



Implementation of Crop Insurance Programme in Bharat: An Empirical Study

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Abstract

Agriculture continues to be the mainstay of Bharatiy economy. It contributes 16.27 percent of GDP, provides 42.6 percent of employment, produces all the food & nutritional requirements of the nation, important raw materials for some major industries, and accounts for about 14 percent of exports. Heavy dependence on weather conditions and its long production cycle, however, makes agriculture a risky economic activity. Despite of Technological and economic advancements the condition of farmers continues to be unstable due to natural calamities and price fluctuations.

Agriculture production and farm incomes in Bharat are frequently affected by natural calamities such as drought, floods, cyclones, storms, landslides etc. The susceptibility of agriculture to the calamities is further compounded by the outbreak of diseases, pest infestation, unseasonal rains, fluctuation of temperature and also some manmade disasters such as sale of spurious seeds, fertilizers, pesticides, price crushes etc. All these events severely affect farmers through loss in their crop production and farm income. With the growing commercialization of agriculture, the magnitude of losses due to unfavorable eventualities is also increasing.

Although, Minimum Support Prices (MSP) of certain crops provide a measures of income stability. However, crop insurance is considered an important mechanism to effectively address the risk to outputs and income resulting from various natural and manmade events, which are beyond the control of individual farmers. Crop insurance is a mechanism to protect the farmers against uncertainties of crop production due to natural factors beyond the control of farmers. It is also a financial mechanism, which minimizes the uncertainty of loss in crop production by factoring in large number of uncertainties having impact on crop yields, thereby distributing the burden of loss. Crop insurance not only stabilizes the farm income but also helps the farmers to initiate production activities after a bad agricultural season. It speeds the crop losses over space and time and helps farmers make more investments in agriculture. In the presented research paper, an attempt has been made to study the experiences in the implementation of crop insurance programme in Bharat.

Keywords: Crop Insurance, Risk Mitigation, Non-Preventable, Calamities, Financial Support, Sum Insured, Disaster, Premium, Claim, Individual Farm, Kharif, Rabi, Indemnity.

Introduction: Risk is an inherent part of Bharatiy agriculture. Therefore, it is imperative to provide risk mitigation tools to Bharatiy agriculture so that both agriculture and the farmer may be provided with economic security against the inherent risk. However, in this regard, crop insurance schemes are being implemented in the country for a long time. With a view to provide insurance coverage and financial support to farmers including small and marginal farmers in the event of failure of any of the notified crop as a result of non-preventable natural calamities, pests & diseases, adverse weather conditions, to encourage the farmers to adopt progressive farming practices, high value inputs and higher technology in agriculture and to stabilize farm income particularly in disaster years, Government of Bharat (GOB) introduced Crop Insurance Schemes since 1985.

A re-structured and improved scheme namely Pradhan Mantri Fasal BimaYojana (PMFBY) and Restructured Weather Based Crop Insurance Scheme (RWBCIS). In PMFBY Insurance protection for notified

food crops, oilseeds and annual horticultural/commercial crops, Fixed maximum premium for all farmers Kharif season 2% of sum insured, Rabi Season 1.5% of sum insured, annual Commercial/horticultural crops 5% of sum insured. The difference between actual premium and the rate of Insurance payable by farmers shall be shared equally by the Centre and State. Claims/Indemnity of full Sum Insured (SI), without capping or reduction in SI. If the sowing is not done due to adverse weather/climate, claims/indemnity upto 25% of sum insured will be paid for prevented sowing/planting risk. When the crop yield is less than the guaranteed yield of notified crops, the indemnity payment equal to shortfall in yield is payable to all insured farmers. On account advance payment, up to 25% of likely claims will be paid as immediate relief. Losses caused by inundation, hailstorm and landslide would be assessed at individual farm level. Post harvest losses assessment for damage to crops in cut and spread in the field up to 14 days on account of cyclonic rain and unseasonal rain in the entire country.

Experience with different Crop Insurance schemes: Keeping in view of above, the Crop insurance programme was initiated in Bharat to provide insurance for H-4 cotton in Gujarat by GIC in the year 1972 and later extended to a few other crops & States. However, on the basis of report of late Prof. V.M. Dandekar, Pilot Crop Insurance Scheme (PCIS) was introduced in the year 1979 and covered food crops, oilseeds, cotton, & potato on 'Homogeneous Area' approach. The scheme was confined to loanee farmers on voluntary basis.

Based on the experience gained, Government of Bharat (GOB) has adopted crop insurance programme as tools for risk mitigation in agriculture. Accordingly, an all-risk Comprehensive Crop Insurance Scheme (CCIS) was introduced in 1985 and remained in operation till Kharif 1999 season. The CCIS had limited scope of coverage of only loanee farmers for food and oilseeds crops and risk commitment of Rs. 10,000/- per farmers per season. The scheme was implemented in 19 States and 3 UTs in one or more crop seasons and covered 7.62 crore farmers for a sum insured of Rs. 24922 crore with a premium of Rs. 403 crores and claims of Rs. 2303 crores. However, CCIS was criticized on account of limited coverage of farmers, crops and risks and treated as loan insurance scheme. To cover farmers who did not borrow from institutional source (non-loanee), an Experimental Crop Insurance Scheme (ECIS) was piloted during Rabi 1997-98 seasons in 14 districts in 5 States. The scheme was limited for small & marginal farmers and 100% subsidy was provided to them.

Subsequently, CCIS was replaced with National Agricultural Insurance Scheme (NAIS) w.e.f. Rabi 1999-00. The Scheme has been preceded by years of preparation, studies, planning, experiments and trials on a pilot basis. NAIS has conceptualized as an comprehensive tools to cover yield losses due to natural non-preventable risks like flood, inundation, landslide, drought, pest & diseases, natural fire, lightening, storm, hailstorm, cyclone etc and provides for greater coverage of farmers (loanee and non-loanee), crops (all food & oilseed crops and annual horticultural/commercial crops) and risk commitment (upto 150% of threshold yield). The premium structure has also been rationalized (actuarial premium rate of annual horticultural/commercial crops) and scheme is required to operationalise at smaller unit area of insurance. However, the scheme could not provide desirable results due to some constraints, mostly operational, faced in implementation of schemes like inadequate infra-structure at field to conduct requisite number of crop cutting experiments (CCEs), delay in settlement of admissible claims on account of late submission of yield data by the State, delay in release of State share towards its committed financial liabilities, phasing out of premium subsidy to Small & Marginal farmers (S/M), larger unit areas of insurance (high basis risk), little interest shown by the financial institutions (insurance under-writing point), lower level of indemnity, inadequate Guaranteed yield to compensate adequately, non-coverage of perennial horticultural/commercial crops, risks of prevented sowing & post harvest losses etc. The Scheme could not translate into actuarial regime as conceptualized. Government has also faced difficulties in their budgeting due to open ended financial liabilities on account of premium subsidy, claims, administrative expenses, bank service charges, publicity expenses etc.

Meantime, to ensure farmer's income by providing minimum guaranteed income, a Farm Income Insurance scheme (FIIS) was piloted during Rabi 2003-04 and Kharif 2004 season to cover yield and price risks in a single instrument. The scheme covered rice and wheat on actuarial premium rates with 75% subsidy to S/M farmers and 50% to others. The total financial liabilities under FIIS were rested with the Government of Bharat (GOB) and MSP operations were to be suspended in pilot districts/crops. The outcome of the scheme was not encouraging as States did not want to suspend MSP procurement, difficulties in collecting price data from markets. The guaranteed income was also not attractive as Yield and Price have offsetting behavior. Premium rate was substantially high despite premium subsidy. Moreover, MSP is available to cover price risks to all farmers at no cost and NAIS to cover to yield risks is also in operation. Further, the

Government since want to further strengthen MSP regime, it would be unconceivable to substitute it with income insurance.

National Agricultural Insurance Scheme (NAIS): Keeping in view the demands of States, farming community etc. for improving the scope and content of erstwhile Comprehensive Crop Insurance Scheme (CCIS), a crop insurance scheme titled National Agricultural Insurance Scheme (NAIS) was introduced in the country w.e.f. Rabi 1999-2000. The scheme provides for greater coverage in terms of farmers (i.e. non-loanee farmers brought under coverage); crops (annual commercial/horticultural crops included) and risk commitment (i.e. up to the value of threshold yield). The premium structure in the scheme has been rationalized to improve financial viability. The implementing States have greater stake in the financial liabilities (i.e. sharing of financial liabilities between the Central and State Governments in the ratio of 1: 1 instead of 2: 1 of pre-NAIS). The farmers under this scheme have the choice for the coverage of more risk (in terms of sum insured & indemnity) by paying higher premium rate (actuarial rate).

NAIS was optional to all the States/UTs. The States/UTs intending to participate in the scheme have to intimate their consent and to abide by the provisions of the scheme. The States/UTs once opted for the scheme have to continue it for a minimum period of three years. The NAIS was implemented by 26 States and 2 Union Territories in one or more seasons. Under NAIS, during the last thirty three crop seasons (i.e. from Rabi 1999-2000 to Rabi 2015-16) about 2713 lakh farmers have been covered over an area of 3917 lakh hectares insuring a sum amounting to Rs. 467505 crore. There were claims to the tune of about Rs. 56233 crore as against the premium of Rs. 14117 crore benefitting about 850 lakh farmers.

Weather Based Crop Insurance Scheme (WBCIS): The efforts have been made to bring more farmers & crops under the fold of Crop Insurance by introducing a Weather Based Crop Insurance Scheme (WBCIS) as announced in the Union Budget 2007 in selected areas on pilot basis. WBCIS is intended to provide insurance protection to the farmers against adverse weather incidence, 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.

Further, to provide competitive service to the farmers, private insurance companies i.e. ICICI-Lombard, IFFCO-TOKIO, M.S Cholamandalam and HDFC-ERGO General Insurance Companies have been involved for implementation besides Agriculture Insurance Company of India (AIC). The scheme has been implemented in Kharif 2007 (1 State), Rabi 2007-08 (4 States), Kharif 2008 (10 States), Rabi 2008-09 (10 States), Kharif 2009 (13 States), Rabi 2009-10 (11 States), Kharif 2010 (16 States), Rabi 2010-11 (14 States) and Kharif 2011 (15 States). From Kharif 2007 to Rabi 2015-16 of the scheme was implemented by 21 States in one or more seasons and a total of 720 lakh farmers have been covered over an area of 887 lakh hectares insuring a sum amounting to Rs. 122941 crore. There were claims to the tune of about Rs. 10311 crore as against the premium of Rs. 12161 crore benefitting about 511 lakh farmers.

The evaluation of implementation of WBCIS has been done by an independent agency and made a suggestions specially pertaining to product designing, establishment of weather Stations, authenticity of weather data, early settlement of claims, coverage of larger risks, protecting the interest farmers etc have already been taken up with concerned organizations. The WBCIS is based on actuarial rates of premium but to make the scheme attractive, premium actually charged from farmers had been restricted to make it at par with PMFBY from Kharif 2016 season. The modified WBCIS is aligned to the parameters/standards of PMFBY and is called RWBCIS. However, under erstwhile WBCIS and current Restructured WBCIS State Governments are free to notify any Crop {including perennial horticultural crops like mango, apple etc.} in any District, Tehsil, Taluka, Block etc. for implementation subject to availability of requisite rainfall/weather data. Under RWBCIS, during the last fourteen crop seasons (i.e. from Kharif 2016 to Rabi 2022-23) about 115.22 lakh farmers have been covered over an area of 210.49 lakh hectares insuring a sum amounting to Rs. 73154 crore. There were claims to the tune of about Rs. 13554.48 crore as against the premium of Rs.15586.85 crore.

Coconut Palm Insurance Scheme (CPIS): The Coconut Palm Insurance Scheme (CPIS) has been introduced on pilot basis from 2009-10 in the selected areas of Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Odisha and Tamil Nadu. Kerala, Tamil Nadu, Andhra Pradesh, Karnataka and Goa have initiated the implementation of the scheme. From 2013-14 to Rabi 2015-16, CPIS was implemented as Component scheme of NCIP and from Kharif 2016 as separate scheme in the coconut growing States of the country. From 2009-10 to 2020-21 of the scheme was implemented by 12 States in one or more seasons and a total of 13 lakh farmers have been covered over the trees of 58.81 Palms insuring a sum amounting to Rs. 531 crore. There were claims to the tune of about Rs. 4.45 crore as against the premium of Rs. 3.46 crore benefitting about 8729 farmers.

It covers the total loss of the individual palm in the age group of 4 to 60 years for dwarf & hybrid; and 7-60 years for tall variety, leading to either death of palm or the palm becoming useless due to various natural and other perils. The farmer should have at least 10 healthy nut bearing palms in the age group of 4 to 60 years in a contiguous area/plot and should have been enrolled by State Agriculture/Horticulture Department or Coconut Development Board (CDB) or any other such agency under rehabilitation/ development/ expansion scheme. Insured sum varies from Rs. 900 per palm (in the age group of 4-15 years) to Rs. 1725 per palm (in the age group of 16-60 years) based on average input cost and age of the palm. The Premium rate per palm ranged from Rs. 9 (in the age group of 4-15 years) to Rs. 14 (in the age group of 16-60 years). 50% of the premium is paid by Government of Bharat (GOB) and 25% by concerned State Govt. and 25% by the farmer/grower. In case, the State Govt. does not agree to bear 25% share of premium, farmers/growers is required to pay 50% of premium if interested in insurance scheme. The scheme is implemented through Agriculture Insurance Company of India Ltd. (AIC).

Modified National Agricultural Insurance Scheme (MNAIS): Due to limitations/shortcomings in the NAIS, Department of Agriculture, Cooperation & Farmers Welfare constituted a Joint Group to study the improvements required in existing crop insurance schemes to make the scheme easier and farmer friendly. Based on the recommendations of the Joint Group and views from various quarters, Modified NAIS (MNAIS) was approved for implementation on pilot basis in 50 districts from Rabi 2010-11 to Kharif 2013 seasons and from Rabi 2013-14 onwards as a full-fledged component of NCIP in the country.

The major improvements made in MNAIS over NAIS were – actuarial premium with subsidy upto 75%, depending upon the premium slab, was provided to farmers; all claims liability rests with the insurer; Unit area of insurance reduced to village panchayat level for major crops; indemnity for prevented sowing/planting risk & for post harvest losses due to cyclone; on account payment up to 25% of likely claims as immediate relief; more proficient basis for calculation of threshold yield; indemnity level of 80% and 90%; private sector insurers with adequate infrastructure have been allowed for crop insurance. Under MNAIS, only upfront premium subsidy is shared by the Central and State Governments on 50: 50 basis and claims liability rests with the insurance companies. From Rabi 2010-11 to Rabi 2015-16, MNAIS was implemented by 21 States in one or more seasons and a total of 277 lakh farmers have been covered over an area of 298 lakh hectares insuring a sum amounting to Rs. 62079 crore. There were claims to the tune of about Rs. 5870 crore as against the premium of Rs. 4936 crore benefitting about 99 lakh farmers.

National Crop Insurance Programme (NCIP): In order to serve farmers' needs in still better ways and to make crop insurance schemes more farmers' friendly, erstwhile three pilot schemes of MNAIS, WBCIS and CPIS, as mentioned above, have been evaluated. Based on the recommendations of evaluation studies, experience gained through implementation of crop insurance schemes and views of the stakeholders, States and appraisal agencies, various improvements/changes have been incorporated in these erstwhile pilot schemes and has been approved by the Cabinet for implementation as a Central Sector Scheme in the name of National Crop Insurance Programme (NCIP) by merging MNAIS, WBCIS & CPIS (as its components) and rolling back NAIS simultaneously from Rabi 2013-14. However, some State Governments had represented about the higher premium burden on farmers under NCIP and its complex implementation procedure as compared to NAIS and therefore, had sought continuation of NAIS. Keeping in view the representations from States/UTs NAIS was also allowed on season to season basis along with NCIP components till the year 2015-16.

Pradhan Mantri Fasal Bima Yojana (PMFBY): In spite of operating a number of insurance schemes for last 30 years, the total area covered under various crops remained at about 23% of the Gross cropped area in year 2015. However, there are large inter-State variations. The following difficulties/challenges were noticed in the implementation of NCIP:

- 1) High premium for farmers.
- 2) Inadequate claims - Reduction of Sum Insured due to capping on actuarial premium under MNAIS and WBCIS.
- 3) High Variability in premium rate between neighboring districts under MNAIS.
- 4) Higher premium in districts having high risk.
- 5) Difficulties faced by States in allocation of districts/areas to insurance companies/Cumbersome administrative structure.
- 6) Delay in settlement of claims.
- 7) Increase in number of Crop Cutting Experiments.
- 8) Non adoption of improved technology.

Keeping in view these difficulties, the matter was discussed with various stakeholders including State Governments. In order to make crop insurance simpler and cheaper for the farmers and to provide them with

better insurance services, a Central Sector Scheme of **Pradhan Mantri Fasal Bima Yojana (PMFBY)** has been approved and implemented by the Government of Bharat (GOB) by replacing NAIS and MNAIS from Kharif 2016 season. The salient improvements which have been made over NAIS/MNAIS are:-

1. Share of farmer in actuarial premium has been rationalized for crops throughout the country & reduced to a lower level subject to a maximum ceiling of 2% of sum insured for Kharif Crops, 1.5% for Rabi crops and 5% for Annual Commercial/ Horticultural Crops.
2. Provisions of capping on actuarial premium rates and reduction in sum insured have been removed.
3. Rationalization of Sum Insured by making it equal to Scale of Finance, which is decided by the District Level Technical Committee (DLTC) primarily based on cost of cultivation of crop in the district/area.
4. The unit taken in to consideration for determining Crop Insurance under Pradhan PMFBY is village/village panchayat or any other equivalent unit as notified by State Government for major crops. For other crops it may be a unit of size of village/village panchayat or above. Under Restructured WBCIS Reference Unit Area (RUA) is notified by the State Government based on available Automatic Weather Stations (AWSs)/Automatic Rain gauge Stations (ARSs) in the area.
5. The coverage of post-harvest losses has been extended throughout the country and an unseasonal rain has been included.
6. Besides, hailstorm & landslide, Inundation has been included for coverage under the localized risks.
7. One more Indemnity Level of 70% has been included and as such, three levels of Indemnity, viz., 70%, 80% & 90% will be available for high, moderate and low risk crops/areas under PMFBY.
8. Provision of selection of implementing agencies (insurance companies) through a transparent bidding process has been made on the basis of mixed-risk-area approach (i.e. cluster preferably of 15-20 districts).
9. NAIS and MNAIS were discontinued/rolled back simultaneously from Kharif 2016, however, WBCIS & CPIS are continuing for implementation.
10. To make it affordable for the farmers, premium structure in WBCIS has also been revised and brought at par with PMFBY and approach for selection of Implementing Agencies and administration of scheme will be same as that of PMFBY.
11. Extensive use of improved technology for transparency & early settlement of claims.

Unified Package Insurance Scheme (UPIS): Besides, a Pilot Unified Package Insurance Scheme (UPIS) has also been approved by Govt. to cater to all insurance needs of the farmer including crop insurance, through one scheme. This scheme will be Piloted in 45 districts of the country from Kharif 2016 and States have already been requested to indicate the districts where the pilot UPIS would be implemented. The main features of the UPIS are as under:

- ❖ To provide comprehensive cover to farmers against various risks including crop.
- ❖ UPIS has seven sections:
 - **Category –I:** Crop Insurance (PMFBY) Compulsory coverage
 - **Category–II:** Loss of Life (PMJJBY), Accidental Death & Disability (PMSBY), Student Safety, Household, Agriculture implements and Tractor.
- ❖ Farmers have to take crop Insurance compulsorily & at least two out of six sections under Category-II
- ❖ To provide all requisite insurance products for farmers through one simple proposal/applications form.

Many States have sought that the selection of 2 sub-sections other than Crop Insurance may be made voluntary rather than mandatory. Some States have selected the districts and notified the scheme. Feedback has been sought from the States. Meanwhile for the one year of operation during the pilot phase it will kept it mandatory as per original provisions of UPIS.

Coverage of Perennial Crops and Difficulties for Non-Coverage of These Crops: The PMFBY 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. Perennial horticultural crops are not yet covered under PMFBY. Perennial crops have a life cycle of more than one year and provide yield after a number of years of vegetative growth period. Therefore, perennial horticultural crops like mango, apple, arecanut, coconut, pepper, cashew, rubber etc. are not yet covered under the scheme because of non-availability of methodology to know the yield of the crop & non-availability of adequate past yield data based on Crop Cutting Experiments (CCEs) and multi-picking nature. Moreover, yield per hectare of perennial crops are highly vary on the basis of variety, age of plant, spacing of plant/density etc.

Though separate schemes for coverage of these horticultural crops are being implemented by the Public Sector General Insurance Companies, but these schemes are not effective. Keeping in view the demand

of the States for coverage of perennial horticulture crops, a Committee was constituted under the Chairmanship of the then Economics and Statistical Adviser in the Department of Agriculture and Cooperation to explore the modalities for the coverage of perennial crops. The committee had recommended covering perennial crops on experimental basis in selected districts. Methodology for assessing yield rates was also suggested by the committee in its report. Based on the recommendations of the Committee it was decided to implement the pilot project for following selected perennial crops and States/ districts during Rabi 2002-03 and Kharif 2003 seasons:

Sr. No.	Selected State	Selected Crops	Crops actually covered
1.	Andhra Pradesh	Mango	Mango
2.	Himachal Pradesh	Apple	Apple
3.	Uttar Pradesh	Mango	Mango
4.	Maharashtra	Orange	Orange
5.	Meghalaya	Pineapple	Not implemented
6.	Tamil Nadu	Banana	Banana

Pilot Scheme was voluntary for farmers, and there was no subsidy in premium for the farmers. Due to these reasons and the high premium rates, the Pilot Project could not do well. Only four farmers were covered in Maharashtra State for orange crop. The Joint Group constituted in 2004 by this Department to study the improvements required in the existing crop insurance schemes, had given a number of suggestions including coverage of perennial horticultural crops like coconut, cashew, cardamom, arecanut etc. under a separate scheme. The matter was discussed at various levels and it was not found feasible to include perennial horticultural crops under yield based scheme of Modified National Agricultural Insurance Scheme and due to the same reasons these crops were not included under PMFBY.

However, under erstwhile WBCIS and current Restructured WBCIS State Governments are free to notify any Crop {including perennial horticultural crops like mango, apple etc.} in any District, Tehsil, Taluka, Block etc. for implementation subject to availability of requisite rainfall/weather data. The insurance companies are being persuaded need to develop insurance product/the scheme for coverage of perennial horticultural crops in consultation with respective State Government and Govt. of Bharat.

Revenue Insurance Scheme for Plantation Crops (RISPC): Ministry of Commerce informed that they have recently approved a pilot Revenue Insurance Scheme for plantation crops (RISPC) for protecting growers of tea, coffee, rubber, cardamom and tobacco from the twin risks of weather and price arising from yield loss due to adverse weather parameters, pest attacks etc and from income loss caused by fall in international/domestic prices through crop insurance mechanism. The scheme is to be implemented on pilot basis in 8 districts in the States of West Bengal, Kerala, Karnataka, Andhra Pradesh, Assam, Sikkim, and Tamil Nadu by the Commodity Boards through selected insurance companies. Operational Guidelines of the scheme have been issued and the progress of implementation of the scheme is being reviewed from time to time.

Progress in Coverage under Crop Insurance Schemes: PMFBY envisages increasing the coverage from existing 23% to 50% of gross cropped area in the country during next 2-3 years. Target for 2016-17 & 2017-18 has been fixed at 30% and 40% of the cropped area respectively. During Kharif 2016 season 21 States implemented PMFBY and 12 States implemented WBCIS and during Rabi 2016-17, 25 States & 3 Union Territories implemented PMFBY and 10 States implemented RWBCIS. Under PMFBY & RWBCIS from 2016-17 to 2022-23, schemes were implemented by 27 States in one or more seasons and a total of 4513 lakh farmers have been covered over an area of 3371 lakh hectares insuring a sum amounting to Rs. 1376633 crore. There were claims to the tune of about Rs. 135481 crore as against the premium of Rs. 192526 crore. Details of season wise combined coverage under PMFBY & RWBCIS are below.

Table : Season Wise progress PMFBY & Restructured WBCIS Combined from 2016-17 to 2022-23								
Seasons	Insured Farmers (In Lakhs)	Insured area (In Lakhs hectares)	Sum Insured (In Rs. Crore)	Farmers Premium (In Rs. Crore)	Gross Premium (In Rs. Crore)	Total Claims (In Rs. Crore)	Paid Claims (In Rs. Crore)	Outstanding Claims (In Rs. Crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2016 Kharif	407.67	377.11	130634.30	2814.02	15886.63	10595.59	10595.59	0.00
2016-17 Rabi	174.07	186.89	71164.84	1271.07	5791.74	6199.87	6199.87	0.00
2017 Kharif	356.61	328.89	124057.21	2774.34	18142.81	18074.50	18073.59	0.91
2017-18 Rabi	175.16	178.39	77909.03	1397.65	6324.88	3993.94	3991.87	5.75
2018 Kharif	348.29	318.01	139855.05	3044.17	21111.53	19664.06	19173.00	810.45
2018-19 Rabi	233.64	214.00	95885.02	1650.13	8576.09	9527.06	9493.63	36.94
2019 Kharif	424.06	337.35	145382.37	3058.36	23914.16	21759.87	21490.01	424.44
2019-20 Rabi	192.10	171.09	76178.83	1423.84	8415.00	5969.90	5869.72	137.76
2020 Kharif	424.38	285.65	116307.23	2628.19	20692.46	14544.72	14226.56	356.29

2020-21 Rabi	198.81	209.79	83365.01	1417.17	11007.22	6290.38	6165.10	168.76
2021 Kharif	504.17	251.64	102149.82	2336.00	19036.11	13360.59	12112.64	1312.41
2021-22 Rabi	327.20	207.37	78946.92	1359.33	11160.86	3061.03	2793.78	272.56
2022 Kharif	611.47	244.26	107442.55	2484.20	17983.29	2404.89	2264.94	297.70
2022-23 Rabi*	134.96	60.37	27355.10	474.51	4483.49	34.30	0.00	34.30
Grand Total	4512.57	3370.79	1376633.30	28132.99	192526.25	135480.72	132450.30	3858.28
Sources: Agricultural Statistics at a Glance (2022), Directorate of Economics and Statistics, Ministry of Agriculture and farmers welfare, Government of India, New Delhi, Page-177-178, Table No-3.25(b)								
* Provisional data								

The objective of launching the new scheme PMFBY was to provide a simple and affordable crop insurance product to ensure comprehensive risk cover for crops of farmers against all non-preventable natural risks from pre-sowing to post-harvest, provide adequate claims amount and timely settlement of claims. The scheme is available for all States/UTs and is voluntary for them. States/UTs are free to subscribe under the scheme keeping in view their risk perception and financial considerations etc. The scheme is also voluntary for the farmers to enroll themselves as per their risk perception. Since inception of the scheme, coverage under the scheme has been around 30% of Gross Cropped Area (GCA) in the States/UTs who are implementing the scheme. However, after some decline due to the withdrawal of some States, area insured has increased from 443 lakh hectares in 2021-22 to 487 lakh hectares in 2022-23. Similarly, Farmers applications under the scheme have also been increased from 831 lakh in 2021-22 to 1080.8 lakh in 2022-23.

The scheme was very well received by the farming community even as 27 States and UTs opted for the scheme in one or more seasons. First year target for coverage of 30% of Gross Cropped Area (GCA) was successfully achieved. This was the highest coverage in the history of crop insurance in Bharat. Further, participation of non-loanee farmers has been increased tremendously (about 6 times) as compared to earlier schemes and reached to about 32% of total coverage under the scheme. This has been a major achievement under the scheme resulting from provision of alternate mechanisms for coverage of non-loanees like Common Service Centres (CSCs) and encouraging direct enrolment on the portal. Post Office has also been included to increase the enrollment of non-loanees.

Sum insured has been equated to the Scale of Finance of the crop, which resulted into more than 100% increase in total sum insured during 2016-17 and also resulted in to increased payout to the farmers, thereby providing adequate security to the farmers against natural calamity. But there is decline in coverage of farmer applicants in 2017-18 due to the announcement of Debt Waiver Scheme in Maharashtra and Uttar Pradesh (alone reportedly led to decrease in coverage by 60 lakhs farmer applicants as compared to Kharif 2016), farmer's perception of risk having had a good monsoon year in 2017-18 coupled with deduplication by making Aadhar mandatory for coverage etc.

Notwithstanding all of the above, it will be fair to compare the performance in 2017-18 not with 2016-17 but with 2014-15 and 2015-16, when despite severe drought, number of farmers covered was much lower at 3.70 crore and 4.85 crore respectively. In comparison in 2016-17 and 2017-18, despite both being good monsoon years, the coverage is higher at 5.84 crore and 5.33 crore. Moreover, the achievements in Kharif seasons under PMFBY as compared to Kharif 2015 are notable especially since during Kharif 2015 in most of the States the cut-off date for availing insurance was 30th September, 2015 and the enrolment under crop insurance shot up after prolonged spell of drought. In comparison, this year has been one of normal monsoons and the cut-off date for availing insurance was 31st July, 2017. In terms of GCA to 565.6 lakh hectare were covered in 2016-17 and 508.1 lakh hectare in 2017-18.

In spite of good monsoon during first two years of implementation of PMFBY the claim ratio during 2016-17 is about 77.5% and during Kharif 2017, it would be about 99.3%. Moreover the farmers in most affected States received more claims and the claim ratio was high in these States viz. Kerala 210%, Karnataka-138% during Kharif 2016, Tamil Nadu-287% and Andhra Pradesh 207% during Rabi 2016-17. Similarly during Kharif 2017, the approximate higher claim ratio is in the States of Chhattisgarh-414%, Haryana-167%, Madhya Pradesh-122% and Odisha-197%.

Under PMFBY benefits to the farmers are also being provided through early payment of claims and directly to the bank accounts of the farmers, more transparency in assessment of crop losses and assessment of claims through use of technology etc. Since inception of the PMFBY in 2016-17 till 2022-23 (as on 30.06.2023), 4846 lakh farmer applications have been enrolled over an area of about 3497 lakh hectare insuring a sum of Rs. 14,45,978 crore. Against premium of Rs. 29,123 crore paid by farmers, claims of Rs. 1,40,599 crore have been paid to about 1457 lakh farmers.

At present, total 20 insurance companies, which includes all the 5 Public Sector General Insurance Companies and 15 Private Sector General Insurance Companies, have been empanelled for implementation of

PMFBY in the country. Further, difference between premium collected and claims paid may not be the margin/profit for the insurance companies as there is a cost of reinsurance and administrative cost which generally range upto 10% to 12% of gross premium. This cost also has to be borne by the Insurance Companies. Out of the total crop insurance business under the scheme about 50% is shared by the 5 Public Sector insurance companies, including Agriculture Insurance Company of India Ltd. The revised Operational Guidelines for PMFBY which came into effect from 1st October 2018 have inter-alia provided that the insurance companies should compulsorily spend at least 0.5% of the total gross premium collected by them for Information, Education and Communication (IEC) activities.

Conclusion and Suggestions: Since independence, the Government of Bharat (GOB) has launched various crop insurance schemes intermittently to sustain the farmers' income levels. Currently, two crop insurance schemes are operating in Bharat, i.e., PMFBY and the RWBCIS. As compared to previous schemes, the PMFBY has come up with modified features, i.e., one premium, one season; coverage of all kharif and rabi seasons and all annual commercial and horticulture crops; risks covered from the pre-sowing period to the post-harvesting period; use of modern technology for assessment of crop losses, such as drones and GPS; claim paid directly into farmers accounts; three levels of indemnity offered, namely 70 percent, 80 percent, and 90 percent. To make it more successful and farmer-friendly, some new features have been added, such as voluntary participation for all farmers, business allocation to insurance companies for three years rather than one, linking with the Aadhaar card, mandatory requirements for states to pay subsidies on time, and flexibility for states to decide on additional risk coverage; however, we found that PMFBY showed limited success during 2016–17 to 2017–18.

Moreover, the success of PMFBY should be judged from coverage of non-loanees who are free to opt for the scheme and which the primary focus of the scheme is also. Coverage of non-loanee farmers under PMFBY has increased to about 32% of the total coverage as against below 5% under erstwhile schemes. This has been a major achievement under the scheme resulting from provision of alternate mechanisms for coverage of non-loanees like Common Service Centres (CSCs) and encouraging direct enrolment on the portal.

Another positive feature of the scheme has been the removal of cap on the sum insured and equating it with scale of finance. This has not only allowed maximum risk coverage to the farmers but claims per farmer and claims per hectare also went up substantially as compared to previous years. Sum insured per farmer per crop increased from Rs. 22123 in 2014-15, Rs. 23715 in 2015-16 to Rs. 34968 in 2016-17. As compared to 2014-15 and 2015-16 which were bad monsoon years when the claims per hectare were Rs. 1777 and Rs. 4118 respectively, in 2016-17, despite it being a good monsoon year the claims per hectare are Rs. 2525. Even claims per farmer in 2016-17 were Rs. 12860 as compared to Rs.7256 in 2015-16 and Rs. 4107 in 2014-15.

Overall, the scheme envisages end to end solutions through integration of all stakeholders on a common crop insurance portal with tight timelines for each of the stages right uptill claim settlement in farmer's accounts. A lot however, depends on the progress of stakeholders in adoption of technological advancements envisaged in the scheme. The Centre is constantly engaging with the stakeholders, especially the States to be proactive. That alone will ensure the eventual success of the scheme.

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