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Empowering Farmers through Crop Insurance in Madhya Pradesh

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ABSTRACT

Agriculture is a critical sector and involves several risks in agricultural production and farm income which has its own impact on the Indian economy. Agricultural Insurance is the only risk mitigation mechanism available to safeguard against production risk. Against this backdrop, the present study has examined the performance of NAIS in Madhya Pradesh and its impact on stabilizing farm income and constraints hindering smooth functioning. The study points out low operational performance viz. coverage, number of farmers insured, claim, premium and farmers benefitted, thus. this scheme has served very limited purpose. Higher premium rate, delay in settlement in claims, tedious and time consuming procedures, farmer's unwillingness to avail insurance facility etc are major constraints reported by farmers. Agricultural risk is much higher for farm income and production. This requires renewed efforts by government in terms of designing appropriate mechanism and safeguarding farm income.

KEAWORDS: NAIS, Performance and constraints, new farm Income guaranteed scheme.

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INTRODUCTION

Risk and uncertainty are the twin dangers, which hamper agricultural production and bring about instability in the state rural economy. The natural calamities and their adverse role in agricultural production is well recognized by the farmers and scientists. Erratic rains, hailstorms and prolonged drought conditions, infestation of insect, pest and diseases etc. are the probable moves of the nature against the farmer's efforts to achieve their professional motives. The nature and the farmers are the opposite players in the game of agricultural production. The annual swings in the productivity of field crops, which cannot be attributed to specific variable under the command of farmers, are explained by the joint variable of risk and uncertainty. The major instruments used by the government to protect farmers from agricultural variability includes crop diversification, procurement of food grains at minimum support prices, calamities relief funds and various crop yield insurance scheme with modified NAIS, FISC, WBCIS etc. The scientific advancements in agriculture and industrial fronts have opened new vistas of increasing farmers welfare through minimizing the constraints of productivity and improving their operational efficiency. Crop insurance is one of the endeavors, which is gaining ground in the economic pursuits Crop insurance is the strategy to reduce risk in farm sector. It's a initiative to make farming as sustainable business but there is much debate on it. scholars who are working on crop insurance has pointed out that the penetration of insurance is less than 20 per cent of total farming households which is a major concern for the government¹. Rest of the farmers are not familiar with the scheme.

Madhya Pradesh is one of the most important states of the country in terms of agriculture production. More than two third of total population are rural based and depending on agriculture. Small and marginal farmers, having less than 2 hectare of land are in majority in the state. Generally, Madhya Pradesh is divided in ten agro climatic zones from the ecology point of view. In these regions, some of the regions are quite vulnerable to disaster. These disasters mostly damage the livelihoods of farmers who are dependent on rain. Hence, to save farmers from the losses, Agriculture Insurance Company (AIC) of India launched crop insurance programme in India, including Madhya Pradesh. Several government institutions were given responsibilities to execute the programme with specific and defined roles in which AIC was identified as the main implementing agency. Although the scheme is partially succeeded in achieving their targeted objectives and creating awareness among farming community and its gamut is only limited to loanee farmers. How the game is played in state agricultural economy, what is the progress and performance of crop insurance, what are the weather perils on crop growth periods, constraints in its implementation etc. are the pertinent questions sought to be answered by the present study.

RISK MITIGATING TECHNIQUES

The major risk mitigating techniques to safeguard production and farm income are²

1. *Crop Diversification*

Crop diversification is intended to give a wider choice in the production of a variety of crops in a given area so as to expand production related activities on various crops and also to lessen risk.

2. *Minimum Support Price*

Minimum Support Price (MSP) is a form of market intervention by the GOI to insure agricultural producers against any sharp fall in farm prices during bumper production years. The MSP are announced by the GOI at the beginning of the sowing season for certain crops on the basis of the recommendations of CACP. In case the market price for the commodity falls below the announced minimum price due to bumper production & glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced minimum price.

3. *Crop Insurance Scheme*

Crop insurance is an insurance arrangement aiming at mitigating the financial losses suffered by the farmers due to damage and destruction of their crops as a result of various production risks.

I) *Methodology*

The present study has been confined to Madhya Pradesh state of Indian Union Time Series Secondary data on season wise area covered, loanee and non-loanee farmers, premium and claim etc were collected from the Annual Progress Report of Agriculture Insurance Company, Bhopal for a period of one decade ending 2013-14. A sample of 75 beneficiaries and 75 non-beneficiaries categorized into three size group viz small up to 2 ha), medium (2 to 4 ha) and large (above 4 ha) were selected by proportionate random sampling technique from Raisen district of Madhya Pradesh to assess the impact of NAIS and problems faced by the beneficiaries. Simple average and percentage technique were employed to analysed the collected data.

II) *Results and Discussion*

Important agencies involved in Agricultural Insurance in India are as follow.

Sector	Insurance Agencies
Public Sector	National Insurance Company, New India Assurance Co. Ltd., Oriental Insurance Co. Ltd., United India Insurance Co. Ltd.
Private Sector	ICICI Lombard, IFFCO Tokio, HDFC ERGO General Insurance, Cholambandalam Ms General Insurance Company Ltd., Reliance General Insurance, Tata AIG General, Future General India Insurance

Table 1: Various Schemes Related To Crop Insurance In India and Their Features

S.No.	Insurance Scheme	Period	Approach	Crops covered	Salient features
1	Crop Insurance Scheme	1972-78	Individual	H-4Cotton Groundnut, Wheat, Potato	Voluntary implemented in 6 states
2	Pilot Crop Insurance Scheme	1979-85	Area	Cereals, Millets, Oilseeds, Cotton, Potato & chickpea	Confirmed to loanee farmers voluntary, 50% subsidy on premium for small & marginal farmers
3	Comprehensive Crop Insurance Scheme	1985-90	Area	Food grains and Oilseeds	Compulsory for loanee farmers
4	Experimental crop Insurance Scheme	1997-98	Area	Cereals, Pulses & Oilseed	For covering non-loanee small & marginal farmers also in addition to loanee farmers
5	National Agril. Insurance Scheme	1999 Continuing	Area and Individual	Foodgrains, Oilseeds, Annual	Available to all farmers, 10% premium subsidy for small & marginal farmers
6	Farm Income Insurance Scheme	2003-04	Area	Wheat & Rice	Insurance against production & market risks compulsory for loanee farmers.
7	Weather/Rainfall Insurance	2003-04 continuing	Individual	Food grains, oilseeds annual commercial and horticultural crops	Available to all farmers based on rainfall received at the IMD / Block rain gauges.

Table 2: Crop Insurance Support Mechanism of Major Countries

S.No	Country	Nature of Support
1	USA	Subsidy in premium ranges from 38 to 67% Reinsurance of administrative expenses of insurance companies Technical services in premium, policy guidelines Free insurance of catastrophic cover the resource poor farmers Non-insured assistance to farmers for crops no insurance is available
2	Canada	Overall subsidy is about 70-75%, subsidy in premium 80-100% for lower levels of coverage & 50-60% for higher levels of coverage. Significance contribution towards provincial administrative costs Provides deficit financing to provincial governments Technical services by setting premium rates
3	Philippines	Overall subsidy is about 70% subsidy in premium ranges from 50-60% Banks share premium for loanee farmers (15-20%) of total premium costs Financial supports to Philippines crop Insurance corporation in extreme adversities.
4	Spain	Overall subsidy is about 70% for loanee farmers & about 50% for non-loanee farmers Subsidy in premium Reinsurance support (50% of reinsurance cost is paid by the government) Technical guidance

Performance of NAIS

An analysis of the performance of NAIS needs to be viewed in terms of its seasonal dimension (kharif and rabi seasons) and the broadening of the range that come under the purview of the NAIS in Madhya Pradesh and some have been presented in Table 3. The growth in NAIS in the state has not been steady throughout the period. Table inferred the dominance of the kharif season over rabi as is expected. In 2012-13 during kharif season 14.21 lakh farmers were compensated as compared to only 5.40 lakh in the rabi season, thus amount one-fifth of the farmers are covered in the state of which non-loanee farmers account for 5.50%. The insurance coverage proportion of kharif to rabi is about 2.63 times but over the period increasing share of the rabi season visualized. The area covered during kharif was significantly increased from 30.87 lakh hectare to 52.86 lakh hectare, the same figure during rabi season was 4.44 lakh hectare to 49.30 lakh hectares. Similarly, during the period under reference the sum insured per hectare has increased from Rs. 285/ha to Rs. 12700/ha during kharif as against Rs. 1900/ha. to Rs. 13290/ha. in rabi season. The claim to premium ratio is high in the state which poses question

how government will manage the claim if disaster strikes. The scheme has not really proved a significant risk mitigating tool for the farmers in the state.

Table 3: Performance of NAIS in Madhya Pradesh

<i>Kharif</i>								
Parameters	1999-00	2000-03	2004-08	2009-10	2010-11	2011-12	2012-13	Total
Farmers covered(in lakh)	13.42	45.01	66.74	15.49	15.29	20.33	23.37	199.65
Area(Lakh ha)	30.87	103.91	161.62	35.04	35.24	47.07	52.86	465.61S
Sum- insured(Rs in crore)	581	3282	9904	3305	3781	5979	7973	34805
Premium(RS in crore)	20.64	126.61	354.52	113.74	130.38	207.79	277.75	1231.43
Claim(Rs in crore)	162	279.39	183.99	54.16	250.56	75.08	2187.43	3192.61
Ratio of claim to premium	7.85	2.21	0.51	0.48	1.92	0.36	7.88	2.59
Farmers compensated(in lakh)	9.47	10.91	4.85	0.95	1.44	0.74	14.21	42.54
<i>Rabi</i>								
Farmers covered(in lakh)	1.87	19.89	36.36	10.15	12.13	13.62	19.86	138.30
Area(Lakh ha)	4.44	53.52	100.03	22.69	28.25	29.41	43.04	330.68
Sum- insured(Rs in crore)	58	1311	5032	1796	2554	3036	5720	26994
Premium(RS in crore)	0.97	23	87	30	46	52	97	457
Claim(Rs in crore)	0.11	89	359	34	270	59	317	1502
Ratio of claim to premium	0.11	3.87	4.13	1.13	5.87	1.13	3.27	3.29
Farmers compensated (in lakh)	0.05	6.34	8.23	1.03	5.30	1.20	3.59	31.14

Table 4: Overall Performance of NAIS in Madhya Pradesh (1999-00 to 2013-14)

Year	Farmers Covered (in lakh)	Area (lakh ha.)	Sum-Insured (Rs. In crore)	Premium (Rs.in crore)	Claim (Rs.in crore)	Farmers Compenseted (in lakh)
Kharif	199.65	465.61	34805	1231.43	3192.61	42.54
Rabi	138.30	330.68	26994	457	1502	31.14
Grand Total	337.95	796.29	61799	1688.43	4694.61	73.68

As shown in table 4 during the entire period from 1999-00 to 2012-13 the NAIS covered about 3.38 crore farmers and 7.96 crore hectares area. The total sum insured during kharif and rabi season taken together was to the tune of 61799 crore and the premium collected was Rs. 1688.43 crore. The average premium changed during kharif was Rs. 34.84 per hundred rupees of sum insured as against 16.17 per hundred rupee of sum insured during the rabi season. The average premium of Rs. 34.84 indicate the dominance of risk crops in the crop area insured during the kharif season.

Impact assessment of NAIS

Table 5: Impact of NAIS on Net Income from Soybean Production (Rs/ha)

Particulars	Beneficiaries				Non beneficiaries			
	Small	Medium	Large	Overall	Small	Medium	Large	Overall
Yield(qt)	14.8	15	14.2	14.67	12.6	12.9	11.3	12.27
Price/qt	3000	3000	3000	3000	3000	3000	3000	3000
Gross income	44400	45000	42600	44000	37800	38700	33900	36800
Total cost	29000	33200	35700	32633	25500	29000	32400	28967
Net income								
I. Over-operational cost	22400	19500	16100	19333	19200	17200	10400	15600
II. Total cost	15400	11800	6900	11367	12300	9700	1500	7833
III. Total cost + premium	14842	11242	6342	10809	12300	9700	1500	7833
Net income	14842	11242	6342	10809	12300	9700	1500	7833
Benefited cost ratio	1.53	1.36	1.19	1.35	1.48	1.33	1.05	1.29

The National Agriculture Insurance Scheme (NAIS) has led to the use of high value inputs like seeds, fertilizers, plant protection chemicals. Table revealed that insured farmers could realize higher returns than that of non-insured farmers. The insured farmers with an incremental expenditure of Rs 3666 per hectare in soybean production could get an incremental net income of Rs. 3533 over that realized by non-insured farmers have realized more return than their non-insured counterparts.

Constraints

Table 6: Problems faced by the beneficiary farmers

S. No.	Problems of beneficiary farmer	Small (N=25)	Medium (N=25)	Large (N=25)
1	The premium rate of crop was higher	22	18	15
2	Delay in settlement of claims	25	25	25
3	The bank up to the period of settlement of claims also charged the interest on the premium	17	15	16
4	Premium is additional burden to the farmer therefore willingly they do not want to avail this facility	12	15	11
5	Tedious and Time consuming procedures	18	20	17

Problems faced by beneficiaries in the existing structure of NAIS have been listed in table 9. The higher rate of premium for soybean crop was the major problem of the beneficiaries in general and small farmers in particular. Another big problem of beneficiaries is delay in settlements which is reported by all sample farmers. The next problem reported by more than 60% farmers is that the bank charged the interest on the premium up to the period of settlement of claim. Lastly near about fifty percent sample farmers say that it is an additional burden to them therefore, willingly they do not want to avail this facility.

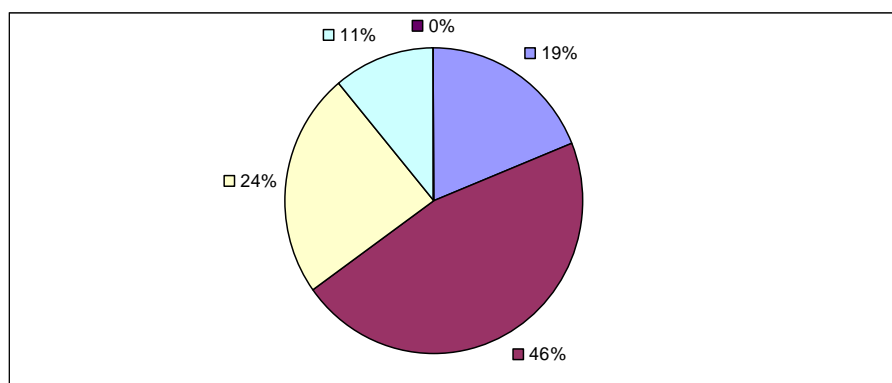


Fig 1: Problems reported by beneficiaries

- Less than 20% farmers are insured
- 46% farmers are aware but not interested
- 24% farmers reported that facilities are not available
- 11% farmers are unable to afford insurance premium.

Only 19% of farmer reported ever having insured their crops. A very large proportion of 81% were found to be unaware of the practice of the crop insurance, 46% were found to be aware but not interested while 24% said that the facility was not available to them. Only 11% felt that they could not afford to pay the insurance premium.³

Limitation of NAIS

- Large insurance unit area.
- Delay in payment of claims due to late Submission of yield data & availability of Government funds.
- Pre sowing /planting risk is not covered.
- Low indemnity level.
- Unattractive basis & calculation of threshold yield.
- Localized calamities are not covered
- Post harvest losses are not covered.
- Different seasonality discipline for loanee and non-loanee farmers.
- Lack of competition.

4. New Crop Income Insurance Scheme

The state recently witnessed crop damage due to untimely downpour and hailstorms in many districts. Production and price risks affect the income of farmers which has adverse effect on their capacity to invest in advance crop varieties, techniques of production and capital formation in farm sector. Government is considering launching new crop income insurance scheme which would ensure protection of livelihood and encourage farmers towards crop diversification. All farm related insurance. Scheme is merged with this scheme. The objective of this scheme would be to protect the farmers by giving them insurance cover for their production and market risks. The scheme used area approach for actual yield and price measurement. If the actual income of the farmers falls short of the guaranteed income they will be eligible for compensation to the extent of indemnity.

Shortcomings in New Scheme

To work out the guaranteed yield or threshold yield the average yield for 7 years in a district is calculated. In case of yield losses from natural calamities compensation would be based on 70% of the average loss in a district. Suppose farmer's yield is 3.5 tone / ha and indemnity being 70% the compensation would be worked out 2.45 tone/ha only. The guaranteed income at a time of fluctuating prices that the farmers will get under the new insurance scheme would be to a maximum of 20% of the loss a farmer suffers. In other words if the wheat MSP is Rs. 1450/qt. and the farmer get only Rs. 1000 by selling it openly in the market the assured price that the farmer will get is Rs. 1000 + 20% of the gap between market price and MSP. Against Rs. 1450 a farmer under the new insurance scheme can expect a maximum of Rs. 1090 per quintal. The price that a farmers get would be still lower considering the way a thrust price is calculated. If the MSP for wheat is Rs. 1450 & the average yield calculated is 3.50 tonnes /ha. The compensation that a farmer get will automatically less than the actual loss and new crop insurance too does not met farmers per unit losses.

Steps Needed

Farmers are unorganized and are nowhere on the economic radar screen of the State. Therefore farmers' interest be kept in mind while tailoring the new crop income insurance policy under which a provision for their minimum income would be taken into account so that farmers can get sufficient amount in adverse situation for surviving caused by crop failure or fall in price of crop in market.

Amendment be done in Revenue Book 6.4 to ensure compensation for maximum number of farmers and cover a range of damages caused due to calamities. Farmers welfare funds be form from bonus amount kept reserve which would be provided benefits in all amount to the farmers in adverse conditions.

Use of latest technology (GPRS) Camera fitted mobile phones may be used to implement crop insurance scheme more effectively. There is a dire need to standardize the procedure for conducting CCE and monitor quality through random checks. The personnel involved for CCE should be properly trained.

Implementing unit should cover each farm units and all major crops be notified. For guaranteed income in place of threshold yield, actual yield and MSP be considered. Farm income should be guaranteed in place of individual crop. Price stabilization fund be formed to mitigate uncertainty faced by farmers due to price volatility. Farmers should be compensated within 60 days of losses so that they can make preparation for their next crop. Interest be paid to the farmers on delayed claim payment.

Contract farming and future trading are expected to provide some insurance against price fluctuation directly or indirectly.

The idea of crop insurance should be extended to the farmers through well organized training camps, group meetings, use of mass media like radio, television and newspapers to convince them of the virtues of the programmes for their economic upliftment along with income stability.

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