Crop insurance: Boon or bane for Indian farmers

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Abstract

Agriculture is directly dependent on the weather conditions, which can neither be controlled nor predicted precisely. This leaves the farmers with the option of precautionary action towards the vagaries of nature. Crop insurance is one such measure through which the farmers can transfer their risk onto a third party and can claim compensation in lieu of their crop failures. It was in 1972 that General Insurance Corporation (GIC) implemented an insurance scheme for Indian scenario, succeeding which there have been many crop insurance schemes till date. The present study was undertaken to thoroughly review the major insurance schemes that have been implemented in the country. The Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather Based Crop Insurance Schemes (RWBCIS) are the two schemes that are currently running across the nation. The paper discusses about the reasons to why the farmers are not willing to take up crop insurance, even when the government is allocating a huge amount of budget towards these schemes. The paper finally concludes that the insurance schemes are non-remunerative to farmers as they seek it as an investment rather than as a risk-mitigating option, outlining the shortcomings and suggesting improvements over the schemes.

Keywords: Crop insurance, schemes, risk transfer, PMFBY, RWBCIS, India

Introduction

Agriculture has always been directly dependent on the environmental factors. If the climatic conditions are favourable then the agricultural productions are bound to be higher and vice versa. The main problem with the natural factors are that neither can they be controlled nor can they be predicted accurately, thereby making agriculture as quite a risky venture. The production risks are beyond the control of man, but the income of the farmers needs to be safeguarded otherwise nobody is going to engage themselves to a loss-making venture like that of agriculture. Majority of the Indian farmers are of small and marginal category, the crop failure hits them the most. The large farmers are still on the safer end. Therefore, the only option left with the farmers is to transfer their production risk to some other third party. Insurance is one such tool that can be undertaken by the Indian farmers to safeguard their income.

Crop insurance is a means to protect oneself against a small probability of large unexpected, unforeseen losses. These uncertainties may include crop losses/failures arising from named/unnamed perils beyond control. In order to avail insurance cover for crops, one needs to pay a premium.

Need for insurance in Indian agriculture

Majority of Indian states lacks proper irrigation facilities, depending only on monsoon. The two consecutive monsoon failures of 2014 and 2015 led to wide-scale crop failures. As per the data, almost 207 districts from 9 states were hit by drought during this time-period which in turn triggered farmer suicide due to inability to repay loans. Market prices of many agricultural commodities sky-rocketed due to this supply shock. These weather fluctuations make it imperative for the existence of a crop insurance scheme to deal with the distress caused to the farmer cultivators.
Major insurance schemes in India

Insurance is not a new term for Indian context as in 1920, Mr. J.S. Chakravarti proposed a rain based insurance scheme in the then Mysore state for protection against drought which was further adopted by other princely states such as Madras, Dewas, Baroda. Little amount of success was achieved under this scheme but what was more important was the conception of the idea of insurance in Indian context. This was the scenario of pre-independence era.

In the post-independence era, it is the duty of Agriculture Insurance Company of India Limited (AIC) to implement the insurance schemes in India. AIC was incorporated under the Indian Companies Act of 1956 on 20 December, 2002 with an authorised share capital of Rs. 15 billion and paid up capital of Rs. 2 billion. It commenced its operation from 1 April, 2003. The Insurance Regulatory and Development Authority (IRDA) situated in Hyderabad serves as the regulatory governing body of crop insurance schemes in India. Table 1 highlights the key features of some of the major insurance schemes implemented in the nation till date and table 2 outlines the various approaches that were used in these schemes.

Table 1: Key features of the major insurance schemes

<table>
<thead>
<tr>
<th>Name of the scheme</th>
<th>Operational years</th>
<th>Key features</th>
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<tbody>
<tr>
<td>Individual Indemnity Based Crop Insurance Scheme (IIBCIS) 1972</td>
<td>1972 to 1978</td>
<td>• Introduced for H-4 cotton variety in Gujarat but was later extended to other crops and states</td>
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<tr>
<td>Pilot Crop Insurance Scheme (PCIS) 1979</td>
<td>1979 to 1984</td>
<td>• Crop insurance was linked to crop loans • Covered 13 states</td>
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<tr>
<td>Comprehensive Crop Insurance Scheme (CCIS) 1985</td>
<td>1985 to 1999</td>
<td>• Compulsory for loanee farmers • Premium rates: cereals and millets (2%), pulses and oilseeds (1%) • Subsidy on premium: 50% for small and marginal farmers • Premiums and claims were shared between the centre and state government in the ratio of 2:1</td>
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<tr>
<td>National Agricultural Insurance Scheme (NAIS) Rabi 1999-00</td>
<td>1999 to 2016</td>
<td>• Implemented for 35 Kharif and 30 Rabi crops • Gram panchayat was selected as a unit under area approach • Non-reflection of pre-sowing and post-harvest losses in the yield index • Delay in settlements • Requirement of huge infrastructure and manpower for crop cutting experiments (CCE)</td>
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<tr>
<td>Weather Based Crop Insurance Schemes (WBCIS) 2003</td>
<td>2003 to 2016</td>
<td>• Launched as pilot programme in Andhra Pradesh • Linked to crop loan by BASIX group • Quantitative relationship: weather parameters and crop yields • Covered: 18 States, 46.94 million farmers and 63.2 million hectares of area in 2013.</td>
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<tr>
<td>Modified NAIS (MNAIS) Rabi 2010-11</td>
<td>2010 to 2016</td>
<td>• Started as a pilot in 50 districts for food grains, oilseeds, annual horticultural crops • Compulsory for loanee farmers • Minimum indemnity level: 70% • In case of prevented/failed sowing: Claims upto 25% of the sum insured • Subsidy in Premium: 25-75% • Insurance unit was reduced to village panchayat/equivalent unit</td>
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<td>National Crop Insurance Programme (NCIP) 2013-14</td>
<td>2013 to 2016</td>
<td>• MNAIS, WBCIS and CPIS were merged to form NCIP • Compulsory for loanee farmers • Subsidy on premium rates (75%) • Village was taken up as insurance unit • Higher indemnity levels: 80% and 90% instead of 70, 80 &amp; 90% • Risk cover: standing crops (sowing to harvesting), prevented sowing/planting risk and postharvest losses due to cyclone (in coastal areas)</td>
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<tr>
<td>Restructured Weather Based Crop Insurance Schemes (RWBCIS) 2016</td>
<td>Currently operational</td>
<td>• Implemented in 12 states during Kharif 2016 and in 9 states during Rabi 2016-17 • R-WBCIS uses weather parameters as “proxy” for crop yields for compensating the cultivators for deemed losses • It uses Reference weather stations (RWS) and Back-up weather stations (BWS) • Claims are processed in accordance to the insurance term sheets, pay-out structure and the scheme provisions and are paid within 45 days from the end of the risk period • Administered by Ministry of Agriculture and Farmer’s Welfare</td>
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<tr>
<td>Pradhan Mantri Fasal Bima Yojana (PMFBY) 2016</td>
<td>Currently operational</td>
<td>• One Nation-One Scheme. • Objectives: i) provide insurance coverage and financial support for failure, ii) stabilise the income of farmers, iii) encourage farmers to adopt innovative and modern agricultural practices, (iv) ensure flow of credit • Only one premium rate for each season and all crops: Kharif (2%), Rabi (1.5%), Annual commercial/annual horticultural crops for both Kharif and Rabi (5%)</td>
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Table 2: Insurance schemes and their approaches

<table>
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<tr>
<th>Schemes</th>
<th>Approach</th>
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<tr>
<td>Individual Indemnity Based Insurance Scheme (1972)</td>
<td>Individual Loss Assessment</td>
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<tr>
<td>Pilot Crop Insurance Scheme (1979)</td>
<td>Homogeneous Area</td>
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<tr>
<td>Comprehensive Crop Insurance Scheme (1985)</td>
<td>Homogeneous Area</td>
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<tr>
<td>National Agricultural Insurance Scheme (1999-2000)</td>
<td>Area Yield Index and Individual loss assessment</td>
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<tr>
<td>Weather Based Crop Insurance Scheme (2003)</td>
<td>Weather Index</td>
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<tr>
<td>Modified National Agricultural Insurance Scheme (2010-11)</td>
<td>Area Yield Index</td>
</tr>
<tr>
<td>Restructured Weather Based Crop Insurance Scheme (2016)</td>
<td>Weather Index based area approach</td>
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<tr>
<td>Pradhan Mantri Fasal Bima Yojana (2016)</td>
<td>Area approach</td>
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Coverage and performance of the current insurance schemes

According to the results displayed in the Figure 1, it is quite evident that the farmers of Maharashtra, Rajasthan, Karnataka, Madhya Pradesh and Andhra Pradesh are amongst the top five states to harvest the benefits of the latest crop insurance schemes. These states on one hand are amongst the top producing states of pulses, spices, horticultural produce and food grains to some extent while on the other hand are very frequently hit by the vagaries of nature.

*Source: [http://www.aicofindia.com](http://www.aicofindia.com)

Fig 1: State-wise proportion of farmers benefitted under the latest crop insurance schemes. The numbers in the figure shows the number of farmers benefitted in (000').

*Source: [http://www.aicofindia.com](http://www.aicofindia.com)

Fig 2: State-wise area covered under the latest crop insurance schemes. The numbers in the figure shows the area covered in (000' ha).
The results of the figure 2 are almost in accordance with the results of figure 1. It reflects that the area covered is having a direct relationship with the number of farmers covered under a crop insurance scheme.

**Lacunae’s of the latest crop insurance schemes**

When formulating a new insurance scheme, one does not comprehends how well the last scheme worked but focusses mainly on its limitations/ lacunae’s so that it could be overcome in the next programme. So, let’s discuss about the constraints of the previous schemes which were pointed out in the various schemes. The shortcoming of the previous programme has served as a pathway for the foundation for PMFBY and RWBCIS as they were implemented to overcome the constraints/ shortcomings of WBCIS, NAIS and MNAIS. Agricultural finance Corporation (AFC) in their Report on Evaluation and Impact Assessment of Crop Insurance Schemes (2013) concluded that “there is widespread ignorance about crop insurance schemes among farmers”.

i. **NAIS (1999) and MNAIS (2010)**

The NAIS and the MNAIS failed to serve the farmers’ interests as the sum insured for risky areas and crops were capped and were largely based on the quantum of crop loan taken. The crop cutting experiments which assessed the crop loss was slow, time taking and required huge man-power. Sometimes, it took several months for the compensation to reach the farmers.

ii. **WBCIS (2003)**

- Insufficient no. of Automatic Weather Station’s (AWS)
- Automatic Weather Station (AWS) data could be manipulated and hence cannot be trusted entirely
- It is very difficult to monitor the non-uniform weather data
- Indian Meteorological Department’s (IMD) website provides with the current data and it takes time to generate historical data
- High premium rate
- Problem of ‘capping’ on sum insured

**The special case of Punjab state**

Punjab state has walked out from implementing PMFBY in the state as it does not exactly cater to the needs of its farmers. The Comprehensive Crop Insurance Scheme (CCIS) of 1985 also focused largely on drought, whereas the Punjab state farmers demanded insurance with higher indemnity against hailstorm only. The past insurance schemes were tailor-made for rain-fed states while Punjab has been always been the state with high rate of irrigation. Some farmers have the opinion that buying insurance is kind of a gamble and would avail insurance only if it’s a freebie. The PMFBY is also being boycotted in the state on the basis of following grounds:

- Instead of taking village as a unit, farmers are demanding for a farm-plot specific approach with increment of the indemnity level up to 95%.
- Farmers are demanding that the 10-year benchmark for assessing the normal yield should be replaced by the last year yield records in order to calculate the insurance premium.
- The premium rates should be flattened at 1% for all crops as Punjab faces less crop losses in comparison to the whole country.

- PMFBY does not take into account the marketing losses and the losses incurred to the farmers after it has reached the market yard. The mechanised practises in Punjab makes it possible for the produce to reach the farm yards just hours after the harvesting.

One of the past insurance schemes i.e. Farm Income Insurance Scheme (FIIS) had an aspect wherein it insured the income of the insured farmers by protecting the farmers against production and market risk. It was later withdrawn in 2004 but it had the potential to cater the needs of farmers of Punjab with improvements. FIIS was even recommended by Punjab Agricultural University (PAU) for the state of Punjab because it safeguarded farmer’s income by ensuring yield and price. In 2018, it was announced by the Government of Punjab that it is set to roll out a custom-made insurance scheme for Punjab farmers by overcoming the shortcomings of the currently operational nation-wide insurance schemes.

**Conclusion**

Agriculture has come a long way since the discovery of farming and animal husbandry; nevertheless; farmers are still at the mercy of the heavens. Crop insurance is a risk management tool that comes handy for the farmers when facing risks of the today’s agricultural world. For calculating a premium, farmers can pass on their weather-related risk to a third party, most preferably insurance companies. Farmers in India have been subjected to public administered insurance schemes since 1972. Every insurance scheme that has been implemented till date had flaws, yet the government of India is attempting to strengthen agriculture by protecting its farmers from the unexpected risks related to weather. Yet, farmers consider insurance as an “investment” rather than as a risk-mitigating option because of its failure to provide profitability and partly because of the attitude of farmers. So, there is a need to create awareness about the insurance and its benefits along with providing technical know-how, hooks and nooks of insurance policies among the farm sector.

In order to demystify the insurance policies, the policies should be a combination of better elements of both the yield-based and weather-based insurance to ensure its viability and wider acceptability to the insured as well as the insurer. The drawbacks of the past policies should be kept in mind while formulating and implementing the existing policies. These drawbacks work as the guiding lights to what should be avoided in a scheme and what needs to be added. The farming community has high hopes for the successfulness of PMFBY and RWBCIS (currently running schemes). These schemes have been implemented for the entire nation and are promising to ensure benefits to the farming community. A lot of campaigning has been done to create awareness amongst the farmers to eliminate the shortcoming outlined by the AFC. The government had allocated Rs. 2500 crore during 2013-14 which has now been raised to Rs. 13200 crores during 2017-18 (BE).

Different private companies that have been entrusted with providing insurance to farmers under PMFBY are charging different premium from farmers for the same crop for same piece of land in the same season. Therefore, either only one company should be allotted for every state or strict rules should be laid down for charging same premium from every farmer.
There are times when farmers pay the premiums but no weather vagaries occur as such or they are not entitled to claim the losses as the losses incurred are of smaller extent. So, there should be a provision of “no claim bonus” for the farmers to boost the farmers to avail insurance next time as well. Otherwise, the farmers will opt out of insurance and will consider it only as a waste of money and not as risk-mitigating measure.

References
15. Times of India, 18/08/2018.