



# Progress and Performance of Agriculture Crop Insurance schemes in Andhra Pradesh

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## Abstract

The Indian economy is basically agrarian. In spite of economic development and industrialization, agriculture is the backbone of the Indian economy. As Mahatma Gandhi said, "India lives in villages and agriculture is the soul of Indian economy". Nearly two-thirds of its population depends directly on agriculture for its livelihood. Agriculture is the main stay of India's economy. It contributes about 26 per cent of the gross domestic product. Variability in agricultural production consists of variability in area and yield and their interactions. Variation in area under a crop occurs mainly in response to distribution, time lines and variation in rainfall and other climatic factors, expected prices and availability of crop specific inputs. All these factors also affect variations in yield. Further, yield is also affected by outbreak of diseases, pests, and other natural or man-made hazards like flood, drought and fire and many other factors. Different events may affect area and yield in same way or in opposite or different way. To cover the risk which may occur in future, there is need to some provision and crop insurance is only mechanism available to safeguard against production risk in agriculture. For fulfilling this need the Government of India and Andhra Pradesh state have made experiments & efforts by introducing various schemes of crop insurance like National Agriculture Insurance Scheme, Weather Based Crop Insurance Scheme and Village Insurance Unit Scheme.

**Key words:** Crop insurance, Farmers, government programs, NAIS

## INTRODUCTION:

Agriculture production and farm incomes in India are frequently affected by natural disasters such as droughts, floods, cyclones, storms, landslides and earthquakes. 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 they are beyond the control of the farmers. With the growing commercialization of agriculture, the magnitude of loss due to unfavourable eventualities is increasing. The question is how to protect farmers by minimizing such losses. For a section of farming community, the minimum support prices

for certain crops provide a measure of income stability. But most of the crops and in most of the states MSP is not implemented. In recent times, mechanisms like contract farming and future's trading have been established which are expected to provide some insurance against price fluctuations directly or indirectly. But, agricultural insurance is considered an important mechanism to effectively address the risk to output and income resulting from various natural and manmade events. According to the National Agriculture Policy 2000, "Despite technological and economic advancements, the condition of farmers continues to be unstable due to natural calamities and price fluctuations". In some extreme cases, these unfavourable events become one of the factors leading to farmers' suicides which are now assuming serious proportions (Raju and Chand, 2007).

### **Crop Insurance in India**

In a country like India, where crop production has been subjected to vagaries of weather and large scale damages due to attack of pests and diseases, crop insurance assumes a vital role in the stable growth of the sector. In order to provide a boost to the agriculture in India, a number of experimental crop insurance schemes have been introduced from time to time; such as First individual approach scheme (1972-1978), Pilot Crop Insurance Scheme (1979-1984), Comprehensive Crop Insurance Scheme (1985-1999), Experimental Crop Insurance Scheme (1997-1998), Pilot Scheme on Seed Crop Insurance and National Agricultural Insurance Scheme (1999- 2000 onwards) (Mahajan and Bobade, 2012).

The scheme is available to all States and Union Territories, on an optional basis. A State opting for the scheme will have to continue it, for a minimum period of three years. The scheme is compulsory, for farmers availing crop production loans and voluntary for others. As per the report of working group on risk management in Agriculture for eleventh five year plan (2007- 2012), till Rabi 2005-06, NAIS covered 79.16 million farmers for a premium of `2,332.50 crores and finalized claims of `7,255.75 crores.

According to the latest data released by ministry of agriculture, crop insurance claims worth of `22,135 crore have been settled till now for 4.86 crore farmers mostly from Andhra Pradesh, Gujarat, Rajasthan, Maharashtra, Bihar and Karnataka. With an insurance claim settlement of `4099 crore, Andhra Pradesh tops list of states getting maximum benefit of the scheme followed by Gujarat (`3917 crore), Rajasthan (`2621 crore), Maharashtra (`1873 crore), Bihar (`1794 crore) and Karnataka (`1635 crore) (Financial Express, 2012).

Regarding the private sector participation in rural insurance, it was observed that companies such as TATA AIG General Insurance, Reliance General Insurance, and HDFC Ergo are involved in selling cattle insurance plans. While for crop insurance, the participation of private players has been very scanty in India. ICICI Lombard pioneered weather insurance space by launching rain fall insurance scheme in 2003 in Andhra Pradesh (Venkatesh, 2008).

**Significance of the study:**

Andhra Pradesh State is “the bejewelled rice bowl of India”. Agriculture plays an important role in the livelihoods of people as 62% of the population in Andhra Pradesh live in rural areas and depend on agriculture and related sectors. State main challenges are water scarcity, degrading natural resources like land, decreasing per capita availability of land and water resources. Further, rain fed agriculture in Rayalaseema and North Coastal Districts, Natural calamities like deficit rainfall, prolonged dry spells, cyclones and heavy rains have great impact on production and income of the farmer. The new State of Andhra Pradesh with 13 districts has great potential for agriculture and allied sectors. Andhra Pradesh State consists of 6 Agro Climatic Zones and 5 different soil types to grow wide range of crops throughout the year. Godavari and Krishna rivers running through the State provides ample opportunity for increasing irrigation potential.

**Objective of the study:**

To study the Progress and Performance of Crop Insurance schemes at policy side and farmer side in the study area.

**Methodology of the study:**

For the completion of research paper has used Descriptive research method. For this study, the data has been collected from secondary sources like the Books, Internet, magazines, journals and different types of research papers etc.

**Review of literature:**

**Birner et al (2011)** analyzed the political economy of agricultural policy in India. This study examined the impact of input subsidies. According to this study more subsidies on the fertilizers leads to the unbalanced use of nutrients and it also leads soil degradation. On the other hand subsidies to the electricity leads to more use of ground water which leads to depletion of ground water. Both subsidies are burden to the government.

**Dhanabhakyan and Malarvizhi (2012)** examined the Kissan Credit Cards (KCC) scheme in their study „A study on the awareness, utilization and problems of using KCC of Canara bank (with special reference to Coimbatore district) “. The main objective of this study was to analyses the awareness of the KCC holders and their attitude towards KCC, to review the extend utilization of KCC and to examine the practical problems faced by the KCC holders in Coimbatore district. The study is based on both primary and secondary data. The study observed that 41% of KCC holders came to know about the card through agricultural officers, 23% through bank employees. The study also focused that some of the bank employees are not polite in providing services.

**Harshan and Deshmush (2013)** examined the agricultural subsidies in India. The major objectives of this study was to analyse the types of government agriculture subsidies and criteria for distribution in India and to find out allocation of funds for agriculture sector in five year plans and annual budget of india. The study was based on secondary data. It concentrated two subsidies i.e. fertilizer subsidy and food subsidy. The study observed that the government of India has taken serious measures for the development of agriculture sector and agriculture subsidies are one of tools to help the development of agriculture sector in India.

**Uma et al (2013)** analyzed the impact of cropping pattern on food security in India, based on the primary data collected from individual households with a focus on Hassan District, in Karnataka. The major finding of this study is that there is a shift in cropping pattern from food crops to commercial crops and this will have a direct impact on food security in future.

**Rajmohan and Sussha (2014)** analyzed the Kissan Credit Card (KCC) in the paper „Kissan Credit Card scheme in India; A facet of financial inclusion“. The main objective of this scheme was to provide a short term credit for the borrowers from the financial institutions and adequate and timely supply of credit to the farmers to meet their crop production requirements. The result shows that there is a significant increase in the number of KCC issued in each financial year by different agencies.

### **Progress and Performance of Agricultural Insurance**

The question of introducing an agriculture insurance scheme was examined soon after the Independence in 1947. an „Individual approach’ or a „Homogenous area approach“. The study favoured „homogenous area approach“ even as various agro climatically homogenous areas are treated as a single unit and the individual farmers in such cases pay the same rate of premium and receive the same benefits, irrespective of their individual fortunes. In 1965, the Government introduced a Crop Insurance Bill and circulated a model scheme of crop insurance on a compulsory basis to State governments for their views. The bill provided for the Central government to frame a reinsurance scheme to cover indemnity obligations of the States. However, none of the States favoured the scheme because of the financial obligations involved in it. On receiving the reactions of the State governments, the subject was referred to an Expert Committee headed by the then Chairman, Agricultural Price Commission, in July, 1970 for full examination of the economic, administrative, financial and actuarial implications of the subject.

### **A Study on growth Performance of crop insurance schemes in Andhra Pradesh**

#### **Growth performance of National Agricultural Insurance Scheme in A.P**

The growth performance of National Agricultural Insurance Scheme in Andhra Pradesh is given in Table 3 in terms of average area covered, number of insured farmers, premium paid, sum insured and claim amount from 2000-01 to 2013-14. The compound growth rates were found to be positive for the aspects like number of farmers insured with 0.09, sum insured with 10.40, gross premium 16.98 and premium subsidy with 0.25. For some terms like area insured, claims paid with and number of farmers benefitted, compound growth rates were found to be negative with the values of -0.27, -17.85 and -29.64 respectively. But maximum growth rate was observed for gross premium paid by farmers which is loss to the farmers (Dey and Maitra, 2017).

Table 1.Growth Performance of National Agricultural Insurance scheme (NAIS) in Andhra Pradesh From 2000 -001 to

2013-14

S.No	Year	No.of Farmers insured	Area insured	Sum insured	Gross Premium	Premium Subsidy	Claims Paid	No.of farmers benefited
		No.in lakh	Ha.in lakh	Rs.in Crores	Rs.in Crores	Rs.in Crores	Rs.in Crores	No.in lakh
1	2000-01	19.6	27.07	2021.24	55.17	18.34	0.35	1.53
2	2001-02	17.76	23.62	2002.35	54.54	14.75	0.89	3.03
3	2002-03	18.30	26.68	2272.77	60.00	12.14	2.16	6.82
4	2003-04	17.37	26.21	2370.55	60.83	7.81	2.15	3.19
5	2004-05	25.93	40.91	3758.25	105.98	6.32	0.93	3.13
6	2005-06	22.48	38.01	3652.36	107.26	6.98	4.98	6.72
7	2006-07	22.70	36.49	4717.41	119.66	7.38	56.23	0.79
8	2007- 08	233.34	38.65	4701.49	139.29	8.94	0.12	0.25
9	2008-09	21.53	36.40	4302.56	130.74	8.25	8.39	1.26
10	2009-10	33.48	49.82	7415.83	226.34	15.10	7.32	12.37
11	2010-11	26.62	39.04	6115.33	210.51	13.79	8.35	8.43
12	2011-12	22.47	32.39	6998.46	185.77	13.45	4.08	5.80
13	2012-13	15.64	25.04	6023.17	1367.40	12.40	0.71	1.14
14	2013-14	12.05	15.41	5194.29	144.55	11.09	0.00	0.00
	CAGR	0.09	-0.27	10.40	16.98	0.25	-17.85	-29.64

Source: Ministry of Agriculture &amp; Govt. of India

### Coverage of Weather Based Crop insurance Schemes in A.P

The coverage of Weather Based Crop Insurance Scheme in Andhra Pradesh is presented in Table 4.10 in terms of average area covered, number of insured farmers, premium paid, sum insured and claim amount from 200910 to 2013-14. Maximum number of farmers covered in 2012-13 with 9.32 lakh farmers and 15.17 lakh ha. On the whole, WBCIS has performed well in terms of coverage of farmers and benefits extended to the farmers (Gondala et al., 2008).

**Table 2. Coverage of Weather Based Crop Insurance Scheme (WBCIS) in Andhra Pradesh 2009-10 to 2013-14**

S. No	Year	No. of farmers insured	Area Insured	Sum insured	Gross Premium	Premium Subsidy	Claims Paid	No. of farmers benefited
		No.in lakh	Ha.in lakh	Rs.In crore	Rs.In crore	Rs.In crore	Rs.In crore	No.in lakh
1	2009-10	0.17	0.12	143.21	11.59	4.72	0.17	0.17
2	2010-11	1.16	1.23	380.51	37.38	18.69	0.11	0.58
3	2011-12	8.96	14.87	3211.32	321.57	200.73	2.09	6.82
4	2012-13	9.32	15.17	3879.60	387.93	242.24	3.55	6.71
5	2013-14	8.28	13.91	3750.08	375.05	236.62	2.83	5.89

Source: Ministry of Agriculture & Govt. of India

### Overall growth performance of crop insurance schemes in A.P

The overall growth performance of Crop Insurance Schemes in Andhra Pradesh is given in Table 5 in terms of average area, number of insured farmers, premium paid, sum insured, claim amount and number of farmers benefitted from 1985-86 to 2015-16. The compound growth rates were calculated and have been reported found progressive. The compound growth rates were found to be positive for all the aspects but maximum growth rate was observed for claims paid to farmers with 26.45 which is loss to the government. For number of farmers insured, area insured, sum insured, premium collected and number of farmers benefitted, growth rates were calculated as 6.54, 7.39, 22.76, 21.1 and 11.42

**Table 3. Overall growth Performance of Crop Insurance Scheme in Andhra Pradesh from 1985-86 to 2015-16**

S.No	Year	No. of Farmers insured	Area insured	Sum insured	Premium collected	Claims Paid	No. of farmers benefited
		No.in lakh	Ha.in lakh	Rs.in Crores	Rs.in crore	Rs.in crore	No.in lakh
1	1985-86	8.67	16.77	214.11	3.90	5.65	0.95
2	1986-87	6.56	16.97	233.07	4.27	39.49	3.30
3	1987-88	9.99	20.85	348.96	6.11	11.58	1.47
4	1988-89	4.02	6.65	115.03	1.95	2.53	0.49
5	1989-90	7.97	13.09	251.68	4.38	24.43	0.83
6	1990-91	2.91	4.85	110.59	1.98	4.78	0.50
7	1991-92	6.49	10.98	248.29	4.97	31.75	2.44
8	1992-93	8.66	15.00	350.31	6.11	17.14	1.83
9	1993-94	8.84	14.52	402.59	6.98	4.82	0.81
10	1994-95	10.02	16.87	507.38	8.53	25.70	2.11
11	1995-96	11.20	17.05	577.61	9.85	18.59	1.64
12	1996-97	12.06	19.58	3808.37	27.39	74.7	6.26
13	1997-98	12.92	22.11	7039.13	44.94	130.97	10.88
14	1998-99	13.78	24.64	10269.88	62.48	187.16	7.88

15	1999-2000	14.64	27.17	13500.64	8.03	243.35	8.74
16	2000- 01	15.50	29.70	16731.40	97.57	299.54	9.60
17	2001- 02	16.37	32.23	19962.15	115.12	355.73	10.46
18	2002- 03	17.23	34.76	23192.91	132.67	411.92	11.32
19	2003- 04	18.09	37.29	26423.66	150.21	468.11	12.18
20	2004- 05	18.95	39.82	29654.42	167.76	524.31	13.04
21	2005- 06	19.1	42.35	32885.18	185.30	580.50	13.90
22	2006- 07	20.67	44.88	36115.93	202.85	636.69	14.76
23	2007- 08	21.53	47.41	39346.69	220.39	692.88	15.62
24	2008- 09	21.53	49.94	42577.45	237.94	749.07	15.62
25	2009- 10	33.64	49.94	45808.20	237.94	749.07	27.73
26	2010- 11	28.35	40.92	49038.96	259.23	784.17	22.44
27	2011- 12	280.49	431.89	54238.96	1835.91	4585.64	70.95
28	2012- 13	284.67	239.30	68368.64	925.52	91657.82	45.98
39	2013- 14	28.86	46.72	11850.05	798.27	64734.38	21.00
30	2014- 15	28.86	46.71	11849.93	205.29	7017.33	20.96
31	2015-16	7.31	40.66	11574.69	648.08	269.74	2.81
32	2016-2017	7.67	43.86	22459.63	122.81	652.12	3.26
	CAGR	6.54	7.39	22.76	21.51	26.45	11.42

Source: Ministry of Agriculture & Govt. of India

## CONCLUSION:

As Mahatma Gandhi said, "India lives in villages and agriculture is the soul of Indian economy". Nearly two-thirds of its population depends directly on agriculture for its livelihood. Agriculture is the main stay of India's economy. It contributes about 26 per cent of the gross domestic product. Variability in agricultural production consists of variability in area and yield and their interactions. Variation in area under a crop occurs mainly in response to distribution, time lines and variation in rainfall and other climatic factors, expected prices and availability of crop specific inputs.

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