

CROP INSURANCE IN INDIA -AN ANALYSIS

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ABSTRACT

Agriculture is considered the backbone of Indian economy; the agricultural production is dependent on the nature. The Indian farmers have to suffer a huge loss during natural disasters such as flood, drought or earthquake. Therefore, insurance is one of the best ways to protect the farmers from such damages. In this context, the present paper makes an attempt to understand the prevailing scenario of crop insurance in India, to look into the role of government in implementing various agricultural insurance schemes and to suggest suitable measures for operational effectiveness of agricultural insurance schemes.

KEYWORDS: *Crop Insurance, Insurance Scheme.*

INTRODUCTION

Crop insurance, especially insurance of yield, is a very complicated concept to administer. The reasons are many - the systemic nature of agricultural risks going against the working of the “law of large numbers” on which premium and indemnity calculations are based, the tremendous scope for moral hazard that contravenes the basic “principle of utmost good faith”, the difficulty of curbing adverse selection and, above all, the twin problems of non-viability and unaffordability that result in a see-saw battle of judgment to continue with the subsidised flat premium rates or to move forward to an actuarial regime. In the case of crop insurance, the pooling concept needs diversification or spread not only over areas but also over time periods. A case for compulsory yield insurance for those availing institutional credit, as in India, is made on the grounds that it eliminates the problem of adverse selection besides taking care of the pooling concept by ensuring the uninterrupted participation of farmers both in good and bad years. The crop insurance programme thus also benefits banks by working as a collateral security. However, less than one-third of the farming community avails of institutional credit in India and for the remaining, insurance continues to be voluntary. Insurance in Indian agriculture is more challenging than in the developed countries due to its inherent nature - a large number of small and scattered landholdings, varying climatic and soil conditions, lack of basic data, and variety of agricultural practices, making it practically impossible to implement the scheme on an

“individual basis” on a wide scale. Further, there is widespread lack of knowledge about the nature and functions of crop insurance amongst the farmers, a majority of whom are illiterate and poor.

The crop insurance is a potentially more effective risk-shifting mechanism to give protections to all types of farmers and the use of it as a risk management tool has grown rapidly in recent years. Also the crop insurance subsidies help the farmer on various grounds. They give protection from different natural calamities. They encourage the planted acres and also encourage the producer to use large amounts of chemical fertilizers, pesticides and herbicides. The crop insurance subsidies create important problem, which increases the probability and size of production loss (moral hazard). Due to the presence of moral hazard problem the insured farmers reduce input use and average yields. Again many environmentalists argue that if agricultural chemical input use increases, it becomes harmful to animal and human well

NEED FOR CROP INSURANCE

Crop insurance is one alternative to manage risk in yield loss by the farmers. It is one of the important tools, which helps in reducing the impact of income loss on the farmer (family and farming). Crop insurance is a means of protecting farmers against the variations in yield resulting from uncertainty of practically all natural factors beyond their control such as rainfall (drought or excess rainfall), flood, hails, other weather variables (temperature, sunlight, wind), pest infestation, etc.

BRIEF HISTORY ABOUT INDIAN CROP INSURANCE SYSTEM

Agriculture is a main stake of the Indian economy and this sector faces diverse types of uncertain events such as natural calamities (drought, flood etc) and delay monsoon which are beyond the control of the farmers. Due to the natural calamities the agricultural production, gross national product and also the income of the farmers decrease. Though before independence both direct and indirect subsidies have been offered in Indian agriculture but after independence at the time of five years plan India has institutionalized both direct and indirect subsidies and they have also been increased their scope and amount for the benefit of the farmers. The agricultural subsidies are price supports, fertilizers subsidies, cheap credit, subsidies irrigation rates, reduce tariff on electricity, reduce excise duties on diesel fuel, differential freight rates for agricultural outputs and inputs, free extension services and incentives offered for agro-processing industries or export of agriculture commodities

Insurance is a form of risk management, primarily used to hedge against the risk of a contingent loss. In essence, insurance is simply the equitable transfer of a risk of a loss, from one entity to another, in exchange for a premium.

In India, the General Insurance Corporation of India (GIC) managed crop insurance, and delivers crop insurance through rural financial institution and the crop insurance tied with crop loan and subsidy shared equally by the central and state governments. The GIC requested the Indian School of Political Economy to prepare a report on the feasibility of introduction of crop insurance in agriculture. The GIC introduced a Pilot Crop Insurance Scheme in 1979-80, in association with the state governments, in 26 areas of Gujrat, 23 areas of West Bengal and 178 areas of Tamil Nadu and later the scheme has been extended to more areas of more states. The scheme offered to all borrowing members but on a voluntary basis. It (Pilot Crop Insurance Scheme) covered only about 60,000 (sixty thousand) farmers all over the country (India). Thus the scheme is not yet fully integrated with agricultural credit. This scheme is loss making (Can Crop Insurance Work.

EVOLUTION OF CROP INSURANCE IN INDIA

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. The first aspect regarding the modalities of crop insurance considered was whether it should be on Individual Approach or Homogenous Area Approach. The individual approach seeks to indemnify the farmer to the full extent of the losses and the premium to be paid by him is determined with reference to his own past yield and loss experience. As such it necessitates reliable and accurate data of crop yields of individual farmers for a sufficiently long period for fixation of premium on actuarially sound basis. The homogenous area approach envisages that in the absence of reliable data of individual farmers and in view of the moral hazards involved in the individual approach, a homogenous area would form the basic unit, instead of an individual farmer. The homogeneous area would comprise of villages that are homogenous from the point of view of crop production and whose annual variability of crop productivity

would be similar. The study favoured 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 then Chairman, Agricultural Price Commission set up in July 1970 for full examination of the economic, administrative, financial and actuarial implications of the subject. Different experiments on crop insurance on a limited, *ad hoc* and scattered scale started in 1972-73. By now we have the experience of a number of products including some of weather insurance. In what follows is a brief on the past experience and availability of different products at present.

Though, agricultural insurance is largely in the public domain some private efforts especially in weather insurance have also been there for some time. Their experience is not all that discouraging. The real challenge is to scale up the distribution and ensure fast claim settlement. India, thus, has a publicly administered crop insurance scheme since 1972. All the variants of the scheme introduced from time to time had flaws. Nevertheless India is not alone where public crop insurance has not been successful. In both developed and developing countries such insurance schemes have incurred losses without offering an effective product. Public crop insurance schemes are available to cultivators as means of reducing the cost associated with crop failure. The schemes, however, suffers from moral hazards and adverse selection and are very costly as payment eligibility is determined by crop damage assessment for each individual farmer. There is a feeling that it is not profitable proposition at all.

OBJECTIVES OF THE STUDY

1. To understand the prevailing scenario of crop insurance in India
2. To look into the role of government in implementing various agricultural insurance schemes
3. To suggest suitable measures for operational effectiveness of agricultural insurance schemes.

FEATURES OF CROP INSURANCE

The following crops are included under the scheme:

Rabi Crops:

- Boro rice, Wheat, etc.
- Pluses: Musur, Arhar, Mung, Gram, and Maskalai, etc.
- Oil Seeds: Mustard, Linseed and Til, etc.
- Potato.

Kharif Crops:

- Aman Rice, and
- Aus Rice

Agricultural Insurance**1. Combined (peril) Insurance**

Combined insurance means a combination of several risks covered (two or more risks, mostly with hail as basic cover). In some countries this type of insurance is also referred to as multi-risk insurance.

2. Yield insurance

Yield insurance includes yield guarantee, based on regional average yield or on individual historic yield, where the main risks affecting yield (e.g. drought) are comprised. In some countries (e.g. USA) this type is also called combined or multi-peril insurance.

3. Revenue Insurance

Revenue insurance combines yield and price risks coverage in a single insurance product. It can be product-specific or whole-farm.

4. Income Insurance

Income insurance covers income, so it covers yield and price risks, but the costs of production are also considered. Usually this type of insurance is not product-specific, but whole-farm income.

5. Whole-Farm Insurance

This type consists on a combination of guarantees for the different agricultural productions in a farm. Depending on the coverage of the guarantees, it can be whole-farm yield insurance, or whole-farm revenue insurance or whole farm income insurance.

6. Area Yield Index Insurance

Indemnities are computed from the decrease of the average yield in an area.

7. Area Revenue Index Insurance

Indemnities are computed from the decrease on the product of the average yields and prices in an area.

8. Indirect Index Insurance

Indirect index insurance reports to those indices of yields or vegetation computed from weather based indices, satellite images and others.

Insurance coverage

The insurance schemes for the farmers have been evolved to provide benefits to the farmers. Some of the policies cater to both the personal and property need of the farmers. The basic requirements of the farmers are covered in the farmer's insurance scheme. Here is a list of the coverage provided to the farmers under such policies.

1. Loss or damage caused due to fire or natural disaster such as flood, storm, tornado, cyclone, earthquake etc.
2. Loss or damage to the property of the insured farmer
3. Coverage for personal accident which includes the insurer and the family members
4. Cover for loss or damage of tractor
5. Cover for loss of pump set
6. Coverage for loss/ damage caused by power failure

Popular insurance schemes in India

1. Weather based insurance
2. Crop insurance
3. Power failure insurance
4. Farmers insurance
5. Rainfall insurance/ Varsha Bima
6. Plant insurance
7. Mango Insurance

8. Poppy Insurance
9. Potato Insurance
10. Grapes Insurance
11. Wheat Insurance
12. Coconut Insurance
13. Rubber Insurance
14. Rabi Weather Insurance
15. Pulpwood Tree Insurance

AGRICULTURE INSURANCE SCHEMES**1) First Individual Approach Scheme 1972-1978**

Different forms of experiments on agricultural insurance on a limited, ad-hoc and scattered scale were started from 1972-73 when the General Insurance Corporation (GIC) of India introduced a Crop Insurance Scheme on 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. It continued up to 1978-79 and covered only 3,110 farmers for a premium of Rs.4.54 lakh against claims of Rs.37.88 lakh

2) Pilot Crop Insurance Scheme (PCIS) 1979-1984

The Pilot Crop Insurance Scheme was launched by the GIC in 1979, which was based on the 'Area Approach' for providing insurance cover against a deficit in crop yield below the threshold level. The Scheme covered cereals, millets, oilseeds, cotton, potato and chickpea and it was confined to loanee farmers of institutional sources on a voluntary basis. The PCIS 1979 was implemented in 12 states till 1984-85 and covered 6.23 lakh farmers for a premium of Rs.195.01 lakh against claims of Rs.155.68 lakh during the entire period.

3) Comprehensive Crop Insurance Scheme (CCIS) 1985-99

The Comprehensive Crop Insurance Scheme (CCIS) launched in 1985 was the first nation-wide Scheme. Previous Schemes were either experimental or Pilot Projects, on a small scale and in a scattered manner. This scheme was linked to short-term credit and was based on the 'homogenous area approach'. The Central Government introduced the CCIS during the year 1985-86. Till Kharif 1999, the Scheme was adopted by 15 States and 2 Union Territories (UTs). Both, PCIS and CCIS were confined only to farmers who had borrowed seasonal agricultural loans from financial institutions. The main difference between PCIS and CCIS was that PCIS was on voluntary basis while CCIS was compulsory for loanee farmers. The CCIS covered 763 lakh farmers for a premium of Rs.404 crore against claims of Rs.2303 crore. A more comprehensive Scheme, 'National Agricultural Insurance Scheme' was launched in 1999 with aim to cover all farmers irrespective of loanee or non-loanee.

4) 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 Ltd. (AIC). The Scheme was available to all the farmers both loanee and

non-loanee irrespective of their size of holding. It envisages coverage of all the food crops (cereals, millets and pulses), oilseeds and annual commercial/horticultural crops, in respect of which past yield data is available for adequate number of years. The Scheme was continued till Kharif 2013; however, some States are allowed to implement NAIS during Rabi 2013-14 also. The Scheme was optional for States/Union Territories (UTs) and it had been implemented by the 25 States and 2 Union Territories in one or more seasons. Since the inception of the Scheme 2084.78 lakh farmers for a premium of Rs.8,67,121 lakh against the claim of Rs.25,37,558 lakh were covered until 2012-13. The total area insured was Rs.3137.70 lakh hectares during the same period

5) 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. During the Five seasons of its implementation in 17 States, the MNAIS covered 45.80 lakh farmers for a premium of Rs.1,08,800 lakh against the claim of Rs.86,400 lakh until Rabi 2012-13. The total area insured was 46.79 lakh hectares during the same period

6) Pilot Weather Based Crop Insurance Scheme (WBCIS)

With the objective to bring more farmers under the fold of Crop Insurance, a Pilot Weather Based Crop Insurance Scheme (WBCIS) was launched in 20 States in 2007. Apart from Agriculture Insurance Company of India, some private companies have also been allowed to implement the Scheme. The WBCIS is intended to provide insurance protection to the farmers against adverse weather incidences, such as deficit and excess rainfall, high or low temperature, humidity etc. which are deemed to impact adversely the crop production. It has the advantage to settle the claims within shortest possible time. The WBCIS is based on actuarial rates of premium but to make the Scheme attractive, premium actually charged from farmers has been restricted at par with NAIS.

The WBCIS was implemented in 18 States and 469.38 lakh farmers were covered for a premium of Rs.7,51,920 lakh against the claims of Rs. 52,860 lakh under the Scheme from 2007-08 to 2012-13. The total area insured was 632.01 lakh hectares during the same period

7) Pilot Coconut Palm Insurance Scheme (CPIS)

The Coconut Palm Insurance Scheme (CPIS) was approved for implementation on pilot basis for the years 2009-10 and 2010-11 in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu. Later on, it was extended to West Bengal also. The pilot was implemented during the years 2011-12 and 2012-13 and continues to be under implementation during the year 2013-14 also. 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. The CPIS is administered by the Coconut Development Board (CDB). Under the Scheme, 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. And the total area covered during the same period was 25,938 hectares

8) 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 requests received, some States have been allowed to implement NAIS during Rabi 2013-14. 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.

SUGGESTIONS AND RECOMMENDATIONS

The following suggestions and recommendations offered were as follows:

Ensure effective network amongst bank and other credit institutions in farm insurance for maximum coverage and reach.

- Introduce broad based schemes that cover varied sectors such as crops, livestock and cover other risks specific to rural localities in an integrated manner.
- Introduce the concept of price support to cover all primary production including agriculture crops, fruits, non-timber production etc. which are all subject to annual variation of prices and yield.
- Promote group insurance mechanism, linking premium with bank loans, and proper monitoring to improve effective operation of insurance schemes.
- Strengthen rural insurance development funds, scientific actuarial techniques, and insurance regulatory mechanisms

CONCLUSION

Dry land farming purely depends on rainfall and Climatic conditions. The impact of financial losses due to vagaries of nature and climatic condition can be minimized by participating in the Agriculture insurance schemes. These schemes can be very helpful for dry land farmers to restore the credit eligibility in years of disaster and for developing the farms by implementing new techniques for better yield.

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