An assessment on Agricultural Insurance Schemes in Tamil Nadu

Mohanapriya.T
Research Scholar, Bharathiyar university, Coimbatore.

Dr.A.G.Sudha
Associate Professor, Department of Business Administration, Velalar college of Engineering and Technology

Abstract
The farmers expect an outcome in terms of production from the farm. Since the production in the agriculture field is exposed to risk the farmers may not be able to produce the expected yield. In India agriculture is highly susceptible to risks like droughts and floods. It is essential to safeguard the farmers from natural calamities and ensure their credit eligibility for the next season. For this purpose, the Indian Government had introduced many agricultural schemes throughout the country. The major risk in agriculture are price and production risk. The risks that arise from the farm can be controlled through informal and formal instruments. From the various formal instruments agricultural insurance is mainly used to reduce the risk. After recognizing the importance of crop insurance which results in reducing agricultural production against variety of risk, the present study focus on evaluating the performance of crop insurance schemes in Tamilnadu. The paper focuses on the insurance products implemented in state of Tamilnadu and evaluate the efficiency of National Agricultural Insurance Schemes in Tamilnadu (NAIS).

Keywords: Agriculture, Insurance, NAIS, Tamilnadu

Introduction
The farmer expects a yield form the agricultural production. The expected output may change as it is exposed to a risk. The farmers usually produce variety of commodities and make decisions under different situation which are uncertain. The results (actual yield) of the decisions made by the farmers are not certain it may be better or worse than the expected yield. The risk faced by the farmers is classified into two categories (viz) Price and production risk. The following are the two stages of the risk
(i) There is adverse situation.
(ii) Adverse situation leads to significant losses.

There are different types of risks faced by the farmers and it is broadly categorized under six major risk namely price risk, production risk, technology risk, institutional, legal and social risk, personal risk and financial risk. The price risk also called as market risk is associated with the availability and purchase of inputs and marketing and sale of finished products. The price variation may occur within season or year or even over a year.

The production risk also termed as yield risk is generally associated with the changes in agriculture production process like changes in yield may be caused due to various factors like rainfall, temperature, disease, pest, etc., Rarely fire, wind, theft and other casualties also leads to unpredictability in production. Use of advanced technology is one of the sources of risk in agricultural production. Often the development in technology leads to positive result by the way of increasing the production. When the yield of one commodity increases there will be more supply and that may leads to reduction in prices which will automatically decreases the income.

Legal and social risks like Government programs have impact on agricultural production. Personal risks are risks, which are usually related with the availability of family labours for performing operations and management decisions. When there is health problem for the decision maker there will be negative consequence in the operation and management decisions.

Risk assessment is a method which is used to identify, characterize and evaluate the risk. Risk assessment seeks to answer the questions like: a) what can go wrong that could lead to an outcome of hazard exposure? b) How likely is this to happen? and c) if it happens, what consequences are expected? (Oryang, 2002). In agriculture risk management varies from informal device and formal
device. The informal devices include avoiding of high risk crops, diversify across crops and across income sources. Formal devices include agricultural insurance, minimum support price system and future’s markets.

Review of Literature

There are different agricultural insurance organizations and supporting institutions in the world. Many agricultural risks cannot be insured on a financially sound basis, but there is a scope for increased insurance of farm assets, of the life and health of rural people and of some specific perils that affect crop and livestock yields (Hazell, 1992). On this basis, Dandekar (1985) recommended that the “crop insurance scheme should be linked, on a compulsory basis, with the crop loan system”.

The system of Agricultural Insurance in Spain has Professional Agricultural Organisations and Agricultural Cooperatives, the Insurance Companies and the Public Administration (Fernando and Burgaz, 2009).

In Nigeria, the Government introduced agricultural insurance programme with the tripartite aim of broadening farmers’ access to farm resources, positively changing farmers’ attitude to risk in their choice of resource use and to achieve increased food supplies in the market (Olubiyo et al., 2009).

The Government of India had introduced a Comprehensive Crop Insurance Scheme in 1985 and later, a National Agricultural Insurance Scheme in 1999-2000 (Bhende, 2005).


Climatic condition in 2012-13

The rainfall for the season (June-September) in the country was 92 % of its long period average (LPA). Out of the total 36 meteorological subdivisions, 23 subdivisions constituting 67.3% of the total area of the country received excess/normal season rainfall and the remaining 13 subdivisions (32.7% of the total area of the country) received deficient season rainfall. The monthly rainfall over the country as a whole was 72% of LPA in June, 87% of LPA in July, 101% of LPA in August and 111% of LPA in September.

Crop insurance

Crop insurance is one of the formal mechanisms adopted by the farmers to reduce the risk that arises from the farm. It is considered to be a fundamental instrument for sustaining stability in farm income, through promoting technology, promotes investment, and also helps in increasing the credit flow into agricultural sector. In India, agriculture insurance is among the instruments used to protect the farmers from agricultural inconsistency. Agriculture insurance is an essential risk management tool that has the potential to provide financial security to the person engaged in agriculture and allied activities. Among various methods of insurance, agriculture insurance is the only instrument for managing with natural risks. It is a significant device which protects agriculturists against uncertainties.

Agriculture insurance schemes have been introduced in India for reducing weather risk. Since 1985 it has become a customary feature during which Comprehensive Crop Insurance Scheme was started. In 1999 this has been substituted by National Agriculture Insurance Scheme (NAIS). NAIS was introduced on a large scale in terms of crops and area covered. This helps to provide insurance to the farmers towards weather. Consequently it is important to evaluate the performance of crop insurance scheme in the state.

Crop insurance in Tamilnadu

In India the crop insurance was pioneered with the preamble of the All-Risk Comprehensive Crop Insurance (CCIS) which covers the major risk since 1985. Later, National Insurance Scheme was alternatively used for CCIS from the year 1999. Since in the countries like India the production of crop
are subject to changes in climatic conditions both the Government and private sector companies are providing Agriculture and Crop Insurance Schemes to reduce the risk of the farmers.

### Comprehensive Crop Insurance Scheme

The Comprehensive Insurance Scheme (CIS) covers 15 states and 2 union territories. The participation in this scheme is voluntary. Around 5 million farmers having 8 to 9 million hectares were annually covered under this scheme. If suppose the actual yield in any area covered by the scheme fall short of the guaranteed yield, the farmers are eligible to receive the compensation to the extent of the shortfall in yield. The General Insurance Corporation of India governs the scheme on behalf of the Ministry of Agriculture, Government of India. A major drawback of the scheme could be seen from the fact that out of the all-India claim of Rs 1,623 crores, Gujarat alone had received Rs. 792 crores for one single crop viz., groundnut. The scheme was scrapped in 1997.

### Experimental Crop Insurance

An experimental crop insurance scheme had commenced its operation in 1997-98, covering non-loanee small and marginal farmers growing specified crops in preferred districts. The premium was given at the subsidized rate. The premium collected under this scheme was about Rs. 3 crores and the claim was amounted to Rs. 40 crores. The Government discontinued the scheme during 1997-98.

### Farm Income Insurance Scheme

The Central Government formulated the Farm Income Insurance Scheme (FIIS) during 2003-04. The two decisive components of a farmer’s income are yield and price. The target for this FIIS is through a single insurance policy so that the insured farmer could get a guaranteed income.

The scheme provided income protection to the farmers by insuring production and market risks. The farmers covered under this scheme were insured minimum guaranteed income (average yield multiplied by the minimum support price). If the real income was less than the guaranteed income, the insured would be compensated to the extent of the shortfall by the Agriculture Insurance Company of India. Initially, the scheme had covered only wheat and rice and would be compulsory for farmers availing crop loans. NAIS (explained in the section below) are withdrawn for the crops covered under FIIS, but continue to be applicable for other crops. The FIIS was withdrawn in 2004. [1]

### National Agricultural Insurance Scheme (NAIS)

The Government of India had conducted an experiment with a comprehension crop insurance scheme which results in failure. The Government then, introduced in 1999-2000, a new scheme titled “National Agricultural Insurance Scheme” (NAIS) or “Rashtriya Krishi Bima Yojana” (RKBY). NAIS envisages coverage of all food crops (cereals and pulses), oilseeds, and commercial crops. It includes all farmers, both loanees and non-loanees.

The premium rates vary from 1.5 to 3.5 percent of sum assured for food crops. In the case of commercial crops, actuarial rates are charged. Small and marginal farmers are entitled for the subsidy of 50 percent of the premium charged. The subsidy is shared equally between the Government of India and the States. The subsidy is to be paid out over a period of 5 years.

NAIS operates on the basis of

1. Area approach - defined areas for each notified crop for widespread calamities.
2. On individual basis for localized calamities such as hailstorms, landslides, cyclones and floods.

Under the scheme, each state is required to reach the level Gram Panchayat as the unit of insurance for the maximum period of 3 years. As of 2011, the General Insurance Corporation of India (GIC) is implementing the scheme, but the Government has a plan to set up an exclusive organization for implementation of the new scheme.

**Performance of NAIS in 2012-2013**
Under National Agricultural Insurance Scheme (NAIS), during the past 27 seasons, beginning from Rabi 1999-2000 till Rabi 2012-13, the Company have covered 20.76 crore farmers for a sum insured of 2,91,000 crore and cultivating area of 31.28 crore hectares, the total claim amount of 28,683 crore have been reported at a claim ratio of 333.48% benefitting 5.40 crore farmers. Under the Scheme, 26% of the insured farmers have received claims.

**National Agricultural Insurance Scheme**

**Table 1**

**All-India Business Snapshot**

NAIS- Business Statistics from Rabi 1999-2000 to Kharif 2012 (i.e) for 26 seasons  
(As on 01.06.2013)

<table>
<thead>
<tr>
<th>State</th>
<th>No of Farmers covered(in ‘0000)</th>
<th>Area Insured (in ‘000’ Hectares)</th>
<th>Sum insured</th>
<th>Gross Premium</th>
<th>Premium subsidy</th>
<th>Claims</th>
<th>No of farmers Benefited(in’000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamilnadu</td>
<td>4,993.29</td>
<td>6,701.13</td>
<td>13,229.21</td>
<td>330.53</td>
<td>159.90</td>
<td>1,545.32</td>
<td>1,665.64</td>
</tr>
</tbody>
</table>

Table 1 describes the performance of National Agriculture Insurance Scheme as on 01.06.2013.

**Modified National Agricultural Insurance Scheme (MNAIS)**

**Objectives**

- To provide insurance coverage and financial support to the farmers in the event of prevented sowing and failure of any of the notified crop as a result of natural calamities, pests and diseases.
- To encourage the farmers to adopt progressive farming practices, high value in-puts and better technology in Agriculture.
- To help stabilize farm incomes, particularly in disaster years.

**Performance of MNAIS in 2012-2013**

Under Modified National Agricultural Insurance Scheme (MNAIS), the Company implemented the Scheme during Kharif 2012 in 29 Districts in 12 States insuring 16 lakh farmers for a sum insured of 4,358 crore against premium of 509.43 crore. During Rabi 2012-13, the Scheme was implemented in 24 Districts in 11 States insuring 7.82 lakh farmers for a sum insured of 1,585 crore against premium of 177.99 crore. So far total claims assessed in respect of Kharif 2012 are 640 crore.

**Weather Based Crop Insurance Scheme**

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

Weather based Crop Insurance Scheme (WBCIS) is a unique Weather based Insurance Product designed to provide insurance protection against losses in crop yield resulting from adverse weather conditions.
incidences. It offers payout against adverse rainfall incidence (both deficit and excess) during Kharif and adverse incidence in weather parameters like frost, heat, relative humidity, un-seasonal rainfall etc. during Rabi.

Weather Based Crop Insurance Scheme was announced in the Union Budget 2007-08. The Weather Based Crop Insurance (WBCIS) provides insurance protection against potential crop losses due to adverse deviations in weather parameters like rainfall, minimum temperature (frost), maximum temperature (heat), humidity, high wind-speed etc. It covers weather risks during critical stages of the crop growth, the sum insured being broadly equivalent to the cost of cultivation.

Objective
To mitigate the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss resulting from incidence of adverse conditions of weather parameters like rainfall, temperature, frost, humidity etc. Weather Insurance has been piloted in the country since Kharif 2003 season, however Weather Based Crop Insurance Scheme took off from Kharif 2007. Some of the States where it is conducted are Andhra Pradesh, Chattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan etc. The aim of the scheme are: To offer insurance security to the farmers against untoward weather incidence, such as shortage and surplus rainfall, high or low temperature, humidity etc. which are held to affect adversely the crop production. It has the advantage of settling the claims within minimum possible time. It is based on actuarial rates of premium but to make the scheme appealing, the premiums actually charged from farmers have been restricted to and made at par with NAIS. The difference between actuarial rates and premium actually paid by farmers are borne by the Government (both Central and State concerned on 50:50 basis). Besides this a cap on premium payable by farmers for annual commercial/horticultural crops has been provided.

Performance of WBCIS in 2012-2013
Under Weather Based Crop Insurance Scheme (WBCIS), the Company covered more than 35 different crops, including perennial crops like apple, citrus crops, grapes, mango, pomegranate, cashew nut, oil palm etc. The Scheme was implemented in 13 States in Kharif 2012 and 14 States in Rabi 2012-13. During Kharif 2012, the Company insured about 60.16 lakh hectares of land and 35.48 lakh farmers for a sum insured of 7,239 crore, earning a premium of 726 crore. During Rabi 2012-13, the Company insured nearly 43.23 lakh hectares of land of 37.06 lakh farmers for a sum insured of 6827 crore, at a premium of 606 crore. So far the reported claims for Kharif 2012 are at 540 crore and the same for Rabi 2012-13 is 502 crore.

The following table 3 indicates the details of WBCIS as on 23.05.2013.

<table>
<thead>
<tr>
<th>State</th>
<th>No of farmers covered</th>
<th>Area Insured (In hectares)</th>
<th>Sum insured</th>
<th>Gross Premium</th>
<th>Premium Subsidy</th>
<th>Claims</th>
<th>No of farmers benefited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamilnadu</td>
<td>55,712</td>
<td>54,171</td>
<td>12,763.61</td>
<td>1,247.68</td>
<td>836.62</td>
<td>517.69</td>
<td>23,861</td>
</tr>
</tbody>
</table>

Reinsurance in the year 2012-13
During 2012-13, Company retained only 30% in case of WBCIS and MNAIS and in case of NAIS (FCOS Higher Coverage and ACH) 40% of its risk based premium and ceded 70% and 60% to reinsurance on quota share basis respectively in the local and the international markets. The net retention viz., WBCIS, MNAIS and NAIS (Kharif) is further protected by stop-loss cover.
Performance of Non-NAIS Portfolio

The Non-NAIS segment reported improved coverage in terms of the number of locations, number of crops insured and farmers covered under different Schemes/products.

Conclusion

Global food demand is expected to be doubled by 2050, while production environment and natural resources are continuously shrinking and deteriorating. Across the larger part of the world, inadequate attention to agriculture has led to steep rise in food prices and increased food riots; and that has pushed an estimated 100 million more people into poverty. During the recent global food crisis in 2008, Indian agriculture performed better than several of the developing countries, mainly owing to timely policy intervention, yet the agriculture sector needs special attention and emphasis to address numerous inherited and future challenges. Limited success in traditional crop insurance schemes is attributed to the financial non-viability due to non–actuarial based premium as well as the serious problem of moral hazard, adverse selection and complex administrative procedures. There are about 100 million farmers in India who work the hardest and yet seem to suffer the most. Their occupation is fraught with the highest risk as it is totally at the mercy of nature. It becomes the primary duty of Government to think of the welfare of farmers which would necessitate thinking of ways and means of reducing the risk in farming. Despite various schemes launched from time to time in the country agriculture insurance has served very limited purpose.

Reference

2. NationalAgriculturalInsuranceScheme (NAIS) / Rashtriya Krishi Bima Yojana (RKBY)
Annexure 1

Farmers Covered under National Agricultural Insurance Scheme

BUSINESS STATISTICS FROM RABI 1999-2000 TO Kharif 2012 i.e. FOR 26 SEASONS

(AS ON 01.06.2013)

<table>
<thead>
<tr>
<th>S.No</th>
<th>State/ Union Territory</th>
<th>No of farmers covered (in ‘000)</th>
<th>No of farmers benefited (in ‘000)</th>
<th>% of the total farmers benefited</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>28360.77</td>
<td>6581</td>
<td>12.65523</td>
</tr>
<tr>
<td>2</td>
<td>Assam</td>
<td>316.37</td>
<td>59.4</td>
<td>0.114226</td>
</tr>
<tr>
<td>3</td>
<td>A &amp; N islands</td>
<td>2.53</td>
<td>0.18</td>
<td>0.000346</td>
</tr>
<tr>
<td>4</td>
<td>Bihar</td>
<td>6036.98</td>
<td>2431.01</td>
<td>4.67482</td>
</tr>
<tr>
<td>5</td>
<td>Chhattisgarh</td>
<td>9774.31</td>
<td>1671.62</td>
<td>3.214517</td>
</tr>
<tr>
<td>6</td>
<td>Goa</td>
<td>7.89</td>
<td>0.7</td>
<td>0.001346</td>
</tr>
<tr>
<td>7</td>
<td>Gujarat</td>
<td>13265.78</td>
<td>4035.36</td>
<td>7.759976</td>
</tr>
<tr>
<td>8</td>
<td>Haryana</td>
<td>631.27</td>
<td>128.81</td>
<td>0.247701</td>
</tr>
<tr>
<td>9</td>
<td>Himachal Pradesh</td>
<td>290.36</td>
<td>104.32</td>
<td>0.200607</td>
</tr>
<tr>
<td>10</td>
<td>Jammu &amp; Kashmir</td>
<td>36.79</td>
<td>4.29</td>
<td>0.00825</td>
</tr>
<tr>
<td>11</td>
<td>Jharkhand</td>
<td>6045.55</td>
<td>2117.86</td>
<td>4.072634</td>
</tr>
<tr>
<td>12</td>
<td>Karnataka</td>
<td>12788.11</td>
<td>4951.26</td>
<td>9.521247</td>
</tr>
<tr>
<td>13</td>
<td>Kerala</td>
<td>423.01</td>
<td>75.66</td>
<td>0.145494</td>
</tr>
<tr>
<td>14</td>
<td>Madhya Pradesh</td>
<td>26632.81</td>
<td>4666.6</td>
<td>8.973848</td>
</tr>
<tr>
<td>15</td>
<td>Maharashtra</td>
<td>31765.82</td>
<td>9117.08</td>
<td>17.5321</td>
</tr>
<tr>
<td>16</td>
<td>Manipur</td>
<td>18.95</td>
<td>18.95</td>
<td>0.036441</td>
</tr>
<tr>
<td>17</td>
<td>Meghalaya</td>
<td>28.16</td>
<td>2.67</td>
<td>0.005134</td>
</tr>
<tr>
<td>18</td>
<td>Mizoram</td>
<td>0.12</td>
<td>0.12</td>
<td>0.000231</td>
</tr>
<tr>
<td>19</td>
<td>Odisha</td>
<td>14355.64</td>
<td>2573.93</td>
<td>4.949654</td>
</tr>
<tr>
<td>20</td>
<td>Puducherry</td>
<td>36.14</td>
<td>6.67</td>
<td>0.012826</td>
</tr>
<tr>
<td>21</td>
<td>Rajasthan</td>
<td>15058.67</td>
<td>5200.57</td>
<td>10.00067</td>
</tr>
<tr>
<td>22</td>
<td>Sikkim</td>
<td>1.89</td>
<td>0.09</td>
<td>0.000173</td>
</tr>
<tr>
<td>23</td>
<td>Tamilnadu</td>
<td>4993.29</td>
<td>1665.64</td>
<td>3.203017</td>
</tr>
<tr>
<td>24</td>
<td>Tripura</td>
<td>19.39</td>
<td>3.43</td>
<td>0.006596</td>
</tr>
<tr>
<td>25</td>
<td>Uttar pradesh</td>
<td>21531.59</td>
<td>4199.79</td>
<td>8.076174</td>
</tr>
<tr>
<td>26</td>
<td>Uttarakhand</td>
<td>370.6</td>
<td>117.48</td>
<td>0.225913</td>
</tr>
<tr>
<td>27</td>
<td>West Bengal</td>
<td>10834.76</td>
<td>2267.73</td>
<td>4.360833</td>
</tr>
</tbody>
</table>

Total | 203627.55 | 52002.22 |