

CROP INSURANCE : A TOOL FOR RISK MANAGEMENT IN AGRICULTURE

RUCHIRA SHUKLA

Institute of Agribusiness Management (IABM), Navsari Agricultural University, NAVSARI (GUJARAT) INDIA

The capacity of the agriculture sector, to hedge itself from the vagaries and aberrations of nature, is considered critical to its development and growth. Many factors, including disasters, can slow the development process, by reducing domestic food supplies and raw materials in the short term. Natural disasters such as drought, floods and cyclones are a major source of risk in agriculture. More than 2/3 of the cropped acreage is vulnerable to drought, in different degrees. On an average, crops on 12 million ha. of land are damaged annually, by natural calamities and adverse seasonal conditions in the country, grossly impacting the level of agricultural productivity and production.

The insurance need for agriculture cannot be over emphasized, as it is a highly risky economic activity, on account of its critical dependence on weather conditions. To design and implement an appropriate insurance program for agriculture, is therefore a very complex and challenging task. The idea of crop insurance emerged in India, during the early part of the twentieth century. Yet, it was not operated in a significant way till the nineties. It is still evolving in terms of scope, spread and structure.

Crop insurance: Crop insurance is a means of “protecting the farmers against uncertainties of crop yields, arising out of practically all natural factors beyond their control”. It is a financial mechanism in which the uncertainty of loss in crop yields, is minimized by pooling most uncertainties that impact crop yields, so that the burden of loss can be distributed.

Crop production involves numerous risks - natural, social, economic and personal. However, the principal characteristic, which distinguishes crop production from any other activity, is its great dependence on nature. Crop production unlike almost any other activity, has to be carried on in the face of continual uncertainties arising out of diverse natural and social elements. Normally, the greatest impact of all these elements falls on crops, which remain under the open skies for weeks and months.

Uncertainty of crop yield, is thus one of the basic risks, which every farmer has to face, more or less, in all

countries, whether developed, or developing. These risks are particularly high, in developing countries particularly in the tropics as in most of these countries, the overwhelming majority of farmers are poor, with extremely limited means and resources. They cannot bear the risks of crop failure of a disastrous nature.

It is true that much of the present uncertainty of crop production in developing countries like India, could be removed by technical measures and by improvements in the social and institutional set-up. That a complete set of

initiatives is needed in this regard, goes without saying. Still, a good deal of uncertainty will always be there, as no imaginable measure could make crop production completely independent of natural factors. Also, the physical measures envisioned, need to be justified by their cost-benefit ratio. There may be many places, for example, where flood is preventable, but the cost of

prevention measures, would be far out of proportion to their benefit. In such cases, it would be bad economics to spend more capital in preventing a risk, than would be lost by the risk itself (especially where capital is so scarce).

Secondly, with a growing population constantly pressing against land, no part of it could be given up for cultivation, simply because it is subject to periodical risks of failure. It is, as much in the country's interest, as in that of the individual owners that such lands should be kept under plough, even if there were occasional risks of failure.

Therefore, the risks of crop production have to be faced. However a serious crop failure has a cascading affect leading to serious repercussions, for the entire community. Various methods have been adopted for helping to compensate farmers, at least partially, for loss of their crops through natural calamities. Reduction or suspension of land rent, taxes, cancellation of accumulated agricultural debts (example of Rural and Agricultural Debt Relief Scheme, 1990), and relief from the Calamity Relief Fund (CRF) / National Calamity Contingency Fund (NCCF), are amongst the methods



applied so far. Useful though these means have been, farmers cannot expect them as a right. Secondly, the continued prospects of relief, 'soften' its recipients and are also likely to be questioned by the non-farming community. An important measure that is largely free from the above difficulties, is crop insurance against all natural and unavoidable hazards.

Crop insurance–types: Crop insurance may be of different types according to different criteria. The types as per criteria used could be:

According to Perils insured

- Single Peril insurance: E.g.- Hail insurance
- Named Peril insurance: Up to four perils are covered
- Multi-Peril insurance: At least five or more perils are covered
- All Peril insurance: Covers all natural and non-preventable perils.

According to object insured:

- Single crop insurance: A scheme covers a single crop, e.g. Apple insurance against hail & frost.
- Multiple crop insurance: A single scheme covers a host of crops, e.g. National

Agricultural insurance scheme:

According to basis of administration:

- Public insurance: Predominantly government run schemes
- Private insurance: Private insurers, without government support.
- Cooperative insurance: Both Government and private agencies are involved.

According to scope and application:

- Voluntary insurance: Scheme optional for states and / or farmers
- Compulsory insurance: Scheme compulsory for States and / or farmers.
- Optional local application of compulsory insurance: Scheme compulsory for
 - certain crops grown in certain pockets.

According to basis of unit size:

- Individual farm basis: assessment and settlement of claims will be on individual farm / plot basis.
- Individual household approach: assessment and settlement of claims will be on household basis, covering all farms owned or cultivated by a farmer.
- Homogenous Area approach: assessment and settlement of claims will be on Area approach basis, covering groups of farmers growing crops under similar conditions.
- Combinations: A combination of farm/area based assessment, peril nature.

Crop insurance - benefits:

Benefits: Overall benefits of Crop Insurance could be summarized as follows:

- Cushions the shock of disastrous crop loss, by assuring farmers a minimum of protection.
- Crop Insurance spreads the crop losses, over space and time. As agricultural income is an important factor in national income, crop insurance also has an effect on the prosperity of the country. It gives farmers greater confidence, in making greater investments in agriculture.
- It improves the position of farmers in relation to agricultural credit.
- Government is relieved of present uncertain financial burden of providing relief.
- It can help normalize the availability of supplies and stabilize prices.
- It will help maintain the dignity of farmers.
- It enables maintenance of systematic records of crop production.

Insurability of risks: Not all risks are insurable. To be insurable, a risk must satisfy the following main criteria:

- The probability of a loss in the future, should lend itself to estimation. This is possible only if reliable data of losses, is available for a sufficiently long period in the past.
- The loss must be capable of being estimated in financial terms.
- The probability of occurrence should not be too high, to make insurance unaffordable.
- To the extent possible, the risk should be an 'Independent Risk'.

Constraints:

The prime crop insurance scheme in the country, is currently, the credit linked NAIS. While it has proven its worth as crucial risk intervention mechanism, however it suffers from several limitations such as guaranteed yields which do not reflect farmer aspirations, low indemnity levels, delays in claim settlement, no coverage for horticultural crops, poor servicing and awareness levels (especially amongst non loanee farmers) and inadequate loss coverage.

On the other hand, large insurance unit sizes, high premium to claims ratios, high costs of distribution and adverse selection (particularly amongst non loanee farmers, who constitute the majority of the farming community), are amongst the difficulty factors articulated by the insurers. The government also subsidizes both the premium and claims end of the scheme making the burden both large and difficult to budget.

Recommendations:

A complex set of modifications are recommended by Working Committee on Risk management in Agriculture for Eleventh Five Year Plan to meet these

challenges with possible additional financial implications for the government as detailed below:

- Reduction of the Insurance Unit to the Gram Panchayat level to minimize the basis risk..
- Coverage to prevented sowing/planting in adverse condition, be selectively extended
- Post harvest loss coverage be provided on an 'individual' basis
- Partial on account settlement of claims be implemented, without waiting for yield data in case of major disasters,
- Individual assessment of losses in the case of localized risks, like hailstorm, landslide etc be extended to all areas
- Uniform seasonality discipline (cut-off dates for buying insurance) be employed for participation for all farmers, both loanee and non loanee.
- Penetration amongst non loanee farmers be increased, through enhancement in service delivery and awareness building initiatives
- Premium sharing by banks be implemented
- Channelising at least a part of agricultural relief funds through crop insurance to increase penetration and to finance additional expenditure on the proposed improvements
- Re-introduce seed crop insurance either as exclusive insurance cover or additional component of NAIS
- Launch government supported weather insurance pilot for selective crops and territories
- Strengthening and automation of weather station network of the country
- Re-introduce government supported Farm Income Insurance with modifications covering a few pulses and oilseeds crops
- Livestock related economic activities contribute 20% to the agricultural GDP. Some segments of the livestock economy are significantly larger than that of traditional agricultures, however, penetration of livestock insurance is very low and stands barely at 6.58% of the

insurable livestock population. Clearly the premium needs to be subsidized to the extent of 50% so that penetration can be raised.

- There are assets such as agricultural implements, bullock carts, pump sets, health etc. which seriously impact farmers' ability to earn an adequate income. What is needed is a single insurance policy covering all assets of the farmer under one contract. The Kissan Package Insurance Policy being sold by Public Sector Insurance companies at present cover 15 items of insurance. The nature of crop-related risks are very different from those of other assets (e.g., Crop insurance covers much shorter period of time and are of a co-variate nature) so that it may not be efficient for an agency like AIC to provide such a comprehensive cover. However the AIC can always tie up with the other insurance companies and offer a one-stop shop for such insurance.

- A large number of private insurance companies have been operating in the Indian Insurance Market since October, 2000. 2 private companies have done pioneering work in agricultural insurance chiefly by way of introduction of weather insurance products. The issue of private sector involvement in agricultural insurance may be addressed by means of the system of coinsurance with underwriting capabilities and contacts with multiple agencies and private insurance companies taking shares according to their capability.

- Any effective system of insurance is based on accurate and timely data. Also effective insurance mechanism operates on the law of large number and that in turn requires effective distribution channels. The large-scale use of remote sensing technology in the agricultural insurance programme is recommended for timely settlement of claims including for on account payments, the introduction of new distribution channels like post offices and micro insurance agencies and the creation of a nationally consistent database with timely dissemination of information from crop-cutting-experiments and cleaning of historical data, etc.



R.N.I. : UPENG/2010/32275 ISSN : 0976-1276
ONLINE ISSN : 2230-9403

FOOD SCIENCE RESEARCH JOURNAL

Internationally Refereed Research Journal

For More detail contact www.hindagrihorticulturalsociety.co.in