1. INTRODUCTION

1.1 Introduction to the Study

Agriculture is the back bone of Indian economy. Ensuring food security for more than 1.21 bn Indian population with diminishing cultivable land resources is herculean task. This necessities use of high yielding varieties of seeds, balanced use of fertilizers, judicious use of quality pesticides along with education of farmers and use of modern farming technique.

The production of Indian pesticides industry has almost remained stable at 82000–85000 MT during FY10. In value terms, the size of Indian pesticides was estimated at ₹ 180 bn for 2010, including export of ₹ 100 bn per hectare consumption of pesticides is low in India at 600 grams when compared to the world average of 3000 grams. Low consumption can be attributed to fragmented land holding, lower level of irrigation, dependence on monsoon, low awareness among farmers about the benefits of usage of pesticides etc. India being a tropical country, the consumption pattern is also more skewed toward insecticides which accounted for 52 percent of the total pesticides consumption in FY10. Rice is the highest pesticides consuming crop in India forming 19.8 percent of the total pesticides consumption followed by cotton. Andhra Pradesh is the highest pesticides consumption state 22 percent followed by Maharashtra & Punjab.

India, due to its inherent strength of low-cost manufacturing and qualified low cost manpower, is a net exporter of pesticides to countries such as USA and some European & African countries. Exports formed 55.56 percent of total revenue in FY10 and have grown at a Compounded Annual Growth Rate (CAGR) of 37.59 percent from FY06 to FY10.

Prior to 2005, i.e. in the process patent regime, Indian companies focused on applied research and concentrated on marketing generics and off-patent products Due to this, the R&D expense by Indian companies was lower at approximately 1 percent of turnover. Global companies focused on High-end Specialty products and dominated the market for patent new molecules. Globally, pesticides will need to increase R&D expenses to meet competition from MNCs. Alternatively Indian companies can be competitive in the area of Contract Research And Manufacturing Service (CRAMS).

With the advent of the Integrated Pest Management (IPM) technique, the use of bio pesticides and Genetically Modified (GM) seeds has increased. Globally GM seeds are used mainly for commercial crops like cotton, maize, soyabean. In India, Bt Cotton is widely used and acreage stood at 9.4 mn ha for 2010, with growth of 12.17 percent over the previous year. Use of GM seeds may diminish the use of insecticides but use of herbicides may improve.

CARE Research feels that the agriculture sector, may see a better future. Domestic market will be the key growth driver for Indian pesticides industry in coming year unlike led by exports in previous years. Also, the Indian pesticides industry is likely to move towards the global product mix, with increases use of herbicides and fungicides.

1.2 Introduction to the Tata Group

The Tata group comprises over 90 operating companies in seven business sectors communications and information technology, engineering, materials, services, energy, consumer products and chemicals. The group has operations in more than 80 countries across six continents, and its companies export products and services to 85 countries. The group takes the name of its founder, Jamshedji Tata, a member of whose family has almost invariably been the chairman of the group. The chairman is Ratan Tata, who took over from J. R. D. Tata in the 1990s.

The total revenue of Tata companies, taken together, was $67.4 billion (around Rs319, 534 crore) in 2009-10, with 57 per cent of this coming from business outside India. Tata companies employ around 395,000 people worldwide. The Tata name has been respected in India for 140 years for its adherence to strong values and business ethics.

1.3 Introduction to Company (Rallis India Ltd.)

Rallis India Limited, with its service focus in agriculture sector, is expected to be the key driver for attainment of leadership in agriculture sector. Rallis has been a leading player in the Indian agrochemicals market for several decades and intends to consciously transform itself from being an agri input company into one that offers end-to- end solutions to the farming community. In the last two the decades of the 20 century, Rallis maintained its leadership position in the domestic agrochemicals

industry, till merger of Bayer and Aventis pushed it to second position. The domestic industry has about 80 players in the organized sector and more than 125 players in the small-scale sector, which mainly comprises of Formulators. The installed capacity of industry is about 124,000 tons. However, demand is seasonal; maximum being consumed in the months from July to November. Average capacity utilization of the industry stands at 65%. Indian agrochemical companies account for only about 35 percent of the total pesticide sales in the country. These include Rallis, with a market share of 13 percent

1.3.1 History of the company

- In 1837, five Greek brothers set up Ralli Brothers in Tabreez, an Iranian city within the Ottoman Empire.
- As early as 1851, Ralli Brothers set up an India office in Kolkata. It was a lucky move because the Crimean War broke out three years later and created huge demand for Indian jute. Rallis made its early fortunes out of jute assets.
- The jute assets were finally sold one hundred years later in 1958 to buy two pharma companies, WT Suren and Teddington.
- After independence, on 23rd August, 1948, an Indian Company was registered as Rallis India Private Limited.
- A British businessman called Sir Clavering Fison got access to DDT technology. Since he saw India as a big market, he established Fison India in 1956.
- Independently, Mr. JRD Tata had become deeply interested in DDT because of its beneficial impact on the health of millions in India affected by malaria.
- In 1970, Tata Fison India reverse-merged into Rallis India Ltd and the present structure of company took shape.
- Rallis India Ltd -Turnover (009-10) Rs 937 Cr. & PAT Rs 101 Cr.

1.3.2 Areas of business

- The domestic formulation business caters to the crop protection and yield enhancement needs of the Indian farmers through a wide portfolio of products, including insecticides, fungicides, herbicides, plant-growth nutrients and seeds.

- The domestic institutional business caters to the bulk and technical requirements of institutional customers.
- The international business handles exports of pesticides to all parts of the world. The export basket includes technical-grade pesticides, branded formulations and contract-manufactured products.

1.3.3 Market Mantra

As pesticides are mostly generic by nature, Rallis is constantly faced with products that are similar to its own. The critical differentiation is through service, quality and interaction with the growers.

"Rallis have very strong brand equity in this market. The Tata name is associated with Rallis and often people call it Tata Rallis.

- Whether in R&D or marketing, innovation makes the difference. Rallis has created a mascot, 'Dr Vishwas', a sort of super-man who identifies farmers' problems and offers complete solutions. He appears in all the company's communications. Some of the farmers who call the Rallis helpline actually ask to speak to Dr Vishwas.
- The company also has a unique marketing programme called **4S (Sampark-Sambandh-Samruddhi-Santushti)** which means building relationships through information and service.
- The sales and marketing staff are joined by factory workers, R&D scientists and officers in the field. Each group is assigned an area and a number of farmers to meet. Apart from understanding problems, if farmers are moving to other products, they can find out why. It is an invaluable marketing device that builds trust and a priceless knowledge base. A process called Innogate captures innovative marketing and problem-solving practices.

1.3.4 Location

The Company’s head office is in Mumbai. Plants are located in India at Akola, Lote, Turbhe, Ankleshwar and Patancheru and the new plant at Dahej will commence operation from this year.

1.4 Product Introduction

a) What it is

Clodinafop-propargyl is a systemic, post-emergence herbicide for selected grass control in spring and Durum wheat.

b) How it works (Mode of Action)

Clodinafop-propargyl is absorbed by the leaves and rapidly translocated to the growing points of leaves and stems. It interferes with the production of fatty acids needed for plant growth in susceptible grassy weeds

c) What it controls

Controls grasses such as green foxtail, barnyard grass, Persian darnel and volunteer canary seed (See specific product label) in spring and Durum wheat. Broadleaved weeds are not controlled

d) Application Timing

For optimum results, apply herbicide to actively growing weeds. An early application will maximize crop yields by reducing weed competition. Weeds emerging after application of the herbicide will not be controlled.

1.5 Introduction to Area

1.5.1 Punjab

Fig 1 Map of Punjab

1.5.2 Agriculture at a Glance

Agriculture in Punjab is highly popular all over India. Punjab is well-known for its agricultural activities and plantations. Agricultural activities have occupied a high percentage of land in Punjab because of its land which is perfect for cropping

Punjab is one of the smallest states in India and possess 2 kinds of regions: the plain region and the hilly region. The hilly region being very less, has Shivalik Hills on the eastern side and Hoshiarpur district on the western side. Punjab has more than 90 percent area of flat plain and which is also a part of the Indo-Gangetic plain. The main sources of irrigation in Punjab are canals and tube wells. The two main main season of crops cultivated in Punjab agriculture are Kharif and Rabi. The Kharif crops of Punjab comprise of maize, cotton, rice, sugarcane, pulses (grams excluded), bajra, peas, jowar, and vegetables such as gourd, onions, and chillies. The Rabi crops of Punjab include gram, barley, wheat, fodder crops, potatoes, oil seeds, and winter vegetables. The agriculture in Punjab is extremely intensive in terms of land, assets, energy, nutrients, agricultural components, water, and so on.

1.5.3 Haryana

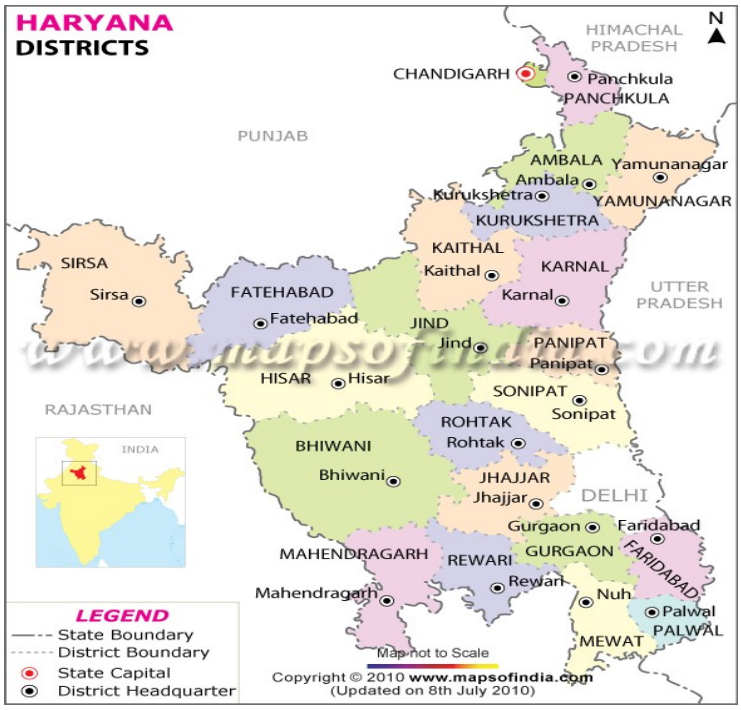

Fig 1.4 Map of Haryana

1.5.4 Agriculture at a Glance

- Geographical Area - 44.21 lakh ha.
- Cultivated Area - 38.09 lakh ha.
- Net Area Sown - 35.56 lakh ha.
- Gross Cropped Area - 63.94 lakh ha
- Cropping intensity - 182 % (National average 135%)
- Irrigated Area - 84%
- No. of Farm Holdings - 15.28 lakh

Haryana is often called the “Food Mine” of the country. About 80 percent of the population of the state is dependent on agriculture, directly or indirectly. Haryana is self sufficient in producing food grains and is also a major contributor of food grains in meeting the needs of other states of the country. The world famous Basmati Rice is produced here in abundance. The major cereals produced in the state include wheat, rice, maize and bajra.The crop production of Haryana can be broadly divided into Rabi

and Kharif. The main kharif crops in the state include sugarcane, groundnut, maize and paddy etc. The minor kharif crops are chillis, bajra, jawar, pulses and vegetables. There are two agro-climatic zones in the state. The north western part of the state is suitable for the cultivation of Rice, Wheat, Vegetable and temperate fruits and the south-western part are suitable for high quality agricultural produce, tropical fruits, exotic vegetables and herbal and medicinal plants.

1.6 Importance of the Proposed Investigation

The Indian agro Chemicals Industry has a vital role to play in achieving higher levels of productivity in agriculture considering the quantum of food grains lost on account of various pests. The Indian pesticide industry had advanced significantly in recent years, producing more than 1000 tonnes of pesticides annually. It is expected that the strong fundamentals of the Indian pesticide industry, such as cheap availability of raw materials, process expertise, low operating costs and R& D strengths, will attract many foreign companies. This in turn should boost investment in research, and thus there would seem to be a bright future for agrochemical companies in India.

Market of pesticides may be divided into three main segments viz., insecticides, herbicides and fungicides. In India insecticides contributes about 65 per cent, fungicides nearly 20 per cent and herbicides about 15 per cent to the pesticides market. India is currently the largest manufacturer of pesticides and the second largest producer of agrochemicals in Asia. Out of 145 pesticides registered in India, 85 technical grades are locally produced. The Rs. 30,000 million Indian agrochemical markets are run primarily by nearly 80 players in organized sector.

Phalaris minor is the major weed of wheat in rice wheat system. Sometimes its population is so high (2000-3000 plants / m2) that farmers are forced to harvest the wheat crop as fodder. Isoproturon (Arelon) was recommended for the control of *Phalaris minor* in 1980s. It remained effective for almost a decade. However, sole dependence on this herbicide resulted in the development of resistance to Isoproturon in *Phalaris minor*. During the last 3-4 years a number of herbicides were found effective against even the resistant biotypes of *Phalaris minor*. Out of the four new herbicides found effective against *Phalaris minor*, two namely Sulfosulfuran and

Metribuzin were effective against both grassy and non-grassy weeds, whereas Clodinafop and Fenoxaprop were specific to grassy weeds.

The main product and services of Rallis India Ltd are Pesticides including insecticides, fungicides and herbicides. The company intends to focus on the development of sales and market share for these products both in India and abroad. Rallis India Limited, with its service focus in agriculture sector, is expected to be the key driver for attainment of leadership in agriculture sector. Rallis has been a leading player in the Indian agrochemicals market for several decades and intends to consciously transform itself from being an agri input company into one that offers end-to-end solutions to the farming community. Clodinafop-propargyl is a systemic, post-emergence herbicide for selected grass control in spring and Durum wheat. Company is looking to serve the mass farmers segment by sale of Cloddinofop-propargyl which has positive effect on plant growth. This study will help to know how to develop Sales Promotional Strategy for Clodinofop in Haryana and Punjab.

1.7 Objectives of the Study

The Project "**Sales Promotional Strategy for Clodinofop-propargyl (post emergence herbicide) in Haryana and Punjab"** was undertaken to fulfill the following objectives:-

I. To identity factors influencing sales of Clodinofop-propargyl
II. To examine the promotional strategy adopted by competitors
III. To study the attitude of stakeholders towards different promotional strategies
IV. To formulate the strategy for sales promotion of Clodinofop-propargyl

2. REVIEW OF LITERATURE

Sinha (2002) examined brand positioning of pesticides and farmers perception and preference for different brands in untapped areas of Udham Singh Nagar and Nainital districts of Uttaranchal. He found that PI Industries Ltd. was one of the leading business players in the field of pesticides.

Kumar (2003) studied the estimation of market potential of agrochemicals for paddy and vegetables in different districts of Uttrakhand state and found that farmers purchase pesticide mostly as per the dealer's advice.

Kottler (2006) described that positioning means creating a space in the customer's mind. Marketing is a continuous process of value creation, value communication, value delivery and brand positioning. Brand positioning helps marketer in building the marketing mix for each segment.

Anand (2006) stated that agrochemicals helped farmers to increase crop productivity by 22 to 50 per cent and were therefore, valuable and indispensable to the sustainable production of higher quality food and fibers

Khan (2006) in this study on agrochemical india reported that weeds contributed 33 per cent of the total crop losses. After efficient use of herbicide 95 per cent losses could be minimized.

Palsania (2006) in his study entitled "Status and Strategy for Marketing of Plant Protection Material for Soybean Crop in Light of Supporting Agencies in Kota and Bundi Districts of Rajasthan" revealed that field staff is the most effective source of information amongst farmers followed by farmers' meeting. The main brands of weedicides were Pursuit and Whip Super in both the districts.

Krishna (2010) studied the brand promotional tools for selective herbicide 'Lasso' in different districts of Punjab and found that field demonstration, farmers' fair, van campaigning, poster and banner etc. helped to increase the sale of Lasso.

3. PROJECT METHODOLOGY

3.1 Area of Study

The study was undertaken in Haryana and Punjab

3.2 Collection of Data

The data required for the accomplishment of objectives regarding herbicide and Clodinofop-propargyl, farmers, perception, promotional schemes, and factors responsible for augmenting the sale were collected through primary and secondary data sources.

Sources of Primary Data

Primary data regarding the study were collected from the following four categories of respondents:

- Distributors
- Dealers/ Retailers
- Farmers
- Company personnel

Sources of Secondary Data

Secondary data regarding the herbicide industry, sales promotional activities, pricing scheme and Government's role in promoting the sale were obtained from

- Literature pertaining to research work done and promotional activities undertaken in the area
- Department of Agriculture of State Government
- Internet

3.3 Sampling

Sample Size

- Distributors : 75
- Dealers: 125
- Farmers: 100

Sampling Procedure

Selection of districts: Five potential wheat growing districts selected (as suggested by company) were:

Panjab: Bhatinad, Ferozpur, Mansa

Haryana: Hissar, Fatehabad

Selection of Mandis: Most potential Mandi from each district was selected Selection of Distributors: 15 potential distributors from each selected mandi region were selected.

Selection of Dealers: 25 potential dealers from each selected mandi region were selected from the list given by distributors

Selection of farmers: 20 farmers growing wheat were selected on convenience basis from the selected regulated mandis

3.4 Research Instruments

Questionnaire containing both open ended and closed ended questions were used as the main research instrument. Questionnaire for distributors, dealers and farmers were prepared separately.

3.5 Analysis of Data:

For the analysis of data, suitable research techniques and statistical tools were applied. The project was carried out to fulfil the specified objectives of the study.

3.5.1 To identity factors influencing sales of Clodinofop-propargyl

To study the factors influencing sale of Clodinofop-prapergyl, dealer/retailer and distributor were be interviewed. Under this objective detailed analysis of herbicides season, Clodinofop-propargyl season, major players for clodinofop-propafgyl,

participation of fertilizer companies, participation of cooperative society, low price brand, weed infestation, climatic factors, resistance problem of Clodinofop-propargyl was done.

3.5.2 To examine the promotional strategy adopted by competitors

Primary data from dealer/retailer, distributor, farmers and concerned organisation were collected to compare promotional activities undertaken for Clodinofop-propargyl and its competitors. Attitude of respondents related to various aspects was studied such as field demonstration, extension services, farmers' meeting, jeep campaigning, gift schemes, packaging of product etc. by using ranking and scaling techniques.

3.5.3 To study the attitude of stakeholders towards different promotional strategies

To study the attitude of stakeholders towards different promotional strategies, 5 point likert scale was used to analyse what , they feel, think, and there opinion toward different promotional strategies of various companies.

3.5.4 To formulate the strategy for sales promotion of Clodinofop-propargyl

After a thorough study of factors influencing sale of Clodinofop-propargyl, promotional activities and attitude of stake holders, a strategy were formulated for sales promotional activities of clodinofop-propargyl in the study area

4. FINDINGS AND ANALYSIS

The result of study are presented and discussed in this chapter under following subheads

4.1 Factors influencing sale of Clodinofop-propargyl

4.2 Promotional strategy adopted by competitors

4.3 The attitude of stakeholders towards different promotional activities

4.4 Strategy for sales promotion of Clodinofop-propargyl

These objectives was done to understand the downfall in the sale (Clodinofop-propargyl) of company in 2010

4.1 The factors influencing sale of Clodinofop-propargyl

4.1.1 List of major companies in sale of Clodinofop-propargyl in Haryana and Punjab

List of all major companies involved in sale of Clodinofop-propargyl in Haryana and Punjab is given in Table 1

Table 1: List of major companies in sale of Clodinofop-propargyl in Haryana and Punjab

MNC's	Indian Players
• Bayer • BASF • DuPont • Monsanto • Dow Agro science • Syngenta • Makhteshim-Agan • Arysta Life Science • Sumitomo chemical	• Rallis India Ltd. • United Phosphorous Ltd. • Excel Crop Care Ltd. • P.I industries Ltd. • Gharda Chemicals Ltd. • Dhanuka • Bharat Insecticides Ltd. • Hindustan Insecticides Ltd.

From the Table 1 it is quite evident that a good numbers of Indian and MNCs were involved in sale of Clodinofop-propargyl. During the study more than 350 companies were involved in sale of Clodinofop-propargyl in Haryana and Punjab. According to response of dealers, distributors and farmers companies like Bayer, Syngenta, Rallis India Ltd, UPL, Shriram Fertilizers and Chamble Fertilizers were working well as compare to other players in market. List of some important players is given in Annexure I.

4.1.2 Sale of herbicide for wheat in Haryana and Punjab during the year (2009-2010)

Response obtained from dealers and distributors about sale of herbicide for wheat in Haryana and Punjab (2010) is depicted in Table 2

Table 2: Sale of herbicide for weeds of wheat during the year 2010 as compare to 2009

Districts	Frequency of Response	Weighted Average Score (Out of 5)					
	Very Good (5)	Good (4)	Moderate (3)	Poor (2)	Very Poor (1)	Total	
Bhatinda	1	3	6	23	7	40	2.2
Mansa	1	6	14	8	11	40	2.4
Ferozpur	2	5	10	11	13	40	2.3
Hissar	2	6	21	7	4	40	2.8
Fatehabad	1	5	18	13	3	40	2.7
Total	7	25	69	62	38	200	2.4

From Table 2, it is evident that Hissar with a weighted average score of 2.8 stood first followed by Fatehabad, Mansa and Ferozpur on scale of sale herbicide for wheat in Haryana and Punjab. Bhatinda scored lowest 2.2 of sale herbicide for wheat. Thus, it can be inferred that in dealers and distributors view highest sale of herbicide for wheat was in Hissar as compared to other districts of Haryana and Punjab. From Table 2 it can be concluded that sale of wheat herbicide was moderate to poor as compared to last year with an average score of 2.4 out of 5.

4.1.3 Response regarding sale of Clodinofop-propargyl in Haryana and Punjab during the year (2009-2010)

Response obtained from dealers and distributors about sale of Clodinofop-propargyl for weeds of wheat in Haryana and Punjab during the year 2010 as compare to 2009 is depicted in Table 3

Table 3: Sale of Clodinofop-propargyl during the year 2010 as compare to 2009

Districts	Frequency of Response	Weighted Average Score (Out of 5)					
	Very Good (5)	Good (4)	Moderate (3)	Poor (2)	Very Poor (1)	Total	
Bhatinda	1	4	11	16	8	40	2.3
Mansa	2	5	12	15	6	40	2.5
Ferozpur	3	6	14	10	7	40	2.7
Hissar	4	8	17	6	5	40	3
Fatehabad	2	10	14	8	6	40	2.8
Total	12	33	68	55	32	200	2.6

From the Table 3, it is evident that Hissar with weighted average of 3 stood first in sale Clodinofop-propargyl, followed by Fatehabad, Ferozpur, and Mansa on scale of sale of Clodinofop-propargyl in Haryana and Punjab. Bhatinda scored lowest 2.3 on Clodinofop-propargyl sale scale. Thus, it can be inferred that in dealers and distributors view highest sale of Clodinofop-propargyl was in Hissar as compared to other districts but overall sale as compare to the last year was moderate to poor with an average score of 2.6 out of 5 in Haryana and Punjab.

4.1.4 Participation of fertilizer companies in sale of Clodinofop-propargyl

Data Regarding response of dealers and distributors about participation of fertilizer companies in sale of Clodinofop-propargyl in Haryana and Punjab during the year 2010 as compare to 2009 presented in Table 4

Table 4: Response of dealers and distributors about participation of fertilizer companies in sale of Clodinofop-propargyl

Districts	Frequency of Response	Total (%)				
	Bhatinda	Mansa	Ferozpur	Hissar	Fatehabad	
Push Sale	35	34	33	30	28	80
Normal Sale	4	6	3	8	7	14
No Idea	1	0	4	2	5	6
Total	40	40	40	40	40	100 200

Data presented in Table 4 indicates that in all five districts of Haryana and Punjab participation of fertilizers companies in sale of Clodinofop-propargyl has increased, 35 respondents from Bhatinda was agreed about fertilizers companies participation in sale Clodinofop-propargyl, followed by Mansa, Ferozpur, Hissar and Fatehabad. 8 respondents from Hissar followed by Fatehabad, Mansa, Bhatinda and Ferozpur said that there was normal sale of Clodinofop-propargyl as compared to previous year. 5 respondents from Fatehabad followed by Ferozpur, Hissar, Bhatinda and Mansa had not any idea about sale of Clodinofop-propargyl. It can be concluded that participation of fertilizers companies was increased for sale of Clodinofop-propargyl in Haryana and Punjab. Overall 80 percent of dealers and distributors responded in favour of push sale by fertilizers companies during 2010.

4.1.5 Response of dealers and distributors about percentage growth in sale of Clodinofop-propargyl by fertilizers companies (2009 to 2010)

Data regarding response of dealers and distributors about percentage growth in sales of Clodinofop-propargyl by fertilizer companies in Haryana and Punjab during the year 2010 as compare to 2009 is presented in Table 5

Table 5: Response of dealers and distributors about percentage growth in sales of Clodinofop-propargyl by fertilizers companies in Haryana and Punjab.

Percentage	Frequency of Response					
	Bhatinda	Mansa	Ferozpur	Hissar	Fatehabad	Total (%)
1-10	5	8	4	23	25	32.5
10-20	6	5	13	7	5	18
20-30	14	16	7	2	1	20
30-40	7	4	8	0	2	10.5
40-50	1	3	3	0	1	4
Same	3	1	2	4	5	7.5
No Idea	4	3	3	4	1	7.5
Total	40	40	40	40	40	100 200

Data presented in Table 5 indicates that in all five districts of Haryana and Punjab, participation of fertilizers companies in sales of Clodinofop-propargyl has increased, 16 respondents from Mansa followed by Bhatinda and Ferozpur said sale of Clodinofop-propargyl has increased 20-30% Bhatinada and Mansa, 10-20% has increased in Ferozpur. While In Haryana 25 repondents from Fatehabad followed by Hissar said sale of Clodinofop-propargyl has increased up to 1-10% in Hissar and Fatehabad, very few respondents was in favor of sale of Clodinofop-proparfgyl increased up to 30-40% and 40-50% in Haryana and Punjab. Some respondents said there was normal sale of Clodinofop-propargyl as compare to last year, while remaining had no idea about sale Clodinofop - propargyl by fertilizers companies. In all, 32.5 percent respondents opinion that sale increased was in range of1-10 percent.

4.1.6 Response of dealers and distributors about sale of Clodinofop-propargyl by cooperative societies (2009 to 2010)

Data regarding response of dealers and distributors about sale of Clodinofop-propargyl by cooperative societies in Haryana and Punjab during the year 2010 as compare to 2009 is presented in Table 6.

Table 6: Response of dealers and distributors about sale of Clodinofop-propargyl by cooperative societies in Haryana and Punjab

Districts	Frequency of Response	Total (%)					
		Bhatinda	**Mansa**	**Ferozpur**	**Hissar**	**Fatehabad**	
Push Sale		31	34	36	27	25	76.5
Normal Sale		6	5	4	9	12	18
No Idea		3	1	0	4	3	5.5

Total	40	40	40	40	40	100 200

Data presented in Table 6 indicates that in all five districts of Haryana and Punjab participation of cooperative societies in sales of Clodinofop- propargyl has been increased, 36 respondents from Ferozpur was agreed about cooperative societies participation in sales of Clodinofop-propargyl followed by Mansa, Bhatinda, Hissar and Fatehabad, while 12 respondent from Fatehabad followed by Hissar, Bhatinda, Mansa and Ferozpur.said there was the same sale of Clodinofop-propargyl as compared to previous year. 4 respondents from Hissar followed by Fatehabad, Bhatinda and Mansa had no idea about sale of Clodinofop-propargyl by cooperative societies. it can be conclude that participation of cooperative societies in sale of Clodinofop-propargyl has increased during the year 2010 as compared to 2009, 76.5 percent respondents in favour of push sale.

4.1.7 Response of dealers and distributors about percentage growth in sale of Clodinofop-propargyl by Cooperative Societies (2009-2010)

Data regarding response of dealers and distributors about percentage growth in sale of Clodinofop-propargyl by cooperative Societies in Haryana and Punjab during the year 2010 as compare to 2009 presented in Table 7

Table 7: Response of dealers and distributors about sale of Clodinofop-propargyl by Cooperative Societies in 2010 as compare to 2010

Percentage	**Frequency of Response**	**Total (%)**				
	Bhatinda	**Mansa**	**Ferozpur**	**Hissar**	**Fatehabad**	
1-10.	12	26	25	14	9	43
10-20.	12	6	5	8	3	19
20-30.	2	1	5	4	2	7

30-40.	3	0	1	0	2	3
Same	5	4	4	5	11	14.5
No Idea	6	3	0	9	9	13.5
Total	40	40	40	40	40	100 200

Data presented in Table 7 indicates that in all five districts of Haryana and Punjab, participation of Cooperative societies in sales of Clodinofop-propargyl has increased, 26 respondents from Mansa, followed by Ferozpur, Fatehabad, Hissar and Bhatinda, said Sale of Clodinofop-propargyl has increased in between 1-10% in Haryana and Punjab, very few respondents said there was normal sale of Clodinofop-propargyl as compared to last year.. As a whole, 43 percent respondent agreed about the sale of Clodinofop-propargyl by cooperative societies.

4.1.8 Response of dealers and distributors about influence low price brand on sale of Clodinofop-propargyl (2009 to 2010)

Data regarding response of dealers and distributors about influence of low price brands on sale of Clodinofop-propargly during the year 2010 as compare to 2009 in Haryana and Punjab presented in Table 8.

Table 8: Influence of low price brands on sale of Clodinofop-propargyl

Districts	**Frequency of Response**	**Total (%)**					
		Bhatinda	**Mansa**	**Ferozpur**	**Hissar**	**Fatehabad**	
Increase Sale		35	38	39	34	36	91
Normal Sale		5	2	1	6	4	9
Total		40	40	40	40	40	100 200

Data presented in Table 8 shows that in all five districts of Haryana and Punjab, influence of low price brands on sale of Clodinofop-propargyl was increased. 39 respondents from Ferozpur followed by Mansa, Fatehabad, Bhatinda, and Hissar, has said sale of Clodinofop-propargyl was increased due to sale of low price brands of Clodinofop-propargyl, while 6 respondents from Hissar followed by Bhatinda, Fatehabad, Mansa and Ferozpur, said there was same sale of Clodinofop-popargyl as compare to last year. It can be concluded that sale of low price brand was increasing in the market of Hayana and Punjab very signifiacantly as 91 percent of dealers and distributors agreed on influence of low price brand on sale.

4.1.9 Response of dealers and distributors about percentage growth in low price brand of Clodinofop-propargyl during the year (2009 to 2010)

Data regarding response of dealers and distributors about low price brands of Clodinofop-propargyl during the year in 2010 as compare to 2009 is presented in Table 9

Table 9: Response of dealers and distributors about low price brand of Clodinofop-propargyl in Haryana and Punjab

Percentage	Frequency of Response	Total (%)					
		Bhatinda	Mansa	Ferozpur	Hissar	Fatehabad	
1-10		4	7	2	2	3	9
10-20		5	9	12	12	16	27
20-30		15	13	20	9	6	31.5
30-40		5	2	4	6	4	10.5
40-50		6	8	2	6	2	12
Same		5	1	0	5	9	10
Total		40	40	40	40	40	100 200

Data presented in Table 9 shows that sale of low price brands of Clodinofop-propargyl was increased in all five districts of Haryana and Punjab, 20 respondents from Ferozpur followed by Bhatinda and Mansa and 16 respondents from Fatehabad followed by Hissar, said sale of low price brands was increased in between 20-30% and 10-20% respectively in Punjab and Haryana, very few respondents said, there was

same sale of Clodinofop-propargyl in market. Maximum respondents i.e., 31.5 percent were of the view that sale of low price brand of Clodinofop-propargyl increased in range 20-30 percent.

4.1.10 List of prices of various Clodinofop-propargyl brands available in market during the year (2010)

Data regarding prices of various Clodinofop-propargyl brands available in market during the year 2010 presented in Table 10

Table 10: Prices of various Clodinofop-propargyl brands available in market

S.No	Company Name	Brand Name	₹/per pack of 16 gms
1	Syngenta	Topik	380
2	Bayer	Lucifer	360
3	Nagarjun Agrochem Ltd	Point	340
4	Rallis India Ltd	Sartaj	350
5	Chemtura Chemical India Pvt Ltd	Moolah	325
6	Unique Fertilizer & chemical	Topstar	300
7	Indo-Swiss Chemical and fertilizer	Topo-Top	300
8	Godrej Agrovet Ltd	Videout	300
9	Coromandal gromour	Skiper	290
10	Insecticide India Ltd	Omega	280
11	Agri Science Ltd	Trophy	280
12	Vijay Chemical Ltd	V-Top	280
13	Sawastic Pesticides Ltd	Top-Up	280
14	Atul Ltd	Vitis	280-300
15	Indofil Chemical Ltd	Gromate	275-300
20	Tropical Agro System	Dabang	270-300
22	UPL	Jhatka	260-300
16	Sabero Organics Gujarat Ltd	Clodina	270
23	Sumil Chemical Industries Pvt. Ltd	Viala-150	260
21	JIL	Jeet	260
24	Medley Chemical Ltd	Chetaha	250-300
25	Cheminova India Limited	Rakshak	250-280
26	Makhteshim-Agan	Clodinagan	250
27	Modern Insecticides Ltd	Clipper Plus	240-260
28	Crystal Phosphates Ltd	Avtar	200-250

29	Sawal Chemical Pvt Ltd	Toppel	180

Data presented in Table 10 shows that difference in prices of Clodinofop-propargyl Syngenta the had a highest price ₹-380 of its brand Topik (Clodinofop-propargyl) while Sawal Chemical Ltd, had lowest price ₹-180 of their brand Toppel (Clodinofop-propargyl). There was very high competition regarding prices of Clodinofop-propargyl seen in market ranging from ₹ -180 to ₹ 380.

4.1.11 Response of dealers and distributors about infestation of weeds in wheat during the year (2010) in Haryana and Punjab

Response of dealers and distributors about infestation of weeds in wheat during the year 2010 as compare to 2009 in Haryana and Punjab is presented in Table 11

Table 11: Response of dealer and distributors about less infestation of weeds in wheat

Districts	Frequency of Response	Weighted Average Score (Out of 5)					
	Strongly agree (5)	Agree (4)	Moderate (3)	Disagree (2)	Strongly disagree (1)	Total	
Bhatinda	**3**	**4**	**16**	**9**	**8**	**40**	**2.6**
Mansa	**3**	**4**	**9**	**14**	**10**	**40**	**2.1**
Ferozpur	**1**	**2**	**8**	**16**	**13**	**40**	**2**
Hissar	**3**	**5**	**21**	**7**	**4**	**40**	**2.9**
Fatehabad	**2**	**5**	**10**	**15**	**10**	**40**	**2.4**
Total	**12**	**20**	**64**	**51**	**45**	**200**	**2.4**

From the Table11 it can be concluded that weeds infestation was moderate in Haryana and Punjab. According to response of most of the dealers and distributors weeds infestation in Hissar, Fatehabad, Mansa and Bhatinda was moderate as compared to last year. Hissar with weighted average of 2.3 stood first followed by Bhatinda, Mansa, Fatehabad and Ferozpur. According to opinion of dealers and distributors from Ferozpur weeds infestation was same as compared to last year.

Maximum response were for moderate or disagree to the less infestation of weeds during this year 2010 as compared to last year.

4.1.12 Response of dealers and distributors about resistance in weeds against Clodinofop-propargyl in Haryana and Punjab during the year (2010)

Data regarding response of dealers and distributors about resistance in weeds against Clodinofop-propargyl in Haryana and Punjab presented in Table 12

Table 12: Response of dealers and distributors about increased resistance in weeds against Clodiofop-propargyl in Haryana and Punjab

Disricts	Frequency of Response	Total (%)					
		Bhatinda	Mansa	Ferozpur	Hissar	Fatehabad	
Resistance		21	27	22	36	28	67
Not Resistance		19	13	18	4	12	33
Total		40	40	40	40	40	100 200

Data presented in Table 12 indicates that resistance in weeds was increased in all five districts of Haryana and Punjab maximum (36) respondent from Hissar followed by Fatehabad, Mansa, Ferozpur and Bhatinda said that resistance in weeds for Clodinofop-propargyl is increasing continuously from last few year. As per dealer and distributors of Hissar and Fatehabad resistance was increased highly over all 67 percent respondents opinion in favour of increased resistance.

4.1.13 Response of farmers about resistance in weeds against Clodinofop-propargyl in Haryana and Punjab during the year 2010

Data regarding opinion of farmers about resistance in weeds against Clodinofop-proaprgyl are presented in Table 13

Table 13: Response of Farmers about resistance in weeds against Clodinofop-propargyl in Haryana and Punjab

District	Frequency of Response	Total (%)					
		Bhatinda	**Mansa**	**Ferozpur**	**Hissar**	**Fatehabad**	
Resistance		14	17	13	18	15	77
Not Resistance		6	3	7	2	5	23
Total		20	20	20	20	20	100 100

In all the five selected districts 77 percent farmers responded in favor of increased resistance of weeds against Clodinofop-propargyl.

4.2 To examine the promotional strategy adopted by competitors

4.2.1 Promotional activities used by various companies in Haryana and Punjab

Information regarding the promotional activities used by companies in Haryana and Punjab is furnished in Table 14

Table 14: **Promotional activities used by various companies in Haryana and Punjab**

Companies	**Promotional Activities**

Bayer	Float Van Campaign, TFA, Banner and Poster, Gifts, Caps, T-Shirt, Key Ring, Small Diary, Wall Clock to dealers, Distributor and farmers
TATA Rallis	Float van Campaign, TFA, Anubhandh Scheme
UPL	Jeep Campaign, Poster and Banners
Shriram	TFA, Poster and Banner
Chamble	Jeep Campaign, TFA, Banner Poster
Syngenta	TFA

From the Table 14 shows various promotional activities used by companies for sales promotion of Clodinofop-propargyl. Bayer was doing maximm work for promotion followed by TATA Rallis, UPL, Shriram, Chamble and Syngenta.

4.2.2 Response of dealers, distributors and farmers about ranking of competitors according to promotional activities used by them in Haryana and Punjab

Responses of dealers, distributors and farmers about ranking of competitors according to promotional activities used by them in Haryana and Punjab are presented in Table 15 Bayer has been on top in Punjab and Haryana followed by TATA Rallis and UPL respectively there are few difference in the view of dealers and distributors with farmers in Haryana but in Punjab there is consistency in the views.

Table 15: Ranking of competitors according to promotional activities

Rank	Companies	Weighted Average of Ranks			
		Haryana		Punjab	
		Dealers/ Distributors	Farmers	Dealers/ Distributors	Farmers
1	Bayer	2 (ii)	1.6 (i)	1.39 (i)	1.3 (i)
2	TATA Rallis	1.6 (i)	2 (ii)	1.9 (ii)	1.9 (i)
3	UPL	3 (iii)	3 (iii)	2.6 (iii)	2.3 (iii)
4	Shriram	5.7 (vi)	5.4 (v)	4.2 (iv)	3.9 (iv)
5	Chamble	5 (v)	5 (iv)	4.7 (v)	5 (v)
6	Syngenta	4.1 (iv)	5.7 (vi)	5.7 (vi)	5.7(vi)

4.2.3 Dealers, distributors and farmers preference for promotional acivities in Haryana and Punjab

Table 16: Dealer, distributors and farmers preference for promotional activities

Rank	Promotional Strategy	Haryana	Punjab		
		Weighted Average of Ranks	Weighted Average of Ranks		
		Dealers/ Distributors	Farmers	Dealers/ Distributors	Farmers
1	Jeep Campaign	1.9 (ii)	2.9 (iii)	1.6 (i)	2.3 (iii)
2	TFA	2.5 (iii)	1.9 (ii)	1.7 (ii)	1.3 (i)
3	Poster/Banner	1.1 (i)	3.5 (iv)	2.9 (iii)	3.9 (iv)
4	Gift	4 (iv)	4.9 (v)	3.8 (iv)	4.9 (v)
5	Packaging	4.7 (v)	5.7 (vi)	4.8 (v)	5.7 (vi)
6	Demonstration	5 (vi)	1.2 (i)	5.9 (vi)	2 (ii)

Table 16: Show the preference by dealer, distributors and farmers for effectiveness of promotional activities by companies for herbicides

Haryana:

Data presented in Table 16 indicates that according to opinion of dealers and distributor's poster banner was most effective method for promotion of Clodinofop-propargyl followed by Jeep campaign, territory field assistant, Gift, Packaging and demonstration while farmers have different opinion. According to farmers product demonstration was most effective method for promotion followed by field assistance was Jeep campaign, poster and banners, gifts and packaging

Punjab:

Data presented in Table 16 indicates that according to opinion of Farmers Product demonstration Jeep campaign one of the most effective method for promotion of Clodinofop-propargyl followed by field assistance, Poster/Banner, Gift, Packaging and Demonstration.Farmers had give a first rank to field worker followed by other activities like product demomstration, Jeep campaign, Poster/Banner, Gift and Packaging

4.3 To study the attitude of stakeholders towards different promotional strategies

4.3.1 Response of dealers and distributors about Satisfaction for promotional activities used by companies

Response of dealer and distributors about promotional activities used by companies in Haryana and Punjab are presented in Table 17

Table 17: Satisfaction of dealers and distributors for promotional activities of companies

Districts	Frequency of Response		Total	Weighted Average Score (Out of 5)			
	Very Good (5)	Good (4)	Moderate (3)	Poor (2)	Very Poor (1)		
Bhatinda	0	0	51	30	8	40	2.2
Mansa	1	2	15	18	4	40	2.4
Ferozpur	0	1	19	14	6	40	2.3
Hissar	0	2	22	12	4	40	2.5
Fatehabad	2	4	14	14	6	40	2.5
Toatl	3	9	121	88	28	200	2.4

From the Table 17 it can be seen that dealers and distributors were not satisfied with promotional activities used by companies in peak season of product sale. The score of dealers and distributors from Hissar and Fatehabad stood first with weighted average 2.5 but even they were not satisfied with promotional activities of companies in peak season, followed by Mansa, Ferozpur and Bhatinda. Overall, there was poor satisfied with the promotional activities of the companies.

4.3.2 Opinion of dealers and distributors about problems they faced during peak sale season

i) Tagging of pesticides with Fertilizers

According to dealers and distributors fertilizer companies were taking advantage of shortage of fertilizer in market, they were tagging heavy stock of pesticides with fertilizer and they were not taking back any stock at the end of season. Distributors were bound with fertilizer companies to sell the persticides in market. As heavy stock was placed by fertilizers companies in the market they were bound to sale to sell it at lower price also which directly affected the brand value of the product.

ii) Pricing: According to dealers and distributors more than 350 companies were selling Clodinofop-propargyl in market of Haryana and Punjab. This product was available in market with price range from ₹ -180 to ₹ - 380, very high competition was existing in market of Haryana and Punjab to sell Clodinofop-propargyl.

iii) Branding: As companies were placing heavy stock in the market, they were not doing promotional activities to promote their brand according to placement of product.

iv) Product placement : As competition was increasing in market of Haryana and Punjab, pesticides companies were placing heavy stock of Clodinofop-propargyl prior to the starting of season.

vi) Gifts: As number of players selling Clodinofop-propargyl in market, companies should provide some small gift items, tours which will motivate dealers , distributor and farmers to buy their producy

vii) Territory field assistant : At this time number of players were selling Clodinofop-propagyl in market and very few of them provide field assistants. As resistance in weeds were increasing, field assistant should be required for to handle the farmers complaints.

4.4 To formulate the strategy for sales promotion of Clodinofop-propargyl

Clodinofop-propargyl was lunched ten years back in Indian market since this product has been their in market for long and considering various factors following activities were suggested to capture the market.

According to response of dealers and distributors more than 350 companies selling Clidinofop-propargyl in the market of Haryana and Punjab. There was very tough competition among brands of different companies. Accordingly, companies should focus on promotional activities to create their brand image in the mind of farmers.

- According to response of dealers, distributors and farmers of Haryana and Punjab Jeep campaign, Poster/Banners, field worker and demostration are the most effective method for promotion product to create brand image in mind of farmers.
- **Jeep Campaigning-4 S campaigning in beginning of season**

  The companies also have a unique marketing programme called **4S (Sampark-Sambandh-Samruddhi-Santushti)** which means building relationships through information and service. Before starting the season for each focus crop 4S campaigning should be formulated and implemented strategically.

  - **Poster/Banner-** posters and display should be pasted on the village Panchayat Bhavan, milk collection centers, streets, pan shops and dealers shop preceded by farmer meetings
  - **Field workers should focus on following activities:**
    - Farmers meeting
    - After Sales Services: the field workers should follow up on after sales services both at farmers and dealers level to get feedback regarding its performance in wheat crops. This will create faith among the farmers about the product and company
    - Progressive farmers, who used Clodinofop-propagyl in a certain quantity (10 packet or more) can be identified and recognized in meeting.
    - Big farmers meeting with a motive to multiply the positive feedback
    - In each new village where Clodinofop-propargyl has not been introduced, initially 7-10 progressive farmer should be selected to tell about the product, followed by demonstration.
    - Public relation- field worker must develop the database of the Clodinofop-propargyl user farmers with the help of the dealers/ distributors. They should contact them individually, through phone or dealers to identify their problems regarding the Clodinofop-propargyl results in wheat crops.

- 91 percent dealer, distributors and farmers were agree about the influence of low price brand on sale of Clodinofop-propargyl, This product was available in the market price range of from ₹ 180 to ₹ 380 with not much difference in the results. This needs further needs on benefit cost ratio.
- **Scheme -** To recognize Cldodinofop-propargyl user farmers, following sales promotion scheme is suggested for Haryana and Punjab
    i) A farmer who has purchased, more than 10 packets of Clodinofop-propargyl should be given a scheme for example plastic bucket of 5lt which having details of product features etc. to cater big farmers.
    ii) If purchased 5 packet, some small gift might be given to cater small farmers

5. CONCLUSION AND RECOMMENDATIONS

5.1 **Conclusion**

On the Basis of Study entitled “Sales Promotional Strategy for Clodinofop-propargyl (post emergence herbicide) in Punjab and Haryana” Following conclusion can be drawn:

- Wheat was the major crop in Punjab and Haryana, *Phalaris minor* is the major weed of wheat.

- Clodinofop-propargyl gave a good result to control most of weeds of wheat but from last few years resistance in weeds is increasing against Clodinofop-propargyl.
- More than 350 companies were selling Clodinofop-propargyl in Haryana and Punjab market, this was molecule available at different prices from ₹ -180 to ₹ -380. Competition was very high to sell this molecule in market.
- According to response of dealers, distributors and farmers companies like Bayer, Syngenta, TATA Rallis, UPL, Shriram fertilizers, Chamle fertilizers were market leader market leaders.
- Sale of wheat herbicide and Clodinofop-propargyl was moving towards moderate to poor in 2010 as compared to 2009.
- Maximum number of respondents from Bhatinda were in favor of push sale of Clodinofop-propargyl with fertilizers. Overall 80 percent of dealers and distributors were agreed that there has been increasing push sale by fertilizer companies
- Maximum number of respondents from Firozpur were in favor of push sale of Clodinofop-propargyl with cooperative societies. 76.5 percent dealers and distributors agreed that there has been increase push sale by cooperative societies
- Maximum number of respondents from Ferozpur were in favor of influence of low price brands on sale of Clodinofop-propargyl. 90 percent of dealers and distributors that there has been on influence of low price brand for increasing on sale of Clodinofop-propargyl
- 36 respondents from Hissar were in favor of increased resistance in weeds against Clodinofop-propargyl. Maximum response were for moderate to disagree to the less weeds infestation during the year 2010 as compared to last year
- Over all 67 percent dealers and distributors and 77 percent farmers were in favour of increased weeds infestation against Clodinofop-propargyl
- In promotional activities only Bayer have a small gifts to dealers, distributors and farmers. Bayer was providing T-Shirts, cap, key rings small diary, wall clock.

- .According to response of dealers, distributors and farmers from Haryana and Punjab, Jeep campaign, Territory field assistant and Poster/Banner are most effective methods for sales promotion of Clodinofop-propargyl.

5.2 **Recommendation**

According to response of dealers and distributors more than 350 companies selling Clidinofop-propargyl in the market of Haryana and Punjab. There was very tough competition among brands of different companies. Accordingly, companies should focus on promotional activities to create their brand image in the mind of farmers.

- According to response of dealers, distributors and farmers of Haryana and Punjab Jeep campaign, Poster/Banners, field worker and demostration are the most effective method for promotion product to create brand image in mind of farmers.
- **Jeep Campaigning-4 S campaigning in beginning of season**

  The companies also have a unique marketing programme called **4S (Sampark-Sambandh-Samruddhi-Santushti)** which means building relationships through information and service. Before starting the season for each focus crop 4S campaigning should be formulated and implemented strategically.

  - **Poster/Banner-** posters and display should be pasted on the village Panchayat Bhavan, milk collection centers, streets, pan shops and dealers shop preceded by farmer meetings
  - **Field workers should focus on following activities:**
    - Farmers meeting
    - After Sales Services: the field workers should follow up on after sales services both at farmers and dealers level to get feedback regarding its performance in wheat crops. This will create faith among the farmers about the product and company
    - Progressive farmers, who used Clodinofop-propagyl in a certain quantity (10 packet or more) can be identified and recognized in meeting.
    - Big farmers meeting with a motive to multiply the positive feedback

- In each new village where Clodinofop-propargyl has not been introduced, initially 7-10 progressive farmer should be selected to tell about the product, followed by demonstration.
- Public relation- field worker must develop the database of the Clodinofop-propargyl user farmers with the help of the dealers/ distributors. They should contact them individually, through phone or dealers to identify their problems regarding the Clodinofop-propargyl results in wheat crops.

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- **Scheme -** To recognize Cldodinofop-propargyl user farmers, following sales promotion scheme is suggested for Haryana and Punjab

iii) A farmer who has purchased, more than 10 packets of Clodinofop-propargyl should be given a scheme for example plastic bucket of 5lt which having details of product features etc. to cater big farmers.

iv) If purchased 5 packet, some small gift might be given to cater small farmers

- **Distributer margin**

  Distributer/dealer should give more margins to beat the competition. There was very high competition so good margin will motivate dealer and distributors to sale codinofop-propargyl.

- **Follow up**

  Companies should focus on customer relationship management, during off season companies filed staff should contact with dealer, distributor and famers.

- **New Alternate**

Clodinofop-propargyl is controlling only Broad leafs weeds, it cannot control narrow leaf of weeds, so farmers spray two times for Broad leaf and narrow leaf. Companies should find out new alternative molecule which can control both types of weeds narrow as well as broad leafs weeds. As resistance in weeds is increasing against Clodinofop-propargyl, farmers were also waiting for new alternative for Clodinofop-propargyl.

- Early/Aggressive placement and Advance booking of Clodinofop-propargyl in market will also increase sale of this molecule.

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