

Agriculture Insurance Company of India Limited (AIC)

WEATHER BASED CROP INSURANCE SCHEME

FREQUENTLY ASKED QUESTIONS (FAQS)

Q1: What is Insurance?

Insurance is a tool to protect you against a small probability of a large unexpected loss. It is a technique of providing people a means to transfer and share risk where losses suffered by few are met from the funds accumulated through small contributions made by many who are exposed to similar risks.

Insurance is not a tool to make money but a tool to help compensate an individual or business for unexpected losses that might otherwise cause a financial disaster.

Q2: What is Crop Insurance?

Crop insurance is a means of protecting the agriculturist against financial losses due to uncertainties that may arise from crop failures/losses arising from named or all unforeseen perils beyond their control.

Q3: What is Weather based Crop Insurance?

Weather Based Crop Insurance aims to mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from incidence of adverse conditions of weather parameters like rainfall, temperature, frost, humidity etc.

Q4: How is Weather Insurance different from crop insurance?

While Crop Insurance specifically indemnifies the cultivator against shortfall in crop yield, Weather based Crop Insurance is based on the fact that weather conditions affect crop production even when a cultivator has taken all the care to ensure good harvest. Historical correlation studies of crop yield with weather parameters help us in developing weather thresholds (triggers) beyond which crop starts getting affected adversely. Payout structures are developed to compensate cultivators to the extent of losses deemed to have been suffered by them using the weather triggers. In other words, **Weather based Crop Insurance uses weather parameters as 'proxy' for crop yields in compensating the cultivators for deemed crop losses.**

Q5: Where has Weather Insurance been tried before?

Weather Insurance has been piloted in the country since Kharif 2003 season. Some of the States where it's piloted are Andhra Pradesh, Chattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan etc.

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Q6: What has been the experience of weather insurance for farmers? What have been the limitations?

Weather Insurance is a new concept. High level of transparency was / is maintained through out. After every period of insurance some improvements were made based on feedback received and also on internal research and experience. Limitations are many like - distance of the farm from the weather station, non-coverage of perils other than weather, wider sowing / planting window of the crop, differences in soil types & management practices, shift in climatic & weather patterns, etc. leading to weak correlation between the yield and the weather indices, etc.

Q7: What is Weather based Crop Insurance Scheme (WBCIS)? How is it different from National Agriculture Insurance Scheme (NAIS)?

Weather based Crop Insurance Scheme (WBCIS) is a unique Weather based Insurance Product designed to provide insurance protection against losses in crop yield resulting from adverse weather incidences. It provides payout against adverse rainfall incidence (both deficit & excess) during Kharif and adverse incidence in weather parameters like frost, heat, relative humidity, un-seasonal rainfall etc. during Rabi. **It is not Yield guarantee insurance.**

Comparison between National Agricultural Insurance Scheme (NAIS) and Weather Based Crop Insurance Scheme (WBCIS)

S.No.	National Agricultural Insurance Scheme (NAIS)	Weather Based Crop Insurance Scheme (WBCIS)
1	Practically all risks covered (drought, excess rainfall, flood, hail, pest infestation, etc.)	Parametric weather related risks like rainfall, frost, heat (temperature), humidity etc.) are covered. However, these parametric weather parameters appear to account for majority of crop losses
2	Easy-to-design if historical yield data upto 10 years' is available	Technical challenges in designing weather indices and also correlating weather indices with yield losses. Needs upto 25 years' historical weather data
3	High basis risk [difference between the yield of the Area (Block / Tehsil) and the individual farmers]	Basis risk with regard to weather could be high for rainfall and moderate for others like frost, heat, humidity etc.
4	Objectivity and transparency is relatively less	Objectivity and transparency is relatively high
5	Quality losses are beyond consideration	Quality losses to some extent gets reflected through weather index

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6	High loss assessment costs (crop cutting experiments)	No loss assessment costs
7	Delays in claims settlement	Faster claims settlement
8	Government's financial liabilities are open ended, as it supports the claims subsidy	Government's financial liabilities could be budgeted up-front and close ended, as it supports the premium subsidy

Q8: How does Weather Based Crop Insurance Scheme (WBCIS) operate?

Weather based Crop Insurance Scheme (WBCIS) operates on the concept of "Area Approach" i.e., for the purposes of compensation, a 'Reference Unit Area (RUA)' shall be deemed to be a homogeneous unit of Insurance. This RUA shall be notified before the commencement of the season by the State Government and all the insured cultivators of a particular insured crop in that Area will be deemed to be on par in the assessment of claims. Each RUA is linked to a Reference Weather Station (RWS), on the basis of which current weather data and the claims would be processed. Adverse Weather Incidences, if any during the current season would entitle the insured a payout, subject to the weather triggers defined in the 'Payout Structure' and the terms & conditions of the Scheme.

The "Area Approach" is as opposed to "Individual Approach", where claim assessment is made for every individual insured farmer who has suffered a loss.

Q9: How does Weather based Crop Insurance Scheme (WBCIS) operate w.r.t. Rabi season?

Weather based Crop Insurance Scheme (WBCIS) provides protection to the insured cultivators in the event of loss in crops yields resulting from the adverse weather incidences, like un-seasonal/excess rainfall, heat (temperature), frost, relative humidity etc. Triggers are broadly fixed so as to capture the adverse incidence of weather parameters on crop yield.

Claims arise when there is a certain adverse deviation in Actual Weather Parameter Incidence in RUA (as per the weather data measured at RWS), i.e., e.g. its "Actual temperature" within the time period specified in the Benefit Table is either less or more compared to the specified "temperature Trigger", leading to crop losses. In such case, subject to the terms and conditions of the Scheme, all insured cultivators under a particular crop shall be deemed to have suffered the same "adverse deviation" in temperature and become eligible for claims.

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Q10: How do I know that the Reference Weather Station (RWS) based on which the current weather parameters are measured is not too far away from my farm? If it's too far, how can I benefit?

Weather experience (rainfall in particular) on a particular day could be different even in smaller geographical area, but, in a span of a fortnight, month or season it evens out. RWS at Block / Tehsil level, by and large, reflects the weather experience of individual cultivators within a RUA.

Q11: What if the RWS malfunctions? Will I still get my claim if I keep other evidence?

There are proven ways to fill in gaps during rare days when instruments do not record data. The service providers ensure recording of data without any break through their backup plans. In extreme situations of RWS malfunctioning for long periods, the data measured at the 'Back-up Weather Stations' would be used.

Q12: Who can buy Weather Based Crop Insurance Scheme (WBCIS)?

All Cultivators (including sharecroppers and tenant cultivators) growing the crop (insurable under the scheme) in any RUA in the Pilot areas shall be eligible for coverage.

However, the Scheme is mandatory for all Loanee Cultivators of Lending Banks / Financial Institutions who have Sanctioned Credit Limit for the particular crops and optional for 'Others'.

Q13: How the 'Amount of Insurance Protection' (Sum Insured) is calculated?

Amount of insurance protection (sum insured) is broadly the cost of inputs expected to be incurred by the insured in raising the crop. Sum insured is pre-declared per unit area (Hectare) by AIC at the beginning of every crop season, in consultation with experts in State Government; and it may be different for different crops in different RUAs. Sum insured is further distributed under the key weather parameters used in the insurance in proportion to the relative importance of the weather parameters.

Q14: How the 'Amount of Insurance' (Sum Insured) is calculated for Loanee cultivators and others?

In case of Loanee cultivator, the sum insured per crop is calculated by multiplying the sum insured (pre-declared cost of inputs) with the crop-specific 'Acreage' declared in the Loan Application Form by the Loanee cultivator for the purpose of "Maximum Borrowing Limit (MBL)" fixed for him by the Lending Bank.

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In case of Others (Non-Loanees), the sum insured per crop is calculated by multiplying the sum insured (pre-declared cost of inputs) with the 'Acreage' expected to be sown / planted under the particular crop and mentioned in the 'Insurance Proposal Form'.

Q15: Is a cultivator required to buy insurance for all the weather parameters covered in the insurance or can he / she buy insurance only for specific crop stages?

Weather Based Crop Insurance Scheme (WBCIS) pilot during Rabi 2007-08 is available as a bundled weather insurance product and hence there is no need for a cultivator to make a decision to buy protection against some or all weather parameters.

Q16: How is the Premium calculated under Weather Based Crop Insurance Scheme (WBCIS)? What are the premium rates?

Premium rates depend on the 'expected loss', which in turn depends on the patterns of weather parameters of historical period of about 25 to 100 years in the context of ideal weather requirements of a crop. In other words, the premium rate could vary with each RUA and with each Crop.

However, the premium rates are capped for the cultivator; and the premium (rates) beyond the cap are shared by the Central and concerned State government on 50:50 basis. The premium rates payable by the cultivator for different crops are as follows:

FOOD CROPS & OIL SEEDS		
S.NO	CROPS	PREMIUM PAYABLE BY THE INSURED CULTIVATOR
1	Wheat	1.5% or Actuarial Rate, whichever is less
2	Other Crops (other cereals, Millets, Pulses, Oilseeds)	2.0% or Actuarial Rate, whichever is less
ANNUAL COMMERCIAL / HORTICULTURE CROPS		
	PREMIUM SLAB	SUBSIDY / PREMIUM
1	Upto 2%	No Subsidy
2	>2 - 5%	25%, subject to minimum net Premium of 2% payable by farmer
3	>5 - 8%	40%, subject to minimum net Premium of 3.75% payable by farmer
4	>8%	50%, subject to minimum net Premium of 4.8% & Max 6% payable by farmer

The 'net premium payable in case of the insured loanee cultivator is financed by the Lending Bank.

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Q17: What are the different Crops covered under Weather Based Crop Insurance Scheme (WBCIS)?

Weather Based Crop Insurance Scheme (WBCIS) pilot during Rabi 2007 season is available in specified locations and for specified crops in the states of Bihar, Chhattisgarh, Haryana, Madhya Pradesh, Punjab, Rajasthan and Uttar Pradesh.

Q18: When can I buy Weather Based Crop Insurance Scheme (WBCIS)?

Weather Based Crop Insurance Scheme (WBCIS) can be availed by the cultivators' upto a specified date before the commencement of the Risk Period. These dates would be State-specific, depending on the risk under the weather parameter with earliest risk commencement date, and will be notified in advance. As an illustration, for a crop with frost cover commencing from December 2007 and un-seasonal rainfall cover from February 2008, a cultivator can buy insurance till end of November.

Q19: Can a cultivator buy Crop Insurance under both National Agricultural Insurance Scheme (NAIS) and Weather Based Crop Insurance Scheme (WBCIS)?

No. The National Agricultural Insurance Scheme (NAIS) is not available for the locations and crops selected for Weather Based Crop Insurance Scheme (WBCIS) pilot.

Q20: Where can I buy Weather Based Crop Insurance Scheme (WBCIS)?

Loanee cultivators with 'Sanctioned Credit Limit' for a particular crop for whom the Scheme is mandatory would be serviced by the Lending Bank. Insurance is provided automatically by the Lending Bank on the basis of 'Acreage' declared in the 'Loan Application' for the specific crop and the available 'Sanctioned Credit Limit'.

Others (Non- Loanee cultivators) can buy Weather Based Crop Insurance Scheme (WBCIS) through the existing network of Lending Banks (Financial Institutions) at the grass-root level; the Insurance Intermediaries and Authorized Representatives of Agriculture Insurance Company of India Ltd. (AIC).

Q21: How claims are determined under Weather Based Crop Insurance Scheme (WBCIS)?

Insured cultivators would become eligible for payout if the "Actual Weather" Data recorded at a "Reference Weather Station (RWS)" during the specified time-period shows deviation (Adverse Weather Incidence) as compared to the specified "Trigger Weather". In such case, the specified 'crop' in that particular RUA shall be deemed to have suffered the same level of Adverse Weather

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Incidence, and consequently the same proportion of loss of crop yield, and become eligible for same proportion of Payouts.

Q22: How do I make a claim for Weather Based Crop Insurance Scheme (WBCIS)?

Payout / Claim settlement is an automatic process based on weather readings recorded at the RWS. Insured cultivators are not required to 'make a claim'.

Q23: Your initial insured cultivators will be around the RWS, all being paid based on the same data. This means that the claims will also be the same for all?

In an area (RUA) for a given crop, the payout given per unit area (acre / hectare) will be the same for all insured cultivators under the same RWS.

Q24: Does settlement of WI claims take as long as crop insurance? How many days?

No. Weather insurance payouts are assured within 45 days from the end of Insurance / Risk Period. The claim payment under traditional crop insurance may take more time as the claims processing is linked to yield estimates.

Q25: How does Weather Based Crop Insurance Scheme (WBCIS) address the production losses caused by other than Adverse Weather Incidences?

Production risks arise because of two factors: uncontrolled random inputs of weather and exposure to pests and diseases. Weather risks could arise because of fluctuations in temperature, rainfall, humidity, solar radiation, hail, wind etc. **Weather Based Crop Insurance Scheme (WBCIS), therefore, addresses the production losses arising out of parametric weather risks only.**

Q26: How is WBCIS beneficial to cultivators?

There are many advantages of Weather Based Crop Insurance Scheme (WBCIS) which makes it beneficial for cultivators in their production risk management. The major advantages / benefits are:

- a) Trigger events like adverse weather (rainfall, temperature, relative humidity etc.) can be independently verified & measured.
- b) It allows for speedy settlement of claims, say within 45 days from the end of the insurance period.
- c) All cultivators – irrespective of Loanee or Non-Loanee; Small / Marginal or Others; Owners or Tenants / Sharecroppers can buy Weather Based Crop Insurance Scheme (WBCIS).
- d) The Government is providing Subsidy in Premium and hence, the premium payable by the cultivator is affordable.

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- e) It provides transparent, fully objective, efficient & direct payouts for adverse weather incidences and thus, an effective risk mitigation tool against weather risks.
- f) The insured is not required to submit claim form or other documents as proof for his/ her loss. The claim payout is automatically calculated on the basis of weather data collected from the Reference Weather Station at the Tehsil / Block level.
- g) Since the weather data decides the compensation, the insured retains the incentive for putting in extra effort for getting better yield of his / her crop.

Q27: Can you please help me decide if crop insurance / weather based crop insurance makes sense for me economically?

Certainly, before you buy our cover, the following queries would help you to make this decision:

- (i) What is your risk exposure? Are crop losses likely to occur on your farm & if they occur, do you have rough idea of the value (is your area prone to drought/floods / frost / heat etc)?
- (ii) How large a loss can you afford (through your cash/bank balance/other reserves that you may plan for bad times/any major expense planned by you like for a wedding or a function etc)?
- (iii) What are your crop insurance options?(Kindly keep in mind that AIC is a Government created entity serving farmers with sole commitment in the field of crop insurance)
- (iv) How many farmers do AIC cover? (About 2 crore farmers annually)
- (v) Can I afford the cost of insurance? (You have to pay a very nominal premium on account of the Government subsidy)

Q28: Finally, can you explain me through an illustration how the Pilot WBCIS operates?

An illustration of Ganganagar Tehsil of Ganganagar District in Rajasthan for Wheat crop is given below:

District: Ganganagar	Block: Ganganagar
Crop: Wheat	Sowing: Standard Sowing Period
Sum Insured per Hectare (Rs.)	22,500
Sum Insured per Acre (Rs.)	9,000

Reference Weather Station: IMD/ Automatic Weather Stations (AWS) at Ganganagar.

COVER 1: Heat or Rise in Mean Temperature

Cover Objective: To cover anticipated yield loss due to rise in atmospheric temperature

Cover period: 1st January to 31st March

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Adverse Temp vs. Payout Table:

STANDARD SOWING PERIOD						
Period (Fortnight)	Jan-1 st FN	Jan-2 nd FN	Feb-1 st FN	Feb-2 nd FN	Mar-1 st FN	Mar-2 nd FN
Fortnightly Trigger Temp. (°C) à	12.86	13.59	14.95	16.31	19.72	22.91
Rise in Fortnightly Mean temp (°C)	Payout (Percentage of Sum Insured)					
1.0	0.00	0.00	0.00	0.00	0.00	0.00
2.0	0.00	0.00	0.00	3.82	4.31	4.31
3.0	0.00	0.00	0.00	6.76	6.57	6.57
4.0	0.00	3.99	3.53	9.92	8.39	8.39
5.0	4.66	5.70	4.92	12.68	9.52	9.52
6.0	6.60	7.04	9.20	15.17	10.78	10.78

Description:

The cover operates from 1st January to 31st March. Payout starts if the mean temperature for any fortnight rises above certain critical level over & above the trigger temperatures. The fortnightly trigger temperatures; payout (as % of sum insured) at a given level of rise in mean temperature during various fortnights is given in the table. As an illustration, a rise in fortnightly mean temperature by 4 °C during 2nd fortnight of January would result in a payout of 3.99% of sum insured, i.e. Rs. 897.75 per hectare or Rs. 359.10 per acre. The payouts determined on the above basis, in each of the fortnights shall be added for all the fortnights from January to March to arrive at the final payout under this cover subjected to the terms and conditions specified in the policy.

The total payout under this cover shall be capped at Rs. 13500 per hectare or Rs. 5400 per Acre

COVER 2: Un-seasonal Rainfall

Cover Objective: To cover anticipated yield loss due to excess/ un-seasonal rainfall
Cover period: 1st Feb to 31st March

Rainfall vs. Payout Table:

STANDARD SOWING PERIOD						
Period (Fortnight)	Jan-1 st FN	Jan-2 nd FN	Feb-1 st FN	Feb-2 nd FN	Mar-1 st FN	Mar-2 nd FN
Daily Rainfall (mm) Excess over	Payout (Percentage of Sum Insured)					
5			0	0	0	0
10			0	0	0	0
20			5	5	5	5
30			10	5	5	5
40			15	10	5	5
50			20	15	5	5

Description:

The cover operates from 1st Feb to 31st March. Payout starts if the daily rainfall during any fortnight is above 20 mm or above. The payout (as % of sum insured) at a given level of daily rainfall above 20 mm during various fortnights is given in the table. As an illustration, a 45 mm

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rainfall on a day during 1st fortnight of February would result in a payout of 15% of sum insured, i.e. Rs. 3375.00 per hectare or Rs. 1350.00 per acre. The payouts determined on the above basis, in each of the days shall be added for all the days during the cover period to arrive at the final payout under this cover subject to the terms and conditions specified in the policy.

The total payout under this cover shall be capped at Rs. 6,750 per hectare or Rs. 2,700 per Acre

COVER 3: Frost

Cover Objective: To cover anticipated yield loss in the event of frost
Cover period: 1st December to 31st January

Event Definition: Temperature of 0°C or below consecutively for 3 or more number of days

Frost Payout Table:

Event Duration (no. of days)	3	4	5
Payout (% of Sum Insured)	5	7	10

As an illustration, night temperature below 0 °C consecutively for 4 days would result in a payout of 10% of sum insured, i.e. Rs. 1575.00 per hectare or Rs. 630.00 per acre. The payouts determined on the above basis from 1st December to 31st January shall be added to arrive at the final payout under this cover subjected to the terms and conditions specified in the policy.

The total payout under this cover shall be capped at Rs. 2250 per hectare or Rs. 900 per Acre

Premium to be paid by the farmer for a bundled product of all three covers: Rs. 135 per acre or Rs. 337.50 per hectare