakh tonnes of nitrogen and 0.10 lakh tonnes of phosphate in 1951-52.

The details on the consumption of fertilizers are given in Table II. It could be seen from Table II that, the consumption of fertilizers has reached a level of about 144 lakh metric tonnes of plant nutrients in 1995-96 from 0.65 lakh tonnes in 1951-52. The increased fertilizer consumption has resulted in a substantial increase in the food grain production, which has risen to a level of 198 million tonnes in 1996-97 from 52 metric tonnes in 1951-52[4]. These required a significant step up in fertilizer supply to match the increasing demand. Increase in demand could only be met by making available the fertilizer at the right time, place and price by the right person, equally supported by the credit and other infrastructural facilities.

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3. Dr.V.Kumar, "Fertilizer Scenario in the Country," **The Pesticide World,** Vol.11, May-June, 1996, PP.33-37.

4 Dr.V.Kumar, **Op.cit,** pp.33-37.

TABLE 1

ALL INDIA FERTILIZER CAPACITY, PRODUCTION AND CAPACITY UTILISATION

('000 tonnes)

Year	N			P_2O_5		
	Capacity	Production	Capacity Utilization in per cent	Capacity	Production	Capacity Utilization in per cent
1951-52	90	29	32	78	10	13
1961-62	283	154	54	182	65	36
1971-72	1487	949	64	534	290	54
1981-82	4732	3143	67	1469	950	69
1991-92	8282	7302	89	2806	2562	94
1992-93	8510	7431	88	2798	2321	84
1993-94	8844	7231	84	2817	1874	68
1994-95	9178	7944	89	2842	2557	92
1995-96(P)	9512	8739	92	2851	2533	89

P : (Provisional)
Source : The Pesticides World - Vol.II. May-June, 1996.

TABLE II

FERTILIZER CONSUMPTION IN INDIA

('000 tonnes)

Year	Consumption (N & P & K)
1951-52	65.6
1961-62	338.3
1971-72	2656.8
1981-82	6067.2
1991-92	12728.4
1992-93	12154.5
1993-94	12366.3
1994-95	13520.2
1995-96(P)	14400.0

(P) : Provisional

Source : The Pesticides World - Vol.II. May-June'1996.

Production and Consumption of Fertilizers in Tamil Nadu

The details on the production of various types of fertilizers in Tamil Nadu are furnished in Table III. From the Table III, it could be seen that, with regard to single super phosphate fertilizer, E.I.D.parry was producing 1,05,400 tonnes followed by KOTHARI (64,900 tonnes), shaw wallace (42,400 tonnes) and Coimbatore pioneer (24,800 tonnes). In the case of urea, SPIC produced more, than that of the other companies during 1996-97.

Similarly the details on the consumption of fertilizers are given in Table IV. It could be seen from Table IV, that among the fertilizer consumption, urea ranked first (8,03,500 tonnes), followed by muriate of potash (2,02,600 tonnes) and 17:17:17 complex (1,55,100 tonnes). In the case of super phosphate and Rock phosphate, the consumption went upto 81,800 tonnes and 4,200 tonnes respectively during 1996-97.

As regards the study area namely Coimbatore district, it is evident from Table V that, the maximum quantity of fertilizer consumed was urea (42,260 tonnes), followed by muriate of potash (20,934 tonnes) and ammonium sulphate (12,016 tonnes). In the case of super phosphate, the consumption was 10,709 tonnes, which accounted for 13.09 per cent of the total (81,800 tonnes) consumption of super phosphate in Tamil Nadu state.

Problem Focus

Marketing is the base for inception, development and growth of any organisation. Regarding relevance to organisation objectives and enterprise

TABLE III

PRODUCTION OF STRAIGHT AND COMPLEX FERTILIZERS IN TAMIL NADU. 1996-97

S.No.	Name of the Factory	Products	Materials ('000 tonnes)
1.	Spic, Tuticorin	Urea DAP (20:20:0)	616.0 312.4
2.	NLC	Urea	119.0
3.	Madras Petro Chemicals Ltd., Manali	Single Super Phosphate	1.4
4.	MFL, Manali	Urea 17:17:17 14:28:14	213.5 436.1 184.0
5.	TAC, Tuticorin	Ammonium Chloride	63.5
6.	E.I.D.Parry, Ranipet	Single Super Phosphate	105.4
7.	Shaw wallace, Avadi	Single Super Phosphate	42.4
8.	Coimbatore Pioneer, Coimbatore	Single Supeer Phosphate	24.8
9.	Kothari, Ennore	Single Super Phosphate	64.9

Source : Agricultural and Fertilizer Statistics. Southern Region (1997)

TABLE IV

CONSUMPTION OF FERTILIZER MATERIALS IN TAMIL NADU 1996-97

(in '000 Tonnes)

Fertilizer/Materials	Kharif	Rabi	Total
Urea	313.7	489.8	803.5
Ammonium Sulphate	21.2	35.7	62.9
Ammonium Chloride	14.8	30.9	45.4
Calcium Ammonium Nitrate (CAN)	1.8	9.3	11.1
Single Super Phosphate	30.6	51.2	81.8
Rock Phosphate	2.9	1.3	4.2
Muriate of Potash	99.4	103.2	202.6
20:20:0	40.9	71.2	112.1
16:20:0	17.7	26.2	43.9
17:17:17	30.0	125.1	155.1
15:15:15	5.7	7.2	12.9
14:28:14	23.4	18.8	42.2

Source : Agricultural and Fertilizer Statistics, Southern Region (1997)

TABLE V

CONSUMPTION OF FERTILIZER MATERIALS IN COIMBATORE DISTRICT (1996-97)

(in tonnes)

Fertilizer/Materials	Kharif	Rabi	Total
Urea	23449	21811	45260
Ammonium Sulphate	6784	5232	12016
Ammonium Chloride	327	1333	1660
Calcium Ammonium Nitrate (CAN)	897	3302	4199
Single Super Phosphate	4477	6232	10709
Rock Phosphate	700	250	950
Muriate of Potash	12900	8034	20934
DAP	1624	2380	4004
16:20:0	231	108	339
20:20:20	2419	3097	5516
17:17:17	1459	5227	6686
14:28:14	957	716	1673

Source : Agricultural and Fertilizer Statistics, Southern Region (1997)

planning in many cases, marketing precedes manufacturing.[5] Marketing serves as a connecting link between producers and consumers. So, there are specific responsibility areas of marketing, namely pricing, marketing, finance, personnel selling, distribution, promotion, advertising and marketing research that need immediate and constant attention.

Marketing of fertilizer, in general, involves buying, selling, providing incentives, off-season rebates, financing, risk bearing, extension, promotion, storage and transportation; all intended to facilitate smooth distribution of fertilizers produced[6].

The distribution of fertilizers in India is done through dealers; either private or co-operative. Co-operative societies are voluntary organisations of farmers to serve themselves with the supply of agricultural-inputs. Besides, co-operatives also provide financial assistance to farmers for getting inputs.

A private dealer is a separate entity and he is an important link in the marketing channel. Manufacturers have to necessarily make use of these marketing intermediaries to make their products reach the consumers faster and to take advantage of the consumers, which the intermediaries possess.[7]

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5 K.Rajeshwar Rao and N.Kusuma, "Marketing Information System in Rashtriya Chemicals and Fertilizers Limited - A Case study", **Indian Journal of Marketing,** 17(7) : 17-24, 1987.

6 B.Shyamala, "Perspective of Fertilizer Marketing", **Kissan World,** 9(10) : 23, 1982.

7 A.B.Thomas Stephen, "Marketing Channels, Dealer Network and Development," Text of lecture Presented at the 29th Fertilizer Association of India Seminar, Training Programme for Fertilizer Marketing Representatives, Trivandrum, April, 2-7, 1990.

In general, branding is a way for an organisation to identify its offerings and distinguish them from that of the competitiors.[8] Manufacturers offer their products to consumers through dealers under different brand names. In the modern marketing management, the concept of brand image has gained tremendous attention. In the fertilizer marketing also, brand development assumes importance. There are several brands in nitrogenous, phosphatic and complex fertilizers. A good brand image has to be maintained to keep up brand loyalty among the consumers. Thus, brand image is an important factor that determines the market share. It is, therefore, essential for the marketing personnel in distribution channel to have a sufficient knowledge on the behaviour of consumers.

The manufacturer while marketing fertilizers, has to decide the target market segments in relation to crop-wise and area-wise usage of fertilizers, taking into consideration the kind of crops grown and the usage level of associated inputs such as pesticide. Therefore, market forecasting system is to be developed to identify the target areas and the probable market potential, so that the distribution can be planned judiciously. It is in this context, M/s."Kothari Fertilizers", were of the view to assess the market potential for their fertilizer products and hence instituted this study. The case firm, namely "Kothari Fertilizers" were also of the view to analyse the same in Coimbatore district. Hence this study has been taken up and that too in Coimbatore district.

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8 Tauseef Ahmed and Inderjeet Singh, "Fertilizers Brand Preference : A case study of Meerut Division (U.P)" **Indian Journal of Marketing,** 15 (10-12) : 28-31. 1985.

Hypothesis

From above, it has been hypothesised that,

i. there existed high market potential for kothari fertilizers in Coimbatore district and

ii. the market share of kothari fertilizers could be further increased.

These hypotheses have been tested through this study.

Objectives

The overall objective of the study is to estimate the demand for fertilizers with special reference to case firm's products for banana, cotton and paddy in Coimbatore district.

The specific objectives of the study however are to;

i) study the fertilizer brand preference of farmers and dealers,

ii) estimate the market potential for fertilizers with special reference to case firm products for banana, cotton and paddy crops in Coimbatore district,

iii) analyse the market share of the casefirm products at dealers' level,

iv) study the effectiveness of promotional strategies followed by case firm in relation to fertilizers among the dealers and

v) suggest certain policy measures, if found necessary, to the case firm, to increase its market share.

Scope of the Study

Market planning in any firm should begin with a quantitative measurement of the total market potential for the product in question and measurement of the share of this market, which the firm is getting. These measurements form the basis for estimating the sales forecast of the product. The study results will help to know the fertilizer brand available in the market and farmers' preference towards them. This study will also be more useful to the sponsoring company that is KOTHARI in assessing the effectiveness of their promotional activities.

Limitations of the Study

This study is based on primary data collected from a sample of farmers and the dealers by survey method. As many of the farmers have not maintained proper records about farming operations, they furnished the required information from their memory and experience and hence the collected data were subject to recall bias. However, every effort had been taken to minimise the bias by including in the interview schedule, the questions that would facilitate cross checking. Hence, the findings of the study may be considered appropriate for the situations prevailing in the study area and extra care should be taken while making generalisation.

Organisation of the Thesis

Chapter I : **Introduction:** setting, problem focus, hypotheses, objectives, scope and limitations of the study.

Chapter II : **Concepts and Review:** Marketing concepts, Brand preference and selection, Demand estimation, Market functionaries, market promotion and review of past studies.

Chapter III : **Methodology:** Sampling design, methods of collection of data and methods of analysis.

Chapter IV : **Description of Study Area:** Geographical location, demography, rainfall pattern, cropping pattern and profile of the company.

Chapter V : **Results and Discussion:** General features of sample farmers and dealers, brand preference among farmers and dealers, market potential, market share and effectiveness of promotional methods.

Chapter VI : **Summary and Conclusions:** Summary, conclusions and policy implications.

Concepts and Review

CHAPTER II

CONCEPTS AND REVIEW

Review of related concepts and past studies will give a holistic picture and that will inturn help us in analysing and understanding the problems in proper perspective. Hence in this chapter, the relevant concepts and previous studies are reviewed under the following seven sections.

i. Marketing concepts
ii. Brand preference and selection
iii. Demand estimation
iv. Market functionaries
v. Market promotion
vi. Other related concepts and
vii. Review of past studies

(i) Marketing Concepts

The concpets of makret, marketing, marketing management, marketing research, marketing environment and market segmentation are reviewed in this section. The concept of market is reviewed first.

A. Market

According to Kotler, a market consisted of all the potential customers, sharing a particular need or want who might be willing and able to engage in exchange to satisfy that need or want[1].

Stanton defined market as a place or a geographical area, where buyers and sellers met and functioned, goods or services were offered for sales and transfer of title of ownership occured[2].

Arvind viewed market as a set of all actual and potential buyers of a product[3], while Clark and Clark defined market as an area in which forces leading to an exchange and from which the actual goods tend to travel[4].

For the present study, the market was considered as a place where exchange of fertilizers for money took place between sellers (dealers) and buyers (farmers).

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1 Philip Kotler, **Marketing Management : Analysis, Planning, Implementation and Control** (New Delhi : Prentice Hall India Pvt. Ltd., 1989), P.9.

2 William Stanton, **Fundamentals of Marketing** (New Delhi : McGraw Hill International Book Company, 1964), p.76.

3 Arvind I. Kobra, "Marketing Concepts and Small Scale Sector", **Indian Journal of Marketing**, 13(4): 19, 1972.

4 Tousey Clark and E.Clark, **Principles of Marketing** (London : The MacMillan Company, 1962), p.10.

B. Marketing

According to Kotler, marketing was a social and managerial process by which individuals and groups obtained what they needed and wanted through creating and exchanging products and value with others[5].

According to American Marketing Association, marketing was referred to the performance of business activities that directed the flow of goods and services from the producer to the ultimate consumer or user[6].

Mamoria and Joshi defined marketing as the process of ascertaining, creating and satisfying the needs of the people and doing it with a profit[7].

Subramanyam ***et al.*** perceived marketing as the process of defining, anticipating and creating consumer needs and wants and of organising all the resources of the company to satisfy them[8].

For this study, on hand marketing was taken as all the business activities performed during the flow of goods (fertilizers) from the dealers to farmers.

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5 Philip Kotler, **Op.Cit.**, p.11.

6 William Stanton, **Op.Cit.**, p.1.

7 C.B.Mamoria and R.L.Joshi, **Principles and Practices of Marketing in India,** (Allahabad, Kitabmahal, 1975), p.8.

8 Subramanyam,G.B. Ramakrishna and S.K.Prasad, "Handloom Marketing - A Study of Consumer Behaviour", **Indian Journal of Marketing,** 15(16): 15-20, 1985.

C. Marketing Management

Philip Kotler defined marketing management as the process of planning and executing the conception, pricing, promotion and distribution of goods and services to create exchanges that satisfied the individual and organisation objectives[9].

D. Marketing Research

Kotler defined marketing research as the systematic design, collection, analysis and reporting of data and findings relevant to a specific marketing situation facing the company[10].

E. Marketing Environment

According to Kotler marketing environment consisted of the external factors and forces that affected the company's ability to develop and maintain successful transactions and relationships with its target customers[11].

For the present study, the factors such as cropping pattern, temperature, rainfall distribution, farmers awareness and the like were considered as the external factors which affected the company's marketing activities and hence formed the marketing environment for the manufacturing firm.

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9 Philip Kotler, **Op.Cit.**, p.11.

10 **Ibid.**, p.107.

11 Philip Kotler, **Op.Cit.**, p.102.

F. Market Segmentation

Kotler referred market segmentation as the act of dividing a market into distinct groups of buyers, who required separate products and/or marketing mixes[12].

(ii) Brand Preference and Selection

Consumer's preference towards a particular brand and selection are the important factors that matters the manufacturers and the marketers. Hence, the concepts like brand, brand loyalty, branding and buying behaviour are reviewed in this section. The concept of Brand is reviewed first.

A. Brand

A name, term, sign, symbol, design (or) combination of them, which was intended to identify the goods or services of one seller group (or) group of sellers and to differentiate them from another[13]

B. Brand Loyalty

According to Padmaraj, any farmer who purchased a particular brand for more than one year reckoned to be brand loyal[14], which Reddy and Shankaraiah defined brand loyalty as the repeat purchase of same brand[15].

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12 Philip Kotler, **Op.Cit.**, p.280.

13 American Marketing Association, **"Marketing Definitions - A Glossary of Marketing Terms"**, (Chicago : American Marketing Association, 1960), p.35.

14 D.Padmaraj, "An Economic Analysis of Fertilizer use and Fertilizer Buying Behaviour in Paddy Farms of Andhra Pradesh" (Unpublished M.Sc.(Ag.) Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1983).

15 Philip Kotler, **Op.Cit.**, p.143-144.

Madhulika Sharma defined Brand Loyalty as the consumer tendency to consistently allocate highly shares of purchase to a particular brand in the given product categories[16].

In the present study, brand was considered as the one consisting of a word, letter, groups of words or letters comprising a name intended to identify fertilizers of manufacturers and to identify them from those of the competitors.

C. Branding

Branding was an intrinsic part of product strategy for successful brands that would provide better income to the concern[17]. Branding in general was a way for an organisation to identify its offerings and distinguish them from those of the competitors[18].

For the study on hand, branding was defined as the path for a manufacturing firm to identify its fertilizer product and distinguish them from those of its competitors.

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16 Madhulika Sharma, "Socio Economic Variables and Brand Loyalty", **Indian Journal of Marketing**, 14(10-11): 9-16, 1984.

17 American Marketing Association, **Op.Cit.**, p.35.

18 Tauseef Ahmed and Inderjeet Singh, **Op. cit.**, p. 15(10-12): 28-31, 1985.

D. Buying Behaviour

Walters defined buying behaviour as the process wherein, a individual decided on whether, what, when, where, how and from whom to purchase goods and services[19].

Buying behaviour was of immense significance and paramount importance to both the buyer and seller; for the former in satisfying his needs and for the latter in meeting the needs of his buyer and realising more profit[20].

For the present study, buying behaviour was considered as the process wherein individuals resorted to the decision of whether, what, when, where, how and from whom to purchase goods and services.

(iii) Demand Estimation

Demand estimation for fertilizers to future period will help to take decision by manufacturers. Hence, the concept of demand, market demand and market potential are reviewed in this section.

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19 C.Glenn Walters, "**Consumers Behaviour - Theory and Practice**", (Illinois : Richard D. Irwin Inc., 1974), p.7.

20 S.D.Sivakumar, "A Study on the Market Structure and Buying Behaviour of the Farmers With Reference to Pesticides", (Unpublished M.Sc.(Ag.) Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1987).

A. Demand

Demand was the schedule of quantities of any product that buyers will purchase at different prices during some stated time period[21].

B. Market Demand

Kotler defined market demand as the total volume that would be bought by a defined customer group in a defined geographical area in a defined time period in a defined environment under a defined marketing programme[22].

In the present study, market demand referred to the total volume of fertilizers that would be bought by the farmers who were cultivating banana, cotton and paddy in Coimbatore district.

C. Market Potential

Stanton defined market potential as the maximum sales opportunities for all sellers of a good (or) service during a stated period of time in a stated market[23]. On the other hand, Roland defined market potential as the limit approached by market demand as industry's marketing effort went to infinity for a given environment. Market potential would be always greater than the market forecast. The two methods employed for the estimation of market potential were, (i) Chain ratio method and (ii) Market build-up method[24].

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21 George Lenald Bach, Economics : **An Introduction to Analysis and policy** (New Delhi : Prentice Hall of India Private Ltd., 1982), p.41.

22 Philip Kotler, **Op.Cit.**, p.259.

23 William Stanton, **Op.Cit.**, p.655.

24 Roland Weirs, **Marketing Research,** (New York : Prentice Hall Inc., 1984), p.453-454.

For the present study, the chain ratio method and market build-up method were used to estimate the market potential for case firm's products.

(iv) Market Functionaries

Market functionaries are those who were engaged in the process of marketing. Marketing functionaries are of different types based on the functions performed by them. The dealer is reviewed first.

A. Dealer

According to Kotler, a dealer was a firm that bought and resold merchandise at either retail or wholesale[25].

Fertilizer dealer was defined by Pandey and Sunitavivek as a person or institution carrying on the business of selling fertilizers either wholesale (or) retail[26].

According to Kulshreshtha, the term dealer included the wholesalers, retailers, distributors, stockists or any other designation by which a distribution intermediary was known[27].

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25 Philip Kotler, **Op.Cit.**, p.555.

26 S.N.Pandey and Sunita Vivek, "Efficiency in Fertilizer Marketing", **Fertilizer News,** 28(7): 22-26.

27 Renu Kulshreshtha, "Sales Promotion Techniques", **Indian Journal of Marketing,** 16(10): 6, 1986.

In this study, dealer was considered as the one who carried on business of selling fertilizers. Wholesaler-cum-retailers, private retailers and wholesaler selling fertilizers to farmers.

B. Wholesaler

According to Vachharajani, a wholesaler was an institutional agency or private organisation. They might be one or more in a given area. They distribute principal products through a number of retailers and in some cases, they also retailed themselves[28].

Wholesalers were those engaged in selling goods or services to those who bought for resale or business use[29].

In the current study, wholesalers were considered as those engaged in selling fertilizers to those who bought for resale or business use, namely the retailers.

C. Retailers

Cundiff and Still defined retailer as a merchant or occasionally an agent whose main business is selling directly to ultimate consumers for non-business use[30].

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28 N.M.Vachharajani, **Establishing Distribution Network : Methods and criteria in "Hand Book of Fertilizer Marketing"**, (New Delhi : Fertilizer Association of India, 1976), pp.235-237.

29 Philip Kotler, **Op.Cit.**, p.569.

30 E.N.Cundiff and R.Still, **"Basic Marketing concepts, Environment and Decision"**, (New Delhi : Prentice Hall of India Private Ltd., 1968), p.21.

According to Kotler, retailers are those engaged in selling goods or services directly to final consumers for their personal and non-business use[31].

D. Wholesaler-cum-Retailer

Any person (or) institution carrying out the business of selling fertilizer to retailers and ultimate users and also doing business to assemble and distribute bulk quantities to other retailers was referred to as wholesaler-cum-retailer[32].

In this study, wholesaler-cum-retailer was considered as the one who carried out the functions of both whole saling as well as retailing.

(v) Market Promotion

Market promotion play a key role in developing a brand preference among consumers and it increased the volume of sales in organisation. Hence, the concept of market promoiton was reviewed.

Stanton defined promotion as an exercise in information, persuasion and communication. These three were related, because to inform was to persuade and conversely a person who was persuaded was also being

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31 Philip Kotler, **Op.Cit.**, p.554.

32 Rameshbabu, "Factors Influencing Dealers Purchase Decision Regarding Fertilizers in Tamil Nadu - A case study of Madras Fertilizers Limited", (Unpublished M.B.M. Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1990).

informed and persuasion and information became effective through some form of communication[33].

Kotler indicated that marketing communication mix could also be called the promotion mix to four major tools namely, advertising, sales promotion, publicity and personal selling[34].

Promotion was a generic term used in marketing to denoter all methods adopted for persuasive communication. It would help to convert a potential buyer to actual buyer[35].

Davar mentioned that the advertisement, sales promotion and personal selling would generally constitute the promotional mix within the marketing mix of the company[36]. Sundaram was of the view that, promotional activity or effort was an attempt to influence the choice behaviour of some market segments[37]. Similarly Jha opined that the sales promotion was a vital link between personal selling and advertising[38].

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33 William, J. Standton, **Op.Cit.**, p.431.

34 Philip Kotler, **Op.Cit.**, pp.428-429.

35 P.K.Vijaya Chandran, "Fertilizer Promotion", Text of Lecture Delivered at Fertilizer Association of India-Seminar Training Programme, Trivandrum, 12 Oct., 1981.

36 Rustom J. Davar, **"Modern Marketing Management in the Indian Context"**, (Madras : Progressive Corporation Pvt. Ltd., 1979), p.447.

37 I.Satya Sundaram, "Packaging Industry Poised for Growth", **FACTS for you**, 11(8): 16, 1990.

38 Bishwambhar Jha, "Promotion mix for Carpet Industry", **Indian Journal of Marketing**, 12(5): 31, 1989.

In the present study, promotional activities were defined as those, which were undertaken by the case firm to influence the purchase decision behaviour of farmers and dealers.

(vi) Other Related Concepts

The other related concepts of fertilizer and market share also reviewed in this section.

A. Fertilizer

Fertilzers were inorganic materials of a concentrated nature, applied mainly to increase the supply of one or more of the essential nutrients as nitrogen, phosphorous and potassium[39].

Cooke opined that any substance that was added to soil, supply one or more plant materials and intended to increase plant growth was a fertilizer[40].

According to Mariakulandai, fertilizers were materials of simple inorganic compounds capable of supplying one or more plant nutrients and available naturally or by synthetic process[41].

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39 Indian Council of Agricultural Research, **"Hand Book of Agriculture"**, (New Delhi : Thomson Press (India) Ltd., 1969), p.104.

40 G.W.Cooke, **"Fertilizing for Maximum yield"**, (London : The English Language Book Society and Crossby Hockwood stables, 1974), p.28.

41 A.Mariakulandai and T.S.Manickam, **"Chemistry of Fertilizers and Manures"**, (Bombay : Asia Publishing House, 1975), p.390.

In the present study, fertilizer was considered as products which contained either N or P or K or in combination of any two or all the three nutrients supplied to farmers as farm inputs.

B. Market share

Wallace defined market share as that proportion of a market which preferred to buy a company's product[42].

The percentage of a market, controlled by a certain company products or services was defined as market share by Bonne and Kurthy[43].

(vii) Related Past Studies

Ahmed and Singh studied the brand prefernce in fertilizer in Meerut division and observed that 54 per cent of farmers preferred SRIRAM fertilizers due to their easy availability in market, good quality, good packaging and good effect on soil structure[44].

Srinivasan studied the impact of promotional efforts of pesticides and fertilizers marketing firms on the farmers with the help of multiple regression

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42 Michael, J. Wallace and Patrick J. Flynn, "**Dictionary of Business English**" (Calcutta : Repa and Co., 1984), p.100.

43 Loais,E. Bonne and David L.Kurthy, "**Contemporary Business**", (New York : Dryden Press : 1982).

44 Tauseef Ahmed and Inderjeet Singh, **Op.Cit.**, pp.28-30.

model. He constructed a promotional index to evaluate the effectiveness of different promotional efforts. The scores of the promotional techniques that convinced the farmers to use that particular brand were summed. The percentage of this summed score to the total score was taken as promotional index. He observed that the promotional efforts had no significant impact on the farmers but the price of the product and area in which it was used were found to be significant[45].

Patil and Pandey, used Cobb-Douglas production function to estimate the demand for fertilizers. They studied the level of consumption of nitrogenous fertilizers at macro level and observed that irrigation was the most pre-dominant factor, others exhibiting varying degrees of significance[46].

Marhatta formulated an econometric model of the demand and supply of all three nutrients (NPK) and showed that the demand for fertilizers was largely determined by the level of fertilizer prices in relation to the prices of the grains[47].

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45 A.Srinivasan, "Economic Evaluation of Promotional Efforts of Fertlizer and Pesticide Marketing Firms", (Unpublished M.Sc.(Ag.) Thesis, Department of Agrl. Economics, Tamil Nadu Agricultural University, Coimbatore, 1986).

46 A.S.Patil and R.K.Pandey, "Demand for Nitrogenous Fertilizers in Indian Agriculture", **Fertilizer News**, 27(8), pp.13-16, 1982.

47 Hari Prasad Marhatta, "The Economics of Fertilizer : Alternative for Avoiding shortage", the University of Connecticat, Dissertation Abstracts International 37(9): pp.5960-5961, 1977.

Namasivayam reported that the socio-economic factors such as age, education and income influenced their preference. The results indicated that uneducated persons preferred the media television and cinema for soap advertisement. Similarly the influence of income on advertisement media was studied and found that the low income group people (below Rs.1000) preferred cinema as a medium[48].

Sivakumar analysed the factors influencing the farmers in purchasing a particular brand by scoring each factor in a four point continuous scale. He found that the quality of the preferred brand, advertisement and price of the brand had significantly influenced the farmers in purchasing that brand[49].

Sridharan and Kharbanda observed that the conduct of regular training programmes to dealers; incentives to dealers on the basis of sales performance during the season and necessary support to dealers in getting distribution credit from commercial banks frequent visit of supplier or agronomist or sales representative to dealer were the factors that motivated the dealers[50].

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48 Namasivayam, "Advertising Media Preference", **Indian Journal of Marketing,** 18(5-7), pp.23-28, 1988.

49 S.D.Sivakumar, "Study on the Market Structure and Buying Behaviour of Farmers with Reference to Pesticide", (Unpublished M.Sc.(Ag.) thesis submitted to Tamil Nadu Agricultural University, Coimbatore), 1987.

50 J.Sridharan and S.C.Kharbanda, "Role of Dealers in Fertilizer Marketing", **Fertilizer News,** 18(8): p.61, 1987.

Rao observed that the dealers preference for stocking a particular brand was more often related to the popularity of the brand, sales turnover, commission or margin he got from the manufacturers[51].

Owusu estimated fertilizer demand and supply functions using ordinary least square method. The estimated function exhibited high degree of auto-correlation. Hence a two stage least square procedure was followed using pooled data. The results indicated that fertilizer, crop and price ratio were important in explaining the variations in fertilizer use[52].

Kannan estimated the demand for FACT Fertilizers in Madurai district and also studied the effectiveness of case firm promotional efforts. He used four point scale to study the effectiveness of promotional efforts, followed by case firm. He concluded that, the wall paintings had greater influence on the farmers to use FACT Fertilizers[53].

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51 H.K.Lakshman Rao, "Role and Functions of Dealers", **Fertilizers Marketing News,** 8(8), p.2, 1977.

52 Boady Fredrick Owusu, "Economic Analysis of Demand and Supply of Fertilizer in the United states", University of Kentucky, Dissertation Abstracts International (A) 42(4), p.1278 A, 1981.

53 R.Kannan, "An Analysis of Demand for FACT Fertilizer and their Promotional Strategieis (Unpublished M.B.M Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1991).

Kamalam estimated the demand for SANDOZ products for cotton and groundnut crops. She used chain-ratio method and market build-up method to estimate (or) forecast the demand[54].

Ramalingam in his study on Brand prefrence regarding fertilizers among farmers and dealers in Pollachi taluk used Garett's scoring Technique to rank the brands. He found that SPIC brand was mostly preferred by both farmers and dealers[55].

Thiruneelakandan estimated the market share for pesticides of different companies in Periyar and Salem districts, using the information namely, total quantity of pesticides sold by sample dealers and average quantity sold per dealer and expressed in percentage[56].

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54 N.Kamalam, "Study on Market potential for Sandoz Products in Salem District", (Unpublished M.Sc.(Ag.) Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1994).

55 K.Ramalingam, "Fertilizers' Brand Preference of Farmers and Dealers in Pollachi Taluk - An Analysis", (Unpublished M.Sc.(Ag.) Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1994).

56 R.Thiruneelakandan, "Study on Market Potential for Pesticide in Salem and Periyar Districts", (Unpublished M.B.M. Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1991).

Design of the Study

CHAPTER III

DESIGN OF THE STUDY

In this chapter, the procedure followed in the selection of crops, study region and the respondents, the method of data collection and the tools of analysis employed are presented and discussed. The selection of crops is outlined first.

Selection of Crops

Since the objective was to take up crop-wise analysis, the selection of crops was considered as the first step. The case firm wanted to assess the demand for their products in banana, cotton and paddy. Therefore these crops were purposively considered for the present study.

Selection of Study Area

The casefirm was interested in increasing its market share in this area and hence the Coimbatore district was selected purposively.

Sampling Design

Coimbatore district formed the universe for the present study. Coimbatore district consisted of seven taluks namely Coimbatore, Mettupalayam, Avinashi, Tiruppur, Palladam, Pollachi and Udumalpet. The Coimbatore, Avinashi and Udumalpet taluks were selected purposively, since they had the largest area under banana, cotton and paddy respectively. The details of gross cropped area in different taluks are furnished in table VI. From each sample Taluk, one block was again purposively selected based on

TABLE VI

TALUKWISE GROSS CROPPED AREA UNDER SELECT CROPS IN COIMBATORE DISTRICT DURING 1996-97

(Area in hectares)

Sl. No.	Taluks	Crops		
		Banana	**Cotton**	**Paddy**
1.	Coimbatore	1400	1724	1526
2.	Mettupalayam	954	239	604
3.	Avinashi	1277	5590	300
4.	Tirupur	83	1402	1747
5.	Palladam	210	860	165
6.	Pollachi	320	4700	6080
7.	Udumalpet	70	1736	10814
	Coimbatore (Dt.)	**3214**	**16251**	**21236**

Source : Joint Director of Agriculture, Coimbatore.

the concentration of area under each crop. Thus, Thondamuthur block in Coimbatore taluk, Avinashi block in Avinashi taluk and Madathukulam block in Udumalpet taluk were selected for banana, cotton and paddy respectively.

As regards selection of villages, four villages in each block were selected randomly from the list of all villages in each block, arranged in the alphabetical order of their names in English. Next, the sample farmers were selected at the rate of ten per village by simple random sampling method. In total, 120 farmers were selected and interviewed.

Dealers were also selected at random from the population pool. In each of the 3 sample blocks, 8 dealers were selected constituting the sample size of 24. The details of names of the sample blocks and villages and number of sample farmers and dealers are furnished in Table VII.

Collection of Data

The primary data were collected from farmers and dealers using a pre-tested interview schedule, the data were collected from farmers on fertilizer use, brand preference, awareness about the casefirm's products and the like. Similarly from dealers the details on quantities of different brands of fertilizers purchased, brand preference,and effectiveness of different promotional efforts followed by casefirm were collected. Separate pre-tested interview schedules were used for farmers and dealers.

Secondary data on location, demography, rainfall pattern, land-use pattern, cropping pattern and irrigation sources were collected from the office

TABLE VII

NAMES OF SAMPLE BLOCKS AND VILLAGES AND NUMBER OF SAMPLE FARMERS AND DEALERS

(in numbers)

S.No.	Taluks Selected	Blocks Selected	Villages Selected	Farmers' sample Size	Dealer
1.	Coimbatore	Thondamuthur	Thondamuthur Kembanur Vandikanur Kaliyannanpudur	10 10 10 10	8
2.	Avinashi	Avinashi	Cheyur Chinakanur Karuvalur Pothampalayam	10 10 10 10	8
3.	Udumalpet	Madathukulam	Madathukulam Kaniyur Kallapuram Gurumangalam	10 10 10 10	8
		TOTAL		120	24

of the Assistant Director of Statistics, Coimbatore. The particulars on dealers network, and fertilizer recommendations were collected from the office of the Joint Directorate of Agriculture, Coimbatore. Details on the profile of the company were collected from Head office of the casefirm at Chennai.

Study Period

Data through field survey were collected during the months of December 1997 and January 1998. The data relating to the agricultural year 1996-97, were collected for the study.

Tools of Analysis

The collected data were tabulated, processed and analysed. Both conventional and functional analysis were employed. The tools employed in the conventional analysis are described first.

(i) Conventional Analysis

Percentage analysis carried out and the Garett's ranking technique employed are discribed in this sub-section.

(A) Percentage Analysis

The percentage analysis was employed in understanding the types of brands used by the farmers, awareness of Kothari Fertilizers, brand preference by farmers etc. For dealers' purchase pattern regarding Kothari fertilizers, percentage analysis was done for the product mix, business experience, nature of dealership and for number of dealership. The averages

were used to find out the Kothari's share among other fertilizers available in the market.

(B) Garett's Ranking Technique

Garett's ranking technique was employed to delineate the factors influencing the farmers and dealers to purchase different brands of fertilizers. In the Garett's scoring technique, the order of merit assigned by the respondents was converted into ranks by using the following formula.

$$\text{Percent position} = \frac{100\ (R_{ij} - 0.5)}{N_j}$$

where,

R_{ij} = Rank given for i^{th} factor by j^{th} individual.

N_j = Number of factors ranked by j^{th} individual.

The percent positions estimated were converted into scores by referring the table given by Garett. For each factor, the scores of various respondents were added and the mean scores were arrived at. The mean scores were then arranged in descending order. The factor with the highest score was considered to be the most influential one.

(ii) Functional Analysis

The compound growth rates, area projection method, Chain ratio method and Market build-up method were employed in order to estimate, the requirements of fertilizers of the casefirm.

A. Compound Growth Rate

It was used to project the area under different crops for future years (1998-99 and 1999-2000). Compound growth rate for cropped area was calculated for each crop using the data of the past 15 years. Compound growth rate was derived by fitting the regression model as follows;

$$Y = AB^t$$

where,

Y = Area of Crop in hectares

A = Constant term

B = Parameter to be estimated

t = Time measured in years.

By linearising the non-linear model,

$$\text{Log } y = \log A + t \log B$$

$$\text{Log } y = a + bt$$

where,

$$\text{Log } A = a$$

$$\text{Log } B = b$$

The compound grwoth rate was obtained by the formula,

$$CGR = (\text{antilog } b-1) \times 100$$

B) Projection of Area

$$Q_A = Q_O (1+r)^{ni} \times 100$$

where,

Q_A = Projected area (in ha) for a crop

Q_0 = Area of Base year

r = Compound growth rate (CGR)

n_i = number of i^{th} year to be projected

ie., n = 1,2,3, ...

C) Chain Ratio method

For the estimation of total market potential the Chain ratio method was employed as detailed below :

$$MP_{(c/s)} = Q_{A(s)} \times D_{(r/a)}$$

where,

$MP_{(c/s)}$ = Market potential for fertilizer "c" for crop "s"

$Q_{A(s)}$ = Total projected area under selected crop "s"

$D_{(r/a)}$ = Recommended (r) or adopted (a) dose of fertilizer "c" for crop "s".

To obtain the Qualified market potential, the formula employed was;

$$MP\ (c/s) = QA(s)\ X\ PA \times PA\ (c/s) \times D\ (r/a)$$

where,

PA = Percentage of crop 's' area for which fertilizer applied.

P(c/s) = percentage of area for which fertilizer "c" applied to total area for selected crop "s".

MP (c/s) = Qualified market potential for fertilizer 'c' for crop 's'.

Area was projected by CGR method and percentages for the estimates were obtained based on the results of the field survey.

D) Market Build-up Method

By this method, the qualified market potential shall be obtained for any fertilizer but not on crop basis. The formula used here is,

MP(c) = nd x Qd.

where,

MP(c) = Market potential for fertilizer 'c' in tonnes.

nd = Number of retail dealers in the region.

Qd = Average quantity sold by the sample retail dealer in the previous year.

iii) Effectiveness of Promotional Activities

Based on the study by Sivakumar, who adopted a three point-scale with equal intervals in the increasing trend of satisfaction to assess the

responses on the different marketing elements[1], a five-point scale with equal intervals in the increasing trend of effectiveness were used to ascertain the responses of dealers on different promotional activities as detailed below :

Not effective	=	1
Less effective	=	2
Fairly effecive	=	3
Effective	=	4
Highly effective	=	5

Co-efficients or weightages were arrived at based on the ratio of the number of respondents under each category to the total number of respondents. These co-efficients or weights were then multiplied with the original score and thus the new weighted scores were obtained. The weighted scores under different promotional activities have been summed up and the mean scores were then arrived at based on the number of respondents under each category of promotional activity. The mean scores were thereafter arranged in descending order. The activity which got the maximum mean score was reckoned as the most effective one in the case of dealers. The promotional activities with mean scores in descending order reflected the order of effectiveness from the most to the least.

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1 A. Sivakumar, "Marketing Strategy Analysis - A case study" (Unpublished M.Sc.(Ag.) thesis, Department of Agricultural Economics, TNAU, Coimbatore, 1992). P.29.

Effectiveness Index

An effectiveness index was developed, for the above promotional activities followed by the casefirm.

A scale was developed by adopting the same procedure as in earlier one, that is a rating of highly effective carried 5 points, effective carried 4 points, fairly effective 3 points, less effective 2 points and not effective 1 point.

Various promotional activities carried out by the Kothari were listed out and referred to the social scientists, and were asked to assign weights to each media according to the effectiveness. The weightages thus obtained, are listed below :

Leaflets and Posters	1
Personal selling	2
Service to dealers	3
Wall painting	4
Campaign	5
Total Score	15

Maximum weight was five, which expressed that most effective media as perceived by the social scientists. According to their effectiveness in conviction, weight was given in ascending order. It was used as weightage

for dealers' opinion on the effectiveness of promotional methods which were measured on a five point scale.

To quantify the conviction carried by the promotional method among the dealers, five-point scale was used and the dealers were asked to rate them according to their perceptions and experiences.

Along with the dealer's mean score, social scientist weight was multiplied for correct assessment of dealer's perception. It was done by

$$I = \frac{\Sigma XY}{N}$$

where,

X - Mean score of dealer effectiveness under each promotional method.

Y - Score of the social scientist for different promotional methopd.

N - Total of the weights expressed by the social scientist for all promotional methods.

that is, multiplied the social scientist weight of each promotional method with the respective mean score rated by the dealer and the products thus obtained were summed up and divided by total weightage of 15.

Description of the Study Area & the Case firm

CHAPTER IV

DESCRIPTION OF THE STUDY AREA AND THE CASE FIRM

An understanding of the agro-climatic features and the business environmental make up of the study area would help in analysing and intrepreting the pattern of decision-making by the dealers, marketers and farmers. Therefore, the agro-climatic features such as soil type, topography, rainfall distribution, irrigation sources, land use and cropping pattern of the study area are described in this chapter. In addition, the profile of the case firm has also been brought out.

(i) Description of the Study Area

In this section, the location, demography, rainfall pattern, land-use pattern, cropping pattern, irrigation, soil types etc., relating to the study area are described.

Location

The study area consists of Thondamuthur, Avinashi and Madathukulam blocks in Coimbatore district (Fig.1). Thondamuthur block is located on the Southern side of Coimbatore Corporation. It has Perur block in the East, Kerala state in the West and Coimbatore North taluk in the North.

Avinashi block is surrounded by Annur in the West, Tirupur in the North-East and Palladam in the South side.

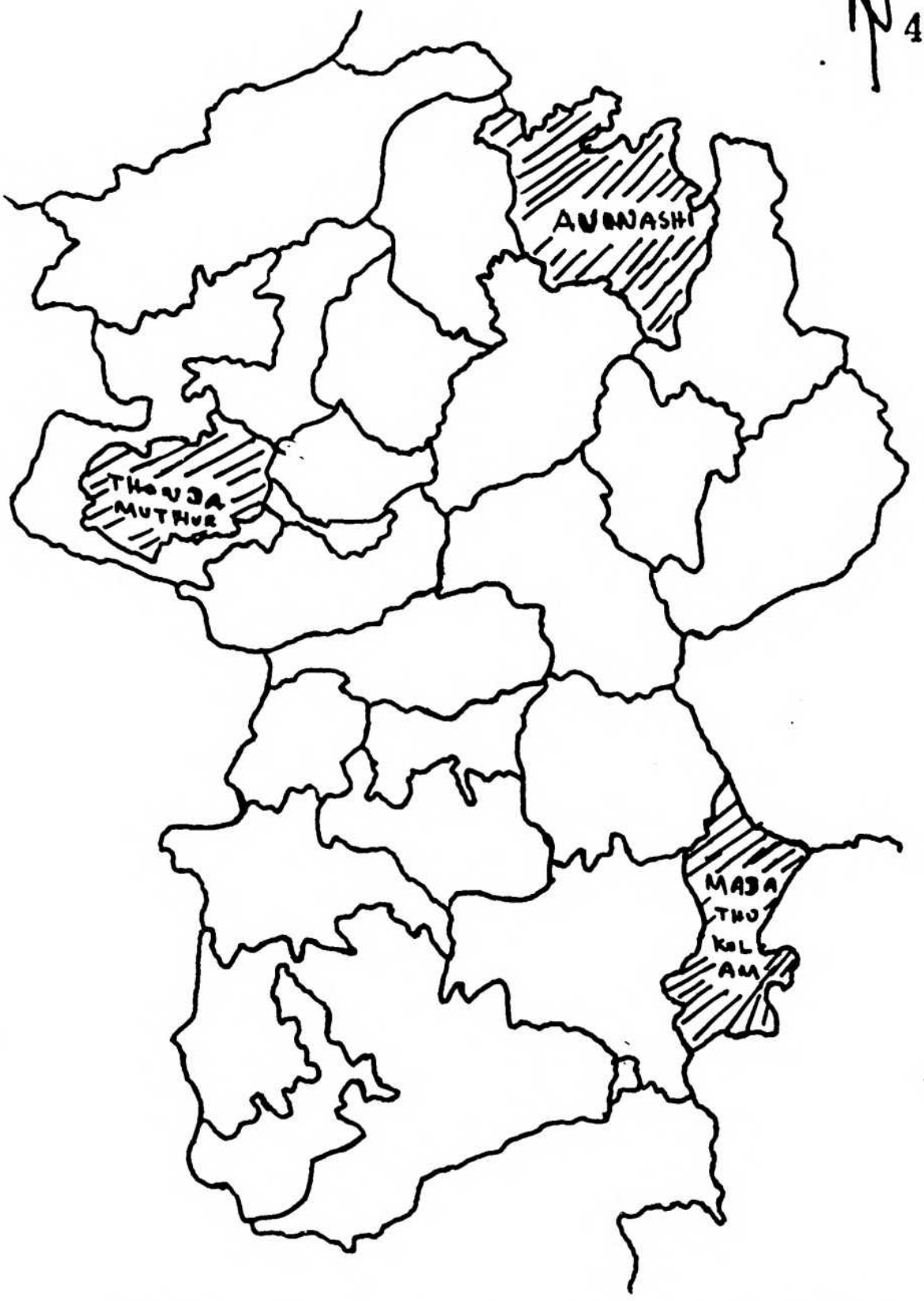

FIG. I. MAP OF COIMBATORE DISTRICT SHOWING THE STUDY AREA

Madathukulam block is located in the Southern most part of Coimbatore district. Its boundary touches Gudimangalam block in the North, Udumalpet block in the West, Valparai block in the South-West and Palani in the East.

Demography

The demographic features of the three sample blocks are furnished in Table VIII. The total population of Thondamuthur block according to 1991 census is 1,03,796 with 52,208 males and 51,588 females. The density of population is 363.03 per square km.

TABLE VIII

DEMOGRAPHIC FEATURES OF THE STUDY AREA

(Numbers)

S. No.	Particulars	Thondamuthur block	Avinashi block	Madathukulam block
1.	Total population	1,03,796	1,48,672	88,799
		(100.00)	(100.00)	(100.00)
2.	Male	52,208	79,363	44,957
		(50.30)	(53.38)	(50.62)
3.	Female	51,588	69,309	43,842
		(49.70)	(46.62)	(49.38)

(Figures in the parentheses indicate percentages to total population)

Source : Office of the Assistant Director of Statistics, Coimbatore.

The population of Avinashi block is 1,48,672 according to 1991 census and 53.38 per cent of them are males (79,363) and the balance of 46.62 per cent are females (69,309). The density of the population is 399 per sq.km.

In Madathukulam block, the total population according to 1991 census is 88,799. Among them, 50.62 per cent are males and 49.38 per cent are females. The density of the population is 391 per sq.km.

Rainfall Pattern

The details on the rainfall distribution pattern in the sample blocks are presented below in Table IX.

TABLE IX

SEASON-WISE DISTRIBUTION OF RAINFALL IN THE STUDY AREA DURING 1996-97

(in mm)

Sl. No.	Seasons	Thondamurthur block	Avinashi block	Madathukulam block
1.	South-West monsoon	272.4 (36.28)	171.0 (29.76)	72.0 (11.38)
2.	North-East monsoon	364.0 (48.49)	259.0 (45.07)	415.7 (65.70)
3.	Winter season	-	-	-
4.	Summer season	114.4 (15.23)	144.6 (25.17)	145.0 (22.92)
	Total	750.8 (100.00)	574.6 (100.00)	632.7 (100.00)

(Figures in parentheses indicate percentages to total)

Source : Office of the Assistant Director of Statistics, Coimbatore.

From the table above, it could be seen that Thondamuthur block receives an annual rainfall of 750mm in the year 1996-97. Of this 364 mm (48.48 per cent) are received during North-East monsoon, followed by 272 mm (36.28 per cent) in South-West monsoon and 114.4mm (15.23 per cent) in Summer season. There is no rainfall during Winter season.

In Avinashi block, the annual rainfall received during the year 1996-97 was 574.6mm. Of this 259mm (45.07 per cent) was received during North-East monsoon, followed by 171 mm (29.76 per cent) during South-West monsoon and 144.6 mm (25.17 per cent) in Summer season. In this block also, there is no rainfall during Winter season.

The total annual rainfall of Madathukulam block is 632.7mm with 65.70 per cent (415.7mm) of the receipt during North-East monsoon, followed by 22.92 per cent (145 mm) during Summer season and 11.38 per cent (72mm) during South-West monsoon. There is no rainfall during Winter season.

Land-use Pattern

Study on the land utilization pattern of the study area would indicate the scope, if any, for better utilization of land and hence the inputs. The details on land utilization pattern of the three sample blocks are presented in Table X.

It could be seen from Table X that, the total geographical areas of Thondamuthur, Avinashi and Madathukulam blocks are 41450 ha, 37330 ha

TABLE X
LAND UTILIZATION PATTERN OF THE STUDY AREA DURING 1996-97

(in hectares)

S. No.	Particulars	Thondamuthur block	Avinashi block	Madathukulam block
1.	Forest	20014 (48.29)	-	-
2.	Barren and uncultivable land	868 (2.09)	5 (0.01)	132 (0.59)
3.	Land put to non-agricultural uses	1396 (3.36)	3448 (9.24)	3390 (14.93)
4.	Cultivable waste	163 (0.39)	180 (0.49)	96 (0.42)
5.	Permanent pastures and other grazing land	9 (0.02)	2 (0.005)	1 (0.004)
6.	Miscellaneous tree crops and groves (not included in cultivated area)	171 (0.42)	26 (0.06)	25 (0.11)
7.	Current fallows	5855 (14.13)	6932 (18.58)	5074 (22.37)
8.	Other fallows	53 (0.12)	1547 (4.14)	492 (2.16)
9.	Net area sown	12921 (31.18)	25190 (67.48)	13426 (59.42)
10.	Total geographical area	41450 (100.00)	37330 (100.00)	22696 (100.00)
II.	Area sown more than once	583	204	2642
III.	Gross cropped area	13504	25394	16028

(Figures in parenthesis indicate percentages to total)

Source : 'G' return record : Assistant Director of Statistics, Coimbatore

and 22696 ha respectively. Net area sown forms 31.18 per cent, 67.48 per cent and 59.42 per cent of the geographical area respectively in these blocks. What is more important for efficient land use is area sown for more than once. Gross cropped area accounted for 70.62 per cent in Madathukulam block followed by 68.02 per cnt in Avinashi block and 32.58 per cent in Thondamuthur block. The area under current and other fallow lands formed 14.25 per cent, 22.72 per cent and 24.53 per cent in Thondamuthur, Avinashi and Madathukulam blocks respectively. It shows that the area under fallow land was high in Madathukulam block. It indicates that there is scope for developing agro-forestry.

Cropping Pattern

The crops and the varieties grown are important determinants of fertilizer use. The major crops in Thondamuthur block are cholam, groundnut, coconut, sugarcane and turmeric. It could be seen from Table XI that cholam and groundnut occupied 24.84 per cent and 15.61 per cent respectively followed by coconut (10.95 per cent), sugarcane (7.10 per cent) and turmeric (3.50 per cent). Banana crop occupies 2.68 per cent of total gross cropped area.

In Avinashi block among the crops cultivated, cholam occupied 43.89 per cent of the cultivated area and cotton occupied 22.73 per cent. Other crops like groundnut, pulses and banana formed 12.82 per cent, 6 per cent and 4.18 per cent respectively.

TABLE XI

CROPPING PATTERN OF THE STUDY AREA, 1996-97

(in hectares)

S. No.	Crops	Thondamuthur block		Avinashi block		Madathukulam block	
1.	Paddy	866	(6.41)	84	(0.33)	5198	(32.43)
2.	Cholam	3354	(24.84)	11145	(43.89)	1030	(6.43)
3.	Other cereals	541	(4.00)	22	(0.08)	1427	(8.90)
4.	Horse gram	265	(1.96)	134	(0.53)	747	(4.67)
5.	Other pulses	1180	(8.74)	1524	(6.00)	1154	(7.20)
6.	Sugarcane	960	(7.10)	335	(1.32)	1727	(10.78)
7.	Cotton	317	(2.35)	5770	(22.73)	103	(0.64)
8.	Groundnut	2108	(15.61)	3256	(12.82)	1612	(10.05)
9.	Banana	362	(2.68)	1058	(4.18)	17	(0.10)
10.	Other fruit & vegtables	959	(7.10)	280	(1.10)	305	(1.90)
11.	Turmeric	472	(3.50)	379	(1.49)	-	
12.	Other spices & condiments	334	(2.48)	43	(0.16)	105	(0.66)
13.	Coconut	1479	(10.95)	500	(1.96)	1333	(8.32)
14.	Other crops	307	(2.28)	864	(3.41)	1270	(7.92)
Gross cropped area		13504	(100.00)	25394	(100.00)	16028	(100.00)

(Figures in parentheses indicate percentages to total gross cropped area)

Source : "G" return record : Assistant Director of Statistics, Coimbatore

Madathukulam block is dominated by crops like paddy, sugarcane, groundnut and coconut. Paddy formed 32.43 per cent followed by sugarcane (10.78 per cent), groundnut (10.05 per cent) and coconut (8.32 per cent).

Irrigation

For intensive and extensive cultivation, adequate irrigation facilities are indispensible. Assured irrigation throughout the crop period encourages the farmers to follow improved cultivation practices, which consequently increases the scope for the fertilizer use. The details on the source-wise irrigation for the selected blocks are presented in Table XII.

TABLE XII

SOURCE-WISE AREA IRRIGATED IN THE STUDY AREA, 1996-97

(in hectares)

S. No.	Sources of irrigation	Thondamuthur block	Avinashi block	Madathukulam block
1.	Canals	617 (9.81)	-	8087 (66.90)
2.	Tanks	203 (3.23)	-	190 (1.57)
3.	Tubewells	1217 (19.36)	897 (22.43)	-
4.	Ordinary wells only for irrigation	4014 (63.86)	3102 (77.57)	3432 (28.39)
5.	Wells supplementing other irrigation	235 (3.74)	-	380 (3.14)
6.	Other sources	-	-	-
Gross area irrigated		6286 (100.00)	3999 (100.00)	12089 (100.00)

(Figures in the parentheses indicate the percentages to the Gross area irrigated)

Source : G-return record, Office of Assistant Director of Statistics, Coimbatore.

As could be seen from the above table, the well irrigation was the major source of irrigation in Thondamuthur block. It accounts for nearly 87 per cent of the gross irrigated area of this block, followed by canal irrigation (9.81 per cent) and tank irrigation (3.23 per cent).

In the case of Avinashi block there is no canal and tank irrigation. Only well irrigation is available. The tube wells irrigate 22.43 per cent of the gross irrigated area and the remaining area (77.57 per cent) is irrigated by ordinary wells only.

Madathukulam block has a gross irrigated area of 12,089 ha. The major sources of irrigation is canal, besides ordinary wells. The canal accounts for 66.90 per cent of gross irrigated area, followed by ordinary wells with 28.39 per cent.

Soil Types

The soil type of a particular area play a crucial role in determining the fertilizer requirement and other crop inputs requirements. Thondamuthur block has the major area under red sand and gravelly soil, followed by moderately red loam and black clay soil. The soil is best suited for cultivation of paddy, banana, sugarcane and turmeric.

In Avinashi block the predominant soil types are redloam and black cotton soil. The soil is best suited for cultivation of cotton and cholam. In Madathukulam block the predominent soil type is red soil and rest is black

cotton soil. The soil is best suited for cultivation of paddy, coconut and cotton.

The recommended doses of plant nutrients (NPK) by the Department of Agriculture for the important crops in Thondamuthur, Avinashi and Madathukulam blocks are given in Table XIII.

Dealer's Net Work

In marketing fertilizers, dealers play a vital role. The use of fertilizers by the farmers depends to a large extent on dealers' efficiency, their services, experiences and interests extended by them. In Coimbatore district there are 287 private dealers and 125 co-operatives and agro-industries, dealing with marketing of fertilizers.

II. PROFILE OF THE CASE FIRM "THE KOTHARI FERTILIZERS"

Background

At first, M/S."The Kothari Enterprises" was a stock firm founded in Madras in 1918. Soon, this small business grew into a big group, which has become as a household name in Tamil Nadu. Today Kothari Fertilizers is part of the Kothari Industrial Corporation Ltd (KICI), which comprises of textiles, coffee and tea (plantations).

Kothari Industrial CorportionLtd., incorporated in 1970 is the Flagship Company of the Dr. D.C.Kothari Group, an amalgam with an annual turn-over of Rs.200 crores. The company is involved in a broad spectrum of activities

TABLE XIII

RECOMMENDED DOSES OF N,P,K FOR CROPS IN THE STUDY AREA

(in kilograms)

Sl. No.	Crops	Thondamuthur block N	P	K	Crops	Avinashi block N	P	K	Crops	Madathukulam block N	P	K
1.	Paddy	40	20	20	Paddy	40	20	20	Paddy (Samba)	50	20	20
2.	Maize	54	27	18	Sugarcane	70	45	0	Paddy (Kuruvai)	60	30	30
3.	Sugrcane	90	25	45	Maize	50	20	20	Sugarcane	90	25	45
4.	Cholam	36	18	18	Cumbu	28	14	14	Pulses	10	20	0
5.	Pulses	10	20	0	Cholam	32	16	16	Cholam	36	18	18
6.	Banana	44	14	132	Pulses	10	20	0	Cotton	48	24	24
7.	Groundnut	7	14	21	Groundnut	7	14	21	Groundnut	7	14	21
8.	Cotton	32	16	16	Cotton	48	24	24				

Source : Office of the Joint Dircetor of Agriculture, Coimbatore.

that span all the states in Southern India through a net work of branches and a powerful sales force. The company marches ahead with broad vision and dynamism. It is a multifaceted company and has many functional divisions. The textile division is described first.

Textile Division

The textile division has a total capacity of one lakhs spindles. It has three mills; two at Coimbatore in Tamil Nadu state and one at Adoni in Andhra Pradesh. Its production has a wide range from 20's to 100's in both cotton and blended. Specially favored in the markets of Mumbai, Calcutta, Tirupur, Lchalkaranji and Kolhapur, they are often taken as the yardstick for comparison. The Textiles are also exported to U.S.A., U.K. and Australia.

Plantation Division

The company has 3040 acres of Tea in Tamil Nadu which yield three million tones of world class tea. It has 3093 acres of coffee plantation and produces nearly 1500mt of coffee. The coffee is cured at Kothari curing works at Hassan, which is the most modern curing plant in India. The plant is equipped with imported machinery from Switzerland, the latest electronic sorters can cure 12,000 tonnes of coffee annually.

Export Division

With an increasing need to expand the groups horizon, Kothari has gone international. Exports tea, yarn, cloth, leather and granites and thus entered into global.

Kothari Orient Finance Ltd

The company promotes industrial growth by extending hire purchase and leasing finance for machinery, equipment and consumer durables. Business is widely distributed among individuals and corporate bodies dealing in chemicals, textiles, plantation, processed foods engineering and the industries. The company has also diversified into service oriented activities like share registers work and acting as share transfer agent. The company plans to enlarge its activities in the areas of factoring and vendor leasing and build up business gradually to achieve a steady growth in financial outlay and to play an important role in the country's industrial development.

Fertilizer Division

Born as part of Kothari's philosophy of integrated growth, the plant is located at Ennore, Chennai. Kothari Fertilizers have kept pace with the times-expanded and modernized and raised production levels from 18,000 TPA of Sulphuric Acid in 1962 to 33,000 TPA in 1996 and 45,000 TPA of Superphosphate in 1962 to 85,000 TPA in 1996. The production of NPK Mixture has grown from 7,000 tones in 1962 to 55,000 tones in 1996, resulting in a turn over of 65 cores. The future plans are to reach production levels of 1 lakh tonnes of Superphosphate, 45,000 tones of Sulphuric Acid and 70,000 tones of NPK Mixtures; thus reaching a turnover of Rs.100 corers by 2000 AD.

With this accent on continuous modernization, Kothari Fertilizers have always been ahead of the competition with high quality standards and economic production costs.

Kothari has started Single superphosphate manufactured in the year 1962. Amidst significant advances in fertilizer technology and usage, the globally respected and time honored practice of applyng Single superphosphate before seeding and transplanting stands unchallenged. Single superphosphate also contains 12 per cent sulphur and 21 per cent calcium, which are very essential nutrients for the crops. These two properties make Single superphosphate a high nutrient fertilizers. Kothari's wide-spread marketing infrastructure and high calibre marketing personnel reach out to customers, spread across the Southern states.

The Fertilizer division has 20 depots, supported by 60 stock points dealers, 2000 dealers in Tamil Nadu, 900 in Karnataka, 500 in Andhra Pradesh and 150 in Kerala.

The field staff supported by advertising, films and audio visual vans, go into remote rural areas and strengthen the usage of the product in the Southern region. Kothari's are the principal distributors for major fertilizer companies like RCF, MCF, GNFC, PPCL - a perfect union of distribution strength and quality products.

Kothari Industrial Corportion Ltd's superphosphate factory at Ennore has received the environmental protection award from the Fertilizer Assoication of India.

According to a company press release, KCL had received the award for total recycling of effluent water since 1987. Also, it was the first in the

South to introduce three stage scrubbing system in the superphosphate plant and a sulphur dioxide scrubbing system in the sulphuric acid plant, the release said.

Results and Discussion

CHAPTER V

RESULTS AND DISCUSSION

The data collected for the study were analysed with reference to specific objectives setforth and the results are presented and discussed in this chapter under the following five sections.

i. General features of sample farmers and dealers,
ii. Brand preference among farmers and dealers,
iii. Market share for casefirm's products,
iv. Market potential of casefirm's products and
v. Effectiveness of promotional activities followed by the casefirm

The general features of the sample are discussed first.

i. General Features of the Sample

Farmers and Dealers

Knowledge on the basic characteristics of the sample would help in understanding the nature of behaviour of the sample farmers and dealers and hence the same are discussed in this section. The basic characteristics of the sample farmers are discussed first.

Basic Characteristics of the Sample Farmers

Characteristics such as educational status, farming experience, size of holding and cropping pattern are discussed in this section.

Educational Status : The sample farmers were categorised by their educational status into four groups namely, illiterates, elementary school, high school and college level. The results are presented in Table XIV.

It could be observed from Table XIV that, 37.50 per cent of the farmers had elementary school education, while 31.67 per cent of farmers were with high school level education. However, only 16.67 per cent of the farmers were in the category of college education. It could also be inferred that, while more number of farmers had elementary school education, the illiterates constituted 14.16 per cent.

Farming Experience : The selected farmers had sufficient experience in farming and it varied from farmer to farmer. The selected farmers were classified according to their experiences in farming as indicated in Table XV.

It could be noted from the Table XV, that 29.16 per cent, 25 per cent and 20 per cent of the sample farmers had an experience of 21 to 30 years, 11 to 20 years and 31 to 40 years respectively in farming. The 18.34 percent of the sample farmers had an experience of lesser than 10 years and 7.5 per cent had more than 40 years.

TABLE XIV

EDUCATIONAL STATUS OF SAMPLE FARMERS

(in numbers)

S.No.	Blocks	Category			
		Illiterate	Elementary	High School	College
1.	Thondamuthur	6	15	14	5
2.	Avinashi	8	14	12	6
3.	Madathukulam	3	16	12	9
	TOTAL	17 (14.16)	45 (37.50)	38 (31.67)	20 (16.67)

(Figures in parentheses denote the percentages to total 120 respondents)

TABLE XV

EXPERIENCE OF THE SAMPLE FARMERS IN FARMING

(in years)

S.No.	Experience	Block			Total
		Thonda-muthur	Avinashi	Madathu-kulam	
1.	Less than 10 years	5	5	12	22 (18.34)
2.	11 to 20 years	11	12	7	30 (25.00)
3.	21 to 30 years	15	11	9	35 (29.16)
4.	31 to 40 years	6	8	10	24 (20.00)
5.	Morethan 40 years	3	4	2	9 (7.50)

(Figures in parantheses indicate the percentages to total respondents)

It is evident from the table that the majority of farmers had experience between 21 and 30 years. There was also substantial number of farmers who had the experiences of 11 to 20 years and 31 to 40 years. The number of farmers with the experience of more than 40 years was the lowest.

Size of Holdings : In general, the buying behaviour of the sample farmers with respect to particular fertilizers, is influenced considerably by the farm size, nature of the land and types of crops grown. The details of average size of holdings and nature of land in the study area are furnished in Table XVI.

It could be seen from the Table XVI, that the average size of holdings worked out to 3.0 ha in Thondamuthur block, 2.50 ha in Avinashi block and 3.18 ha in Madathukulam block. Among the blocks, the maximum area in wetland was observed in Madathukulam block. The gardenland cultivations was predominantly done at Thondamuthur block while the dryland cultivation was predominant in Avinashi block. Thus it is clear that Thondamuthur block has immense potential to use fertilizers for garden land crops and similarly Avinashi for dryland crops and Madathukulam for wetland crops.

Cropping Pattern : The cropping pattern of the sample farms in three blocks indicates the nature of crops grown and which inturn influences the choice of the fertilizer application. A diverse variety of crops were grown in the three blocks and the details on the same are given in the Table XVII.

It could be noted from Table XVII that, Banana was the major crop in Thondamuthur block with 47.43 per cent of gross cropped area, followed by

TABLE XVI

AVERAGE SIZE OF THE SAMPLE FARMS

(in hectares)

S.No.	Type of Land	Thondamuthur Block	Avinashi Block	Madathu-kulam Block
1.	Wetland	0.30	0.18	2.16
2.	Gardenland	2.58	0.30	0.97
3.	Dryland	0.12	2.02	0.05
	TOTAL	3.00	2.50	3.18

TABLE - XVII

CROPPING PATTERN OFTHE SAMPLE FARMERS

(in hectares)

S.No.	Crops in Blocks	Area in ha	% to Gross Cropped Area
1.	**Thondamuthur**		
	Banana	57.0	47.43
	Sugarcane	27.2	22.62
	Cotton	9.4	7.82
	Turmeric	10.2	8.48
	Coconut	16.4	13.65
	Total	**120.00**	**100.00**
2.	**Avinashi**		
	Cotton	65.4	65.27
	Cholam	22.8	22.75
	Banana	12.00	11.98
	Total	**100.20**	**100.00**
3.	**Madathukulam**		
	Paddy	66.8	52.27
	Sugarcane	40.6	31.77
	Coconut	20.4	15.96
	Total	**127.8**	**100.00**

sugarcane and coconut with 22.62 per cent and 13.65 per cent, respectively. Similarly cotton was the major crop in Avinashi block with 65.27 per cent of gross cropped area followed by cholam and banana with 22.75 per cent and 11.98 per cent, respectively. In Madathukulam block, paddy was the major crop with 52.27 per cent of the gross cropped area, followed by sugarcane and coconut with 31.77 per cent and 15.96 per cent of the gross cropped area respectively. So, the major crops grown in the study area were Banana, cotton and paddy. The fertilizer use was comparatively more in Banana and paddy crops than in cotton crop.

Basic Characteristics of the Sample Dealers

The business experience, nature of dealership, educational status and product mix are the factor that would influence the business success of the dealers. Hence the same are discussed.

Business Experience : Business experience of dealers has influenced their decision making process. The experienced dealer had more customers because of the rapport he developed over the years. Therefore,the sample dealers were classified into three groups and the results are presented in Table XVIII.

It could be seen from Table XVIII that, in Madathukulam block, 75 per cent of the dealers were with more than 11 years of experience. Further, 62.5 per cent of the dealers in Thondamuthur block were with more than 11 years of experience, whereas in Avinashi block 62.5 per cent of the dealers

TABLE XVIII

BUSINESS EXPERIENCE OF THE SAMPLE DEALERS

(in years)

S.No.	Block	< 10 years	11-20 years	> 20 years	Total	Average experience in years
1.	Thondamuthur	1 (12.5)	5 (62.5)	2 (25.0)	8 (100.00)	17
2.	Avinashi	5 (62.5)	2 (25.0)	1 (12.5)	8 (100.00)	12
3.	Madathukulam	2 (25)	3 (37.5)	3 (37.5)	8 (100.00)	15
	TOTAL	**8 (33.33)**	**10 (41.67)**	**6 (25.0)**	**24 (100.00)**	-

(Figures in the parentheses indicate the percentage to the total number of dealers in each block)

were with below 10 years of experience. This might be due to the entry of more new dealers in the recent years in Avinashi block.

The average experience in fertilizer dealing was the maximum in Thondamuthur block (17 years) and it was the lowest (12 years) in Avinashi block. Madathukulam block, however came in between.

Nature of Dealership : Wholesale-cum-retail business involves more turnover, and more attention will be given by the manufacturer in influencing wholesaler relative to the retailer. The nature of dealership among the sample dealers were analysed and the results are presented in Table XIX.

From Table XIX, it could be inferred that 100 per cent of the sample dealers were retailers in Avinashi block, while 87.5 per cent in Thondamuthur block, and 75.0 per cent in Madhukulam block, were the retailers. The wholesaler-cum-retailers accounted for 25 per cent in Madathukulam and 12.5 per cent in Thondamuthur block. However, no such category was found in Avinashi block.

Educational Status : Educational status of the dealers influences not only the buying behaviour but also their profits. The sample dealrs were categorised by their educational statuses into four groups, namely illiterates, elementary school, high school and college level and the results are furnished in Table XX.

TABLE XIX

NATURE OF DEALERSHIP AMONG SAMPLE DEALERS

(No.of Dealers)

S.No.	Block	Retailer	Wholesale Cum-retailer	Total
1.	Thondamuthur	7 (87.5)	1 (12.5)	8 (100.00)
2.	Avinashi	8 (100.00)	-	8 (100.00)
3.	Madathukulam	6 (75.00)	2 (25.0)	8 (100.00)

(Figures in the parentheses denote percentage to the total number of dealers in each block)

TABLE -XX

EDUCATIONAL STATUS OF SAMPLE DEALERS

(no.of dealers)

S.No.	Category	Block			Total
		Thonda-muthur	Avinashi	Madathu-kulam	
1.	Illiterate	-	-	1	1 (4.17)
2.	Elementary	1	-	-	1 (4.17)
3.	High School	3	2	3	8 (33.33)
4.	College	4	6	4	14 (58.23)

(Figures in parentheses indicate the percentage to the no.of dealers)

As could be discerned from the Table XX that, majority (58.33 per cent) of the dealers were with collegiate education, while 33.33 per cent were with high school education. Only 4.17 per cent of the dealers were in the category of illiterate. This is a good sign.

Product Mix : The product mix maintained by the sample dealers were analysed and the results are given in Table XXI.

Table XXI showed that all the sample dealers in the three blocks were dealing with fertilizers and pesticides. Herbicides were dealt with by 75 per cent in Thondamuthur block, 100 per cent in Avinashi block and 50 per cent in Madathukulam block.

Seeds were dealt with by 75 per cent in both Thondamuthur and Avinashi blocks and by 62.5 per cent in Madathukulam block. Other products like cattle feed, farm implements and cement, etc., were dealt by 25 per cent of sample dealers in Avinashi block and 37.5 per cent in Madathukulam block.

ii. Fertilizers Brand Used and Prefered by Farmers and Dealers

In this seciton the brands of fertilizers used and prefered by the sample farmers and dealers are discussed. The brands of fertilizers used and preferred by the sample farmers are discussed first.

TABLE XXI

PRODUCT-MIX MAINTAINED BY THE SAMPLE DEALERS

(in hectares)

S.No.	Product Mix	Thondamuthur Block	Avinashi Block	Madathukulam Block
1.	Fertilizer	8 (100.00)	8 (100.00)	8 (100.00)
2.	Pesticides	8 (100.00)	8 (100.00)	8 (100.00)
3.	Herbicides	6 (75.00)	8 (100.00)	4 (50.00)
4.	Seeds	6 (75.00)	6 (75.00)	5 (62.5)
5.	Others	-	2 (25.00)	3 (37.5)

(Figures in parentheses denote the percentage to 8 dealers)

Brands Used by the Sample Farmers :

The quantities of fertilizers purchased and used in each brand by the sample farmers would aid in identifying the brands that most. The brands used in higher quantities would be considered as those having relatively a greater market share. The details on the quantities of fertilizers used by the sample farmers in the three sample blocks are presented in Tables XXII, XXIII and XXIV.

In Thondamuthur block, Muriate of potash, Ammonium chloride and Urea were used by 100 per cent, 87.5 per cent and 77.5 per cent of the sample farmers respectively, as could be evidenced from Table XXII. However DAP and complex were used by 65 per cent and 37.5 per cent of the sample farmers respectively. In the case of Super phosphate and mixtuers, 37.5 per cent and 35 per cent of the farmers respectively used. Of the total quantities of fertilizers used by the sample farmers, 43.02 per cent was potash, followed by Ammonium chloride (18.36 per cent), urea (11.82 per cent) and DAP (11.35 per cent). In the case of Super phosphate and Mixtures, the quantities of fertilizers used were, 3.89 per cent and 7.36 per cent respectively.

In the case of Super phosphate and Mixtures, two brands namely Pioneer and KOTHARI were used by sample farmers. In the case of Super phosphate, 22.5 per cent of the sample farmers used pioneer brand, while 15 per cent used KOTHARI brand.

TABLE XXII

BRANDS OF FERTILIZERS USED BY THE SAMPLE FARMERS OF THONDAMUTHUR BLOCK

S.No.	Product	Brand	No.of farmers used	Percentage to total	Quantity used (in quintals)	Percentage to total
1.	Urea	SPIC	21	52.50	1856.25	
		Vijay	6	15.00	180.00	
		FACT	2	5.00	24.00	
		Mangla	2	5.00	18.00	
	Sub-Total		**31**	**77.50**	**2078.25**	**11.82**
2.	Super Phosphate	Pioneer	9	22.50	459.00	
		Kothari	6	15.00	224.00	
	Sub-Total		**15**	**37.50**	**683.00**	**3.89**
3.	Muriate of Potash	IPL	26	65.00	4110.75	
		SPIC	14	35.00	3450.00	
	Sub-Total		**40**	**100.00**	**7560.75**	**43.02**
4.	DAP	SPIC	18	45.00	1677.00	
		Vijay	8	20.00	319.00	
	Sub-total		**26**	**65.00**	**1996.00**	**11.35**
5.	Ammonium Chloride	TAC	24	60.00	2763.75	
		SPIC	11	27.50	462.50	
	Sub total		**35**	**87.50**	**3226.25**	**18.36**
6.	Complex	Vijay	15	37.50	739.50	4.20
7.	Mixture 14	Pioneer	6	15.00	517.00	
		Kothari	3	7.50	182.00	
	Sub-total		**9**	**22.50**	**699.00**	**3.98**
8.	Mixture 12	Pioneer	2	5.00	250.00	
		Kothari	2	5.00	192.50	
	Sub-Total		**4**	**10.00**	**442.50**	**2.52**
9.	Mixture 18	Kothari	1	2.50	150.00	0.86
	TOTAL		**40**	**100.00**	**17575.25**	**100.00**

TABLE XXIII

BRANDS OF FERTILIZERS USED BY THE SAMPLE FARMERS OF AVINASHI BLOCK

S.No.	Product	Brand	No.of farmers used	Percentage to total	Quantity used (in quintals)	Percentage to total
1.	Urea	SPIC	29	72.50	2398.50	
		Vijay	4	10.00	59.50	
		FACT	2	5.00	12.00	
		Mangla	1	2.50	4.00	
	Sub-Total		**36**	**90.00**	**2474.00**	**30.47**
2.	Super Phosphate	Pioneer	5	12.50	68.00	
		Kothari	2	5.00	16.00	
	Sub-Total		**7**	**17.50**	**84.00**	**1.03**
3.	Muriate of Potash	IPL	24	60.00	1645.00	
		SPIC	8	20.00	157.50	
	Sub-Total		**32**	**80.00**	**1802.50**	**22.19**
4.	DAP	SPIC	19	47.50	1120.00	
		Vijay	10	25.00	279.50	
	Sub-total		**29**	**72.50**	**1399.50**	**17.23**
5.	Complex	Vijay	27	67.50	2178.75	26.82
6.	FACTomfos	FACT	4	10.00	45.00	0.56
7.	CAN	NFL	6	15.00	84.50	
		SONA	3	7.50	8.75	
	Sub-total		**9**	**22.50**	**93.25**	**1.15**
8.	Mixture 16	Kothari	3	7.50	33.00	0.40
9.	Mixture 18	Kothari	1	2.50	12.00	0.15
	TOTAL		**40**	**100.00**	**8122.00**	**100.00**

TABLE XXIV

BRANDS OF FERTILIZERS USED BY THE SAMPLE FARMERS OF MADATHUKULAM BLOCK

S.No.	Product	Brand	No.of farmers used	Percentage to total	Quantity used (in quintals)	Percentage to total
1.	Urea	SPIC	26	65.00	4107.00	
		Vijay	6	15.00	207.00	
		FACT	4	10.00	142.50	
		Mangla	2	5.00	18.00	
		IFFCO	2	5.00	20.00	
	Sub-Total		**40**	**100.0**	**4494.5**	**29.45**
2.	Super Phosphate	Pioneer	5	12.50	80.00	
		Kothari	3	7.50	33.00	
	Sub-Total		**8**	**20.00**	**113.00**	**0.74**
3.	Potash	IPL	20	50.00	1174.50	
		SPIC	**14**	35.00	459.00	
	Sub-Total		34	**85.00**	**1633.50**	**10.70**
4.	DAP	SPIC	27	67.50	3214.00	
		Vijay	12	30.00	744.65	
	Sub-total		**39**	**97.50**	**3959.05**	**25.94**
5.	Complex	Vijay	9	22.50	687.50	
		FACT	8	20.00	420.00	
	Sub-total		**17**	42.50	**1107.50**	**7.26**
6.	Ammonium Chloride	TAC	4	10.00	61.50	
		SPIC	3	7.50	32.50	
	Sub-total		**7**	**17.50**	**94.00**	**0.61**
7.	Zinc Sulphate	Kothari	13	32.50	108.60	
		SPIC	10	25.00	64.40	
	Sub-total		**23**	**57.50**	**173.00**	**1.14**
8.	Ammonium sulphate	FACT	30	75.00	3451.25	22.60
9.	Gypsum	SPIC	21	52.50	179.55	1.18
10.	Mixture 16	Kothari	3	7.50	32.50	
		Pioneer	1	2.50	10.00	
	Sub-total		**4**	**10.00**	**42.50**	**0.27**
11.	Mixture 18	Kothari	2	5.00	17.50	0.11
	TOTAl		**40**	**100.00**	**15265.35**	**100.00**

In the Mixture 14, pioneer brand was used by 15 per cent of the sample farmers, while 7.5 per cent used KOTHARI brand. As regards Mixture 18, only KOTHARI brand was used by 2.5 per cent of the sample farmers.

In Avinashi block, urea, potash, DAP and complex were used by 90 per cent, 80 per cent, 72.5 epr cent and 67.5 per cent of the sample farmers respectively. In terms of quantity of fertilizers used, urea ranked first with 30.47 per cent of the total quantities of fertilizers used, followed by complex (26.82 per cent), potash (22.19 per cent) and DAP (17.23 per cent).

In the case of Super phosphate, 12.5 per cent of the sample farmers used 'Pioneer brand' and KOTHARI brand was used by 5 per cent of the sample farmers. In Mixtures, only KOTHARI brand was used by sample farmers of this block. Further, 7.5 per cent of the sample farmers used Mixture 16 and only 2.5 per cent of them used Kothari 18.

In Madathukulam block, urea, DAP, potash, Ammonium sulphate and complex were used by 100 per cent, 97.5 per cent, 85 per cent, 75 per cent and 42.5 per cent respectively. In terms of quantity of fertilizers used, urea used by 29.45 per cent, followed by DAP (25.94 per cent), Ammonium sulphate (22.60 per cent), potash (10.70 per cent) and complex (7.26 per cent).

Zinc sulphate and Super phosphate were used by 57.5 per cent and 20 per cent of the sample farmers respectively. Among the former, 32.5 per cent used KOTHARI brand, followed by SPIC (25 per cent). In this block,

KOTHARI Super phosphate was used by more number of farmers (12.5 per cent), followed by Pioneer (7.5 per cent). Further, 7.5 per cent of sample farmers used Mixture 16, and 5 per cent used mixture 18.

From the above results, it could be inferred that,in Thondamuthur block, Pioneer brand of Super phosphate and Mixtures were popular among farmers than that of KOTHARI. It is because, the Pioneer brand was manufactured in Coimbatore itself and hence it was easily made available to farmers. However in Madathukulam Block, the KOTHARI products used was little bit higher over Pioneer brand among the farmers. In Avinashi Block, compared to total quantity of fertilizers used, the share of KOTHARI brand was the minimum. In this context, it was necessary for the casefirm to take suitable measures to increase their market share in both Thondamuthur and Avinashi blocks.

Awareness and Adoption of KOTHARI Fertilizers :

The extent of awareness about the existence of different types of fertilizers produced by KOTHARI namely, Super phosphate, Zinc sulphate and Mixtures was assessed and the results are presented in Table XXV below;

Table XXV

FARMERS AWARENESS AND ADOPTION OF KOTHARI FERTILIZERS

(numbers)

Blocks	Super Phosphate		Zinc Sulphate		Mixtures	
	Aware ness	Adop tion	Aware- ness	Adop- tion	Aware- ness	Adop- tion
Thondamuthur	30 (75.0)	6 (15.0)	18 (45.0)	0 (-)	27 (67.5)	6 (15.0)
Avinashi	18 (45.0)	2 (5.0)	10 (25.0)	0 (-)	15 (37.5)	4 (10.0)
Madathukulam	22 (55.0)	5 (12.5)	24 (60.0)	13 (32.5)	25 (62.3)	5 (12.5)

(Figures in the parentheses indicate percentages to total of 40 farmers)

It could be noted from Table XXV that, 75 per cent, 45 per cent and 55 per cent of the sample farmers were aware of Super phosphate in Thondamuthur, Avinashi and Madathukulam blocks respectively. It could be seen further from the table that, Zinc sulphate was known to 45 per cent, Mixtures to 67.5 per cent of sample farmers in Thondamuthur block. Out of 30 farmers who were aware of Super phosphate, 6 farmers (15 per cent) used it.In the case of Mixtures, out of 27 farmers, only 6 farmers (15 per cent) used in Thondamuthur block.

In Avinashi Block, 45 per cent of the sample farmers were aware of Super phosphate, while 37.5 per cent were of mixtures and 25 per cent were aware of Zinc sulphate. Out of 18 farmers who were aware of Super phosphate, only 2 farmers (5 per cent) used it. Out of 15 farmers who were

aware of Mixtures, 4 (10 per cent) used it and out of 10 farmers who were aware of zinc sulphate, no one used it.

In Madathukulam block, among 22 farmers (55 per cent), who were aware of Super phosphate, five (12.5 per cent) used it. Out of 24 farmers who were aware of KOTHARI Zinc Sulphate, 13 (32.5 per cent) used it. Out of 25 farmers (62.5 per cent) who were aware of Mixtures, five (12.5 per cent) used them.

From the results, it could be inferred that, in all the three blocks, above 50 per cent of the sample farmers were aware of Kothari fertilizers. Howoever the adoption rate was very low and hence, this gab needs to be bridged through proper marketing promotional strategy.

Preference for Purchase of Brands :

Eventhough the relative share of different brands purchased by the sample respondents indicated the brand that was mostly preferred by the farmers, it was not expected to provide complete picture. There might be the differences between what farmers actually purchased and what they preferred to purchase. The latter would give a clear picture on the brands that were mostly preferred by farmers, because the farmers would have purchased even the un-preferred brand due to some reasons such as non-availability of preferred brands at the time of purchase. The details on the fertilizer-wise brand preference of the respondents are given in Table XXVI.

TABLE XXVI

PREFERENCE FOR PURCHASE OF BRANDS AMONG FARMERS

S.No.	Brand Names of Fertilizers	Number of respondents			All farmers (Nos)	Percentage to total
		Thondamu-thur Block	Avinashi Block	Madathu-kulam Block		
I.	Urea					
1.	SPIC	24	18	22	64	53.34
2.	Vijay	9	13	14	36	30.00
3.	FACT	7	9	4	20	16.66
II.	Super phosphate					
1.	Pioneer	21	24	17	62	51.67
2.	Kothari	13	6	18	37	30.83
3.	Parry	6	10	5	21	17.50
III.	Potash					
1.	IPL	31	25	28	84	70.00
2.	SPIC	9	15	12	36	30.00
IV.	DAP					
1.	SPIC	22	16	27	65	54.17
2.	Vijay	18	24	13	55	45.83
V.	Complex					
1.	Vijay	26	22	31	79	65.83
2.	FACT	14	18	9	41	34.17
VI.	Mixtures					
1.	Pioneer	28	13	15	56	46.67
2.	Kothari	9	11	18	38	31.66
3.	Stanes	3	16	7	26	21.67

As could be noted from Table XXVI, in Urea, SPIC was the most preferred brand (53.34 per cent of farmers). Vijay urea and FACT urea were preferred by 30 per cent and 16.66 per cent of the sample farmers respectively.

The other brands of urea such as IFFCO, KRIBHCO, Neyveli and Mangla were not at all preferred by the sample farmers, eventhough they were purchased by a few farmers due to the non-availability of the preferred brands.

It could be inferred that SPIC urea was mostly preferred and hence it had been the market leader.

In Super phosphate, Pioneer (KATHIR) brand got the highest preference (51.67 per cent of selected farmers). KOTHARI' Super and Parry Super were preferred by 30.83 per cent and 17.50 per cent of farmers respectively. It could also be observed that, the Pioneer Super Phosphate was preferred by more than half of the total respondents than any other brands of Super phosphate; because it was manufactured in Coimbatore itself, and it was known to most of the sample farmers.

As regards potash, Indian potash Ltd brand got the highest preference as it was preferred by 70 per cent of selected farmers. SPIC potash was preferred by 30 per cent. In the case of DAP, SPIC brand was preferred by 54.17 per cent, followed by Vijay brand (45.83 per cent).

Among the complex fertilizers, Vijay complex (17:17:17) had the highest preference for purchase, as it was preferred by 65.83 per cent of respondents. Factamphos was prefered by 34.17 per cent of the sample farmers.

In Mixture also, Pioneer brand got the highest preference as it was preferred by 46.67 per cent of selected farmers, followed by KOTHARI Mixture (31.66 per cent) and stanes mixture (21.67 per cent).

Block-wise analysis also exhibited the same trend. In urea the same order of preference could be observed in all the three blocks.

In Super phosphate, KOTHARI brand had a slight edge over Pioneer in the order of preference in Madathukulam block. In Mixture also, KOTHARI Brand was preferred by more number of farmers in Madathukulam block.

Factors Influencing Brand Preference and Selection :

A study on the factors influencing the brand preference would help in making meaningful conclusions. The analysis would also help to infer why and how the brands attained popularity among the farmers.

In this study, several factors were listed and the respondents were asked to give their order of preference for different factors that influenced them to prefer a particular brand for purchase. By Garett's Ranking Technique, the mean scores were arrived at for each factor and their order of influence was assessed. The results are furnished in Table XXVII.

TABLE XXVII

FACTORS INFLUENCING BRAND PREFERENCE BY FARMERS

S.No.	Factors	Thonda-muthur Block		Avinashi Block		Madathu-kulam Block		All farmers	
		Mean Score	Rank	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
1	Dealer's influence	71.60	1	74.10	1	74.55	1	72.03	1
2	Easy availability	71.05	2	71.23	2	72.2	2	71.49	2
3	Quality	69.92	3	63.95	3	66.1	4	67.85	3
4	Brand loyalty	55.30	4	58.20	4	67.35	3	59.52	4
5	Sales promotion	50.10	5	47.25	5	51.30	5	50.65	5
6	Credit availability	47.48	6	44.87	6	43.62	6	45.21	6
7	Packaging and easy to handle	43.67	7	42.40	8	41.32	7	42.86	7
8	Sales personnel's influence	42.57	8	43.35	7	37.97	8	40.47	8
9	Price differential	23.50	9	28.37	9	29.12	9	28.05	9
10	Suitablity to soil	22.13	10	19.10	10	19.57	10	20.57	10

It could be observed from Table XXVII that, the dealers' influence was the most influencing one by the farmers. Generally farmers purchased whatever brands of fertilizers sold by the dealers. They were not asking any particular brand. They just got what dealers had at that time in stock. In the study area, dealers acted as a sole adviser with regard to fertilizer and other input applications. Hence, dealers' influence on farmers was the critical factor which influenced them to purchase a particular brand.

Easy availability was considered as the next important factor with the mean score of 71.49. Quality with mean score of 67.85 also got some influence. The other factors such as brand loyalty, sales promotion, credit availability, packaging and ease of handling, sales Personnels' influence followed in order with the mean scores of 59.52, 50.65, 45.21, 42.86, 40.47 respectively.

It could be further evidenced from Table XXVII that, the factors such as price differentials and suitability to soils with the mean score of 28.05 and 20.57 had very limited influence on the farmers to purchase a particular brand.

It could therefore be inferred that the dealer's influence and easy avaialability of various brands of fertilizers were the most influencing factors for preferring a particular brand.

As regards block-wise analaysis, it showed some variations contrary to the general trend prevailed among the sample farmers. However, dealers' influence and easy availablity of fertilizer brands were the most influencing factors in all the three sample blocks.

As far as the quality factor was concerned, it was ranked third in both Thondamuthur and Avinashi blocks. But in Madathukulam block it was ranked fourth. Similarly, the brand loaylty was ranked 4^{th} in both Thondamuthur and Avinashi blocks and it was ranked as 3^{rd} in Madathukulam block.

The other factors such as sales promotion and credit availability ranked were 5th and 6th respectively in all the three blocks. It could thus be evidenced from the table that, the same order of influence was present among all the categories of farmers.

Similarly, the influences of factors like packaging, ease of handling and sales personnel's differed marginally among the blocks. In Avinashi Block, sales personnel's influence ranked 7th in the order, while in other two blocks, it was ranked as 8th. The factors like packaging and ease of handling ranked 8th in Avinashi Blcok. In other two blocks, it ranked given 7th.

The other factors such as price differential and suitability to soils ranked 9th and 10th respectively in all the three blocks.

It could thus be inferred that the dealer's influence, easy availability and quality were the major factors that influenced the brand preference. These results were also in confirmity with the findings of Ahmed and Singh[1].

Brand Purchased and Preferred by Dealer

Brands purchasaed and preferred by the dealers are the reflections of the farmers preference. Therefore the brands purchased and preferred by the dealers were analysed and discussed in this section. Brands purchased by the dealers are discussed first.

Brands Purchased by Dealers :

The dealers' purchases of brands would be the reflections of farmers' preferrence. Therefore, the dealers' purchases of various brands of fertilizers were analysed and the results are furnished in table XXVIII.

It could be seen from Table XXVIII that, in the case of Urea, SPIC and Vijay brands were dealt with by almost all the dealers (100 per cent). However the FACT, Mangla, Neyveli, Nagarjuna and IPL were dealt with respectively by 83.34 per cent, 75 per cent, 62.3 per cent, 33.33 per cent and 20.83 per cent of the sample dealers.

It could also be discussed from Table XXVIII that, out of the total quantities of Urea purchased SPIC brand alone accounted for 33.84 per cent. Vijay Urea accounted for 9 per cent, while FACT Urea accounted for 15 per cent during 1996-97. The other brands of Urea namely Mangla, Neyveli,

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1. Tauseef Ahmed and Inderjeet Singh, **Op. Cit.**, pp. 28-31.

TABLE XXVIII

QUANTITIES OF VARIOUS BRANDS OF FERTILIZERS PURCHASED BY THE SAMPLE DEALERS

(in tonnes)

S. No.	Product	Brand	Dealers		Quantity purchased	% to total
			Numbers	% to total		
1.	Urea	SPIC	24	100.00	1215	33.84
		Vijay	24	100.00	675	18.80
		FACT	20	83.34	540	15.04
		Mangla	18	75.00	475	13.24
		Neyveli	15	62.50	380	10.58
		Nagarjuna	8	33.33	190	5.30
		IPL	5	20.83	115	3.20
					3590	**100.00**
2.	Super phosphate	Pioneer	22	91.67	635	43.50
		Kothari	17	70.83	520	35.61
		Parry	12	50.00	225	15.41
		Shaw wallace	5	20.83	80	5.48
					1460	**100.00**
3.	Potash	IPL	24	100.00	690	46.15
		SPIC	22	91.67	525	35.12
		Rallis	16	66.67	280	18.73
					1495	**100.00**
4.	DAP	SPIC	24	100.00	950	44.19
		Vijay	22	91.67	675	31.40
		FACT	22	91.67	525	24.41
					2150	**100.00**
5.	Complex	Vijay	24	100.00	1120	49.01
		FACT	24	100.00	800	35.01
		Paramphos	20	83.34	365	15.98
					2285	**100.00**
6.	Ammonium sulphate	FACT	22	91.67	555	
7.	CAN	NFL	24	100.00	185	

(Total sample dealers = 24)

(Table XXVIII Contd.)

S. No.	Product	Brand	Dealers		Quantity purchased	% to total
			Numbers	% to total		
8.	Ammonium chloride	TAC	20	83.34	380	55.07
		SPIC	15	62.50	310	44.93
					690	**100.00**
9.	Zinc sulphate	Kothari	11	45.83	60	46.15
		SPIC	8	33.33	45	34.62
		Leo	5	20.84	25	19.23
					130	**100.00**
10.	Mixture 10	Pioneer	16	66.66	245	39.84
		Kothari	12	50.00	220	35.78
		Stanes	5	20.83	80	13.00
		Shaw wallace	5	20.83	40	6.50
		Local	3	12.50	30	4.88
					615	**100.00**
11.	Mixture 14	Pioneer	12	50.00	130	43.34
		Kothari	11	45.83	90	30.00
		Stanes	4	16.66	40	13.33
		Shaw wallace	3	12.50	25	8.33
		Local	2	1.33	15	5.00
					300	**100.00**
12.	Mixture 18	Pioneer	20	83.33	230	38.33
		Kothari	17	70.83	225	37.50
		Stanes	8	33.33	70	11.67
		Shaw wallace	5	20.83	55	9.16
		Local	2	8.33	20	3.34
					600	**100.00**
13.	Mixture 12, 16	Pioneer	8	33.33	120	38.70
		Kothari	5	20.84	85	27.41
		Stanes	3	12.50	50	16.13
		Shaw wallace	2	8.33	35	11.30
		Local	2	8.33	20	6.46
					310	**100.00**

(Total sample dealers = 24)

Nagarjuna and IPL accounted for 13.24 per cent, 10.58 per cent, 5.30 per cent and 3.20 per cent respectively of the total quantity of urea purchased during the year 1996-97. It could thus be inferred that, SPIC brand accounted for the maximum market share.

In the case of Superphosphate, Pioneer brand was dealt with by 91.67 per cent of the dealers followed by KOTHARI (70.83 per cent), Parry (50 per cent) and Shaw Wallace (20.83 per cent). In terms of quantity purchased, again Pioneer had 43.50 per cent of the total quantity of Super phosphate purchased, followed by KOTHARI with 35.61 per cent, Parry with 15.41 and Shaw Wallace with 5.48 per cent.

As regards Potash, IPL brand was dealt with by 100 per cent of the dealers, whereas SPIC and Rallis potash were handled by 91.67 per cent and 66.67 per cent of the dealers respectively. In terms of quantity purchased also, IPL brand accounted for the highest percentage of 46.15, followed by SPIC with 33.12 per cent and Rallis with 18.73 per cent.

With reference to DAP, SPIC brand was dealt with by 100 per cent of the dealers, followed by Vijay and FACT with the equal percentages (91.67 per cent) of dealers. In complex, Vijay and FACT brands were dealt with by 100 per cent of the dealers, followed by Paramphos by 83.34 per cent of dealers. While analysing quantity of complex fertilizers purchased, the Vijay brand was purchased by 49.01 per cent of the sample dealers, followed by FACT (35.01 per cent) and Paramphos (15.98 per cent). It could thus be

inferred that, in the case of complex fertilizers, SPIC brand dominated the other two brands namely FACT and Paramphos in the market.

In the case of Ammonium sulphate, only FACT brand was dealt with by 91.67 per cent of the sample dealers. Regarding Calcium Ammonium Nitrate (CAN), the NFL brand alone was dealt with by 100 per cent of the dealers.

As regards Ammonium chloride, two brands namely TAC and SPIC were handled by the sample dealers. The TAC brand was dealt with by 83.34 per cent of dealers, followed by SPIC (62.5 per cent). In terms of quantity purchased also, TAC brand was purchased by 55.07 per cent of dealers, while SPIC brand was purchased by 44.93 per cent.

In the case of Zinc suphate, KOTHARI brand was dealt with by 45.83 per cent of the dealers, while SPIC and Leo brands were handled by 33.33 per cent and 20.84 per cent respectively. In terms of quantity purchased also, KOTHARI brand got the highest percentage of 46.15, followed by SPIC (34.62 per cent) and Leo brand (19.23 per cent).

As regards Mixture 10, Pioneer brand was dealt with by 66.66 per cent of the dealers, followed by KOTHARI (50 per cent), Stanes (20.83 per cent), Shaw Wallace (20.83 per cent) and local (12.50 per cent). In terms of quantity purchased also, the same order was repeated.

With regard to other Mixtured Fertilizers like Mixtures 12, 14 16 and 18, the Pioneer brand was dealt with by more number of dealers followed by KOTHARI and Stanes, as could be evidenced from Table XXVIII.

Brand Preferences by Dealers :

The sample dealers expressed their preferences for different brands of urea, Super, potash, DAP, Complex and Mixtures. These details were found to be essential to understand as to what actually the sample dealers preferred to purchase, rather than what they actually purchased during 1996-97. It could be observed from Table XXIX that, the preferences of the dealers were almost on the lines of purchases made.

SPIC urea was the most preferred brand as it got preference from 15 selected dealers (62.5 per cent). Vijay urea and FACT urea were preferred by 25 per cent and 12.5 per cent of the sample dealers respectively.

In the case of Super phosphate, three brands namely Pioneer (Kathir), KOTHARI and Parry were dealt with by sample dealers. Of the 24 sample dealers, 54.16 per cent preferred Pioneer Super phosphate, 29.17 per cent preferred Parry Super and 16.67 per cent were for KOTHARI Super phosphate. The results indicated tht majority of the dealers preferred Pioneer Super phosphate while KOTHARI Super phosphate, was preferred by 16.67 per cent of the sample dealers.

In the case of muriate of potash, only two brands namely Indian potash Ltd. (IPL) and SPIC were preferred by sample dealers. Among them,

TABLE XXIX

BRAND PREFERENCES BY SAMPLE DEALERS

S.No.	Name of the brand	No. of dealers	Percentage to total
1.	**Urea**		
	SPIC	15	62.5
	Vijay	6	25.0
	FACT	3	12.5
2.	**Super phosphate**		
	Pioneer	13	54.16
	Parry	4	16.67
	Kothari	7	29.17
3.	**Potash**		
	IPL	16	66.67
	SPIC	8	33.33
4.	**DAP**		
	SPIC	11	45.84
	Vijay	8	33.33
	FACT	5	20.83
5.	**Complex**		
	Vijay	13	54.16
	FACT	9	37.51
	Paramphos	2	8.33
6.	**Mixtures**		
	Pioneer	10	41.66
	Kothari	6	25.0
	Stanes	3	12.5
	Shaw wallace	3	12.5
	Local	2	8.33

66.67 per cent preferred IPL potash, while SPIC brand was preferred by 33.33 per cent. It could therefore, be inferred that, as far as potash fertilizer was concerned, the IPL was enjoying the highest preference and market share.

As regards DAP, three brands namely SPIC, Vijay and FACT were preferred by sample dealers. Of the 24 sample dealers, 45.84 per cent preferred SPIC DAP, followed by Vijay (33.33 per cent) and FACT (20.83 per cent). The results showed that the majority of the sample dealers preferred SPIC DAP and it was closely followed by Vijay DAP.

With reference to complex fertilizers, sample dealers dealt with Factamphos (20 : 20 : 0 : 15), Vijay (17 : 17 : 17) and Paramphos (16 : 20 : 0 : 15) as could be observed from the Table XXIX. Vijay was preferred by 54.16 per cent and Factamphos was preferred by 37.51 per cent and Paramphos was preferred only 8.33 per cent of the sample dealers. Therefore, it could be inferred that, Vijay complex was preferred by most of the dealers followed by Factamphos.

In the case of Mixed fertilizers, Pioneer was preferred by 10 sample dealers (41.66 per cent), followed by KOTHARI (25 per cent), Stanes (12.50 per cent), Shaw wallace (12.5 per cent) and Local (8.34 per cent). It could thus be inferred that Pioneer and KOTHARI were the major players in Mixture fertilizers market, followed by Stanes and Shaw wallace.

From the above results, it could be inferred that, KOTHARI Super phosphate and Mixture fertilizes were preferred by sample dealers next only

to Pioneer. The other fertilizers namely urea and DAP, SPIC brands were preferred by most of the dealers.

Factors Influencing Dealers' Brand Preference :

The dealers were asked to indicate the factors that influenced them to prefer different brands from the highest to the lowest order of influence. Garett's ranking tehcnique was adopted to delineate the factors which influenced the dealers. The mean scores as arrived at by this technique for each factor indicated the level of influence of the concerned factors and the details are presented in Table XXX.

Table XXX

FACTORS INFLUENCING DEALER'S BRAND PREFERENCE

S.No.	Factors	Mean Score	Rank
1.	Credit availability	78.20	1
2.	Easy availability	68.41	2
3.	High profit margin	63.08	3
4.	Good brand image	60.25	4
5.	High sales	52.30	5
6.	Special incentives	45.62	6
7.	Quality	44.67	7
8.	Promotional support	33.63	8
9.	Sales representatives' influence	32.08	9
10.	Good packaging	18.92	10

It could be observed from the table above that the credit availability was found to be the most influencing factor with the mean score of 78.20. Easy availability was the next important factor that influenced the dealers with the mean score of 68.41. High profit margin, good brand image and high sales are the other factors followed in order. The special incentives like transport rebate, cash discount etc. offered by the manufacturers and the quality were the other factors that influenced the dealers.

Promotional support by the manufacturers, sales representatives' influence and good packaging, with their lower mean scores of 33.63, 32.08 and 18.92 also influenced the dealers in their brand preference, as could be evidenced from Table XXX.

The results showed that the factors like credit availability from manufacturers and easy availability of products by manufacturers had greater influences. The factors like high profit margin, good brand image and high sales also influenced the dealers highly. The other factors such as special incentives, quality, promotional support, sales representatives' influence and good packaging had also influenced but at a lesser degree. These results were almost in line with that of Ramesh Babu[2].

From this, it could be inferred that, if the case firm wanted to popularise their brands and increase the market share, it had to increase the

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2. Ramesh Babu, "Factors Influencing Dealers Purchase Decision Regarding Fertilizers in Tamil Nadu - A case study of Madras Fertilizers Limited", (Unpublished M.Sc (Ag.) Thesis, Department of Agricultural Economics, Tamil Nadu Agricultural University, Coimbatore, 1990).

credit sales and timely supply of fertilizers. Casefirm should also maintain good brand image among farmers and dealers.

iii) Estimation of Market Potential and Demand

Market potential demand is the maximum sales opportunities for all sellers of a good or service during a stated period of time in a stated market. So it is essential for a firm to know the potential to plan and allocate the resources to a particular market segment.

In this study, an attempt was made to estimate the market potential for case firm's fertilizers for banana, cotton and paddy in Coimbatore district during 1998-99 and 1999-2000.

Chain ratio method was used to estimate the likely market potential for casefirm's products in Coimbatore district and the results are presented.

There are two types of market potential namely, total market potential and qualified market potential. Total market potential is the maximum amount of sales that might be available to all firms in an industry during a given period under a given level of industry's marketing effort and given environmental conditions. On the other hand, qualified market potential is the amount of sales expected in the particular region, based on the current use of particular chemical in the field. Each one was estimated and the results are discussed further.

Total Market Potential

The total market potential demand was estimated with the following assumptions :

1. The cropped area under different crops would increase or decrease with the same trend, as it had been in the previous years. (1980-81 to 1997-98).

2. Only one fertilizer was available in the market for the particular crop segment, that is, there was no substitute fertilizr in the market for the particular crop segment.

3. The doses of fertilizers used in the estimation were based on the company's recommendation, since the farmers' adopted various doses.

The market potential demand for each of the three crops is discussed below. Banana is discussed first.

Banana

The estimated total market potential demand for the periods 1998-99 and 1999-2000 is presented in the Table XXXI.

From the table XXXI, it could be noted that, the estimated total market potential demand for mixtures 12, 14 and 18 for banana was 49,500 tonnes during 1998-99 and 53,088 tonnes during 1999-2000. For Superphosphate,

TABLE XXXI

ESTIMATED TOTAL MARKET POTENTIAL DEMAND IN COIMBATORE DITRICT FOR BANANA, COTTON AND PADDY. 1998-99 AND 1999-2000.

(in tonnes)

	Fertilizers	1998-1999	1999-2000
I.	**Banana**		
	Mixture 12	49500	53088
	Mixture 14	49500	53088
	Mixture 18	49500	53088
	Super phosphate	962.5	1032.28
II.	**Cotton**		
	Mixture 16	10227.75	10362
	Mixture 18	10227.75	10362
	Super phosphate	5113.88	5181
III.	**Paddy**		
	Mixture 16	9853.75	9382.5
	Mixture 18	9853.75	9382.5
	Super phosphate	4926.88	4691.25
	Zinc sulphate	394.15	375.30

the estimated total market potential demand was 962.5 tonnes during 1998-99 and 1032.28 tonnes for 1999-2000.

Cotton

The casefirm's fertilizers were used mostly in cotton and hence the potential demand for the same was estimated and the results are presented in Table XXXI earlier.

It could therefore, be inferred from Table XXXI that, the total market potential demand for Mixtures 16 and 18 of the casefirm, during 1998-99 was 10,227.75 tonnes and during 1999-2000 it was 10,362 tonnes. In the case of Superphosphate, the estimated total market potential demand was 5113.88 tonnes during 1998-99 and 5181 tonnes during 1999-2000.

Paddy

The estimated total market potential demand for Mixtures 16 and 18 would be 9853.75 tonnes during 1998-99 and 9382.5 tonnes during 1999-2000. For Superphosphate, the estimated total market potential demand for paddy was 4926.88 tonnes during 1998-99 and 4691.25 tonnes during 1999-2000.

The estimated potential demand for Zinc sulphate was 394.15 tonnes during 1998-99 and 375.30 tonnes during 1999-2000.

Qualified Market Potential

Qualified market potential for the casefirm's fertilizers in the study area was estimated using chain ratio method and market build-up method. The same is discussed for each of the three crops considered, below;

Banana

The details on the estimated qualified market potential demand during the period 1998-99 and 1999-2000 are presented in Table XXXII.

It could be discerned from Table XXXII that, the qualified market potential demand estimated for mixture 12 was 633.50 tonnes and 637.48 tonnes respectively during 1998-99 and 1999-2000.

The qualified market potential for Mixture 14 in banana was 989.78 tonnes and 993.26 tonnes respectively during 1998-99 and 1999-2000.

During 1998-99, the qualified market potential demand for Mixture 18 in banana was 351.95 tonnes, whereas it was 352.30 tonnes during 1999-2000. For Superphosphate, the qualified market potential was 115.89 tonnes during 1998-99 and 115.96 tonnes during 1999-2000.

Cotton

For cotton, the estimated qualified market potential of Mixture 16 was 209.43 tonnes and 213.40 tonnes respectively for 1998-99 and 1999-2000. In the case of Mixture 18, the potential was estimated at 53.35 tonnes for 1998-99 and 54.04 tonnes for 1999-2000.

TABLE XXXII

ESTIMATED QUALIFIED MARKET POTENTIAL DEMAND IN COIMBATORE DISTRICT FOR BANANA, COTTON AND PADDY. 1998-99 AND 1999-2000.

(in tonnes)

	Fertilizers	1998-1999	1999-2000
I.	**Banana**		
	Mixture 12	633.50	637.48
	Mixture 14	989.78	993.26
	Mixture 18	351.95	352.30
	Super phosphate	115.89	115.96
II.	**Cotton**		
	Mixture 16	209.43	213.40
	Mixture 18	53.35	54.04
	Super phosphate	76.45	77.45
III.	**Paddy**		
	Mixture 16	164.92	166.84
	Mixture 18	87.60	88.33
	Super phosphate	102.45	102.50
	Zinc sulphate	21.66	22.75

For Superphosphate, the qualified market potential estimated in cotton was 76.45 tonnes for 1998-99 and 77.45 tonnes for 1999-2000.

Paddy

The qualified market potential estimated for Mixture 16 in paddy was 164.92 tonnes for 1998-99 and 166.89 tonnes for 1999-2000. In the case of Mixture 18, the potential was 87.60 tonnes during 1998-98 and 88.33 tonnes during 1999-2000. With regard to Super phosphate, the qualified market potential demand was 102.45 tonnes during 1998-99 and 102.50 tonnes during 1999-2000.

For Zinc sulphate, the qualified market potential was 21.66 tonnes during 1998-99 and 22.75 tonnes during 1999-2000.

TABLE XXXIII
QUALIFIED MARKET POTENTIAL IN COIMBATORE DISTRICT BY MARKET BUILDUP METHOD

(in tonnes)

S.No.	Fertilizers	Average Qty. Sold/dealer	Estimated Potential
1.	Mixture 10	27.5	11330
2.	Mixture 14	15.0	6180
3.	Mixture 18	20.45	8425.4
4.	Mixtures 12,16	17.0	7004
5.	Super Phosphate	30.0	12360
6.	Zinc sulphate	6.0	2472

From the table above, it could be seen that, the estimated qualified market potential for Super phosphate was 12360 tonnes followed by Mixture 10 (11330 tonnes), Mixture 18 (8425.4 tonnes), Mixture 12,16 (7004 tonnes), Mixture 14 (6180 tonnes) and Zinc sulphate (2472 tonnes).

Gap Between Total and Qualified Market Potential Demand

The gap between projected total market potential demand and the qualified market potential demand was assessed and the results are presented in the Table XXXIV.

It could be noted from Table XXXIV that, there existed a wide gap between the total market potential demand and the qualified market potential demand in all types of Kothari fertilizers. Hence the casefirm may have to take appropriate steps in tapping the potentials.

iv. Market Share of KOTHARI Fertilizers

It is essential to analyse the market share of a particular fertilizer in a particular market segment to know the relative volume of business the company is making. It will also be helpful for product innovation and development. Hence market share of the case firm, namely KOTHARI fertilizers were analysed and the results are presented in Table XXXV.

From the Table XXXV, it could be inferred that out of the total Super phosphate sales of all the dealers, the share of Kothari was 35.91 per cent, while the market shares of Pioneer, EID Parry and Shaw wallace

TABLE XXXIV
GAP BETWEEN TOTAL AND QUALIFIED MARKET POTENTIAL DEMAND

(in tonnes)

S.No.	Fertilizer Name	1998-99			1999-2000		
		Total Market Potential demand	Qualified Market Potential Demand	Gap	Total Market Potential demand	Qualified Market Potential demand	Gap
I	**Banana**						
	Mixture 12	49500	633.50	48866.50	53088	637.48	52450.52
	Mixture 14	49500	989.78	48510.22	53088	993.26	52094.74
	Mixture 18	49500	351.95	49148.05	53088	352.30	52735.70
	Super Phosphate	962.5	115.89	846.61	1032.28	115.96	916.32
II	**Cotton**						
	Mixture 16	10227.75	209.43	10018.32	10362	213.40	10148.6
	Mixture 18	10227.75	53.35	10174.40	10362	54.04	10307.96
	Super Phosphate	5113.88	76.45	5037.43	5181	77.45	5103.55
III	**Paddy**						
	Mixture 16	9853.75	164.92	9688.83	9382.5	166.84	9215.66
	Mixture 18	9853.75	87.60	9766.15	9382.5	88.33	9294.17
	Super Phosphate	4926.88	102.45	4824.43	4691.25	102.50	4588.75
	Zinc Phosphate	394.15	21.66	372.49	375.30	27.75	347.55

TABLE XXXV

MARKET SHARE OF FERTILIZER BRANDS OF KOTHARI IN COIMBATORE DISTRICT

(in tonnes)

S. No	Fertilizer Name	Quantity of fertilizers sold by the sample dealer									
		Kothari	**Pioneer**	**EID Parry**	**Shaw wallace**	**Stanes**	**Shedi (Mani mark)**	**Leo (Caress Kavin)**	**SPIC**	**Total Quantity sold by dealer**	**Average quantity sold by dealer**
1.	Super phosphate	510 (35.91)	620 (43.67)	215 (15.14)	75 (5.28)	-	-	-	-	1420 (100)	24.48
2.	Zinc sulphate	60 (46.15)	-	-	-	-	-	25 (19.23)	45 (34.62)	130 (100)	5.41
3.	Mixture 10	220 (35.78)	245 (39.84)	-	40 (6.50)	80 (13.0)	30 (4.88)	-	-	615 (100)	15
4.	Mixture 14	90 (30)	130 (43.34)	-	25 (8.33)	40 (13.33)	15 (5)	-	-	300 (100)	9.37
5.	Mixture 18	225 (37.5)	230 (38.34)	-	55 (9.16)	70 (11.66)	20 (3.34)	-	-	600 (100)	12
6.	Mixtures 12 & 16	85 (27.41)	120 (38.70)	-	35 (11.30)	50 (16.13)	20 (6.46)	-	-	310 (100)	15.5

Figures in parentheses indicate the percentages to total.

respectively were 43.67 per cent, 15.14 per cent and 5.28 per cent. It could thus be inferred that regarding market share in Super phosphate, KOTHARI occupied the second position next only to Pioneer (Fig. II).

From the Table XXXV, it could be further evidenced that out of the total Zinc sulphate sales of the sample dealers, the share of KOTHARI Zinc sulphate accounted for the maximum of 46.15 per cent, followed by SPIC (34.62 per cent) and Leo brand (19.25 per cent). Thus, KOTHARI shared the maximum (Fig. III).

It could be further noted from Table XXXV, that the Pioneer accounted for the maximum share of 39.84 per cent of the total Mixture 10 sales, while KOTHARI accounted for 35.78 per cent, followed by Stanes (13 per cent), Shaw wallace (6.50 per cent) and Shedi. (4.88 per cent). Thus, KOTHARI occupied the second place next only to Pioneer (Fig. IV).

It could be further observed from Table XXXV that in the total sales of Mixture 14, of all the sample dealers, again Pioneer topped with 43 .34 per cent, while KOTHARI occupied the second position with 30 per cent. Stanes (13.33 per cent), Shaw wallace (8.33 per cent) and Shedi (5 per cent) followed in order (Fig. VI).

In Mixture 18 also, the Pioneer was the market leader accounting for 38.34 per cent of the market demand. However the KOTHARI was closely behind it with 37.5 per cent. The Stanes (11.66 per cent) Shaw wallace (9.16 per cent) and Shedi (3.34 per cent) followed in order (Fig. V).

Fig II.DEALERS LEVEL MARKET SHARE OF SUPER PHOSPHATE

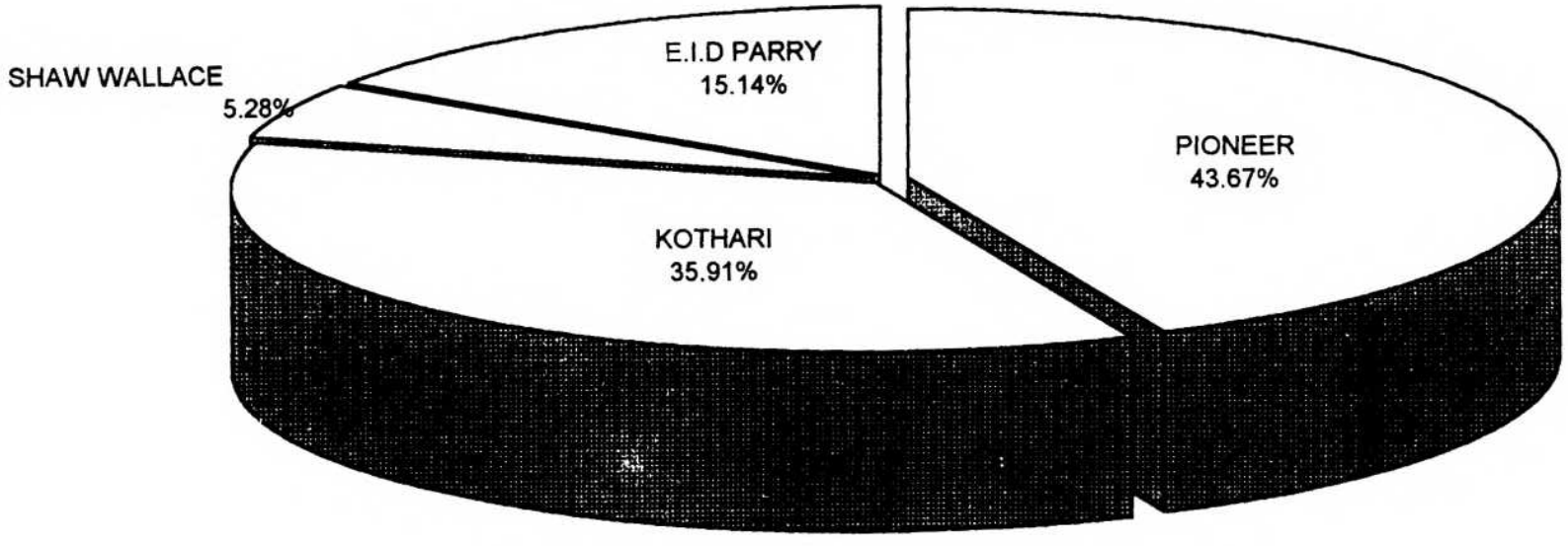
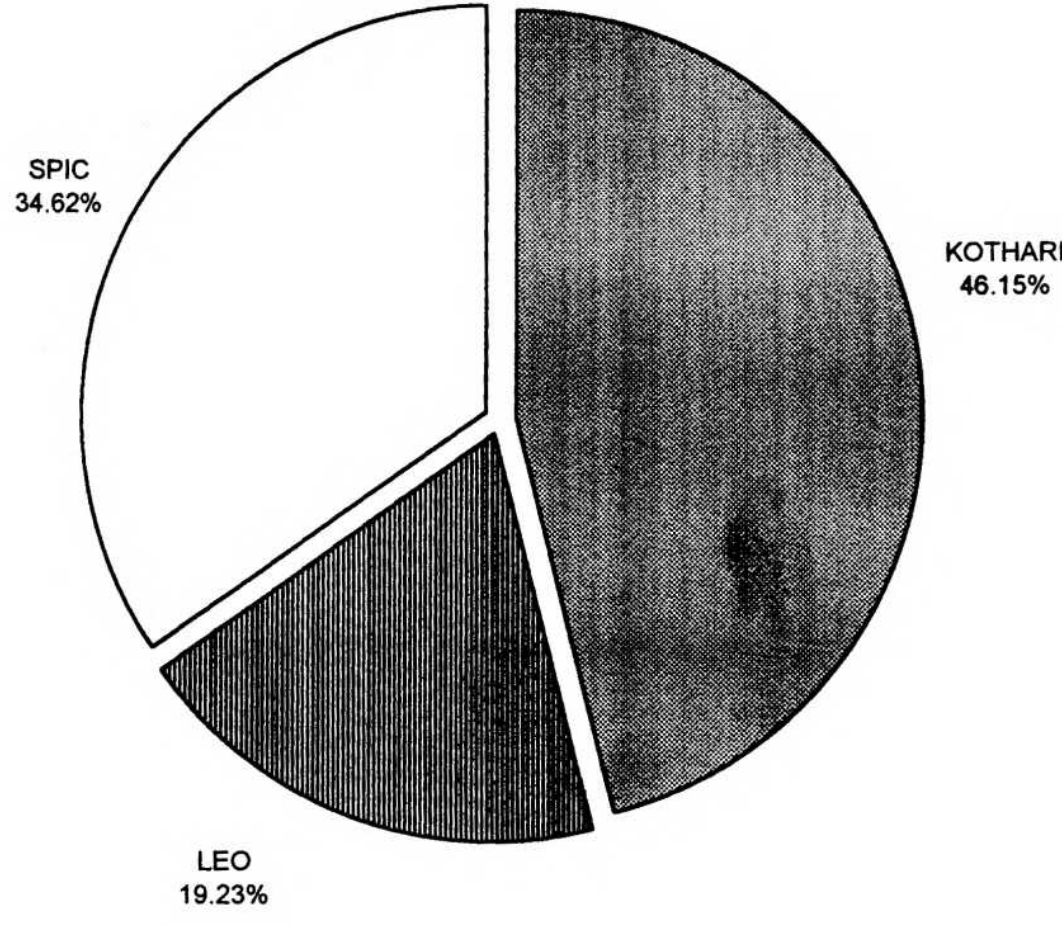


FIG III.DEALERS LEVEL MARKET SHARE OF ZINC SULPHATE



FIGIV.DEALERS LEVEL MARKET SHARE OF MIXTURE.10

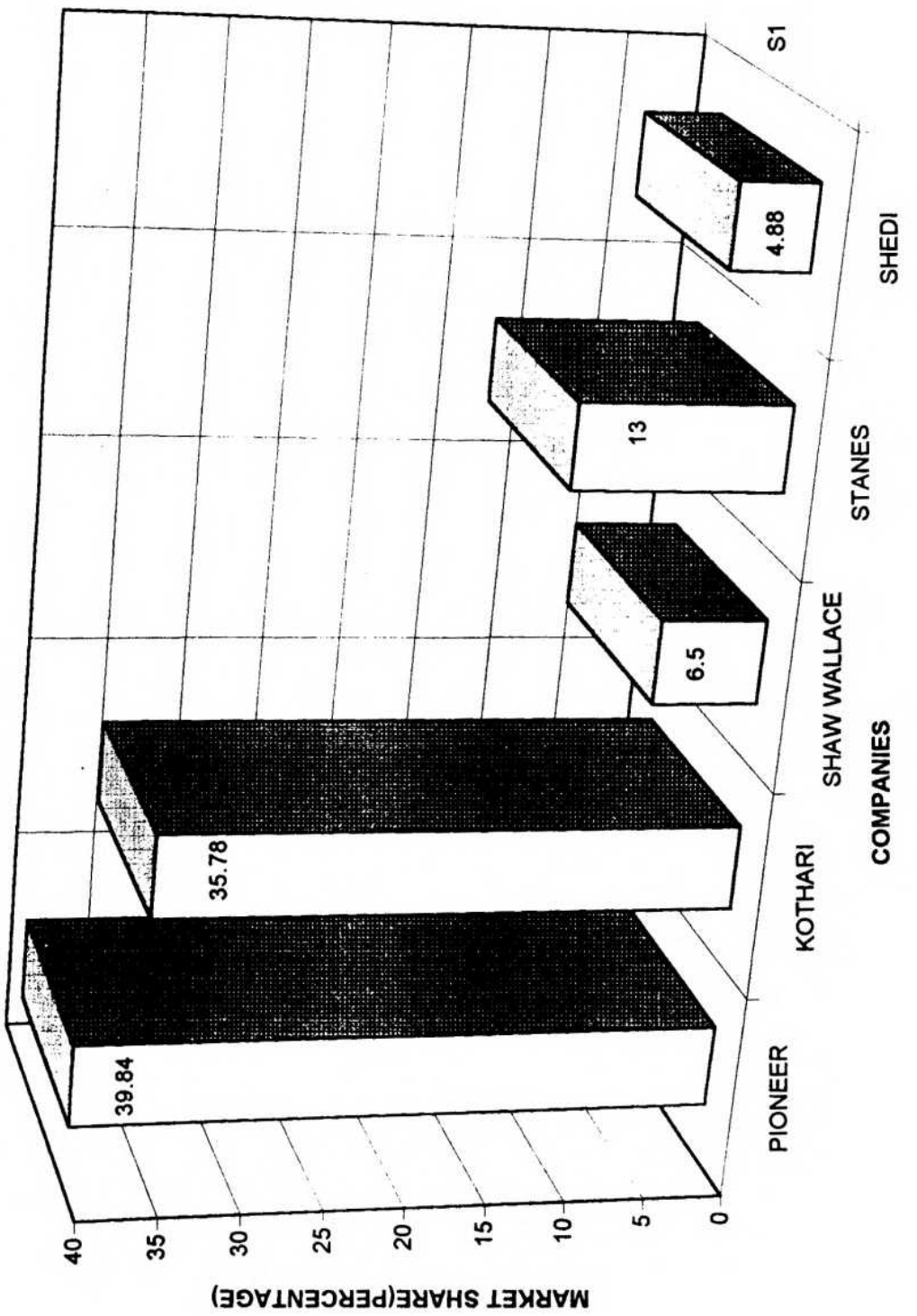


FIG V.DEALERS LEVEL MARKET SHARE OF MIXTURE 18

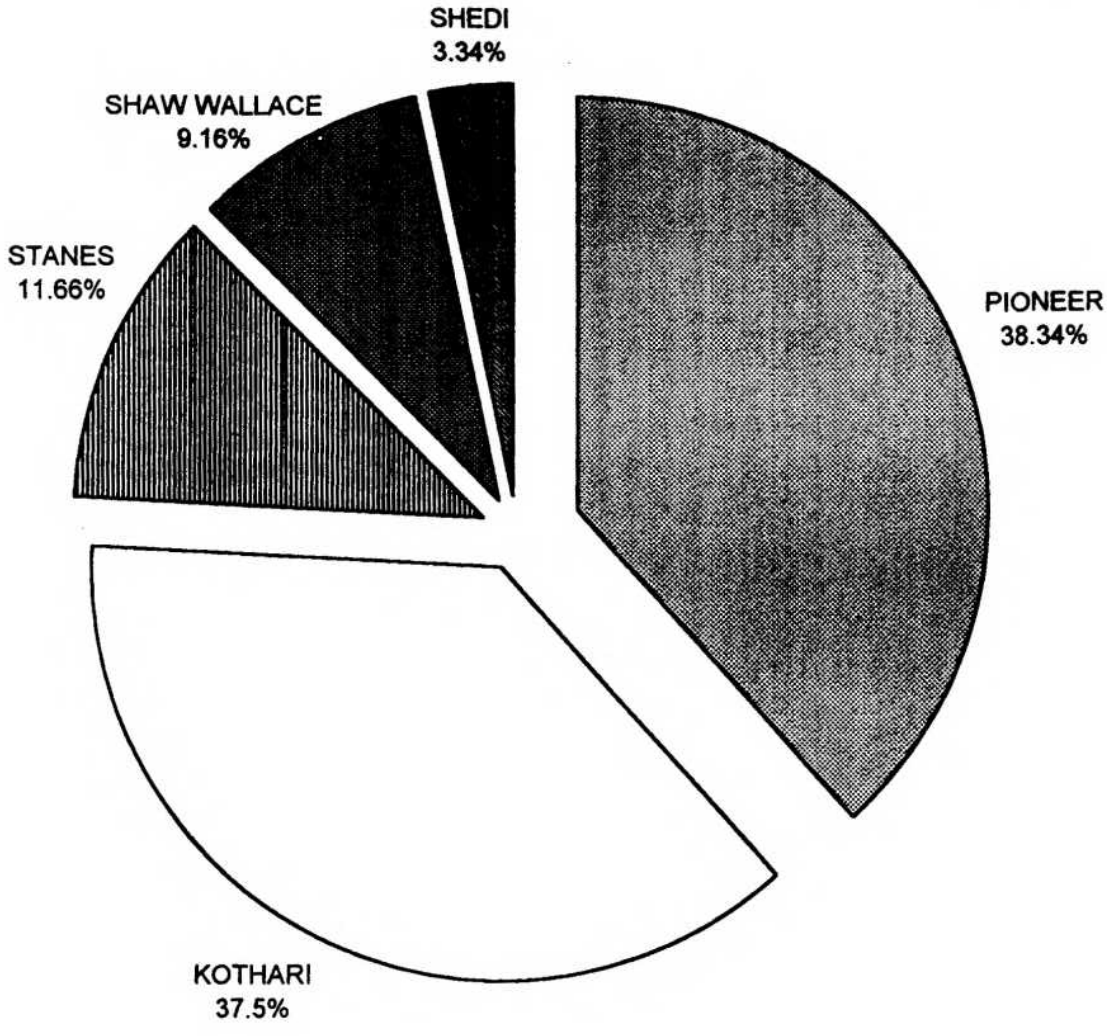
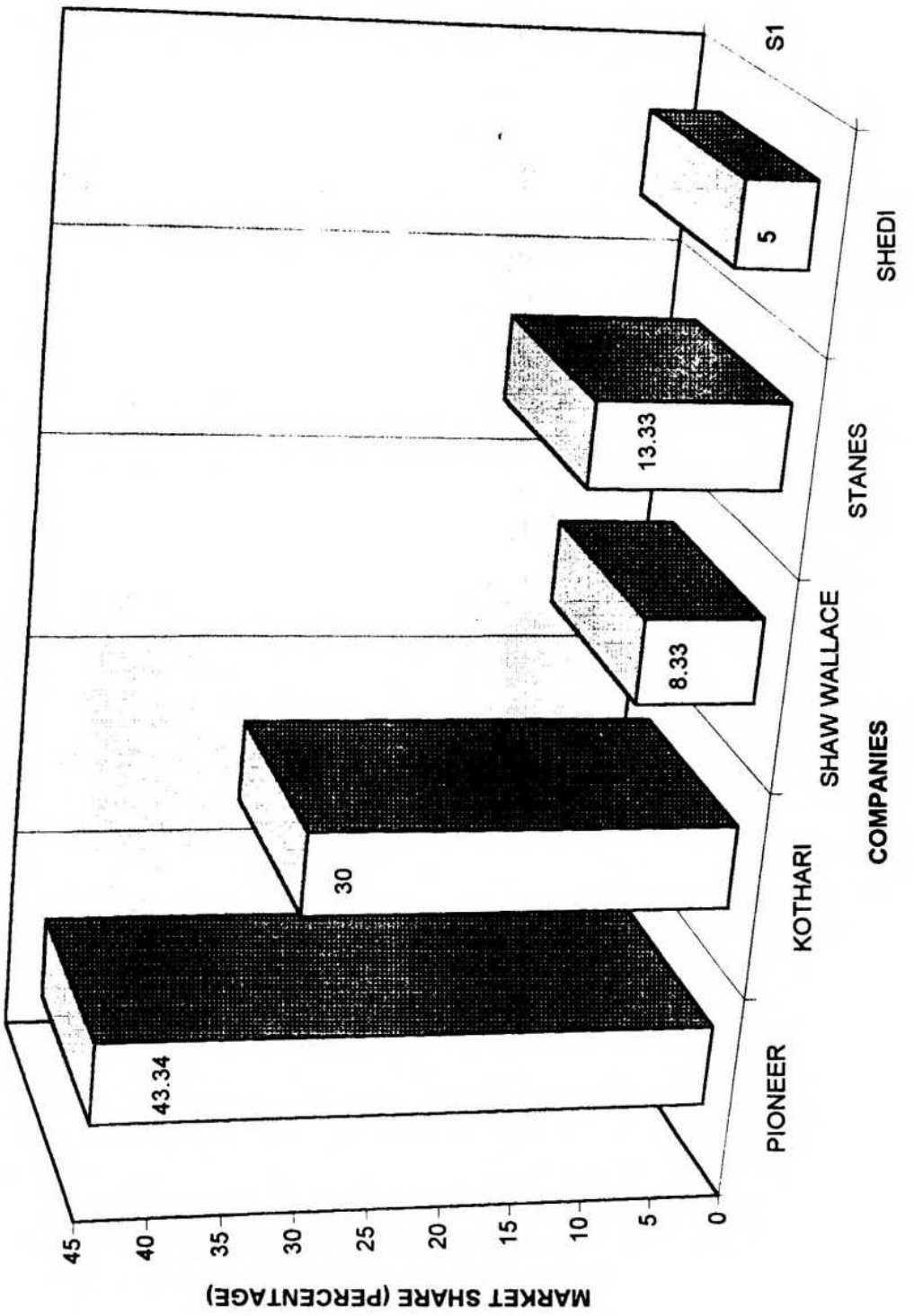


FIG VI.DEALERS LEVEL MARKET SHARE OF MIXTURE 14



It could be further found from the table that, the Pioneer accounted for maximum share of 38.70 per cent of the total sales of Mixtures 12 and 16, of all the sample dealers, while KOTHARI accounted for 27.41 per cent, followed by Stanes (16.13 per cent, Shaw wallace (11.30 per cent) and Shedi brand (6.46 per cent).

It could therefore be inferred that, the Pioneer was the market leader in both Super phosphate and Mixtured fertilizers. The next in market place was KOTHARI in both the fertilizers. With regard to Zinc sulphate, KOTHARI however occupied first position followed by SPIC.

v) Effectiveness of Promotional Methods

Promotional measures are taken both by manufacturers as well as dealers. The effectiveness of promotional measures undertaken by the casefirm at dealers' level are discussed.

Several promotional efforts were undertaken by the casefirm to promote their brands. The dealers' responses to each promotional activity was measured in a five-point scale with equal intervals in the increasing trend of effectiveness. The mean scores obtained under this scaling technique for each promotional activity reflected the order of effectiveness of the same. Therefore, the details on the same were gathered and analysed. The results are presented in Table XXXVI.

TABLE XXXVI

EFFECTIVENESS OF PROMOTIONAL METHODS

S.No.	Promotional activity	Arithmetic mean	Mean score	Rank
1.	Service to dealers	4.34	1.99	1
2.	Wall painting	3.20	0.89	2
3.	Campaigning	3.12	0.79	3
4.	Personal selling	2.33	0.70	4
5.	Leaflets and Posters	1.95	0.52	5

It could be noted from Table XXXVI that, the service to dealers was considered as the most influencing factor with a maximum score of 1.99. Dealers were the most important market intermediaries between producers of fertilizers and farmers. So, it could be rightly inferred that better the service to dealers, higher would be preference for the casefirm brand.

Different kinds of services are provided by the casefirm to dealers to promote the sales of their brands. The services are credit facilities, transport rebate, incentives etc. Dealers mostly favoured the brands supplied by the casefirm, which provided better services to dealers. Thus, dealer service emerged as the most influencing measure.

Next to service to dealers, wall paintings and campaigns were considered an effective promotional activities, by the dealers, whose mean scores respectiely were 0.89 and 0.79. Personal selling, Leaflets and posters

were considered as the other effective promotional activity by the dealers. The mean scores for these activities were 0.70 and 0.52 respectively. From the dealers' point of view, service to dealers, wall paintings and campaigns were considered as the effective promotional methods.

In general, the dealers in the study area did not take up any significant promotional activity.

Effectiveness Index

With view to assess the effectiveness of various promotional measures undertaken by the casefirm, the effectiveness index was developed and the results are given below.

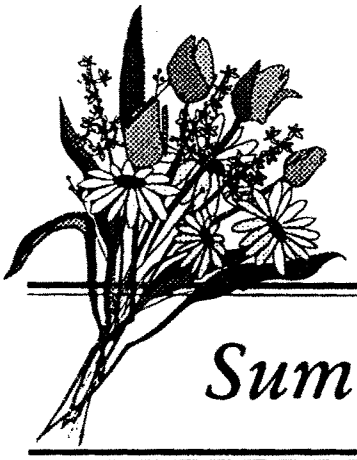
$$I = \frac{(1.95x1) + (2.33x2) + (9.39x3) + (3.20x4) + (3.12x5)}{15}$$

$$I = \frac{1.95 + 4.66 + 13.02 + 12.80 + 15.6}{15}$$

$$I = \frac{48.03}{15}$$

$$I = 3.20$$

The effectiveness index value obtained was 3.20. This index vlaue is referred back again in the five point scale to pickout the exact qualitative assessment, on the effectiveness of the promotional measures carried out by the casefirm.Thus, it was assessed that the promotional measures carried out by the casefirm were fairly effective and yet it could be made still more effective.



Summary and Conclusion

CHAPTER VI

SUMMARY AND CONCLUSIONS

A study on the Market potential for KOTHARI Fertilizers was undertaken in Coimbatore district. The specific objectives of the study were (i) to study the fertilizer brand preference of farmers and dealers. (ii) to estimate the market potential for fertilizers with special reference to casefirm products for Banana, Cotton and Paddy crops in Coimbatore district (iii) to analyse the market share of casefirm products at dealers' level (iv) to study the effectiveness of promotional measures followed by the casefirm in relation to fertilizers among the dealers and (v) to suggest policy measures, if found necessary, to the casefirm, to increase its market share.

The study was confined to three crops namely, banana, cotton and paddy, while analysing the demand for fertilizers of the casefirm. The sample consisted of 120 farmers and 24 fertilizer dealers, who were randomly selected in three blocks of Coimbatore district, namely Thondamuthur, Avinashi and Madathukulam. The data were collected by personal interview method using a pre-tested questionnaire.

Percentage analysis was employed to understand the types of brands used by the farmers, awareness of KOTHARI Fertilizers and brand preference of farmers and dealers. The Chain ratio method and Market buildup method were employed in order to estimate the requirements of fertilizers of the casefirm. The findings of the study are summarised below:

General Features of Samples Farmers and Dealers

As regards the literacy level of farmers, 37.50 per cent of the sample farmers had education upto elementary school level, followed by high School level (31.67 per cent). About 29.16 per cent of sample farmers had an experience in farming between 21 and 30 years, followed by 11 and 20 years (25 per cent).

The average size of sample farms in Thondamuthur, Avinashi and Madathukulam blocks were 3 ha, 2.50 ha and 3.18 ha respectively. As regards cropping pattern, Banana was the major crop in Thondamuthur to the extent of 47.43 per cent of the total cropped area of the sample farmers. Similarly in Avinashi and Madathukulam blocks Cotton (65.27 per cent) and Paddy (52.27 per cent) were the major crops respectively.

In all, 24 dealers were contacted for the present study. Nearly 42 per cent of the dealers had experience between 11 and 20 years and about 25 per cent of the dealers had more than twenty years of experience in fertilizers dealing. As regards nature of dealership, 100 per cent of the dealers were retailers in Avinashi block, followed by 87.5 per cent in Thondamuthur and 75 per cent in Madathukulam blocks.

About 58.33 per cent of sample dealers had education up to college level and only 4.17 per cent of sample dealers were illiterates. As regards products mix, fertilizer and pesticides were dealt by all the sample dealers.

Brand Preference Among Farmers

It was found that, in Thondamuthur block, Muriate of potash, Ammonium chloride and Urea constituted the major fertilizers used. In the case of super phosphate and Mixtured fertilizers, Pioneer brand was used by larger number of sample farmers than KOTHARI brand. Urea, Potash and DAP dominated in both Avinashi and Madathukulam blocks. SPIC urea and DAP were found to be popular in all the three blocks. Vijay complex dominated all the three blocks followed by FACT. In Madathukulam block, the super phosphate of KOTHARI brand was used by more number of farmers than the Pioneer brand.

It was found that, the awareness of KOTHARI super phosphate among the sample farmers in Thondamuthur block (75 per cent) and Madathukulam block (55 per cent) were higher than that in the Avinashi block (45 per cent). Zinc sulphate of KOTHARI was used in Madathukulam block only (32.5 per cent). In Mixture also, the awareness and adoption of pioneer brand were higher in both Thondamuthur and Madathukulam blocks than in Avinashi block.

As regards brand preference in Urea, SPIC was the most preferred brand followed by Vijay and FACT. The Pioneer super phosphate and Mixtures were the most preferred ones than KOTHARI. For Zinc sulphate, KOTHARI was the most preferred one than SPIC brand.

Dealer influence, easy availability, and quality were the most influencing factors of brand preference while, brand loyalty, sales promotion,

credit availability and packaging were the least influencing factors, as perceived by the sample farmers.

Brand Preference Among Dealers

In the case of urea, the SPIC and Vijay brands were dealt with by almost all the dealers, followed by FACT (83.39 per cent), Mangla (75 per cent) and Neyveli (62.3 per cent). In terms of quantity purchased, 33.84 per cent of urea purchased was of SPIC brand, while 19 per cent and 15 per cent of the total quantities purchased were of Vijay and FACT respectively. In super phosphate, Pioneer and KOTHARI were dealt with by 91.67 per cent and 70.83 per cent of the sample dealers respectively. In terms of quantity purchased, again Pioneer accounted for the maximum of 43.50 per cent of the total quantity of super phosphate purchased, followed by KOTHARI with 35.61 per cent.

In the case of Potash, Indian Potash Limited (IPL) brand was dealt by 100 per cent of the dealers, whereas SPIC and Rallis potash were handled by 91.67 per cent and 66.67 per cent of the sample dealers respectively. The DAP, SPIC and Vijay were dealt by 100 per cent and 91.67 per cent of the sample dealers respectively.

In the case Zinc sulphate, KOTHARI brand was dealt with by 45.83 per cent of the dealers, while SPIC and Leo brands were handled by 33.33 per cent and 20.84 per cent of the dealers respectively. As regards Mixed fertilizers, the Pioneer brand was dealt with by the maximum number of dealers, followed by KOTHARI and Stanes.

As regards preference for purchase of brands, SPIC urea was the most preferred brand (62.5 per cent) followed by Vijay (25 per cent) and FACT (12.5 per cent). With regard to Super phosphate, Pioneer brand was dealt with by all the sample dealers, followed by Parry (29.17 per cent) and KOTHARI (16.67 per cent).

In the case of Mixed fertilizers, Pioneer was preferred by maximum sample dealers (41.66 per cent), followed by KOTHARI (25 per cent), Stanes (12.5 per cent), Shaw wallace (12.5 per cent) and Local (8.34 per cent).

Credit availability, easy availability, high profit margin and good brand image were the factors in that order found to influence the brand preference of dealers, while high sales, special incentives, quality and promotional support were the least influencing factors.

Total Market Potential

The estimated total market potential demand for Mixtures 12, 14 and 18 during 1998-99 for Banana was 49.500 tonnes and during 1999-2000 it was 53,800 tonnes. For super phosphate, the demand was 962.5 tonnes during 1998-99 and it was estimated at 1032.28 tonnes for 1999-2000.

The estimated total market potential demand for Mixtures 16 and 18 for Cotton, were more during 1998-99 (10,227.75 tonnes) and 1999-2000 (10,362 tonnes) than that of 9853.75 tonnes and 9382.5 tonnes respectively during 1998-99 and 1999-2000 for paddy.

For Cotton, the market potential demand for super phosphate was assessed at 5113.88 tonnes and 5181 tonnes respectively during 1998-99 and 1999-2000, while it was 4926.88 tonnes for 1998-99 and 4691.25 tonnes for 1999-2000 for Paddy.

Qualified Market Potential

The qualified market potential demand for Mixture 14 in banana was 989.78 tonnes and 993.26 tonnes respectively during 1998-99 and 1999-2000.

For Cotton, the qualified market potential demand for Mixture 16 was the maximum during 1998-99 and 1999-2000, followed by super phosphate and Mixture 18. In the case of Paddy also the same trend as that of Cotton crop prevailed. For Paddy crop, Zinc sulphate requirement was 21.66 tonnes and 22.75 tonnes respectively during 1998-99 and 1999-2000.

The qualified market potential demand estimated by market buildup method for KOTHARI super phosphate was the maximum of 12,360 tonnes followed by Mixture 19 (11,330 tonnes), Mixture 16 (8,425.4 tonnes), Mixture 12 and 16 (7,004 tonnes) Mixture 14 (6180 tonnes) and Zinc sulphate (2472 tonnes).

Market Share of KOTHARI Fertilizers

Out of the total super phosphate sales, KOTHARI brand accounted for 35.91 per cent. Similarly, Pioneer accounted for 43.67 per cent, EID Parry accounted for 15.14 per cent and Shaw wallace with 5.28 per cent.

KOTHARI Zinc sulphate accounted 46.15 per cent out of the total Zinc sulphate sales and SPIC accounted for 34.62 per cent, followed by Leo brand (19.25 per cent). In the case of Mixture 10, KOTHARI's market share was 35.78 per cent, but Pioneer accounted for 39.84 per cent followed by Stanes (13 per cent) and Shaw wallace (6.50 per cent).

In other Mixtured Fertilizers namely Mixtures 14, 12, 16 and 18, the Pioneer brand had the maximum share, followed by KOTHARI, Stanes and Shaw wallace.

Effectiveness of Promotional Measures

The effectiveness of promotional measures undertaken by the casefirm at the dealers' level, was measured in five-point scale with equal intervals in the increasing trend of effectiveness. It was found that, the service to dealers was opined as the most influencing factor with a maximum score of 1.99, followed by wall painting (0.89) and campaigns (0.79). The other methods such as personal selling, leaflets and posters were the least effective ones. The effectiveness index development indicated that the promotional measures carried out by the case firm were fairly effective and still there existed scope for improving.

Conclusions

i. In Thondamuthur and Avinashi blocks, more number of farmers used Pioneer brand of super phosphate and Mixtured fertilizers than KOTHARI brand.

ii. In Madathukulam block, KOTHARI super phosphate and Zinc sulphate were used by more number of farmers than Pioneer super and SPIC Zinc sulphate.

iii. In the case of super phosphate Pioneer (KATHIR) brand was preferred by 51.67 per cent of the sample farmers followed by KOTHARI (30.83 per cent) and Parry (17.50 per cent).

iv. For Mixtured fertilizers also, Pioneer brand was preferred by 46.67 per cent of the sample farmers, followed by KOTHARI (31.66 per cent) and Stanes (21.67 per cent).

v. Awareness of KOTHARI Fertilizers among the farmers in Thondamuthur and Madathukulam blocks were higher than that in Avinashi block.

vi. Dealers' influence, easy availability and quality were the most influencing factors in purchasing a particular brand among farmers.

vii. As regards super phosphate, Pioneer brand was dealt with 91.67 per cent of sample dealers, followed by KOTHARI (70.83 per cent), Parry (50 per cent) and Shaw wallace (20.83 per cent).

viii. In Mixtured fertilizers, Pioneer brand was dealt with by maximum number of dealers, followed by KOTHARI, Stanes, Shaw wallace and Local.

ix. Credit availability, easy availability and high profit margin were the highly influencing factors in purchasing a particular brand among dealers.

x. The estimated total market potential demand for Kothari super and Mixtured fertilizers in Cotton crop was higher than that for banana and paddy crops.

xi. The qualified estimatead market potential for Mixture 14 in banana was 989.78 tonnes in 1998-99 and 999.26 tonnes in 1999-2000. This was followed by the Mixtures 12, 18 and super phosphate.

xii. The qualified market potential under market build-up method for super phosphate was estimated at 12,360 tonnes. It was followed by Mixture 10 (11,330 tonnes) and Mixture 18 (8,425.4 tonnes).

xiii. As regards super phosphate, Pioneer brand occupied the number one position (43.67 per cent) in the market, followed by KOTHARI (35.91 per cent), EID parry (15.14 per cent) and Shaw wallace (5.28 per cent) in order.

xiv. In Mixtured fertilizers, Pioneer brand was the market leader, followed by KOTHARI, Stanes, Shaw wallace and Local brand.

xv. The service to dealers, wall paintings and campaigns were perceived as the most effective promotional measures by the dealers. The effectiveness index indicated that, the promotional measures followed by the case firm were fairly effective.

The results in overall also showed that the hypotheses formulated for the study were valid.

Policy Implications

i. The awareness and adoption levels of KOTHARI Fertilizers in Avinashi block were low. So, the casefirm has to take suitable promotional measures to create more awareness about KOTHARI fertilizers among farmers in Avinashi block.

ii. Timely supply of KOTHARI fertilizers at a right place to the farmers and dealers would ensure and secure the KOTHARI brand loyalty.

iii. The dealers at large, favoured the credit facilities extended by the companies and the price stability of the particular product. The casefirm therefore, must keep an eye on the prices of the products and maintain them such that they are on par with that of the competiting firms.

iv. There has been declining trend in the area under paddy crop. The policy makers should try to understand the factors responsible for the declining trend in the area under Paddy crop and take up appropriate steps, atleast to retain the existing area.

v. From the study, it could be noted that the qualified market potential demand for KOTHARI super phosphate was high at dealers' level. Hence, the casefirm may try to understand the factors responsible for the same and take appropriate steps to boost up sales.

vi. KOTHARI super phosphate and Mixed Fertilizers occupied the second position in the market next only to Pioneer brand. Hence, the case firm has to reformulate its marketing strategy so as to increase its market share.

vii. As per the dealers' opinions, among the promotional efforts, services to dealers and wall-paintings were found to be most effective ones followed by the campaign. Hence the casefirm may have to concentrate more on the better and continuous service to dealers and on wall paintings to improve the sales of their products.

viii. The effectiveness index on promotional measures arrived at was 3.20. It indicated that the promotional measures carried out by M/s. Kothari had fairly good impacat; but still there existed scope to improve. Therefore, the case firm has to specifically reformulate its promotional strategy as well.

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