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Agriculture Insurance: Special Reference to Crop Insurance Scheme in India

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Abstract

Indian agriculture dependent on monsoon which is always flexible. It leads to operating risk in cultivation of different crops. Natural calamities may affect on the yield from agriculture sector. To cover the risk which may occur in future, there is need to some provision and crop insurance is only mechanism available to safeguard against production risk in agriculture. For fulfilling this need the Government of India has made experiments & efforts by introducing various schemes of crop insurance. Since the year 1999-2000, National Agricultural Insurance Scheme has been launched by National Agricultural Insurance Scheme Corporation of India. This research paper has made attempt to study the growth and development of National Agricultural Insurance Scheme and to examine the important features and performance of NAIS. Agriculture in India is varied, diversified and prone to a variety of risks. Most farmers are shall and marginal ones. In most areas, agriculture is rain fed, leading to a greater degree of yield variability and risk. Crop Insurance, which aims at addressing yield risk – though necessary for a vast majority of farmers – is subject to structural design and financial problems. Problems of asymmetry of information – moral hazard and adverse selection – and co-variability are more pronounced in crop insurance than in other forms of insurance. The present paper tries to depict the picture of crop insurance in India.

Keywords: crop insurance, national agricultural insurance scheme, Prime Minister Fasal bima yojana

INTRODUCTION

India an agrarian economy with one third population depending on the agriculture sector directly or indirectly has 116 million farm holdings covering an area of 163 million hectares of which small and marginal farmers (with holdings of 2 hectares or less) make up 80 percent of the producer population. Farming is an inherently risky business and farmers face many types of risks. About 60 per cent of net shown area of the country is rain-fed and 65 per cent of Indian farmers depend on rain-fed irrigation. The growth of crops and realization of output are determined by the quantum of rainfall and its distribution during the Monsoon Season which at times is uncertain. Rainfall pattern affects the irrigated crops also. Nearly two third of the cropped acreage in India is vulnerable to drought in different degrees. This leads to operating risk in cultivation of different crops. On an average 12 million hectares of crop area is affected annually by these calamities severely impacting the yields and total agricultural production. Agricultural production and farm incomes in India are frequently affected by natural disaster such as droughts, floods, cyclones, storms, landslides and earthquakes. Susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and man-made disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes, etc. All these events severely affect farmers through loss in production and farm income, and are beyond the control of farmers. With growing commercialization of agriculture, the magnitude of loss due to unfavourable eventualities is increasing. In recent times, mechanisms like contract farming and futures trading have been established which are expected to provide some insurance against price fluctuations directly or indirectly. But, agricultural insurance is considered an important mechanism to effectively address the risks to output and income resulting from various natural and manmade events.

The ‘Pradhan Mantri Fasal Bima Yojana’ was launched by the Government of India in kharif in 2016 and replaced previous schemes such as the National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). The insurance scheme operated on an “area approach”. The scheme was compulsory for farmers who took a loan from any financial source and voluntary for non-loanee farmers, but the scheme was made optional for loanee farmers from kharif 2020 (Tiwari et al. 2020). Various public and private insurance companies implemented the scheme, but under the overall control of the Ministry of Agriculture and Farmers’ Welfare, Government of India. The Weather-Based Crop Insurance remains in place, but the name has been changed to the Restructured Weather-Based Crop Insurance Scheme. As such, the Indian Council of Social Sciences Research (ICSSR) launched a major project entitled “An Evaluation of Pradhan Mantri Fasal Bima Yojana for Haryana and Punjab: The Way Forward for Diversification”; thus, this study is undertaken to evaluate the project and study the impacts of the schemes on the farmers. The objectives of this paper are (1) to review the various crop insurance schemes and (2) to evaluate the performance of the Pradhan Mantri Fasal Bima Yojana and the challenges it faces; therefore, the present paper is divided into five sections, including an introduction. The second section deals with the materials and methods used in this research. The third part reviews various crop insurance schemes in India, while the fourth section deals with the main results and provides a discussion of the research objectives. The last section includes the conclusions of the study with some recommendations

Crop Insurance in India: An overview

The idea of crop insurance in India in existence for more than a century, took decades to solidify into concrete, workable schemes. Only after independence in 1947, crop insurance received concrete attention. It was discussed in 1947 by the Central Legislature and in 1950, two pilot schemes were circulated among States for adoption. But states were unwilling to operate the schemes because of resource constraints. Crop insurance again received attention at the time of formation of Third Five Year Plan (1961-1966), but the Working Group on Agriculture was not in favour of its inclusion in the Plan. In October 1965, the Government of India decided to draw up a crop Insurance Bill and model scheme of crop insurance. In March 1970, the Government referred the Bill and the Model Scheme to an Expert Committee under the Chairmanship of Dr. Dharm Narayan. But the Committee concluded against the introduction of crop insurance because of the financial burden. Prof. V.M. Dnadekar, a prominent economist, examined the expert committee report and advocate strongly for introduction of crop insurance based on an area approach.

OBJECTIVES OF THE STUDY:

1. To study the growth and development of National Agricultural Insurance Scheme.

2. To examine the important features, trend and performance of National Agricultural Insurance Scheme.

METHODOLOGY:

The case study method has been used in this paper. The paper has made an attempt to analyses the growth & performance of Crop Insurance Scheme. It is mainly dependent on secondary data but supplemented by the discussion with some insurance companies, academicians & some farmers.

THE SIGNIFICANCE OF THE STUDY:

The present study is significant for potential beneficiaries from those villages which have not much awareness of crop insurance scheme. It will also helpful to small and marginal farmers to protect their interest in crop against natural calamities and getting benefits under this scheme. It will also assist the insurers, bankers & policy makers for policy prescription & policy intervention.

National Agricultural Insurance Scheme (NAIS)

The National Agricultural Insurance Scheme (NAIS), with the aim to increase coverage of farmers, crops and risk commitment, was introduced in the country from Rabi 1999-2000 replacing the erstwhile Comprehensive Crop Insurance Scheme (CCIS). The main objective of the scheme was to protect the farmers against the crop losses suffered on account of natural calamities, such as, drought, flood, hailstorm, cyclone, pests and diseases. The scheme was implemented by the Agriculture Insurance Company of India (AIC). NAIS was to be discontinued after implementation of National Crop Insurance Programme (NCIP) from Rabi 2013-14 but on representation of some states it has been continued during 2013-14 and 2014-15.

Modified National Agricultural Insurance Scheme (MNAIS)

To improve further and make the scheme easier and more farmer friendly, a proposal on Modified National Agricultural Insurance Scheme MNAIS) was prepared and was approved by Government of India for implementation on pilot basis in 50 districts from Rabi 2010-11 season. After evaluation of impact of pilot, the scheme is being implemented as a full-fledged component of NCIP from Rabi 2013-14.

National Crop Insurance Programme (NCIP)

To make the Crop Insurance Schemes more farmer friendly, a restructured Central Sector Scheme in the name of 'National Crop Insurance Programme' (NCIP) was introduced from Rabi 2013-14. The existing MNAIS, WBCIS and CPIS were merged under this programme with various improvements and changes for implementation throughout the country. However, on the basis of request received, some States have been allowed to implement NAIS during 2013-14 and 2014-15. The coverage of NCIP in terms of farmers and area insured has been projected to the level of 50 percent each from the existing level of about 25 percent and 20 percent respectively by the terminal year 2016-17 of the Twelfth Plan. The coverage under CPIS is projected at 25 percent of coconut growers during 2013-14 with increase of 5 percent each year during remaining years of Twelfth Five Year Plan.

Weather-Based Crop Insurance Scheme

The Weather-Based Crop Insurance Scheme (WBCIS) introduced in 2007–2008 included a weather index, which covered losses due to unexpected weather, i.e., high or low temperatures, excess or deficit rainfall. At that time, private sector insurance companies came into the market

(Nair 2010b). The scheme is a repackaged version of a rainfall insurance scheme introduced as an experiment by ICICI Lombard in 2003 for groundnut and caster sugar farmers from Mahboobnagar district in Andhra Pradesh. Later, IFFCO-Tokio General Insurance Company and the public sector Agricultural Insurance Company of India (AIC) introduced similar schemes (Nair 2010a). The scheme was based on the "area approach", and the premium rates were high, i.e., 8–10 percent for food crops and oilseeds and 12 percent for commercial crops, and was shared equally by the central and state governments. Participation in the scheme was compulsory for loanees and voluntary for non-loanee farmers. In 2007–2008, the scheme was implemented in selected states, such as Bihar, Chhattisgarh, Haryana, Madhya Pradesh, Punjab, Rajasthan, and Uttar Pradesh, Risks 2021, 9, 191 respectively (Raju and Chand 2008).

Crop insurance in India:

The story of crop insurance in India goes long back and has had a chequered history. Crop insurance in general has not been so successful across the globe in different countries. Policy makers have unrolled various avatars of crop insurance in different times but notwithstanding the unique nature of Indian agriculture and inequitable socio-economic status of Indian farmers, crop insurance has remained a failed attempt in general. Even after repeated revision of the schemes and huge support in the form of premium subsidies for the farmers, crop insurance has failed to produce the desired results. Even after more than decades of existence of crop insurance in some form or the other, it has reached just a small percentage of the farmers.

The time line of different avatars of crop insurance in the country is provided in the following table:

Time Period	Crop Insurance Program/Scheme	Salient Features
1971-1978	First individual Approach Scheme	Was introduced on a limited, ad-hoc and scattered scale
		General Insurance Corporation (GIC) of India introduced the scheme
		H-4 cotton and later included groundnut, wheat and potato
		The scheme was implemented in Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Tamil Nadu and West Bengal
		3,110 farmers were covered for a premium of Rs.4.54 lakh against claims of a massive Rs.37.88 lakh
1979-1984	Pilot Crop Insurance Scheme (PCIS)	Was based on based on the 'Area Approach' for providing insurance cover against a deficit in crop yield below the threshold level
		Rolled out by GIC and the scheme covered cereals, millets, oilseeds, cotton, potato and chickpea

		Was restricted only to the loaned farmers of institutional sources on a voluntary basis
		Implemented in 12 states till 1984-85 and covered 6.23 lakh farmers
		Total premium collected was Rs.195.01 lakh against claims of Rs.155.68 lakh during the entire period
1985-99	Comprehensive Crop Insurance Scheme (CCIS)	Was the first nation-wide Crop Insurance Scheme
		Was linked to linked to short-term credit and was based on the 'homogenous area approach'
		Scheme was adopted by 15 States and 2 Union Territories (UTs)
		It had covered 763 lakh farmers for a premium of Rs 4 04 crore against claims of Rs 2303 crore
Rabi 1999-2000 to Rabi 2013-14	National Agricultural Insurance Scheme (NAIS)	Was aimed to protect the farmers against the crop losses suffered on account of natural calamities, such as, drought, flood, hailstorm, cyclone, pests and diseases
		Was implemented by the Agriculture Insurance Company of India Ltd. (AIC)
		Available to all the farmers both loaned and non-loaned irrespective of their size of holding and covered all crops
		Implemented by 25 States and 2 Union Territories and covered 2084.78 lakh farmers
		Premium collected was Rs.8,67,121 lakh against the claim of Rs.25,37,558 lakh till 2012-13
		The total area insured was Rs.3137.70 lakh hectares during the same till 2012-13
Rabi 2010-11 season	Modified National Agricultural Insurance Scheme (MNAIS)	Was implemented on pilot basis in 50 districts from Rabi 2010-11 season
		The scheme was thought to be easier and more farmer friendly
		It was implemented in 17 States and covered 45.80 lakh farmers
		Total premium collected was Rs 1,08,800 lakh against the claim of Rs 86,400 lakh until Rabi 2012-13
2007-08	Weather Based Crop Insurance Scheme (WBCIS)	Was launched in 20 States and was implemented by Agriculture Insurance Company of India along with some private companies
		The aim of the scheme was to settle the claims within shortest possible time
		WBCIS is based on actuarial rates of premium and premium actually charged from farmers has been restricted at par with NAIS

		Was implemented in 18 States and 469.38 lakh farmers were covered
		Premium of Rs.7,51,920 lakh was collected against the claims of Rs. 52,860 lakh under the Scheme from 2007-08 to 2012-13
2009-10	Coconut Palm Insurance Scheme (CPIS)	Was introduced on a pilot basis in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu. Later on, it was extended to West Bengal
		The pilot was implemented during the years 2011-12 and 2012-13 and continues to be under implementation
		It has been administered by the Coconut Development Board (CDB)
		Fifty percent of the premium is contributed by Government of India, 25 percent by the concerned State Government and the remaining 25 percent by the farmer
		51,108 farmers were covered for a premium of Rs.167.69 lakh against the claims paid of Rs.214.05 lakh till December 2013
2016	Pradhan Mantri Fasal Bima Yojana	Launched recently in 2016
		Has been discussed separately in this article

Challenges in Crop Insurance

Agriculture in India is varied, diversified and prone to a variety of risks. Most farmers are shall and marginal ones. In most areas, agriculture is rain fed, leading to a greater degree of yield variability and risk. Crop Insurance, which aims at addressing yield risk – though necessary for a vast majority of farmers – is subject to structural design and financial problems. Problems of asymmetry of information – moral hazard and adverse selection – and co-variability are more pronounced in crop insurance than in other forms of insurance. Due to the vastness of the country, large number of small and marginal farmers, and adoption of area-based approaches, several agencies and organizations are involved in Crop Insurance Programmes. Hence, coordinated efforts are critical for effective implementation of crop insurance scheme. A four members committee headed by Dr. P.K. Mishra, former Secretary, Department of Agriculutre and Cooperation was constituted in September 2013 to examine the loopholes in the implementation of the Crop Insurance Schemes. The Committee examined the various issues related to Crop Insurance such

Conclusion

India being one of the most disaster prone countries and agriculture being the source of livelihood of the majority of its people, crop Insurance occupies an important place. Hence, an attempt has been made to understand and assess various crop insurance schemes and risk management approaches and purpose a suitable strategy for India. The performance of the major crop insurance schemes, NAIS, MNAIS, WBCIS and PBFBY at the National level and state level were studied. It was observed that penetration rate of all the schemes was low and for NAIS, the claim premium ratio was more than 300 percent costing the government heavily. The performance of MP in terms of International Journal of Commerce and Management Research www.managejournal.com 23 the number of farmers insured and area brought under insurance cover was better under NAIS as compared to other states. WBCIS has performed well only in Rajasthan and Bihar. MNAIS has been implemented only but few states. PMFBY launched during Kharif, 2016 has covered 366.64 lakh farmers accounting to 26.5% penetration in India and bringing 388 lakh hectares under insurance cover which is 15 percent more than the previous year. The sum insured under PBFBY has also increased by 104 percent. The coverage of non-loanee farmers has also increased by 6 times. The awareness levels have improved for PBFBY. Majority of the farmers are not very much interested in crop insurance due to issues such as improper loss assessments, inadequate and delayed claim payments and poor response from the banks. Farmers are more aware about the relief payments and prefer relief to crop insurance. To protect from losses due to weather risk, we need to build an appropriate comprehensive risk mitigation strategy rather than just focusing on one strategy of crop insurance as silver a bullet to address the weather risk problem of farmers. Apart from crop insurance programmes, government needs to focus on other strategies such as developing resistant varieties, encouraging farmers to cultivate risk resistant crops and varieties, through policy measures such as variable interest rates for crop loans, variable premium rates and favourable MSPs for risk resistant crops. Rather than just relying on the banks selling insurance products, other outlets and micro insurance agents need to be developed in rural areas.

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