Volume VI, No. 1

Journal

December 2007

Sowing Seeds...
of PROTECTION

बीमा विनियामक और विकास प्राधिकरण

Printed by Alapati Bapanna and
published by C.S.Rao on behalf of
Insurance Regulatory and Development Authority.

Editor: U. Jawaharlal

Printed at Kalajyothi Process Ltd.
(with design inputs from Wide Reach)
1-1-60/5, RTC Cross Roads
Musheerabad, Hyderabad - 500 020
and published from
Parisrama Bhavanam, III Floor
5-9-58/B, Basheer Bagh
Hyderabad - 500 004
Phone: +91-40-66820964, 66789768
Fax: +91-40-66823334
e-mail: irdajournal@irda.gov.in

From the Publisher

It is often said that India lives in its villages. The most important occupation of the villagers is agriculture and it is estimated that almost three fourths of India's population is dependent on the primary sector which contributes around a fifth of the total GDP of the nation. It is this section of the population that suffers most, as a result of the vagaries of nature. Intermittent incidences of either a severe drought or a devastating flood subject the hardworking farmer community to untold misery.

Apart from the havoc that nature can play, there are certain limitations that confront the Indian farming community. A vast majority of the people dependent on agriculture are small or marginal farmers, with limited land-holding that renders the use of modern technology unviable. Added to this, ignorance and the lack of education contribute to their inability to adopting loss-control measures. Scientific assessment of the credit needs of the farmers, and putting in place proper insurance arrangements would certainly go a long way in alleviating their hardship.

There is no significant breakthrough in agriculture insurance. Developing a sound actuarial basis for a proper assessment of the risks and pricing them accordingly would make agriculture insurance products viable for the insurers; and at the same time affordable for the farmers. There is immediate need for working in this direction and also to spread the understanding of the importance of risk management techniques among the agricultural community of the nation. Broadening the target base would help achieve economic viability and at the same time fight the twin evils of moral hazard and adverse selection.

'Agriculture Insurance' is the focus of this issue of the **Journal**. Health insurance is a relatively new class in the Indian insurance scene. Although it has made rapid progress recently, there is need and also scope for expanding it further. The focus of the next issue of the **Journal** will be on 'Health Insurance'.

C.S. Rao

INSIDE

ISSUE FOCUS

FOLLOW THROUGH

Agriculture Insurance - Friend of the Farmer

Despite more than two-thirds of the Indian population depending on agriculture, either directly or indirectly, the fact that the farming community still pursues the profession with a great degree of uncertainty as to the ultimate outcome speaks volumes of the associated ills. The increasing number of suicidal deaths of the members of this community is another intriguing factor. Over a period of time, there has been overall progress in agricultural output and the income levels, if the entire nation is to be taken as a unit. However, there are still some pockets where the deep-seated maladies continue.

One of the essential reasons for the problems associated with agriculture is dependence on weather. There has been tremendous progress in the area of weather forecasting techniques as also the precautions to be taken against the damage that nature's fury can cause. However, environmentalists emphasize that the trends of global warming are responsible for the ecological disequilibrium that manifests itself in the form of catastrophes. In a predominantly agrarian economy like India, the farming community bears the brunt of such losses.

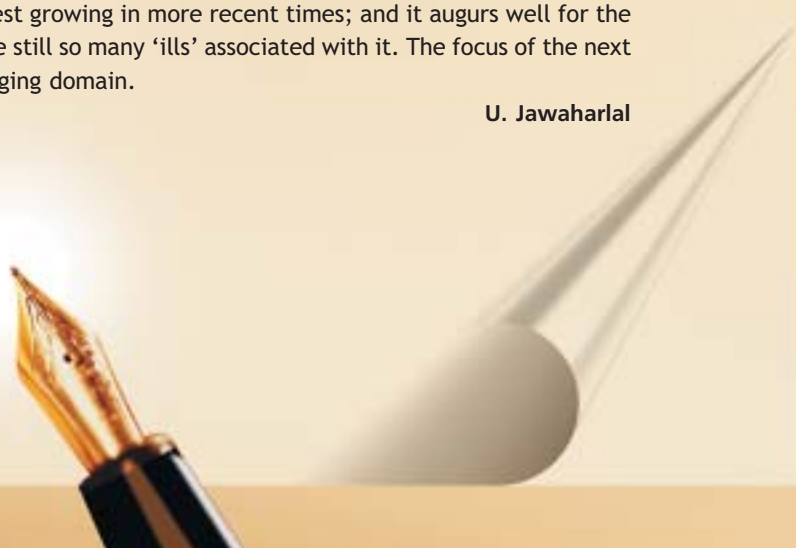
While the supremacy of nature is beyond doubt, measures must be taken in order that the devastation that it can wreak is put in control; and wherever losses are imminent, there must be alternatives for the farmers to resort to. Proper insurance arrangements can be a very handy tool in such adverse circumstances. However, insurance in the area of agriculture has not made sufficient progress in the country; although more recent trends indicate a healthy growth. There is need for consolidation in this class and products based on scientific and actuarial assessments are the need of the hour. Further, there is also a drastic need for bringing the vast majority of the agrarian community under the umbrella of insurance so that the economies of scale are accomplished. This, of course, presupposes that the benefits of insurance are well understood; and it is here that all the stakeholders have to play a key role.

'Agriculture Insurance' is the focus of this issue of the **Journal.** Mr. M. Parshad, the CMD of Agriculture Insurance Company of India Ltd. himself sets the ball rolling with an article that talks about the difficulties associated with the administration of the schemes; and the way forward. In the next article, Mr. Roman Hohl and Ms. Harini Kannan exhort the evolutionary trends of agriculture in India; and take a look at what is required for the Indian agriculture sector. Mr. K.N. Rao, in his article 'Weather based Crop Insurance' talks about certain limitations of weather insurance which can however provide stability against the inherent risks.

The subject of crop insurance has always been evolving and the government has also been constantly working on it. This fact is brought home lucidly by Mr. M.K. Poddar in the next article. Mr. Pranav Parshad, in his article, describes how exactly index-based weather insurance works and narrates his experience in the domain. In the last article on issue focus, Ms. Avinash Kaur Lochan brings out succinctly the correlation between microfinance and microinsurance; and the role of agriculture insurance product for the Indian market. In the 'follow through' section, Ms. Madhumalati Damle discusses the importance of spreading the risk globally, if the mechanism of reinsurance is to emerge successful in the long run. In addition to the statistics of monthly performance of the players, we have for you the class-wise half-yearly statistics of both life and non-life insurers.

'Health Insurance', as a class, has been the fastest growing in more recent times; and it augurs well for the Indian insurance industry. Nevertheless, there are still so many 'ills' associated with it. The focus of the next issue of the **Journal** will be on this ever-challenging domain.

U. Jawaharlal



Report Card:LIFE

First Year Premium of Life Insurers for the Period Ended October, 2007

Sl No.	Insurer	Premium u/w (Rs. in Crores)			No. of Policies / Schemes			No. of lives covered under Group Schemes		
		Oct, 07	Up to Oct, 07	Up to Oct, 06	Oct, 07	Up to Oct, 07	Up to Oct, 06	Oct, 07	Up to Oct, 07	Up to Oct, 06
1	**Bajaj Allianz**									
	Individual Single Premium	54.58	296.81	577.42	7218	47197	28133			
	Individual Non-Single Premium	320.86	2332.84	928.23	223987	1724890	573898			
	Group Single Premium	1.08	6.98	3.24	0	0	1	759	4957	1209
	Group Non-Single Premium	2.17	13.20	11.93	21	158	112	82838	457676	465933
2	**ING Vysya**									
	Individual Single Premium	3.35	11.88	17.56	384	1081	1238			
	Individual Non-Single Premium	52.42	289.78	184.57	32899	176669	96577			
	Group Single Premium	-0.03	0.81	2.31	0	0	0	15	183	517
	Group Non-Single Premium	0.06	2.30	4.23	3	11	28	10964	59210	8400
3	**Reliance Life**									
	Individual Single Premium	26.39	97.74	62.83	5086	19767	9756			
	Individual Non-Single Premium	140.83	611.65	204.36	70906	333736	141340			
	Group Single Premium	37.78	135.74	9.22	4	45	15	13647	70789	13486
	Group Non-Single Premium	1.81	11.99	3.96	29	148	79	46557	223151	103281
4	**SBI Life**									
	Individual Single Premium	124.77	504.19	186.63	16878	70289	27654			
	Individual Non-Single Premium	153.64	760.17	391.06	47839	247316	179863			
	Group Single Premium	17.66	108.56	108.19	0	0	2	8931	56380	66647
	Group Non-Single Premium	15.37	98.82	128.36	13	34	258	88282	298355	671567
5	**Tata AIG**									
	Individual Single Premium	4.21	17.93	5.24	707	2714	371			
	Individual Non-Single Premium	61.57	346.55	265.32	33169	233778	206594			
	Group Single Premium	4.98	37.42	29.26	0	0	4	33388	235006	156895
	Group Non-Single Premium	18.51	39.41	26.66	11	39	58	12039	127684	142975
6	**HDFC Standard**									
	Individual Single Premium	10.11	62.91	65.81	10991	182107	62557			
	Individual Non-Single Premium	172.62	926.87	508.89	46850	295366	137500			
	Group Single Premium	8.14	36.19	51.46	6	71	61	5985	72552	124739
	Group Non-Single Premium	8.33	41.61	33.42	8	28	9	7716	28845	1678
7	**ICICI Prudential**									
	Individual Single Premium	27.59	192.70	162.50	4053	30177	25038			
	Individual Non-Single Premium	451.95	2609.03	1612.91	185851	1258671	763684			
	Group Single Premium	11.01	100.04	86.41	22	120	98	45898	254633	69197
	Group Non-Single Premium	78.42	281.41	219.03	8	247	192	26211	279826	174819
8	**Birla Sunlife**									
	Individual Single Premium	1.61	12.18	17.03	7850	39101	20090			
	Individual Non-Single Premium	142.88	696.93	307.26	35090	198035	113434			
	Group Single Premium	0.47	2.43	5.69	0	3	0	1062	3464	3319
	Group Non-Single Premium	18.17	48.20	54.50	12	75	89	29373	88225	42271

9	**Aviva**									
	Individual Single Premium	1.55	11.23	15.41	249	1695	1424			
	Individual Non-Single Premium	67.41	425.87	312.81	25784	173513	134679			
	Group Single Premium	0.15	1.54	1.79	0	0	1	125	771	957
	Group Non-Single Premium	2.64	20.04	16.42	6	82	42	48807	386601	183544
10	**Kotak Mahindra Old Mutual**									
	Individual Single Premium	1.97	11.64	20.64	273	1535	2188			
	Individual Non-Single Premium	60.92	295.25	171.94	23612	109287	54233			
	Group Single Premium	1.86	11.95	3.92	0	1	5	18010	101411	19730
	Group Non-Single Premium	5.91	28.82	20.76	21	127	80	46609	272114	124140
11	**Max New York**									
	Individual Single Premium	18.94	116.04	20.33	1266	7572	1214			
	Individual Non-Single Premium	76.91	553.33	349.93	51541	368486	273748			
	Group Single Premium	0.00	0.00	0.00	0	0	0	0	0	0
	Group Non-Single Premium	4.75	24.83	1.78	15	222	32	36882	332743	44337
12	**Met Life**									
	Individual Single Premium	1.74	13.52	3.16	264	2095	662			
	Individual Non-Single Premium	54.02	257.45	102.89	19446	95962	43738			
	Group Single Premium	0.38	4.63	0.00	2	36	0	18513	111855	0
	Group Non-Single Premium	0.00	0.00	10.22	0	0	152	0	0	300008
13	**Sahara Life**									
	Individual Single Premium	3.13	15.40	7.26	810	4016	1869			
	Individual Non-Single Premium	5.37	27.91	2.36	7216	41086	6625			
	Group Single Premium	0.00	0.00	0.00	0	0	0	0	0	0
	Group Non-Single Premium	0.00	0.00	0.94	0	2	2	0	52	103131
14	**Shriram Life**									
	Individual Single Premium	16.38	74.23	20.63	2720	13886	4595			
	Individual Non-Single Premium	10.25	58.66	24.97	5657	35824	31168			
	Group Single Premium	0.00	0.02	0.00	0	1	0	0	1625	0
	Group Non-Single Premium	0.00	0.00	0.00	0	1	0	0	571	0
15	**Bharti Axa Life**									
	Individual Single Premium	0.30	0.78	0.00	26	71	0			
	Individual Non-Single Premium	6.85	25.09	1.12	5051	22175	442			
	Group Single Premium	0.00	0.00	0.00	0	0	0	0	0	0
	Group Non-Single Premium	0.00	0.00	0.00	0	0	0	0	0	0
	Private Total									
	Individual Single Premium	**296.62**	**1439.18**	**1182.43**	**58775**	**423303**	**186789**			
	Individual Non-Single Premium	**1778.51**	**10217.36**	**5368.63**	**814898**	**5314794**	**2757523**			
	Group Single Premium	**83.49**	**446.29**	**301.48**	**34**	**277**	**187**	**146333**	**913626**	**456696**
	Group Non-Single Premium	**156.12**	**610.64**	**532.21**	**147**	**1174**	**1133**	**436278**	**2555053**	**2366084**
16	**LIC**									
	Individual Single Premium	1595.28	9161.90	12183.67	408407	2489724	3062861			
	Individual Non-Single Premium	941.89	12265.11	12350.41	1588022	15391635	8828081			
	Group Single Premium	602.53	4474.18	4372.01	1470	11930	9604	1811614	12044697	7221496
	Group Non-Single Premium	0.00	0.00	0.00	0	0	0	0	0	0
	Grand Total									
	Individual Single Premium	**1891.90**	**10601.08**	**13366.10**	**467182**	**2913027**	**3249650**			
	Individual Non-Single Premium	**2720.40**	**22482.47**	**17719.04**	**2402920**	**20706429**	**11585604**			
	Group Single Premium	**686.03**	**4920.48**	**4673.49**	**1504**	**12207**	**9791**	**1957947**	**12958323**	**7678192**
	Group Non-Single Premium	**156.12**	**610.64**	**532.21**	**147**	**1174**	**1133**	**436278**	**2555053**	**2366084**

Note: 1.Cumulative premium upto the month is net of cancellations which may occur during the free look period.
2. Compiled on the basis of data submitted by the Insurance companies

FIRST YEAR PREMIUM OF LIFE INSURERS FOR THE HALF YEAR ENDED SEPTEMBER 2007

INDIVIDUAL SINGLE PREMIUM (INCLUDING RURAL & SOCIAL)

(Rs.in Crore)

Sl. No.	PARTICULARS	PREMIUM		POLICIES		SUM ASSURED	
		Sept 2006	Sept 2007	Sept 2006	Sept 2007	Sept 2006	Sept 2007
	Non linked*						
1	Life						
	with profit	102.64	82.75	12602	6621	157.38	147.19
	without profit	519.87	104.54	136397	223301	1794.88	1362.95
2	General Annuity						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	2.01	6.09	91	657	0.12	0.13
3	Pension						
	with profit	70.72	40.62	3739	2665	1.62	2.10
	without profit	1.38	0.24	50	22	1.08	0.00
4	Health						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0.00	0.00
A.	Sub total	696.63	234.23	152879	233266	1955.07	1512.37
	Linked*						
1	Life						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	1633.17	2045.32	163933	513859	1797.70	3877.91
2	General Annuity						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	-0.22	0.00	0	0	0.00	0.01
3	Pension						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	9393.59	6429.53	2445859	1698846	1.71	25.23
4	Health						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0.00	0.00
B.	Sub total	11026.55	8474.85	2609792	2212705	1799.41	3903.14
C.	Total (A+B)	11723.18	8709.08	2762671	2445971	3754.49	5415.51
	Riders:						
	Non linked						
1	Health#	0.01	0.01	17	13	0.25	0.01
2	Accident##	0.03	0.01	544	73	3.93	0.55
3	Term	0.00	0.00	9	1	0.06	0.00
4	Others	0.00	0.00	0	0	0.00	0.00
D.	Sub total	0.04	0.02	570	87	4.25	0.56
	Linked						
1	Health#	0.01	0.01	50	11	0.55	0.13
2	Accident##	0.04	0.08	1739	7723	12.08	58.54
3	Term	0.00	0.00	4	0	0.08	0.00
4	Others	0.00	0.00	0	0	0.00	0.00
E.	Sub total	0.05	0.08	1793	7734	12.72	58.67
F.	Total (D+E)	0.09	0.10	2363	7821	16.97	59.23
G.	**Grand Total (C+F)	11723.27	8709.18	2762671	2445971	3771.46	5474.74

* Excluding rider figures.
** for policies Grand Total is C.
# All riders related to critical illness benefit, hospitalisation benefit and medical treatment.
Disability related riders.
The premium is actual amount received and not annualised premium.

FIRST YEAR PREMIUM OF LIFE INSURERS FOR THE HALF YEAR ENDED SEPTEMBER 2007

INDIVIDUAL NON - SINGLE PREMIUM (INCLUDING RURAL & SOCIAL)

(Rs.in Crore)

Sl. No.	PARTICULARS	PREMIUM		POLICIES		SUM ASSURED	
		Sept 2006	Sept 2007	Sept 2006	Sept 2007	Sept 2006	Sept 2007
	Non linked*						
1	Life						
	with profit	8368.57	4068.78	7306524	6223612	65468.66	59555.48
	without profit	923.98	102.45	392135	438233	8525.08	8658.48
2	General Annuity						
	with profit	0.10	0.05	108	63	1.59	1.15
	without profit	0.00	0.00	0	0	0.00	0.00
3	Pension						
	with profit	22.63	12.31	10175	9941	98.34	110.95
	without profit	4.25	8.56	1824	3364	0.00	0.00
4	Health						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	6.95	37.04	53189	162498	2384.12	12747.23
A.	Sub total	9326.47	4229.20	7763955	6837711	76477.78	81073.30
	Linked*						
1	Life						
	with profit	0.10	-0.01	46	8	0.89	0.20
	without profit	3995.33	13505.74	1545647	10648205	37260.87	138030.39
2	General Annuity						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0.00	0.00
3	Pension						
	with profit	0.04	0.02	4	5	0.00	0.00
	without profit	572.41	2005.47	198789	820853	254.06	1343.45
4	Health						
	with profit	0.00	0.00	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0.00	0.00
B.	Sub total	4567.87	15511.22	1744486	11469071	37515.82	139374.04
C.	Total (A+B)	13894.34	19740.42	9508441	18306782	113993.61	220447.34
	Riders:						
	Non linked						
1	Health#	1.73	0.82	9397	6032	124.38	77.85
2	Accident##	3.17	1.98	189857	108951	3162.62	1774.58
3	Term	0.23	0.11	3701	1954	40.26	19.58
4	Others	8.93	6.42	2560	699	1450.13	748.19
D.	Sub total	14.06	9.33	205515	117636	4777.39	2620.20
	Linked						
1	Health#	2.25	1.63	5901	4358	202.84	180.60
2	Accident##	2.55	9.54	49585	75345	3300.75	4707.25
3	Term	0.37	0.19	4010	9412	81.48	216.90
4	Others	0.57	0.26	9931	2281	50.99	1180.89
E.	Sub total	5.74	11.62	69427	91396	3636.06	6285.64
F.	Total (D+E)	19.81	20.96	274942	209032	8413.44	8905.84
G.	**Grand Total (C+F)	13914.15	19761.37	9508441	18306782	122407.05	229353.18

* Excluding rider figures.
** for policies Grand Total is C.
# All riders related to critical illness benefit, hospitalisation benefit and medical treatment.
Disability related riders.
The premium is actual amount received and not annualised premium.

FIRST YEAR PREMIUM OF LIFE INSURERS FOR THE HALF YEAR ENDED SEPTEMBER 2007

GROUP SINGLE PREMIUM (INCLUDING RURAL & SOCIAL)

(Rs.in Crore)

Sl. No.	PARTICULARS	PREMIUM		NO. OF SCHEMES		LIVES COVERED		SUM ASSURED	
		Sept 2006	Sept 2007	Sept 2006	Sept 2007	Sept 2006	Sept 2007	Sept 2006	Sept 2007
	Non linked*								
1	**Life**								
a)	Group Gratuity Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	661.58	570.77	796	784	321571	433199	2097.55	1453.91
b)	Group Savings Linked Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	18.03	4.38	340	239	69049	47547	1144.91	311.63
c)	EDLI								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	1.93	2.65	476	450	361205	457180	1145.81	1995.23
d)	Others								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	1920.03	1553.19	6573	8836	5889610	9793097	51724.99	37746.08
2	**General Annuity**								
	with profit	352.17	227.18	4	3	1323	884	0.00	0.00
	without profit	271.73	681.02	32	41	3237	4618	0.00	0.00
3	**Pension**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	343.50	1062.85	84	279	71447	199893	0.00	0.00
4	**Health**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
A.	**Sub total**	**3568.96**	**4102.03**	**8305**	**10632**	**6717442**	**10936418**	**56113.25**	**41506.86**
	Linked*								
1	**Life**								
a)	Group Gratuity Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	32.50	67.82	12	55	72649	36672	6.44	199.67
b)	Group Savings Linked Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
c)	EDLI								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
d)	Others								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	5.36	6.70	2	1	5078	435	0.51	0.04
2	**General Annuity**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
3	**Pension**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	5.55	57.84	9	15	4756	26851	0.00	0.00
4	**Health**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
B.	**Sub total**	**43.41**	**132.36**	**23**	**71**	**82483**	**63958**	**6.95**	**199.71**
C.	**Total (A+B)**	**3612.37**	**4234.39**	**8328**	**10703**	**6799925**	**11000376**	**56120.20**	**41706.57**
	Riders:								
	Non linked								
1	Health#	0.18	-0.01	10	7	3239	3951	2345.92	215.51
2	Accident##	0.21	0.07	21	19	9860	23506	7736.07	315.57
3	Term	0.00	0.00	0	0	0	0	0.00	0.00
4	Others	0.00	0.00	0	0	0	0	0.00	0.00
D.	**Sub total**	**0.39**	**0.06**	**31**	**26**	**13099**	**27457**	**10081.99**	**531.08**
	Linked								
1	Health#	0.00	0.00	0	0	0	0	0.00	0.00
2	Accident##	0.00	0.00	0	0	0	0	0.00	0.00
3	Term	0.00	0.00	0	0	0	0	0.00	0.00
4	Others	0.00	0.00	0	0	0	0	0.00	0.00
E.	**Sub total**	**0.00**	**0.00**	**0**	**0**	**0**	**0**	**0.00**	**0.00**
F.	**Total (D+E)**	**0.39**	**0.06**	**31**	**26**	**13099**	**27457**	**10081.99**	**531.08**
G.	****Grand Total (C+F)**	**3612.76**	**4234.45**	**8328**	**10703**	**6799925**	**11000376**	**66202.19**	**42237.65**

* Excluding rider figures.
** for no. of schemes & lives covered Grand Total is C.
# All riders related to critical illness benefit, hospitalisation benefit and medical treatment.
Disability related riders.
The premium is actual amount received and not annualised premium.

FIRST YEAR PREMIUM OF LIFE INSURERS FOR THE HALF YEAR ENDED SEPTEMBER 2007

GROUP NEW BUSINESS -- NON-SINGLE PREMIUM (INCLUDING RURAL & SOCIAL)

(Rs.in Crore)

Sl. No.	PARTICULARS	PREMIUM		NO. OF SCHEMES		LIVES COVERED		SUM ASSURED	
		Sept 2006	Sept 2007	Sept 2006	Sept 2007	Sept 2006	Sept 2007	Sept 2006	Sept 2007
	Non linked*								
1	**Life**								
a)	Group Gratuity Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	42.13	47.33	18	23	33548	27565	139.64	192.42
b)	Group Savings Linked Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	6.78	17.10	0	0	108280	133905	2246.96	1809.11
c)	EDLI								
	with profit	0.00	0.97	0	83	0	90561	0.00	813.49
	without profit	3.02	1.20	133	84	218924	102174	1773.53	878.95
d)	Others								
	with profit	0.00	15.94	0	110	0	197048	0.00	5117.83
	without profit	80.74	67.86	589	376	1429654	1170758	27978.13	23566.09
2	**General Annuity**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
3	**Pension**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.86	0.21	3	0	68	0	0.06	0.00
4	**Health**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
A.	**Sub total**	**133.54**	**150.61**	**743**	**676**	**1790474**	**1722011**	**32138.32**	**32377.89**
	Linked*								
1	**Life**								
a)	Group Gratuity Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	136.17	155.46	151	218	130178	360854	1509.15	2148.14
b)	Group Savings Linked Schemes								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	1.93	0	14	0	3301	0.00	44.93
c)	EDLI								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
d)	Others								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	4.78	7.16	10	9	144	683	0.79	7.40
2	**General Annuity**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	20.80	1.61	3	4	1679	1022	20.80	1.61
3	**Pension**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	118.88	136.15	79	106	11987	30904	0.00	0.00
4	**Health**								
	with profit	0.00	0.00	0	0	0	0	0.00	0.00
	without profit	0.00	0.00	0	0	0	0	0.00	0.00
B.	**Sub total**	**280.64**	**302.32**	**243**	**351**	**143988**	**396764**	**1530.75**	**2202.08**
C.	**Total (A+B)**	**414.18**	**452.93**	**986**	**1027**	**1934462**	**2118775**	**33669.07**	**34579.97**
	Riders:								
	Non linked								
1	Health#	0.06	0.98	4	13	1168	8197	45.59	577.11
2	Accident##	0.07	0.31	10	11	6176	12694	276.90	923.26
3	Term	0.00	0.01	1	1	73	61	2.17	0.63
4	Others	0.00	0.01	2	4	102	379	22.03	71.14
D.	**Sub total**	0.12	1.30	17	29	7519	21331	346.68	1572.14
	Linked								
1	Health#	0.00	0.00	0	0	0	0	0.00	0.00
2	Accident##	0.16	0.29	15	13	11812	13901	855.15	456.04
3	Term	0.00	0.00	0	0	0	0	0.00	0.00
4	Others	0.00	0.00	0	0	0	0	0.00	0.00
E.	**Sub total**	**0.16**	**0.29**	**15**	**13**	**11812**	**13901**	**855.15**	**456.04**
F.	**Total (D+E)**	**0.28**	**1.59**	**32**	**42**	**19331**	**35232**	**1201.83**	**2028.19**
G.	**Grand Total (C+F)	414.46	454.52	986	1027	1934462	2118775	34870.90	36608.16

* Excluding rider figures.
** for no. of schemes & lives covered Grand Total is C.
# All riders related to critical illness benefit, hospitalisation benefit and medical treatment.
Disability related riders.
The premium is actual amount received and not annualised premium.
$ Reflects revised data submitted by ICICI Prudential Life Insurance Company Ltd.

Ensuring **Healthy Progress...**

THE POTENTIAL FOR HEALTH INSURANCE IN INDIA IS HUGE, CONSIDERING THE LOW PENETRATION. MORE RECENT TRENDS INDICATE GOOD PROGRESS OF THIS YOUNG SECTOR. HOWEVER, IN ORDER TO FIGHT THE 'ILLS' ASSOCIATED WITH THE CLASS, THERE IS A ROLE FOR EACH OF THE STAKEHOLDERS TO PLAY' SAYS U. JAWAHARLAL.

Health insurance, as a class, is very young in the Indian insurance domain. But it has overtaken several other sectors; and presently it occupies the third place among the different non-life insurance classes. More than that, as per the latest statistics available, it has registered a higher than 50% rise over the business figures for the corresponding period last year; while the overall growth in non-life insurance business is around 10%. All these statistics put it in a very healthy spot which augurs well for the Indian insurance industry as also for the betterment of healthcare in the country. However, it would be naïve to believe that everything is hunky-dory with health insurance.

Among the customer grievances in the insurance domain, health insurance occupies one of the top slots; and the reasons are not far to seek. Primarily, the insuring public should understand that insurance pays when the conditions underlying the contract are fulfilled. This fact is sometimes not well received even by the educated elite and it is felt that having paid the premium for some years, they have a right to enforce a claim. While the responsibility of improving the awareness levels rests with all the stakeholders, insurers would do well to make the clauses very explicit; and if necessary, to emphasize and explain, in particular, the exclusions.

Some of the areas which are the usual bone of contention are the condition of the pre-existing disease and the compulsory hospitalization for a certain minimum period. An upfront, detailed underwriting and an open discussion with the policyholder can lead to better objectivity in dealing with pre-existing diseases. Similarly, the condition of minimum hospitalization should be applied in its true spirit. At a time when medical technology is progressing by leaps and bounds, strict interpretation of such clauses in letter may not serve the purpose.

Moral hazard is a great deterrent in health insurance business. There is a role for all parties concerned in curbing this menace. Hospitals should ensure to charge the patients based on the treatment provided, and not really bother about their insurance status. The institution of Third Party Administrators has been introduced to serve the purpose of easier settlement of claims and they should play their role effectively in ensuring better administration. Above all, the insurance orientation of the customer should be taken into consideration while dealing with health insurance claims.

As age progresses, the likelihood of one's falling sick, increases. At the same time, considering the higher risk, the underwriting rigour and cost of insurance also increase progressively with age. This leads to a situation whereby the availability of insurance when it is needed more gets to be increasingly difficult. With the report of the committee for health insurance for senior citizens having been submitted, it is hoped that some of these issues would be attended to.

'Health Insurance' will be the focus of the next issue of the Journal and we look forward to a healthy debate on this hugely important area for the Indian insurance industry.

Towards
Better Health...

in the next issue...

CIRCULAR

November 1, 2007 43/IRDA/AGENCY/Nov 2007

Re: Clarification on Circular pertaining to Reduction in Training Hours

To

All Insurers / Agents Training Institutes (In-house, Private and Online)

IRDA vide Gazette Notification dated 9th October, 2007 on Amendments to IRDA (Licensing of Insurance Agents) Regulation and IRDA (Licensing of Corporate Agents) Regulation and Circular no. 42/IRDA/AGENCY/Oct 2007 dated 15th October, 2007 issued instructions about reduction in agents' training hours. IRDA is in receipt of number of requests seeking clarification with regard to the limit of number of training hours per day.

In this regard, I am directed to state that –

"By one week it is meant seven days inclusive of weekend and holidays. It is advised that training per day not to exceed 8 hours. This would apply to both online and offline training"

Sd/-
(V. Vedakumari)
Executive Director (Admn.)

NOTICE

8th November, 2007

Re : General Insurance Council's Proposed Standard Market Wordings for erstwhile tariff Business

The General Insurance Council has undertaken the responsibility of developing Standard Market Wordings for Fire, Engineering and Motor portfolios to be followed by insurers in the tariff free regime. The Standard wordings proposed for the above classes of insurance by the Council are available for perusal on their website www.generalinsurancecouncil.org.in.

Suggestions/comments from various stakeholders and public may be sent to the General Insurance Council directly with a copy to us.

(C.S. Rao)
Chairman

CIRCULAR

November 22, 2007 45/IRDA/F&A/Nov.-07

To
The Chairman/Chief Executive Officer of
All Insurance Companies
Dear Sir,

Quarterly Submission of Financial Statements

As you are aware, section 11 (1A) of the Insurance Act, 1938 requires all insurers to prepare at the expiration of each financial year, with reference to that year, a balance sheet, a profit and loss account, a separate account of receipts and payments, a revenue account in accordance with the regulations made by the Authority. These statements are required to be furnished to the Authority within a period of six months from the end of the period to which they refer.

With a view to strengthening the framework of disclosure to the Authority and to reduce the periodicity at which information on the financial performance of the companies is submitted to the Authority, it has now been decided that all insurers shall submit to the Authority the un-audited segment wise financial statements on a quarterly basis. These statements may be filed with the Authority without the accompanying schedules. The manner of preparation of the un-audited financial statements shall be as per the instructions contained in the IRDA (Preparation of Financial

Statements and Auditor's Report of Insurance Companies) Regulations, 2002 and the various circulars/instructions issued thereunder.

The filing of quarterly statements is required to be made as per the following time schedule:

Solvency report as on	To be submitted on or before
30th June	15th August
30th September	15th November
31st December	15th February

The prevailing requirements for filing of the Financial Statements as at 31st March shall continue as per the provisos of the Regulations under reference and the instructions issued vide Circular No. IRDA/F&A/013/2005-06 dated 9th June, 2005.

These instructions come into effect from the quarter ended December, 2007.
Kindly acknowledge receipt.

(C. R. Muralidharan)
Member (F&I)

CIRCULAR

November 22, 2007 46/IRDA/F&A/Nov.-07

To
The Chairman/ Chief Executive Officer of
All Non Life Insurance and Re-insurance Companies

Dear Sir,

Reporting of Maintenance of Solvency Margin Ratio

As you are aware, all insurance companies are required to maintain the solvency ratio of 1.5 at all times. Further, IRDA (Assets, Liabilities and Solvency Margin of Insurers) Regulations, 2000 require all insurers to file the Statement of Solvency Margin (General Insurers) as at 31st March every year.

Post relaxation of controls on the tariffs for the non-life insurance industry, there is a felt need to monitor the solvency position of all insurers at shorter intervals. Accordingly, it has now been decided that all non-life insurance companies shall file their solvency position as at the end of each quarter. It is expected that the stipulation would enable insurance companies to lay down their business plans and to be in the position to meet their capital requirements in a timely manner. While the stipulation was made effective for the life insurance companies, w.e.f. June, 2007, the requirement is now being extended to the non-life and re-insurance companies as well.

The filing of quarterly statements is required to be made as per the following schedule:

Solvency report as on	To be submitted on or before
30th June	15th August
30th September	15th November
31st December	15th February

The prevailing requirements for filing of the Solvency Statements as at 31st March shall continue as per the provisos of the Regulations under reference.

The format of submission of the solvency position is enclosed at Annexe.
Kindly acknowledge receipt.

(C. R. Muralidharan)
Member (F&I)

ANNEXE

STATEMENT OF AVAILABLE SOLVENCY MARGIN AND SOLVENCY RATIO

Item (1)	Description (2)	Notes No. (3)	Amount (4)
01	Available Assets in Policyholders' Funds: Deduct:		
02	Liabilities		
03	Other Liabilities		
04	Excess in Policyholders' funds (01 - 02 - 03)		
05	Available Assets in Shareholders Funds: Deduct:		
06	Other Liabilities		
07	Excess in Shareholders' funds (05 - 06)		
08	Total ASM (04)+(07)		
09	Total RSM		
10	Solvency Ratio (Total ASM / Total RSM)		

Certification

I,....., the CFO,certify that the above statements have been prepared in accordance with the section 64VA of the Insurance Act,1938, and the amounts mentioned therein are true to the best of my knowledge.

Place:
Date: Name and Signature of the CFO

Counter signature: Principal Officer:

Notes:

1. Item No.01 shall be the amount of the Adjusted Value of Assets in respect of policyholders' funds as mentioned in Form IRDA-Assets -AA.
2. Item No. 02 shall be the amount of Total Liabilities as mentioned in Form HG.
3. Item No. 03 shall be the amount of other liabilities arising in respect of policyholders' funds and as mentioned in the Balance Sheet
4. Item No. 05 shall be the amount of the Total Assets in respect of shareholders' funds as mentioned in Form IRDA - Assets - AA.
5. Item No. 06 shall be the amount of other liabilities arising in respect of shareholders' funds and as mentioned in the Balance Sheet.

We welcome consumer experiences.
Tell us about the good and the bad you have gone through and your suggestions.
Your insights are valuable to the industry.
Help us see where we are going.

Send your articles to:
Editor, IRDA Journal, Insurance Regulatory and Development Authority,
Parisrama Bhavanam, III Floor, 5-9-58/B, Basheerbagh, Hyderabad 500 004
or e-mail us at irdajournal@irda.gov.in

The **Speciality** of **Crop Insurance**

Role of AIC

'IN ORDER TO ENSURE PROTECTION AGAINST FINANCIAL LOSSES IN THE FARMING SECTOR, THERE HAS TO BE A PROGRESSIVE TRANSITION FROM UNCERTAIN AND INFORMAL RISK MANAGEMENT PRACTICES TO MODERN DAY RISK MANAGEMENT STRATEGIES AND TECHNOLOGY-INTENSIVE ACTIVITIES' OPINES M.PARSHAD.

Risks in Agriculture

Agriculture is among the oldest organised occupations and is termed the primary sector of the economy. Due to the late infusion of industrialisation and technology in agriculture, the impact of risk in agriculture seldom received the necessary attention it required. Now that the focus of developmental initiatives are more people-centric; and in less developed countries the majority of the population live in the agricultural economy, more attention is paid to risks in agriculture and this needs to be scaled up continuously to bring the much needed prosperity in the rural belt and at the same time to ensure the food security of the country.

Risks in agriculture are manifold and can be classified under the following heads. Production risk is the primary risk with which we are concerned in the crop insurance area. Agriculture yield depends on many parameters which include weather - the components of which can include rainfall, temperature variation, frost, solar radiation, wind, vapour pressure and such. Then there are risks such as pest risks having both frequency and severity factors. Soil, its fertility, pH, texture and depth form an important area of crop success. The crop itself that is to be cultivated, its variety and factors such as its physiology, phenology and morphology are significant. The agronomic inputs concerned such as seeds, farmyard manure, fertilisers and irrigation combined with the relevant management practices including the dates of planting, manuring, pest management and irrigation all form part of the success of the crop venture. Significant risks relating to weather and pests are often totally beyond the control of the farmers, whereas other risks can be more manageable.

Other risks for the agriculturist include price or market risk, investment and credit risk, institutional risk which mean risks relating to unexpected changes in regulations, services, support programmes etc., technology risks and personal risk which affects the lives and activities of the farmers and their households.

The need of the hour to ensure protection against financial losses in the farming sector, is to move away from the centuries old uncertain and informal risk management mechanisms such as avoiding risks or localised non-formal risk pools, mutual aid or migration of farmers in time of distress; to modern day risk management strategies. These can include use of credit, participation in more technology intensive activities including contract farming, use of futures contracts and insurance.

Need for Financial Services

Financial inclusion and deepening of financial services in the rural societies are a pre-requisite in migrating from the

Agriculture yield depends on many parameters which include weather – the components of which can include rainfall, temperature variation, frost, solar radiation, wind, vapour pressure and such.

vicious cycles of poverty and dependency, to one of prosperity and economic empowerment. Keeping this in mind, the government in tie-up with General Insurance Corporation had endeavoured to begin the process of infusing crop insurance among the agricultural sector of the country way back in 1979. This process has been augmented and accelerated continuously till now and will continue till the vast majority of farmers are included in the ambit of financial services including banking and insurance.

Complexities of Crop Insurance

Crop insurance, however, is not easy either as a concept or as a product to be handled either by insurer or the insured. The reasons for this are many. For insurers agricultural risks are more in the nature of systemic risks in as much as climate risks such as drought, excess rain, flood or high temperatures are pervasive over a large area and not random as seen in normal fire or burglary risks. Therefore the pooling concept needs diversification or spread not only over areas but also over time periods. This makes for high actuarial premiums ranging even up to 20% of the sum insured. Even in rich countries, such high levels of premium are found unaffordable, and are therefore subsidised. There is a greater need for this in India, where 80% of farmers are in the small and marginal categories.

In view of the systemic nature of the risk as stated above, insurers also find that individual insurance is difficult to sell or administer in practice and therefore the rates as well as claim settlement terms are based on what is called the "area" concept. This means that irrespective of the yield level of the individual farmer, if the sample chosen indicates a shortfall; all the insureds in that area receive claims based on the shortfall as indicated by the sampling. In this, if the insured receives a claim even where he had a bumper crop, the pooling arrangement suffers a loss; while if the farmer had a major loss and no loss is declared for the area, the farmer suffers a loss, despite insuring. The anomaly created by this type of mismatch is called "basis risk" and every crop insurer and the government backing the programme constantly endeavours to reduce the impact of basis risk for better targeting of indemnity.

As stated before, the pooling concept will be robust only if the pool receives uninterrupted patronage over time. This makes it necessary that the farmers insure without break both in good years as well as in the bad years. Elements of moral hazard and adverse selection thus have to be rooted out as much as possible. Therefore there is a need to make such insurances universal, and as far as possible such insurances are also made compulsory for the sake of the common good. It is therefore seen that governments, insurers and bankers join together and ensure that all farmers availing credit are compulsorily insured and all non-loanees are also encouraged to take insurance.

The agricultural insured are spread far and wide in rural areas and therefore administering the schemes and claims individually becomes very time consuming and costly. So apart from the area concept, insurers are looking at proxy insurances by using weather triggers, in view of the fact that weather phenomena can be scientifically correlated to crop losses. Weather insurance has become very popular because apart from proven correlation, such policies are transparent in as much as the weather data can be uploaded almost immediately so that the insured is aware of the weather performance vis-à-vis the given trigger, and the claim becomes payable almost as soon as the trigger deviations are known. This policy also enables the insured incentive to work in such a manner that the crop can be saved by additional efforts or cost, because the claim is payable irrespective of the yield once the direct correlation between the degree of variability in different weather-components on the one hand and the estimated impact thereof on the productivity of the crop concerned is clearly established on the basis of scientific inputs, farmers' feedback etc.

The agricultural insured are spread far and wide in rural areas and therefore administering the schemes and claims individually becomes very time consuming and costly.

There is a third option in agriculture insurance, called Income Guarantee Insurance to provide protection to the farmers against fluctuations in market price of the crop concerned in addition to deficiency in yield. But, this type of cover is more complex and is not likely to be preferred by the farmers in the presence of Minimum Support Price regime.

Agriculture Insurance in India

Having said this, it needs to be emphasised that, in India, the government and the Agriculture Insurance Company of India Limited (AIC) have passed through the leaning curve in all areas of crop insurance and are looking to make crop insurance reachable and affordable to a majority of cultivators in the country. In India, there has been a very long learning period in yield insurance and we insure the largest number of farmers in the world (around 18 million), by covering around 15% of the farmers in India, involving about 20% of the cropped area. Crop yield insurance has become an area of study for betterment by various organisations and experts

The role of both the Central and State Governments whose support and patronage is of utmost importance to the success of all crop insurance schemes can never be unduly emphasised.

including the World Bank and it will be constantly improved for better responsiveness and spread.

There has been a large number of pilots done in the area of weather insurance, and the capability of AIC has been upgraded to world class levels; and the schemes have received acceptance of world leaders in reinsurance and have been admired for their research intensiveness and advanced features, having received inputs from institutions like Indian Agricultural Research Institute, and having a vast database of weather data which has been duly cleaned and simulated for over 100 years. This has in effect made AIC capable of offering unique weather products based on climate variation and locational differences in around 250 locations spread over around 50 districts of the country for the most common crops. This will be scaled to cover all the districts/taluks and all the crops in due course of time. Government of India has recognised the capability of AIC and has declared in Parliament its intention to launch a large weather pilot in the country through AIC. We hope to cover a large number of states in the winter season, after having successfully launched a pilot in Karnataka in the monsoon season.

AIC managing crop insurance with the widespread use of intermediaries

AIC has been experimenting with unique insurance models in the management of crop insurances. Since premium rate in the crop sector is high as stated earlier, AIC has managed to keep management costs and intermediary costs to the minimum so as to ensure that the agriculturist is not loaded much beyond the actuarial load. Management costs have been kept below a level of 2% and intermediary costs are also kept low till now. In order to achieve this, AIC has used the large banking spread within the country numbering almost 1.5 lakh branch offices of PSU Commercial Banks, Co-operative Banks and Rural Banks; besides a huge net-work of PACS engaged in the distribution of crop-loans to the farmers at the village level. Banks have consistently helped to spread agricultural insurance apart from other intermediaries like brokers and corporate agents. Similarly, AIC hopes to ride technology developments to reduce costs and also to add value to cultivators by offering such services as weather updates and disease forecasting and even issue of the policy documents electronically.

In line with the latest concepts nurtured by the IRDA, we also intend to use various platforms and alliances to carry crop insurance to all parts of the country. Tie up with other insurers, making most banks our bancassurance partners, and utilising other corporates as well as NGOs/MFIs/SHGs are some of the measures on the cards to give all round protection value to the rural customer.

The Empowering Role of the Government

Finally, the role of both the Central and State Governments whose support and patronage is of utmost importance to the success of all crop insurance schemes can never be unduly emphasised. World over, agriculture insurance thrives in the shadow of government support and patronage. AIC is extremely grateful to the various Ministries at the Centre, especially the Ministries of Agriculture and Finance, and so also the Ministries at the State level and their cooperative institutions. In line with this, AIC has collaborated with the various Boards and authorities in the agriculture sector such as the Coffee, Rubber, Coconut, Spices Boards and hopes to carry on creating specific products of value to all the specially supported crops in India including floriculture and all types of plantations. End to end solutions are also being discussed with other insurers so that asset, liability and other covers can be tied with the main agriculture policies.

Conclusion

By the percentage of population, India is still an agricultural country and the agricultural economy must become fully resilient and sustainable to achieve all round progress. In this scenario, the containment of risks occupies an ever increasing role, as this only will turn our farmers into prosperous agricultural entrepreneurs. Therefore all farm initiatives need risk containment steps, the main component of which will be insurance. AIC has been formed at the initiative of the Government to ensure that the risks in the crop sector are adequately addressed and every agriculturist is given an opportunity to choose a risk containment insurance product of his/her choice. It is our endeavour to reach this objective in the near future.

The author is Chairman and Managing Director, Agriculture Insurance Company of India Ltd.

Greenfield for Agriculture Insurance

Huge Potential in India

ROMAN HOHL AND HARINI KANNAN EMPHASIZE THAT THE DRAWBACK AGAINST TRADITIONAL INSURANCE STEMS FROM ITS PERCEIVED COMPLEXITY, HIGH ADMINISTRATIVE COSTS, LOSS ADJUSTMENT PROCEDURES, DATA COLLECTION AND FARM-PRODUCTION-SPECIFIC TARIFF CALCULATIONS FOR SELECTED PERILS. THEY FURTHER ADD 'THE PRESSURE TO INCREASE PRODUCTION AND A SHIFT TOWARD RISKIER LARGE-SCALE MONOCULTURE HAS INCREASED THE DEMAND FOR YIELD AND WEATHER-BASED INDEX COVERS IN THE FOOD INDUSTRY.'

The Green revolution

In a country with a billion plus population, the importance of the agricultural sector reaches enormous proportions. According to 2005 figures, agriculture and agriculture-related activities account for 18.6% of India's gross domestic product (GDP), employing more than 60% of the country's population and utilising 43% of its arable land. The sector remains the main pillar of the sub-continent's economy and plays an important role in the overall socio-economic development.

With the introduction of high yielding wheat and rice varieties; adequate pest and disease control; advanced irrigation techniques and supportive price policies; agriculture production in India has experienced a fast growth rate over the last 50 years.

When it comes to record-setting agricultural output, India has its share. In fact, the country is the world's largest producer of pulses, tea, milk and eggs. It is also the second largest producer of paddy rice, sugarcane and groundnut, and the third largest producer of wheat and cotton. The sub-continent nation accounts for approximately 10% of the world's agricultural revenues.

Despite its achievements, however, the Indian agriculture sector is increasingly under pressure as consumer diets change towards more diversified food products. A lack of investments in the sector as a result of outdated infrastructure, high transportation costs, inefficient markets, and low productivity – with average crop yields below international levels – have made the growing consumer demand for a broader range of products difficult to meet. Figures show that although India's annual economic growth exceeds 8% per year, its agricultural growth rates have decreased from 4.7% (1992-1997) to 1.5 % (2002-2006). This decrease is well below the government's target growth rate of 4% in agriculture and comes despite an increase in areas planted.

Additionally, recent trade liberalisation has resulted in the introduction of new products at lower prices creating competitive pressure for domestic producers.

The country largely depends on temporary and spatial distribution of monsoon rainfalls, which makes 90% of variability of crop yields attributable to weather, while 30% of the arable land is currently irrigated. A slight shift in monsoon patterns can seriously impact the economy as it did in 2002, when a severe drought slowed India's GDP to 4%, and good monsoon rains in 2003 helped it to expand to 8%.

When it comes to record-setting agricultural output, India has its share. In fact, the country is the world's largest producer of pulses, tea, milk and eggs.

Weather insurance is directly linked to rainfall and/or temperature as measured by weather stations. The policy pays out when the levels of rainfall and/or temperature increase or decrease around certain levels.

All these recent changes are putting pressure on domestic farmers to produce more in an increasingly competitive and risky environment.

Agriculture insurance

India's agriculture insurance programs date back 30 years and started with short-term crop credit insurance. The Agriculture Insurance Company (AIC) administrates the state-run agricultural insurance program – The National Agricultural Insurance Scheme (NAIS) – which has been offering protection to core crops and commercial/horticultural crops since 1999. It is compulsory for farmers requiring loans from credit agencies and optional for others. NAIS covers close to 20 million farmers in 23 Indian states and spans over 30 different crop types during Kharif and 25 different crops during Rabi season, worth an annual premium of USD 150 million in 2007.

The NAIS program currently contributes 1.5% to the global agriculture insurance premium that stood at USD 11 billion in 2006.

Although premium rates are subsidised by the government under the NAIS program, insurance penetration remains low (10% of sown area, 7% of number of farmers). The premium rates for the program are not based on actuarial loss calculations but on flat rates, rendering the program unattractive for the private insurance sector so far.

More than 60% of the estimated 120 million farm holdings have land of one hectare or less, accounting for nearly 20% of the cropped area. An efficient insurance distribution network and administration of small sized insurance contracts is therefore the key for a successful agriculture insurance scheme. Often, agriculture risk is difficult to define as the available production data is limited. The complexity of agriculture insurance and the variety of crops covered make loss adjustment a matter of expertise adding a considerable part to the costs of insurance.

New solutions

India is likely to benefit from index-based insurance covering agriculture production against a multitude of systemic perils at affordable prices and reduced administrative costs.

Weather insurance is directly linked to rainfall and/or temperature as measured by weather stations. The policy pays out when the levels of rainfall and/or temperature increase or decrease around certain levels. The payout of weather insurance occurs as soon as a few weeks after harvest, which is in contrast to the rather slow settlement process of the current NAIS crop insurance scheme. An important issue of weather insurance is the basis risk (i.e., the non-perfect correlation between losses in agriculture production and the payout of weather insurance policies). To overcome this difficulty, insurance policies can be written as yield index contracts where indemnity is based on a shortfall of the expected production and pre-agreed or actual price.

Index-based weather insurance is rapidly gaining interest in India. To date, more than 5,00,000 Indian farmers have taken weather insurance policies through schemes provided by AIC; and private sector insurance companies including ICICI Lombard and Iffco Tokio. The international reinsurance market is supporting these developments in a number of ways. Swiss Re, for instance, began reinsuring a scheme developed by ICICI Lombard together with microfinance provider BASIX in 2004. This program provides smallholder farmers with protection against severe weather conditions. Since then, Swiss Re has written over 50 transactions reinsuring Indian insurers against weather risks related to farmers. For the current season, the Indian government introduced a weather insurance scheme mainly for crops against excessive and deficit rainfall/temperature during the Kharif and Rabi seasons.

Besides farming communities or cooperatives; the food industry, including packing houses, processors, elevators, transporters and traders that depend on stable large-scale crop production; can profit from yield or weather index covers as a cost-efficient risk management solution. Agriculture banks and rural lending institutions are increasingly interested in protecting their outstanding loan portfolios with yield or weather index insurance covers. Similarly, agricultural input (e.g., seeds, chemicals) providers that sell their inputs to farmers against forward contracts are interested to cover their sales risk with index products.

The future ahead

With the Agriculture Insurance Company (AIC) of India actively promoting crop insurance; strengthening marketing, education and awareness of the benefits of insurance; the existing government-supported crop insurance portfolio is likely to grow further with increased geographical diversification and more crop types.

In its 2007 budget, the Government of India allocated a provision of USD 125 million to develop the NAIS for the 2007-08 period.

The government has also allocated USD 25 million to insurance companies in India to further develop weather index-based insurance schemes and implement them as an alternative to the NAIS scheme on a pilot basis. One of the main uses of these funds are premium subsidies in which the farmer pays a flat premium rate of up to 2% and the central and the state government share the remaining portion of the actuarial premium on a 50-50 basis. This allows insurance products to be actuarially rated and yet be made affordable to poor farmers.

The Working Group on Risk Management in Agriculture has submitted its report for the 11th five-year plan (2007-2012), asking the government to earmark USD 7000 mn (for crop, livestock, pilots on farm income insurance, seed insurance and weather insurance) and also set a lofty target of insuring 40% of the farmers by 2011-12.

Experts in the industry have pointed out several inherent flaws in the NAIS scheme and in the past few years, government-appointed committees have recommended several modifications. A crucial change is a shift to an actuarial-based system. The premium under NAIS is currently not actuarial but a flat rate, ranging from 1.5 to 3.5% of the sum insured based on the crop. AICL plans to roll out the Modified NAIS scheme (MNAIS) by 2008 on a pilot basis which will be actuarially rated.

In addition, the recently launched National Agricultural Innovation Project by the Indian Council of Agricultural Research aims at bringing innovations to the sector as well as increasing productivity, profitability and competitiveness.

Stronger incentives for private investments into agriculture marketing and processing, as well as a more liberal handling to establish food-processing firms and more contract farming will definitely help the sector to grow with the demand.

Government agencies are also promoting diversification in production, goods, research and improved risk management away from the original agriculture policy to be self-sufficient on wheat and rice. Stronger incentives for private investments into agriculture marketing and processing, as well as a more liberal handling to establish food-processing firms and more contract farming will definitely help the sector to grow with the demand. Regulatory changes in leasing agriculture land and the government's plan to further increase agriculture credits in the coming years will allow agriculture and related sectors to increase competitiveness and reduce production costs.

Index covers based on either yield or weather data or a combination of both are increasingly important for the Indian agriculture sector. Establishing a solid public-private partnership between the government and the insurance industry will foster the use of index-based products by the farming community and the Indian economy. Other stakeholders to the Indian agriculture sector that rely on stable agriculture production might equally profit from the benefits of index structures.

Roman Holhl is the Director, Head Agro Australia Asia & Corporate Business, Swiss Re. Harini Kannan is Assistant Vice President, Environmental and Commodity Markets, Swiss Re; and specialises in Weather Index based insurance products.

Weather based **Crop Insurance**

Panacea or Providence?

K N RAO WRITES THAT WHILE WEATHER INSURANCE MAY NOT BE THE ULTIMATE ANSWER TO THE ERRATIC WEATHER PATTERNS, IT WOULD CERTAINLY PROVIDE A GREAT STABILITY AGAINST THE RISKS THAT ARE ASSOCIATED WITH IT.

Inasmuch as many proponents of index based insurance have taken upon themselves in order to tell the world the virtues of weather based insurance, the author through this article makes an attempt to put in perspective the challenges of designing an effective weather based crop insurance with its relative merits and de-merits vis-à-vis the area yield based crop insurance.

Weather based crop insurance arrived in India during Kharif 2003 season through BASIX a microfinance institution. Since then, Agriculture Insurance Company of India Limited (AIC), a government entity created to exclusively write agriculture insurance; ICICI Lombard General Insurance Company and IFFCO Tokio General Insurance Company have been piloting weather based crop insurance for different crops across different territories in the country. The response from the farmers so far has not been very encouraging. There could be many reasons for this lukewarm response, and may include: unaffordable premium rates and lack of subsidies from the government; poor density of weather stations and the consequent basis risk; technical challenges in designing the insurance product; unrealistic expectations, poor communication and lack of clarity; restricted scope of insurance (just limited to parametric weather indices); and last but not the least, the competition with subsidized area yield insurance in the form of National Agricultural Insurance Scheme (NAIS).

However, the current year, i.e. 2007-08 is special from weather insurance point of view as the Hon'ble Finance Minister, while presenting the Union Budget on 28th February 2007, offered for the first time the financial support of the government to weather insurance. His announcement verbatim is reproduced below:

"Agriculture Insurance Corporation (AIC) has been running a pilot weather insurance scheme since Kharif 2004 and it appears to be a more promising risk mitigation scheme. Hence, Government will ask AIC to start a weather based crop insurance scheme on a pilot basis in two or three States, in consultation with the State Governments concerned, as an alternative to the NAIS. The Scheme will be operated on an actuarial basis with an element of subsidy. I intend to allocate Rs. 100 crore for this purpose in 2007-08"

Pursuant to the announcement in the Union Budget, AIC launched the pilot on weather based crop insurance during Kharif 2007 season in Karnataka in about 70 Hoblis for eight crops, as an alternative to NAIS. AIC designed a customized weather insurance product for the pilot, providing for crop-stage specific payout against contingencies of deficit and excess rainfall. About 50,000 hectares of crops were insured for a risk value of Rs.500 million under the pilot. Payouts have been estimated at Rs.45 million as on 31st October 2007.

The Government as a part of the pilot for Rabi 2007-08 season, has two of the private insurers to operate in two States with AIC for non-borrowing farmers where the pilot

Pursuant to the announcement in the Union Budget, AIC launched the pilot on weather based crop insurance during Kharif 2007 season in Karnataka in about 70 Hoblis for eight crops, as an alternative to NAIS.

is used as a substitute to NAIS. All the insurance companies allowed to participate in the pilot are entitled for the premium subsidy support from the government at the same rate.

AIC designed the weather indices using such weather parameters as unseasonal rains, frost, heat, relative humidity, etc and technical inputs from the apex scientific institutions in designing the customized insurance product for the pilot during Rabi 2007-08 season. The product has been further validated and fine-tuned in consultation with the Agriculture Department of respective states.

The most redeeming features of AIC's customized weather insurance product for the pilot are (i) product definition at Block / Tehsil level (compared to most of the products in the market at District level); (ii) generating current weather data at Block / Tehsil using Automatic Weather Stations (AWS) and (iii) use of crop growth models (instead of simple weather models) in designing the insurance product.

Comparing Area Yield Insurance and Weather Insurance

Both weather based crop insurance and area yield based crop insurance seem to have relative strengths and weaknesses. The detailed comparison between the two insurance programs is given in the table-1 below. Weather insurance seems to score better when it comes to data accuracy, transparency and quick settlement of payouts. On the contrary, Area Yield insurance seems to do better in terms of scope of insurance (comprehensive insurance), product design and to some extent, lower basis risk* compared to weather insurance.

*[*Basis risk said to exist if the yield loss observed at the insurance unit level does not exactly match an individual's yield loss experience (area yield insurance); the weather parameters measured at the weather station do not exactly match the weather incidence experienced at an individual's farm (weather index insurance]*

However, the two biggest weaknesses of the present weather based crop insurance program and the challenges are: **designing a proxy weather index with predictive capability to realistically measure crop losses and thus, is closer to the indemnity principle; and the Basis risk.** The combined effect of the two challenges could be very disastrous for the success of weather insurance, unless resolved; as discussed below with a diagrammatic representation.

TABLE-1

S.No.	Parameter	Area Yield Crop Insurance	Weather Based Crop Insurance
1	Scope of insurance	Practically all risk insurance cover (drought, excess rainfall, flood, hail, pest infestation, etc.)	Parametric weather related risks like rainfall, frost, heat (temperature), humidity etc.) are only covered. However, these parametric weather parameters appear to account for majority of crop losses
2	Designing	Easy-to-design if historical yield data up to 10 years is available	Technical challenges in designing weather indices and also correlating weather indices with ensuing yield losses. Needs up to 25 years' historical weather data
3	Basis risk	High basis risk	Basis risk with regard to weather could be high for rainfall and wind; and moderate for others like frost, heat, humidity etc.
4	Objectivity	Objectivity and transparency are relatively less	Objectivity and transparency are relatively high
5	Data accuracy	Yield data to some extent can be tampered with and also can be influenced by local administration	Weather data is largely tamper-proof, but can't be totally ruled out. Automatic Weather Stations (AWS) to a large extent may provide hands-free and real-time data
6	Incentive to protect the crop	Farmer has lesser incentive to protect the crop vis-à-vis insurance	Farmer has higher incentive to protect the crop vis-à-vis insurance, as the claim is based on the weather, not the yield
7	Quality losses	Quality losses are beyond consideration	Quality losses to some extent get reflected through weather index
8	Loss assess-ment costs	High loss assessment costs (crop cutting experiments)	Relatively low loss assessment costs, though cost of weather data from private data providers could be expensive
9	Claim settle-ment time	Slow claims settlement	Faster claims settlement
10	Reinsurance	Reinsurance is not easy to get	Reinsurance is available

Source: **Author**

Diagram1: Effect of Basis Risk & Poor Design of Weather Index

		CROP	
		Good Crop	Poor Crop
CLAIM	Poor Claim	No / Low Claim during Good Crop season (1)	No / Low Claim during Poor Crop season (2)
	Good Claim	Full / High Claim during Good Crop season (3)	Full / High Claim during Poor Crop season (4)

Source: **Author**

Basis risk may result from poor density of weather stations, while poor design of weather index may result in not capturing the yield loss and thus, cause a payout when there is no loss and vice-versa. Both, Basis risk and poor design of Weather Index may result in 'no claim' despite the poor crop at individual farmer's farm and vice-versa.

A good insurance product should be able to ensure either 'no claim' if the crop is good (box-1) or 'high claim' if the crop is poor (box-4), only then the insurance can be called effective. Or else, it would lead to 'no claim' despite the crop being poor (box-2) or 'high claim' notwithstanding a good crop (box-3), defeating the very purpose of insurance. In other words, what is important for the farmer is not merely a claim (payout) through insurance, but a claim when it matters, i.e. when the crop is poor. In other words, tackling the Basis risk and correct designing of weather index are critical to the success of weather insurance, lest one would be tempted to call weather insurance, 'satta' (gamble).

The existing NAIS in any case has been on the 'altar' for a while for improvements. Once these improvements are introduced (possibly from Kharif 2008 season!), some of the USPs of weather insurance products vis-à-vis NAIS get neutralized as these USPs are built on the perceived shortcomings of the present NAIS. For example, with actuarial regime the payouts under NAIS can be made within two to three months from harvesting season compared to the present six to eight months. Similarly, losses of localized calamities / risks like hailstorm, landslide, flooding and wild animal damage would be assessed on individual farm basis. The most talked about improvement, however, is lowering of insurance unit to 'Gram Panchayat'. Weather insurance then may not look as attractive as it looks now.

Role of Weather Insurance

The concept of weather insurance with particular reference to Indian agriculture is a bit overstated built over unrealistic expectations while undermining the problems and challenges. Still, weather insurance has a role to play, particularly as **'complimentary'** to the existing area yield crop insurance (NAIS) and the same is discussed in the concluding part of this article:

- **Weather index insurance products for crops there exists no historical yield estimates:** There are still crops in India which do not have adequate historical yield data in some areas. Many of these crops do not lend themselves to 'individual based insurance' due to either low value or high complexity. Weather insurance could be the answer for these crops and areas.
- **Use of weather index to make early payouts under area yield crop insurance:** Weather index can provide a trigger to release early payout under area yield insurance (NAIS) with a provision that these early payouts are to be adjusted against payouts as per final yield estimates.
- **Use of weather index to design double trigger insurance products:** The insurance product is to be developed on two independent parameters (triggers) - 1st trigger being weather index that would operate early; and 2nd trigger being area yield estimate that would operate after harvesting of the crop say, each trigger may weigh for 50% of the payout.
- **Design of macro level insurance products using weather index:** Weather index based insurance could be an ideal tool for protecting a large portfolio at District / Regional / State level against drought or floods. District / State administration can buy a macro level weather index insurance to protect its liability on relief or additional expenditure arising out of widespread weather calamities like drought or flood. The macro level weather index could be constructed using the network of weather stations at District / Regional / State level.

Ultimately, the success of weather insurance program in India would depend on weather insurance product design, steps taken to minimize the basis risk, creating realistic and appropriate communication for different stakeholders, adopting reliable and sustainable pricing (including governmental subsidies); and last but not the least, product servicing and timely payout. Weather insurance can least modify weather conditions, nor can it eliminate weather risk, but it can certainly help manage weather risks in a more efficient way, **IF** designed and used appropriately.

The concept of weather insurance with particular reference to Indian agriculture is a bit overstated built over unrealistic expectations while undermining the problems and challenges.

The author is crop insurance specialist working with Agriculture Insurance Company of India Ltd. The views expressed in this article are his own and may not necessarily represent those of AIC. He may be reached at kollirao@aicofindia.org; rao_kolli2002@yahoo.com

Yield-based **Crop Insurance Covers in India**

A Historical Perspective

'ALTHOUGH AGRICULTURE INSURANCE HAS MADE PROGRESSIVE EVOLUTION, A LOT MORE NEEDS TO BE DONE IN A VERY OBJECTIVE MANNER IN CASE INSURANCE IS TO BE PROPAGATED AS A MAJOR RISK MANAGEMENT TOOL' OPINES M.K. PODDAR.

Crop Insurance is generally perceived as a difficult insurance as only a few insurance companies transact it. History indicates that the maiden state-sponsored attempt on introduction of crop insurance (CIS) in India was made as early as 1920 in Mysore State, when a rainfall insurance scheme was conceived. Before independence, many attempts were made by different states of India to design and operationalize CIS but without success. Soon after independence, upon ministerial assurance in the Parliament, a special study was commissioned in 1947 to find out the feasibility and modalities of a CIS. Although the study resulted into a scheme, the same did not find favour with the state governments.

In the Third Five Year Plan, interest on CIS was revived and a draft bill was prepared which was again not accepted by the states on the plea of huge financial obligation. This led to the constitution of another committee in 1970, under the chairmanship of Dr. Dharam Narain, the then Chairman of Agricultural Prices Commission. The Dharam Narain committee, having examined the model and considering the prevailing confusion, thought it prudent not to advise in favour of a CIS in near future. But interest and concern about CIS refused to die down. The General Insurance Dept of LIC (being already nationalized by then), in collaboration with fertilizer companies introduced a scheme in 1972, covering cotton crop. At that time GIC came into being and further expanded the scheme to include groundnut, wheat and potato. GIC continued the scheme for five years, i.e., till 1978, even though the results were not encouraging (in five years, roughly, 3100 farmers were insured for a premium of Rs.4.5 lac and claims of Rs.38 lac).

Without getting dispirited by the results, GIC took further interest in CIS and sought Professor V. M. Dandekar's (a noted Agricultural Economist) opinion on the subject. Following his recommendations, GIC started a Pilot Crop Insurance Scheme (PCIS) in 1979. Professor Dandekar's doctrine broke new ground for CIS in India in more than one way, viz., he logically concluded that CIS in order to be successful, (a) has to be linked to the crop credit system, and needs to be made compulsory for the borrowing farmers to have adequate spread and avoid adverse selection, etc (b) has to consider a homogeneous area as 'unit of insurance' rather than individual approach, in order to minimize administration and host of other logistic problems, (c) existing crop cutting estimates data can be used for loss

In the Third Five Year Plan, interest on CIS was revived and a draft bill was prepared which was again not accepted by the states on the plea of huge financial obligation.

Hurricane, Tornado, Flood, Inundation and Landslide, Drought, Dry spells, Pests / Diseases etc.

Crops Covered

- **Food crops (Cereals, Millets & Pulses):** Paddy, Wheat, Jowar, Bajra, Maize, Ragi, Green gram, Black gram, Red gram, Horse gram, Gram etc.
- **Oilseeds:** Groundnut, Sunflower, Soyabean, Safflower, Castor, Sesamum
- **Annual Commercial/Annual Horticultural crops**: Sugarcane, Cotton, Potato, Onion, Ginger, Turmeric, Banana, Pineapple, Jute, Tapioca, Chilli, Cumin, Coriander, Isabgol, Methi etc.

The Scheme covers all food grain crops, oilseeds and annual commercial / horticultural crops, if past ten years' yield data was available with State Govt.

Unit of Insurance

The scheme operates on 'Area Approach' basis i.e. defined areas for each notified crop for widespread calamities. Individual assessment of losses is also being implemented on experimental basis for localized calamities like hailstorm, landslide, cyclone and flood in certain pre-notified areas. The size of unit area varies from state to state and crop to crop. Presently, the defined area is Block/ Mandal/ Taluka / Patwari halka / Nyaya Panchayat/Gram Panchayat or even a village in the case of one state for selected crops.

The amount of crop loan availed for the notified crop is the minimum amount of sum insured which has to be insured on compulsory basis.

Limits of Sum Insured

A. Loanee farmers: The amount of crop loan availed for the notified crop is the minimum amount of sum insured which has to be insured on compulsory basis. Further, he may even go for additional coverage up to 150% value of average yield by paying premium at actuarial rate as communicated by AIC and notified by the state governments.

B. Non-loanee farmers: Coverage at normal flat rates of premium is available up to the value of threshold yield i.e. normal coverage. Additional coverage up to 150% of the value of average yield can be availed by paying actuarial rate. The value of sum insured is arrived at by multiplying the threshold yield/ average yield with the latest available Minimum Support Price (MSP) announced by the Govt. or the market price provided by the state govt., in case the MSP is not announced.

Premium

For Kharif crops, the premium rate is 3.5 % of SI for bajra and all oilseeds and 2.5% for all other food crops including pulses. For Rabi crops, premium rate is 1.5% for wheat and 2% for all other food crops and oilseeds. However, actuarial rate for all crops is calculated by AIC and the lower of the flat rates and the actuarial rates are applied. For annual commercial and horticultural crops, actuarial premium rates are charged. The premium for small and marginal farmers is subsidized to the extent of 10% which is shared by the state govt. and Govt. of India in equal proportion.

Procedure for Insurance Coverage

All crop loans disbursed/ withdrawn, including those through Kissan Credit Cards or otherwise, for insured crops are automatically covered by the banks. Non-loanee farmers willing to avail insurance can contact the nearest bank before the stipulated cut-off dates and submit the proposal forms along with proof of land / crop cultivated.

Settlement of Claims

- **Area approach basis for widespread calamities:** Claim in a Notified Area (NFA) becomes automatically payable if there is a shortfall in yield i.e. if the current season's yield is less than the guaranteed yield. The shortfall is converted into claims by multiplying the percentage shortfall with sum insured. The yield data considered for the assessment of claims is the production series data which is obtained through the process of General Crop Estimation Survey (GCES) used for the purpose of production estimate of the state i.e. separate yield data for crop insurance is not allowed.

Claim payable =

$$\frac{\text{Shortfall in Yield}}{\text{Threshold Yield}} \times \text{Sum Insured}$$

where; Shortfall = Threshold Yield (TY) - Actual Yield (AY)

The Threshold Yield (TY) or guaranteed yield for a crop in an insurance unit is the moving average of the preceding 3/ 5 years multiplied by the indemnity level (90%, 80% or 60% depending upon the variability in the yield of the crop). The claims are automated and credited to the farmers account through the banks and farmers or banks need not lodge a claim with AIC.

- **Individual approach for localised calamities**
  In the case of hailstorm, landslide, localized flooding etc. loss assessment on individual basis is being implemented on an experimental basis in a few select areas/crops.

Coverage

The summary of coverage under National

Given the pivotal role of agriculture in the socio-economic fabric of the country, and the uncertainty of climatic aberrations jeopardizing the livelihood of the rural masses, the need and benefits of agriculture insurance cannot be over stated.

Agricultural Insurance Scheme (Rabi 1999-2000 to Rabi 2006-07 season) is given below:

Total number of farmers covered	9,70,73,736
Total area covered (Hectares)	15,62,10,772
Total sum insured (Rs. Crore)	97180
Total insurance charges (Rs. Crore)	2943
Total claim (Rs. Crore)	9763.00
Claim ratio	**1:3**

The coverage under the Scheme, has been increasing, although gradually. In 2006-07, a record of 1.8 crore farmers have been covered under the scheme. Around 40 lakh farmers receive benefits under the scheme, which is about 22% of the farmers covered. In the current financial year, state-wise implementation target for coverage has been adopted, which hopefully, will augment coverage to a significant extent.

Steps Initiated by the Government to Reform the Present Insurance Scheme

It may be observed from the above that the subject of crop insurance has ever been evolving and under constant scrutiny from all the stakeholders, especially government, national policy makers, farmers' organizations etc. However, of late, it has assumed a critical importance in view of stagnating agricultural growth, rural indebtedness and farmers' suicide issues. The current penetration level of insuring only 15% of the farming population even after 7 years of operation, leaving rest 85% in the lurch to fend for themselves against nature's wrath - NAIS came under close scrutiny, particularly after formation of AIC, for immediate remedial measures.

Upon intervention of Hon'ble Prime Minister, a high level **Joint Group** was formed in 2004 to suggest possible improvements followed by formation of a **Working Group** on risk management in agriculture under Planning Commission for the Eleventh Five Year Plan. The World Bank also took interest in the crop insurance programme of India and extended a technical assistance and suggested possible improvements.

Recommendations of the Joint Group, Working Group and World Bank inter-alia included (i) unit of insurance should be Village Panchayat at least for major crops, (ii) selected pre sowing and post harvest losses also to be compensated (iii) provision for midseason 'on account' payment of claims, (iv) threshold yield on the basis of yield of five best out of preceding seven years, (v) indemnity levels should be 90% for low risk areas / crops and 80% for others (vi) uniform seasonality discipline (cut-off dates for buying insurance) for loanee and non-loanee farmers (vii) damage due to wild animals should be covered on individual basis (viii) insurance coverage to perennial horticultural and vegetable crops be designed (ix) crop insurance scheme should be placed on actuarial regime, with varying premium subsidy at different slabs of actuarial premium, (x) premium sharing by banks, (xi) re-introduction of government supported Farm Income Insurance with modifications covering a few pulses and oilseeds crops (xii) re-introduction of seed crop insurance either as exclusive insurance cover or additional component of NAIS (xiii) launch government supported weather insurance pilot for selective crops and territories (xiv) streamlining yield estimation, computerization, use of hand held devices and better data consolidation practices and advanced indemnity payments prior to harvest based on weather and/or remote sensing devices, and (xv) guaranteed yields based on long term average with yield trend adjustment.

Conclusion

Given the pivotal role of agriculture in the socio-economic fabric of the country, and the uncertainty of climatic aberrations jeopardizing the livelihood of the rural masses, the need and benefits of agriculture insurance cannot be over stated. However, too much focus on insurance without resorting to all other risk management tools may not answer fully the needs of farmers. There has been criticism of the scheme but some of them are quite unfair as the scheme has very valid and proven benefits. While there has to be necessary research and development of alternative approaches, strengthening the strong points of the yield based all risk cover embodied in NAIS, would be the key to the varied insurance needs of the farmers.

The author is Chief Manager, Agriculture Insurance Company of India Ltd.

Coping with Rural Risks

Index-based Weather Insurance

PRANAV PRASHAD ARGUES THAT THE SUCCESS OF PREDOMINANTLY AGRARIAN ECONOMIES DEPENDS ON FAVOURABLE WEATHER CONDITIONS WHICH ARE BEYOND ONE'S CONTROL. HE FURTHER STATES THAT THE ADVERSITY COULD HOWEVER BE REDUCED BY HAVING IN PLACE GOOD FORECASTING METHODS; AND MEASURES TO COMPENSATE WEATHER-RELATED LOSSES.

Weather and Indian Agriculture

Many agrarian economies owe their strength to favorable weather parameters, such as rainfall, temperature and sunshine. However, these economies are ill equipped to deal with adverse weather incidences. Therefore, reducing vulnerability to weather in developing countries is a critical challenge.

India is also such an economy which is highly dependent on agriculture for its livelihood. It sustains 17% of the world's population on 2.4% of land resource.[1] Out of the total area in India, a major proportion, approx 55% is under agricultural sector.

Agriculture contributes a significant 22% to the overall Indian GDP. It not only provides livelihood support to two-thirds of the population but also provides employment to 54% of work force.

Indian agriculture has high dependence on weather, especially monsoons. A causal analysis of agricultural losses as compiled by General Insurance Corporation of India's crop insurance cell showed that a major reason of crop losses can be attributed to weather vagaries.

Introduction to Weather Insurance

As the name suggests, Weather Insurance is an insurance coverage against the vagaries of weather. It is an insurance product based on a weather index, hence, provides financial protection based on the performance of specified index in relation to a specified trigger. Detailed correlation analysis is carried out to ascertain the way weather impacts yields of the crops to arrive at compensation levels. The weather indices could be deficit/excess rainfall, extreme fluctuations of temperature, relative humidity and/or a combination of above.

Process of making an index based product

The steps involved in the development and implementing an index based insurance programme are:

Peril Identification

Peril identification involves appreciation of agronomic properties of the crops or nature of the economic activity. Detailed correlation analysis is carried out to ascertain the way weather impacts yields of the crops/ output of other economic activities.

Index Setting

The index is created by assigning weights to critical time periods of crop growth.

The past weather data are mapped on

> Weather Insurance is an insurance coverage against the vagaries of weather. It is an insurance product based on a weather index, hence, provides financial protection based on the performance of specified index in relation to a specified trigger.

to this index to arrive at a normal threshold index. The actual weather data are then mapped to the index to arrive at the actual index level. In case there is a material deviation between the normal index and the actual index, compensation is paid out to the insured on the basis of a pre-agreed formula.

Back testing for payouts
In order to ensure the robustness of the structure, the normal index is extensively tested based on historical data to ascertain if the payouts made on the basis of the chosen indices would have adequately indemnified the loss in the past or not.

Pricing
Pricing is determined based on components of expected loss, volatility of historical losses and management expenses.

Monitoring
This entails collection of weather data during the policy period and concurrent assessment of the ground conditions.

Claims Settlement
The claim settlement is a hassle-free process, as the beneficiary is not required to file a claim for loss to receive a payout. Instead ICICI Lombard compensates the beneficiary at the end of the crop season for any deviations from the normal conditions on the basis of the data collected from an independent source accessible to all, like a local weather station, thus obviating the need for carrying out field surveys.

Advantages of Index based Insurance Products like Weather Insurance

Index based insurance products like weather insurance carry the following advantages:

- A long term sustainable solution
- A market-based alternative to traditional crop insurance, which overcomes challenges of
  - High monitoring and administrative cost
  - Moral hazard and adverse selection
  - Transparency – replaces human subjective assessment with objective weather parameters
- Scientific way of designing product
- Simple terms of insurance delivery
- Speedy claims settlement process

Weather insurance has multiplier effect on the economy as it enables access to factors of production. Adequate protection offered through the weather insurance product enhances the risk taking capacity of the farmers, banks, micro-finance lenders and agro-based industries. This in turn would result in boosting the entire rural economy.

Further, as the product is developed on the foundation of universally acceptable parameters, it is easier to transfer the risk through reinsurance. This allows for pooling of risk and thereby more competitive "portfolio adjusted" pricing for the insurer and ultimately for the farmers.

Initiatives in Weather Insurance

ICICI Lombard has been a pioneer in bringing weather insurance solutions to India's farming community. Beginning with a small pilot for 230 groundnut and castor farmers in Mahbubnagar, as on date close to 80 weather insurance deals were executed across the country which have provided weather insurance solutions to 150,000 farmers covering an area of 225,000 acres.

These 80 deals represent experience in wide-ranging crops such as groundnut, castor, cotton, black gram, soybean, grapes, paddy and oranges. The deals were executed across 9 states viz. Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Rajasthan, Punjab, Karnataka, Gujarat, Maharashtra and Tamilnadu, with wide variety of intermediaries such as micro finance organizations, agri-input corporates, non government organizations, banks, governments, and Internet kiosks.

Weather insurance has multiplier effect on the economy as it enables access to factors of production. Adequate protection offered through the weather insurance product enhances the risk taking capacity of the farmers, banks, micro-finance lenders and agro-based industries.

Innovative ways to reach to the hinterland - reduction of basis risk

A common issue faced at the field level while providing Weather Insurance is Basis risk. Most of the weather stations are owned and maintained by Indian Meteorology Department (IMD); and are located at the district headquarters. But most of the agricultural activities are carried out in much interior locations. As a result, most of the time, companies were unable to measure weather data at precisely the customer location. To build up the network of weather stations in the interiors, ICICI Lombard has a tie up with National Collateral Management Services Limited for installing Automated Weather Stations (AWS) at the block level. These data supplement India Meteorological Department's district level weather stations and the company gets sub-district level data which help in better monitoring of the policies. A major advantage of these AWS is that they provide real time daily

data through automated calling process. Currently, through this network 113 locations are covered to reduce basis risk (up from 64 locations in 2005).

Designing Crop and situation specific products

ICICI Lombard attempts to cover the entire crop cycle which is divided into phases, so that complete protection can be provided. Different phases may involve different weather parameters such as in wheat where the product addresses the dual risks of extreme temperature fluctuations and unseasonal rainfall at maturity stage.

Salt manufacturing

Expanding the market to get benefit of diversification for agricultural risks, the first Weather Insurance deal for salt manufacturers was designed and hence Weather Insurance was provided to an industry which was non-agricultural in nature in India. Following up on this success, index based weather insurance was also offered to the Brick manufacturers to insure their kilns against unseasonal rainfall across North India.

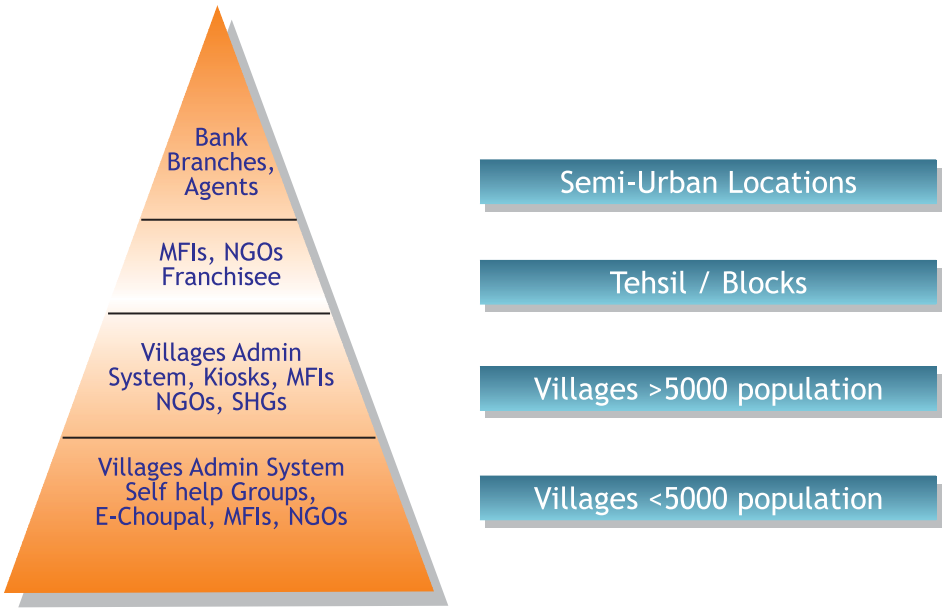
Distribution: a key challenge

The major challenge faced not only by Weather Insurance product, but by all rural financial products is that the sheer spread and diversity of target customers makes cost effective distribution a big challenge. In India, 37% of the urban population lives in 23 cities whereas a majority of the rural population lives in 100,000 villages.

To overcome this challenge, a three pronged strategy is important to implement.

For example, ICICI Lombard takes the help of all contact points to reach farmers and sell the product concept (Fig. 23.1). ICICI Lombard also takes the help of various aggregators to sell the policies and is in touch with various State Governments and the Central Government to endorse the product and also has its own dedicated distribution channel to market the product. It has been realized that locally available channels are not only cost effective but also trustworthy for the end customer.

Technology based solutions like smart cards, hand held deposit machines which offer a cost effective distribution and also quicker service delivery solutions are increasingly being used in the hinterland. There is also increasing use of the support through banking infrastructure for disbursing low ticket cash based payouts.



Locally available channels are effective since trust is the cornerstone of relationships

Challenges in Product Development

"One size does not fit all". Since crops and weather parameters vary greatly across each state, the product needs to be designed for each location/ district individually, hence scale is an issue. Involvement of local agencies is critical for peril identification and testing of models, hence remaining on their right side is essential throughout the entire exercise. Getting relevant data is a big challenge; currently the entire dependence is on IMD.

With the passage of time, there is an expanding use of local bodies like agriculture universities, state disaster management cells for historical data and for policy implementation and monitoring.

Conclusions

In conclusion, index based weather insurance programmes can form the basis of effective development since:

Rural demand for products and services is no different from urban requirements provided

- A fairly priced and relevant product is made available
- Cost effective distribution systems are established
- Effective administration is ensured and
- Easy accessibility and quality service is ensured.

Focused approach along with appropriate regulation will help build a model that is viable, sustainable and scalable; and availability of financial services and insurance would change the rural landscape in future.

The author is Head - Rural & Agriculture Business Group, ICICI Lombard General Insurance Company Ltd.

Role of **Microinsurance** in **Agriculture**

Need to Align with Microfinance

AVINASH KAUR LOCHAN **OBSERVES THAT THE REAL CHALLENGE IS TO ENVISION THE TASK OF FINANCING AND COVERING THE POOR AS NOT JUST A FULFILLMENT OF SOCIAL SECTOR OBLIGATIONS BUT A GREAT BUSINESS OPPORTUNITY AS WELL.**

While speaking at an Agricultural Exhibition at Pune on 18th Nov'2007, Prof. Muhammad Yunus said 'Let us compete in poverty eradication'; and amidst loud cheers from the crowd, he further addressed India's Union Agriculture Minister Shri Sharad Pawar and asked him to compete on who builds the first poverty museum. Professor Yunus also plans to set up a poverty museum in his country so that the younger generation learns what poverty is all about and vows never to succumb to it.

This paper aims at providing the reader a brief insight into:

- What micro-insurance is
- What importance agriculture has to Indian economy
- The relevance of insurance to the agricultural sector
- Evolution of Micro-insurance in India
- The need for unique product design and distribution to diversify from standard insurance to micro-insurance to travel the extra mile and increase out-reach in rural areas to the farmers
- How to make micro-insurance cater to the needs of the farmers and yet be profitable for the insurer
- Farmer Issues and
- Recommendations and conclusion.

What is micro-insurance?

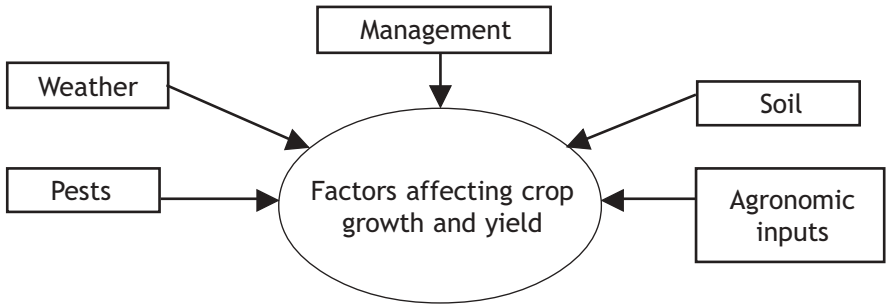
Micro insurance is different from other traditional products in the market in it being a targeted instrument for inclusive insurance for low income households. It intends to offer the poor protection against risks in return for payment of affordable premiums in ways that support small ticket size; coverage for the most vital risks; and a responsive and service oriented distribution infrastructure.

Importance of Agriculture to Indian economy

Agriculture is the mainstay of the Indian economy, as it accounts for 22 per cent of the GDP and provides livelihood to 58 per cent of the country's population. India does live in the villages and entire industries depend directly or indirectly on agriculture for their raw material requirements. Achieving growth in this sector will have a cascading impact on other sectors, leading to the spread of benefits over the entire economy and will also be significant in reducing poverty and regional inequality in the country.

The relevance of insurance to the agricultural sector

The major focus of insurance so far has been on the urban markets, primarily due to easy availability of interested intermediaries; sufficient margins of



Micro insurance is not a specific product or product line and is also not limited to a specific insurance company.

profits available to cover operating costs; and market and service the products.

Major risks to which crops are exposed

- Untimely/ Adverse climatic occurrences like drought, excessive wind, flood, untimely/ inadequate/excessive rainfall, thunderstorm, hailstorm and cyclone
- Cold/heat waves, frost, and sudden variations in temperature
- Different risks that a crop is exposed to at different sub crop stages during the period from sowing to harvesting
- Pests
- Plant diseases and weeds

Need for Crop Insurance as a risk mitigation tool

- Greater dependence of crop production on nature
- Uncertainty of crop yields
- Incapacity of farmers to bear disastrous losses
- Loss of investment - failure to repay loans
- Ineligibility to further credit – loss of occupation
- Loss of purchase power - impoverishment leading to mounting debt - suicide
- Spillover effects of crop failures on the economy like increase in inflation, increase in prices etc.

Evolution of Micro-insurance in India

IRDA is probably the first regulatory authority in the world to issue the notification on Micro-insurance regulations and has opened a wide variety of options for the insurance sector whereby both the life and general insurance players can have mutual arrangements to market combination products for the target customers.

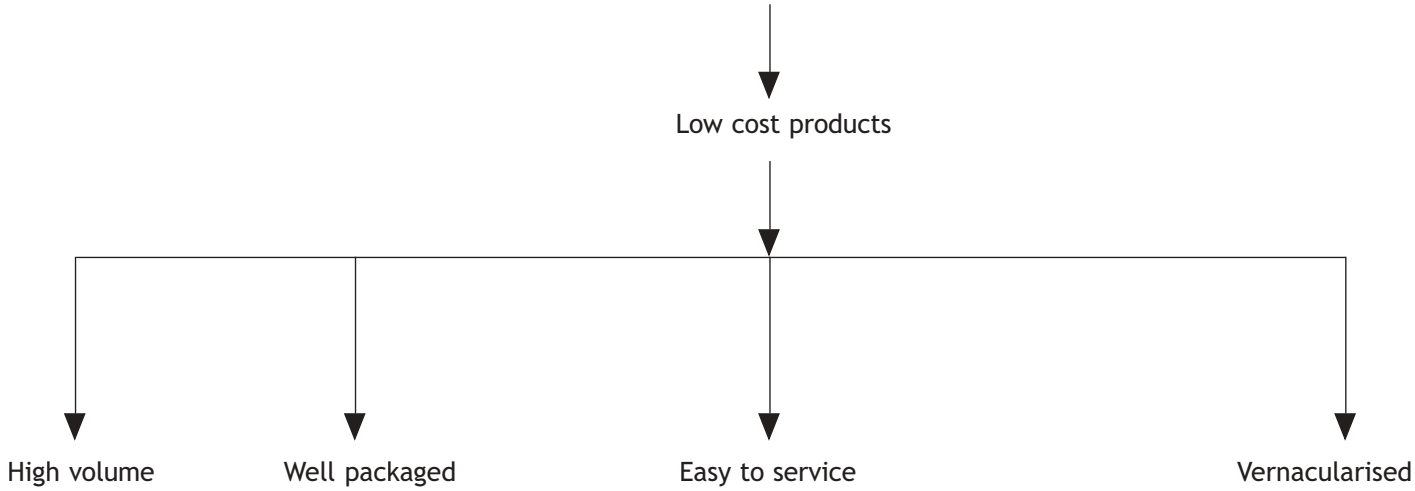
Main Features

- Insurance simplified by the regulator for ease of distribution
- No licensing and less stringent training norms (only 25 hours) for micro-insurance agents
- Servicing of micro-insurance products open to other existing intermediaries also
- Single window policies and service possible as per the regulations and a non-life insurer can tie-up with a life insurer and vice-versa to offer composite insurance product (life and non-life) to the low-income people
- The IRDA regulation allows the MFIs, NGOs and SHGs and these have the potential to become the best 'Rural Insurance Advisors' on account of their proximity and capacity to understand the needs and fears of the farmers.

The need for unique product design and distribution to diversify from standard insurance to micro-insurance, to walk the extra mile and increase out-reach in rural areas to the farmers:

Micro insurance is not a specific product or product line and is also not limited to a specific insurance company. Micro

Challenges in product design for Micro-Insurance for agriculture



insurance targets specific income segments, i.e. the low-income earning segment of the population.

A few differences between the standard insurance and micro-insurance for agriculture may be seen as:

Standard insurance	Micro-insurance for agriculture
• Targeted generally at the urban wealthy or middle class clients.	• Targeted at low-income small and marginal farmers, some living along or even below poverty line.
• High level of awareness	• Low levels of awareness
• Markets are near, accessible and familiar.	• Markets are distant and considered inaccessible due to vast geographical stretch and poor infrastructure and connectivity.
• Most consumers are aware of their specific insurance requirements and bundling not necessary	• Not insurance/finance literate
• Consumer awareness on insurance as a risk management tool is rising	• Farmers see insurance as an avoidable means of additional expense with uncertain outcome
• Ticket size of premium is high	• Low ticket size
• Agents and brokers are responsible for sales and services. Direct sales are also common, intermediaries find the covers lucrative and attractive	• New intermediaries are required to manage the entire customer relationship, including premium collection. Micro-insurance is most economical when directly sold to groups. Due to inherent seasonal nature, not perceived attractive / regular source of income by intermediaries
• Globalized	• Localized consumers, need vernacular documents

How to make micro-insurance cater to the needs of the farmers and yet be profitable for the insurer?

Agriculture insurance risk is well known as a possible systemic, non-diversifiable risk stemming from say natural disasters affecting a large number of farms over a whole region. Therefore the insurance companies tend to view the crop insurance contracts to be many times more risky than an equally valued portfolio of fire and engineering/automobile insurance contracts.

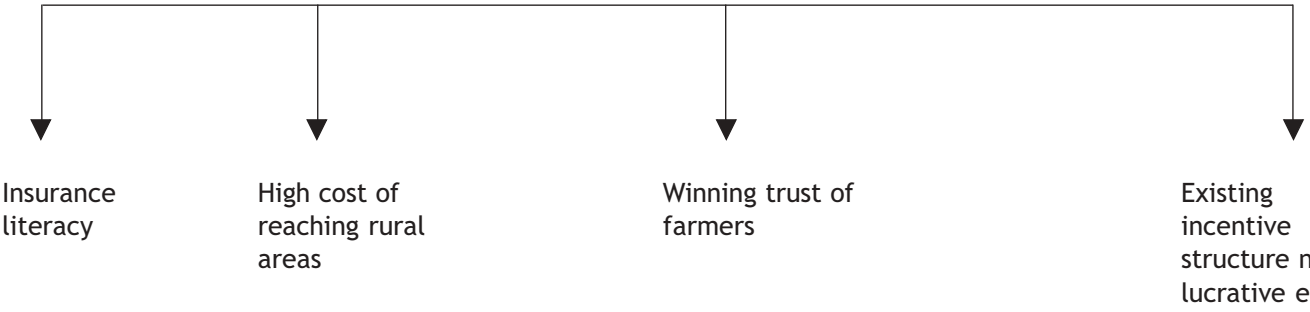
Due to frequency and severity of agricultural losses, the premiums are generally high, even when subsidized. Hence consumers are reluctant to take insurance.

The challenge is to envision the task of financing and covering the poor as not only a fulfillment of social sector obligations but a great business opportunity as well. Well known studies have been done on doing business successfully with the layer at the bottom of the pyramid.

In insurance we can begin with certain well known factors:

- In India, everyone is connected through some co-operative, commercial, social or religious association/structure.
- There are well functioning agencies/ intermediaries in every village

Challenges of rural distribution for Micro-Insurance for agriculture



All financial services need to be taken to the grass root level with an ever improving framework so that we can indeed move towards a hunger free, food surplus nation with prosperous farmers.

- The political system at the local level allows for social initiatives

Using such platforms allows for mass/ wholesale selling, with the assistance of the financial and governmental infrastructure.

Beginning with groups or the opinion leaders in villages for efficiencies and access and then increasing penetration levels to individual units is required so that even if the profit per individual/ family for the underwriter and the intermediary is miniscule, it becomes substantial when applied to large groups and the Law of large numbers come into play.

Some more measures that can be adopted to make it easier for the masses would be:

- Simplifying underwriting and claim settlement procedures, introducing easy to understand and easy to market and service new integrated micro-insurance products (with both life and non-life component)
- Making premium payment plans flexible (installment facility) and simplifying premium collection
- Designing long term policies where necessary , to coincide with the loaning period/other requirements of farmers: Micro-insurance may prove to be most effective if it complements micro-finance and the insurance period may be made to coincide with the loaning period for convenience.

Farmers' Issues

- There is need for making the insurance proposition simple and effective and the service structure transparent and speedy
- High cost of rural distribution has to be addressed while pricing of micro-insurance products and it needs to take into account the high cost of reaching the rural areas while planning the remuneration structure for the micro-insurance agents. It should also account for expenses which are especially high for small ticket policies related to (a) canvassing insurance (b) collecting and remitting premiums where there is likely to be a lack of bank accounts, (c) assisting in documentation and claims.
- Winning the trust of the farmer and taking care of their consumer rights.

Recommendations and conclusion

It is time to redesign the micro-finance practices in India, so that they may be aligned with the Micro-insurance Regulations and allow the poor class to access all financial services. All financial services need to be taken to the grass root level with an ever improving framework so that we can indeed move towards a hunger free, food surplus nation with prosperous farmers. Insurers and intermediaries need to get together to ensure the following:

- Simplification of products and bundling where required to make them easy to understand, easy to use, sell and service
- Simplifying and making premium payment plans flexible to suit farmer needs
- Focus on volumes by targeting large groups
- Integrating micro-finance activities with micro-insurance for a most beneficial outcome
- Claim settlement to be timely, simple and transparent
- Maximizing the benefit of connectivity revolution in rural India to reach the un-served markets
- Using additional innovative distribution channels to achieve cost-efficiency in agricultural markets:
  - Banking network: (At the recent Micro-insurance seminar at Mumbai, the Hon'ble Finance Minister Mr P. Chidambaram said that insurance companies could look at tapping the extensive network of over 50,000 bank branches for distribution of small ticket insurance).
  - Agri-preneurs, fertilizer/seed/ pesticide distributor companies
  - Social/ charitable institutions, local governments, gram panchayats
  - Internet kiosks/ village level connectivity and end-to-end solution providers like the leaders in this field- the ITC e-choupal, and others like DCM Kisan Bazaars, Kisan Khushali Bazaars, Reliance Retail etc.

The author is Manager, Agriculture Insurance Company India Ltd.

Making **Reinsurance** an **Effective Tool**

Thoughts for Sound Underwriting

MADHUMALATI DAMLE SUGGESTS THAT BY PROVIDING RELIABLE AND REGULAR INFORMATION TO THE REINSURERS, MEANINGFUL AND LONG RELATIONSHIPS CAN BE BUILT WHICH ARE VERY VITAL FOR A SUSTAINED REINSURANCE PROGRAMME.

All of us in the insurance world are aware of the theory of reinsurance and also appreciate the need for reinsurance. We all know what a Treaty is and what is a Facultative Placement and why we need reinsurance.

In today's world, do we really follow the theory? Reinsurance in essence is extending basic insurance concepts globally. It is all about spreading the risk across the global insurance market. The professional reinsurers do the balancing act of balancing exposures from one region against those from another region to provide capacity worldwide. Treaty or Facultative Reinsurance is a mere tool to achieve this goal.

Purchasing a reinsurance programme is a corporate decision. An insurance company buying a reinsurance programme has to involve the top management of the company, the investments/finance teams, the marketing team and the underwriters. One needs to know what the goal of the company for the next twelve months is, for which period the reinsurance programme is being designed; whether any new products are being introduced or the focus of marketing is changing say from retail to corporate business etc.

A reinsurance programme evolves over the years and as your goals in the market change, the programme structure changes to suitably address the new exposures. For example, a company concentrating on corporate business and large risks needs a more vertical programme for risk exposures whereas a company doing retail may need to focus on accumulated exposures as against single risk exposures.

For an insurance company, reinsurance is not a core business competence. It is basically an expense item to protect the balance sheet and not a profit making tool.

In practice, how much reinsurance is enough? Are there any measurable formulae? Really speaking there is none available, but there are some guidance tools available from past experience. Some tools are available based on statistical modeling. Then, there are regulatory guidelines, which differ from market to market; and, of course, market specific experience is also one variable, which is used.

What do we do in markets where there are no regulatory compulsions or minimum level of cover stated by the regulators and no reliable models are available and the experience shows very little loss activity? In such circumstances, you are in a guessing game and it always helps to know what your peers are doing.

"You do not wish to be the first insurer to run out of cover if and when a sizeable catastrophe hits the market."

Reinsurance in essence is extending basic insurance concepts globally. It is all about spreading the risk across the global insurance market.

We have all accepted Probable Maximum Loss (PML) underwriting for the direct business. PMLs are meant for basic fire risks (fire, explosion, implosion, etc.). However, there is no PML calculation for natural perils, e.g., earthquake. So the logic is simple, how much risk exposure do you cover? 'When you are writing PML, it should be full Sum Insured', which means that when you are doing underwriting on PML basis, your protection should be up to the full Sum Insured exposed.

Market forces do play a big role in determining what capacity of reinsurance is available and at what price. The simple rule would be buy more in a soft market using reinsurer's capital; and conversely, buy less in a hard market and use your own capital.

A company needs to technically assess how much cover in toto you need to buy to feel comfortable for your balance sheet to be adequately protected. Taking advantage of soft market condition really apply as to how much lower you can buy your protection, which also means how much you can reduce your deductible. At the higher end, it being Balance Sheet protection issue; you need to buy adequate level of protection whether it is a soft market or a hard market.

One cannot make a predetermined budget for reinsurance and then go out looking as to what is available within the budget. The decision should be actually how much cover you need and for that cover what should be the budget for that particular year. Without compromising on the coverage one can then go about negotiating price to keep the expense of reinsurance within a certain budget.

A lot has been said about a reinsurers' reactions to a detariff market.

- Proportional capacity will disappear.
- Portfolio protection would be difficult to come by and more emphasis would be on FAC protection.

All these reactions stem from the fact that reinsurance is, for the most part, a blind underwriting. A reinsurer gets very little data to know what is happening at the ground level and would like to protect himself from unhealthy practices in the market by distancing himself away from aggressive pricing or poor underwriting. One cannot improve a company's performance through purchasing of a reinsurance programme if the basic price charged is too low or the underwriting is poor.

Can a reinsurer correct anomalies in the direct market? Can he correct risk rating which is slipping? The answer would be 'yes' and 'no'. On proportional basis, he cannot correct anomalies and has to follow the insurer. This is the reason the proportional capacity would become expensive (less commissions) and slowly it could disappear if treaty results continue to be adverse.

It is another story for non-proportional covers. The reinsurer can do exposure rating and demand and get the right price from the Insurer. It is then left to the insurer either to correct the basic pricing or suffer deterioration on the net retained portfolio.

How do you eliminate the fear/anxiety of the reinsurer in a detariff market?

- Transparent information
- In-depth information
- Regular information
- Reliable information

The Indian market was buying a combined programme till the four subsidiaries of GIC were delinked in 2001. The information at that level was market information and was much simpler for the reinsurer to understand.

The four Government companies since 2001 have done well to develop more and more reliable information on the portfolio, which they protect. Along with this information and the information produced by public sector insurers, GIC has also been able to assess their exposure more accurately and give elaborate information of such exposure to their reinsurer. The improved information overall has helped the market to get reasonably better deals and build reinsurers' confidence into the market over the years as evidenced by increased interest of global reinsurers in the Indian market.

Market forces do play a big role in determining what capacity of reinsurance is available and at what price. The simple rule would be buy more in a soft market using reinsurer's capital; and conversely, buy less in a hard market and use your own capital.

Any company, which buys adequate reinsurance protection gains reinsurers' confidence, which in turn results in better reinsurance deal for such insurers. So, in the end it is in the interest of the Indian market to keep giving more and more reliable information, adopt a mature approach of treating a reinsurer as a partner, preferably long term, and thus evolve reinsurance purchase as a most effective tool for good underwriting.

The author is a former DGM, New India Assurance Co. Ltd., and is presently working as Executive Director, IRICS.

• प्रकाशक का संदेश

प्रायः यह कहा जाता है भारत गाँव में बसता है। ग्रामिणों का सबसे महत्वपूर्ण व्यवसाय कृषि है। यह अनुमान लगाया गया है कि भारत की तीन चौथाई जनसंख्या प्राथमिक क्षेत्र पर निर्भर है। जो देश की कुल सकल घरेलू उत्पाद का पाँचवा हिस्सा देता है। जिसके परिणामस्वरूप इस लहर की प्रकृति के कारण जनसंख्या सबसे अधिक परेशान होती है। अप्रत्याक्षित घटनाएँ अथवा एक बड़ा सूखा अथवा फैली हुई बाढ़ कार्यरत किसानों के लिये अनकही विपदा लेकर आती है।

प्रकृति जब अपना तांडव करती है उसके अतिरिक्त कुछ सीमाएँ है जो भारतीय कृषक समुदाएँ झेलता है। अधिक संख्या में लोग कृषि पर निर्भर हैं दो छोटे और सीमांत किसान है जो बहुत कम भूमि रखते है जिस पर आधुनिक तरीके से कृषि कार्य संभव नही है। इसके साथ जोड़ते हुये उपेक्षा तथा शिक्षा में कमी हानि नियंत्रण उपायों को ग्रहण करने से रोकती है। किसानों की ऋण आवश्यकताओं का वैज्ञानिक मूल्यांकन तथा उचित बीमा संविदा प्रस्तुत करना उनकी कठिनाईयों को दूर करने में एक बड़ी भूमिका निभाएगा।

कृषि बीमा में कोई विशेष उपलब्धि हासिल नही हुई है। एक मजबूत बीमांकक आधार जो जोखिम का मूल्यांकन कर सके तथा दर निर्धारित कर सके बीमाकर्ता के लिये कृषि बीमा उत्पादों को सक्षम बनायेंगे। इसी समय यह कृषक के लिये वहन योग्य भी होगा। इस कार्य के लिये काम करने की तुरन्त आवश्यकता है तथा बीमा की जोखिम प्रबंध तकनीकों का महत्व कृषि समुदाय में राष्ट्र तक पहुँचाना होगा।

लक्ष्य के आधार को विस्तृत करते हुये यह आर्थिक व्यवहार्यता को प्राप्त करने में तथा उसी समय दो बुराइयाँ जो नैतिक जोखिम तथा प्रतिकूल चुनाव से संबंधित है को दूर कर सकेगा।

जर्नल के इस अंक के केंद्र में कृषि बीमा है। भारत की बीमा पटल पर स्वास्थ्य बीमा अपेक्षाकृत एक नया वर्ग है। वैसे हाल ही में इसने बड़े स्तर पर प्रगति की है अभी इसके विस्तार देने तथा भविष्य में आगे बढ़ाने की आवश्यकता है। जर्नल के अगले अंक के केंद्र बिन्दु में स्वास्थ्य बीमा होगा।

सी. एस. राव

सी. एस. राव
अध्यक्ष

दृष्टि कोण

भारत जैसे देश में गरीब लोगों के लिये संयुक्त बीमा उत्पादों की आवश्यकता है, यह उनके जीवन तथा संपत्ति को बीमित कर सकेंगें। हम उनके लिये सरल जान सकने वाले उत्पादों की आवश्यकता है।

श्री पी चिदम्बरम

वित्त मंत्री, भारत सरकार

माइक्रो बीमा प्रचालन के लिये वित्तिय विनियमों का अनुपालन एक चुनौती है जो न केवल माइक्रो व्यवसाय की विशेषताओं को ध्यान में रखेली वरन् परंपरागत बीमा कंपनियों को दूर रखते हुये प्रतिस्पर्धात्मक गैर लाभ की स्थिति में रखेगी।

श्री मिचल फ्लेमी

अध्यक्ष, अंतर्राष्ट्रीय एसोसिएयशन ऑफ इंश्योरेंस सुपरवाइजर की कार्यकारी समिति

हम कुछ विदेशी बीमा कंपनियों ने बीमा के संयुक्त उपक्रमों में निवेश किया है, यह कोशिश होनी चाहिये की सार्वजनिक मानक बनाये जायें जिनको सभी समझ सकें। संयुक्त लक्ष्य पॉलिसीधारक के हितों की रक्षा होना चाहिये।

श्री सी एस राव

अध्यक्ष, आईआरडीए, भारत

ग्लोबल बाजार में हाल ही में हुई रूकावटों ने स्वस्थ अनूकूल शर्तों की सतता जो विश्व विकास तथा कम मुद्रास्फीति के लिये वित्तिय असंतुलन एकत्र कर सकती है जिसके बाद दोष सुधार होगा तथा अधिक स्थिरता के लिये कार्य होगा।

श्री तोशिको फ्यूकुनी

गर्वनर, बैंक ऑफ जापान

जैसे हम वित्तिय क्षेत्र के विकास के पीछे लगे रहते हैं, हम अधिक उदार उत्पादों को आते हुये देखेंगे। बाजार के भागीदार तथा विनियामक को अपनी सूझ को ऐसे जोखिमों को लेने के लिये समझदारी बनानी चाहिये।

श्री गुह चोक टोंक

वरिष्ठ मंत्री, सिंगापुर सरकार

पूंजी बाजार तथा बीमा / पुर्नबीमा उद्योग ने अपनी योग्यता का प्रदर्शन किया है। बीमाकर्ता के प्राकृतिक महाआपदा जोखिम को स्थानांतरित करने में तथा उपभोक्ता जब बाजार के गति सिद्धांत को कार्य करने दिया जाता है।

श्री फ्रैंकलिन डब्ल्यू न्यूटर

अध्यक्ष, अमेरिका की पुर्नबीमा एसोसिएशन (आरएए)

खाद्य सुरक्षा मापदंड - स्वास्थय और स्वच्छता खाद्यकर्मियों के उत्तरदायित्व

पिछले अंक से आगे...

खाद्य सुरक्षा मापदंड 3.2.2 फूड सेफ्टी एंड जनरल रिक्वायरमेंट के अंतर्गत खाद्यकर्मियों का पूर्ण रूप से उत्तरदायित्व है कि ये जो उचित हो यह करते हुये इस बात का ध्यान रखें कि खाद्य पदार्थ को असुरक्षित और लोगों के खाने के लिये अनुचित न बनाएँ। खाद्यकर्मियों के अपने स्वास्थय और स्वच्छता के भी विशेष उत्तरदायित्व है।

क्या आप एक खाद्यकर्मी हैं?

एक खाद्यकर्मी वह व्यक्ति है जो खाद्य व्यवसाय में काम करता है या खाद्य पदार्थ या उन सतहों के साथ काम करता है जो खाद्य पदार्थ के संपर्क में आता है जैसे कि कांटा, छुरी, प्लेटें और कटोरिया। एक खाद्यकर्मी खाद्य व्यवसाय के लिये कई अलग कार्य कर सकता है। इसके उदाहरणों में खाद्य पदार्थ को बनाना, तैयार करना, परोसना, बांधना, प्रदर्शित करना और भंडार में रखना शामिल है। खाद्यकर्मी खाद्य पदार्थों के निर्माण, उत्पादन, संग्रह, निस्सारण, संसाधन, दोने, सौपने, द्रवण या संरक्षण में भी शामिल हो सकते हैं।

खाद्यकर्मी क्या करें यदि वह बीमार हो?

- यदि खाद्यकर्मी को खाद्यजनित बीमारी हो
  - खाद्यकर्मी काम पर अपने कार्यनिरीक्षक को अवश्य बताये यदि उन्हें कोई भी निम्न लक्षण होः उल्टी, दस्त, बुखार या बुखार के साथ गला खराब। इसका केवल एक अपवाद है यदि खाद्यकर्मी को यह पता हो कि ये लक्षण किस कारण से है। उदाहरण के लिये खाद्यकर्मी काम पर गर्भावस्था के कारण उल्टी कर रही हो।
  - खाद्यकर्मियों को अपने निरीक्षक को अवश्य बताना चाहिये यदि उन्हें खाद्यजनित बीमारी से पीड़ित बताया गया है।
  - खाद्यजनित बीमारी की सूचना देने के साथ साथ खाद्यकर्मियों को किसी खाद्य पदार्थ के साथ काम नही करना चाहिये। जब ये अवसर हो कि वो अपनी बीमारी के कारण खाद्य पदार्थ को असुरक्षित या अनुचित बना सकते हैं। यदि खाद्यकर्मी कोई और काम करने के लिये रहता है तो यथासंभव ध्यान रखना होगा कि यह खाद्य पदार्थ को दूषित न करे।
  - ध्यान देंः यह बीमारियाँ जो खाद्य पदार्थ से आगे बढ़ सकती हैं उनमें हैपाटाइटिस ए और गिआरडिया, सालमोनेला और कैम्पाइलौबैक्टर से होने वाली बीमारियाँ शामिल हैं।
- यदि खाद्यकर्मी की त्वचा पर चोट या घाव है या अन्य कारण से बीमार है
  - खाद्यकर्मियों को अपने निरीक्षक को किसी संक्रामक रोग या ऐसी दशा जैसे कि जुकाम या अन्य कोई समस्या के बारे में अवश्य बताना चाहिये जिससे उसके कान, नाक या आँख से पानी बह सकता हो और यदि कोई अवसर हो जिससे वे अपनी इस दशा के कारण खाद्य पदार्थ को लोगों के खाने के लिये असुरक्षित या अयोग्य कर सकते हैं।
  - और यदि वे इस दशा के साथ खाद्य पदार्थ के साथ काम करते रहें तो खाद्यकर्मियों को चाहिये कि वे यथासंभव ध्यान रखें कि खाद्य पदार्थ को दूषित न करें। उदाहरण के

खाद्यकर्मियों को अपने निरीक्षक को किसी संक्रामक रोग या ऐसी दशा जैसे कि जुकाम या अन्य कोई समस्या के बारे में अवश्य बताना चाहिये

खाद्यकर्मियों से अपने हाथ धोने की अपेक्षा की जाती है, जबकि उनके हाथों से खाद्य पदार्थ दूषित होने की संभावन है।

लिये एक दूषित घाव को पूरी तरह ढका जा सकता है या नंगी त्वचा वाले हिस्से पर वाटर प्रूफ कपड़े की तरह लगाई जा सकती है और पानी सुखाने की दवा प्रयोग की जा सकती है।

- यदि खाद्यकर्मी को पता हो या शक हो कि उसने खाद्य पदार्थ को दूषित कर दिया है
  - खाद्यकर्मियों को अपने निरीक्षक को अवश्य बताना चाहिये यदि वे जानते या सोचते हों कि उन्होनें किसी खाद्य पदार्थ को खाने के लिये असुरक्षित या अयोग्य लना दिया है। उदाहरण के लिये खाद्यकर्मी के पहने जेवर खाद्य पदार्थ में गिर गये हों।

निजी स्वच्छता के बारे में क्या करें?

खाद्यकर्मियों के निजी स्वास्थय व स्वच्छता के तरीकों से खाद्य पदार्थ प्रदूषण को अवश्य कम करना चाहिये।

सबसे महत्वपूर्ण बातें जो उन्हें पता होनी चाहिये कि येः

- जितना भी उचित हो, अपने शरीर या शरीर से कुछ निकलने वाली चीज या जो कुछ यह पहन रहें हो उसे खाद्य पदार्थ या खाद्य पदार्थ के संपर्क में आने वाली सतहों से बचाएँ
- खाने के लिये तैयार खाद्य पदार्थों से अनावश्यक संपर्क को रोकने के लिये जो उचित हो करें
- अपने काम के अनुसार स्वच्छ बाहरी वस्त्र पहनें
- ध्यान रखें कि शरीर के किसी खुले भाग पर हुई पट्टी या ड्रेसिंग एक वाटरप्रूफ से ढकी हुई हो
- खाद्य पदार्थों के संपर्क में आने वाली सतहों या असुरक्षित खाद्य पदार्थ पर न खाएँ
- खाद्य पदार्थों के संपर्क में आने वाली सतहों या असुरक्षित खाद्य पदार्थ पर न छीकें, न नाक साफ करें, न खाँसी करें
- जहाँ खाद्य पदार्थ के साथ काम किया जाता है वहाँ न थूकें, न सिगरेट पीएँ और न तम्बाकू या मिलती जुलती से वस्तु का प्रयोग करें
- शौचालय के अतिरिक्त कहीं और पेशाब या शौच न करें।

खाद्यकर्मियों के हस्त-प्रक्षालन के कुछ विशेष नियम

खाद्यकर्मियों से अपने हाथ धोने की अपेक्षा की जाती है, जबकि उनके हाथों से खाद्य पदार्थ दूषित होने की संभावन है। इसमें शामिल है कि वे अपने हाथ धोएं

- कच्चे खाद्य पदार्थ के साथ काम करने के बाद खाने के लिये तैयार खाद्य पदार्थ के साथ काम करने से तत्काल पहले
- शौचालय जाने के तुरंत बाद
- किसी अन्य कार्य के बाद खाद्य पदार्थ के साथ काम शुरू करने से पहले
- सिगरेट पीने, खाँसने, छींकने, रूमाल या फैकने वाले पतले कागज के प्रयोग करने, खाने पीने या तम्बाकू से मिलती जुलती से वस्तु का प्रयोग करने के बाद
- अपने केश, खोपड़ी या शरीर छिद्र को छूने के बाद।

खाद्यकर्मी अपने हाथ कैसें धोएं ?

- व्यवसाय द्वारा दी गयी प्रक्षालन सुविधाओं का प्रयोग करें
- साबुन या अन्य प्रभावशाली माध्यमों से अपने हाथ अच्छी तरह से साफ करें
- चलता गर्म पानी प्रयोग करें
- अपने हाथ एक बार इस्तेमाल करने वाले तौलिए से सुखाएं या किसी दूसरे तरीके से जिससे कि रोग के कीटाणु हाथों पर न आ सकें।

अधिक जानकारी चाहिए?

मापदंडों की प्रतियां, इनके निर्देश या अन्य तथ्य पत्रिकाएँ और सहायक सामग्री ए एं जेड एफ ए की वेबसाइट पर मिल सकती है।

जब यह मापदंड हर राज्य व प्रदेश में जारी हो जायेंगे तब खाद्य व्यवसाय सीधे स्थानीय परिषद् के वातावरण स्वास्थय अधिकारी या अपने राज्य या प्रदेश के स्वास्थय या स्वास्थय सेवाएं विभाग और लोक स्वास्थय खंडों से सलाह ले सकते हैं।

राज्य और प्रदेश के स्वास्थय विभाग व स्थानीय परिषदों के संपर्क का ब्यौरा का एक अलग तथ्य

पत्रिका फूड सेफ्टी स्टैंडर्ड सौरसिन ऑफ इनफोरमेशन एंड एडवाइज में है।

खाद्य सुरक्षा मापदंड-खाद्य पदार्थ को सुरक्षा से प्राप्त करना

क्या जरूरी है?

मापदंड 3.2.2 फूड सेफ्टी प्रैक्टिस एंड जनरल रिक्वायरमेंट के अंतर्गत खाद्य व्यवसायों से यह आशा की जाती है कि ये सब व्यवहारिक उपाय करें और असुरक्षित और अनुचित खाद्य पदार्थ न लें। इसका अर्थ है कि ये अवश्य निश्चित करें कि जो खाद्य पदार्थ ले रहे हैं

- दूषण से बचा हो
- पहचाना जा सके जब यह आपके प्रागंण में हो
- यदि यह संभावित संकटजनक है तो पहुँचने पर उचित तापमान पर हो

आपके प्रांगण में आने वाले प्रत्येक खाद्य पदार्थ को जांचना मुश्किल होगा लेकिन आप आने वाले खाद्य पदार्थ का आकस्मिक निरीक्षण कर सकते हैं।

कैसे निश्चित करूं कि यह खाद्य पदार्थ मेरे प्रांगण में पहुँचने पर दूषित नही है?

जबकि आप हमेशा यह नही बता सकते हैं कि आपके व्यवसाय में आने वाला खाद्य पदार्थ दूषित है पर दूषण की संभावना को कम करने के लिये आपको व्यावहारिक कदम लेने चाहिये। उदाहरण के लिये आप निम्न कदम उठा सकते हैं:

- अपने खाद्य पदार्थ आपूर्तक को निश्चित करने को कहें कि लाते समय खाद्य पदार्थ दूषण से बचा रहे और जहाँ संभव हो उन्हें पैकेट व बर्तनों में भेजने को कहें।
- जांच करें कि खाद्य पदार्थ पहुँचने पर आवरित या बंधा हुआ है और इसका बंधन या आवरण क्षतिग्रस्त नही है और वह तिथि जिससे पहले उसका सेवन सर्वोत्तम हो या अवधि पार तिथि को देखें यदि अवधि पार तिथि जा चुकी है तो खाद्य पदार्थ खराब हो चुका हो सकता है।
- जहां तक संभव हो निश्चित करें कि खाद्य पदार्थ न सौंप जाएं जब तक कि खाद्य पदार्थ के आने पर इसको जांचने और इसे सीधे फ्रीजर में या अन्य उपयुक्त भंडार क्षेत्र में रखने के लिये कोई व्यक्ति काम पर न हो।

आपके प्रांगण में आने वाले प्रत्येक खाद्य पदार्थ को जांचना मुश्किल होगा लेकिन आप आने वाले खाद्य पदार्थ का आकस्मिक निरीक्षण कर सकते हैं। आप कुछ आपूर्तकों के खाद्य पदार्थ की अधिकतर जांच का फैसला कर सकते हैं बजाय उन आपूर्तकों के जिनका उत्पादन सामान्यतः ठीक दिशा में आना है।

यदि आपके प्रांगण में पहुँचाया गया खाद्य पदार्थ दूषित है या आप सोचते हैं कि यह दूषित हो सकता है तो आप इसे आपूर्तक की सहमति से खाद्य पदार्थ को नष्ट कर दें। उदाहरण के लिये यदि खाद्य पदार्थ का ऊपरी आवरण खुला है या क्षतिग्रस्त है तो आप दूषण का शक कर सकते हैं। खाद्य पदार्थ तब भी दूषित है यदि इसमें कीडें, चूहे की मेंगने, शीशा धातु या बाहरी पदार्थ है या यह खराब हो चुका है।

मैं कैसे निश्चित करूं कि मुझे अपने प्रागंण के खाद्य पदार्थ का स्त्रोत व नाम पता है ?

यदि कार्यान्वयन अधिकारी आपको ऐसा करने को पूछता है तो आप अवश्य ही अधिकारी को अपने प्रांगण में पड़े किसी भी खाद्य पदार्थ के आपूर्तक की और यह कौन सा खाद्य पदार्थ है इसकी जानकारी दे। आपको यह जानकारी चाहिये यदि आपके प्रांगण में पड़ा खाद्य पदार्थ असुरक्षित या किसी प्रकार से दूषित पाया जाता है और इसे आपूर्तक को वापस या नष्ट करना पड़ सकता है।

यद्यपि सारा नही तो अधिकतर खाद्य पदार्थ जो आप खरीदते हैं उस पर उत्पादन का नाम, निर्माता का नाम और पते का, आयातक या खाद्य पदार्थ पैक करने वाले का लेबल होगा, तथापि प्रांगण में बिना बंधा या बिना लेबल का खाद्य पदार्थ होगा तो आपको दूसरे तरीके से सिद्ध करना होगा कि यह कौन सा पदार्थ है और कहाँ से आया है। आप आपूर्तक द्वारा किये गये चालान रख सकते हैं या अपने आपूर्तक का और आप उनसे क्या खरीदते हैं और आपके प्रांगण में कौन सा खाद्य पदार्थ है, का कोई दूसरा लेखा रख सकते हैं।

आप खाद्य पदार्थ तब तक स्वीकार न करें जब तक आप इसे पहचान नही सकते या इसके आपूर्तक को खोज नही सकते।

मैं कैसे निश्चित करूं कि संभावित संकटजनक खाग्य पदार्थ ठीक तापमान पर पहुँचे?

आप यह निश्चित करने के लिये व्यावहारिक कदम अवश्य उठायें कि आप संभावित संकटजनक

खाद्य पदार्थों की पहुँच स्वीकार न करें यदि यह ठीक तापमान पर नही या सुरक्षित समय सीमा से अधिक समय तक तापमान नियंत्रण से बाहर रहा है। आपके व्यवसाय पर सौंपा गया संभावित संकटजनक खाद्य पदार्थ अवश्य ही

- यदि यह ठंडा है तो 5 डिग्री सेल्सियस या कम तापमान पर
- यदि गर्म है तो 60 डिग्री सेल्सियस या अधिक तापमान पर हो
- यदि यह बर्फ में जमा हुआ है तो बर्फ में जमा होना चाहिये न कि आंशिक पिघला हो या
- यह किसी दूसरे तापमान पर हो सकता है- बशर्ते कि सौंपने वाला व्यवसाय यह प्रदर्शित कर सके कि सुरक्षित समय सीमा पार नही की गई है।

यदि संभावित संकटजनक खाद्य पदार्थ जो आपके व्यवसाय पर सौंपा गया है उन जरूरतों को पूरा नही करता आप उसे अवश्य अस्वीकार कर दें। अधिकतर व्यवसाय संभावित संकटजनक खाद्य पदार्थों को 5 डिग्री सेल्सियस या कम पर या बर्फ लगे रूप से सौंपा जाना चाहेंगे, लेकिन कुछ हालात ऐसे भी हो सकते हैं जब आप संभावित संकटजनक खाद्य पदार्थों को दूसरे तापमान पर स्वीकार करना चाहेंगे। उदाहरण के लिये आप ऐसा खाद्य पदार्थ खरीद रहे हो जो आपूर्तक के यहाँ से ठीक तापमान पर चलता है और जिसे आपके प्रांगण तक आने का समय कम है।

तथ्य पत्रिका फूड सेफ्टी स्टैंडर्ड टेम्परेचर कंट्रोल रिक्वायरमेंट से संभावित संकटजनक खाद्य पदार्थों के तापमान नियंत्रण की व समय की लंबाई जिस पर इसे 5 डिग्री सेल्सियस और 60 डिग्री सेल्सियस तापमान के बीच रखा जा सकता है की अधिक जानकारी है। सामान्यतः जहाँ सौपनें का समय दो घंटे से अधिक हो वहाँ खाद्य पदार्थों को रेफरीजिरेटिड वाहनों में ले जाना चाहिए जिनमें खाद्य पदार्थों को 5 डिग्री सेल्सियस या इससे नीचे के तापमान पर या बर्फ लगी अवस्था में रखा जा सकता है।

निम्न उदाहरणों में कुछ व्यावहारिक कदम शामिल है जो आपको यह निश्चित करने के लिये कदम उठाने चाहिए कि जब संभावित संकटजनक खाद्य

यदि संभावित संकटजनक खाद्य पदार्थ जो आपके व्यवसाय पर सौंपा गया है उन जरूरतों को पूरा नही करता आप उसे अवश्य अस्वीकार कर दें।

पदार्थ आपके व्यवसाय पर पहुँचाया जाता है तो वह सुरक्षित हैः

- जो व्यवसाय आपके प्रांगण में खाद्य पदार्थ लाता है उसके साथ आपको सौंपने के स्वीकृत तापमान पर विवाद करना चाहिए और औपचारिक रूप से सहमत होना चाहिए कि खाद्य पदार्थ समय सीमा के अंदर, बर्फ लगा हुआ या गर्म सौंपा जाएगा।
- यदि खाद्य पदार्थ बर्फ लगा हो तो जब यह आपके व्यवसाय पर पहुँचे आप यह निश्चित करने के लिये जाँच कीजिए कि यह बर्फ लगा हुआ है और पिघलना शुरू नही हुआ है।
- यदि खाद्य पदार्थ ठंडा या गर्म हो जब यह आपके व्यवसाय पर पहुँचे तो आप निश्चित करने के लिये खाद्य पदार्थ का तापमान जांचे कि 5 डिग्री सेल्सियस या उससे कम या 60 डिग्री सेल्सियस या उससे अधिक हो।
- यदि आप खाद्य पदार्थ या संबंधित पहुँचाए जाने का लेखा जांचने की जरूरत नही लेकि आपको यह निश्चित करने के लिये कि यह सहमत समय सीमा में पहुंचाया गया है इसके प्रस्थान व आगमन का लेखा जांचे।

अधिक जानकारी चाहिए?

मापदंडों की प्रतियां, इनके निर्देश या अन्य तथ्य पत्रिकाएँ और सहायक सामग्री ए एं जेड एफ ए की वेबसाइट पर मिल सकती है।

जब यह मापदंड हर राज्य व प्रदेश में जारी हो जायेंगे तब खाद्य व्यवसाय सीधे स्थानीय परिषद् के वातावरण स्वास्थय अधिकारी या अपने राज्य या प्रदेश के स्वास्थय या स्वास्थय सेवाएं विभाग और लोक स्वास्थय खंडों से सलाह ले सकते हैं।

राज्य और प्रदेश के स्वास्थय विभाग व स्थानीय परिषदों के संपर्क का ब्यौरा का एक अलग तथ्य पत्रिका फूड सेफ्टी स्टैंडर्ड सौरसिन ऑफ इनफोरमेशन एंड एडवाइज में है।

खाद्य सुरक्षा मापदंड - तापमान नियंत्रण की मांगे

भूमिका

मापदंड 3.2.2 फूड सेफ्टी प्रैक्टिस एंड जनरल रिक्वायरमेंट संभावित संकटजनक खाद्य पदार्थों

> कई संरक्षित खाद्य पदार्थों में भोजन को जहरीला बनाने वाले जीवाणु नही होते हैं और जीवाणु कुछ प्रकार के खाद्य पदार्थों में नही पनपते।

को विशेष तापमान पर रखने व ठंडा और दोबारा गर्म करने की विशेष मांगे स्थापित करता है। खाद्य व्यवसाययों को इन मागों का पालन अवश्य करना होगा या ये दिखा सकते हैं कि उनके पास एक दूसरा सुरक्षित प्रबंध है जिससे खाद्य पदार्थ को खाने के लिये सुरक्षित रखा जा सकता है।

- **किन खाद्य पदार्थों को तापमान नियंत्रण में रखना चाहिए?**
  संभावित संकटजनक खाद्य पदार्थों को अवश्य तापमान नियंत्रण में रखना चाहिए।

- **कौन से खाद्य पदार्थ संभावित संकटजनक खाद्य पदार्थ है?**
  संभावित संकटजनक खाद्य पदार्थ वे खाद्य पदार्थ है जिनमें खाने को जहरीला बनाने वाले सूक्ष्म जीवाणु होते हैं और जो इन बैक्टीरिया के विकास में सहायक होते हैं या खाद्य पदार्थों को सुरक्षित तापमान पर न रखने पर विष को इस स्तर तक बना देते हैं जो कि उपभोक्ताओं के लिये असुरक्षित है। विष वह रसायन है जो कि कुछ प्रकार के जीवाणु से बनते हैं।

संभावित संकटजनक खाद्य पदार्थों के उदाहरण निम्न है:

- कच्चा और पका हुआ मांस या मांस वाले खाद्य पदार्थ जैसे कि कैसेरोलस, करी और लसानया
- डेयरी उत्पाद, जैसे कि दूध, दही, डेयरी से बने मीठे आहार
- समुद्री खाद्य पदार्थ (जीवित खाद्य पदार्थ को छोड़कर)
- पके हुए चावला व पास्टा
- अंडा युक्त खाद्य पदार्थ, दाल, मेवे व अन्य अधिक प्रोटीन युक्त खाद्य पदार्थ दैसे कि किश और सोया उत्पाद
- खाद्य पदार्थ जिनमें ये खाद्य पदार्थ हैं जैसे कि सेंडविच और रोलस

कौन से खाद्य पदार्थ संभावित संकटजनक पदार्थ नही हैं ?

कई संरक्षित खाद्य पदार्थों में भोजन को जहरीला बनाने वाले जीवाणु नही होते हैं और जीवाणु कुछ प्रकार के खाद्य पदार्थों में नही पनपते। उदाहरण के लिये डिब्बा बंद और बोतल बंद खाद्य पदार्थ, सूखे फल, नमकीन सूखे मांस, खमीर लगे सूखे मांस, दही, सख्त पनीर, स्प्रैड्स कुछ चटनियाँ, सूखा पास्ता, डबल रोटी और सूखे पदार्थ।

हालांकि यदि आप खाद्य पदार्थ को किसी प्रकार बदल दें तो कुछ खाद्य पदार्थ जोकि संभावित संकटजनक नही हैं संभावित संकटजनक बन सकते हैं उदाहरण के लिये सूखा कस्टर्ड पाउडर संभावित संकटजनक नही है लेकिन जब दूध या पानी पाउडर के साथ कस्टर्ड बनाने के लिये मिला दिया जाये तो कस्टर्ड संभावित संकटजनक हो जाता है।

कुछ खाद्य पदार्थ संभावित संकटजनक न हो पर उन्हे भ्रष्ट होने से बचाने के लिये फ्रिज में रखना पड़ता है। भ्रष्ट खाद्य पदार्थ बेचना अपराध है।

- **खाद्य पदार्थ को तापमान नियंत्रण में कब रखना चाहिए?**
  आप निश्चित करें कि जब भी संभावित संकटजनक खाद्य पदार्थ प्राप्त, प्रदर्शित दिया या संग्रहित किया जाए इसका तापमान 5 डिग्री सेल्सियस या ठंडा या 60 डिग्री सेल्सियस या गर्म है। यदि आप संभावित संकटजनक खाद्य पदार्थ को किसी अन्य तापमान पर प्राप्त प्रदर्शित, ढोना या संग्रहित करना चाहते हैं तो आपको कार्यान्वयन अधिकारी को दिखाना होगा कि आपके पास कोई दूसरा सुरक्षा प्रबंध है।

  जब आप संभावित संकटजनक खाय पदार्थो को संसाधित या तैयार कर रहे हैं तब इन्हें किसी विशेष तापमान पर रखने की आवश्यकता नही क्योंकि यह अव्यवहारिक होगा लेकिन आपको संसाधन या तैयारी का समय कम से कम रखना चाहिये ताकि जीवाण को खतरनाक स्तर तक बढ़ने या विष बनाने का अवसर ही न मिले।

- **संभावित संकटजनक पदार्थ को ठंडा करना**
  यदि आप संभावित संकटजनक पदार्थ को पका कर ठंडा करना चाहते हैं तो आप जल्दी से जल्दी खाने को 5 डिग्री सेल्सियस या अधिक ठंडा कीजिये। यद्यपि भोजन पक चुका है फिर भी इसमें भोजन को जहरीला बनाने वाले जीवाणु हो सकते हैं। जल्दी ठंडा करने का समय इन जीवाणु को बढ़ने या विष बनाने का समय कम कर देता है।

> मापदंड उन तरीकों को विशेष रूप से बताता है जिससे खाद्य व्यवसाय क्रियान्वयन अधिकारी को दिखा सकें कि वह एक दूसरा सुरक्षित प्रबंध प्रयोग कर रहा है।

मापदंड के अनुसार भोजन 60 डिग्री सेल्सियस से 21 डिग्री सेल्सियस तक अधिकतम दो घंटों में ठंडा करना चाहिए और 21 डिग्री सेल्सियस से 5 डिग्री सेल्सियस तक अगले अधिकतम 4 घंटों में होना चाहिए। दूसरे तरीके से यदि आप भोजन को लंबे समय तक ठंडा करना चाहते हैं तो आपको दिखाना होगा कि आपके पास कोई दूसरा सुरक्षित प्रबंध है।

यदि आपको मालूम नहीं कि भोजन कितनी जल्दी ठंडा हो रहा है तो सलाई वाले थर्मामीटर का प्रयोग कर खाने के सबसे गर्म हिस्से अधिकतर मध्य भाग को मापें। थर्मामीटर के प्रयोग की जानकारी के लिये तथ्य पत्रिका थर्मामीटर और उनका संभावित संकटजनक खाद्य पदार्थों के साथ प्रयोग देखें।

भोजन को जल्दी ठंडा करने के लिये इसे कम गहरे बर्तनों में छोटे छोटे हिस्सों में बांट लें। ऐसा करते हुए खाने को दूषित न करने का ध्यान करें।

- **पहले से पके हुए ठंडा किए संभावित संकटजनक खाद्य पदार्थ को दोबारा गर्म करना**

यदि आप पहले से पके हुए व ठंडा किए संभावित संकटजनक खाद्य पदार्थ को दोबारा गर्म करें तो इसे जल्दी से 60 डिग्री सेल्सियस या अधिक गर्म पर अवश्य दोबारा गर्म करें। आदर्श रूप से आपको दो घंटे में 60 डिग्री सेल्सियस पर खाद्य पदार्थ को दोबारा गर्म करने का उद्देश्य रखना चाहिए ताकि आप वह समय कम कर सकें जिसमें खाद्य पदार्थ उस तापमान पर हो जहाँ जीवाणुओं के विकास व विष बनाने की संभावना होती है।

यह मांग केवल उन संभावित संकटजनक खाद्य पदार्थों पर निर्भर होती हैं जिन्हें आप गर्म रखना चाहते हैं, उदाहरण के लिये आपके चूल्हे पर या भोजन प्रदर्शन यूनिट में। उस हर भोजन पर लागू नही होती जिसे आप रेस्तरां या दुकानों पर ग्राहकों के लिये एक दम खाने के लिये दोबारा गर्म करते हैं।

- **एक व्यवसाय तापमान नियंत्रण की मांगे कैसे पूरी करता है?**

मांगो को पूरा करने का सबसे आसान तरीका है कि ध्यान रखें कि जब संभावित संकटजनक खाद्य पदार्थ प्राप्त, संग्रहित, प्रदर्शित या ढोया जाये तो वह बहुत ठंडा 5 डिग्री सेल्सियस या अधिक ठंडा हो या बहुत गर्म 60 डिग्री सेल्सियस या अधिक गर्म हो। संभावित संकटजनक खाद्य पदार्थ को जल्दी से ठंडा या दोबारा गर्म किया जाये और कम से कम समय में तैयार किया जाये।

यदि किसी कारण आप खाद्य प्राप्त को 5 डिग्री सेल्सियस या अधिक ठंडे या 60 डिग्री सेल्सियस या अधिक गर्म ताप पर संग्रहित, प्रदर्शित या ढोना या ठंडा व गर्म करने के समय व ताप की मांगो को पूरा नही करना चाहते या असमर्थ हैं तो आपको अवश्य दिखाना होगा कि आपके पास कोई दूसरा सुरक्षित प्रबंध है।

मापदंड उन तरीकों को विशेष रूप से बताता है जिससे खाद्य व्यवसाय क्रियान्वयन अधिकारी को दिखा सकें कि वह एक दूसरा सुरक्षित प्रबंध प्रयोग कर रहा है। आप खाद्य सुरक्षा कार्यक्रम का प्रयोग कर सकते हैं या खाद्य उद्योग के मान्य दिशानिर्देशों का अनुसरण कर सकते हैं या ठोस वैज्ञानिक प्रमाण वाले प्रबंध को प्रयोग कर सकते हैं। ए एन जेड एफ ए तापमान नियंत्रण पर अधिक विस्तृत दिशा निर्देश तैयार कर रही है जिसमें सुरक्षित दूसरे प्रबंधों का प्रयोग भी शामिल है।

अधिक जानकारी चाहिए?

मापदंडों की प्रतियां, इनके निर्देश या अन्य तथ्य पत्रिकाएँ और सहायक सामग्री ए एं जेड एफ ए की वेबसाइट पर मिल सकती है।

जब यह मापदंड हर राज्य व प्रदेश में जारी हो जायेंगे तब खाद्य व्यवसाय सीधे स्थानीय परिषद् के वातावरण स्वास्थय अधिकारी या अपने राज्य या प्रदेश के स्वास्थय या स्वास्थय सेवाएं विभाग और लोक स्वास्थय खंडों से सलाह ले सकते हैं।

लेखक श्री आर महेन्द्र, सलाहकार जीवन बीमा

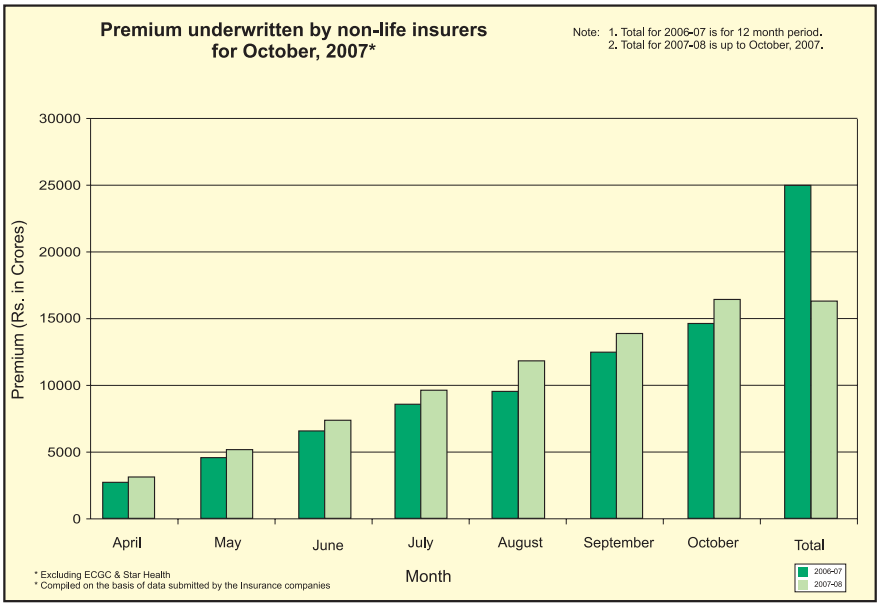
Report Card: General

GROSS PREMIUM UNDERWRITTEN FOR AND UP TO THE MONTH OF OCTOBER 2007

(Rs.in Crores)

INSURER	OCTOBER		APRIL - OCTBER		GROWTH OVER THE CORRESPONDING PERIOD OF PREVIOUS YEAR
	2007-08	2006-07	2007-08	2006-07	
Royal Sundaram	58.43	52.04	379.31	341.17	11.18
Tata-AIG	59.30	57.09	472.40	457.67	3.22
Reliance General	182.25	68.12	1128.68	445.66	153.26
IFFCO-Tokio	77.30	72.45	610.87	728.96	-16.20
ICICI-lombard	337.54	310.19	2064.13	1835.36	12.46
Bajaj Allianz	202.56	159.30	1325.07	1005.55	31.78
HDFC General	17.52	18.30	129.55	109.57	18.23
Cholamandalam	48.27	28.83	314.79	182.96	72.05
New India	452.29	426.04	3117.68	2973.24	4.86
National	321.31	304.78	2275.89	2137.27	6.49
United India	288.93	257.73	2139.80	2037.71	5.01
Oriental	332.20	365.07	2321.59	2345.12	-1.00
PRIVATE TOTAL	983.18	766.32	6424.79	5106.89	25.81
PUBLIC TOTAL	1394.73	1353.62	9854.96	9493.34	3.81
GRAND TOTAL	2377.91	2119.94	16279.76	14600.23	11.50
SPECIALISED INSTITUTIONS					
ECGC	51.64	46.86	364.88	339.88	7.36
Star Health & Allied Insurance	49.10	10.52	94.90	13.84	585.86

Note: Compiled on the basis of data submitted by the Insurance companies.



GROSS PREMIUM UNDERWRITTEN BY NON-LIFE INSURERS WITHIN INDIA (SEGMENT WISE):

Sl. No.	Insurer	Fire	Marine	Marine Cargo	Marine Hull	Engineering	Motor
1	**Royal Sundaram**	**43.27**	**9.09**	**9.09**	**0.00**	**19.89**	**171.87**
	Previous year	*65.21*	*8.88*	*8.88*	*0.00*	*17.96*	*133.54*
2	**TATA-AIG**	**87.73**	**49.81**	**49.81**	**0.00**	**14.38**	**119.37**
	Previous year	*92.53*	*34.51*	*34.51*	*0.00*	*16.58*	*143.82*
3	**Reliance**	**86.51**	**22.18**	**18.37**	**3.81**	**52.01**	**565.08**
	Previous year	*100.49*	*14.61*	*8.45*	*6.16*	*34.68*	*115.32*
4	**IFFCO Tokio**	**155.74**	**32.26**	**26.33**	**5.94**	**41.98**	**191.75**
	Previous year	*204.61*	*99.89*	*25.16*	*74.73*	*45.42*	*218.44*
5	**ICICI Lombard**	**287.39**	**118.31**	**33.46**	**84.85**	**97.51**	**604.83**
	Previous year	*253.99*	*81.80*	*29.11*	*52.69*	*104.46*	*478.18*
6	**Bajaj Allianz**	**162.20**	**44.68**	**39.78**	**4.90**	**75.71**	**586.80**
	Previous year	*219.47*	*37.91*	*32.26*	*5.65*	*89.89*	*334.80*
7	**HDFC Chubb**	**4.40**	**1.52**	**1.52**	**0.00**	**2.86**	**63.73**
	Previous year	*4.44*	*1.20*	*1.20*	*0.00*	*2.15*	*64.13*
8	**Cholamandalam**	**46.80**	**17.11**	**17.04**	**0.06**	**16.04**	**97.07**
	Previous year	*49.43*	*12.79*	*12.64*	*0.15*	*14.06*	*35.52*
9	**New India**	**475.93**	**209.67**	**90.94**	**118.73**	**105.33**	**976.58**
	Previous year	*465.05*	*192.23*	*73.50*	*118.73*	*104.28*	*988.63*
10	**National**	**222.98**	**89.56**	**61.25**	**28.31**	**66.41**	**1,010.15**
	Previous year	*303.68*	*87.93*	*60.01*	*27.92*	*56.57*	*906.59*
11	**United India**	**319.74**	**143.53**	**82.49**	**61.04**	**103.32**	**665.09**
	Previous year	*420.16*	*139.38*	*70.70*	*68.67*	*111.24*	*571.80*
12	**Oriental**	**328.25**	**162.30**	**87.91**	**74.40**	**105.42**	**795.59**
	Previous year	*335.84*	*172.31*	*83.03*	*89.29*	*99.17*	*820.40*
	Grand Total	**2,220.93**	**900.02**	**517.97**	**382.04**	**700.84**	**5,847.91**
	Previous year	*2,514.89*	*883.44*	*439.45*	*443.99*	*696.46*	*4,811.16*
	SPECIALISED INSTITUTIONS						
13	**ECGC ***						
	Previous year						
14	**Star Health & Allied Insurance****						
	Previous year						

Note: In case of public sector insurance companies, the segment wise data submitted may vary from the flash Nos filed with the Authority. As such, the industry totals may vary from the flash figures published for the month of September-2007.

*Pertains to Credit Insurance.

** Pertains to Health Insurance.

Note: Compiled on the basis of data submitted by the Insurance companies

FOR THE HALF YEAR ENDED SEPTEMBER - 2007 (PROVISIONAL & UNAUDITED)

(Rs.in Crores)

Motor OD	Motor TP	Health	Aviation	Liability	Personal Accident	All Others	Grand Total
140.03	**31.83**	**53.85**	**0.00**	**2.68**	**16.56**	**3.68**	**320.87**
119.92	*13.62*	*42.21*	*0.00*	*5.22*	*12.82*	*3.29*	*289.13*
100.40	**18.97**	**35.12**	**0.00**	**49.07**	**56.31**	**1.31**	**413.10**
131.74	*12.07*	*19.24*	*0.00*	*38.06*	*42.54*	*13.29*	*400.57*
414.61	**150.47**	**147.92**	**4.03**	**7.92**	**25.95**	**34.86**	**946.44**
115.16	*0.16*	*31.82*	*3.97*	*4.83*	*10.25*	*61.56*	*377.54*
131.36	**60.39**	**44.59**	**1.82**	**13.66**	**9.48**	**42.28**	**533.56**
177.82	*40.62*	*31.58*	*0.84*	*6.87*	*8.28*	*40.58*	*656.52*
429.15	**175.68**	**424.89**	**18.16**	**41.41**	**80.44**	**53.63**	**1,726.59**
424.85	*53.32*	*296.25*	*16.87*	*58.91*	*76.08*	*158.63*	*1,525.17*
428.93	**157.87**	**125.12**	**7.43**	**26.58**	**20.59**	**73.41**	**1,122.51**
239.01	*95.79*	*73.90*	*4.05*	*16.07*	*14.80*	*55.36*	*846.24*
56.57	**7.17**	**20.79**	**0.00**	**2.11**	**3.44**	**13.18**	**112.03**
60.72	*3.41*	*4.04*	*0.00*	*2.06*	*5.40*	*7.85*	*91.27*
78.62	**18.45**	**56.07**	**0.00**	**6.86**	**9.64**	**16.84**	**266.41**
32.68	*2.83*	*15.80*	*0.23*	*8.15*	*5.77*	*12.37*	*154.12*
535.84	**440.73**	**483.30**	**35.58**	**40.14**	**46.40**	**292.59**	**2,665.52**
645.71	*342.92*	*347.51*	*63.88*	*33.38*	*47.45*	*273.86*	2,516.27
626.33	**383.82**	**313.17**	**27.32**	**19.64**	**31.31**	**174.05**	**1,954.58**
622.07	*284.52*	*181.62*	*38.49*	*20.10*	*29.01*	*208.48*	*1,832.45*
403.81	**261.28**	**275.62**	**13.08**	**35.29**	**46.38**	**250.96**	**1,853.01**
344.01	*227.79*	*206.14*	*4.98*	*36.36*	*43.99*	*245.94*	*1,779.98*
492.31	**303.28**	**262.19**	**45.75**	**34.58**	**48.41**	**206.91**	**1,989.39**
567.55	*252.85*	*209.50*	*51.66*	*30.84*	*38.08*	*222.80*	*1,980.60*
3,837.95	**2,009.95**	**2,242.63**	**153.17**	**279.92**	**394.91**	**1,163.69**	**13,904.01**
3,481.25	*1,329.91*	*1,459.61*	*184.97*	*260.85*	*334.47*	*1,304.00*	*12,449.87*
						313.24	**313.24**
						293.02	*293.02*
		44.58			**1.09**	**0.67**	**46.34**
		1.98			***1.34***	***0.00***	***3.32***

Mr. C.S. Rao, Chairman, IRDA delivering the Keynote address at the Conference.

FICCI organized a one-day conference "Sustainable Health Insurance – Need of the Hour" at Federation House, New Delhi on 29th November, 2007.

Seen in the photograph of the inaugural session (from L to R): Ms. Shikha Sharma - Chairperson, FICCI's Insurance & Pensions Committee and CEO & MD, ICICI Prudential Life Insurance Co. Ltd.; Mr. R.R. Shah - Member Secretary, Planning Commission, Government of India; Mr. Habil Khorakiwala - President, FICCI; Mr. C.S. Rao - Chairman, IRDA and Mr. Shivinder Mohan Singh - Chairman, FICCI's Health Services Committee and CEO & MD, Fortis Healthcare.

A view of the deliberations at the meeting in progress.

The meeting of International Association of Insurance Supervisors (IAIS) - Corporate Governance Task Force took place at Hotel Le Meridien, New Delhi on 24th and 25th September 2007.

From (L to R): Mr. Michael Graham, Guernsey Financial Services Commission; Ms. Lone Moerup, IAIS; Ms. Shikha Sharma - CEO & MD, ICICI Prudential Life Insurance Co. Ltd.; Mr. C.R. Muralidharan - Member (F & I), IRDA, India.

"It's three weeks since I sent all the documents for the claim... I hope they send the money soon."

"Yes, they will. When all the papers are in order, they have to settle within 30 days. It's the rule!"

The Insurance Regulatory and Development Authority (IRDA), the supervisory body of insurance companies in India, protects the interests of policyholders. Here are some of the regulations laid down by IRDA:

- A claim has to be paid or disputed by the insurance company, giving relevant reasons within 30 days of receiving all relevant documents.
- The insurer shall furnish the prospect, a copy of the proposal form, free of charge, within 30 days of the acceptance of a proposal.
- Proposals shall be processed and communicated within 15 days of receipt by the insurer.
- In case of delay in settlement of claim after submission of all necessary documents, the insurance company will be liable to pay a stipulated amount of interest.
- A life insurance policyholder is entitled to a "Free Look Period" of 15 days (from the date of receipt of policy) to cancel the policy.
- An insurance company shall respond within 10 days of receipt of any communication from its policy holders.

Issued in public interest by:
बीमा विनियामक और विकास प्राधिकरण
Insurance Regulatory and Development Authority
3rd Floor, Parisrama Bhavanam,
Basheerbagh, Hyderabad 500 004.
Website : www.irda.gov.in

SPREAD THE WORD...

The above advertisement is issued by IRDA in the Public interest.
Those wishing to publish it for spreading consumer awareness of Insurance may use this artwork for reproduction.

10 – 15 Dec 2007 Venue: Pune	**Reinsurance Management** By *NIA Pune*
13 – 15 Dec 2007 Venue: Pune	**Workshop on Motor TP Claims** By *NIA Pune*
21 – 22 Dec 2007 Venue: Pune	**Seminar on Motor Insurance Underwriting & Claims** By *NIA Pune*
24 – 26 Dec 2007 Venue: Pune	**Actuarial Practices in Life Insurance** By *NIA Pune*
31 Dec 2007 – 05 Jan 2008 Venue: Pune	**Effective Underwriting in Detariff Regime** By *NIA Pune*
07 – 12 Jan 2008 Venue: Pune	**Prevention of Insurance Frauds (Non-life)** By *NIA Pune*
17-18 January 2008 Venue: NIA, Pune	**3rd Semianr on Health Insurance and Care** By *Institute of Actuaries of India, Mumbai.*
21 – 26 Jan 2008 Venue: Pune	**Effective Claims Management (Non-life)** By *NIA Pune*
21 - 23 Jan 2008 Venue:New Delhi, India	**1st India Rendezvous 2008** By *Asia Insurance Review, Singapore*
30 Jan - 1 Feb 2008 Venue:Jakarta, Indonesia	**8th CEO Insurance Summit in Asia** By *Asia Insurance Review, Singapore*

RNI No: APBIL/2002/9589

view point

In a country like India, composite insurance products are needed for the poor, which would insure their life and assets. We need simple, understandable products for them.

Mr P Chidambaram
Hon'ble Minister of Finance, Govt of India

Implementing financial regulation for microinsurance operators entails the challenge to formulate a framework that not only takes into account the unique characteristics peculiar to the microinsurance business, but also avoids putting conventional insurance companies at a comparative disadvantage."

Mr Michel Flamée
Chair of the Executive Committee of
International Association of Insurance Supervisors (IAIS)

With several foreign companies investing in insurance joint ventures, the effort should be to have universal norms that can be interpreted by all. The common goal should be to protect the policyholders' interest.

Mr CS Rao
Chairman, IRDA, India

The recent disruptions in global financial markets seem to show that under the continuing favorable conditions of healthy world growth and low inflation, financial imbalances can accumulate, which will be followed by corrections, posing a risk to economic stability.

Mr Toshihiko Fukui
Governor of the Bank of Japan

As we pursue financial sector development, we will also see more sophisticated products coming to the fore. Market players and regulators alike must refine their understanding of the attendant risks.

Mr Goh Chok Tong
Senior Minister, Government of Singapore

The capital markets and the insurance/reinsurance industry have demonstrated their ability to meet natural catastrophe risk transfer needs of insurers and consumers when market dynamics are allowed to work.

Mr Franklin W Nutter
President, Reinsurance Association of America (RAA)