Chapter -1

INTRODUCTION,
HISTORY
PROBLEM IN HAND
RESEARCH OBJECTIVE
SCOPE OF RESEARCH
1. INTRODUCTION

Agriculture is the backbone of Indian economy. A significant share of GDP come from agriculture sector. India is the origin of many crops essential for livelihood of human being. But unfortunately this sector from years has not been focused. The green Revolution, which was ushered in the mid-sixties in Punjab, faded away in the early nineties, leaving agriculture to struggle for its mere sustainability in Indian farming sector. This is apparent from the fast-sliding compound growth rate in this sector from 5.37 % in Sixth plan to 1.9 % in the Ninth plan and 2.28 % in Tenth plan period subsequently (Khan 2011a). The contribution of agriculture in Indian economy is goes way back to the era of ancient India when agriculture is the only sector contributing more than 90 % to the total GDP.

There are two broad sectors involved in the category of Agricultural sector namely Agri output sector (Produced Materials) & Agri-input Sector (Material required for Production). Agrochemical sector is a part of Agri-input segment. Suryakumar (2014) highlighted that one of the major issue in Indian Agriculture is the appropriate usage of proper Agro chemical products used in farming. However research done by national & international agencies clearly demonstrate that small farmers in India do not get & cannot access agriculture advisory services & Information which is a burning topic of this hour.

The agrochemical sector has generic and new generation molecules as far as branding is concerned. Insecticides dominates the other two category (Fungicide & Herbicide) and captures a market share of 50 % the other two has 25% each subsequently. As per FICCI (2013b) the till 2012 there are 834 molecules existing in India , there are approximately 240 technical and less than 470 formulations available to Indian farmers.
1.1 History

1.1.1 Indian Agrochemical Industry
Domestic market on the other hand would grow at 8% CAGR, as it is predominantly monsoon dependent, to reach USD 3.3 billion by FY19. Globally, India stands fourth in the production of crop protection or Agro chemicals, after United States, Japan & China. The crop protection companies in India can be categorized into two types one is foreign players & domestic players. FICCI (2013b) highlighted that the US$ 3.8-bn Indian agrochemical industry comprises of about 125 companies manufacturing technical and about 800 offering finished formulations for the farming community. This comprises of both Domestic consumption and export. Both the sector takes 50-50 share of the agrochemical division. Subsequently in 2014 FICCI updated the Indian crop protection industry is estimated to be USD 4.25 billion in FY14 and this figure is anticipated to grow at the rate of CAGR of 12% to meet USD 7.5 billion by FY19. Exports currently constitute almost 50% of Indian crop protection industry and are anticipated to grow at the rate of CAGR of 16% to meet USD 4.2 billion by FY19, resulting in 60% share in Indian crop protection industry (FICCI 2014c).

1.1.2 Global Agrochemical Industry
The global population currently stands at 700 crore, and anticipated to touch 930 crore by 2050 just 36 years ahead. The growing population will require increase in global food production by 70% in order to meet the rising demand (FICCI, 2014a). In one hand there is need to produce more food, on the other hand the world is facing challenges of increasing urbanization, decreasing per capita arable land, increasing malnutrition, rising food inflation and loss of crop output to pests, insects, weeds and diseases.

Table 1: Sales of Agrochemical Products (Globally)

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<tr>
<th>Region/ Country wise</th>
<th>2011</th>
<th>2012</th>
<th>% Change</th>
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<tbody>
<tr>
<td>Asia</td>
<td>11,083</td>
<td>11,741</td>
<td>5.9</td>
</tr>
<tr>
<td>Latin America</td>
<td>11,308</td>
<td>12,876</td>
<td>13.9</td>
</tr>
</tbody>
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Europe | 10,710 | 11,454 | 6.9  
N.America | 10,013 | 10,632 | 6.2  
Rest of world | 3,026 | 3,232 | 6.8  
Grand Total | 46,140 | 49,935 | 8.2  

Source: Agrow Magazine - World Crop Protection Magazine, March 20, 2013 (All the fig. in $ million)

1.1.3 Agrochemical Companies
Domestic production of agrochemical products in India is well advanced with over twenty companies active in product manufacture. The dominance of the local companies can be traced back to Indian government regulations imposing tariffs on imported material, resulting in the development of a local industry which, although commodity product orientated, also gained a reputation for the manufacture of high quality products using low cost process technology. Table – 2 shows the list of leading agrochemical companies that exists in Indian market.

Table 2: Leading Companies in the Indian Market 2011

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Market Share (%)</th>
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<tbody>
<tr>
<td>1</td>
<td>Syngenta</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>United Phosphorous</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Rallis</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>Bayer</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>DuPont</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Excel Crop Care</td>
<td>6</td>
</tr>
</tbody>
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1.1.4 Sales promotion

According to Kazmi and Batra (2001a) the definition given by AMA as any activity excluding selling through person or AD to create impressive sales action is sales promotion.

Kotler (2005a) highlighted “SP consists of short inducement benefit devices for acceleration of buying or purchasing habits from a particular trade.”

Kazmi et al (2001a) emphasized “SP as event based activities which has direct influence on purchasing action.”

SP as a selling enticement for immediate and a short period sales influence. Promotions includes gifts and giveaways like coupons, self-liquidating premium, value-packs, refunds & rebates, price off packs, contests, sweepstakes, trade show, continuity plans and others.

Kazmi and Batra (2001a) referred to definition given by SP institute UK as SP constitutes a variety of techniques applied to achieve bigger sales target with high benefit cost ratio in a specific frame of time.

Don E. Schulz and William A. Robinson (1993) defined SP is an enticement available directly to the dealer, distributor, customer or the sales staff of the company which gear up sales up to a larger extent and achieve sales of the specific period of time.

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<thead>
<tr>
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<th>Dow</th>
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<tbody>
<tr>
<td>8</td>
<td>Monsanto</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>BASF</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Cheminova</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Phillips McDougall –AgriService, 2011
1.1.4.1 Tools and Techniques of Sales Promotional activities

All techniques and tools of sales promotions are fairly simple and can be reduced to twelve in number (Singh B, 2006a). According to him almost all promotions make use of one or more of these tools, alone or in some carefully developed combination. The important tools of sales promotion are monetary deals such as reduction in price in form of scheme or any type of tools. On the pack it may be mentioned the details of price off of given through slips called as coupons which can be redeemed on the spot called as immediate benefit or in the next purchase known as delayed benefit.

Singh Bir (2006b) highlighted numerous economic factors influence consumer in the ways in which they spend their income for personal consumption. There are two broad categories of determinants available for sales promotion viz Economic Determinants(Disposable Personal Income, Consumer Credit, Consumer’s Income Expectations)Sociological Determinants (Reference Group, the Diffusion Process, and Status Symbols)The fig here below describes the category of determinants in a normal distribution curve.

1.1.4.2 Sales Promotional tools and Devices used in Agrochemical products

Wirthwein C. (2010b),’ highlighted the strategy of Dow agro sciences the peanut case which was not scientific problems rather a marketing problems. Lorsban, a granular product, is applied after the peanut plants emerge from the ground. This requires application equipment
not commonly available. In addition, research revealed that farmers considered the pests controlled by Lorban to be seasonal, in wet growing seasons, they tended cause problems, but not in dry years. Compounding this problem was the fact that most of these pests – lesser corn stalk borer, southern corn root worm, wire worm, cutworm - feed underground. If the farmers couldn’t see them they weren’t there. Out of sight, out of mind. So branding of the product should not only sales prospective rather holistic.

Srinivasan (2012) in his research on agro products mentioned there is no impact of promotional programs for farmers for adopting technology in agriculture practice. In a survey of groundnut farmers he concluded that it is very difficult to change the mindset of farmers.

1.1.4.3 Objective of Sales Promotion
Kotler P (2005a) sales promotional devices changes from perspective to perspective as per their objective of implementation or purpose of floating in the market for that product.

Further Kotler P (2005a) narrated that companies float inducement articles to rope in customers for trial or demonstration of new products and subsequently give recognition to long time user of the brand. Sometimes customers switch frequently from one product to other, SP is quite helpful in retaining them. It may be other way around SP can be used to attract the competitors’ loyal customers which lead to higher market share and brand promotion through more visibility of the brands.

According to Kotler P (2005a) the company can use sales promotion to achieve many objectives, however, every offer must start by being specific as to which objectives are to be achieved, According to Schultz and Robinson (1992) the objectives should be Specific, Measurable, Clear and concise, Practical and realistic, Affordable and, Attainable. Further Schultz and Robinson (1992) also mentioned the types of promotions for consumers and the trade can be usefully put under two heading, immediate value offer us delayed value offer and ‘price-cut us extra value offer’.

Sarangi S. (2011b) narrated SP acts an imperative role in both the selling and purchasing attitude of any product. Dealers and distributors feel comfortable in pushing the
product and in the same time buyers are getting enticed towards the offers floated with product or brand.

According to Sarangi Sales Promotion also supplements and co-ordinates efforts of advertising/personal selling. It is usually difficult to choose a particular sales promotion tool for achieving the specific objectives. An important area that concerns SP goal is directly proportionate to the specific promotional techniques to be used (Sarangi S., 2011b).

1.1.4.4 Advantages & disadvantage of Sales Promotion

Kazmi ET. Al (2001c) highlighted one of the advantages of Sp is to break the negative perception of customers. As far as mindset of customers are concerned there is a significant influence of SP at the trade level also. Increase in sales result into higher profit which is the ultimate objective of any company.

One of the advantages of SP is differential pricing barrier breaking. It helps the customer to realize the value for money proposition of and product or its brand. It facilitates to enhance perceived quality of the brand.

For many customers, who feel time-pressed, buying on deal is a simple decision rule and many consumers may also consider buying on deal as a smart move and the last one is influence of trade reaction.

Interim promotion gives a chance to dealers or buyers to buy the alternative and retailer shelf is rotating instead of static. Since dealers stock is moving they are comfortable in displaying the brand in the shelf which work as a visual promotion.

Kazmi et. al (2001c) highlighted sales promotion has certain drawbacks which can be highlighted as it is not the solution for perceived bad products or a worst advertising. It is evident that SP is quite helpful in killing bad products and subsequently the brand dissolves but customers can be motivated to try a new product because of the incentive, but after this the product itself must take over the expectation. Ultimate result is as follows

1. Decrease in Brand Loyalty: Kazmi et. al (2001c) stated that the major objective of many sales promotions is to encourage brand switching. This is especially true in case of low-
involvement category products, or where there is little or no significant differentiation among brands and the unit value in low.

2. Increased Price-Sensitivity: Kazmi et. al (2001c) narrated that there is a limit to everything if frequency of promotion is more than it may be detrimental.

3. Quality Image may become tarnished: Kazmi et. al (2001c) stated that the quality image is one of the factors detrimental to SP. If there is no SP or seldom promotion carried out then involvement may not be high which lead to negative impact on the brands image.

4. Dealers Forward-buy and Divert Stocks: Kazmi et. al (2001c) analysed that the trade dealing is also quite important, sometime dealers purchase a higher quantity of a single brand which enhance the certainty of availability but if not liquidated for one or other reason than seller discourage to keep stock in the next season.

5. Merchandising support from dealers is doubtful: Kazmi et. al (2001c) stated that as there is intensifying competition among marketers for space in retail outlets, producers often ignore the performance conditions spelled out for retailers and benefits are not passed on to consumers as intended.” In this case SP is quite helpful in pushing the product

6. Short-term Orientation: Kazmi et. al (2001c) highlighted that the shorter orientation of the supplier has an adverse effect in the long term strategy making of the brand. Most of the times company focus on short term which build an image of high volume and low profit product.

Sarangi S. (2011c) highlighted SP has a direct relationship with the end user and can be referred as consumer SP. More over manufacture originated sales promotion belongs to “pull strategy” and the retailer initiated sales promotion is of “Push-Strategy”.

Sarangi S. (2011c) narrated that in general, consumer promotions can be “same for less” or “more for the same” which is translated into “price-out” or “added-value”. Few consumer’s sales promotions with offer of free samples or coupons contain some selling message that reinforces the brand or product.
In fact Sales promotion for consumers is more effective when considered with advertising and point-of-purchase display. Price discounts, bonus pack, coupons and free samples etc. are some important consumer promotions.

Sarangi S. (2011c) highlighted trade sales promotions are directed at resellers. According to him the terms trade includes distributors, dealers, wholesalers and retailers who are involved in distributing the company’s products. Mainly trade sales promotion is part of “push strategy” of manufacturers. However out of a total sales promotion budget, a higher portion is spent on trade sales promotion by the manufacturers.

According to Sarangi S. (2011c) trade sales promotions objectives are different from consumer’s sales promotions. Dealers can influence consumers in many ways and retailers’ supports in marketing displays, feature advertising and taking direct initiative in offering products to consumers directly increasing sales.

Few important trade promotions are cash rebate, Trade coupons, display and advertising allowance and sales contests etc., which depend on the type of products and the appropriateness of the method chosen.

Kazmi ET. al (2001e) highlighted the there are four broad effect of sale promotion exists viz. Brand Switching, Repeat Buying, Purchasing more and accelerating timing of purchase & Increasing Category Expansion and Consumption. Kazmi ET. al (2001e) stated that Brand switching of this type is often called as “aggressive” “switching”. The second type of promotion effect on brand switching is often called as “defensive switching.” in this case, the objective is to retain the customer by encouraging her/him to buy the same brand as was bought on earlier occasion instead of switching to a different brand on this purchase occasion stated by Kazmi. Promotions offering price deals influence the attitudes of consumers toward buying the brand. Largely much would depend on the size of the discount and the consumers’ sensitivity toward price and how much importance consumers place on price on price than quality. According to Kazmi if the attitude toward the brand has been quite low compared to some other brands, then a monetary promotions scheme is supposed to encourage a switch to the promoted brand. Price promotion like this may also encourage
consumers to buy an otherwise expensive brand, which they could not afford on the normal list price.

The second effect emphasized by Kazmi et. al (2001e) is repeat Buying. When a consumer buys a product on promotion, this may lead to developing the habit toward purchasing that brand and some evaluation about the performance of the brand. It may also happen that since the brand is purchased on purchase in future declines. Mainly repeat purchase has many results in developing an expectation that the brand is linked with SP schemes and it keeps on continuing, some companies change scheme time to time and type to type.

The third effect highlighted by Kazmi et. al (2001e) as repeat purchase are essential for any brand when the consumer purchase for future requirement and constantly became the regular user of the brand and enhance loyalty towards that brand.

Re-sellers when buy more than their normal requirements, it is called “forward buying.” Excessive inventories building in this manner often leads to stock diversion in non-deal areas.

The fourth effect emphasized by Kazmi et. al (2001e) as increasing Category Expansion and Consumption. According to the author SP induced demand through development of event to purchase a product or brand. Many situations the purchase of a product category gets accelerated, many high-involvement products, promotions can help consumers to realize that a certain product would serve as a good gift item for them.

Sarangi S. (2011e) explained different code & regulation of sales promotion exists and important to focus. As narrated by Sarangi ICC code, which was introduced in the year 1973, show that the industry must recognize the CSR in the direction of the consumer welfare.

Sarangi S. (2011c) highlighted that there are twenty three articles included twenty thee article as general rules. Article- 1 refers to Integrity, Article: 2 refers to Terms of the offer, Article: 3 refers to Presentation, Article: 4 refers to Servicing of promotions, Article: 5 refers to Protection of privacy, Article:6 refers to safety, Article: 18 & Article: 19 refers to
Fair Competition, Article: 20 & Article: 22 refers Responsibility, Article: 23 refers to Implementation

Kazmi ET. Al (2001b) emphasized that combined budget allocated to advertising and sales promotion, increasingly larger percentage of the budget is being utilized for sale promotion. The major factors influence sale promotion are more number of competing players, elasticity of price, immediate conversion of sale, immediate acceptance by the consumers and costumer expectations for price decrease. Now a day’s trade has become more powerful, Emphasis on sales volume, Sales Promotions Maximise Profits, Introducing an Element of Interest, Impulse Buying Is Increasing, Sales Promotion Specialists Are Available, Excess Stocks etc.

Panda T K (2007) highlighted that a target market can be in any of the six stages of buying readiness. These stages include awareness, knowledge, Linking, preferences, conviction and purchase, We need to identify what stage the buyer is in and for what purpose we need to design the program i.e. to induce trial, to develop repeat purchase or to try the new product line with existing product.

Choudhury ET. al. (1992a) once of the most exciting features of working with sales promotion is that standard techniques can sometimes be combined or adapted to create what is almost a new technique. The sales promotion offers great opportunities for being creative, for bringing fresh thinking to bear on how best to reach a goal.

Gaikwad V S (2010) offer to discuss it is important to analyse and take necessary action how to enter in the rural market space. As far as attitude is concerned rural market is more heterogeneous and the 6.4 lakh village may not fit in to a single category of interpretation. The mindset of the rural mass is difficult to predict.

Thomas (2012) highlighted that there is a huge gap between rural and urban channel of communication. Elite class sophisticated mode of communication may not work for the rural masses. The one-stop strategies is not going to work; a judicious mix is what may work for the huge mass of rural population or a combination of different approaches judiciously mixed to suit the rural targets, especially activities like rapport building through different tools may be an effective way to a valid course of action into remote India.
Hammond, J. (2008a) highlighted the importance of branding in the new millennium. According to the author to stay alive in business one need to focus on brand building exercise or else it is very difficult to compete. He further highlighted that logo or slogan can’t represent any brand, every brand has its own USP and should be treated accordingly.

Kapferer J N (2000) explained measurement of value of brands do exists but the factor which effect to the greatest extent is awareness, this is the factor which stay in the top of the mind and this helps the buyers to take decision on the selection of brands. Brand image which further take the brand to international level has a significant role in equity development of the brand. Forty ninestudies from US & EU and zero down to twenty six ways of calculation of brand equity. From the study it was inferred that non-monetary method of calculation is apt for calculation of brand equity. The non-monetary included awareness of the brand, approach towards the brand, inclination or preference towards the brand etc. are few of the components considered for valuation of equity of the brand. Brandequity on the other hand get into account the prospect of geographical expansion or global foray.

Kapferer J N (2000a) highlighted Brand assets mean Brand awareness which is capability of any brand to represent a segment that may be the best model or representation. If compared to the existing competitors the intensity of liking or fondness reflects the strength of the brand.

It can be considered that the confusion exists among several companies who all have painted an enticing picture of the strength of brand assets in order to justify the price of expensive acquisition.

Jones J. P. (2012a) referred A second case described by Nielsen demonstrated a much better performance. In this, by the fifth year, a new brand launched on top of an existing one had doubled the combined shares of the two; in other words, the old brand maintained its sales level and the new brand added the same volume of sales again. In this case, the existing brand was improved and the new brand was also well accepted. And, importantly, the manufacturer maintained support for the old brand.
Saurabh & Mahajan (2013) presented The Technical Specifications and Evidence provided by the brands/products to substantiate their miraculous claims as well as the positive experiences of the consumers with the selected brands/products were the most important parameters influencing the respondents’ perception of the products/brands. Cost, Access, and Safety came at a later stage of perception of the consumers for these brands. While purchasing product/brands with an aesthetic appeal, claiming to provide miraculous results.

As per Kapferer J N (2000b) branding activities are not only naming a brand which will represent it outside the world rather can create an impression that carry the image of the organization. Product can’t speak but the brand can speak, so careful branding can zoom up the feature of the product up to a greatest extent. But the issue is it is a long term exercise needs careful observation and proper strategy to develop a brand. In the same time the expectation of product from brand is immense, overnight brand building is everybody’s expectation.

In the market space credibility of brand can be brought through repetitive successful stories and enforcement of conducive exercise favourable for the brand. Brand is the only element which helps in providing a chance to recover the product if acceptance is low, or popularity is not building up.

What brand strategies, then, should be implemented? They differ according to two main brand types. Those based on technology (cosmetics, hygiene, beauty, detergents, etc.) must invest in R&D in order to recreate a difference in performance which advertising should help feed to the brand.

However, same brands are making risky moves. They think that they should drop their prices to the level of the lowest priced products. But such a decrease in prices is bound to undermine brand’s long-term credibility as far as its loyal customers are concerned, in which case the latter might start wondering about the brand’s true value. Moreover, it would not be well-grounded, nor would its purpose be clear. The market mechanism can indeed be compared to a trammel-hook.
Kapferer J N (2000) highlighted identity of a brand can be built through apt concepts. Brand management may be well established and tried concept but when it comes for implementation it will be all time new.

Kapferer J N (2000) highlighted the one of the best ways of managing a new brand is follow the strategy built for the old brand. More than launching a brand inventing a brand will be well suited action. If the awareness of one brand enhances no doubt the association with other brand will reduce. If there are three brands in the market space with unaided awareness the probability of introduction of a new brand is near impossible and get blocked. The relationship between aided and unaided awareness in graphically represented by the curve in Figure 2.

![Figure 2 : Blocked market with reference to Brand Awareness](image)

Jones J. P. (2012a) described functional Performance as a brand comes naked into the world. Without functionality that is superior to the competition in at least some respect, it will not persuade that person who buys it on a trial basis or who receives a free sample, to buy it again. Once of the roles of the package design, introductory promotions, and initial advertising is to communicate this functional performance clearly. It is also important at this stage to start building added values, because these will consolidate the brand’s lead once “me-too” brands arrive.
Manufacturers have most to gain if they create a total new segment, because if a new brand succeeds in doing this, it will keep its leadership. But there have been occasional examples of manufacturers introducing that first fully successful brand into a segment by following competitors who saw the opportunity but were unable to produce a brand that appealed well enough to the consumer.

### 1.1.4.5 Building of Brands in New Age

Blackett T (2004a) highlighted that Brands are assets of any business and the worth of possessing a strong brand is unquestionable. Brands eventually keep the assurance provided to the regular user of the product. The level of confidence can be assured from a brand only which lead to a concrete business plan and forecast development.

Lindemann J (2004a) referred the statement of John Stuart that if anything remains valuable after splitting a business is not the capital goods rather the virtual brand image, because it influence the selection of customers.

The life span of a brand which is even more than sixty years, again highlighting his statement the author emphasized the average age of a brand is twenty five years.

The brands which are strong in nature can excel easily in the market and no doubt it will stand first in respect of all the indices.

Akasie (2000) explained the relationship of a brand with its customers. Many owners of brands can earn immense return on them money they put in building brands and grow in a faster velocity.

Steve Hilton (2004a) argue that in a society the role of brand is vital which can be segmented as per their vitality, sustainability and reliability. A sustainable brand has major responsibility for wealth creation and enhance loyalty quotient. Brands encourage innovation which will ensure appropriate output which will improve the confidence for consumer protection.

Steve Hilton (2004b) mentioned there are certain power of brand do exists for an affirmative change in the society. Relationship of a brand with the customers lead to social up
Advantages of power brands may be helpful in taking the brand to the global level.

Steve Hilton (2004b) explained the need of the development image. Companies spent a huge money to create an image. Building reputation of a company needs a proper strategy based on the literacy level of consumer, purchasing power, life style etc. Proper supplement of needs will make the path easy for building a brand.

Smith S et.al (2002 emphasized that the branding is more dependent upon relationship than profitability and provision of value more of a marketing gimmick. It is fundamental that employee or channel partner are also play an important role in developing brands.

1.1.4.6 Brand equity
Pati D (2002a) emphasized the ways of ascertaining brand equity varies, and unfortunately choosing amongst these is not easy. There seem to be few broad approaches. Price approach: it indicates that the quantity of capital which will be needed to substitute the brand, which would include all costs for product development, test marketing, advertising, etc. Market approach: The amount at which it would exchange between a willing buyer and seller, with equity to both. Consumer-oriented approach: There exists a range of option in this context.

Kabre V (2013) it might be observed that the word “BRAND EQUITY” acquires different connotations when different people use it. Or brand equity gets defined differently from different points of view. The definitions have been classified under 3 headings namely (i) cost-based (ii) price-based and (iii) consumer-based. The cost-based definitions try to arrive at cost at which the brand, if necessary, can be sold to some other organization, like an asset. Price-based definitions use the retail price of the brand as the basis for computing brand equity. Finally consumer-based definitions use some sort of attitudinal scale to arrive at a number that measures brand equity.

There are several methods exists for estimating brand equity. One of the simple way of analysing brand equity is CBBE.
According to Pati D. (2002b) Brand associations are generated through: Experience(s) of self and others, Word of mouth, Exposure to brand communication, and Exposure to special initiatives and events built around a brand.

Sarangi S. (2011f) explained association of brand as anything that can be connected to the memory of consumer. It is important to notice that earlier only advertising only can link the memory of the customers but sale promotion advertised can make a better impact on memory of the consumer.

Sarangi S. (2011f) explained association of Brand help building better brand image than the other dimension of brand equity. When there is an extension of product or brand line available customer may need a cause to retain or switch to other brand.

Sarangi S. (2011f) highlighted that to achieve high awareness, as per suggestion of Aaker few communication tasks can be undertaken viz. Unforgettable message, Unique USP communication etc. get into the press as news item, or publicities the brand, Sponsor major events, Consider extending brand to other products, Use cues of either the product class, the brand or both, repeat constantly.

Kapferer J N (2000b) awareness and desire is the vision of lavishness which need to be generated continuously. In the real world it is required more to enhance recognition more than actual purchase or use.

Sarangi S. (2011f) explained high brand perceived quality gives a cause to repeat purchase. It may not the quality of manufacturer point or product based rather an evaluation of quality by individual consumer.

Sarangi S. (2011f) explained if a customer go to another shop and ask for its brand or will he or she leave with the substitute being offered to by the shopkeeper is referred as poor loyalty towards the brand. The main problem is brand loyalty is the high commitment dimension which will deviate quickly with lucrative offer in hand.
1.2 Problem in hand

The crop protection industry includes products derived both from conventional chemical synthesis as well as products based on biological agents. In the last decade the introduction of transgenic or GM crops possessing herbicide tolerance and insect resistance has significantly expanded the overall scope of the biological based element of the industry. As a result, for some companies their turnover includes conventional agrochemical products as well as revenues from the sale or licensing of GM traits. In addition, several of the industry participants have seed sales, which can be from GM seed as well as those derived from conventional seed breeding and distribution businesses. In this analysis, we have excluded revenues from all seed including GM to focus solely on agrochemical products.

FICCI (2013a) also highlighted that if we glance the fact, it speaks otherwise: the number of agrochemicals registered for usage in India – at 240 gm. – is lower than in neighbouring Pakistan (500 gm.), let alone the US (750 gm.). The Per capita consumption, at 600 gram approximately as compared to the global average per capita consumption of 3000 gram per hectare. But shrill headlines in newspapers and in the electronic media continue to exaggerate concerns, placing the industry on the defensive.

Globally during 2012 the value of the agrochemical market was impacted by significant volume growth in a number of regions, as well as some modest rises in product prices. When the impact of trade weighted inflation and currency factors are excluded, the real change in the overall value of the crop protection sector in 2012 rose by 8.9% over 2011.

Agrochemicals are used in a number of markets that are not related to crop cultivation and are classified as non-crop. During 2012, the overall market value for agrochemical product usage into the non-crop sector is believed to have risen by 1.3% to $6,372 m. Based on these results, the total market for agrochemicals is estimated to have increased by 5.7% to $53,732 m. in 2012.

Market acceptance and usage of crops genetically manipulated to express herbicide tolerance and insect resistance is a further factor that significantly impacts the conventional chemical crop protection market. Since their introduction, GM crops have become an important element in the crop protection crop input sector, particularly in the Americas and
more recently Asia. During 2012 growth in the value of the market for these seeds increased by 17.9% to $18,495 million, following nominal dollar growth of 21.9% in 2011, 21.8% in 2010, 15.5% in 2009, 29.6% in 2008 and 20.6% in 2007.

Bhatia (2011) explained marketing of agricultural products are very critical as one strategy can’t work for Agri input and Agri output. Marketing of fertilizers are different from pesticide which again different from marketing agroequipment&livestock feed. Though all are part of rural marketing.

Recently rigorous environment guidelines across the world are increasing the cost of just beginning new products and concurrently delaying the introduction of new products in the market. The situation in the European Union for agrochemical product is that if it is found to be mutagenic, carcinogenic or endocrine disruptor then it would not achieve registration or re-registration irrespective of the level of exposure brought into being. According to the govt norms it takes almost nine to ten years to introduce a new product anywhere in the world. Enormous low focus on R&D by domestic manufacturers due to high costs: this industry is facing a serious threat owing to the rising costs & investment in R&D. It takes almost USD 250 million to introduce a new molecule in research and development and subsequent release. It checks the companies to invest in R&D activities and focus more on the generic products which require low investments in research and development and less time to introduce in individual countries.

FICCI (2013a) also emphasized that it was clear that the entry of new molecules – vital to combat pests resistant to older remedies – is hampered severely by a glacially slow regulatory process. There are rampant increasing low quality products and need is there to give justice to farmer.
1.3 Scope of Research

CIB (Central Insecticides Board) plays an important role in regulating and reviewing various agro chemical molecules and brands periodically. There is a rule that after 3 year of introduction a new molecule with me too registration is possible, with this many brand mushrooming up in the market in a short span of 4 years, which lead to price war among competitors. Hence the farmers (who are mostly uneducated) will have always a problem of identifying the right chemical and right brand (Jana, Dec 2012).

Due to lack of awareness of brands the end users are lacking the proper knowledge about the quality of products. Small companies in the name of generic introduce products with low quality intermediates. Big players unable to get good market share and budget for awareness of the particular segment products deters. Over the years many spurious products enter in the market in the name of non-brand products. At the ends of the day the only effective segment is the agrarian community for whom agrochemical product is a need.

In the real sense there are very less work carried out for brands as the size of agrochemical brands are very less. Their revenue generating capability is not significantly higher than generic brand or product. So huge scope is there to work in this sector.
1.4. Organization / Product / Process

1.4.1 Product- Brand Matrix

1.4.1.1 Insecticide

In this category the product selected for study is Imidacloprid which is a global product introduced in all major countries on many crops. Provides long lasting control of sucking and some biting insects. Sales of Imidacloprid are fairly evenly divided between seed treatment, soil and foliar applications. The main markets for the product as a seed treatment are in cereals, maize, soybeans, oilseed rape/canola, sugar beet, sunflower and cotton. Pioneer product for sugar beet seed treatments, as before its introduction few sugar beet seeds were treated. The major soil applications are in rice, vegetables, potatoes, turf, ornamentals and tobacco. Also finds significant sales in animal health as Advantage for flea control on cats and dogs. Use on maize in France was suspended in 2004 due to concerns relating to toxicity to bees, although the product has been accepted for Annex 1 approval in the EU, it is to be removed from usage on bee sensitive crops in the EU for 2 years from January 2014. Distribution agreements with MAI and Cheminova were agreed in 2005, with MAI launching the product as Kohinor in Brazil. Nufarm market generic versions of imidacloprid in the USA, as Nuprid for agricultural uses, Mallet for the turf and ornamental sector, and Senator as a seed treatment. Now subject to strong generic competition, although Bayer continues to introduce new formulations. Currently under registration review in the USA

Farmers are well aware of this product and the allied brands available in the Indian pesticide market. Table 3 represents the existing brands in this category available in the market

Table 3 Insecticide brands of Imidacloprid 17.8 % SL

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the Brand</th>
<th>Name of the Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Confidor</td>
<td>Bayer</td>
</tr>
<tr>
<td>No.</td>
<td>Company</td>
<td>Parent Company</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Ultimo</td>
<td>Biostadt India ltd</td>
</tr>
<tr>
<td>3</td>
<td>Chemida</td>
<td>Cheminova</td>
</tr>
<tr>
<td>4</td>
<td>Suzu</td>
<td>Coromandel agrico</td>
</tr>
<tr>
<td>5</td>
<td>Hexamida</td>
<td>Coromandel international</td>
</tr>
<tr>
<td>6</td>
<td>Confidence -555</td>
<td>Crystal phosphates</td>
</tr>
<tr>
<td>7</td>
<td>Midas</td>
<td>Devidayal</td>
</tr>
<tr>
<td>8</td>
<td>Dhanuka media</td>
<td>Dhanuka</td>
</tr>
<tr>
<td>9</td>
<td>Imiden</td>
<td>Dow</td>
</tr>
<tr>
<td>10</td>
<td>Seamer</td>
<td>Dupont</td>
</tr>
<tr>
<td>11</td>
<td>Imidacel</td>
<td>Excel crop care</td>
</tr>
<tr>
<td>12</td>
<td>Midar</td>
<td>Gautami chemicals &amp; pesticides</td>
</tr>
<tr>
<td>13</td>
<td>Maharaja</td>
<td>Gharda chemicals</td>
</tr>
<tr>
<td>14</td>
<td>Immediate</td>
<td>Godrej</td>
</tr>
<tr>
<td>15</td>
<td>Army</td>
<td>Gujrat chemicals</td>
</tr>
<tr>
<td>16</td>
<td>Mantra</td>
<td>Heranba</td>
</tr>
<tr>
<td>17</td>
<td>Hilmid</td>
<td>Hindustan insecticides ltd</td>
</tr>
<tr>
<td>18</td>
<td>Hi Imida</td>
<td>Hpm</td>
</tr>
<tr>
<td>19</td>
<td>Atom</td>
<td>Indofil</td>
</tr>
<tr>
<td>20</td>
<td>Victor</td>
<td>Insecticide India ltd</td>
</tr>
<tr>
<td>21</td>
<td>Admit</td>
<td>Isagro</td>
</tr>
</tbody>
</table>
1.4.1.2 Fungicide

The product in fungicide category is Mancozeb 75% WP which is a broad-spectrum contact fungicide with a wide range of crop applications and utilised in many mixtures. The product benefits from usage in combination with many single site systemic products in resistance avoidance strategies, particularly on fruit & vegetable crops. As a result, sales have increased recently on combination with recently introduced Oomycete disease control products. In 2005, US registrants of EBCD fungicides dropped some uses of Mancozeb from their labels, with US re-registration subsequently awarded. In 2006, Bodisen Biotech announced the construction of the largest mancozeb plant in China. Has received full Annex 1 re-registration in the EU. DuPont’s global non-mixture mancozeb business and related assets were acquired by United Phosphorus in 2010. Indofil acquired Dow’s European Dithane business in 2012, including all trademarks and rights to the patented NT formulation technology.

Farmers are well aware of this product and the allied brands available in the Indian pesticide market. Table 4 represents the existing brands in this category available in the market.
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the Brands</th>
<th>Name of the Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sparsh</td>
<td>Biostadt india ltd</td>
</tr>
<tr>
<td>2</td>
<td>Luzem</td>
<td>Cheminova</td>
</tr>
<tr>
<td>3</td>
<td>Corothane</td>
<td>Coromandel agrico</td>
</tr>
<tr>
<td>4</td>
<td>Crystal m-45</td>
<td>Crystal phosphates</td>
</tr>
<tr>
<td>5</td>
<td>Devidayal m 45</td>
<td>Devidayal</td>
</tr>
<tr>
<td>6</td>
<td>Dhanuka m-45</td>
<td>Dhanuka</td>
</tr>
<tr>
<td>7</td>
<td>Dithane M-45</td>
<td>Dow</td>
</tr>
<tr>
<td>8</td>
<td>Mancozvip</td>
<td>Godrej agrovet</td>
</tr>
<tr>
<td>9</td>
<td>Mount 45</td>
<td>Bharat insecticides</td>
</tr>
<tr>
<td>10</td>
<td>Hindustan m 45</td>
<td>Hpm</td>
</tr>
<tr>
<td>11</td>
<td>Gautami m45</td>
<td>Gautami chemicals &amp; pesticides</td>
</tr>
<tr>
<td>12</td>
<td>Narmada</td>
<td>Gujrat chemicals</td>
</tr>
<tr>
<td>13</td>
<td>Mandy</td>
<td>Heranba</td>
</tr>
<tr>
<td>14</td>
<td>Hilthane</td>
<td>Hindustan insecticides ltd</td>
</tr>
<tr>
<td>15</td>
<td>Indofil m-45</td>
<td>Indofil</td>
</tr>
<tr>
<td>16</td>
<td>Rm 45</td>
<td>Krishi rasayan</td>
</tr>
<tr>
<td>17</td>
<td>Macoban</td>
<td>Makteshim agan</td>
</tr>
<tr>
<td>18</td>
<td>Zeb</td>
<td>Nagarjuna agrichem</td>
</tr>
</tbody>
</table>
1.4.1.3 Herbicide

The product selected in the Herbicide category is Glyphosate 41% SL. This is the largest selling agrochemical on the world market which, despite generic competition, continues to achieve significant sales. The product continues to exploit new markets, such as usage in reduced tillage systems and on Roundup Ready crops, however sales were held back between 2009 and 2011 due to an oversupply of generic material from China resulting in price erosion. Monsanto has reached agreements with a number of companies to allow usage of own-label product in the USA and on Roundup Ready crops. Glyphosate is off patent in all markets, with many companies now involved in the manufacture and supply of the product. Full Annex 1 registration has been achieved in the EU. In 2011, Dow introduced the product in a mixture with 2, 4-D as Enlist Duo for use as part of its Enlist Weed Control System. Volume demand continues to increase each year, with market value affected by the level of supply that has a significant impact on pricing.

Farmers are well aware of this product and the allied brands available in the Indian pesticide market. Table 5 represents the existing brands in the category of herbicides available in the market

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the Brands</th>
<th>Name of the Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Manco-m45</td>
<td>Sulphur mills</td>
</tr>
<tr>
<td>20</td>
<td>Stargem(m45)</td>
<td>Swal</td>
</tr>
<tr>
<td>21</td>
<td>Tata m 45</td>
<td>Tata rallies</td>
</tr>
<tr>
<td>22</td>
<td>Uthane</td>
<td>Upl</td>
</tr>
</tbody>
</table>

Table 5 Herbicide brands of Glyphosate 41% SL
<table>
<thead>
<tr>
<th></th>
<th>Company</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brake</td>
<td>Biostadt india ltd</td>
</tr>
<tr>
<td>2</td>
<td>Glyfos</td>
<td>Cheminova</td>
</tr>
<tr>
<td>3</td>
<td>Glyphosvip</td>
<td>Godrej agrovet</td>
</tr>
<tr>
<td>4</td>
<td>Round up</td>
<td>Monsanto</td>
</tr>
<tr>
<td>5</td>
<td>Hyjac</td>
<td>Insecticide india</td>
</tr>
<tr>
<td>6</td>
<td>Rootout</td>
<td>Bharat insecticides</td>
</tr>
<tr>
<td>7</td>
<td>Fausta</td>
<td>Coromandel Agrico</td>
</tr>
<tr>
<td>8</td>
<td>Glycor</td>
<td>Coromandel international</td>
</tr>
<tr>
<td>9</td>
<td>Clinton</td>
<td>Crystal phosphates</td>
</tr>
<tr>
<td>10</td>
<td>Gladiator</td>
<td>Devidayal</td>
</tr>
<tr>
<td>11</td>
<td>Noweed</td>
<td>Dhanuka</td>
</tr>
<tr>
<td>12</td>
<td>Weedall</td>
<td>Dow</td>
</tr>
<tr>
<td>13</td>
<td>Glecsl 41 sl</td>
<td>Excel crop care</td>
</tr>
<tr>
<td>14</td>
<td>Glysate</td>
<td>Gautami chemicals &amp; pesticides</td>
</tr>
<tr>
<td>15</td>
<td>Glyder</td>
<td>Gharda chemicals</td>
</tr>
<tr>
<td>16</td>
<td>Glycil</td>
<td>Gujrat chemicals</td>
</tr>
<tr>
<td>17</td>
<td>Glory</td>
<td>Heranba</td>
</tr>
<tr>
<td>18</td>
<td>Trinashi</td>
<td>Hindustan insecticides ltd</td>
</tr>
<tr>
<td>19</td>
<td>Garud</td>
<td>Hpm</td>
</tr>
<tr>
<td>20</td>
<td>Clean up</td>
<td>Indofil</td>
</tr>
</tbody>
</table>
1.4.1.4 Plant Nutrition Products

Plant nutrition products often called as tonic by Indian farmers used for nourishment of the crop. These are either plant based or animal origin in nature. They enhance greenness of the plant and aesthetic value to the farming practices. These products are not need based rather these are want based products. The usage of this product goes way back to 30 years with the introduction of Biozyme by Wockhardt in Indian market; this is the only consistent brand existing from three decades. Many companies introduced one or other product in this category but unable to sustain among Indian farmers.

Farmers are well aware of this product and the allied brands available in the Indian pesticide market. Table 6 represents the existing brands in this category of Plant nutrition product available in the market.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the Brands</th>
<th>Name of the Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Linch</td>
<td>Isagro</td>
</tr>
<tr>
<td>22</td>
<td>Allkill</td>
<td>Krishi rasayan</td>
</tr>
<tr>
<td>23</td>
<td>Glyphogan</td>
<td>Makteshim agan</td>
</tr>
<tr>
<td>24</td>
<td>Globus</td>
<td>Nagarjuna agrichem</td>
</tr>
<tr>
<td>25</td>
<td>Vinash</td>
<td>Sulphur mills</td>
</tr>
<tr>
<td>26</td>
<td>Touchdown</td>
<td>Syngenta</td>
</tr>
<tr>
<td>27</td>
<td>Glytaf</td>
<td>Tata rallis</td>
</tr>
<tr>
<td>28</td>
<td>Sweep</td>
<td>Upl</td>
</tr>
</tbody>
</table>

Table 6 Plant Nutrition Product brands
<table>
<thead>
<tr>
<th></th>
<th>Biozyme</th>
<th>Biostadt india Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Biovita</td>
<td>PI industries Ltd</td>
</tr>
<tr>
<td>3</td>
<td>Zymo</td>
<td>DSCL</td>
</tr>
<tr>
<td>4</td>
<td>Cytozyme</td>
<td>SPIC</td>
</tr>
<tr>
<td>5</td>
<td>Rallizyme</td>
<td>Rallis India Ltd.</td>
</tr>
<tr>
<td>6</td>
<td>Isabion</td>
<td>Syngenta</td>
</tr>
<tr>
<td>7</td>
<td>Siapton</td>
<td>Isagro</td>
</tr>
<tr>
<td>8</td>
<td>Fruit Energy &amp; Crop energy</td>
<td>Indofil India Ltd.</td>
</tr>
<tr>
<td>9</td>
<td>Dhanzyme</td>
<td>Dhanuka</td>
</tr>
</tbody>
</table>
Research Objective & Research Hypothesis
Keeping in view the objective of research hypothesis for the study has been framed and analysed through the questionnaire.

In an exploratory study of Agrochemical giant TATA Rallis Bhatia (2011), analyzed that impact of agriculture at the bottom of pyramid availability of agrochemical products are not upto the mark.

Bhatia (2011) while studying Mahindra shubh labh Services Ltd. (MSSL) found out that the agrochemical products and agri input services which are required for farming solution should be one stop solution.

Further Bhatia (2011) summarized that agriculture marketing is presumed only to be the movement of agriculture produce from farms to the consumers or manufactures, but it also the selling of output and input including Fertilizers, Pesticides, Seeds, Farm Machinery Tools & Equipment apart from conveying the new/changing needs of the economy to the producers to make them aware of new developments at the technology level and to enable for production planning.

Shah P.K. & Meheta B.N. (2012) in their remarks mentioned that the promotional offers are a part of existing marketing strategy. The component of brand equity the brand loyalty which work as a partition catalyst for various promotional offers, schemes etc.

Moreover, frequent modifications in the offers found to be adverse impact on perceived mindset of the specific brand in customer’s mind emphasized by Shah P.K. & Meheta B.N. (2012)

In the marketing of Agrochemical brands as a sales Promotion is gaining it’s importance significantly day by day over other tools of Promotion Mix viz., personal selling, Advertisement, Public Relations etc. It has been seen that by the propagation of sales promotional tools in the market during off Seasons to encourage trial and often to shift in time the purchase decisions of consumers for the agrochemical products. Farmers or consumers are found to advance or postpone their purchase based on Sales Promotion offers
or schemes not as per season. Broad agenda of this study was to analyse the influence of various forms of sale promotion on the brand equity of certain selected products in the Agrochemical segment. Conventional marketing theories propose that sales promotion generally degrade Brand Equity significantly. Nevertheless, the specific impact of Sales Promotion on Brand Equity of competing brands on various dimensions is notable by a small number of researchers in the agrarian segment. In this study it has been attempted to minimize the distance.

In Indian Agriculture still there are many evidences are where in without sufficient knowledge, products introduce by small companies in the name of generics and were used by the farmers.

FICCI (2013a) also highlighted that if we glance the fact, it speaks otherwise: the number of agrochemicals registered for usage in India – at 240 gm. – is lower than in neighbouring Pakistan (500 gm.), let alone the US (750 gm.). The Per capita consumption, at 600 gram approximately as compared to the global average per capita consumption of 3000 gram per hectare. But shrill headlines in newspapers and in the electronic media continue to exaggerate concerns, placing the industry on the defensive.

FICCI (2013a) also emphasized that it was clear that the entry of new molecules – vital to combat pests resistant to older remedies – is hampered severely by a glacially slow regulatory process. There are rampant increasing low quality products and need is there to give justice to farmer.

Significance of the Study

Agrochemical industry in India commercially is an upcoming sector worldwide, but unfortunately only few companies are able to understand the importance of branding in this sector. Huge advertisement cost and lack of awareness force the Agrochemical companies to float promotional schemes for getting quick response for their products sale, but they may create destruction to the brand if not selected meticulously there. Mostly farmers who all are user of the product are not educated, so they believe what they are shown or told. Agrochemical Companies are in immense dilemma to construct a promotional tool which will be effective in getting a quick sale without effecting brand equity of the products. This
research will be an eye opener for the agrarian companies which segment of sales promotion need to be given more emphasis.

Before entering into data collection basic idea about the place and demography was collected from. Under this segment lead district managers, NABARD district development managers, and Agriculture and horticulture officers, other Govt. Agencies dealing with Argo. Products are included.

The outlook for the market in the longer term is positive due to these developments and also increasing prosperity in the country as a whole, which is driving demand for increased and higher quality food production, and also demand for other commodities, notably cotton. The geography of the country allows almost all crops to be cultivated, however farming is generally restricted by supply of water and any improvement in infrastructure would clearly be of benefit. Improvement in fixed crop prices significantly improved the market in 2009, 2010 and 2012 (but held in the election year of 2011). A concern, however, remains in that although the economy in the country is growing fast, inflation is also high and rising, with the value of the currency declining in 2011.

India remains a net exporter of agricultural produce, and agriculture remains an important part of the economy, the potential to increase output and quality is evident if the investment were to be made. The country has accepted GM cotton, and at present there are a wide range of field trials under way, mostly through local academic institutions, but also by Maharashtra Hybrid Seeds, Rallis, Monsanto and Syngenta. It now appears that B.t brinjal (aubergine), rape/mustard seed and rice are close to commercialisation.

**Setting of Objective**

Farmers were qualified for interview on the basis of acreage and/or activities involved in. Farmers having more than ten acres of land are considered as potential respondents and activities should be related to agriculture directly or indirectly.

Tools like in-depth interview & focus group interview were used in the process of data collection. A structured questionnaire with both open and close ended questions was used to
collect required data. Since most of the questions were open ended prompting and probing was done wherever required. Approximately 20 to 30 minutes spent per person to take an interview. Most of the times questionnaire was not handed over to the farmer to save time.

The sample selection was a non-probabilistic.

The selections of the districts were on the basic of convenience. It was done so because probabilistic selection might consume time. This would have increased the cost of project. Thus the budget was a major limiting factor that prevented the probabilistic selection of the districts for survey.

Villages in the districts were identified by simple random sampling and snowball sampling.

The respondents were selected on non-probabilistic basic.

The respondents were selected on the basic of quota sampling and snowball sampling method. It was done because of the following reasons.

If the probabilistic sample would have increased the time of the survey as

Selected respondents might not be available at the time of approach thus increasing the waiting time.

Selected respondents might not be willing to give the interview. Thus a new sample should have been drawn on the basic probabilistic method and interview should have to be done all again thus increasing the total time of the survey.

The state of where research is undertaken are well recognized for its best quality cattle breeds & good quality basmati production. Finest inter & intra transportation facility of the state is a catalyst for increased trend in the export of basmati from the state. With the continuous effort of state govt. & central govt. in the form of subsidies and technical assistance agri scenario of the state changed immensely.

Indian Agrochemical market on the other hand would grow at 8%, as it is mainly monsoon dependent, to reach USD 3.3 billion by the next 5 years. Globally, India stands fourth in the top producer of Agro chemicals, after United States, Japan & China as recorded by FICCI.
The Agrochemical companies in India can be categorized into two types one is MNC players & Indian players. FICCI (2013b) highlighted that the INR 38000 crore Indian agrochemical Industry comprises of about 125 companies manufacturing tech and about 800 offering formulations for the farming community. This comprises of both Domestic consumption and export to other countries. Both the sector domestic & export takes 50-50 share of the agrochemical division. Subsequently in 2014 FICCI updated the Indian Agrochemical industry is estimated to be USD 4.25 billion in FY14 and this figure is anticipated to grow at the rate of CAGR of 12% to meet USD 7.5 billion by FY19. Export to other countries currently constitute almost 50% of Indian crop protection industry and are anticipated to grow at the rate of CAGR of 16% to meet USD 4.2 billion by FY19, resulting in 60% share in Indian crop protection industry (FICCI 2014c). The crop protection chemical sector has generic and new generation molecules as far as branded product is concerned. Insecticides dominates the other two category (Fungicide & Herbicide) and captures a market share of 50 % the other two has 25% each. As per FICCI (2013b) there are 834 molecules existing in India there are approximately 240 tech and less than 470 formulations available to Indian farmers
1.5 Research Objectives

In this research the foremost objective is to come out with unique analysis about the effect & influence of sales promotion both price promotion (with immediate effect) and Premium Promotion (with Purchase-Premiums) on CBBE (Mullin, 2010).

While dealing with agrochemical products there are so many factors come across. The primary objective of the research is to analyse the impact of all the factors keeping in view the different situations such as without any promotion or may be monetary promotion or price promotion and with premium promotion.

At the time of imposing price promotion there are few more scenario happens like it may be immediate effect i.e. at the time of purchase the discount passed on to the customer or it may be a delayed benefit i.e. discount is passed on in the second purchase. In case of premium promotion it may happened as immediate benefit i.e. gift or give away handed over at the time of purchase or can be given a coupon which can be redeemed later on called as delayed benefit.

The components of CBBE considered for study were Awareness & Association of Brand, the Perceived Quality, the Loyalty of Brand (Aaker, 1991).

1.5.1 Sub Objectives

1. To find out the differential effects of Sales Promotions, viz., price promotion (with immediate effect) and Premium Promotion (with Purchase-Premiums) on CBBE. Here we need to analyze how the purchase behavior influenced with the price promotion, how customer switch when they saw an offer attached to the product. In the same time which one is more powerful monetary or non-monetary. Up to what extent monetary promotion drive the show as compared to non-monetary sales promotion

2. To explore the differential effects of Sales Promotion on the various components of CBBE, viz., Awareness & Association of Brand, the Perceived Quality, the Loyalty of Brand among Insecticide, Fungicide, Herbicide and Plant nutrition product categories. Here is required to analyze that how all the components of brand equity influence different indications of agrochemical products. For eg. fungicides are more influenced
towards perceived quality and sometime insecticides and how much is the differential
impact.

3. To find out the effects of Sales Promotions, price promotion (with immediate effect) and
Premium Promotion (with Purchase-Premiums) on different categories of products, viz.,
Insecticide, Fungicide, Herbicide and Plant Nutrition Products on CBBE. Here we need
to identify how the different brands in each product category behave towards sales
promotion. For eg. Without sales promotion how the brands behave when consumer have
no promotion in other competitor brands. Similarly when price promotion is there with
other brands how consumer rate to the favorite brands. Similarly how the consumer react
to the favorite brands when they saw offers attached to competitors brands.
1.6 Hypothesis of the Research
Keeping in view the secondary research following hypotheses were formulated for verification of impact of sales promotion (both price & premium promotion) on various components of CBBE such as Awareness & Association of Brand, the Perceived Quality, the Loyalty of Brand of selected agro chemical product categories that are Insecticide, Fungicide, Herbicide & Plant Nutrition Products.

1.6.1 Insecticide
1.6.1.1 Hypothesis (H1.1): There is a significant impact of sale promotion on CBBE of Insecticides. It has 3 Sub Hypothesis which are as follows

1.6.1.2 Hypothesis (H1.1a): There is a significant influence of sale promotion on Brand Awareness & brand association of Insecticide products.

1.6.1.3 Hypothesis (H1.1b): There is considerable impact of sale promotion on Perceived quality of Insecticide products.

1.6.1.4 Hypothesis (H1.1c): There is substantial effect of sale promotion on loyalty of Brand Insecticide products.

1.6.1.5 Hypothesis (H1.2): There is a significant differential influence on CBBE by price promotion (Immediate discount) than premium promotion (with Purchase-Premiums).

1.6.2 Fungicides
1.6.2.1 Hypothesis (H1.3): There is a significant impact of sale promotion on CBBE of Fungicides. It has 3 Sub Hypothesis which are as follows

1.6.2.2 Hypothesis (H1.3a): There is a significant influence of sale promotion on Brand Awareness & brand association of Fungicide products.

1.6.2.3 Hypothesis (H1.3b): There is considerable impact of sale promotion on Perceived quality of Fungicide products.
1.6.2.4 Hypothesis (H1.3c): There is substantial effect of sale promotion on loyalty of Brand Fungicide products.

1.6.2.5 Hypothesis (H1.4): There is a significant differential influence on CBBE by price promotion (Immediate discount) in Fungicide products. Price promotion (Immediate discount) affects CBBE more than premium promotion (with Purchase-Premiums).

1.6.3 Herbicides
1.6.3.1 Hypothesis (H1.5): There is a significant impact of sale promotion on CBBE of Herbicides. It has 3 Sub Hypothesis which are as follows

1.6.3.2 Hypothesis (H1.5a): There is a significant influence of sale promotion on Brand Awareness & brand association of Herbicide products.

1.6.3.3 Hypothesis (H1.5b): There is considerable impact of sale promotion on Perceived quality of Herbicide products.

1.6.3.4 Hypothesis (H1.5c): substantial effect of sale promotion on loyalty of Brand Herbicide products.

1.6.3.5 Hypothesis (H1.6): There is a significant differential influence on CBBE by price promotion (Immediate discount) in Herbicide products. Price promotion (Immediate discount) affects CBBE more than premium promotion (with Purchase-Premiums).

1.6.4 Plant Nutrition Products
1.6.4.1 Hypothesis (H1.7): There is a significant impact of sale promotion on CBBE of Plant Nutrition Products. It has 3 Sub Hypothesis which are as follows

1.6.4.2 Hypothesis (H1.7a): There is a significant influence of sale promotion on Brand Awareness & brand association of Plant Nutrition Product products.

1.6.4.3 Hypothesis (H1.7b): There is considerable impact of sale promotion on Perceived quality of Plant Nutrition Product products.
1.6.4.4 Hypothesis (H1.17c): There is substantial effect of sale promotion on loyalty of BrandPlant Nutrition Product products.

1.6.4.5 Hypothesis (H1.8): There is a significant differential influence on CBBE by price promotion (Immediate discount) in Plant Nutrition Product products. Price promotion (Immediate discount) affects CBBE more than premium promotion (with Purchase-Premiums).

### 1.7 Details of the Brand Undertaken For Research

With the changing time and advancement of agrochemical sector there are large no. of brand introduced in Agrochem sector in India & in the globe also. The value of the crop protection industry increased significantly during the 1960s and 1970s, both in real and nominal terms. However following this period, the rate of growth in the value of the industry began to fall, until in more recent years, around the year 2000, when the market entered into a period of volatility, albeit with an underlying trend of growth. More recently, in 2011 and on into 2012, the market has experienced a swing towards positive growth, with real rates returning to levels similar to those last recorded during the 1970s. Results have benefitted from much greater stability in glyphosate prices and some modest increases in overall agrochemical prices; however volume growth driven by high crop prices has been the key factor benefitting the market.

One of the key features of the agrochemical industry over the last decade or so has been the increasing level of M&A activity within the industry; this is exemplified by the significant number of company acquisitions and mergers that have taken place in the industry in the last few years. Many brands have been acquired one of the example is dithane by Indofil.

In the Agrochemical marketing of brands as a sales Promotion is gaining it’s importance significantly day by day over other tools of Promotion Mix viz., personal selling, Advertisement, Public Relations etc. It has been seen that by the propagation of sales promotional tools in the market during off Seasons to encourage trial and often to shift in time the purchase decisions of consumers for the agrochemical products. Farmers or consumers are found to advance or postpone their purchase based on Sales Promotion offers or schemes not as per season. Broad agenda of this study was to analyse the influence of
various forms of sale promotion on the brand equity of certain selected products in the Agrochemical segment. Conventional marketing theories propose that sales promotion generally degrade Brand Equity significantly. Nevertheless, the specific impact of Sales Promotion on Brand Equity of competing brands on various dimensions is notable by a small number of researchers in the agrarian segment. In this study it has been attempted to minimize the distance.

In Indian market without sufficient knowledge products introduce by small companies in the name of generics and were used by the farmers. Due to lack of education the push of distributors or retailers became driving factor for the brand

1.7.1 Confidor

This is an Insecticide brand owned by Bayer Crop Science, a Multinational company working in India from more than a decade. Bayer was initially formed in 1863, with its business operations focused on the chemical sector. The company primarily adopted a strategy of diversification into a broad range of chemical sectors. initially commencing the production of phenacetin, an antipyretic product based on one of the byproducts of the company’s activities in dye manufacture, in the 1880s. Subsequent developments led to the company synthesizing a chemically pure and stable form of acetylsalicylic acid in 1897, which was launched as Aspirin in 1899. The product remains commercially important today.

The foundations of Bayer’s modern crop protection business were laid in the late 1940s when the company commenced research into organophosphorousinsecticides. One of the early successes of this programme was the introduction of two fast acting insecticides, methyl and ethyl parathion. Building on the success of these products the company developed a family of insecticides based on organophosphorous chemistry. Subsequent research developments saw the company expand into herbicide and fungicide chemistry. The company was one of the early innovators in development of triazine herbicides (introduced from 1970 onwards), triazole fungicides (1976) and pyrethroid insecticides (1980).

1.7.2 Atom
Atom is a brand of Indofil Industries Ltd. Indofil industries limited is one of top Indian company in the agrochemical sector. Being a fungicide company it has a good market share in terms of loyal farmers, who all consider Indofil as a quality driven company and with this brands image this brand is moving in Indian agrochemical sector. In 2012 Dow Divested European dithane business to Indofil. Indofil acquired the rights and trademarks of the Dithane product range in the European market, the existing customer contracts, and the associated registrations and accompanying data, as well as gaining the exclusive rights to the use of the patented NT technology and related trademarks in Europe. Indofil previously manufactured and distributed Dithane in India under license from Rohm & Haas prior to Dow’s acquisition of the Rohm & Haas agrochemicals business in 2001.

1.7.3 Tatamida

Tatamida is a brand of Rallis India which is a Tata group of company. Rallis was one of the top Indian company in agrochemical sector. This brand exists from more than a decade.

1.7.4 Dithane –M-45

Dithane –M-45 is a brand of Dow Agro, India. The Dow Chemical Company began operations in 1897, focusing on the manufacture and marketing of bleach products on a commercial scale. In 1906 the company commenced production of products for fruits and flowers, representing the origins of the company’s agricultural chemicals division. This division was properly established in 1908, with the first product being a spray for fruit trees. In 1910 the company produced its first lime sulphur and lead arsenate sprays for farm chemical businesses. Dow Chemical now operates as a diversified chemical company on a global basis, with the chemical interests of the company encompassing plastics, coatings, adhesives, epoxy products, polyurethanes, specialty chemicals, polymers, base chemicals, hydrocarbons and agricultural products. These operations were considerably expanded following a merger with Union Carbide which was completed in 2001. In terms of industry rankings Dow is now estimated to be the second largest chemical company globally on the basis of chemical sales, a position that was enhanced by the purchase of the remainder of Rohm & Haas in 2008.
1.7.5 Indofil M-45

Indofil M-45 is a brand of Indofil Industries Ltd. Originally this is a Rohm & Haas brand. After acquiring the brand in India Indofil changed the brand name Dithane to Indofil M-45. Now the brand Dithane again acquired by Indofil in 2012 for European region.

1.7.6 Uthane M-45

Uthane M-45 belongs to UPL limited earlier known as united phosphorous Limited. United Phosphorus (UPL) began operations in 1969 when it opened a manufacturing plant for red phosphorus in India. Subsequent developments took the company into other areas of phosphorus chemistry including inorganic phosphorus intermediates, aluminum phosphide (a grain fumigant), zinc phosphide (a rodenticide), and white phosphorus. As a result of these activities the company has established itself as the leading company in the domestic market for phosphorus and its derivatives. In 1975 United Phosphorus formed a crop protection division initially based on the company’s products for the organophosphate insecticide sector. Up until the late 1980s, the principal activity of the agrochemical division was the supply of phosphorus-based intermediates to other agrochemical companies. This business remains part of the overall activities of United Phosphorus.

1.7.7 Round up

Round up is a brand of Monsanto. Historically the agribusiness operations of Monsanto were mainly focused around the company’s involvement in the crop protection sector through herbicide chemistry. The discovery and market development of the nonselective herbicide glyphosate (Round up) brought major benefits to the company by way of substantial increases in sales and operating profit. In addition to the success of glyphosate (Round up), Monsanto also had a significant selective herbicide portfolio based on chloroacetanilide chemistry, with the key products within this group including Lasso (alachlor), Avadex (trillate) and Machete (butachlor).

1.7.8 Clean up
Clean up is a brand of Indofil Industries limited. Being a fungicide driven company Indofil got a good no. of loyal farmers. To provide customers a basketful of products Indofil introduced clean up.

1.7.9 Brake

Brake is a Brand of Biostadt India Ltd. Biostadt India Limited is pioneer in plant growth promoters. To support the loyal farmers, dealers and distributors they introduce brake as a traded product.

1.7.10 Siapton

Siapton is a brand of Isagro Asia. This is one of the good brands in this sector of plant nutrition products. Isagro is a multinational company existing in India from more than two decades. Worldwide it is a growing company entering into many ventures. Isagro USA, entered into a partnership with Arysta, through its North American subsidiary for the launch of Isagro’s Mettle (tetraconazole) fungicide in Canada.

1.7.11 Biozyme

Biozyme is a brand of Biostadt India Ltd. This brand is the oldest off all and got a market share of more than 50 %. Biostadt earlier known as Wockhard Life sciences. With Biozyme farmers started using plant nutrition products in India. Biostadt India Ltd is known for its marketing strategy it is relying both on Above-The-Line (ATL) &Below-The-Line (BTL) Marketingto brand Biozyme in India. Biostadt is an Indian multinational working more than 60 countries. As an establishment of pharmaceutical origin Biostadt got a good corporate image in India

1.7.12 Biovita

Biovita is a brand of PI industries limited. This is also one of the oldest brands in the plant nutrition segment. This is in fact the second largest brand after biozyme very popular mostly in north India
1.8 Assumptions for the study

A satisfied customer can only be loyal to a brand. This satisfaction is from post-sales satisfaction from shop / dealer like, Product display, Information received, Banners posters display for sales promotion can be granted for responding an answer, the performance of the products, Field knowledge can be a base of the response.

The buyers are at last one time user of the product. The respondents are not necessarily a opinion leader but the

Price promotion can be in any form of discounting especially monetary sales promotion.

Premium promotion may be in any form of non-monetary sales promotion scheme. Both the immediate and delayed form of promotion are considered as sales promotional scheme.

In APPENDIX – I the entire questionnaire has been put. The questionnaire has 5 segments first for the general information, second for insecticides, third for fungicide, fourth for herbicides and fifth for plant nutrition products. Total of twenty four questions have been asked to the respondents. Further the questionnaire has three subsets in each segment from second to fifth category one has without SP, second was with monetary promotion and the third was non-monetary sales promotion.

In APPENDIX – II there are different props used to prompt the respondents if they are unable to recollect the brand image though they use it. Initially respondents were asked about the brand and their views as per the questionnaire if the respondents seem blank then they will be supported with the colour print of the brands and brand matrix. There are different combination of brand images as per the proceeding the moderator show the props to the respondent.