

APPRAISAL OF WEATHER BASED CROP INSURANCE SCHEME (WBCIS) IN RAJASTHAN

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ABSTRACT

Indian agriculture depends on monsoon which is always flexible. It leads to operating risk in cultivation of different crops. Natural calamities may affect on the yield from agriculture sector. 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 has made experiments & efforts by introducing various schemes of crop insurance. Since the year 2007, Weather Based Crop Insurance Scheme has been launched by Government of India. This research paper has made attempt to study the growth and development of Weather Based Crop Insurance Scheme in Rajasthan.

KEYWORDS: *Operating Risk, Production Risk, Weather Based Crop Insurance Scheme.*

Introduction

Weather Based Crop Insurance Scheme was started for the first time during Kharif 2007 on a pilot basis. This scheme was based on Area approach. More than 70 percents subsidy on premium is being provided to all farmers, which is equally shared by GO and Rajasthan Government. Crops like Bazra, Moong, Moth, Cowpea, Groundnut and Guar for Kharif season and Fenugreek, Coriander, Cumin, Gram, Isabgol, Sarso / Mastard, Taramira, Barley, Wheat for Rabi season are covered under this scheme. This scheme is not based on yield parameters, but based on several weather parameters like deficit/excess rain fall, excess temperature and dry days. All the farmers (loanee and non-loanee) are eligible in this scheme. However this is compulsory for loanee farmers. Reference Unit Area is linked to local weather stations. Risk period i.e. insurance period will be considered from sowing time to maturity of crop. The sum insured under WBCIS is broadly equivalent to cost of cultivation and it is pre-declared and notified by the insurance agency and banks.

Review of Literature

Sinha (2004) undertook a study of interstate comparison with respect to the effect of crop insurance policy.

Kalavakonda and Mahul (2005) analyzed the activity of crop insurance of India's second largest driest state Karnataka and pointed out the weakness in product design, implementation challenges and operational problems.

Karthik and Ramalingam (2013) analyzed the awareness level of farmers about various crop of insurance scheme and also evaluated the relationship between the socio-economic characteristics of farmers and their awareness level.

Balasubramanian (2014) in his article, highlighted issues related to weather based crop insurance scheme in Perambalur district of Tamilnadu where about 90 percent area is under rainfed. Therefore, WBLIS is more appropriate for covering the rainfall risks in cropping.

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Objectives

- To study the growth and development of Weather Based Crop Insurance Scheme.
- To examine the Rajasthan's status in WBCIS among the selected states

Performance of weather Based Crop Insurance Scheme in Rajasthan

Table 1: Performance of WBCIS in Rajasthan till Rabi-2015-16

Season	Farmers Covered	Area Insured (in Hectare)	Sum Insured (in lacs)	Premium (in lacs)	Claim (in lacs)	Farmers Benefitted
2007-08	584415	923775	159244	12959	9464	366541
2008-09	1121656	2165731	226181	23198	9950	668878
2009-10	1189706	1991171	200293	17526	15305	686192
2010-11	7377178	10589133	756189	68497	26400	2927865
2011-12	8226629	10848089	920653	83934	62074	3719258
2012-13	8127619	10581687	962144	86227	83319	6267063
2013-14	6258845	7949438	673151	65228	23897	4206423
2014-15	5462351	6372699	483230	58219	89088	5172331
2015-16	5777309	6610536	435744	61247	72951	4926763
Total	44125707	58032258	4816830	477034	392447	28941314

Source: Agriculture Department of Rajasthan and AICof India.

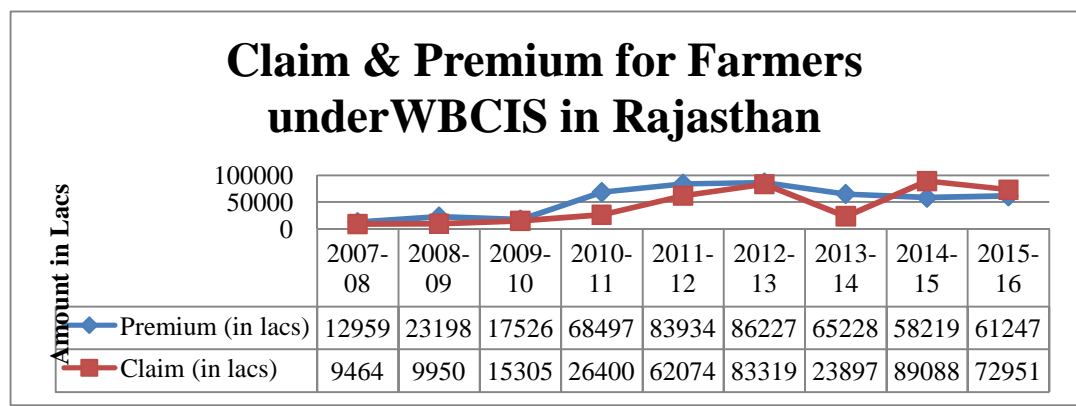
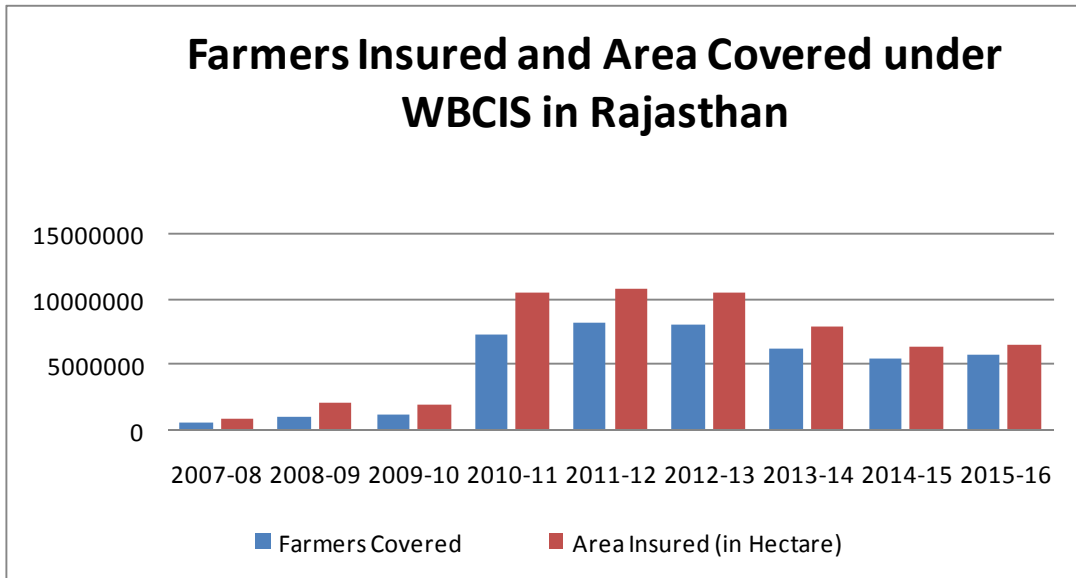


Table 1 shows that around 441 lakh farmers in Rajasthan got their crop insured up to the year 2015-16. Overall 289 lakh farmers benefitted from crops insurance during this period. WBCIS was started from Kharif 2007. In 2007-08, the insured amount was Rs. 1592.44 crore with the coverage of 9.23 lakh hectare of 5.84 lakh farmers. Premium collected during 2007-08 was Rs. 129.59 crore as compared to Rs. 94.46 crore as claims. Till 2011-12, there was an upward trend in the coverage of farmers under WBCIS in Rajasthan. In 2014-15, a sum total of Rs. 58219 lakh was collected as premium from 54.62 lakh farmers against their 63.73 lakh hectare of lands. And claims were paid out of Rs. 89088 lakh. In 2015-16, as many as 57.77 lakh farmers were insured and the insured amount was Rs. 435744 lakh against Rs. 61247 lakh as premium collected in Rajasthan. As many as 49.27 lakh farmers in Rajasthan benefitted from it, during 2015-16. The coverage of WBCIS in Rajasthan is very good in comparison to other states.

Table 2: Average Area, Sum and Claim - Premium Ratio

Years	Sum Insured		Premium per		Claims		Claim-Premium Ratio	Farmer Benefitted Percent
	Farmer	Hectare	Farmer	Hectare	Farmer	Hectare		
2007-08	27248	17238	2217	1403	1619	1024	0.73	63
2008-09	20165	10444	2068	1071	887	459	0.43	60
2009-10	16836	10059	1473	880	1286	769	0.87	58
2010-11	10250	7141	928	647	358	249	0.39	40
2011-12	11191	8487	1020	774	755	572	0.74	45
2012-13	11838	9093	1061	815	1025	787	0.97	77
2013-14	10755	8468	1042	821	382	301	0.37	67
2014-15	8847	7583	1066	914	1631	1398	1.53	95
2015-16	7542	6592	1060	927	1263	1104	1.19	85
Total	13852	9456	1326	917	1023	740	0.80	66

Source: Agriculture Department of Rajasthan and AIC of India

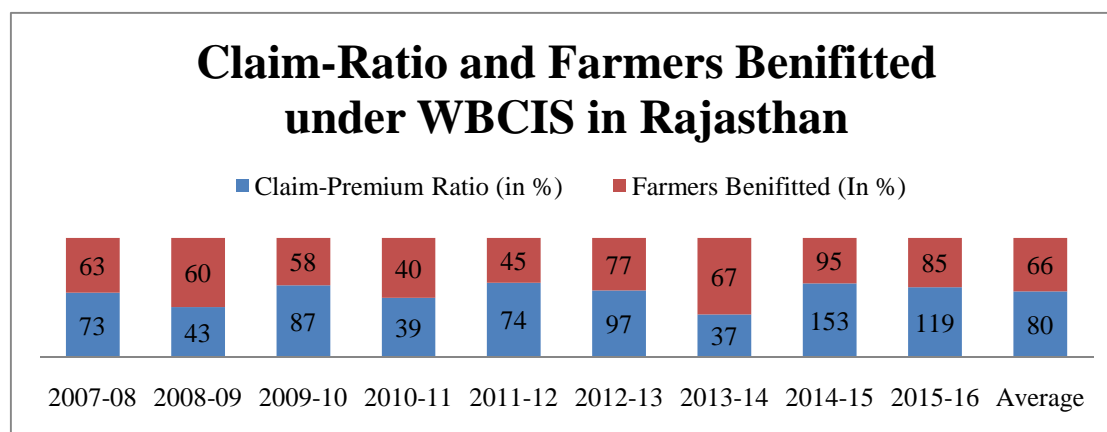


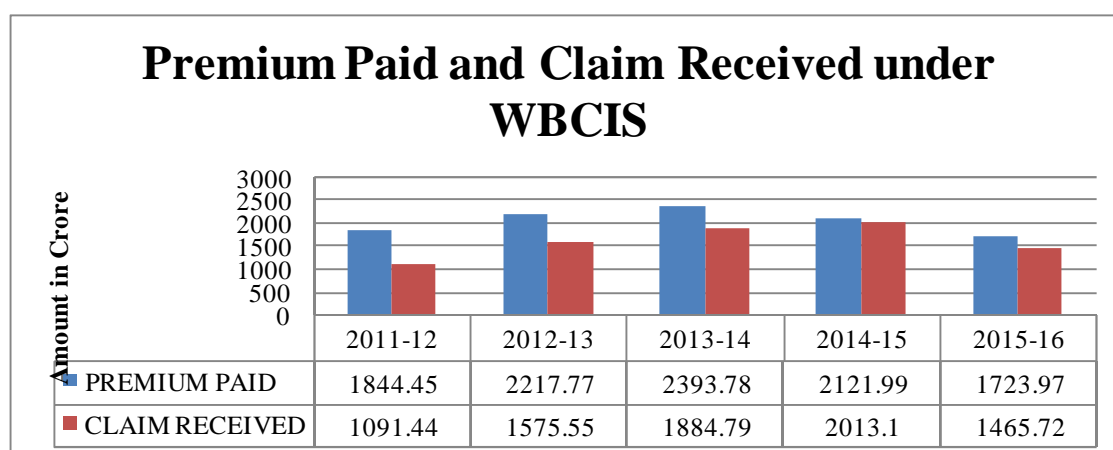
Table 2 explains the average sum insured, premium, claims and claim-premium ratio per farmer and per hectare in Rajasthan state from 2007-08 to 2015-16. During 2007-08, sum insured per farmers was Rs. 27248 and per hectare was Rs. 17238. Sum insured per farmer was highest in 2007-08 i.e. Rs. 27248. On an average sum insured per hectare was Rs. 13852. Average premium per farmers was Rs. 1326 and Rs. 917 per hectare. Average claim-premium ratio was 0.80. Average percentage of farmers received their claims was 66 till Rabi 2015-16. This ratio was 95 during 2014-15 and 85 during 2015-16.

Claim-premium ratio was 0.73 in 2007-08. It is only two seasons above 1 i.e. 1.53 in 2014-15 and 1.19 in 2015-16. It was less than 1, in all seasons except 2014-15 and 2015-16. During 2010-11 to 2013-14, insurance agency made huge profits as for every 1 rupee collected as premium; it gave only 39 paise, 74 paise, 97 paise and 37 paise respectively as claims to the insured farmers. Despite this loop sidedness, a good number of Rajasthan farmers, seem to have benefitted, and performed quite well to accept crops insurance as means towards boosting agricultural production as well as guarding against natural and manmade hazards in agriculture.

Table 3: Association between Premium Paid and Claim Received under Weather Based Crop Insurance Scheme

Years	Premium Paid	Claim Received
2011-12	1844.45	1091.44
2012-13	2217.77	1575.55
2013-14	2393.78	1884.79
2014-15	2121.99	2013.1
2015-16	1723.97	1465.72
Total	10301.96	8030.6

Source: www.agricoop.nic.in and Department of Agriculture, cooperation and Farmers Welfare



Values	Premium Paid (X) (Amount in Crore)	Claim Paid (Y) (Amount in Crore)
Arithmetic Mean	2060.39	1606.12
Standard Deviation	244.75	325.22
Co-efficient of Standard Deviation	0.12	0.20
Correlation (r)	0.68	

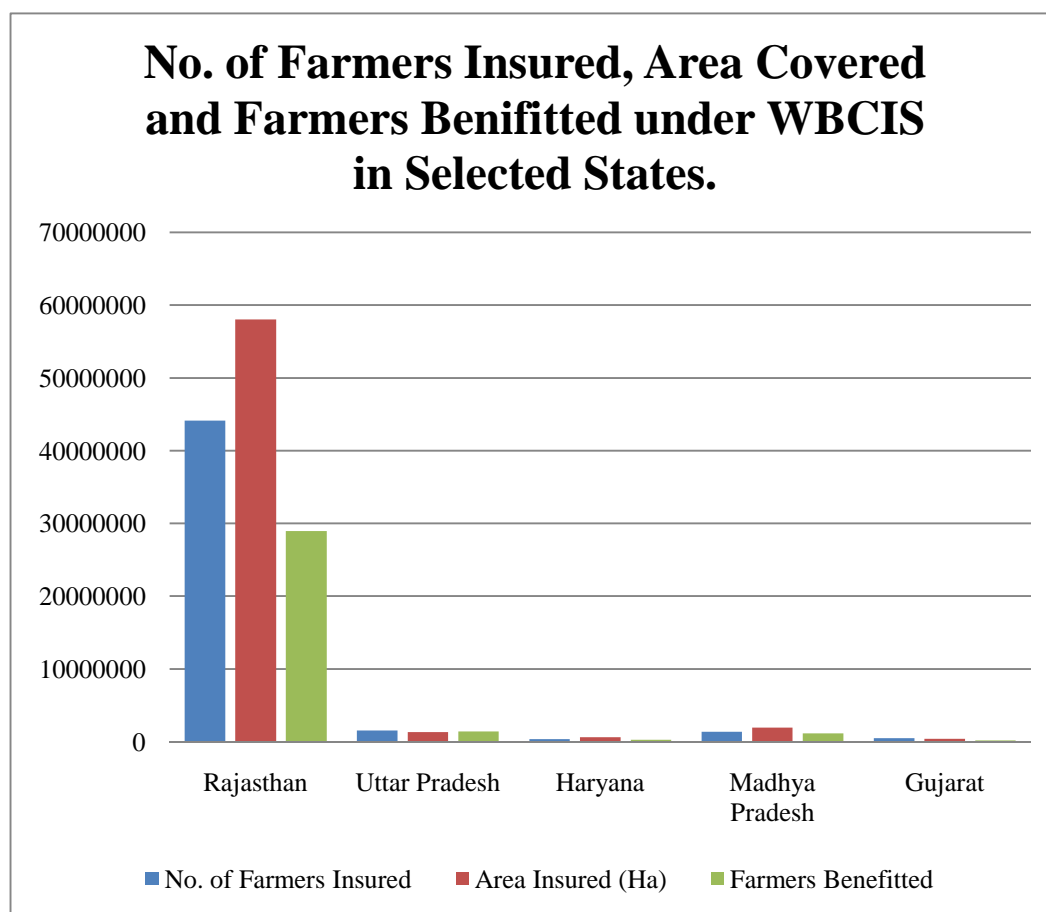
Interpretation

Above statistical analysis shows that arithmetic mean of premium paid is 2060.39 crores while that of claim received is 1606.12 crore. Standard deviation of premium paid is 244.75 and that of claim received is 325.22. This shows that there is positive variation in claim received in comparison to variation in premium paid. Coefficient of standard deviation shows that there is 12% variation in premium paid while it is 20% for claim received. Correlation between premium paid and claim received is 0.68 which is moderate degree positive correlation. It shows that for every 1 rupees of premium paid only 0.68 paisa received by the farmers as claim. It means Insurance Companies making huge profits towards agriculture insurance products.

Comparison of WBCIS between Selected States of India towards 6 Parameters**Table 4: Comparison Between Selected States till Rabi 2015-16**

State	No. of Farmers Insured	Area Insured (Ha)	Sum Insured	Gross Premium	Claims	Farmers Benefitted
Rajasthan	44125707	58032258.7	4816829.91	477033.57	392447	28941314
Uttar Pradesh	1529699	1318113.64	265304.16	45482.57	53716.05	1394020
Haryana	359388	602022.74	190262	16768.49	6208.42	250497
Madhya Pradesh	1381347	1919796.56	509160.53	50112.56	30498.31	1151892
Gujarat	497661	413126.4	22394.75	2239.48	857.35	170576

Source: www.agricoop.nic.in and Department of Agriculture, Cooperation and Farmers Welfare Annual Reports.

**Table 5: Performance of Selected States on Basis of 6 Indicators WBCIS**

State	Ranks					
	Farmers Covered	Area	Sum Insured	Premium	Claims	Farmers Benefitted
Rajasthan	1	1	1	1	1	1
Uttar Pradesh	2	3	3	3	2	2
Haryana	5	4	4	4	4	4
Madhya Pradesh	3	2	2	2	3	3
Gujarat	4	5	5	5	5	5

Source: Calculation on the basis of data obtained from AI of India and department of agriculture

If we look at the data of WBCIS, Rajasthan stood at the top position in terms of all indicators i.e. area, farmers, sum insured, premium, claims and farmers benefitted, Uttar Pradesh and Madhya Pradesh on these composition among the selected states, Haryana on 4th and Gujarat on 5th position. It equal value is given to all the six indicators, than compositely Rajasthan stood at the top position and Uttar Pradesh and Madhya Pradesh on 2nd position.

Findings

- In Rajasthan 4.41 Crore farmers and 5.80 crore hectare of land was covered under WBCIS till Rabi 2015-16.
- Total premium collected under this scheme in Rajasthan was Rs. 4770.344 crore and Rs. 3924.472 crore claims were distributed till Rabi 2015-16.
- Rajasthan stood at the top position in terms of all indicators i.e. area, farmers, sum insured, premium, claims and farmers benefitted.

- Uttar Pradesh and Madhya Pradesh on the second position among the selected states, Haryana on 4th and Gujarat on 5th position.
- It equal value is given to all the six indicators, than compositely Rajasthan stood at the top position and Uttar Pradesh and Madhya Pradesh on 2nd position.
- Claims per farmer and perfect are were Rs. 1023 and Rs. 740 respectively. Average claim-premium ratio was 0.80 at all India level and 0.77 at Rajasthan level.
- 66 percent farmers received insurance claims. Highest number off armors received claims was also in Rajasthan.
- Average premium per hectare was Rs.917 and Rs.1326 perfarmers.
- Claims per hectare were Rs.1104 and Rs.1263 performer during 2015-16. Highest claims per hectare and performer were during 2014-15 i.e. Rs.1398 and Rs.1631 respectively.
- Claim-premium ratio was 1.53 during 2014-15 and was 0.37 during 2013-14. Overall claim-premium ratio was 0.80 which means for every 1 rupees premium farmers get only 80 paisa.

Suggestions

- These WBCIS is not covering all crops, they covers only few crops. Therefore these schemes should be drafted to cover all the crops grown in any particular area.
- Claim – Premium Ratio is less than 1 in the scheme and insurance companies making huge profits so Government should reduce the premium rate and increase the level of indemnity or amount of sum insured.
- Proper steps should be taken to increase the numbers of crops area covered specially non-loanee farmers. This can be possible by reducing premium rate and other formalities adopted for taking agriculture insurance.
- As the coverage of WBCIS is comparatively low so government should provide infrastructure to private insurance companies and can share some part of operational cost, as private insures pull their hands because of high start-up costs.
- Any insurance activity always based on the principal of large numbers because the risks being distributed across space and time due to its large coverage.
- There is a need to create awareness among farmers about agriculture insurance schemes through effective media, insurance agents and rural agents at door step or at village level. As most of the farmers are not so much educated that's why technicalities should be made clear.

Conclusion

The multi-dimensional analysis of the available and collected data along various variables and parameters of the study on weather based crop insurance in Rajasthan does go to prove that the peasantry in the state, by and large, actively participates in their share to contribute to agricultural growth and development in respect of all the crops for which its land is suitable. In Rajasthan WBCIS is implemented in better ways as Rajasthan got No. 1 position in all parameter. However, enough is not enough and much more needs to be perceived and done to keep the farmers dovetailed to the task of states all-inclusive and sustainable development in Agriculture and fields to maintain its pride of place as a predominantly agrarian society, always on the move forward.

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