

CHAPTER VI

AN INNOVATIVE STRATEGY FOR FERTILIZER MARKETING SYSTEM

6.1 INTRODUCTION

Marketing activity centers around consumers' satisfaction through management of the marketing mix: Product, Prices, Promotion & product placement - the 4Ps of Marketing management. Marketing management should constantly evaluate the changing marketing environment to make adjustment needed to reach the goal. Identification and removal of the barriers to facilitate consumption are the key functions of marketing management. This is a valid proposition in the fertilizer marketing system. Marketing management should take innovative strategies to benefit the consumers and the firm.

A strategy that worked well in a given environment would prove ineffective in other. In the fertilizer industry the situation has changed. The consumption which was steeply growing has started declining since 1986.

In order to reverse the declining trend in the fertilizer production due to stagnation in consumption, the marketing system has to be revitalized. Marketing management concepts have to be adopted and marketing mix appropriately managed.

6.2 PRODUCT MIX

The requirement of plants are met by major fertilizer nutrients- Nitrogen, Phosphate and potash as discussed in the chapter II.

These nutrients are met by Urea, DAP, MOP, Complex fertilizers such as 17-17-17, 19-19-19, 15-15-15, 28-28-0, 20-20-0, 16-20-0, 23-23-0, 12-32-16, 14-35-14, 10-26-26, SSP, TSP, etc; in addition to these, there are also several brands of manufacturers. This multiplicity of grades and brands have created many marketing problems the farmer is confused when he is exposed to several diverse communications on these products. These also have created transportation and inventory problems. Pricing, advertisement and extension and agronomic advice to farmers all become complex and the marketing costs will increase due to the presence of such large product mix. There is an urgent need to minimize the range so that efficiency can be improved and costs can be reduced.

Urea, DAP & MOP would meet the entire requirements satisfactorily range provides flexibility to the farmer. It is also essential that only the highest analysis of any complex product is manufactured and marketed. For instance when 19-19-19 can be manufactured all the lower analysis such as 15-15-15, 17-17-17 etc should not be produced and marketed this will increase the logistics cost without any benefit to the consumer the farmer.

6.3 PROMOTION MIX

In the area of promotion and extension it must be made need based. An extensive situation analysis be made in order to tailor make the programs which can be location specific. A Market Research of the consuming points will help in making the promotional programs more relevant to the consumer. Further the overlapping and nullifying programs should be eliminated. The dept. of agriculture can monitor and remove such unproductive programs.

A common agency to promote fertilizer usage and its economics may be considered to save the cost of duplication of efforts that are being currently practiced.

6.4 SEGMENTATION APPROACH IN FERTILIZER MARKETING

Segmentation is considered an effective marketing management strategy. Products, prices, distribution and promotions can be segmented for increased impact. For instance the planters, farmers with large holdings respond differently to different marketing mix as compared to small, marginal farmers and those farmers cultivating un irrigated areas.

The field survey has revealed that the needs , capabilities attitudes with regard to fertilizer use from small, medium , large farmers and planters are different. Further the requirements of farmers with irrigated facilities and those that are cultivating dry land vary too much.

The type of products required, the prices that they can afford, the communication needs , technology transfer from these target groups are different, There is adequate demand from these segments to develop systems tailored to the specific needs.

The survey has also revealed that the facilities meant for small and marginal farmers and those cultivating dry lands are being largely availed by other segments of farmers due to inadequate monitoring.

Bulk movement , using paper bags, introducing 20 kg, 5 kg bags for the specific needs of farmers help stimulating consumption from the sector.

6.5 INNOVATIVE APPROACH IN FERTILIZER MARKETING - A CASE STUDY OF IFFCO³

The story of Indian Farmers Fertilizer Cooperative Limited (IFFCO) is a success story unparalleled in the annals of Indian cooperatives. Set up in 1967 as a multi-unit cooperative with an authorised capital of Rs.200 crores, the society has indeed blossomed into a premier organisation in the capital-intensive fertilizer industry in India. Ever since its Kalol and Kandla plants went into commercial production during 1975 they have carved a niche for themselves in the realm of capacity utilisation and establishing new production performance records each year. The Phulpur plant which went into production in March 1981 further increased the organization's production capacity, thus enabling IFFCO, a federation of 27,000 societies spread over 18 states and 4 union territories, to provide a giant supply base for the cooperative distribution system. The organization of the farmers, for the farmers and by the farmers today stands committed to strengthen cooperative movement in the country.

IFFCO's three modern fertilizer plants in operation at Kalol and Kandla in Gujarat and Phulpur in UP, have a total production capacity of 19 lakh tonnes of fertilizer material. The Kalol plant has an annual production capacity of three lakh tonnes of ammonia and 3.99 lakh tonnes of urea. The Kandla plant with an annual capacity of 3.09 lakh tonnes of P_2O_5 produces about 10 lakh tonnes of NPK/DAP materials. The third plant at Phulpur has annual production capacity of 2.97 lakh tonnes of ammonia and 4.95 lakh tonnes of urea.

The fourth plant with an investment of Rs.696 crores and installed capacity of 7.26 lakh tonnes of urea annually at Aonla near Bareilly in UP

³ Annual report of IFFCO, 1992-93 and discussions with the marketing executives of IFFCO.

is set for production in early 1988. The total production capacity of IFFCO will therefore increase to 26 lakh tonnes of fertilizer material.

While the seventies saw IFFCO rising in status, the Eighties has been a period of consolidation and take off for phenomenal growth in all directions. The total installed capacity increased from 3.42 lakh tonnes of nutrients ($N+P_2O_5$) in 1979-80 to 8.39 lakh tonnes in 1986-87. The total production increased from 3.66 lakh tonnes of nutrients in 1979-80 to 8.81 lakh tonnes in 1986-87, which accounted for 10 per cent of nitrogenous and 20.5 per cent of phosphatic fertilizer produced in the entire country. During 1986-87 the over-all production performance was 105 per cent with Kandla achieving a capacity utilisation of 111 per cent, Kalol 103 per cent and Phulpur 97 per cent.

IFFCO has the distinction of winning many awards from the Fertilizer Association of India and National Productivity Council for outstanding production performance.

Marketing Strategies

With the increased production at plants, and expanding horizons of its marketing territory, the dynamic marketing operations of the society have also risen to new heights to meet the growing responsibilities and challenging marketing situation in the country.

Being a cooperative organization committed to strengthen the cooperative structure, IFFCO channelises its products through cooperatives having 33,000 retail outlets. The success of marketing strategy is reflected in increased sales year after year. Despite unfavorable weather and unprecedented drought conditions prevailing in the country, IFFCO was able to push around 20 lakh tonnes of fertilizer material with a turnover of about Rs.488 crores in 1986-87.

Farmer's Service Programme

IFFCO, from its very inception, has been alive to its responsibility of increasing agricultural productivity through promotion of scientific farming including balanced fertilization among the farming community. IFFCO field staff use a whole range of methods such as field demonstrations, farmers' meetings, soil testing, crop seminars, field days, distribution of minikits etc. to the weaker sections of the community for effective transfer of improved agricultural technology.

Farmers Service Centres

IFFCO has established 150 farmers service centres where all essential inputs like fertilizers, seeds, agro-chemicals, and technical guidance are provided under one roof. Agricultural implements like seed-cum-fertilizer drills, sprayers, dusters, etc. are also provided to farmers on custom hiring basis. Considering their popularity among the farming community, IFFCO, in collaboration with NCDC has developed about 2000 cooperative societies (out of a target of 2500) as model sale points. To impart momentum to the cooperative thrust, IFFCO has been organizing Jawaharlal Nehru Memorial Lecture on Cooperation every year since 1983 and has also instituted an annual cash award to eminent cooperators for outstanding contribution towards cooperative movement.

Village Adoption

IFFCO has adopted over 650 villages all over the country for their integrated socio-economic development. Along with propagating improved agricultural technology, efforts are made for uplift of the village community through promotion of family welfare, child care, adult education, conservation of energy, social-forestry, medical check-up, veterinary check-up, etc.

Special Projects

In keeping with the nation's priorities, IFFCO has initiated several projects to promote dryland farming, production of oil-seeds and pulses, increasing rice productivity in potential blocks and developing tribal and backward areas. Problem Land Reclamation Projects have been taken up in Sultanpur (UP), Sunderbans (West Bengal) and Kole Land in Trichur (Kerala).

Farmers Integration Scheme

To fulfil its objectives of serving the farming community, the society has drawn up a scheme of farmers integration under which small groups of farmers from one part of the country are taken to another part. The object is to expose them to modern agricultural practices and also assist them in familiarizing themselves with cultural heritage, social customs and life styles of different regions of the country and thus achieve the objective of national integration. More than 2000 farmers have been covered under this scheme during 1985-86 and 1986-87.

Farmers Community Centres

IFFCO has established 10 Community Centres in tribal and backward areas to serve as a nucleus for supplying farm inputs to a cluster of villages, to disseminate latest agricultural technology, serving the health services need of the area and providing educational and recreational facilities. These centres are at Samundi (Maharashtra) Bhodhwara, Tarasgaon (M.P.) Udaka, Pipalwas (Rajasthan), Raipalli (Orissa), Abiana Khurd (Punjab), Leduki (U.P.), Peddarkur (A.P.), and Alambarmedu (Tamil Nadu).

6.6 CONCLUSION

This chapter discusses the need and scope for an innovative approach in fertilizer marketing. The innovation can be in all the areas of marketing mix - product range should be reduced and made flexible to meet the crop and soil needs, liquid fertilizer and fertilizer in small (5 kg) bags and also in bulk (one tonne) should be marketed to take care of the needs of the small and marginal farmers and also the requirement of large holding farmers. Promotion should be made dynamic to the needs of the farmers utilizing the information facility and media development. Logistics should be streamlined.

CHAPTER VII

CONSUMER BEHAVIOUR IN FERTILIZER MARKETING

A sample study

7.1 INTRODUCTION

The major task of marketing management should be to adapt the firm's resources to the changing market opportunities and challenges. Instead of marketing products that are convenient to produce, the marketer should carefully investigate, what the consumer needs? Can he be persuaded to buy what is good for him? How much he is capable and willing to pay and how the firm can make long term profits through satisfying customer needs? Complacency developed in a sheltered environment is difficult to deal with in a changed environment, where the customer may have alternate choice.¹ Even the Indian Railways have learnt the need to understand the changing environment and consumer needs and behaviour. The new strategy of providing door to door delivery, container services etc, have become highly rewarding. The railways now have a Marketing Research cell, to understand the changing needs of passengers and goods traffic.

If marketing organizations have to survive, grow and meet the challenges, thrown by market forces, the customer has to be in the focus of all marketing decisions. The consumer behaviour being so complex, What should the marketer know about consumer and his behaviour? Answers to questions, who are the customers? what do they buy?, why do they buy?

¹ Subash C. Mehtha (1985) "Buyer behaviour and market segmentation" p.19, Published by Tata McGrahill, New Delhi.

where do they buy? lead to better understanding of the consumer behaviour and better management of the marketing mix.²

Understanding the consumer needs, capabilities, attitudes and environment or fundamental to the success of marketing operation.

The fertilizer industry which had been in the sheltered environment for the last four decades had paid little attention to understanding the consumer background and motivations. Hardly a few fertilizer marketing units have established a Marketing Research cell and even those who have set up, seldom put forth efforts to understand the market and the consumer behaviour.

The sample surveys undertaken for the purpose of this research reveal that farmers can be influenced to change their buying behaviour and adopt new methods and techniques if they are properly guided. Farmers who had been traditionally using only organic manure have adapted to chemical fertilizers.

A study was also conducted to find out the perception of fertilizer sales personnel of IFFCO, a large scale fertilizer manufacturing unit in the cooperative sector having plants at Gujarat and Uttar Pradesh (1993) on farmers awareness, needs, expectations from fertilizer marketing organizations, dealer outlets, the key factors that can stimulate & affect the consumption rates.

Marketing of concepts must precede the marketing of product and services. This chapter brings out the details of these studies and the findings.

² Subash C. Mehtha (1985) "Buyer behaviour and market segmentation" p.32, Published by Tata McGrawhill, New Delhi.

7.2 FARMERS SURVEY

A survey of the farmers was conducted during Feb- Mar 1994, to study the awareness level of the fertilizer use, its economics, and also attitudes/ purchase behaviour of farmers.

The survey covered randomly selected farmers in villages of TamilNadu and Andhrapradesh. List of the villages covered are in the appendix.

A simple structured, close ended questionnaire was developed to obtain the response through personal interviews, at the residences and work place of farmers. Close ended questions containing several alternatives were built in to the questionnaire. Thirty main questions covering, the demographic, educational background ,their feed back on Product. Pricing , Promotion and Placement in the fertilizer marketing and other agricultural inputs (seeds, pesticides, etc.) were in the questionnaire.

Services of M.B.A. students were taken for conducting the field interviews, in local language . An intensive orientation program was conducted to the interviewers.

Since this study has attempted to obtain the awareness and attitudes of the farmers towards fertilizer use and the fertilizer marketing system the sample size is determined based on the availability of resources.

7.3 ANALYSIS AND INTERPRETATIONS

1. The study covered 210 farmers in 14 villages of TamilNadu/Andhra Pradesh. For the purpose of obtaining the feed back of farmers on the marketing systems and to estimate the level of awareness, the sample

size is considered adequate for obtaining the behavioral aspects of the target consumers.

2. Twenty eight percent of the responded farmers had small holdings less than 2 hectars,49% medium holdings - between 2 and 5 hectars and 23% large with over 5 hectare.

Fertilizer marketing system should focus on small and medium farmers who account for 77% of the farming population. Marketing mix and strategies must be based on this target group of consumers.

3. Sixty one percent of farmers were cultivating irrigated land and 39% non- irrigated

Farmers with irrigated land offer high current potential for fertilizer consumption. Marketing effort towards this group should be for improving the application levels and bringing/reinforcing increased awareness towards balanced application and adoption of high yielding varieties (HYV).

4. Only 20% of the respondents had no formal education,36% had elementary schooling and 44% had education beyond the high school level.

This information is of vital importance to fertilizer marketing system in formulating promotion programs and selecting the communication media.

5. Seven percent of the respondents were below 25 years of age,52% were in the age group 25-45, and 41% were over 45.

This reveals that 59% of the farmers belong to the active and energetic group and innovation in agriculture is possible if efforts are diverted to this group. Training programs, Orientation courses on improved agricultural practices and usage of fertilizer will have significant impact.

6. Only 3% of the farmers did not use any fertilizer, 20 % applied urea, 22% DAP, 19 % Fertilizer mixtures. 3% of the farmers were using whatever fertilizer products that were available at the time of application and the huge majority were keen on the type of fertilizer products to be applied.

The analysis also indicates that DAP and urea are the most popular products, Complex products take the third place.

This reveals that farmer's awareness to fertilizer use is improving and that they are receptive to communications on fertilizer use and improved farm technology and reinforcement is needed.

7. To a question whether they were aware of the fertilizer to be applied and the quantity to be applied for different crops, 53% expressed that they were not sure whether what they were applying was correct. Fertilizer manufacturing units and extension agencies have an important role to play in educating farmers and offering the right products.
8. Fertilizer dealer and the agricultural Dept officials together form the main source of information to farmers. 39% of the respondents reported that dealer / Dept were the source of information. Only 8% of the farmers reported that fertilizer salesmen were the source of information. Cinema, Radio, and News papers had each a weightage of 10% as source of information.

The analysis reveals that the fertilizer salesmen must be made more effective in imparting information needed by farmers and also for transfer of technology. The same feed back information was obtained from the large scale survey of farmers undertaken by the Fertilizer Association of India Southern Region, Madras, details of which are discussed in the first chapter under overview of literature. This information can be used in developing promotional programs , salesmen and dealer training courses.

9. Only 39% of the villages had adequate dealer net work and 44% of the respondents reported that they had to get their requirement from dealers located on an average distance of 5kms.

This analysis points out to the need of development of retail network at the village level and motivating the dealers to be active in the marketing system.

10. Forty one percent of the farmers bought their requirements from cooperatives, 26% from private dealers and 33% from both.

This indicates the large scope for cooperatives to strengthen their marketing approach.

11. To the enquiry, what the farmers would do when they were unable to get the fertilizers they need at the retail point, 30% reported that they would wait until the stock of the product they needed arrived, 41% responded that they would go out to neighboring village to get, 26% reported that they would use whatever was available at that time, only 1% said that they would use any fertilizer if what they wanted was not available in the village.

12. Regarding the usage pattern 73% reported that they would apply fertilizers to irrigated crops and 27% applied for both irrigated and rained crops.

This reveals that fertilizer application to non-irrigated crops is considered risky and not economical by a large majority of farmers. Fertilizers should be promoted for rainfed crops which has a large potential.

13. Thirty one percent of farmers bought fertilizers from cooperatives because of; quality and 25%, for credit, 24% for price, 9% for service and the rest for other reasons.

The image of the cooperative retail outlets must be improved. They must be made more service oriented; by maintaining stocks of products needed by the farmers , offering soil testing service etc.

14. The private dealer did not rate high with regard to the product quality, Regarding credit and service levels farmers rate private dealers higher than cooperatives. 36% of the farmers said that they bought fertilizers from cooperatives because of the availability of credit.

This indicates the need for channel development , both private and cooperatives.

15. Seventy eight percent said they were applying the right quantity of fertilizers. This requires a better understanding of the farmers awareness of the right product. The interaction between farmers and the salesmen must be improved.

16. **Lack of funds has been a significant factor in the non application /under application of fertilizer products. 29% reported that lack of finance was the main handicap. 14% believed that the application of fertilizers was not economical,22% said that they did not apply because of non availability of fertilizer products.**

It is interesting to note that price has not been a major factor for stimulating or decreasing the use . Only 9% reported that increase in price was a factor for the non user. The quantity used may come down but farmers do not give up use of fertilizer because of increase in price This is a vital feed back to fertilizer marketing strategy.

17. **Thirty percent of the farmers reported that they decreased the quantum of application when the price rose steeply due to de-control of Phosphates and Potash.31% reported that they shifted to cheaper products. This is a important feed back for policy decisions.This supports the information on the decrease in the consumption level of P by 30% and K by 70%. Fertilizer marketing efforts should be directed to justifying the use of fertilizers, particularly when the price increases.**
18. **Regarding the awareness level to the balanced application of fertilizers, 77% said that they knew about the importance of balanced application for crop growth and higher productivity.**
19. **A large proportion of the farmers still do not avail the soil testing facility.Testing the soil for its nutrient levels periodically is basic for economical use and choosing the right product. Only 35% reported that they had availed the service. 24% reported that the facility was not available, Among those who used the service 10% reported that the results were delayed**

This is a key area in fertilizer marketing system both from the point of promoting the right product and improving the economics of usage from the farmer's point of view. The FAI-SR study has also the same feed back.

20. Application of fertilizer in split dosages is an important requirement for better response of the crops and improved economics. Only 32% of the farmers practiced the split dosage. The rest 68% applied the fertilizer at one time. Marketing effort should be focused on this aspect.
21. Visits of fertilizer sales men to the villages are important aspects of fertilizer marketing both for arranging the stocks at dealer points and transferring the farm technology. 82% of the respondents reported that the salesmen visits were not adequate and most of the visits were during the main seasons and the farmers were busy with their operations at the time of such visits. The marketing system must make note of this. Even in the earlier analysis it was reported that fertilizer salesmen was not the main source of information to the farmers.
22. The Dept. of agriculture of the state government has played a useful role in providing the information needed by the farmers as compared to salesmen of fertilizer units. 48% of the respondents reported that the Dept. officials visited their villages frequently.
23. The farmers meetings arranged by manufacturers are meant to provide both technical and commercial information to farmers. Only 14% of the farmers of the 14 villages where the survey was conducted reported that the farmers meetings were effective.

This is another area requiring streamlining.

- 24. The fertilizer publicity vans are meant to visit villages and to carry mass communication programs for the benefit of farmers; 40% of the respondents reported that the vans visited the villages frequently. 17% said they had not seen a van in their villages. 68% of the farmers who witnessed the publicity van programs and messages given by the van programs are not useful and relevant.**
- 25. To the question , what factors would encourage them for increased use of fertilizers, 27% reported lower price, 30% said easy availability, 22% , indicated availability of credit on time, 14% on irrigation facility and 7% on improved procurement prices . This feed back provides the significance of non- price factors in stimulating consumption.**
- 26. Seventy five percent of the farmers are aware that the fertilizer products are being subsidized by GOI and that they must apply this input judiciously.**
- 27. Sixty percent of the farmers covered by this study said that they fully depended on farming for their livelihood.**
- 28. Availability of other agri inputs for the farmer is equally important for consumption of fertilizers. 48% of the farmers reported that there was difficulty in getting seeds and pesticides on time.**
- 29. Forty seven percent of the respondents reported that the existing fertilizer product range must be modified to suit their crops and economics**

30. Farmers report that fertilizer manufacturers can assist by timely supplies to dealers (23%), deputing salesmen to villages (11%), giving advice on cultivation practices and offering soil testing facility (38%).

7.4 SURVEY OF THE FIELD SALES FORCE

A survey of the sales executives of IFFCO was conducted during sales conference in Dec. 1993 with the objective of obtaining their perception of the farmers. Coming under their territory of operation. The study covered 25 executives with varied experience in fertilizer marketing ranging from 5-15 years. All the respondents were graduates in Agriculture 85% of the respondents were from Tamil Nadu the rest 15% are from Karnataka.

Following are the responses

1. Urea, DAP are the most preferred products by farmers.
2. 85% of the respondents ranked availability of the product, credit and price as the consideration for farmer's usage of fertilizer products.
3. All the respondents expressed that the consumption of urea increased consequently decontrol of P & K. 85% of the respondents expressed that the consumption of urea went up by 20% and the consumption of P & K were affected to the extent of 30% for P and 60% for K.
4. All the sales executives reported that the decontrol had affected balanced application of fertilizers.
5. It was reported that the awareness of economics of fertilizer use is low among farmers at 15%.

6. 90% of expressed that the soil testing facility was not avoided by farmers because the results were unduly delayed and also the service was not accessible.
7. Credit followed by quality are the main reason for farmers purchasing from Co-ops.
8. 90% expressed that withdrawal of subsidy would affect fertilizer consumption.
9. Easy availability of high analysis products, better economics are considered as key factors for improving fertilizer consumption.

7.5 CONCLUSION

The study has brought out important aspects of farmers background and behavioral aspect for policy considerations at both macro and micro levels for improving fertilizer marketing systems. It has identified key factors for increasing the consumption rates and also their purchase behaviour.