

CROP INSURANCE SCHEME PROTECTION AGAINST RAINFALL VARIATIONS

"The Indian Experience"

By: FAIR central office

1. Introduction:

Crop insurance falls broadly in two types of schemes, namely, farm income insurance and weather insurance. Several studies have established that rainfall variation account for more than 50% of variability in crop yields, in many countries. Delays in the onset, breaks in the raining spells during the principal cropping seasons and uneven distribution of rainfall, play havoc with crop production.

In India for example, the analysis revealed that variations in rainfall as from 1985-2003 accounted for nearly 90% of total claims out of which 80% were on account of deficit rainfall and 10% were on account of excess rainfall.

Therefore developing a viable crop insurance scheme to provide insurance protection against rainfall deficit assumes great importance for mitigating the adverse financial effects which weather can cause on the rural economy and securing the financial interest for the farming community.

2- Objectives and advantages of the scheme:

- To guarantee financial compensation to the insured in the event of rainfall adversity.
- To avoid the shortcomings of traditional crop insurance programs namely, the moral hazard, the

lengthy claims settlement procedures, and the lack of reliable methodology for estimating and reporting crop yields.

- To allow operating efficient and inexpensive scheme that also offers possibility for reinsurance, domestically and internationally.

3- Prerequisite Infrastructure:

Existence of reliable independent rainfall reporting system is a precondition for operating the scheme. This requires a developed Meteorological department and enough number of rain gauge stations in the different areas to verify and measure the rainfall.

4- The Scheme Coverage Scope:

The Scheme aims at compensating the insured against the anticipated financial loss on account of shortfall in crop yield resulting from any adverse rainfall incidence, subject to the terms and the conditions mapped out, attached and contained in the schedules.

Furnishing evidence of insurable interest by the insured to the Insurance Company and showing the actual crop acreage in the proposal shall be a condition precedent for the coverage and settlement of claims.

The Insurance Company shall not be liable to make any payment under the

scheme, other than claims which strictly arrive as per the prescribed parameters and methodology. Any incidental or additional expenses incurred, including reporting of claims shall not be within the scope of cover.

5- Risk Acceptance Period:

The period of acceptance of risk for various options is provided in the schedule of each MD Rain gauge station, and risk shall be accepted accordingly till the on set of the rainfall season.

6- Multiple Insurance:

Cultivators participating in the scheme should not participate in other crop insurance programs for the same crop grown in the same survey number, and vice versa, If at the time of processing of claims covered by the Scheme, there exists any other insurance of any nature whatsoever covering the same interest, the Insurance Company shall not be liable to pay or contribute more than its rateable proportion of anticipated loss or damage.

7- The Scheme Coverage Options:

The Scheme guarantees a pay-out of claims on a graded scale, upon adverse incidence of rainfall, The "Actual Rainfall Incidence" during the period of insurance shall be measured against the "Normal Rainfall Incidence" (based on historical data) of the specific Meteorological Department (MD) Rain-gauge Station, and deviations if any are recorded.

Compensation payable under the Scheme as per the coverage options is linked to other specificities, like crop, deductible, etc. wherever mentioned.

The insured can purchase any one of the below-mentioned Coverage options for a particular plot of land growing a particular crop, i.e. only *one* Coverage option shall be purchased .at any given time:

*** Option A:**

Seasonal Rainfall Insurance

Coverage is against adverse deviations beyond 20%in "Actual Rainfall" (in mm) from "Normal Rainfall" (in mm) for the entire season. "Actual Rainfall" is the monthly cumulative rainfall during the hall season. Periods for short and medium duration crops are considered. The pay-out structure is designed in such a way that the yield output elasticity (i. e. sensitivity of a crop to given adverse deviation in rainfall for a particular crop) is correlated to various ranges of adverse deviation in rainfall. The sum insured per hectare is the maximum pay-out corresponding to the maximum potential loss. The claim pay-out shall be on a graded scale (in slabs), corresponding to different degrees of adverse deviation in Actual Rainfall.

*** Option B:**

Rainfall Distribution Index

Coverage is against deviation beyond 20% in "Actual Rainfall Index" from "Normal Rainfall Index" for the entire season. The Index reflects the idealand practical method of assessing the rainfall requirements and therefore is more efficient compared to aggregate rainfall. The index is constructed to maximize the correlation, by assigning "Key Factor Weights" for weekly rainfall within the

'season-span'. The Key Factor Weights are based on sound scientific research work. The indexes (normal and actual) are both MD station and crop specific. The sum insured per hectare is the maximum pay-out corresponding to the maximum potential loss. The claim pay-out shall be on a graded scale (in slabs), corresponding to different degrees of adverse deviation in Actual Rainfall Index.

*** Option C:
Sowing Failure**

Coverage is against adverse deviation in "Actual Rainfall" (in mm) from "Normal Rainfall" (in mm) beyond 40% during the sowing period. The sum insured per hectare is the maximum input cost incurred by the cultivator till the end of the said period, and is pre-specified. The claim pay-out shall be on a graded scale, corresponding to different degrees of rainfall deviation. The maximum pay-out of 100% of sum insured is available at deviations of 80% & above.

Sum Insured: Sum Insured for option A and B is pre-specified and normally is between cost of production and value of production. In case of option C "Sowing Failure", it is the maximum input cost incurred by the cultivator till the end of the sowing period, which again is pre-specified.

Premiums are pre-fixed and vary from option to option and crop to crop. The premium for different crops / areas / coverage options range between 2% - 8%.

Schedules: The Schedules for various

options detailed above shall contain the following details:

- Season span/period of Insurance.
- Risk Acceptance Period.
- Reference MD Rain-gauge station and its jurisdiction for the scheme.
- Normal Rainfall Incidence (as 'weekly/monthly/season's cumulative rainfall', 'index' etc.).
- Crop
- Sum Insured (fixed "per hectare").
- Premium (fixed amount per hectare, or percentage of Sum Insured).
- Pay-out structure (compensation structure at various levels of rainfall adverse deviations).

8. Coverage procedure - Acceptance of Risk:

- The coverage at the grass-root level will be made mostly through the network of Rural Finance Institutions (RFI), particularly Cooperative Sector Institutions. The Insurance Company may also directly market the insurance scheme subject to the availability of its network.
- The cultivators may fill up the Proposal form available with the network of Rural Finance Institutions (RFI) or other agencies as stated in the preceding paragraph, and submit it along with the requisite premium. The Branch of RFI/agency shall scrutinize the proposal, and record it in a Register. The collecting Bank/agency shall, at the end of each week, furnish a consolidated Declaration with total Premium to the Insurance Company, giving details of coverage

with individual cultivators' details. The Declaration shall be consolidated per week per crop per MD-station.

- In case of groups of cultivators who would like to be insured under the Scheme, a single crop-wise proposal would be adequate followed by summary sheet containing details of individual cultivators (village, crop, acreage, survey number, sum insured, premium etc.).
- Risk is accepted only within the period specified in the schedule. No risk shall be accepted after the expiry of the stated period. The Insurance Company shall have the sole authority and discretion to accept or decline the risk without assigning any reason.
- It shall have the sole and binding authority to identify anomalies in insurance coverage, through investigations by itself or through its Agencies. Upon identification of anomalies or discrepancies in the coverage, based on such investigations, the Company shall have the discretion to scale down the Sum Insured.

9. Indemnity - concepts & procedure:

Claims shall arise when there is a certain adverse deviation in Actual Rainfall Incidence within the jurisdiction of the MD Rain-gauge station. In such case, subject to Rainfall Strike, all insured Cultivators, under a particular crop and coverage option, shall be deemed to have suffered the same "adverse deviation" and become eligible for claims. There shall be no necessity for submission of 'loss

information', 'claims intimation' or any other document by anyone.

The adverse deviations beyond the 'Rainfall Strike' shall be converted to claims within the MD Rain-gauge station's jurisdiction, depending on the crop, the coverage option chosen and according to the Pay-out structure. Accordingly, the claim pay out is automatically calculated and the amount is credited to the insured growers' bank account.

10. Definitions

The following technical terms, defined herein, are in specific context of the Scheme. For all other terms and phrases, the common uses shall apply:

- "Insured" means the individual or institution, whose name specifically appears as such in the schedule.
- "Normal Rainfall Incidence" shall mean the historical rainfall data (long term average) of a particular MD-Rain gauge station, represented as weekly, monthly or season's cumulative rainfall,
- "Actual Rainfall Incidence" shall mean the actual rainfall recorded during current season of a particular MD-Rain gauge station, represented as weekly, monthly or season's cumulative rainfall,
- "Normal Rainfall Index" shall mean the cumulative rainfall index for the entire season arrived at, after applying 'key factor weights' on the *historic* weekly rainfall data pertaining to the geographical area under MD Rain gauge station, and is crop-specific.

- “Actual Rainfall Index” shall mean the cumulative actual rainfall index for the entire season arrived at after applying 'key factor weights' on the actual weekly rainfall data pertaining to the geographical area under MD Rain gauge station during the season, and is crop-specific.
- “Deductible” is the specified quantum of deviation in the actual rainfall / actual rainfall index for which cultivator is not eligible for pay-out.
- Sum Insured” per hectare denotes a pre-fixed guarantee amount, corresponding to the maximum potential loss level. The Sum Insured may range from 'cost of production' / 'input cost' to 'value of production'
- "Rainfall Strike" refers to specified percentage of adverse deviations of actual rainfall below which the payout is triggered.
- "Season Span" is 'period of insurance' and refers to duration or length of rainfall period (weeks / months) considered for measuring the rainfall. It can be different for different crops and the various coverage options.
- "Schedule" refers to a document containing all relevant information on a particular coverage option i.e. MD Rain gauge station, Station's jurisdiction, Period of Insurance, Period of Risk Acceptance, Crop, Sum insured, Premium, Payout structure, etc. ■