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## A Study of Farmers' Awareness on Agricultural Insurance Schemes in Southern Haryana

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### ABSTRACT

In the form of risk mitigating strategy insurance may play a vital role in anchoring a stable growth of agricultural sector through reduction of the financial losses suffered by the farmers due to damage and destruction of their crops, contents, machinery or accident with the farmer. The awareness regarding governmental initiatives has always been among the major hindering factors to take full advantage of the developmental efforts. The present study conducted in two districts (Palwal and Faridabad) of southern Haryana (vulnerable to Earthquake, Industrial & Chemical Disaster, Floods, Drought, Accidents, Fire, Health related Disaster, Hailstorm, Bio Terrorism etc.) shows that farmers awareness level regarding the agricultural insurance schemes was found at lowest ebb in terms of its components and sub components. Number of constraints were reported by the respondent farmers hindering the acquisition of Agricultural Insurance Scheme which need immediate attention of the stakeholders to fulfill the lofty dreams set forth in respect of the newly launched *PradhanMantriFasalBimaYojna*.

**Keywords:** Awareness, Agricultural Insurance, Haryana.

### INTRODUCTION

According to the National Agriculture Policy (2000), "Despite technological and economic advancements, the condition of farmer continues to be unstable due to natural calamities and price fluctuations". Due to the weather-sensitive nature of crop cultivation with 60 per cent of net sown area under rain-fed farming, the impact of this variability is observed more in the extreme weather conditions (drought/ flood) years. Man-made disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price fluctuations *etc.* severely affect farmers through loss in production and farm income and these are not in the control of farmers. With the growing commercialization of agriculture, the magnitude of loss due to unfavorable eventualities is increasing. Since only 27% of farmer households have access to formal financial sources (NSSO, 2005) the impact of government support which mainly targets non loan farmers, remains restricted. The adverse climatic effect has traditionally been addressed by *ex-ante* such as intercropping and crop diversification as well as *ex-post* household level initiatives such as borrowing from moneylenders, distress sales, mortgages or sale of assets, decumulation of grain stock or past

savings, the entry of weaker members of the family into the labour market and even migration by farming communities and government responses in the form of waivers and postponement of loan and interest payments, additional credit dosages etc.

Financial instrument to hedge weather risks in the form of emerged first in U.S.A in 1997 and is the fastest growing derivative market today according to Chicago Mercantile Exchange (Brockett, Wang & Yang, 2005). In India, on a pilot basis ICICI Lombard launched a rainfall insurance scheme with support from World Bank, for groundnut in *Mahabubnagar*, Andhra Pradesh in 2003. The insurance policy sold a non-linear put option on a rainfall index correlated with crop yield. Due to delayed monsoon that year the rainfall index fell by 21 percent resulting in a payment to the farmers (Sinha, 2004). ICICI Lombard also launched a pilot scheme for insurance against excess rainfall for rice farmers in Aligarh, Uttar Pradesh. As documented by Manuamorn (2005), ICICI Lombard views a substantial profitability potential in weather insurance. Similarly in 2004, IFFCO TOKIO targeted four Indian states-Gujarat, Maharashtra, Andhra Pradesh and Karnataka for a deficit rainfall insurance scheme during

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monsoon months. The Agriculture Insurance Company of India Limited (AIC) introduced Varsha Bima–2005 in about 125 India Meteorological Department (IMD) station areas spread across 10 states. AIC has also launched crop-specific and location-specific weather based crop insurance scheme, as Rainfall Insurance Scheme for Coffee, Apple Insurance, Rubber Plantation Insurance, *etc.*

In India insurance in agriculture, historically, has roots in a study during 1947-48 recommending homogenous area approach, crop insurance bill in 1965 and expert committee headed by Dharam Narian report denying crop insurance scheme in 1971. Later, Dandekar in 1976 advocated crop insurance and pilot crop insurance scheme (PCIS) was implemented in 1979 with the involvement of General Insurance Corporation (GIC) which covered 13 states and 6.27 Lakhs of farmers till 1984-85. During 1985 comprehensive crop insurance scheme (CCIS) was implemented and replaced by National Agricultural Insurance Scheme (NAIS) in 1999 to include non-loanee farmers which continued till 2007-08 covering 9-15 % farmers, 8-16 % cropped area and 2.14- 3.57 % crop output in monetary terms (Raju and Chand, 2008). To remove the arguments on the merits and demerits of NAIS, a new scheme, Modified National Agricultural Insurance Scheme (MNAIS) based on actuarial premium rates expected to generate more benefits to farmers through coverage of prevented sowing/planting risk and post-harvest losses, higher indemnity level of minimum 70 per cent with more precise calculation of threshold yield was implemented during 2010. To remove the inherent flaws, new scheme namely *PradhanMantriFasalBimaYojna* (PMFBY) has been launched during June 2016 which let farmers pay a very low premium to insure their crops. Farmers have to pay a premium of only 2 per cent of the sum insured for *Kharif* crops, 1.5 per cent for *Rabi* crops and 5 per cent for horticulture and cash crops. The difference between the premium paid by the farmers and the premium fixed by the insurance companies will be subsidized and there will be no cap on the maximum subsidy paid by the Government. The subsidy has to be borne equally by central and the respective state Government. The coverage includes losses due to non-preventable risks (Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, Tornado. Risks due to Flood, Inundation and Landslide, Drought, Dry spells, pests/Diseases), having intent to sow/plant and incurred expenditure for the purpose, and are prevented from sowing/planting crop due to adverse weather conditions, post-harvest losses (up to a maximum period of 14 days from harvesting) and certain localized problems. Studies shows that the personal sources dominate the agricultural

information system in the technologically and developmentally backward district, the dearth of extension personnel and their poor linkages with farmers amongst themselves along with poor usages of ICT tools aggravates the situation (Nain *et al.*, 2015, Bhagat *et al.*, 2004, Raina *et al.*, 2011; Ravi Kumar *et al.*, 2015). As such present study focus on the awareness of the farmers regarding Crop Insurance Scheme, one of the most advocated risk mitigation strategies advocated and implemented by the government.

## METHODOLOGY

The study was conducted in purposively selected Hathin Block of Palwal district, and Ballabgarh block of Faridabad district. Hathin block is the part of Mewat region of Haryana state where the human development index (HDI) is extremely low. The district level analysis of aggregate development revealed that Mewat was the least developed region of Haryana, specifically in terms of the standard of living, education and health indices. Mewat lagged way behind to other districts in Haryana, including BRGF (Backward Regions Grant Fund) districts. Considering all indices of development, Mewat performance on all parameters, except demographic index, was worse than all districts of Haryana. In Mewat, around 90 per cent population resides in those rural areas where agriculture and livestock are one of the major sources of livelihood. The situation was quite grim due to poor availability of water in Mewat. Village namely Swamika was selected randomly for the purpose of primary data collection from the zone. Second selected block (Ballabgarh of Faridabad District) was comparatively better off in terms of livelihood and agricultural output. Faridabad have an Location Quotient almost equal to one depicting that the concentration of rural employment is almost equal to that of NCR taken as a whole. (NCR Planning board, 2015). Village Fatehpur Biloch known for its flower production, primary processing and marketing (secondary agriculture) was selected. The village has also been identified to be developed as *Adarsh Gram* (Model Village) and has been adopted by local MLA for overall development of the village. Two methods of data collection *viz.* focused group discussion (FGD) method followed by personal interview were adopted for the purpose. In total four FGDs were organized (two of male farmers; one in each selected village and two of farm women; one in each selected village) to take stock of the general nature of awareness and utilization of Crop Insurance Scheme. To assess the general nature of awareness five broad questions were focused Each FGD consisted of 25 participants, in total 100 respondents (50 each from male and female group

and 50 from each district) participated. At first stage (during FGDs) the farmers and farm women who were identified as aware were considered as population and 30 farmers in each village were selected randomly for personal interview. In order to assess the specific knowledge of farmers specific questions related to components of the Agricultural insurance scheme were focused and assessed on three point continuum and accordingly weights were assigned to arrive at weighted mean scores for items and sub items. The constraints in adoption of the scheme were also collected.

### RESULTS AND DISCUSSION

**General awareness of the Agricultural Insurance Scheme:** The data in table 1 shows that, in overall 34.7 per cent of farmers and only 19.7 per cent farm women were aware regarding the agricultural insurance schemes

in general. The variations in both the selected locales was also very high as only 21 per cent respondents were aware in *Palwal* district in comparison of 33% at *Faridabad* location. The variations in subject matter was also observed; nearly half of the farmers and one third of the farm women were aware about crop/ livestock insurance, other insurance schemes, crops covered and the sources of information for agricultural insurance. The aspects of awareness requiring deeper information like premium amount, companies involved, procedures for availing it, inclusion of farm machinery, buildings and accidental insurance of farmer were not known by majority of the farmers. The gender wise variations were also observed; awareness of all the subject matter of agricultural insurance was known by lesser percentage of farm women.

**Farmers' awareness level regarding various aspects of Agricultural Insurance Scheme in vogue:** The

**Table 1: Distribution of focused group participants on the basis of awareness regarding General Agricultural Insurance Scheme (Percentage of aware farmer)**

S.No.	Items of awareness	Fatehpur Biloch (Faridabad)		Swamika (Palwal)		Total	
		Male	Female	Male	Female	Male	Female
1	Crop/ livestock insurance schemes	74	55	45	25	59.5	40.0
2	Other agricultural insurance schemes	55	35	41	18	48.0	26.5
3	Crops covered under agricultural insurance	60	48	41	21	50.5	34.5
4	Personal Accident Insurance of farmers	42	38	35	16	38.5	27.0
5	Building and Contents Insurance of farmer	15	05	16	04	15.5	04.5
6	Agricultural machinery ( Pumpset, tractor etc) insurance)	28	15	22	12	25.0	13.5
7	Procedure of availing crop insurance	41	20	33	15	37.0	17.5
8	Percent of amount of premium to be borne by farmer and government	15	0	10	02	12.5	01.0
9	Company (ies) involved in agricultural insurance	10	00	08	00	09.0	00.0
10	Sources of information regarding agricultural insurance	62	50	40	15	51.0	32.5
	Overall	40.2	26.6	29.1	12.8	34.7	19.7

**Table 2: Farmers' level of awareness regarding components of Agricultural Insurance Scheme**

S.No.	Particulars	% age of farmers			Weighted mean score
		Fully Aware (2)	Partially Aware (1)	Not aware (0)	
A	Coverage of Crops				0.70
1	Food crops (Cereals, Millets and Pulses),	66	34	00	0.83
2	Oilseeds	60	36	00	0.78
3	Annual Commercial / Annual Horticultural crops	20	60	20	0.50
B	Coverage of Risks and Exclusions				0.39
1	Prevented Sowing/ Planting Risk	16	32	54	0.32
2	Standing Crop (Sowing to Harvesting)	52	34	14	0.69
3	Post-Harvest Losses	20	56	24	0.48
4	Localized Calamities	10	28	62	0.24
C	Sum Insured /Coverage Limit	12	22	66	0.23
D	Premium Rates and Premium Subsidy				0.35
1	Kharif	24	22	54	0.33
2	Rabi	24	22	54	0.33
3	Annual commercial/ horticultural crops	14	24	62	0.26
E	Payment of Government Subsidy	40	16	44	0.48
F	Coverage of farmers				0.67
1	Compulsory for lonee farmers	60	30	10	0.75
2	Optional for non-lonee	40	36	24	0.58
G	Loss assessment procedures	10	50	40	0.35
H	Implementing agencies	10	34	56	0.27

awareness level was ascertained on seven major aspects viz: Coverage of crops. Coverage of risks and exclusions, premium rates and premium subsidy, payment of Government subsidy, coverage of farmers, implementing agencies and loss assessment procedures. The data in table 2 shows that majority of the farmers were not aware regarding the components coverage of risks and exclusions, premium rates and associated subsidy, loss assessment procedures and the implementing agencies. The weighted mean scores of the subject matter and sub items under different subject matter show that the awareness level ranged between 12.5 to 42.5 per cent only. The satisfactory level of awareness was observed for inclusion of food crops (66%) and oilseed (60%) under coverage of crops, coverage of standing crop from sowing to harvesting (52%) under coverage of risks and exclusions and compulsory for lonee farmers (60%) under coverage of farmers. The awareness regarding implementing agencies, loss assessment procedures and premium rates was at its lowest ebb. Similar findings were reported by Goudappa *et al* (2012). The findings are enough indication for the organisation of large scale awareness campaigns so that the lofty dreams of inclusion of last farmer in agricultural insurance scheme as a measure to mitigate the risk may be realized.

**Perceived constraints in acquiring agricultural insurance:** Table 3 shows that majority of farmers perceived that low awareness level (78%), perceived malpractices at different levels (72%), issue of non compensation (68%), procedural complexities (66 %) , perceived faulty methods for crop lose assessment (54%) was perceived as major constraint by majority of the respondent farmers. Unfavourable attitude , perceived low level of risk coverage (34%), perceived high rate of premium (32%) along with perceived more beneficial to large farmers only (30%) were the constraints perceived by relatively fewer number of respondents. Similar nature of constraints were reported by Sundar and Ramakrishnan(2013) in previous farm related insurance schemes.

**Table 3: Perceived constraints in acquiring agricultural insurance**

S.No.	Constraint	Percent of farmers
1.	Inadequate publicity and low level of awareness	78.0
2.	Perceived malpractices at different levels	72.0
3.	Believes that no compensation proportionate to lose	68.0
4.	Tedious procedure to obtain	66.0
5.	Perceived faulty methods of assessing crop losses	54.0
6.	More time and energy consuming	46.0
7.	Unfavourable attitude towards insurance	38.0
8.	Low indemnity rate and its delayed payment	34.0
9.	Premium amount is high	32.0
10.	More beneficial to large farmers only	30.0

## CONCLUSION

The study brought out various issues related to awareness level of the farmers regarding components of newly launched insurance scheme popularly known as PMFBY (*Pradhan Mantri Fasal Bima Yojna*). The low level of awareness regarding various components clearly implies that all the stakeholders along with the service provider should be actively engaged in public awareness and capacity building campaign for farmers through bank personnel, agricultural department and village administrative offices. The farmers were sensitive to different constraints including premium rate, timely returns and assessment procedures. The service providers have to concentrate as a whole. It will greatly help the farmers to recover from bad agricultural years. This will influence other non subscriber to subscribe agricultural insurance and finally mitigate the agricultural risks.

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