



CROP INSURANCE IN INDIA _A PERSPECTIVE

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ABSTRACT:

Insurance is one of the most demanding financial products in India. Its basic purpose is to protect the family against any uncertainty in life like death, illness, injury and accidents etc. Insurance is a risk transfer mechanism where the individual or the business enterprise can shift some of the uncertainty of life on to the shoulders of others for a minimum charge known as premium.

India basically an agrarian economy still depended mostly on monsoons for growing crops. Crop losses due to extreme weather conditions are a common phenomenon in agriculture, including losses in developing countries and all emerging markets. The majority of these losses around 70 to 80 percent – are either due to a lack of rain or excess of moisture (that is either rain or flooding). So appropriate risk management tools for agriculture are a key challenge for agricultural development in the future. One of these tools – crop insurance systems – has been successfully implemented in the last decades, mostly however in industrialized countries. To introduce them in developing countries and emerging markets too, a system approach is needed incorporating a public-private partnership between the government (central as well as state governments), the insurance industry.

A large number of farmers are committing suicides. In this scenario of high risk and uncertainty of rain fed agriculture, allocating risk is an important aspect of decision making to farmers. This indicates a need for suitable plans that will help farmers to earn their livelihood and secure their production.

Keeping in mind this our Prime Minister Shri Narendra Modi ji launched a scheme “pradhan mantra fasal bima yojana” on 13 January 2016.

This paper tried to focus what has been done in past for the well-being of farmers and tried to review the innovative techniques in agricultural/rural insurance, which overcome some of the disadvantages of yield based group insurance and suggests rainfall (weather) index insurance as a better alternative to the existing agricultural insurance scheme.



KEYWORDS: Agrarian Economy, Risk Management, weather insurance, price volatility.

INTRODUCTION

Agriculture production and farm incomes in India are frequently affected by natural disasters like droughts, floods, cyclones, storms, landslides and earthquakes. Moreover 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 incidents severely affect farmers through loss in production and farm income, and these events are beyond the

control of the farmers. With the growing commercialization of agriculture, the magnitude of loss due to these unfavorable eventualities is increasing day by day. Now the important question is how to protect farmers by minimizing such losses. The minimum support prices for certain crops provide a measure of income stability for a section of farmers. But most of the crops and in most of the states this minimum support price is not implemented. Recently mechanisms like contract farming and future's trading have been established to provide some insurance against price fluctuations directly or indirectly. But, over and above agricultural insurance is considered to be an important mechanism to effectively address the risk to output and income resulting from various natural and manmade events. Agricultural Insurance is a means of protecting the farmers against financial losses due to uncertainties that may arise agricultural losses arising from named or all unforeseen perils beyond their control unfortunately, agricultural insurance in the country has not made much headway even though the need to protect Indian farmers from agriculture variability has been a continuing concern of agriculture policy.

As per our National Agriculture Policy 2000, "Despite technological and economic advancements, the condition of farmers continues to be unstable due to natural calamities and price fluctuations". In some extreme cases, these unfavorable events become one of the factors leading to farmers' suicides which are now increasing day by day. Crop insurance is one method by which farmers can stabilize farm income and investment and guard against disastrous effect of losses due to natural hazards or low market prices. It not only stabilizes the farm income but also helps the farmers to initiate production activity after a bad agricultural year. It cushions the shock of crop losses by providing farmers with a minimum amount of protection. It spreads the crop losses over space and time and helps farmers make more investments in agriculture. But one need to keep in mind that crop insurance should be part of overall risk management strategy. Insurance comes towards the end of risk management process. It is only redistribution of cost of losses of few among many, and it cannot prevent economic loss.

OBJECTIVES OF THE STUDY

- To examine the performance of the existing and earlier national agricultural insurance schemes prevalent in India
- To discuss and explore the problems and prospects of agriculture insurance in the country
- To look into the role of government in implementing various agricultural insurance schemes
- To suggest effective agriculture insurance programme in India

RESEARCH METHODOLOGY

Here exploratory research methodology is used to analyze the data. Data was collected from multiple sources such as books, journals, research articles to understand the concept of crop insurance. Apart from this, matter is collected from different websites and professional magazines. So this study is purely based on available secondary data.

AGRICULTURAL INSURANCE IN INDIA

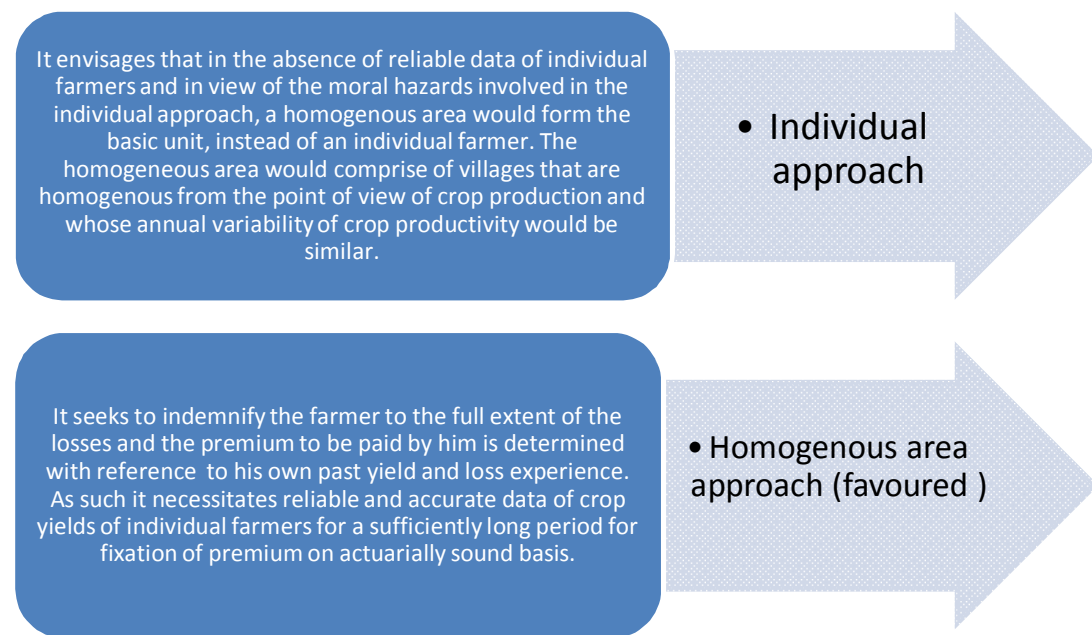
In the words of Mahatma Gandhi, "*India lives in villages and agriculture is the soul of Indian economy*". Nearly two-thirds of its population depends directly on agriculture for its livelihood. The Indian economy is basically agrarian economy. In spite of economic development and industrialization, agriculture is the backbone of the Indian economy. It contributes about 26 percent of the gross domestic product. It meets food requirements of the people and produces several raw materials for industries. Over 70 per cent of the rural households depend on agriculture as their main means of livelihood. Agriculture along with fisheries and forestry accounts for one-third of the nation's Gross Domestic Product (GDP) and is its single largest contributor. Agricultural exports constitute a fifth of the total exports of the country. But it is subject to variety of risks arising from rainfall aberrations, temperature fluctuations, hailstorms, cyclones, floods, and climate change. These risks are further increased by price fluctuation, weak rural infrastructure, imperfect markets and lack of financial services including limited

span and design of risk mitigation instruments such as credit and insurance. These factors not only affect farmer's livelihood and incomes but also undermine the viability of the agriculture sector.

Management of risk in agriculture is one of the major concerns of the decision makers and policy planners, as risk in farm output is considered as the primary cause for low level of farm level investments and agrarian distress. Both, in turn, have implications for output growth.

The question of introduction of crop insurance in India was taken up for examination soon after independence in 1947. A special study to work out modalities of crop insurance was commissioned in 1947-48 following an assurance given by the Ministry of Food and Agriculture to introduce crop and cattle insurance in the country. Crop insurance has existed in India for the past 36 years, and has grown substantially in terms of area covered and perils insured.

The first aspect regarding the modalities of crop insurance considered was whether it should be on Individual Approach or Homogenous Area Approach.



Various agro-climatically homogenous areas to be treated as units and the individual farmers in those area units would pay the same rate of premium and receive the same benefits, irrespective of differential loss in individual yields.

The ministry circulated the scheme for adoption by the state governments but the states did not accept. In 1965, the Central Government introduced a Crop Insurance Bill and circulated a model scheme of crop insurance on compulsory basis to constituent state governments for their views. The bill provided for the Central Government framing a reinsurance scheme to cover indemnity obligations of the states. However because of very high financial obligations none of the states accepted the scheme. On receiving the responses of state governments, the Subject was considered in detail by an Expert Committee headed by the chairman. IIMA -INDIA.

National Agricultural Insurance Scheme (NAIS)

India's modified crop insurance program called as national agricultural Insurance scheme has been implementing since Rabi 1999-2000. The specific objectives of the program are to provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests and diseases and to encourage the farmers to adopt progressive farming practices, high value inputs and improved technology in agriculture.

Features of the schemes:

1. Scheme is available to all farmers-loanee and non-loanee both- irrespective of their size of holding.
2. Compulsory for loanee farmers and optional for non-loanee farmers
3. Limit for sum assured is the thresholds yield of the crop in the specified area.
4. Cover all crops for which a reasonable past yield data is available.
5. Premium rates are fixed at 3.5 % for bajra and oilseeds and 2.5 % for other kharif crops, 1.5 % for wheat and 2% for other Rabi crops
6. In case of small and marginal farmers 50 % of premium charges are born by the government.
7. Separate agency namely agricultural insurance company of India (AIC) has been established for implementation of NAIS with the help of rural financial institutions, state governments and farmers.

But due to the high claim/premium ratio there is need to refine the program to enhance its economic viability, so that the scheme will sustain overtime to serve large section of the farmers to insure their risk and hence productivity and also enhance competitiveness of Indian agriculture by regional specialization.

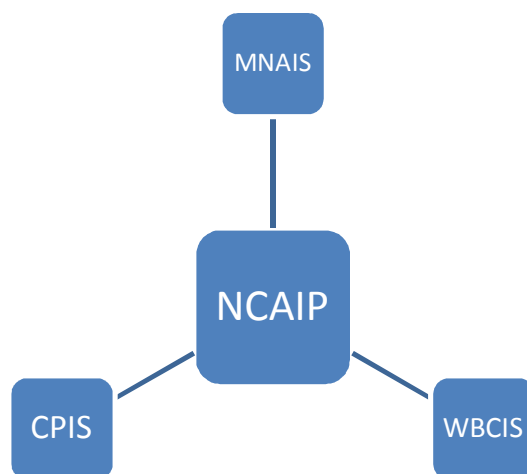
Why there is high claim/premium ration in crop insurance

1. Most of the farmers not participate willingly in crop insurance as farmers expect to receive alternative payments from the government in catastrophic years/ crop failure years irrespective of premium payments.
2. Heavy subsidy on the part of the government, which may encourage excessive risk taking/claims by farmers.
3. Rural income earners such as agricultural labourer, traders, processors, and farm input suppliers are equally affected by crop failure but out of the crop insurance scheme.
4. There is no incentive for insurers to practice sound actuaries practices, as losses will be born by government.
5. No private sector participation in crop insurance business due to lack of incentives.

New developments in the insurance sector give a ray of hope to rural insurance as there will be greater scope of private sector insurer and reinsures in the rural insurance business.

National Crop Insurance Programme (NCIP)

It was introduced with effect from 1st November, 2013 has **MNAIS** as a component which is an improved version of NAIS. It was launched by UPA government in 2013 by merging three schemes viz. Modified National Agricultural insurance Scheme (MNAIS), Weather Based Crop insurance Scheme (WBCIS) and (CPIS) coconut palm insurance scheme.



Modified National Agricultural Insurance Scheme (MNAIS)

Modified national agriculture insurance scheme before being incorporated in NCIP was implemented separately as MNAIS on pilot basis from Rabi 2010-11 to Kharif 2013. . The Company has been implementing MNAIS since its inception. During Kharif 2014, the MNAIS was implemented by the Company in 133 Districts across 13 States and during Rabi 2014-15 as part of NCIP in 87 Districts across 9 States

This scheme provides insurance coverage and financial support to the farmers in the event of failure of crops and subsequent low crop yield.

The MNAIS covers following three kinds of crops: Food crops which include cereals, millets & pulses Oilseeds Annual Commercial / Horticultural crops The state government notifies which particular crops are to be covered for a particular season or year. Thus, it does not cover all crops but only those crops belonging to above three broad categories, which have been notified by the state government level. The state government notifies those crops of which past yield data is available for adequate number of years.

- actuarial premium rates are charged with a provision of subsidy up to 75%, which is shared by the Central and State Governments on 50 : 50 basis;
- entire liability of claims is on the implementing insurance companies;
- it is compulsory for loanee farmers and optional for non-loanee farmers;
- risk coverage for pre-sowing/prevented sowing and post-harvest losses due to cyclone in coastal areas;
- on account payment up to 25% advance of likely claims as immediate relief in the areas which suffered at least 50% crop yield loss;
- more proficient basis for calculation of threshold yield;
- two higher indemnity levels of 80% & 90% instead of earlier 70%, 80% & 90%;
- reduction in Unit Area of Insurance to village/ village Panchayat level; and
- Private insurance companies have been involved to provide the benefits of competition.

Weather Based Crop Insurance Scheme (WBCIS)

The Government of India had introduced another Pilot namely, Pilot Weather Based Crop Insurance Scheme (WBCIS) with effect from Kharif 2007, which became full-fledged Scheme as a component of NCIP with its introduction. The Scheme operates on an actuarial basis with premium subsidy contribution from Union and State Governments.

WBCIS is area based and automatic. The Company insured many food, oilseed and pulse crops besides insuring perennial crops like Apple, Citrus crops, Grapes, Mango, Pomegranate, Cashew nut, Oil palm and spices etc. During Kharif 2014, the Scheme was implemented by the Company, in 102 Districts across 14 States and during Rabi 2014-15 as part of NCIP in 88 Districts across 11 States. Other Products Apart from the above, the Company continued to implement various in-house products, including Rainfall Insurance, Varsha Bima, Coffee Rainfall Insurance Scheme, Pulp Wood, Bio fuel Insurance and Rubber Plantation Insurance.

Features:

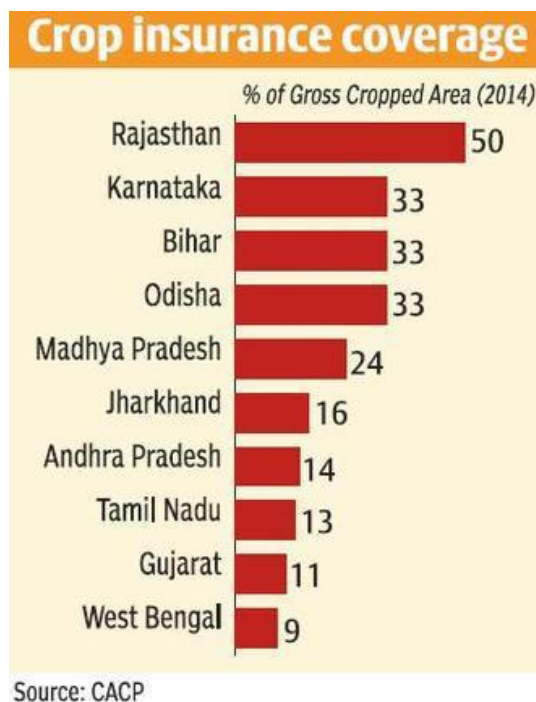
- Provide coverage against weather deviation from the notified standards on the basis of weather data received from the notified Automatic Weather Stations (AWSs) and Automatic Rain-gauges (ARGs);
- actuarial premium rates are charged with a provision of subsidy up to 50%, which is shared by the Central and State Governments on 50 : 50 basis;
- entire liability of claims is on the implementing insurance companies;
- it is compulsory for loanee farmers and optional for non-loanee farmers;
- add on coverage in respect of hailstorm and cloud burst on individual assessment basis.
- private insurance companies have been involved to provide the benefits of competition.

Advantages of weather index insurance

- Quality of historic data by different agro-climatic regions is available about rainfall and other weather parameters.
- It is less costly and easily observable at local level with accuracy.
- A single indicator of rainfall is sufficient to insure against most of the losses faced by both farmers and off-farm and non-farm entrepreneurs/workers.
- Management Innovations with Rural Finance, Paving the Way Forward for Rural Finance An International Conference on Best Practices
- Even individuals who did not have cultivated area, but likely to be effected by the weather event in same way as the farmer can also able to benefit from it.
- No moral hazard and adverse selection as it is based on area average yield independent of individual performance.
- It will allow reinsurance by the primary insurer as it is based on standardized/well defined internationally verifiable data.

Coconut Palm Insurance Scheme (CPIS)

- Individual farmer/planter/grower offering at least 5 healthy nut bearing palms in a contiguous area/plot is eligible for insurance;
- Provide coverage against total loss of palm on account of happening of peril insured leading to death of the insured palm or its becoming unproductive;
- Fixed premium rates ranging from Rs 9/- to Rs 14/- per palm depending upon the age of palm. However, Government is providing subsidy up to 50% by GOI and 25% by State Government;
- Sum insured per palm is ranging from Rs. 900/- to Rs.1750/-;
- Scheme is being implemented by AIC.



Out of the total farm land of 195.26 million hectares in the country, only 42.82 million hectares or 22 per cent is insured. It is in this backdrop that the Centre launched the Pradhan Mantri Fasal Bima

Yojana in January this year. While the outline of the scheme looks attractive, the success of the plan lies in its implementation

Pradhan Mantri Fasal Bima Yojana. (PMFBY)

On 13th January, 2016, the Govt. under the leadership of Prime Minister Shree Narendra Modi has launched a new crop insurance policy named pradhan mantri fasal bima yojana which will help in easing of the burden of premiums on farmers who take loans for their cultivation. This will have a rebated premium rate on the principal sum insured. The Union cabinet has also decided to make the settlement process of the insurance claim, fast and easy so that the farmers do not have to face any trouble regarding the crop insurance plan.

Adequate sum insured

The main setback with the existing crop insurance schemes is that the sum insured (SI) is too small to make any difference to the farmer. In 2013-14, for instance, while the average per hectare output was worth ₹41,442, the sum insured (SI) under various crop insurance schemes was just ₹18,464 (kharif - ₹19,141 and rabi - ₹16,927). While the insured sum here looks sufficient to cover the cost of production, it is way less than a farmer's income in a normal season.. Under the Pradhan Mantri Fasal Bima Yojana, there is no cap on premium. So the farmer will be covered for the full In the new scheme, the sum insured is the average of the past seven years 'threshold' yield for the specific crop (excluding calamity years) in the village it is grown, multiplied by the minimum support price (MSP).

Lower premium

In the existing crop insurance schemes, farmers cough up substantial costs for insurance. In the new Yojana, however, the premium outgo will drop substantially. Farmers will have to pay just 2 per cent of the SI for all kharif crops, 1.5 per cent for rabi and 5 per cent for commercial or horticulture crops.

Wider coverage

Unlike in the earlier schemes, in the new one, there is greater risk coverage. For instance, there was no cover for risks specific to a region (landslide, inundation) in NAIS. In MNAIS, risk of loss to cyclonic rains was given only to coastal regions. Under the Pradhan Mantri Fasal Bima Yojana all risks are covered. Post-harvest losses due to cyclonic rain or thunder are covered for farmers across India.

Faster settlement

A delayed settlement process for crop loss defeats the very purpose of insurance. The delay in settling claims for existing schemes was sometimes as long as six months to a year. To expedite the process, the Centre has directed the use of drones and other satellite-based technology when assessing crop damage and estimating acreage. It has also mandated authorities to use smart phones to capture images of crops to improve the quality of yield data. As the images come with GPS time stamping, the process will be more reliable.

Another leading general insurer says the Centre has now laid down the deadlines clearly. From the number of days within which the State has to give the certified yield data to the insurance company, to the maximum number of days within which the Centre/State has to pay their premium subsidy to the insurer, and the number of days for the insurance company to settle claims., everything has been put down on paper.

How they compare			
	NAIS	MNAIS	New crop insurance scheme
Premium rate	Low	High	Lower than even NAIS
Insurance cover	Full	Capped	Full
Settlement through banks	No	Yes	Yes
Localised risk coverage	No	Hailstorm, landslide	Hailstorm, landslide, inundation
Post harvest loss coverage	No	Coastal area- for cyclonic rain	All-India - for cyclonic and unseasonal rain
Prevented sowing coverage	No	Yes	Yes
Use of technology	No	Intended	Mandatory

Source: Ministry of Agriculture

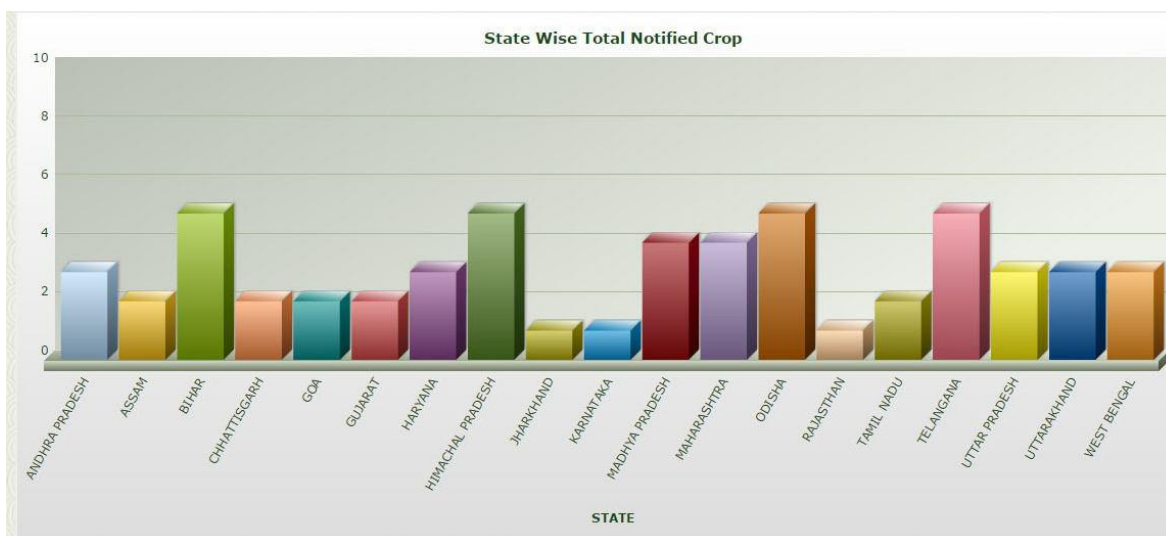
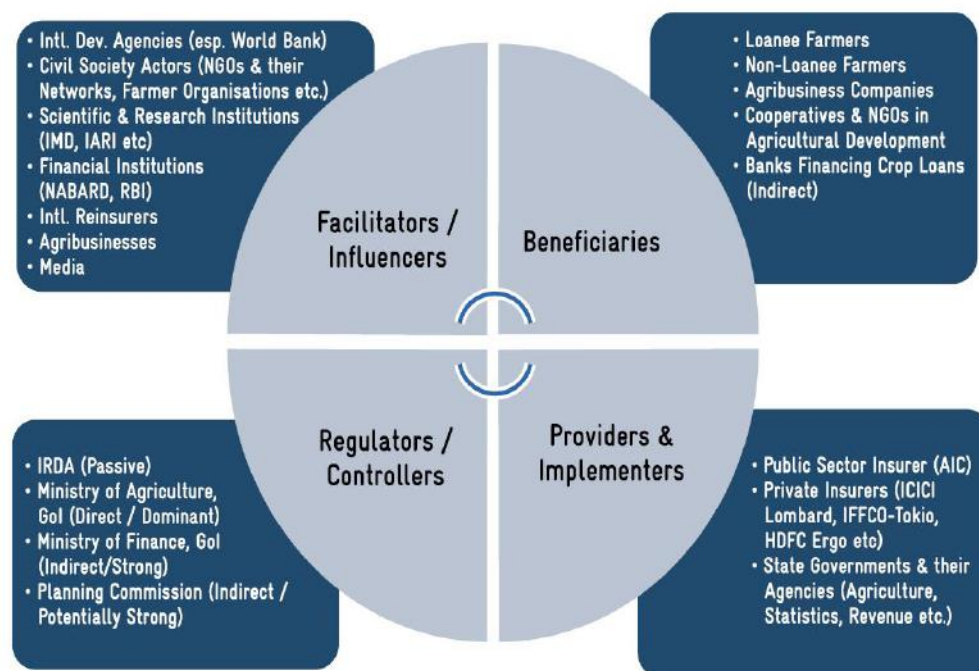
PARTNERS IN CROP INSURANCE

Selecting of Insurance Company to do crop insurance in the State is decided by the concerned State Government only and it may vary from season to season. The following general insurance companies are empanelled by Govt of India to transact Crop Insurance:

1. Agriculture Insurance Company of India Limited,
2. ICICI Lombard General Insurance Co. Ltd.
3. IFFCOTOKIO General Insurance Co. Ltd.
4. HDFC ERGO General Insurance Co. Ltd.
5. Chola mandalam MS General Insurance Co. Ltd.
6. Tata-AIG General Insurance Co. Ltd.
7. Future Generali India Insurance Company Ltd.
8. Reliance General Insurance Company Ltd.
9. Bajaj Allianz General Insurance Co. Ltd.
10. Universal Sompo General Insurance Co. Ltd.
11. SBI General Insurance Co. Ltd.

(This list is indicative only and subject to change by Govt of India from time to time.)

2.7 Mapping of Stakeholders in Indian Crop Insurance Domain



State_Name	schemecd	District_Name	Company_Short_Name	Scheme_Name	CropName	CropCd	NotifiedA t
GUJARAT		4 Ahmadabad	AIC	PMFBY	PADDY -IRRI	10720	474
GUJARAT		4 Anand	AIC	PMFBY	PADDY -IRRI	10720	482
GUJARAT		4 Dohad	AIC	PMFBY	PADDY -IRRI	10720	485
GUJARAT		4 Gandhinagar	AIC	PMFBY	PADDY -IRRI	10720	473
GUJARAT		4 Kheda	AIC	PMFBY	PADDY -IRRI	10720	483
GUJARAT		4 Mahesana	AIC	PMFBY	PADDY -IRRI	10720	471
GUJARAT		4 Narmada	AIC	PMFBY	PADDY -IRRI	10720	487
GUJARAT		4 Navsari	HDFC ERGO	PMFBY	BLACK GRAM (URD BEAN)	1805	490
GUJARAT		4 Navsari	HDFC ERGO	PMFBY	PADDY -IRRI	10720	490
GUJARAT		4 Navsari	HDFC ERGO	PMFBY	PADDY -UNIR	10719	490
GUJARAT		4 Navsari	HDFC ERGO	PMFBY	PIGEON PEA (RED GRAM/ARHAR/TU R)	1826	490
GUJARAT		4 Panch Mahals	AIC	PMFBY	PADDY -IRRI	10720	484
GUJARAT		4 Sabar Kantha	AIC	PMFBY	PADDY -IRRI	10720	472
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	BAJRA NAPIER HYBRID	10416	475
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	CASTOR (REHRI, RENDI, ARANDI)	1641	475
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	COTTON -IRRI	10708	475
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	COTTON -UNIR	10709	475
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	GREEN GRAM (MOONG BEAN/ MOONG)	1822	475
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	GROUNDNUT (PEA NUT/MUNG PHALLI)	1074	475
GUJARAT		4 Surendranagar	HDFC ERGO	PMFBY	SESAME (GINGELLY/TIL)/SE SAMUM	1751	475

GUJARAT	4	Surendranagar	HDFC ERGO	PMFBY	SORGHUM (JOWAR/GREAT MILLET)	7188	475
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	BLACK GRAM (URD BEAN)	1805	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	COTTON -IRRI	10708	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	COTTON -UNIR	10709	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	GREEN GRAM (MOONG BEAN/ MOONG)	1822	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	GROUNDNUT (PEA NUT/MUNG PHALLI)	1074	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	MAIZE (MAKKA)	7186	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	PADDY -IRRI	10720	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	PADDY -UNIR	10719	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	PIGEON PEA (RED GRAM/ARHAR/TUR)	1826	493
GUJARAT	4	Tapi	HDFC ERGO	PMFBY	SORGHUM (JOWAR/GREAT MILLET)	7188	493
GUJARAT	4	The Dangs	HDFC ERGO	PMFBY	BLACK GRAM (URD BEAN)	1805	489
GUJARAT	4	The Dangs	HDFC ERGO	PMFBY	FINGERMILLET (RAGI/MANDIKA)	1563	489
GUJARAT	4	The Dangs	HDFC ERGO	PMFBY	PADDY -UNIR	10719	489
GUJARAT	4	Vadodara	AIC	PMFBY	PADDY -IRRI	10720	486
GUJARAT	4	Vadodara	HDFC ERGO	PMFBY	BAJRA NAPIER HYBRID	10416	486
GUJARAT	4	Vadodara	HDFC ERGO	PMFBY	CASTOR (REHRI, RENDI, ARANDI)	1641	486
GUJARAT	4	Vadodara	HDFC ERGO	PMFBY	COTTON -IRRI	10708	486

GUJARAT	4	Vadodara	HDFC ERGO	PMFBY	COTTON -UNIR	10709	486
GUJARAT	4	Vadodara	HDFC ERGO	PMFBY	MAIZE (MAKKA)	7186	486
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GUJARAT	4	Valsad	HDFC ERGO	PMFBY	PADDY -IRRI	10720	491
GUJARAT	4	Valsad	HDFC ERGO	PMFBY	PADDY -UNIR	10719	491

Major Issues in Crop Insurance in India

It is a well-known fact that only less than 10 % of the farmers in India are covered with currently prevailing crop insurance products. Following are the problems related to crop insurance in India.

Difficult to insure crop losses. Crop insurance is very different from Life insurance, livestock insurance products in many ways, which makes it difficult to insure. The difficulties related to insuring crop losses are given below. a) Spatially correlated risk- Output or Yields devastated over a wide region, b) Range of losses- meager,	Technical problems a) Geographic basis risk. b) Area yield data are not collected for all crops and all regions c) Insufficient time-series of area yield data for a given region d) Historical area yield data are not reliable e) If there are continuous three drought years, the expected block yield will be very less f) Current year area yield estimate is subject to manipulation (by farmers, politicians)	Implementation problems: a) Limited reach: Less than 5 % of the total number of farmers. b) Compulsory coverage: The product is tied to the crop loans given by rural public sector banking system. The coverage is compulsory for the borrowers and not voluntary. In many cases farmers themselves do not know that they were covered. c) Lack of transparency d) Uniform premium: e) Very late	3) Farmers lack of Interest. a) Lack of understanding of need for insurance. b) Lack of knowledge on insurance and how it works c) Cognition failure d) Lack of customized products e) Lack of free access to institutions f) Inadequate affordability on the part of farmers.	4) Prerequisites for effective crop insurance a) Addressing the various challenges on both insurer side and farmers' side mentioned above. b) Layering the risk. c) Crop insurance, a risk transfer measure, will be effective only in combination with risk reduction measures like physical measures (E.g. Bunding, Silt application), biological
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moderate and severe losses c) Long tail distribution of losses; very severe losses coming at low frequency. This makes the premium very costly for the farmers.	etc.	compensation f] Lack of viability g] Administrative cost h] Inequality of benefits i] Political interference		measures (E.g. Quality seeds), timely cultivation practices and diversification measures (E.g. Diversification to livestock/ tree crops) and risk coping measures like timely credit availability. d] Linking crop insurance with risk education and prevention, so that over the years the premium comes down.
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Towards A Solution

Following solution can be suggested for this:

1. Ensure that any existing company or new entity has a sound legal basis on which to offer insurance products, with the required level of business competence.
2. Clarify the government's objective in promoting crop insurance.
3. Establish strong linkages, at an early stage, with international re-insurers. These companies can assist not only with technical advice, but can also be instrumental in ensuring the necessary adherence to correct application of premium setting procedures, and settlement of claims.
4. The financial base for the insurer must be adequate. This must be sufficient to survive initial years in which weather conditions might be such that underwriting profits are sharply negative. On top of this loss, administrative expenses have to be met. In many developing countries there may have to be public sector participation in ensuring a sound financial base.
5. Work closely with representatives of the farming and/or forestry sectors. This will help ensure that the service and products are popular and therefore in demand.

Vision of 12th Five Year Plan

The general understanding that crop insurance coverage can be improved with small changes here and there is highly inadequate. As can be seen above, the challenges are multiple in nature and related to each other in the 12th five year plan. So without a large scale and simultaneous efforts and investments at national level on the following five key parameters there will not be significant progress in coverage of small and marginal farmers:

a) Research to evolve location specific insurance products.

There needs to be open admission of all the crop insurance providers that there is dearth of robust location/region specific crop insurance products and relevant agricultural research institutes both public and private need to involve in serious medium to long term action research in evolving appropriate products. All States need to support this research.

b) Insurance education for the small and marginal farmers.

Like a drive for financial literacy at the national level, a separate drive for insurance literacy among small and marginal farmers is needed to address the

critical attitude and knowledge changes needed for them to appreciate crop insurance product. Farmers need to be having a new attitude of giving importance

to effective crop insurance on par with the importance they give to other risk management measures like land development, seeing insurance as one of the working capital expenses and seeing the logic behind pooling premiums for pooling risks and transferring to others. It is the role of State to create markets for crop insurance on which private insurance players can make further investment in a later stage.

c) Capacity building of various stakeholders like farmers' organizations, SHGs, cooperatives, banks and insurance companies.

Microfinance through SHGs has been an important development success and banks could reach the poor families remote corners of the country through SHGs. It is time those farmers groups, SHGs and various kinds of farmers' bodies to be made

vehicle for crop insurance not only for delivery but also for evolving appropriate products. They can act as risk aggregators for effective crop insurance delivery.

d) Investment in infrastructure like automatic rain gauges and data collection systems.

Again the role of state to create these for making available crop insurance on a large scale, as they are public good in nature. Further effective PPP arrangements can be tried for addressing this challenge. A good quality automatic rain gauge costs Rs. 35000 with the cost of installation and the annual maintenance cost is Rs. 6000. Like Karnataka government has tried, a network of rain gauges need to be created along with central server for receiving information at each district level. The data base created from now on will help in offering precise products in future.

5) Bringing in favorable regulatory environment for various insurance delivery institutional mechanisms like mutual insurance.

Also ensure that any existing company or new entity has a sound legal basis on which to offer insurance products, with the required level of business competence.. Establish strong linkages, at an early stage, with international reinsurers.

These companies can assist not only with technical advice, but can also be instrumental in ensuring the necessary adherence to correct application of premium setting procedures, and settlement of claims. Although the opportunity for profit may be some years away, such companies are often prepared to become involved in a new geographical field of business. They operate with long term time horizons, and this can work very much to the benefit of a nascent crop insurer –whether this is a new company or a new section within an established company.

The financial base for the insurer must be adequate. This must be sufficient to survive initial years in which weather conditions might be such that underwriting profits are sharply negative. On top of this loss, administrative expenses have to be met. In many developing countries there may have to be public sector participation in ensuring a sound financial base.

Work closely with representatives of the farming and/or forestry sectors. This will help ensure that the service and products are popular and therefore in demand.

CONCLUSION

In the theoretical framework crop insurance stabilizes the farmer's income during the losses in crop production. But in real picture it doesn't act as risk management instrument during the loss in farming. The farmers perceive that the crop insurance is mainly suits for large farm size farmers and its extent in risk sharing was very low. They also considered that the premium rate is not affordable by small and marginal farmers. Bank officials place a major role in making awareness among farmers but

they are not suits to explain the real terms and condition of crop insurance among farmers. So the service providers have to look on the product innovations and appropriate distribution channel to make crop insurance reach more effectively. The insurance industry can help both in mitigation and adaptation to climate change by inducing proper proactive and reactive responses in insurance users. The mitigation responses include incentivising use of clean technology, climate friendly cropping pattern, promoting organic farming and less energy intensive agriculture. Proactive adaptation responses include encouraging cultivation of drought resistant variety crops and seed variety, pest management, seed treatment, using efficient irrigation method etc. Discount in premium may be given for taking risk reducing action such as water conservation and sustainable farming practices. The insurance industry can induce desirable reactive responses after the occurrence of crop loss by making quick payment of indemnity, so that insurance buyers do not deplete their productive assets and fall into poverty trap. Also mid-season payment may be made if there is clear indication of ultimate crop loss due to severe drought condition or excess rainfall at crucial growth stage of crop.

REFERENCES:

1. Government of India, Report of the Working Group on Risk Management in Agriculture for Eleventh Five Year Plan (2007-12), Planning Commission, New Delhi
2. India Development Gateway, Varsha Bima - 2005, www.indg.in/agriculture
3. Government of India, Crop Insurance, www.indiaagronet.com
4. India Development Gateway, Weather Based Crop Insurance Scheme (WBCIS), www.indg.in/agriculture
5. Venkatesh, G, Crop Insurance in India – A Study, Mumbai
6. Government of India, State-wise Progress of CCIS from Kharif '85 to Kharif 1999
7. Ifft, Jennifer, Government vs Weather: The True Story of Crop Insurance in India, Research Internship Papers 2001, Centre for Civil Society, www.cci.in
8. Sinha, Sidharath, Agriculture Insurance in India: Scope for Participation of Private Insurers, Economic and Political Weekly, June 19, 2004, P 2605-2612 .
9. Raju, SS and Ramesh Chand, Agriculture Insurance in India: Problems and Prospects, NCAP Working Paper No. 8, March 2008
10. Agriculture Insurance Company of India, Performance of NAIS, Country Profile, www.aicofindia.org