

Innovation for a Fruitful Harvest

Matthieu de Gaudemar - September 28, 2016



A man uses a single-axle hand tractor to plough his field in Kampong Speu province last year. [Hong Menea](#)

The integration of technology into Cambodia's agricultural sector is vital to increase the competitiveness and overall performance of the Kingdom's harvest, but efforts to push for widespread adoption of innovative solutions have been slow to take off, industry experts and stakeholders said at a forum in Phnom Penh yesterday.

Panelists at this year's Asia Agricultural Innovation Summit Series, a program hosted by Winrock International and part of a USAID sustainable farming initiative, discussed ways for Cambodia to benefit from greater technological integration into one of the country's largest sectors for employment.

Ben Amick, regional innovation manager of Winrock, explained that the use of technology is still in its infancy in Cambodia, but that the agricultural sector as a whole has an opportunity to leapfrog outdated techniques to streamline production processes.

"By 2050 we will need to double agricultural output worldwide, but there is not much land left to do that, so we need to turn to innovative solutions to address that problem."

He said in the past, agricultural problems were solved by agronomists, but the integration of other sectors such as technology and business was essential to solving these challenges.

Van Kim Ran, a farmer and early adopter in Cambodia of two-wheel tractors, a cheaper and versatile variation of the standard four-wheeled machine, explained during one of the panel discussions that new technology has had a huge impact on production at his farm.

“My grandfather used traditional agricultural techniques for the past 20 years and sometimes he could not generate enough production to meet market demands,” he said. “In this area, modern tractors have helped reduce labour requirements and have made productions easier to manage, allowing for a quicker response to the market requirements.”

He added that for small-scale production, traditional methods could still be used. However, when it comes to larger levels of activity of tens or hundreds of hectares, modern equipment is not only essential, but can also double farmers’ salaries by reducing costs and increasing productivity.

“Before the use of tractors, farms did not have enough labour force, but with a tractor, you can cultivate around 2.5 hectares per hour, which means productivity goes up greatly compared to traditional methods,” he said.

Bun Sieng, owner of the Natural Agriculture Village Shop, a provider of chemical-free food products for vegetable, fruit and rice farming, said a major factor in determining if local farmers would adopt a technology was whether it was affordable and could quickly show profits.

She noted that aside from those factors, solutions such as flood-resistant seeds or non-chemical pesticides were an important tool for farmers to counter the effects of climate change and mitigate the damage of extreme weather events.

Ouk Makara, director of the Cambodian Agricultural Research and Development Institute (CARDI), told the *Post* that implementing changes in rural farming communities is a lengthy process because sometimes farmers doubt the viability of techniques touted by international organisations and foreign companies.

“It takes time for innovation technologies to be adopted unless you are able to show farmers how the new technology works and that it is clearly better than the old technology,” he said.

“For foreign technological solutions, you need to first test the product in Cambodia and involve not only the farmers, but also all the stakeholders that could play a role in the distribution and use of the product.”

Todd Hyman, engineering manager at Brooklyn Bridge to Cambodia, a social enterprise group that partners with farmers to promote innovate agricultural solutions, echoed this sentiment and told the forum that technological benefits do not always immediately outweigh the risks in the eyes of farmers.

“Risk adversity is a big thing as the farmers are doing what they have been doing for years and they have been surviving even though there is plenty of room for improvements,” he said.

“We can show the cost benefits to farmers, but for them to really be interested, they have to see it first-hand.”