CHAPTER V

SUMMARY AND CONCLUSION

Agriculture is the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that nurtured the development of civilization. Wheat is the first important and strategic cereal crop for the majority of world’s populations. It is the most important staple food of about two billion people (36 per cent of the world population). In 2002, the world’s main wheat producing regions were China, India, United States, Russian Federation, France, Australia, Germany, Ukraine, Canada, Turkey, Pakistan, Argentina, Kazakhstan and United Kingdom. Wheat is an edible grain, one of the oldest and most important of the cereal crops. Though grown under a wide range of climates and soils, wheat is best adapted to temperate regions with rainfall between 30 and 90 cm. Wheat is grown in India in an area of about 30 Million ha with a production of 93 Million tonnes. The normal national productivity is about 2.98 tonnes/ha. The major Wheat producing states are Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, Rajasthan, Bihar, Maharashtra, Gujarat, Karnataka, West Bengal, Uttarakhand, Himachal Pradesh and Jammu & Kashmir. These States contribute about 99.5 per cent of total Wheat production in the country. Remaining states, namely, Jharkhand, Assam, Chhattisgarh, Delhi and other North Eastern states contribute only about 0.5 per cent of the total Wheat production in the country.

Indian fertilizer industry is one industry with immense scopes in future. The Indian fertilizer industry is one of the allied sectors of the agricultural sphere. India has emerged as the third largest producer of nitrogenous fertilizers. Fertilizer plays important role in crop cultivation. Fertilizer enhances the growth of crop which ultimately results into higher yield. Now a day’s water soluble fertilizer has vital role in crop cultivation especially in case of fruits and vegetable. As water soluble fertilizer leads to fast absorption of nutrients and carriers. It can meet specific crop demands at particular crop growth period, which ultimately helps in development at various physiological stages of the crop. Water soluble fertilizers are very essential for better crop growth yet it is not gain popularity in India. In India water soluble fertilizers are mainly use in fruits and vegetables cultivation. In Gujarat annually, almost 38 to 40 lakh MT of fertilizers are consumed while total consumption of water soluble fertilizers in India is 1,10,000 MT.
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With this background, the present study was carried out with the following specific objectives.

1. To study socio economic profile of farmers in Junagadh district
2. To identify the factors influencing the consumption of magnesium fertilizer
3. To study the resource use efficiency of wheat growers
4. To analysed brand preference of farmers toward magnesium sulphate
5. To analyse purchase and consumption pattern of magnesium sulphate users

Two stage sampling technique was adopted as per the objectives of the study. At the first stage, Junagadh district was selected. At the second stage, 100 farmer was selected purposively. Three fertilizer manufacturing company was selected randomly in Junagadh district to estimate consumer preferences towards fertilizers by using conjoint analysis.

Primary data required for the study was collected from the questionnaire, face-to-face interview with the farmers given in Annexure-I and Annexure-II respectively. Primary data means data related to the objectives like, socio- economics profile (age, family size, education, annual income, gender, social status, farm size, etc.), factors influencing consumption of fertilizers (fertilizer consumption in wheat, area under crop, farm gross income, extension participation, etc.), resource use efficiency (yield of wheat, quantity of seed, expenses on labour and plant protection chemicals, irrigation charges, etc.). Data were collected during the month March to April 2017.

5.1. MAJOR FINDINGS OF THE STUDY

5.1.1. Socio-economic profile

- The majority of 99 per cent farmers were married and 63 per cent belonged to age group of 36 to 50 years which indicate mostly middle age group engaged with the farming.
- The major per cent of farmers 58 per cent lived in nuclear family and 61 per cent belonged to the below 5 members in their family.
- The majority of farmers 59 per cent had the education up to higher secondary level.
- The majority of farmers 47 per cent were medium farmers. The majority of respondent farmers 87 per cent occupied with agriculture.
- 57 per cent farmers belonged to the income range between Rs. 150001 to 400000.
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- 81 per cent have not a membership with any organization and 95 per cent have not taken part in any extension programme.
- 100 per cent decision were taken by male and 47 per cent had 10 to 20 years’ experience in farming.

5.1.2. Factor affecting consumption of magnesium sulphate

The study about the factors influencing consumption of fertilizers revealed that the variables under study together were contributed 96.93 per cent variation in fertilizer consumption as indicated by $R^2$. The results indicated that irrigated area under crop, farm gross income and irrigation were positive and significant impact on consumption of quantity of fertilizers at a 1 per cent significance level. The other variables experience in farming, extension participation and education are found to be non-significant. The sum of regression co-efficient was 2.443 indicating increasing return to scale. It means the gross value increases proportionately with an increase in the variable factors.

5.1.3. Resource use efficiency of wheat cultivation

The results of the resource use efficiency in wheat revealed that the elasticity of output in response to use of quantity of seed, expenses on plant protection chemicals, expenses on manure and fertilizer expenses were found positive and significant in Junagadh district. It indicates that there is scope to increase the uses of these resources to increase the output.

5.1.4. Brand preference of farmers toward magnesium sulphate

During the study, it was found that the farmers’ preference toward T. J. Agro chemicals and fertilizer Pvt. Ltd. and product of other companies were influenced by attributes like brand, price and mode of payment. The results revealed that among all the attributes, price of particular product had the greatest influence on farmers’ preference which accounts for 38.18 per cent followed by brand 33.22 and mode of payment 28.6 per cent. The most preferred factor was the price Rs.720 (1.484) followed by brand Magvan (1.217) and cash payment (1.114). Mode of payments has strong influence on the farmers’ brand preference. These factors have their relative importance to the extent of 28.6 per cent next to the brand. Farmers have given most preference to cash payments (utility 1.114) while payment through credit was least preferred i.e. utility -1.114.
The preference towards the fertilizer of T. J. Agro chemicals and fertilizer Pvt. Ltd. brand found poor. Hence, T. J. Agro chemicals and fertilizer Pvt. Ltd. company should considered the effective factors like price and credit payment in its promotional policy.

5.1.5. Purchase and consumption pattern of magnesium sulphate users

The analysis of the purchase and consumption pattern of the magnesium sulphate users. Farmers use this patterns for the purchase of magnesium sulphate. It include brand preferred by farmers, quantity they purchased, number of purchase in year, time of purchasing, from where they know about this brand, number of people involved in decision making, etc.

The result shows that majority of the farmers 39 per cent were preferred brand of Vanita agro Pvt. Ltd., 9 per cent farmers were preferred 1 to 10 kg of magnesium sulphate, 57 per cent farmers purchased 5 kg packets, 40 per cent farmers purchase magnesium sulphate below 2 times in a year, 54 per cent farmers purchase magnesium sulphate when they needed to purchase, 34 per cent farmers get information about the brand from the dealers, in decision making 55 per cent farmers take decision individually.

5.1.5.1. Degree of likeness of the respondents towards magnesium sulphate

Degree of likeness of the respondents towards magnesium sulphate was find out in the study. It shows following five factors, viz. performance, easy availability, advertising, brand image and future intension regarding purchase of product. This factors measures by moderate, extreme, low, neutral and dislike. In performance 32 per cent were moderate, in easy availability 32 per cent were moderate, in advertising 30 per cent were low, in brand image 25 per cent were moderate, in future intension regarding purchase of product 36 per cent were moderate.

5.1.5.2. Important criteria for choice of Magnesium sulphate by respondents

Important criteria for choice of Magnesium sulphate by respondents was found in the study. There are seven several criteria for the choice of Magnesium sulphate viz. price, product quality, distance of dealers shop from farm, purchase on credit, after sales service, recommendation by other farmers/dealer, timely availability. Hundred per cent farmers gave first priority to the quality of the product and 94 per cent were gave priority to the timely availability of the product.
5.2. CONCLUSION

The present study was undertaken in Junagadh district to analyse resource use efficiency, factors affecting consumption of fertilizer, consumers’ preference and consumption pattern of magnesium fertilizer users. Total sample size of 100 farmers and 3 fertilizer companies were selected. Majority of the farmers were having medium size of land holding thus their earning laid between one and half lakh to four lakh. The variables under study together contributed 97 per cent variation in fertilizer consumption and total area under crop, farm gross income and irrigation were positive and significant impact on consumption of quantity of fertilizers at a 1 per cent significance level. The elasticity of output in response to quantity of seed, expenses on plant protection chemicals, expenses on manure and fertilizer expenses were found positive and significant in Junagadh district. Among all the attributes price of particular product had the greatest influence on farmers’ preference which accounts for 38.18 per cent. Majority of the farmers 39 per cent were preferred brand of Vanita Agro Pvt. Ltd. Performance and easy availability were preferred by farmers. Farmers have an importance of product quality compare to other criteria.