

September 2024

A DECADE OF
**ENSURING
FINANCIAL SECURITY
FOR FARMERS**

PM FASAL BIMA YOJANA



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Summary

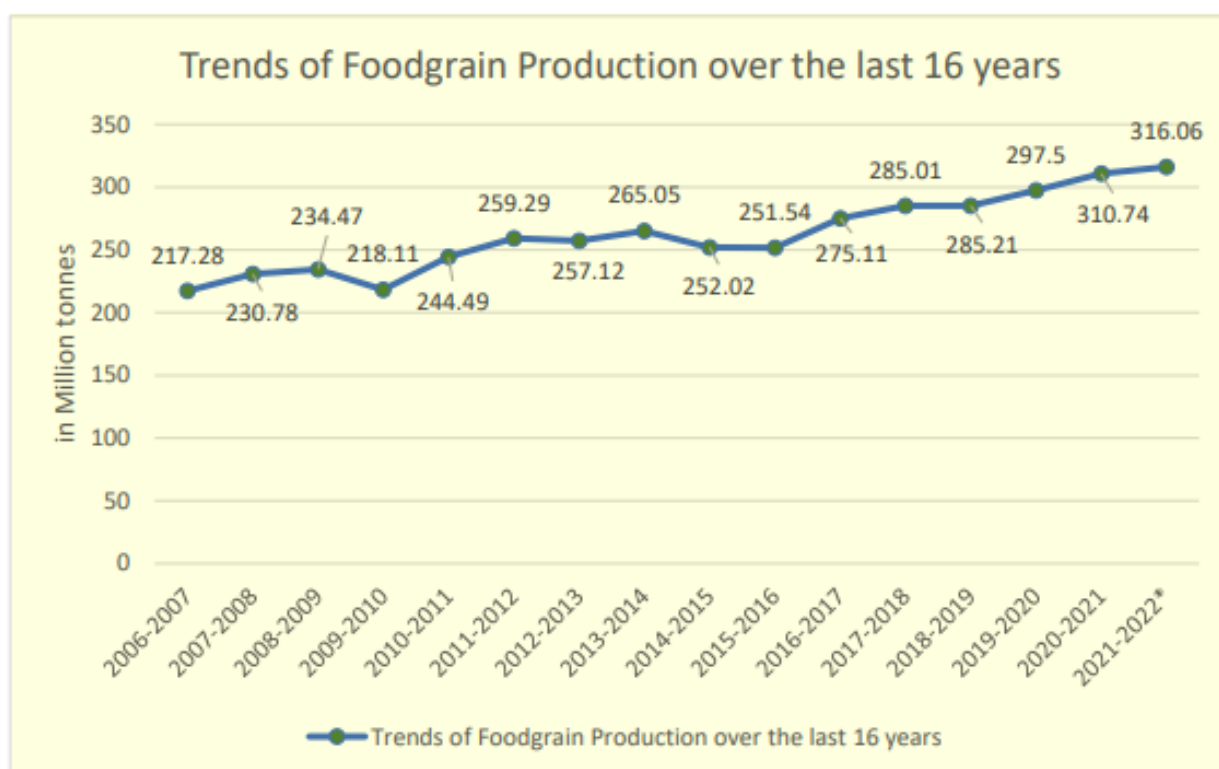
Agricultural production and farm incomes in India are frequently affected by natural disasters such as droughts, floods, cyclones, storms, landslides and earthquakes. There are man-made disasters such as fire, sale of spurious seeds, fertilizers and pesticides, price crashes, etc. All these events severely affect farmers through loss in production and farm income and are beyond the control of farmers. Crop insurance is one of the most important alternatives to manage such type of risks by the farmers. In 2016, the Government of India introduced Prime Minister Fasal Bima Yojana (PMFBY), which integrated several technological advancements that helped in not just adoption but scalability as well. Today, The PMFBY caters to over 8 crore (80 million) farmers, the world's third largest crop insurance scheme. As India has become one of the world's largest foodgrain producers, it is important that the agricultural sector, which ensures food security and contributes to a significant portion of exports, protecting the farmer's interest remains one of the top priorities.

Introduction

Indian agriculture has witnessed wide variations in growth performance during a span of six decades after independence. The variability was particularly pronounced due to the subsistence nature of farming in India and the sector's heavy dependence on monsoon and other climatic parameters. In the initial years after the inception of planned development, it was the green revolution technologies that fired up growth in the sector for nearly three decades. The impact of green revolution tapered off gradually towards the later years of the last century. Economic reforms initiated in early nineties had a significant impact on agricultural sector, primarily due to the opening up of economy to external competition, liberalization of trade and deregulation of input and other sub-sectors. (to overcome difficulties in identifying structural breaks or secular acceleration etc due to inter year fluctuations and to capture the effects of major changes in technologies and policies on the sector in various phases, an analysis based on decadal trend growth rates was carried out.

The Agriculture Sector occupies centre stage in the Indian economy, embodying three thrust areas: promoting inclusive growth, enhancing rural income, and sustaining food security. In the last decade, the government has taken several steps to ensure inclusivity and sustained growth for farmers.

The rise in food grain production in the last decade has seen an increase, which has positively impacted the farmers, providing economic stability and improvement in quality of life as well.



- Includes Kharif and Rabi both.

*Includes second advance estimates for 2021-22 as on 16.02.2022

The agricultural sector, which is estimated to constitute 18 percent of India's GVA in FY24, is the bedrock of the nation's economy. Despite challenges posed by the global health crisis and variability in climate conditions, the sector has demonstrated remarkable tenacity and resilience, contributing significantly to India's economic recovery and development.

The total food grains production for FY23 was 329.7 million tonnes, marking a rise of 14.1 million tonnes compared to the previous year. The average food grain production per year was 289 million tonnes in FY15 to FY23, compared to 233 million tonnes in FY05 to FY14. Rice, wheat, pulses, Nutri/coarse cereals, and oilseeds witnessed record increases in production. India's global dominance extends across agricultural commodities, making it the largest producer of milk, pulses, and spices worldwide².

Objectives of PMFBY and their Environmental and Social Performance Environmental Impact

Providing financial support to farmers suffering crop loss/damage arising out of unforeseen events	
Environmental Performance	Social Performance
<ul style="list-style-type: none"> PMFBY has strengthened the link between environmental parameters and agriculture by including mid-season calamities (floods and inundation), crop failures due to droughts and pests 	<ul style="list-style-type: none"> The intent of PMFBY strongly supports small and marginal farmers
Stabilizing the income of farmers to ensure their continuance in farming	
Environmental Performance	Social Performance
<ul style="list-style-type: none"> Income stabilization with quick payment is a key feature which has led to greater adoption 	<ul style="list-style-type: none"> PMFBY is liked with credit (loan) through formal institutions only for notified crops.
Encouraging farmers to adopt innovative and modern agricultural practices	
Environmental Performance	Social Performance
<ul style="list-style-type: none"> PMFBY implementation is in continuity with other welfare schemes introduced by the government such as PM Kisan, Soil Health Cards Drip Irrigation etc. which ensures the farmers use modern agricultural techniques which have less impact on environment 	<ul style="list-style-type: none"> Stability in income has been one of the key results of welfare schemes to farmers.

Environmental Impact

The Modi-led government in the last decade has taken transformational measure to combat climate change in the country. The agricultural sector too witnessed transformative changes with the increase in adoption of technology such as renewable energy to power agricultural equipment such as pumps and lighting, or the use of satellite technology to detect weather patterns across the country, thus providing farmers with advanced information on weather patterns. The government has also taken steps to promote technology such as drip irrigation through Per Drop, More Crop or the promotion of organic methods for cultivating crops under Paramparagat Krishi Vikas Yojana (PKVY), which reduces dependency on chemical fertilisers.

The Indian government has embarked on a transformative journey to bolster the agricultural sector, recognizing its vulnerability to the impacts of climate change and the pressing need for sustainable practices. Central to this initiative is the Pradhan Mantri Fasal Bima Yojana (PMFBY), a comprehensive crop insurance scheme designed to provide a safety net for farmers facing the uncertainties of nature. Integrated Pest Management (IPM) strategies help farmers manage pest populations sustainably, reducing reliance on chemical pesticides. Additionally, efficient irrigation practices, including drip and sprinkler systems, conserve water and ensure crops receive adequate moisture even during dry spells.

The government's PM Fasal Bima Yojana (PMFBY) comes to the rescue to prevent financial losses incurred by farmers whose crops are climate-dependent. The integration of knowledge and technology with farming has helped to improve the yield of crops and reduce losses to the farmers.

Social Aspects

In past 8 Years of implementation of Pradhan Mantri Fasal Bima Yojana (PMFBY) – 56.80 crore farmer applications have been enrolled and over 23.22 crore farmer applicants received claims. During this period, nearly Rs. 31,139 crore were paid by farmers as their share of premium against which claims of over Rs. 1,55,977 crore have been paid to them. **Thus, for every 100 rupees of premium paid by farmers, they have received about Rs. 500 as claims.**

The confidence boost for farmers to continue or take up farming as a profitable source of income is on the rise. The increase participation of women in the agricultural workforce is an indication of increase in the cultivated land. 68%³ of the applicants to PMFBY belong to small land-holding farmers. Close to 50% of the applicants belong to the Other Backward Castes, indicating acceptance and penetration of the scheme.

The increase in yield and diversification of crops have led to the creation of Agri startups, food processing industries and in increase in use of latest technology such as drones for land mapping and applying fertilisers/pesticides on the crops.

Technology a driving force for Farmers in India

India in the last decade has become one of the top adopters of technology in the world. The Direct Benefit Transfer (DBT) a mechanism which has become the backbone of both central and state welfare scheme has helped in not just cutting the time limit for payments but also ensuring the removal of middle-man between the beneficiary and government.

Digital India Land Records Modernization Programme (DILRMP)

The objective of DILRMP is to develop a modern, comprehensive and transparent land record management system with the aim to develop an Integrated Land Information Management System. The use of drones to map the farm lands have helped in identifying the region, types of crops and the weather conditions that prevail in the region. This has benefited the insurance companies and the government in digitally identifying the farming area for insurance. 95.08% Record of Rights (RoR) have been completed (6,25,062 villages out of total 6,57,396 villages in the country)

Farmer-related schemes such as **PM Kisan** have now become one of the largest welfare schemes that support over 11 crore farmers across India which utilises DBT as well as the Pradhan Mantri Jan Dhan Accounts, which have helped in greater penetration of the scheme into rural areas. An analysis revealed that, approximately 50% of the farmers utilized this money to cater their general domestic expenses and nearly 40% of the beneficiaries for the agriculture and farm related activities⁵.

One of the major transformational decisions taken by the Modi Government was to introduce **100% Neem Coating** on all subsidized agricultural grade urea in the country in order to increase nutrient efficiency, crop yield, and soil health and check the diversion of agricultural grade urea for non-agricultural activities. The adoption of technology into ensuring subsidised fertilisers to farmers all year around has not just been beneficial to farmers but also has helped in reducing costs through leakages in the form of fake accounts or duplication.

Soil Health Card/ Soil Health Management Schemes

Soil Health Card/ Soil Health Management Schemes under the National Project on Management of Soil Health & Fertility have been implemented through the State Government since 2014-15. Now, this scheme has been merged in Rashtriya Krishi Vikas Yojana as a Soil Health and fertility component from 2022-23. Under the scheme, since 2014-15, 23.59 crore soil health cards have been issued across the country.

Under the Soil Health Card scheme Soil Testing Labs (VLSTLs) at village / Gram Panchayat level. Since, 2014-15, total 8272 Soil Testing Labs (1,068 Static, 163 Mobile, 6,376 Mini labs and 665 Village Level labs) have been established, which help the farmers in understanding the type and nutrient deficiency in the soil.

Per Drop More Crop (PDMC)

Per Drop More Crop (PDMC) the scheme is relevant in achieving national priorities such as improving on-farm water use efficiency, enhancing crop productivity, generating employment opportunities and overall income enhancement of farmers. Micro irrigation adoption helped to improve water use efficiency around 30% to 70% and increase income of farmers in the range of 10% to 69%⁶.

Kisan Credit Card (KCC)

Kisan Credit Card (KCC) The KCC Scheme has since been simplified by providing the farmers with ATM enabled debit card based on one-time documentation, multiple withdrawals within the limit and built-in cost escalation in the limit, etc. Over 7 crore KCC has been issued to farmers across India. AS of 2018-19 animal husbandry and fisheries have

Drone technology The use of drones has been instrumental in land mapping as well application of fertilisers and pesticides, thus creating new job opportunities. Funds amounting to **Rs. 129.19 crores** have been released towards Kisan Drone promotion, which include Rs. 52.50 crores released to the ICAR for the purchase of 300 Kisan Drones and organizing their demonstrations on the farmers' fields in 75,000 hectares through 100 KVKs, 75 ICAR institutions and 25 SAUs. It also includes funds released to various state governments to supply

more than 240 Kisan Drone to farmers on subsidy and establish more than 1,500 Kisan Drone CHCs to provide drone services to the farmers. PM Modi had handed over 1,000 drones to Drone Didis to promote the use of drone technology in farming.

Insuring the Farmers

India is a land of farmers where the maximum proportion of rural population depends on agriculture and allied activities for their livelihood. Agriculture heavily depends on monsoons with 60% of the cropped area being rain-fed. Given the fact that around 75% of rainfall occurs during June-September period, the fate of the Kharif crops depends on the Southwest monsoon. The shift in rain patterns over the years coupled with extreme weather conditions, leading to seasonal crop losses, impacting not only the farmers but the nation in terms of food security.

As agricultural produce is at the mercy of weather conditions, the farmer is at risk. Protecting the farmer financially through crop insurance is one way to secure the farming community. It is a financial tool that minimizes the impact of loss in farm income by factoring in a large number of uncertainties that affect the farmers' crop yields.

The Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched in 2016, replacing existing schemes such as the two crop insurance schemes, the National Agricultural Insurance Scheme (NAIS) and the Modified form of NAIS. The PMFBY helped increase insurance coverage while ensuring that the premiums paid by **farmers remained affordable**.

The Scheme has been implemented on an 'Area Approach basis' i.e., Defined Areas for each notified crop for widespread calamities with the assumption that all the insured farmers, in a Unit of Insurance, to be defined as 'Notified Area' for a crop, face similar risk exposures, incur to a large extent, identical cost of production per hectare, earn comparable farm income per hectare, and experience similar extent of crop loss due to the operation of an insured peril, in the notified area.

The PMFBY with its flexibility of covering crops in both Kharif as well as Rabi became instrumental in increasing acceptance of the scheme.

Scheme	Year	Farmers Insured (Rs. in lakhs)	Farmers Benefitted (Rs. in lakhs)	Gross Premium (Rs. in lakhs)	Claims Paid (Rs. in crores)	Beneficiary Ratio	Claim to Premium Ratio
NAIS	2000-2001	110.8	42.17	239.94	1289.66	0.38	5.37
	2005-2006	167.22	36.68	554.77	1424.75	0.21	2.56
	2009-2010	239.34	90.11	1154.55	5118.11	0.37	4.43
WBCIS	2007-2008	6.709	2.20	145.48	104.15	0.32	0.71
	2011-2012	116.71	63.298	1844.31	1091.43	0.54	0.59
	2015-2016	90.30	75.190	7180.52	5386.41	0.83	0.75
MNAIS	2011-2012	12.29	2.23	286.97	179.50	0.18	0.62
	2013-2015	53.58	17.81	1074.47	1391.97	0.33	1.29
	2015-2016	86.15	40.45	1347.78	1812.20	0.46	1.34
RWBCIS	2016-2017	20.99	17.21	1631.78	1658.29	0.81	1.01
	2017-2018	20.22	15.89	2363.22	1871.82	0.78	0.79
	2018-2019	21.26	13.94	2891.56	2656.21	0.65	0.91
PMFBY	2016-2017	562.71	131.80	20,243.15	15,109.77	0.23	0.74
	2017-2018	507.73	159.04	22,986.39	19,943.71	0.31	0.86
	2018-2019	546.85	151.14	26,214.42	17,359.21	0.27	0.66
	2019-2020	283.60	223.20	32,012.00	25,546.00	0.78	0.79
	2020-2021	393.30	61.80	29,960.55	15,708.29	0.15	0.52

Table 1 Comparison of PM Fasal Bima Yojana with previous crop insurance scheme in the country

Currently, the PMFBY covers 5.98 lakh hectares, and 3.97 crore farmers have been covered, one of the largest participations in such an insurance scheme⁸.

Salient Features of PMFBY

The PMFBY has been an insurance scheme, in its short term, able to gain the trust of the farmers and the security it provides to the farmers has been a pivotal point.

1. Crop Insurance Portal has been developed for ensuring better administration, coordination, transparency, dissemination of information and delivery of services including crediting the claim amount electronically to the individual farmer's Bank Account⁹.
2. Increased risk coverage of Crop cycle – **pre-sowing to post-harvest losses**.
3. "On-Account payment" up to 25% of sum insured for mid-season adversity, if the crop damage is reported more than 50% in the insurance unit. Remaining claims based on Crop Cutting Experiments (CCEs) data.

4. Use of Remote Sensing Technology, Smartphones & Drones for quick estimation of crop losses to ensure early settlement of claims.
5. Area approach for settlement of claims for widespread damage. Notified Insurance unit has been reduced to Village/Village Panchayat for major crops
6. Uniform maximum premium of only 2%, 1.5% and 5% to be paid by farmers for all Kharif crops, Rabi Crops and Commercial/horticultural crops respectively.
7. The difference between premium and the rate of Insurance charges payable by farmers is provided as subsidy and shared equally by the Centre and State.
8. Removal of the provision of capping on premium which led to reduction in sum insured to facilitate farmers to get claim against full sum insured without any reduction.
9. Individual farm level assessment and settlement of claims for localized calamities of hailstorm, landslide, Inundation, Cloud Burst and Natural Fire and post-harvest losses due to cyclone, cyclonic rain and hailstorm.
10. Provision of claims upto 25% of sum insured for prevented sowing.

Season	Total Farmer Applications (In Lakhs)	Area Insured (In lakh hectares)	Sum Insured (In Rs. Crore)	Farmers Share in Premium (In Rs. Crore)	Gross Premium (In Rs. Crore)	Total Claims (In Rs. Crore)	Paid Claims (In Rs. Crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2016 Kharif	407.67	377.11	130634.30	2814.02	15886.63	10595.59	10595.59
2016-17 Rabi	174.07	186.89	71164.84	1271.07	5791.74	6199.87	6199.87
2017 Kharif	356.61	328.89	124057.21	2774.34	18142.81	18074.50	18073.59
2017-18 Rabi	175.16	178.39	77909.03	1397.65	6324.88	3993.94	3991.87
2018 Kharif	348.29	318.01	139855.05	3044.17	21111.53	19664.06	19173.00
2018-19 Rabi	233.64	214.00	95885.02	1650.13	8576.09	9527.06	9493.63
2019 Kharif	424.06	337.35	145382.37	3058.36	23914.16	21759.87	21490.01
2019-20 Rabi	192.10	171.09	76178.83	1423.84	8415.00	5969.90	5869.72
2020 Kharif	424.38	285.65	116307.23	2628.19	20692.46	14544.72	14226.56
2020-21 Rabi	198.81	209.79	83365.01	1417.17	11007.22	6290.38	6165.10
2021 Kharif	504.17	251.64	102149.82	2336.00	19036.11	13360.59	12112.64
2021-22 Rabi	327.20	207.37	78946.92	1359.33	11160.86	3061.03	2793.78
2022 Kharif	611.47	244.26	107442.55	2484.20	17983.29	2404.89	2264.94
2022-23 Rabi	134.96	60.37	27355.10	474.51	4483.49	34.30	0.00
Grand Total	4512.57	3370.79	1376633.30	28132.99	192526.25	135480.72	132450.30

Table 2 Season Wise progress under Pradhan Mantri Fasal Bima Yojana (PMFBY) 2016-2017 to 2022-23

Numbers at a Glance

- PMFBY is the world's **3rd largest** crop insurance scheme in the world
- **56.80 crore** farmer applications have been enrolled and **over 23.22 crore** farmer applicants received claims
- **More than 63%** of the farmers who have availed the scheme belong to SC/ST and OBC
- **More than 66.59%** of the farmers belong to small land holding farms who have applied to the scheme
- **Over 23.22 crore** farmer applicants received claims under PMFBY in past 8 years of its implementation

World Bodies Praise PMFBY

World Bank 2018¹¹

The World Bank described PMFBY as "a significant advancement in agricultural insurance, providing a safety net for farmers and enhancing their resilience to climate-related shocks." This statement reflects the scheme's potential to stabilize farmers' incomes.

United Nations Development Programme (UNDP) - 2023¹²

Amit Kumar, Head of Sustainable and Inclusive Growth at UNDP India, emphasized the importance of PMFBY in enhancing the resilience of farmers against agricultural risks. He stated, "Risk is an inherent part of agriculture and is one of the biggest roadblocks in improving the lives of farmer communities in India. This collaboration is an important step towards strengthening the risk and credit ecosystem for agriculture in India."

Conclusion

The Pradhan Mantri Fasal Bima Yojana (PMFBY), launched in January 2016, represents a significant advancement in India's agricultural insurance landscape, aiming to provide comprehensive support to farmers facing crop loss due to unforeseen events such as natural calamities, pests, and diseases. This scheme has been instrumental in empowering farmers, particularly those belonging to marginalized communities, including Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Classes (OBC), and smallholders. By offering a uniform premium rate of 2% for Kharif crops and 1.5% for Rabi crops, PMFBY ensures affordability and accessibility, thereby encouraging wider participation among farmers, especially those with limited financial resources. One of the core achievements of PMFBY is its extensive reach, having insured over 56.96 crore applications and disbursed claims amounting to approximately Rs 1.54 lakh crore since its inception. This financial support has been crucial in stabilizing the income of farmers, enabling them to recover from crop failures and continue their agricultural activities without falling into debt. The scheme's design facilitates quick claim settlements through a technology-driven approach, utilizing remote sensing and digital platforms to streamline processes and enhance transparency. This technological integration not only expedites the assessment of crop losses but also empowers farmers by providing them with timely financial assistance. Moreover, PMFBY emphasizes the inclusion of marginalized groups by mandating that a proportionate budget allocation for SC/ST/OBC farmers aligns with their representation in the agricultural sector.

Through its comprehensive coverage, technological advancements, and focus on sustainable practices, PMFBY is a cornerstone of India's efforts to strengthen its agricultural sector and uplift the livelihoods of millions of farmers across the country.

This grassroots involvement fosters awareness and encourages participation among farmers who may otherwise be hesitant to engage with formal insurance schemes.

Appendix

1. <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2022740>
2. <https://pib.gov.in/PressReleasePage.aspx?PRID=2011549>
3. <https://pmfby.gov.in/adminStatistics/dashboard>
4. <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1989671>
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12. <https://www.undp.org/india/press-releases/undp-india-partners-absolute-foods-further-sustainable-agriculture-practices-country>