CRITICAL ISSUES INFLUENCING CROP INSURANCE

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ABSTRACT:

Agricultural business is a very high-risk job and an increase demand for agricultural products from one side and steady increase in production cost and weather changes, on the other side, have motivated many to use insurance for agricultural products. Insurance plays an important role in influencing crop production and insured satisfaction or farmers. The purpose of this research is to find critical components in agricultural insurance. This present study looks at the genesis of agricultural insurance in India, examines various agricultural insurance schemes launched in the country from time to time and the coverage provided by them. Major issues and problems faced in implementing agricultural insurance in the country are discussed in detail.

Keywords: Crop insurance, Agriculture, Issues, difficulties

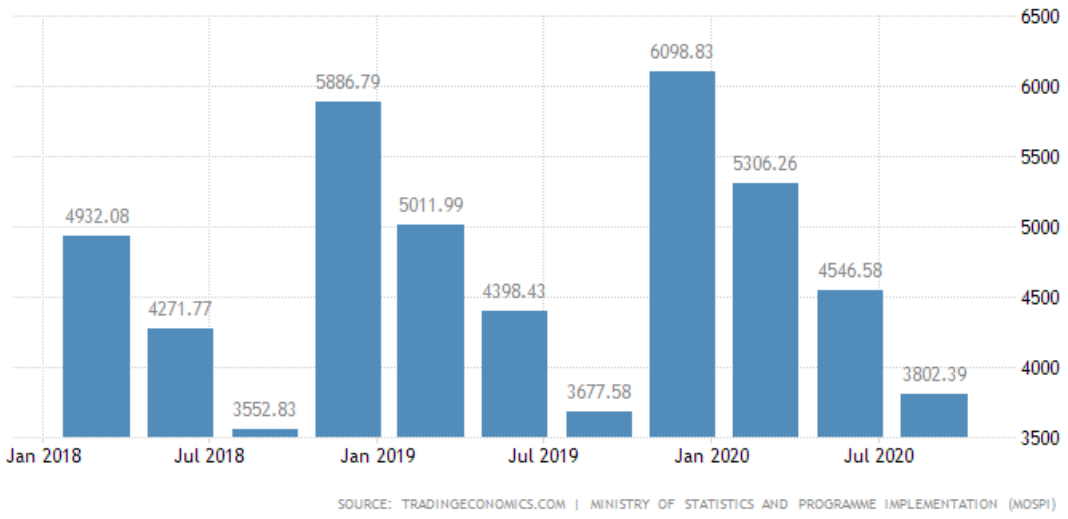
Introduction:

Agriculture is one of the primary sources of livelihood for about 58% of India's population. Gross Value Added (GVA) by agriculture, forestry and fishing was estimated at Rs. 19.48 lakh crore (US$ 276.37 billion) in FY20 (PE). Growth in GVA in agriculture and allied sectors stood at 4% in FY20. The agriculture, forestry and fishing gross value added (GVA) growth is likely to be 3% in the second quarter of FY21.

The Indian food industry is poised for huge growth, increasing its contribution to the world food trade every year, particularly within the food processing industry. Indian food and grocery market is the world's sixth largest, with retail contributing 70% of the sales. The Indian food processing industry accounts for 32% of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. Essential agricultural commodities export for the April-September

period of 2020 increased by 43% to Rs. 53,626crore over Rs. 37,397crore in the same period last year.

Production of cereals is one of the primary contributions of the agricultural sector to India. Cereals account for almost 46 percent of the Indian agricultural market. There has been a constant increase in annual yield of cereals across the country. The arable land area in the country is the second largest in the world after United States. According to the World Bank, approximately 38% of the land area in India is suitable for agriculture. This value is decreasing continuously due to urbanization. Organic farming has a huge potential in our country. It started mostly as trial operations on farms less than an acre in size. The total organic area is about 5.71 million hectares. Sugar crops are mainly cultivated using this method.



Rice and wheat are the two main food staples. India is the second largest producer of both rice and wheat across the world. Even though farming makes up a large share of agriculture in the country, livestock rearing along with fishing also contribute significantly to feeding India's population as well its economy.

GDP From Agriculture in India decreased to 3802.39 INR Billion in the third quarter of 2020 from 4546.58 INR Billion in the second quarter of 2020.

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency

3802.39	4546.58	6098.83	2690.74	2011 - 2020	INR Billion	Quarterly

It is estimated that India's agriculture sector accounts only for around 14 percent of the country's economy but for 42 percent of total employment. As around 55 percent of India's arable land depends on precipitation, the amount of rainfall during the monsoon season is very important for economic activity.

Among the farming community in India, 82% are small and marginal farmers who possess less than 2 hectares of land. Even though they are the majority, only 47.3 percent of the crop area is owned by them. There is a declining trend in the average landholding size from 1.15 hectares in 2010 - 11 to 1.08 hectares in 2015 - 16 [5]. Despite these, the food grain production in India was increased over the years and attained self-sufficiency through the adoption of modern scientific technologies. But farming is subjected to natural calamities and price fluctuations as a result the situation of the farmers has not been improved and it remains unstable. Frequent failure of crops, lack of remunerative prices for produce, and poor return on investment are the major problems in the agricultural sector.

REVIEW OF LITERATURE:

D. Hebsiba Beula's research highlights the interplay of climate change, agricultural risk, and insurance:

- Beula (2018) emphasized weather-index insurance as a tool for mitigating climate-induced yield risks.
- Beula (2019) discussed systemic challenges in Indian crop insurance schemes, focusing on governance and sustainability.
- Beula (2020) studied farmer satisfaction and noted that delayed claims weaken trust in insurance.
- Beula (2021) highlighted the role of blockchain and satellite technology in enhancing transparency and efficiency.

Other important contributions include:

- Mishra (1994) studied the early National Agricultural Insurance Scheme (NAIS) and highlighted low penetration due to lack of awareness.

- Raju & Chand (2008) reviewed Indian crop insurance, identifying issues of moral hazard, adverse selection, and high subsidy dependency.
- Mahul &Stutley (2010) (World Bank) stressed the importance of public-private partnerships for sustainability.
- Giné, Townsend & Vickery (2008) found that low uptake of insurance in India was due to trust deficits and lack of understanding.
- Cole et al. (2013) showed that awareness campaigns significantly improved crop insurance adoption among smallholder farmers in Gujarat.
- Clarke et al. (2012) suggested that index-based insurance can reduce basis risk and speed up settlements if backed by reliable data.
- Hazell et al. (2017) studied global experiences and found that technology-driven insurance (remote sensing, big data) improves efficiency.
- Greatrex et al. (2015) argued that insurance must be integrated with climate adaptation strategies like credit and irrigation.
- Manuamorn (2007) suggested that weather-index insurance is cost-effective and scalable, though basis risk remains a challenge.
- Jat et al. (2020) linked climate change impacts on crop productivity with the urgent need for adaptive crop insurance mechanisms.

Collectively, these studies indicate that while crop insurance is vital for farmer welfare, its success depends on technological innovation, policy reforms, and improved awareness.

CROP INSURANCE:

Crop insurance is an arrangement of pooling risk based on the principle of, "large number". The insurance company collects premiums from all policyholders and compensates for the persons who incurred loss. Thus, the risk is managed in two ways.

1. **Distributing across space** that means the losses of farmers in one area is compensated by the farmers in other areas.

2. **Distributing across time** by compensating with the reserves of the insurance company that are accumulated through premiums collected in normal years.

The corpus fund is created by the government and is supplemented by the insurer through the interest income accrued by investing the resources gainfully.

Need for Crop Insurance:

Extreme temperature and rainfall shocks causes a decline in crop yield during both Kharif and Rabi seasons. Climate change affects agricultural productivity. Two types of risks are common in Indian agriculture: yield risk (uncertainty of crop yield) due to weather variability and price risk. Even though farmers practice traditional risk management methods by diversifying less risky and less profitable crops by the resource-poor farmers and landless agricultural labourers. who have extremely limited means and resources are vulnerable in the absence of insurance mechanisms. The compensations in the form of relief packages given by the government during natural calamities suffered severe limitations Therefore, crop insurance is needed to address the issue of yield risk in the agricultural sector.

ISSUES IN THE CROP INSURANCE SCHEMES:

The farming community at large does not seem to be satisfied with the partial expansion of scope and content of crop insurance scheme. There are issues relating to its operation, governance and financial sustainability.

Reduction of insurance unit to Village Panchayat level

As of now, most of the insurance schemes are implemented on the basis of “homogeneous area” approach, and the area at present is the Mandal / Taluk / Block or equivalent unit, in most instances. These are large administrative units withconsiderable variations in yields and impact of natural calamities. For the scheme to become more popular, the unit for determining claim should be reduced to the level of “village” in the case of large villages and to “cluster of villages” in the case of small villages. However, because of infrastructural and financial constraints States could not lower the unit to village panchayat. However, under the Indian conditions, implementing a crop insurance scheme at the “individual farm unit level” is covered with problems, such as:

- Non-availability of the past records of land surveys, ownerships, tenancy and yields at individual farm level Small size of farm holdings
- Remoteness of hamlets and inaccessibility of some farm-holdings

- A large variety of crops, varied agro-climatic conditions and package of practices, etc.,

Inadequate infrastructure

We feel that lowering of the insurance unit to the Gram Panchayat (GP) level, is a welcome move, as it would reflect yield losses at a reasonable level. However, data being the lifeline of insurance, the actuarial rating of the product at GP level would be possible only if the historical yield data at that level (GP) is available for a reasonably long period. In real terms, such data at the GP level is not available and therefore it would be difficult for the insurer to work out premium rates on sound actuarial principles

Threshold / guaranteed yield

Presently, Guaranteed Yield, based on which indemnities are calculated, is the moving average yield of the preceding three years for rice and wheat, and preceding five years for other crops, multiplied by the level of indemnity. The concept does not provide adequate protection to farmers, especially in areas with consecutive adverse seasonal conditions, pulling down the average yield. It is proposed to consider the best 5, out of the preceding 10-years‟ yield.

Levels of indemnity

At present, the levels of indemnity are 60 per cent, 80 per cent and 90 per cent corresponding to high, medium and low risk areas. It is perceived that the 60 per cent indemnity level, does not adequately cover the risk, especially in the case of small/ medium-intensity adversities, since losses get covered only if and when, the loss exceeds 40 per cent. Consequently, suggestion was made that instead of three levels of indemnity here should be only two levels of indemnity, viz. 80 per cent and 90 per cent. But, these higher levels of indemnity may escalate the premium rates, and would, increase the subsidy burden of the government.

Extending risk coverage to prevented sowing / planting, in adverse seasonal conditions

Insurance Schemes under the existing mode covers risk only from sowing to harvesting. Many a times sowing / planting is prevented due to adverse seasonal conditions and the farmer loses not only his initial investment, but also the opportunity value of the crop. A situation where the farmer is prevented from even sowing the field, is a case of extreme

hardship and this risk must be covered. Pre-sowing risk, particularly prevented I failed sowing / reseeding on account of adverse seasonal conditions, should be covered, wherein up to 25 per cent of the sum insured can be paid as compensation, covering the input - cost incurred till that stage.

Coverage of post-harvest losses

In some states, crops like paddy are left in the field for drying after harvesting. This may cause damage to the crops. Since, the schemes cover risks only up to the harvesting, these post-harvest risks are outside the insurance cover.

Time of settlement of claims

The processing of claims in NAIS begins only after the harvesting of the crop. Further, claim payments have to wait for the results of Crop Cutting Experiments (CCE‟s) and also for the release of requisite funds from the central and state governments. Consequently, there is a gap of 8-10 months between the occurrence of loss and actual claim payment.

Service to non-loanee farmers

The awareness about the scheme is poor, partly due to lack of adequate localized interactions and substantially due to the lack of effective image building and awareness campaigns. For loanee farmers, with premium being deducted at the time of loan disbursement and claim settlements being credited to the farmer’s loan account, the illiterate or poorly educated farmer is hardly aware of the scheme’s existence, let alone its benefits. The poor participation of non-loanee farmers is even worse. These farmers are neither familiar nor comfortable in going to the distantly-located credit agencies. Dedicated rural agents, who could provide service, supported by the effective communication and training programs, would be a needed initiative.

Premium sharing by financial institutions

Crop Insurance claims are paid for adverse seasons, the loan availed could not have been repaid by the farmer. The claim amount is automatically adjusted against the outstanding crop loan, leading to the recovery of dues for the financial institutions (FIs), and providing the farmer eligibility for fresh loan. In other words, Crop Insurance helps the flow of credit, to crop production. Considering the overall benefits of Crop Insurance and its direct

and indirect protection to lending activities, the burden of high premium rates of Crop Insurance, may be partly shared by the Fls.

CONCLUSION

Crop insurance is essential for stabilizing farm incomes and protecting India's agricultural economy against climate and market risks. However, issues such as inadequate data, delayed claim settlements, poor awareness, and limited coverage restrict its effectiveness. A farmer-centric approach, combined with technological innovation (blockchain, satellite monitoring, and digital claim processing), can make the system more transparent and efficient.

As emphasized by Beula (2021) and Hazell et al. (2017), the future of crop insurance lies in integrating technology with strong policy frameworks. Addressing structural issues like expanding coverage, reducing unit size, and ensuring timely settlements will not only enhance farmer trust but also strengthen the resilience of India's agricultural sector in the face of climate change.

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