

## Original Research Article

# STUDY OF EFFECTIVE PROMOTIONAL TOOLS FOR ENHANCING THE USE OF PRE- EMERGENCE HERBICIDE IN PADDY CROP

### ABSTRACT

The article on title “Study of effective Promotional Tools for enhancing the use of Pre-Emergence Herbicide in Paddy Crop” was carried out under the guidance of Dr. NITIN BARKER. Paddy (*Oryza sativa*) is the major staple food for a large population of world's population especially in South and East Asia, 65% of the India's population major staple food is rice. Paddy is high valued cash crop and also a major export commodity. Paddy processing industry is the biggest industry in India because India is the second largest paddy producer of the world. Multi stage random sampling procedure was adopted to select the respondents. The numbers of farmers interviewed were 100. When the conclusion was drawn it was found that the biggest problem in the study area is the rice farmers mainly face the unawareness of useful chemicals for the protection of the crop and they face the loss of the crops. A majority of Farmer (i.e. 70%) knew about the use of (Stilleto) herbicide. Company also has good relation on major role at the time of buying agrochemical products. Also found that advertisements also play effective role in creating awareness of agrochemical products. Finally, it could be concluded that there are good opportunities for Herbicide (Stilleto) to create a market space in the study area. The company need to focus on certain factors like farmer's expectations, field demonstrations and creating awareness in the study area.

**Keywords:-** *Promotional tools, Pre- Emergence Herbicide, Cash crop, Commodity, Respondents, Agrochemical product.*

### INTRODUCTION

Paddy (*Oryza sativa*) is the major staple food for a large population of world's population especially in South and East Asia, 65% of the India's population major staple food is Rice. Paddy is the main kharif crop and its sowing begins with the onset of the southwest monsoon from June and harvesting from October onwards. Out of total rice production in 2021-22, 111.76 million tonnes were in Kharif season and 18.53 million tonnes in Rabi (winter-sown) season. The country exported 21.2 million tonnes of rice in 2021-22 fiscal year, of which 3.94 million tonnes were basmati rice Major share of rice is cultivated during Kharif season. India has the largest area followed by China and Indonesia. Major paddy growing states in India are Andhra Pradesh, Bihar, Uttar Pradesh, Madhya Pradesh, Punjab, Haryana and West Bengal. West Bengal has the highest rice production followed by Uttar Pradesh and Punjab. The herbicides weedicides are in greater demand not only for paddy but also for tea and fruits crop, as hand weeding has become nearly impossible due to labor scarcity and high wages.

**STILLETO** is Pre-Emergence herbicide which has composition of **Pendimethalin 38.4% + Pyrazosulfuron ethyl 0.85% ZC.** and it is selective herbicide which has systemic mode of action. Majorly it is effective in transplanted rice. The Target Weeds are Echinochloa colona (Wild rice), Echinochloa crusgalli (Banyard grass), Marsilea quadrifolia (Common water clover), Ludwigia parviflora (Water crest), Cyperus difformis (Common sedge), Cyperus iria (Umbrella sedge), Cyperus spp. This product is mainly useful in paddy crop. This is the only product which is also effective in water logging condition in case of pre- emergence herbicide.

Herbicide are primarily grouped into inorganic and organic herbicides. The selective and non-selective herbicides depending on their selectivity, the selective herbicide kill only the targeted plants or weeds while crop are not affected; e.g. simazine, atrazine, 2,4-d, butachlor, alachlor, fluchloralin and pendimethalin. Now selective herbicide kill all vegetation that they come in contact with irrespective of whether it is a crop or weed eg. paraquat and diquat. Herbicide in natural state may be solid, liquid, nonvolatile, soluble or insoluble. Time of application of herbicide for efficient use and effective control of weeds, time of application of herbicide is important. It is depend on herbicidal property like selective, solubility and volatility.

## **METHOD**

### **Selection of District:-**

Haryana state has 22 districts. Out of these districts Jhajjar was selected purposively. The reason for the selection of district was on the basis of Paddy Cultivation and maximum use of herbicide in paddy crop.

### **Selection of block:-**

Selection of the block is the second stage of sampling. Out of 5 blocks, **Jhajjar block** was selected purposively.

**Table 1. Block selection for the study**

<b>Sr. No.</b>	<b>Name of Blocks</b>	<b>No. of Villages in Block</b>
1.	Jhajjar	72
2.	Bahadurgarh	69
3.	Matannail	46
4.	Salhawas	40
5.	Beri	37

**Selection of Villages:-** There 10 villages were selected randomly out of 72 villages for the study.

**Selection of Respondents:-** A village wise list of all the respondents is selected by visiting them. Further, they are stratified on the basis of beneficiaries and non- beneficiaries, complete list of all 100

farmers were selected randomly.

**Table 2. Selection of respondents and their percentage**

S. No.	Respondents	Land Holdings	Percentage (%)
1.	Marginal Farmers	0-1 Hectare	34
2.	Small Farmers	1-2 Hectare	21
3.	Semi Medium Farmers	2-4 Hectare	19
4.	Medium Farmers	4-10 Hectare	16
5.	Large Farmers	Above 10 Hectare	10
<b>Total</b>			<b>100</b>

### Analytical tools:-

1. **Percentage formula:-**

$$\text{Percentage} = (\text{Value} / \text{Total Value}) \times 100$$

2. **Garrett's Ranking Technique:-** (Garrett and Woodsworth, 1969):

$$\text{Per cent position} = [100 (R_{ij} - 0.5)] / N_j$$

Where,

$R_{ij}$  = rank given for  $i$ th problem by  $j$ th individual

$N_j$  = number of problems ranked by the  $j$ th individual

### RESULT

Since from the COVID each and every sector in India faced lot of challenges or problems related with their products. Due to lockdown its hard-to-reach companies' product towards the customer. But only agriculture sector which grows during the lockdown also. The GDP from agriculture sector also increased at the time of lockdown by 3.9% from the above given information we found that the most of the agricultural companies used various sales promotion strategy in agriculture named as Have an online presence, Advertising, Public speaking, Retailer Visiting, Value addition, Exhibition, Handout samples, Offer discounts, Network with people related with agriculture field. The Delphi Technique was originally conceived as a way to obtain the opinion of experts without necessarily

bringing them together face to face. Expert's opinion was taken from the previous year data, company representative & distributors/dealers.

Thus, from these opinions it was concluded that the following promotional tools were identified as following:-

**Table 3. Promotional tools identified for the study**

S. NO.	Promotional tools	Number	Percentage	Ranking
1	Farmers meeting	40	40%	1
2	Posters	10	10%	5
3	Phone call	20	20%	3
4	Company people	12	12%	4
5	Demo	3	3%	6
6	Literature display	15	15%	2
	Total	100	100%	

**Interpretation:-**

Out of total sample size, 40 percent farmers responded that farmer meeting is the best source of information to them. The more fascinating fact is that 98.5 percent of farmers who considered Farmer meeting as the best source also believed that Company People (Individual Contact) helps them to update their knowledge regarding recent agronomic practices in Paddy. When asked specifically regarding the Demo, 100 percent of the respondent said that every company must practice it and Demo creates good will among Farmers. The respondents did not know much about Display items such as Cut-outs, Promo gates, Poster, cubes etc. as they had not observed such items at the shop of retailer. Wall paintings and trolley paintings are virtually in existent in Case of pesticide market.

During the study in JHAJJAR region different promotional activities were adopted, which are as follows:

### **1. Farmers Meeting (Public speaking)**

- The farmers meeting were conducted as an awareness program in villages to provide valuable information regarding STILLETTO (Herbicide) about its effective use in the field of paddy.
- During the farmers meeting, the problems were noticed from the farmer side and effective solutions were provided for the better production of paddy.

### **2. Field Visiting:-**

- Field visits were conducted and analysed the crop related issues and provided the effective solution to the farmers.
- Proper guidance was provided to farmers, about the effective, safe and proper use of pesticide. Regularly field visits were conducted to get the proper feedback about STILLETTO.

### **3. Product Demonstration:-**

- Product demonstration were conducted to attract the farmers in show the result of the product (STILLETTO). Regular follow up of demonstration were conducted on the field site.
- After the successful result field day were conducted by gathering a group of farmers of near-by villages to show the result of STILLETTO.

### **4. Retailer Visiting:-**

- Retailer's visit were conducted to analyse the market demand of the product. It helps to increase market share of STILLETTO.

### **5. Poster (Banner):-**

- We put the banners at the point of purchase and also on four wheelers to cover maximum area. This tool helped a lot to generate demand for STILLETTO product in Jhajjar district.
- Pamphlets were distributed to the farmers to let them help for recall about the product.

## **CONCLUSION**

In agriculture, India has made lot of progress since independence, in the field of agriculture and its productions under many crops. In the green revolution by the adoption of modern agricultural

techniques since last four decades has enabled the farmers to increase their production. But due to lockdown its hard-to-reach companies' product towards the customer. But only agriculture sector which grows during the lockdown also. A majority of Farmer (i.e, 70%) knew about the use of herbicide. Company also has good relation on major role at the time of buying agrochemical products. Also found that advertisements also play effective role in creating awareness of agrochemical products. it could be concluded that there are good opportunities for Herbicide (STILLETTO) to create a market space in the study area. The company need to focus on certain factors like farmer's expectations, field demonstrations and creating awareness in the study area. Effective promotional Strategies were used for enhancing the market value of STILLETTO. An awareness programs were conducted in villages to provide valuable information regarding STILLETTO (Herbicide) about its effective use in the field of paddy. Product demonstration were conducted to attract the farmers in show the result of the product (STILLETTO). As many activities were conducted to get the farmers faith and increase the market value of product but the Farmer meeting as the best source also believed that Company People (Individual Contact) helps them to update their knowledge regarding recent agronomic practices in Rice. When asked specifically regarding the Demo, 100 percent of the respondent said that every company must practice it and Demo creates good will among Farmers.

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