INSURANCE – GENERAL

Agriculture insurance needs a technology makeover

Many Asian economies are agrarian, and livelihoods are intricately linked to the agriculture segment which again is heavily dependent on the weather. With the weather playing truant we look at how technology can deal with some of the challenges the segment faces in the region.

By Jimmy John

The impact of climate change is making life increasingly difficult for farmers and cultivation becomes difficult and unproductive – which has resulted in governments pushing agriculture insurance across the region.

PMFBY stutters after promising start

Nearly 44% of the Indian population depends on agriculture for their livelihood. The Pradhan Mantri Fasal Bima Yojana (PMFBY) scheme launched by the government of India in February 2016 was supposed to shake up the agriculture segment but three years down the line the scheme is fraught with challenges with many states withdrawing from the scheme.

The scheme was created to target 50% of all farmers, with the promise of compensation in case of crop loss. Previous government crop insurance schemes saw low enrolment rates due to a lack of trust, high premiums, the lack of land records, low awareness and the absence of coverage for localised crop damage.

In spite of the government's good intentions, assessments of the PMFBY face several hurdles that make processing and verification of insurance claims error-prone and time-consuming. Pay-outs do not reach farmers at the right time and in amounts commensurate with their losses.

Since its launch, the PMFBY has so far achieved 41% coverage of farmers compared to 28% coverage under the three previous schemes. Many experts and organisations working in this area are now recommending the use of information and communication tools to help farmers regain faith in crop insurance schemes and make them more efficient and transparent.

Existing technology needs a revamp

Speaking recently at a national conference on agriculture PMFBY CEO Dr Ashish Kumar Bhutani said that the crop insurance scheme needed a technological breakthrough.

Despite spending $4.2bn on PMFBY, it was getting negative publicity as large number of farmers have complained about non-payment of claims due to the use of a primitive technology. CelsiusPro director business development and technology Sebastian Glink believes that there are multiple elements where technology could help the scheme.

Mr Sebastian Glink

"First, everybody needs to get access to the relevant data at a central platform. The most relevant data is, of course, the area yield data and this data should be available in the same format per crop as granular as possible, ideally down to gram panchayat (village office) level. Second, the crop cutting exercises need to be optimised. This is one of the main weak points in the set-up of PMFBY.

"Crop models combining the data from the ground with remote-sensing data using statistical models could help to at least partially replace CCE with crop yield estimations provided by models. Third, a central platform for the management of the scheme, not only for the insurers and reinsurers but also for the farmers to get access to their policies and most importantly to increase the transparency. Such a platform can also help to improve the tender process and become a trading platform for the insurance scheme," he said.

Technology a critical component

In Asia, it is important to keep costs low and hence technology becomes vital to improve efficiency. There is a need to use advanced technology to gather more data from the ground and automation of farming process and systems could take place on the back of data from drone based image analytics integrated with IoT devices for individual fields and localised conditions.

Mr Glink said that there is a lot going on for crop-yield estimation and claims assessment and both topics are linked because they need models, historical data and ideally new ways of getting actual observation values.

"Mainly by satellites we get more granular environmental data, which helps us to understand the impact of weather and climate on crop yield. At the same time some countries spend a big effort on collecting on the ground-area yield data. Both can be used to design an index based insurance product. Platform technology and smartphones make it easy to digitalise the entire insurance value chain from pricing and buying an insurance to administrating an insurance scheme," he said.

Develop simple products

Developing simple products which are easy to understand, affordable and transparent is the key to a successful agriculture insurance programme. "Technology helps in the design, implementation and administration of those products, but you need experienced people who are familiar with the data, the technology but also with insurance environment to be successful," said Mr Glink.

There are success stories from Africa and other parts of the world how parametric insurance schemes have been designed and implemented and the potential in Asia is huge, he said.