AGRICULTURE CROP INSURANCE POLICIES IN INDIA – A STUDY ON PRADHAN MANTHRI FASAL BIMA YOJANA (PMFBY) IN TELANGANA STATE

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***Abstract*: India is the seventh largest country in geographical level and second largest country in population wise and twelfth largest country in economic wise. More than 70% of the population has their livelihood as agriculture and agriculture oriented works either directly or indirectly for their living. Over 600 million farmers are involved in agriculture related activities. Mahatma Gandhi said "Indian economy lives in rural villages", and many of the industries get their raw material from agriculture sector. Agricultural production therefore is inherently a risky business and farmers face a variety of weather, pest, disease, input supply and market related risks. Crop insurance programme whether for an advanced or a developing country, cannot be designed without scarifying some of the preceding rigid requirements. The government is relieved from large expenditures incurred for writing-off agricultural loans, providing relief and distress loans etc., in the case of crop failure. The Policy resolution than describe in detail the strategy and policy alternatives which are grouped under the following heads: Sustainable agriculture, Food and nutrition security, Generation and transfer of technology, Inputs management, Incentive for agriculture, Investment in agriculture, Institutional structure and Risk management. In January earlier this year, in a move aimed at reducing the recurrence of agricultural distress without having to effect hefty hikes in the Minimum Support Prices (MSP), Narendra Modi led National Democratic Alliance government had announced a crop insurance scheme named Pradhan Mantri Fasal Bima Yojana (PMFBY). Under the new scheme being implemented from Kharif season of 2016, the premium paid by farmers had been reduced to 2% of the insured value for the more rain-dependent kharif crop and 1.5% for the rabi season, compared with 3.5-8% charged for the two earlier schemes National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS). In the case of horticultural crops, farmers' premium burden will be 5% of the sum assured or 50% of the total premium. Under the PMFBY, there would be no upper limit on government subsidy provided by centre and state governments. "Even if the balance premium (after farmers' contribution) is 90%, it will be borne by the government".**

***Keywords*: Agriculture, Crop Insurance, farmers, investment, PMFBY, risk**

Introduction

India is the seventh largest country in geographical level and second largest country in population wise and twelfth largest country in economic wise. The economy of India is as diverse as it is large, with a number of major sectors including manufacturing industries, agriculture, textiles and handicrafts, and services. Agriculture is a major component of the Indian economy. More than 70% of the population has their livelihood as agriculture and agriculture oriented works either directly or indirectly for their living. Over 600 million farmers are involved in agriculture related activities. Mahatma Gandhi said "Indian economy lives in rural villages", and many of the industries get their raw material from agriculture sector. Agriculture has been the backbone of Indian economy for several centuries. Indian agriculture is characterized by lack of technology, low productivity, under employment, multiplicity of crops, unequal distribution of land, predominance of small farmers, etc. agricultural production therefore is inherently a risky business and farmers face a variety of weather, pest, disease, input supply and market related risks.

The prevalence of risk in agriculture is not new and farmers, rural institutions and lenders have, over generations, developed ways of reducing and coping with risk. Although the virtues of these traditional risk management mechanisms are widely recognized they also have their own limitations. They can be costly in terms of income opportunities that farmers forgo. They can discourage investments and technological changes that, while risky, enhance long-term productivity growth. They have limited capacity to spread covariate risks like droughts that affect most farmers in a region at the same time. In theory these limitations would not exist if insurance markets were perfect, but the reality for many risky agricultural regions, insurance markets are poorly developed and they are weakly linked across regions and with urban areas.

Indian agriculture is characterized by lack of technology, low productivity, under employment, multiplicity of crops, and unequal distribution of land and predominance of small farmers. Agricultural production therefore is inherently a risky business and farmers face a variety of weather, pest, disease, input supply and market related risks. Given an uncertain income each year, farmers must worry about their ability to repay debt, to meet overhead costs (eg. land rents and taxes) and, in many cases, their ability to meet essential living costs for their families. These same risks are also of concern to agricultural lending institutions. Confronted with risky borrowers, lenders must seek to reduce the possibility of poor loan recovery rates in unfavourable years, even if this means only modest levels of lending to agriculture.

Farming is inherently one of the riskiest economic activities. The prevalence of risk in agriculture is not new and farmers, rural institutions and lenders have, over generations, developed ways of reducing and coping with risk. Although the virtues of these traditional risk management mechanisms are widely recognized they also have their own limitations. They can be costly in terms of income opportunities that farmers forgo. They can discourage investments and technological changes though risky, enhance long-term productivity growth. They have limited capacity to spread covariate risks like droughts that affect most farmers in a region at the same time. In theory these limitations would not exist if insurance markets were perfect, but the reality for many risky agricultural regions insurance markets are poorly developed and they are weakly linked across regions and with urban areas.

During 2008-09 the agricultural sector contributed to 15.7% of India's GDP (at 2004-05 prices) and 10.23% (provisional) of total exports besides providing employment to around 58.2% of the work force. During 2009-10, agricultural sector contributed to 14.6% of India's GDP (at 2004-05 prices). The growth in share of agriculture in GDP as per the final figures of 2008-09 was -0.1%. It was 0.4% in 2009-10 and is estimated to be 5.4% in 2010-11. In terms of composition, out of a total share of 14.6% of the GDP in 2009-10 for agriculture and allied sectors, agriculture alone accounted for 12.3% followed by forestry and logging at 1.5% and fisheries at 0.8%.

Objectives of the Study

1. To study the evolution of the crop insurance scheme in India
2. To review the status of National Agricultural Insurance Schemes in Telangana State
3. To examine the problems and prospects of National Agricultural Insurance Schemes
4. To study causes for shortcomings in implementation and suggest required improvements in respect of National Agricultural Insurance Scheme

Research Methodology

The study will be based on secondary sources of data. Data will be collected from District Central Co-operative Banks (Head Office, Branch Offices), Nationalised Banks (Head Office, Branch Offices), Gramin Banks, Primary Agricultural Co-operative Societies and Departments of Telangana State.

Review of Literature

According to Chandrakanth and Rebello (1980), crop loss due to drought, excessive rains, pests, and diseases may be included in the hazards to be insured. They also remarked that if the entire crop is lost during the planting stage, the indemnity payable should cover the costs up to that stage. Another observation was that crop insurance should be made compulsory at least for all borrowers. In this case the insurance premium must be included in the crop finance.

Subrahmanian (1984) suggested that premium rates have to be revised annually based on the cost of cultivation and the long-term average yield. In India, coverage is taken as a percentage of the long-term average alone. But it would be better to arrive at the coverage level based on cost of cultivation and price per unit of output in addition to the long-term average yield.

Dandekar (1985) noted that the crop insurance scheme is based on the area approach and that a *taluka* / *tehsil* are taken to be the area. Indemnities payable to farmers in the area are assessed on the basis of the average yield for the area; the variations in the yield within the area are neglected. This method is considered unsatisfactory.

Merrit (1987) stated that regardless of whether crop production is government-sponsored, or originated with a private agricultural lender, the use of a crop insurance option increases the probability of repayment of loans. It is to the advantage of the lender to require the collateral – the expected yield – to be insured thereby guaranteeing repayment of the loan. It was to the advantage of the farmer-borrower that he insures his crop when he takes an operating loan so that if a production loss should occur the insured will not be forced to choose between repaying the loan out of other resources and going out of business.

Jorge (1987) opined that the appraisal of loss is one of the momentous aspects of insurance. Moreover, in the case of crop insurance, a rapid loss adjustment procedure is essential. Since the farmers will wish to harvest the undamaged part of the affected crop in due time, it is necessary to set up and train an adequate number of local adjustment personnel capable of responding immediately to appraise losses. Since crop insurance is characterised by a very high degree of risk, it is risky for a primary organisation to bear an excessive insurance liability accepted from farmers. Therefore, the insurance carriers should be willing to spread their risk. One option is reinsurance.

New Agriculture Policy:

The challenges facing Indian agriculture can be grouped in four categories relating to (1) growth (2) sustainability (3) efficiency and (4) equity. There are also other important concerns like food security, livelihood, employment, improvement in standard of living of agricultural population. Addressing these challenges requires 5 efforts on several fronts like incentive structure, infrastructure, technology, market development, extension, regulations, input supply, tenancy etc. New agriculture policy should address above challenges through efforts in abovementioned areas and also provide direction to the future of agriculture in the country. The National Agricultural Policy (NAP) document aims to attain output growth rate in excess of 4 percent per annum in agriculture sector based on efficient use of resources. It seeks to achieve this growth in a sustainable manner and with equity. The Policy resolution than describe in detail the strategy and policy alternatives which are grouped under the following heads: Sustainable agriculture, Food and nutrition security, Generation and transfer of technology, Inputs management, Incentive for agriculture, Investment in agriculture, Institutional structure and Risk management

Types of Risks

Management of risk in agriculture is one of the major concerns of the decision makers and policy planners, as risk in farm output is considered as the primary cause for low level of farm level investments and agrarian distress. Both, in turn, have implications for output growth. In order to develop mechanisms and strategies to mitigate risk in agriculture it is imperative to know the sources and magnitude of fluctuations involved in agricultural output. Farmers are exposed to risk from rainfall variability, market price fluctuations, credit uncertainty and adoption of new technology. The diversities in the sources of risks require a variety of instruments for protecting the farmers. In India, these include crop insurance, rainfall insurance, farm income insurance and a calamity relief fund. Most of these measures other than crop insurance are in the experimental stage. Different sources of risk that affect agriculture are classified below.

- Production Risk
- Price or Market Risk
- Financial and Credit Risk
- Institutional Risk
- Human or Personal Risk
- Legal / Policy Risk
- Resource Risk
- Health Risks
- Assets Risks
- Technology Risk

Crop insurance programme whether for an advanced or a developing country, cannot be designed without scarifying some of the preceding rigid requirements. The dearth of accurate and sufficient data regarding crop yield and losses in most developing countries compounds the problem in crop insurance design.

Crop credit insurance also reduces the risk of becoming defaulter of institutional credit. The reimbursement of indemnities in the case of crop failure enables the farmer to repay his debts and thus, his credit line with the formal financial institutions is maintained intact (Mishra 2007; Pomareda 1986; Hazell et al. 1990). The farmers do not have to seek loans from private moneylenders. The farmer does not have to go for distress sale of his produce to repay private debts. Credit insurance ensures repayment of credit, which helps in maintaining the viability of formal credit institutions. The government is relieved from large expenditures incurred for writing-off agricultural loans, providing relief and distress loans etc., in the case of crop failure.

In India, more than two third of the land holdings are less than 2 hectares. The average size of holding is less than 1.55 hectares and more than half of the arable area is rain-fed and output from agriculture is largely conditioned by the monsoon. A properly designed and implemented crop insurance programme will protect the numerous vulnerable small and marginal farmers from hardship, bring in stability in the farm incomes and increase the farm production.

Smith and Goodwin 1996 Some of the studies confirm the conventional view that moral hazard incentive lead insured farmers to use fewer chemical inputs find that at reasonable levels of risk aversion, nitrogen fertilizer and insurance are substitutes, suggesting that those who purchase insurance are likely to decrease nitrogen fertilizer applications.

Crop Insurance System in India

Crop insurance in India has been attempted in embryonic form since the independence and there have been many sporadic efforts to ensure protection of the farming community against losses suffered through natural calamities. During the period 1979 – 85, a pilot crop insurance scheme was implemented for food crops and oilseeds in selected areas. Based on the experience of the scheme, a Comprehensive Crop Insurance Scheme (CCIS) was evolved and implemented in 1985. Under the CCIS which was in implementation till Kharif 1999, the total number of farmers covered were 7.63 crores with total sum insured Rs. 25,000 crores and the claim paid being Rs. 2303 crores. In order to enlarge its coverage in terms of farmers, crops and forms of risks, the Government launched the National Agricultural Insurance Scheme (NAIS) on June 22, 1999 expanding the scope and content of the CCIS. The scheme is implemented in 21 States and two Union Territories for Kharif – Bajra & Oil seeds, other crops (cereals, other millets & pulses), Rabi – Wheat, other crops (cereals, millets, pulses & oil seeds), Kharif & Rabi – Annual Commercial Annual Horticultural crops. The pilot project on Farm Income Insurance Scheme (FIIS) was introduced from Rabi 2003-2004 season.

New crop insurance scheme Pradhan Mantri Fasal Bima Yojana

In January earlier this year, in a move aimed at reducing the recurrence of agricultural distress without having to effect hefty hikes in the Minimum Support Prices (MSP), Narendra Modi led National Democratic Alliance government had announced a crop insurance scheme named Pradhan Mantri Fasal Bima Yojana (PMFBY). Under the new scheme being implemented from Kharif season of 2016, the premium paid by farmers had been reduced to 2% of the insured value for the more rain-dependent kharif crop and 1.5% for the rabi season, compared with 3.5-8% charged for the two earlier schemes National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS). In the case of horticultural crops, farmers'

premium burden will be 5% of the sum assured or 50% of the total premium.

NAIS and MNAIS have been discontinued from Kharif 2016, but the ongoing Weather Based Crop Insurance Scheme (WBCIS) and Coconut Palm Insurance Scheme would continue to operate while premium to be paid under WBCIS has been brought on a par with PMFBY. Later while unveiling the operational guidelines for the PMFBY at a massive farmers' rally in Sehore in Madhya Pradesh in February this year, Prime Minister Modi had noted that new crop insurance scheme would provide a solution for the farmers problems, in times of difficulty. He said care had been taken to eliminate the shortcomings of previous crop insurance schemes, and create trust among farmers with regard to crop insurance. He said technology would be used extensively with this scheme to ensure early settlement of claims, and exhorted farmers to take benefit of this scheme.

Under the PMFBY, there would be no upper limit on government subsidy provided by centre and state governments. "Even if the balance premium (after farmers' contribution) is 90%, it will be borne by the government". In the earlier schemes, there was a provision of capping the premium rate which resulted in low claims being paid to farmers. Officials said that this capping on premium was done to limit the government outgo on the premium subsidy. "This capping has now been removed and farmers will get claim against full sum insured without any reduction". This would ensure that farmers get the full sum insured without any reduction or hassles from the 11 designated insurance companies if natural calamities ravage their crops. Officials said that the following roll out of PMFBY, the crop insurance coverage is set to rise from 45 million hectares or 23% of the area under cultivation at present to 50% of the crop area by 2018-19.

Another benefit to farmers under the new crop insurance scheme is that losses incurred by them at any stage of the farming activity from the sowing to the post-harvest season would be covered. Earlier, only post-harvest losses can be offset by the insurance facility under the two existing schemes. Also, even those farmers who haven't taken bank loans will be eligible for insurance cover under PMFBY.

"The new scheme will increase farmers' income and resultant increase in rural demand," an agriculture ministry official said. The subsidy would be borne by the Centre and the state government concerned equally. For PMFBY, finance minister Arun Jaitley had allocated Rs 5,501 crore in 2016-17 while Rs 2,995 crore was allocated for various crop insurance schemes in the previous fiscal.

In the earlier schemes, only 20 million of an estimated 120 million farmers in the country earning for a population four to five times as many had crop insurance cover in 2014-15, even as the facility was just against the cost of cultivation and barely provided any income protection. According to the agriculture ministry data, most of the farmers who earlier took crop insurance were in Rajasthan, Bihar, Uttar Pradesh, Maharashtra, Karnataka and Andhra Pradesh. In terms of the value of the farm output, the MNAIS and the Weather-based Crop Insurance Scheme fared even more dismally, with a coverage of only around 5.5%. Since the launch of PMFBY in January, states such as Telangana, Andhra Pradesh, Jharkhand, Odisha, West Bengal, Himachal Pradesh and Uttarkhand have already awarded contracts to empanelled insurance companies for providing crop insurance coverage to large number of farmers in forthcoming kharif season.

The Agriculture ministry has empaneled state-owned Agriculture Insurance Company of India (AIC) and 10 private companies including ICICI-Lombard General Insurance, HDFC-ERGO General Insurance, IFFCO-Tokio General Insurance and SBI General Insurance, for implementation of the mega scheme.

Management of the scheme

The existing State Level Co-ordination Committee on Crop Insurance (SLCCCI), Sub Committee to SLCCCI, District Level Monitoring Committee (DLMC) already overseeing the implementation & monitoring of the ongoing crop insurance schemes like National Agricultural Insurance Scheme (NAIS), Weather Based Crop Insurance Scheme(WBCIS), Modified National Agricultural Insurance Scheme(MNAIS) and Coconut Palm Insurance Scheme(CPIS) shall be responsible for proper management of the Scheme. IA shall be an active member of SLCCCI and District Level Monitoring Committee (DLMC) of the scheme.

Yield Losses (standing crops, on notified area basis):

Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as (i) Natural Fire and Lightning (ii) Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, Tornado etc. (iii) Flood, Inundation and Landslide (iv) Drought, Dry spells (v) Pests/ Diseases etc.

Sharing of Risk:

The liability of the Insurance companies in case of catastrophic losses computed at the National level for an agricultural crop season, shall be upto 350% of total premium collected (farmer share plus Govt. subsidy) or 35% of total Sum Insured (SI), of all the Insurance Companies combined, whichever is higher. The losses at the National level in a crop season beyond this ceiling shall be met by equal contribution (i.e. on 50:50 basis) from the Central Government and the concerned State Governments.

The highlights of this scheme are as under:

1. There will be a uniform premium of only 2% to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops.
2. In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%.
3. The premium rates to be paid by farmers are very low and balance premium will be paid by the Government to provide full insured amount to the farmers against crop loss on account of natural calamities.
4. There is no upper limit on Government subsidy. Even if balance premium is 90%, it will be borne by the Government.
5. Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers.
6. This capping was done to limit Government outgo on the premium subsidy. This capping has now been removed and farmers will get claim against full sum insured without any reduction.
7. This Scheme also covers Loss / damage resulting from occurrence of identified localized risks i.e. hailstorm, landslide.
8. The new Crop Insurance Scheme is in line with One Nation – One Scheme theme

Policy Implications:

- The scheme covers kharif, rabi crops and commercial and horticultural crops as well.
- The premium charged for kharif crops would be up to 2% of the sum insured and for rabi crops it would be up to 1.5% of the sum assured.
- For annual commercial and horticultural crops, the premium would be 5 per cent.
- To provide insurance to the farmers at a subsidized rate of premium, the remaining share will be borne equally by the central and respective state governments.
- This scheme will cover post-harvest losses also and provide farm level assessment for localised calamities including hailstorms, unseasonal rains, landslides and inundation.
- To fasten the process of claims, the scheme proposes mandatory use of remote sensing, smart phones and drones for quick damage assessment.

Conclusion:

Majority of farmers are small and marginal farmers and hence use of technology is difficult for them. Moreover, mere including the provision of technology would not solve the problem. As suggested by, the Report of the Committee to Review the Implementation of Crop Insurance Schemes in India, submitted to government of India in 2014, Agriculture extension models should have build in incentives such as cash incentives for the ground workers to increase the use of technology. This scheme is not a income insurance but only revenue loss coverage which insures against weather risk and not crop loss risk. Risks such as destruction by wild animals are not covered under the scheme. Though including post harvest loss is a welcome step, it should be noted here that Post harvest losses does not include storage losses Problems related to insurance run far deeper than premium rates. In the long run, there should be an attempt to delink the insurance from the banks as Financial Stability Report by RBI highlights that linkage of loans with insurance doesn't meet good response from banks as the burden of Priority Sector Lending is already there on the banks. Also, Compulsory deduction of premium from loans hedges the banks and not the farmers. The assessment of risk should begin much before sowing and proceed beyond harvest. The decision of what to sow and reap is currently not a well informed choice based on a sound assessment of soil, yield and prices. If insured, small and marginal farmers show an increasing tendency to sow cash crops reliant on the monsoon—a classic case of moral hazard. It is here that better risk assessment, contract design and cooperatives becomes crucial. Mixed farming and inter-cropping also helps in diversifying the risks generally associated with mono cropping. Commodity futures are yet another solution to achieve price risk management and price discovery. Unfortunately in India, no significant price discovery has occurred in agricultural commodity markets which started their operation a decade ago. This is primarily because of the lack of integration between the futures and spot markets. These loopholes are to be addressed along with making steps to improve the insurance coverage.

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