P: ISSN NO.: 2321-290X RNI : UPBIL/2013/55327 Shrinkhla Ek Shodhparak Vaicharik Patrika
E: ISSN NO.: 2349-980X Vol-III * Issue-VIII* April-2016

# Socio-Economic Profile and Perception of Farmers on Crop Insurance in Odisha: A Case Study of Selected Villages of Keonjhar District

**Yayati Nayak**
Lecturer,
School of Commerce,
Ravenshaw University,
Cuttack

**Abstract**

Agriculture is central to the livelihoods of millions of rural poor. It is the backbone of our Indian economy. Universally agriculture is perceived to be the synonymous with risk and uncertainty. Agriculture in India is varied, diversified and prone to a variety of risks. In most of the areas, agriculture is rain fed, leading to a greater degree of yield variability and risk. Crop insurance is one of the best alternatives to handle such risk. It helps in stabilization of agricultural production. Therefore, it is considered as a risk management tool. To save farmers against these risks involved in agriculture, government has launched several schemes such as National Agricultural Insurance Scheme (NAIS),Weather Based Crop Insurance Scheme (WBCIS),etc.Despite various government supports the penetration of crop insurance is found to be very negligible. Offering a case study of Keonjhar district in Odisha this study is an attempt made by the researcher to study the socio-economic profile of farmers and their perception on crop insurance in the study area.The present study is based on the data collected from 50 farmers from different villages of Keonjhar district. The survey reveals that most of the farmers are not aware about the crop insurance schemes/products and the risk mitigation measures of the government. The study concludes with the recommendation that there is a strong need to refine the existing crop insurance schemes for ensuring better penetration of crop insurance in the backward state of Odisha.

**Keywords** Crop Insurance, Socio-Economic Profile, Farmers' Perception, Awareness Level.

**Introduction**

Agriculture in India is varied, diversified and prone to a variety of risks. Most farmers are small and marginal ones. In most areas, agriculture is rain fed, leading to a greater degree of yield variability and risk.Crop insurance, which aims at addressing yield risk though necessary for a vast majority of farmers is subject to structural, design and financial problems. Problems of asymmetry of information moral hazard and adverse selection and co-variability are more pronounced in crop insurance than in other forms of insurance. Consequently, crop insurance schemes face many problems. In response to such problems, schemes based on the area approach were introduced in the 1980s. More recent insurance schemes are based on weather, and adopt an area approach. Several agencies and organizations are involved in crop insurance programmes, given the vastness of the country, large number of small and marginal farmers, and adoption of area-based approaches. Hence, coordinated efforts are critical for effective implementation of crop insurance schemes in India. However, issues of governance and inter-agency coordination have posed many challenges.

India, an agrarian economy with one third population depending on the agriculture sector directly or indirectly has 116 million farm holdings covering an area of 163 million hectares of which small and marginal farmers (with holdings of 2 hectares or less) make up 80 percent of the producer population. Farming is an inherently risky business and farmers face many types of risks. About 60 per cent of net sown area of the country is rain-fed and 65 percent of Indian farmers depend on rain-fed irrigation. The growth of crops and realization of output are determined by the quantum of rainfall and its distribution during the Monsoon Season which at times is uncertain. Rainfall pattern affects the irrigated crops

also. Nearly two third of the cropped acreage in India is vulnerable to drought in different degrees. This leads to operating risk in cultivation of different crops. On an average 12 million hectares of crop area is affected annually by these calamities severely affecting the yields and total agricultural production.

Agricultural production and farm income in India are frequently affected by natural disasters such as droughts, floods, cyclones, storms, landslides, earthquakes, etc. Susceptibility of agriculture to these disasters is compounded by the outbreak of epidemics and 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. With growing commercialization of agriculture, the magnitude of loss due to unfavourable eventualities is increasing. In recent times, mechanisms like contract farming and futures trading have been established which are expected to provide some insurance against price fluctuations directly or indirectly. But, crop insurance is considered as an important mechanism to address the risks to output and income resulting from various natural and manmade events.

**Importance of the Study**

Traditional agriculture is a 'way of life' for our farmers but now it is becoming a business. Along with the adoption of new technology in farming the problems faced by the farmer's are also increasing. There are problem of soil and water management, natural hazards, technical know-how, marketing, finance, pests and diseases and so on. In finding the solution for these problems, crop insurance can be applied. An important ray of hope in this complex scenario of agribusiness is that new generation are more educated, young and energetic have taken up to this enterprise. About 75% of the population is dependent directly or indirectly on the agriculture sector. In many countries crop insurance is accepted as an Integrated Risk management mechanism managed by public and private enterprises. The knowledge of crop insurance is very vital for each and every farmer. This knowledge on crop insurance will help farmers to minimise their risks associated with farming. Farmers can minimise their risk if there is a sound risk minimising tool. The present study is an attempt made by the researcher to study the socio-economic profile and perception of farmers on crop insurance in the selected villages of Keonjhar district in Odisha.

**Review of Literature**

Many research works have been done in different areas of crop insurance in India and especially about the perception of farmers on it. A good number of literatures are available on the various aspects of crop insurance in India. A few of these reviews are as follows.

**Bindiya Kunal Soni & Jigna Trivedi (2013)** in their research article, "Crop Insurance: An Empirical Study on Awareness and Perceptions", they have made an attempt to understand the existing scenario of crop insurance in India with a special reference to Gujarat. The study empirically checks upon the awareness level of farmers in Anand district towards this product. The paper further examines the perception of those who have availed or not availed crop insurance in various villages of Anand district. The study concludes with various suggestions for increasing the awareness level of the farmers for ensuring better penetration of crop insurance in Anand district.

**S.S. Raju and Ramesh Chand (2008)** in their research article, "A Study on the Performance of National Agricultural Insurance Scheme and Suggestions to make it more Effective", they have examined the features and performance of National Agricultural Insurance Scheme (NAIS) operating in the country and has suggested some modifications to make it more effective. NAIS coverage in terms of crop area, number of farmers and value of agricultural output is very small. If crop insurance programme is to be made an important tool in agricultural risk management, the present level of coverage will have to be improved, at least by 3-4 folds. Such an expansion can occur only with improvements in and broad-basing of the insurance scheme. Every suggested improvement has financial implications and affects the concerned insurance practices. It requires renewed efforts by the government in terms of designing appropriate mechanisms and providing financial support to agricultural insurance. Providing of similar support to the private sector insurers would help in increasing the insurance coverage and improving the viability of insurance schemes over time. The study has also suggested that different general insurance companies in the country may be assigned some reasonable targets to cover agricultural insurance, and to begin with, it could be equal to the share of agriculture in the national income.

**Patwardhan P.S. and Narwade S.S (2013)**

In their research paper, "Role of Agriculture Insurance Scheme in Marathwada Region of Maharashtra, India", they wanted to make a study on the role of National Agriculture Insurance Scheme (NAIS) in Marathwada region of Maha-rashtra state of India. The study showed that farmers covered under NAIS in Maharashtra in kharif season increased at the rate of 1.50% during the period under study. But the area covered and farmers benefitted declined by -6.05% and 4.14% respectively in Maharashtra during 2000-2010. The farmers covered under NAIS in Marathwada in kharif season increased at the rate of 10.67% but area declined by -1.90% during the period under study. In Marathwada claims paid (10.43%) and farmers benefitted (8.72%) in kharif season increased during the period under study.

**R.C Bharati, N.K Azad, KM Singh, S Chakraborti, Naresh Chandra and S.P Singh (2014)**

In their research paper, "Factors Affecting Adoption of Crop Insurance in Bihar" they have used multistage Stratified Random Sampling for selecting two villages in each of the three Agro-Climatic Zones of Bihar. From each selected village, 100 farmers were interviewed. Based on the data collected on age, education and category, multiple regression equation was fitted. Age, education and category contributed significantly on adoption of crop insurance. Age being the most important factor of adoption contributed about 50% towards adoption. It was observed that younger farmers with larger land holding adopt more

crop insurance. It was also observed that with the increase in bank branches, adoption rate increased (r= 0.982). Further it was found that the factors age, education and category were not independent.

**Shweta Sinha and Nitin Kumar Tripathi (2014)**

In their research work, "Assessment of crop insurance international practices, policies and technologies as risk mitigation tools in India and Thailand", they have focussed on the overview of current international practices, policies and technologies relating to the use of crop insurance with case studies of India and Thailand. Both countries are at different stages of adapting index based crop insurance with varying level of support from government. Specifically, weather index insurance is continuously evolving and a combination of technology application and policy up gradation can potentially reduce reliance on subsidy and increase private sector engagement in crop insurance.

**Mohanapriya.T and Dr.A.G.Sudha (2014)**

In their research paper, "An assessment on Agricultural Insurance Schemes in Tamil Nadu", they have focussed on the insurance products implemented in state of Tamilnadu and evaluate the efficiency of National Agricultural Insurance Schemes in Tamilnadu (NAIS).

**Dr. Frank Rathana Kumar and Mr. Breshnev (2014)**

In their research work, "Current Issues on Crop Insurance in Cauvery Delda Region-An Overview", they have made an evaluation of the crop insurance programme in India through the multi-peril yield based National Agricultural Insurance Scheme (NAIS). With the emergence of weather-based crop insurance as an alternative has addressed several limitations of traditional insurance. Both these forms of insurance must thus be looked upon as complementary to each other in order to evolve an efficient mechanism for dealing with natural disaster risks in agriculture. This article highlights the current issues on crop insurance in cauvery delda region-an overview.

**Mukesh H.V (2015)**

In his research article, "Impact of Crop Insurance on Indian Agriculture", he has discussed mainly the issues and benefits of crop insurance in India. Traditional farmers are expanding their operation to include new and different options in doing so they are met with new liability; issues and new risk management needs. Agriculture Insurance is a risk management tool and as a risk transfer device that farmers can depends on as an instrument of indemnity in the event of crop failure.

**D. Suresh Kumar, B.C. Barah, C.R. Ranganathan, R. Venkatram, S. Gurunathan and S. Thirumoorthy (2011)**

In their research work, "An Analysis of Farmers' Perception and Awareness towards Crop Insurance as a Tool for Risk Management in Tamil Nadu", they have reported the results of a survey of 600 farmers conducted to assess their perception about various facets of crop insurance schemes. The Probit and Tobit models have been employed to analyse the factors affecting awareness among the farmers. Crop diversification index has also been used to examine the farmers' adjustment mechanism against risks. The survey has revealed that most farmers (65%) are aware of risk mitigation measures of the government. But, only half of the farmers have been found aware about the crop insurance schemes/products. This implies that there is need to disseminate information about insurance schemes across the target groups. Further, it has been shown that factors such as gross cropped area, income from other than agricultural sources, presence of risk in farming, number of workers in the farm family, satisfaction with the premium rate and affordability of the insurance premium amount significantly and positively influence the adoption of insurance and premium paid by the farmers. The study has clearly brought out the urgency of developing more innovative products, having minimum human interventions.

**S.B. Goudappa, B.S. Reddy and S.M. Chandrashekhar (2012)**

In their research work, "Farmers Perception and Awareness about Crop Insurance in Karnataka", they have made a study on the farmers perception and awareness of crop insurance was conducted in North Eastern parts of Karnataka because region receives very less rainfall compared to other part of Karnataka and people of this region always suffering from drought, they continue to suffer. The study revealed that average size of family among borrowers and non borrowers was seven. Most of them (44%) are illiterate and 25% were education up to primary level. Level of education, family size and experience in farming did not show any significant difference between among the district selected for study. However, farm size and crop income, which generally corresponds to farm size, were significantly higher in Gulbarga district compared to Koppal and Raichur districts. Though NAIS crop insurance scheme is operating since 2002-03 in the study area majority of respondent (>80%) are not aware that who is implementing agency and who pay's compensation. Almost all respondents are in the wrong perception that banks will pay compensation and are the implementing agency.

More than three fourth of the insurance beneficiaries mentioned that bank compulsion was the motivation for opting insurance. Financial security, good experience from others was the region for opting crop insurance. Further more than 80% of respondents are not aware of extent of coverage premium paid, last date, procedure for insuring crops and method of loss determination and compensation worked out by agriculture insurance company. Respondent farmers were suggested for improving existing scheme and they want quick settlement of claims which is usually taking more than one year. Around three fourth of the beneficiaries suggested to consider adverse weather condition prevailed during flowering and pod formation stage. National Agriculture Insurance Scheme (NAIS) in operation needs to be continued with modification and simplification of modalities of indemnity, loss assessment, settlement of compensation and disbursement procedure.

**Research Gap**

A good number of studies have been done in different areas of crop insurance. After an intense review of related literature it is found that a few

studies have been done to study the awareness level of farmers on crop insurance in Odisha and especially in the backward district like Keonjhar where most of the people depend on agriculture to eke out their livings. Crop insurance is one of the most important tools to minimise risk which needs further study to make it more meaningful. With this backdrop it is an attempt made by the researcher to fill the existing gap by conducting this study.

**Objectives of the Study**

The main purpose of this paper is to study the awareness level of farmers about crop insurance in India. However, the specific objectives of the study are as follows.

1. To study the socio-economic profile of farmers in the study area.
2. To examine the awareness level of farmers on crop insurance in Keonjhar district.

**Research Methodology**

The data has been collected from the farmers of different villages of Keonjhar District in Odisha. The sample consists of marginal, small and large farmers. On the basis of convenience sampling method 50 farmers have been selected for this present study. Normally 70 to 75% of households in different villages under this study area belong to farming community. A well structured questionnaire was used to collect data from the respondents. The study was carried out in the month of April, 2016. The present study is mainly based on the primary data. The collected data has been analysed by using percentage analysis.

**Data Analysis and Interpretation**

**Table-1.1**

**Socio-Economic Characteristics of Sample Farmers**

| Socio-Economic Characteristics | Classification | No of farmers | Percentage (%) |
|---|---|---|---|
| Age in years | Up to 21 | 3 | 6 |
| | 21-30 | 7 | 14 |
| | 30-40 | 30 | 60 |
| | Above 40 | 10 | 20 |
| Marital Status | Single | 3 | 6 |
| | Married | 45 | 90 |
| | Divorced | 2 | 4 |
| Type of Family | Joint | 40 | 80 |
| | Nuclear | 10 | 20 |
| Number of Dependants | Nil | 5 | 10 |
| | 1 | 4 | 8 |
| | 2-3 | 26 | 52 |
| | More than 3 | 15 | 30 |
| Family Background | Cultivation | 29 | 58 |
| | Daily labourer | 18 | 36 |
| | Private Job/ Service | 3 | 6 |
| Educational Qualification | Illiterate | 21 | 42 |
| | Primary | 19 | 38 |
| | Matric | 7 | 14 |
| | Degree/Diploma | 3 | 6 |
| Type of House | Hut | 37 | 74 |
| | Pucca | 3 | 6 |
| | Thatched House | 10 | 20 |
| Landholdings (in Acre) | Less than 1 | 9 | 18 |
| | 1-2 | 21 | 42 |
| | 3-4 | 17 | 34 |
| | Above 4 | 3 | 6 |
| Annual Income (in Rs.) | Less than 10,000 | 10 | 20 |
| | 10,000-20,000 | 30 | 60 |
| | 20,000-30,000 | 8 | 16 |
| | Above 30,000 | 2 | 4 |
| Earning members in family | 1 | 19 | 38 |
| | 2 | 21 | 42 |
| | 3 | 6 | 12 |
| | Above 3 | 4 | 8 |
| Savings (in Rs.) | Nil | 30 | 60 |
| | 5,000 | 10 | 20 |
| | 10,000 | 8 | 16 |
| | Above 10,000 | 2 | 4 |

**Source: Primary Data collected from field**

Table No.1.1 depicts that the majority (60%) of the farmers are between the age group of 30-40 years, most of them (90%) are married and (42%) of the farmers have no formal education. Family background of the farmers are cultivation (58%) followed by daily labourer (36%). Most of the farmers (74%) have traditional house (Hut) built of mud and straw. All most all the farmers belong to small and marginal category having land holdings of 1-2 acres. The above table also depicts that (60%) of the farmers have income of less than Rs.20, 000 per annum. Most of the farmers (60%) consume what they earn while (20%) save less than Rs.5000 per annum.

**Table- 1.2**
**Farmers' Awareness Level about Crop Insurance Schemes in the Study Areas**

| Particulars | Number of Farmers | Percentage |
|---|---|---|
| Aware | 23 | 46 |
| Not Aware | 27 | 54 |
| Total | 50 | 100 |

**Source: Primary Data collected from field**

Table No.1.2 depicts that the awareness level among the farmers about crop insurance schemes in the study areas is very low. Farmers are not aware about the crop insurance schemes implemented by the Government as risk management tool. Most of the farmers (54%) have no idea about crop insurance schemes. Among the farmers (46%) have knowledge about crop insurance.

**Table -1.3**
**Number of Farmers opted for Crop Insurance**

| Particulars | Number of Farmers | Percentage |
|---|---|---|
| Insured | 11 | 48 |
| Not Insured | 12 | 52 |
| Total | 23 | 100 |

**Source: Primary Data collected from field**

Table No.1.3 depicts that only (48%) of the farmers have opted for crop insurance schemes. Rest of the farmers (52%) have not joined in the crop insurance schemes besides their awareness and knowledge about crop insurance schemes implemented by the government.

**Table -1.4**
**Source of Information about Crop Insurance**

| Source | Number of Farmers | Percentage |
|---|---|---|
| Newspaper/Radio/Television | 13 | 26 |
| Friends/Relatives | 9 | 18 |
| Banks | 17 | 34 |
| Govt. Departments | 11 | 22 |
| Total | 50 | 100 |

**Source: Primary Data collected from field**

Table No.1.4 depicts that (34%) of the farmers get information about crop insurance schemes from Banks, (26%) of the farmers from Newspaper and other electronic Media, (22%) of the farmers from the government departments and rest (18%) of the farmers from friends and relatives.

**Table - 1.5**
**Nature of Risks Faced by Farmers**

| Risks | Number of Farmers | Percentage |
|---|---|---|
| Less Rain/Drought | 31 | 62 |
| Heavy Rain/Flood | 6 | 12 |
| Pests | 13 | 26 |
| Total | 50 | 100 |

**Source: Primary Data Collected From Field**

Table No.1.5 depicts that (62%) of the farmers have the opinion that less rain is the main cause of risk, (26%) of the farmers have the opinion that pests bring risk while (12%) of the farmers believe that natural calamity like flood is also another case of risk.

**Table -1.6**
**Type of Crop Insured**

| Type of Crop | Number of Farmers | Percentage |
|---|---|---|
| Rice/Paddy | 13 | 57 |
| Wheat | 2 | 9 |
| Potato | 7 | 30 |
| Groundnut | 1 | 4 |
| Total | 23 | 100 |

**Source: Primary Data collected from field**

Table No.1.6 depicts that (57%) of the farmers go for paddy insurance, (30%) of the farmers go for potato insurance, (9%) of the farmers go for wheat insurance and the rest (4%) go for groundnut insurance.

**Table - 1.7**
**Level of Satisfaction of Farmers on the Prevailing Crop Insurance Schemes**

| Satisfaction Level | Number of Farmers | Percentage |
|---|---|---|
| Satisfied | 6 | 26 |
| Highly Satisfied | 1 | 4 |
| Neutral | 4 | 17 |
| Dissatisfied | 12 | 53 |
| Total | 23 | 100 |

**Source: Primary Data collected from field**

Table No.1.7 depicts that the awareness level of farmers about crop insurance schemes in the study areas is not satisfactory. Farmers are not fully satisfied with the crop insurance schemes implemented by the Government. From the total farmers (53%) of them are dissatisfied with the prevailing crop insurance schemes, (26%) of them are satisfied, (4%) of them are highly satisfied while (17%) of them have no any opinion about the crop insurance schemes implemented by the government.

**Table - 1.8**
**Reasons for Dissatisfaction of Farmers on the Existing Crop Insurance Schemes**

| Reasons | Number of Farmers | Percentage |
|---|---|---|
| High Premium | 11 | 48 |
| Less Subsidy | 3 | 13 |
| Delay in claim settlement | 9 | 39 |
| Total | 23 | 100 |

**Source: Primary Data collected from field**

Table No.1.2 depicts that most of the farmers (48%) are dissatisfied with the existing crop insurance

schemes because of the high premium rate, (39%) of them are dissatisfied with the procedure of delay in claim settlement and the rest (13%) of them are dissatisfied with less subsidy of the government.

**Findings**

1. The awareness level of farmers is very poor in the study areas. They are not aware about the existing crop insurance schemes of the government.
2. Among the farmers who aware about the crop insurance schemes most of them have not insured.
3. Farmers get maximum information about crop insurance schemes from Banks followed by Newspaper and other electronic media.
4. Farmers have the opinion that less rain brings more risk as compared to pests and natural calamity.
5. Most of the farmers go for paddy insurance followed by Potato, Wheat and Groundnut.
6. Al most all the farmers are dissatisfied with the existing crop insurance schemes implemented by the government.
7. Farmers are dissatisfied with the existing crop insurance schemes because of the high premium rate, less premium subsidy and delay in settlement of claims.

**Suggestions**

1. Awareness level of farmers about crop insurance schemes can be created through newspaper, television, radio and other electronic print media.
2. Government should make the crop insurance compulsory to all farmers availing crop loans from the Commercial Banks and Cooperative Banks.
3. Awareness campaign should be conducted by the government from time to time in the village level to increase the awareness level of farmers about crop insurance.
4. The existing crop insurance schemes must be redesigned to attract more farmers in the chain of crop insurance.
5. The claim settlement procedure should be faster as far as practicable.
6. The government should give more premium subsidy to motivate farmers to opt for crop insurance.
7. The crop insurance schemes must cover all types of crops both Kharif and Rabi.

**Conclusion**

Agriculture in India is varied, diversified and prone to a variety of risks. Most of the farmers are small and marginal ones. In most areas, agriculture is rain fed, leading to a greater degree of yield variability and risk. In this scenario of high risk and uncertainty of rain fed agriculture, mitigating the risk of the farmers is an important aspect, which the decision makers must have to handle with utmost care. The awareness level of farmers about crop insurance is very poor. They are not aware about the existing crop insurance schemes of the government. Farmers are dissatisfied with the existing crop insurance schemes because of the high premium rate, less premium subsidy and delay in the settlement of claims. The government should give more focus on the purification of the existing crop insurance schemes and to increase the awareness level of farmers about crop insurance. The government should give more premium subsidy to motivate farmers to opt for crop insurance. Awareness campaign should be conducted by the government from time to time in the village level to enhance the awareness level of farmers about crop insurance. The existing crop insurance schemes must be redesigned to attract more number of farmers towards crop insurance.

**References**

1. Bindiya Kunal Soni & Jigna Trivedi (2013), “Crop Insurance: An Empirical Study on Awareness and Perceptions”, GIAN JYOTI E-JOURNAL, Volume 3, Issue 2 (Apr-Jun 2013), ISSN 2250-348X
2. S.S. Raju and Ramesh Chand (2008), “A Study on the Performance of National Agricultural Insurance Scheme and Suggestions to make it more Effective”, Agricultural Economics Research Review, Vol. 21 January-June 2008, pp 11-19
3. Patwardhan P.S. and Narwade S.S (2013), “Role of Agriculture Insurance Scheme in Marathwada Region of Maharashtra, India”, International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 5, Issue 1, 2013.
4. R.C Bharati, N.K Azad, KM Singh, S Chakraborti, Naresh Chandra and S.P Singh (2014), “Factors Affecting Adoption of Crop Insurance in Bihar” Journal of AgriSearch 1(2): 102-107 ISSN : 2348-8808 (Print ), 2348-8867 (Online)
5. Shweta Sinha and Nitin Kumar Tripathi (2014), “Assessment of crop insurance international practices, policies and technologies as risk mitigation tools in India and Thailand”, ISSN 2320-5407 International Journal of Advanced Research (2014), Volume 2, Issue 9, 769-789
6. Mohanapriya.T and Dr.A.G.Sudha (2014), “An assessment on Agricultural Insurance Schemes in Tamil Nadu”, The International Journal’s, Research Journal of Social Science and Management, www.theinternationaljournal.org > RJSSM: Volume: 04, Number: 02, June 2014, ISSN: 2251-1571
7. Dr. Frank Rathana Kumar and Mr. Breshnev (2014), “Current Issues on Crop Insurance in Cauvery Delda Region-An Overview”, International Journal of World Research, Vol: I Issue XI, November 2014, Print ISSN: 2347-937X
8. Pandaraiah G and K.V.Sashidar (2015) “Crop Insurance: Farmers perception and awareness: A case study in Kuram Pally Village of Kanagal mandal of Nalgonda District, Telangana State”, EPRA International Journal of Economic and Business Review, January, 2015, Vol-3, Issue-1, e-ISSN: 2349-0187, e-ISSN: 2347-9671
9. Mukesh H.V (2015) in his research article, “Impact of Crop Insurance on Indian Agriculture”, Global Journal for Research Analysis, Volume-4, Issue-4, April, 2015, ISSN No.2277-8160
10. D.Suresh Kumar, B.C. Barah, C.R. Ranganathan, R. Venkatram, S. Gurunathan and S. Thirumoorthy (2011), “An Analysis of Farmers’ Perception and Awareness towards Crop Insurance as a Tool for Risk Management in Tamil Nadu”, Agricultural Economics Research Review, Vol. 24 January-June 2011 pp 37-46
11. S.B. Goudappa, B. S. Reddy and S.M. Chandrashekhar (2012), “Farmers Perception and Awareness about Crop Insurance in Karnataka”, Indian Research Journal of Extension Education, Special Issue (Volume II), 2012.