

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 A lack of investments in the sector as a result of outdated infrastructure, high transportation costs, inefficient markets, and low productivity - with average crop yields below international levels - have made the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%.

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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

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as well as increasing productivity, profitability and competitiveness.

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.

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