

CROP INSURANCE - AN INDIAN EXPERIENCE

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What a great achievement for Crop Insurance in India i.e. 250 farmers covered in first ever scheme in 1972 to more than 12 Million farmers in 2005. However the experience is not fully satisfactory as less than 10% farmers are brought under the umbrella of crop insurance and a large number of farmers are still reeling in poverty and even committing suicides, as agriculture has become a very risky and non-profitable proposition.

The above referred achievement is obtained by implementing and experimenting various types of schemes and the search is still on to find a more beneficial and economically viable crop insurance scheme.

India is an agriculture country and 65% (over one billion population) is engaged in agriculture and allied activities contributing about 23% to GDP. Every year, large scale crop failure occur in one part of the country or the other due to various natural calamities such as flood, drought, cyclone etc and damaging the crops in wide spread areas and making agriculture as the most risky business. Though such farmers were given some support from the government under various schemes but the help is not enough. The subject of crop insurance was discussed in Indian parliament as early as 1950 and Government assured that viable crop insurance

scheme would be introduced. Accordingly, Government appointed various committees to suggest a viable crop insurance scheme. The scheme suggested by such committees were not acceptable to the State Governments due to huge financial implications and no insurance company was willing to implement any such scheme because of expected heavy losses.

A beginning in Crop Insurance Scheme was made by General Insurance Corporation of India (GIC) in 1972 by implementing an experimental Crop Insurance Scheme for cotton crop on individual approach. Under this scheme, a fixed guaranteed yield was offered to selected farmers and losses were assessed individually. Later, the scheme was extended to paddy and groundnut crops. This scheme was continued till 1979 and phased out since it was concluded that the schemes based on individual approach are not economically viable and suitable for implementation on large scale. During the period from 1972 – 1979, about 3000 farmers were covered and premium collected was 0.45 million rupees and claims amounting to 3.5 million were paid. The various other problems observed during implementation of such schemes based on individual approach are as under:

a. Non availability of past record of land survey, ownership, tenancy and yields: Majority of Indian farmers are illiterate and hardly any farm record of yield is maintained. Also great majority of farmers is engaged in what's called subsistence farming.

b. Large number of farm holdings (nearly 110 millions): which are small and fragmented with average farm holding size of lowly 1.5 hectares. The total small and marginal farmers constitute approx. 78% and own only 32% of the farm area.

c. Inaccessibility of farm-holdings: Some of the Indian villages are still to be connected by roads and most of those connected face the danger of being cut-off from the rest, during most of the monsoon period. Farms in most of these villages are not easily accessible for assessment of crop losses.

d. Large variety of crops, varied agro-climatic conditions and package of practices: The country is classified into 120 agro-climatic zones, each with its own distinct climate. Wide variety of crops is grown in each of the agro-climatic zone, using varying levels of farm technology.

e. Collection of small amount of premium from large number of farmers: It requires massive effort to collect small amounts of premium from large number of farmers who are faraway and scattered.

f. Simultaneous harvesting of crops all over the country: Most of the crops grown in the country are ready for harvest during October-November and April-May and it's nearly impossible to mobilize technical workforce to assess losses in so many farms, spread across length and breadth of the country. Mixed cropping may further complicate loss assessment.

g. Prohibitive cost of manpower and infrastructure: For any organization to administer a Scheme of this magnitude, covering farmers as individuals will require very huge infrastructure and manpower and it's administrative cost is likely to be highly prohibitive.

Pilot Crop Insurance Scheme (PCIS)-1979

In the background and experience of the aforesaid experimental schemes for crop insurance, a study was commissioned by GIC and entrusted to eminent agricultural economist, Prof. V.M. Dandekar. Based on the recommendations of Prof. Dandekar, a Pilot Crop Insurance scheme was introduced by GIC from 1979. The important features of the scheme were:

- (i) The scheme was based on "Area Approach"
- (ii) The scheme was all risk
- (iii) The scheme covered Cereals, Millets, Oilseeds, Cotton, Potato and Gram.
- (iv) It was confined to loanee farmers only and on voluntary basis.

- (v) The risk was shared between GIC and the State Government in the ratio of 2:1
- (vi) The maximum sum insured was 100% of the crop loan, which was later increased to 150%
- (vii) 50% subsidy was provided for insurance charges payable by Small / Marginal farmers by the State Government and the Government of India on 50:50 basis.

PCIS – 1979 was implemented in 13 states till 1984-85 and covered 0.627 billion farmers for premium of Rs.19.69 billions against claims of 15.705 billions.

The above referred scheme was administered at district or sub district level as unit of insurance. Under Crop Estimation surveys, yield data were available for all the major crops and current year's yield was estimated by a three stage random sampling methodology. The first stage of random sampling is selection of village (each sub district has 30 to 40 villages), growing the particular crop. The second stage of random sampling is based on selection of survey number within the village and the third stage of random sampling was 5 x 5 meters cut for harvesting the same and assessing the productivity per hectare. In each sub district, for each crop, 16 – 20 such crop-cutting experiments were conducted. Past yield data for such sub district (insurance unit) was used for constructing indemnity tables and guaranteed yield, Actual yield is used to work out claims based on the difference between the level of

guaranteed yield and actual estimated yield. It may be noted here that the rate of indemnity was uniformly applied for all the insured farmers irrespective of their individual experience, as the scheme was based on area approach. This methodology is continued in subsequent schemes such as comprehensive crop insurance schemes and national agricultural insurance scheme. The only difference is that the size of the unit of the insurance was further divided into smaller units so that, the estimated yield reflect the farmers actual experience.

Comprehensive Crop Insurance Scheme (CCIS):

Based on the experience of the pilot crop insurance scheme, the Government of India decided to widen the coverage of the crop insurance scheme and introduce comprehensive crop insurance scheme from 1999. The main features of the scheme are as follows:

- i) It covered farmers availing crop loans from Financial Institutions for growing food crops & oilseeds on compulsory basis. The coverage was restricted to 100% of crop loan subject to a maximum of Rs.10,000/- per farmer.
- ii) The premium rates were 2% for Cereals and Millets and 1% for Pulses and Oil seeds. 50% of the premium payable by Small and Marginal farmers was subsidized equally by Central and State Governments.
- iii) Premium & claims were shared by Central & State Government in 2:1 ratio.

- iv) The scheme was optional to State Governments.
- v) The scheme is administered under multi agency model, involving Government of India, Departments of State Governments, Banking Institutions and GIC.

The summary of coverage particulars until Kharif 1999 since inception is as follows:

Total number of farmers covered:
7,61,79,361

Total area covered (Hectares):
12,75,13,668

Total Sum-Insured (Rs. millions):
249220

Total insurance charges (Rs. millions):
402830

Total claim (Rs. millions): 23026.80

Claims ratio: 1: 5.72

National Agricultural Insurance Scheme (NAIS): Keeping in mind demands of State Government for including scope and contents of crop insurance, a broad based National Agricultural Insurance Scheme was introduced in 1999-2000 season. In addition to covering food crops and oil seeds, the scheme was extended to annual, commercial, horticultural crops such as cotton, sugarcane, potato, onion, banana, ginger etc.

The salient features of the Scheme are summarized as follows:

- a) States & Areas covered:** The Scheme is available to all States/Union Territory.
- b) Farmers covered:** Covers all farmers, including sharecroppers,

tenant farmers. Loanee farmers are covered on compulsory basis, while non-loanee farmers are covered on voluntary basis.

- c) Risks Covered:** Basically all-risk insurance covering all yield losses due to natural, non-preventable risks.
- d) Sum Insured:** Sum insured can extend up to a value of 150% of average yield. In case of loanee farmers the sum insured is equivalent to at least 100% of loan amount availed for the crop.
- e) Premium rates:** Premium rates may range from 1.5% to 3.5% for food crops and oilseeds or actuarial premium whichever is less and for commercial and horticultural crops it will be on actuarial premium.
- f) Premium Subsidy:** Small / Marginal farmers are eligible for premium subsidy @50% which is to be phased out on sun-set basis in a period of three to five years subject to review of financial results.
- g) Nature of Scheme:** It is a Yield guarantee scheme operating on "Area approach" basis. If the actual average yield per hectare of the insured crop for the defined area (on the basis of requisite number of Crop Cutting Experiments) in the insured season, falls short of specified Threshold yield, all the insured farmers growing that crop in the defined area are deemed to have suffered shortfall in their yield and the scheme seeks to provide coverage against such contingency.
- h) Risk sharing:** Implementing Agency (GIC) shall bear, until transition to

actuarial regime is made, all claims up to 100% of premium for food crops & oilseeds and balance claims are shared between Government of India and States on 1:1 basis. In respect of annual commercial/horticultural crops, Implementing Agency shall bear all claims up to 150% of premium in the first 3 or 5 years and 200% of premium thereafter. All claims beyond the liability of GIC shall be paid out of Corpus Fund. The scheme was transferred to Agricultural Insurance Company of India Limited with effect from 1st April, 2002.

i) Corpus Fund: To meet claims of catastrophic nature, a Corpus Fund is created with contributions from Central Government and

participating States on 1:1 basis. The fund shall be managed by Implementing Agency.

Farm Income Insurance

During 2002, the scheme was slightly modified to link the indemnity to minimum support price as fixed by the Government and named the scheme as Farm Income Insurance Scheme (FIIS). However, the experiment was phased out in 2005.

The Government of India fulfilled its commitment to Crop Insurance by incorporating an exclusive insurance company to transact crop insurance and agricultural insurance business named as “Agricultural Insurance Company of India Limited”. The role of various agencies under the scheme may be illustrated as under:

<p>Government of India</p> <ul style="list-style-type: none"> ▪ Policy matter ▪ Subsidising Premium ▪ Sharing claims if exceeds 100% of food crop, and 150% for annual horticulture crops 	<p>State Government</p> <ul style="list-style-type: none"> ▪ Formation of Crop Insurance committee to select crops and area to be covered ▪ Issuing notification to bank for implementation of scheme ▪ Providing yield data for each crop and each area ▪ Sharing of claims if exceeds 100% for food crops, 150% for
<p>Agricultural Insurance Company of India Ltd., (AIC)</p> <ul style="list-style-type: none"> ▪ Implementing agency ▪ Compiling the proposals received from banks ▪ Collecting yield data from respective state governments ▪ Working out claim for each crop and each area ▪ Paying Claims to Bank 	<p>Bank</p> <ul style="list-style-type: none"> ▪ Collection of premium from loanee farmers while disbursing the loan ▪ Collection of proposal form along with premium from non-loanee farmers ▪ Furnishing consolidated proposal to AIC ▪ Disbursement of Claim to farmers account

With the efforts of all the above agencies, progress of the scheme has been satisfactory and each year about 12 medium farmers are covered.

A brief summary from 1999 – 2005 of the performance of the scheme is as under:

Total number of farmers covered: 78.94 million

Total Sum Insured: 7550172 million Rupees

Total Insurance Charges: 232667 million Rupees

Claims Paid: 722107 million Rupees

Claims Ratio: 310%

Rainfall Insurance Scheme: As an alternative approach to Crop Insurance, weather insurance scheme, i.e. rainfall insurance scheme is introduced since 2003. Graded compensation is paid to insured farmers if there is variation in the rainfall from the average rainfall.

Horticulture and Floriculture Crop:

These crops emerge as a promising diversification in agriculture on account of high income generation per unit of area. Hence, various public sector insurance companies are offering coverage for floriculture and horticulture crops such as grapes, tea, coffee, Poplar, rubber etc. These schemes are based on individual approach. However, the coverage is not very high.

Conclusion:

In nutshell, it can be said that the performance of crop insurance scheme is steady in India and progressing. Efforts are being made to find out a commercially viable scheme, which is also beneficial to the farmers. Consideration is required to be given to shift from individual crops to group of crops for coverage using index methodology to get wider and stable results. Further, the latest techniques as yield assessment have to be used such as geographical information system using satellite. ■