Myanmar farmers going against the grain with life-changing apps

Information on everything from weather, climate change to crop prices

AYE YWAR: A free app on farmer San San Hla's smartphone is her new weapon in the war against the dreaded stem borer moth that blighted her rice paddy in southern Myanmar for the last two years. As she watches her workers haul in this year's harvest, the 35-year-old is in a triumphant mood, ascribing her victory over the seasonal scourge to advice received via the app about effective pesticide use.

"We used to just farm the way our parents showed us," she told AFP, in her village of Aye Ywar west of Yangon. "But after getting the app, I now see how we should be doing it... it's better to use proper techniques rather than just working blindly." San San Hla is among a growing cohort of farmers who are turning to tech to address the knowledge gap in a country where two thirds of the workforce are employed in agriculture.

The sector accounts for some 28 percent of the country's GDP, but yields are low with farmers cut-off from modern technology under decades of isolationist junta rule. For people like San San Hla apps could be the answer. They are providing farmers with up-to-date information on everything from weather, climate change, crop prices to advice on pesticides and fertilizers.

'Green Way'

Chat forums are connecting farmers, allowing them to swap tips while experts are on hand to answer queries. The "Green Way" app is the brainchild of two former agricultural students, who in 2011 set up a website for farmers, often working through the night to keep it updated. But at the time few farmers had internet access, recalls Yin Yin Phyu, 28, explaining the "idea just didn't take off." Then smartphones arrived and everything changed.

Smartphones arrived and everything changed

As Myanmar opened its doors, telecoms companies rushed in to grab market share, thrusting Myanmar beyond the era of desktop computers and old-style mobile phones. The cost of sim cards, once the tightly-controlled reserve of the well-connected, or special branch spies, plummeted from an unattainable $3,000 in 2005 to $1.50 in 2013. Competitors practically gave away smartphone handsets as they fell over themselves to build up brand loyalty. Mobile penetration stood at just seven percent in 2012. By the end of 2017, smartphone penetration had rocketed to 80 percent. A nascent tech hub followed and outside of agriculture, apps were created for everything from healthcare to Myanmar's parliament.

Farmers, many among the country's poorest, today find themselves with a mobile computer in their hands-a game-changer for the entrepreneurs behind 'Green Way,' who launched their app in 2016 and now employ 18 full-time staff. "'Green way' is my dream to link farmers and experts," Yin Yin Phyu told AFP. "The farmers can get help whenever they need." Some 70,000 farmers have already downloaded the app although she hears far more are accessing it through phone-to-phone sharing.

Field work

Greater productivity at Myanmar's farms could reshape both its economy and society, says 71-year-old agricultural expert Myo Myint. "Many workers migrate to other countries because they can't make enough money to live from agriculture in Myanmar," he says. "Farmers need technology and investment."

A 2017 World Bank study found farmers in some areas of the country still earn as little as $2 per day. Productivity is also relatively low with only 23kg of rice paddy generated in one day of work in Myanmar compared to 62kg in Cambodia, 429kg in Vietnam, and 547kg in Thailand. The founder of the "Golden Paddy" app says the new tech is not best suited to struggling farmers at the bottom of the ladder.

This photo taken on December 27, 2017 shows farmers working in a rice field on the outskirts of Yangon. — AFP

They do not have the time or resources to implement advice on changing seeds or fertilizer. Instead, the apps are aimed at smallholder farmers to allow them to "become a little more commercial," Dutchman Erwin Sikma explains. Similar projects in other developing countries - in India and parts of Africa - are still reliant on old-style phones and information by SMS. Myanmar now has the chance to leapfrog that era to become an agricultural trailblazer. But that also means the country is in uncharted territory. "We have a lot of first-mover disadvantages," Erwin Sikma says. "It's a start-up in a completely new model in a completely new market or economy so we need all the help we can get." — AFP

Amazon: From online book seller to market shaker

SAN FRANCISCO: Amazon has grown from a humble beginning as an online bookseller to a colossus of the internet. It recently devoured Whole Foods Market, and is now biting into health care. Here are some key facts about Amazon:

Incorporated in 1994 in Seattle, Washington, Amazon sold its first book in July 1995, with founder Jeff Bezos personally mailing packages to customers in the early days. In 1999, Amazon went beyond books into gadgets, toys, electronics, software, home improvement and video games. A year later, it launched "Marketplace," allowing third parties to sell over the Amazon platform and has added new categories of merchandise and services over the years. Amazon Web Services, launched in 2002 to be the online hosting platform for Amazon and its partners, has grown into one of the world's biggest cloud computing operators.

In 2005, the company launched Amazon Prime, a subscription service offering free delivery on many items and other benefits, representing an important element in the Amazon business model. No official figures are available, but some analysts say Prime has some 90 million subscribers in the US. Amazon has expanded internationally, and operates as a retailer in Canada, Mexico, Britain, France, Germany, Japan, Italy, Spain, the Netherlands, Ireland, China, India and Australia.

SARAN, France: In this file photo taken on October 10, 2016 shows the Amazon distribution center. — AFP

Music, games, food

In 2007, Amazon Music launched as a platform for streaming songs, and later evolved into a cloud-based service. Amazon made its first move into grocery delivery in 2007 with Amazon Fresh. It is now beginning deliveries through Whole Foods. A rival to Netflix in video, Amazon offered both DVD rentals and streaming for several years before rebranding its service as Instant Video and later as Prime Video. It now has its own studios producing original programs and films, and won an Academy Award last year for "Manchester by the Sea." Amazon waded into the booming world of video game play as spectator sport with the billion-dollar buy of eSports streaming platform Twitch in 2014. Amazon bought US grocery chain Whole Foods in a $13.7 billion deal announced in June of last year.

Hardware, drones, video

Amazon started making Kindle e-readers in 2007 and expanded its hardware to tablets with the Kindle Fire in 2011. A Fire smartphone launched in 2014 flopped, but Amazon continued in hardware with its voice-activated Echo speakers, igniting a market for voice-commanded home assistants powered by artificial intelligence. Amazon also produces Fire TV devices. The first Amazon physical retail store opened in Seattle in 2015. A cashierless "Amazon Go" shop opened in its home city early this year uses technology to automatically bill customers for items they pick from shelves. — AFP

Thailand to scan eyes of workers

BANGKOK: Thailand is using optical scanning technology to keep track of who is working on its fishing boats, officials said Thursday, as the kingdom tries to curb slave labor and human trafficking that has riddled the low-paid industry. The lucrative fishing business is the fourth largest in the world and is heavily dependant on migrant labor from Cambodia, Myanmar and Laos, but documented abuses and forced labor have put the trade under pressure to clean up its act or face consequences.

Thailand's junta, which took power in 2014, led the push to overhaul the industry in response to a European Union threat in 2015 to ban all Thai seafood products unless issues were addressed. But rights groups say abuses have continued despite widely publicized reforms while the US State Department's 2017 Trafficking in Persons report kept Thailand on its Tier 2 Watchlist for a second consecutive year.

At a briefing on Thursday in Bangkok to trumpet reforms in the industry, Labor Minister Adul Sangsingkeo said tens of thousands of workers had been scanned but the roll out was still in the early stages. "The ministry has done optical scanning to 70,000 people who work on fishing boats so that we can track their identity," he said. "Also we're in the middle of creating a software to read the collected data from the scans."

The program, which captures data from the iris, started in October and is part of an overarching plan to register workers. The government is also adopting measures for facial and fingerprint scanning. Petcharat Sinauy, deputy permanent secretary at the Ministry of Labor, said the purpose of the stepped up tech was to make sure workers were on the boat they were registered with and not farmed out to another vessel.

"It is to find out whether the fisherman is truly in the list of this ship and has not been sold and rotated to work for many ships all the time," she said. A report released by Human Rights Watch last month said forced labor and other rights abuses remained "widespread" and that little had been done to rein in worker exploitation. Thai police say a crackdown has led to the prosecution of some 100 trafficking suspects and the rescue of 160 victims since May 2015, when the EU issued its "yellow card" warning about seafood products. The government has also reduced the number of fishing fleets and created a hotline that resulted in the prosecution of 53 cases. — AFP

Blockchain comes to world of humanitarian aid

NEW YORK: Blockchain, the technology behind the cryptocurrency bitcoin, is taking root in a sector far from finance: the world of humanitarian aid. By offering refugees a virtual identity, reassuring donors that their money is being well spent, or rushing funds where they are needed most, aid charities are experimenting with the technology in the hopes that it can improve their work. "We are at the very beginning. There is a lot of hype," said Christopher Fabian, leader of UNICEF's Ventures Fund, which invests in open source technology solutions.

At the end of 2017, UNICEF-the UN agency dedicated to protecting children-brought together Russian-speaking blockchain experts in a meeting in Kazakhstan. The goal? To develop a "smart contract" that would facilitate transactions between the organization and its numerous partners for deliveries and payments, if certain conditions were met.

"It totally failed, but we learned a lot from that and will do the same challenge this year in Mexico," Fabian admitted, adding that he could envision a host of future projects using blockchain for the "social good"-even if most of them will fail. But the agency is thirsty for innovation. Its French office has also launched an operation dubbed Game Chaingers (for blockchain), which challenges tech geeks and gaming enthusiasts to install on their computers software aimed at creating Ethereum, a virtual currency, to help Syrian children.

Syrian refugees

Blockchain allows users to create and spread information across a large network of computers, which its proponents say lends it both transparency and security. And the applications for the technology are multiplying quickly. For aid and development groups, blockchain can come in all shapes and sizes. Aid donors could, for example, trace their contributions as they spread across an organization. The platform Disberse, supported by a network of 42 humanitarian groups, already road-tested this application by tracking money sent by a British association to four schools in Swaziland.

In theory, the technique can reduce transaction costs, fight corruption by making everything transparent, and allow a better record of where food aid is directed, or make sure that medicines are not counterfeited. Those in charge of programs that directly send money to people in need also see it as a way of more easily controlling the disbursement of funds or avoiding use of financial intermediaries such as banks, which might also take a cut.

VILNIUS, Lithuania: Giant letters, reading the word "blockchain" are displayed at the blockchain centre, which aims at boosting start-ups. — AFP

"In the old days, we were delivering aid at the back of the truck," said Alex Sloan, a consultant at the World Food Program's Innovation Accelerator, which works with start-ups and others to help fight hunger. "Now, we are moving toward distributing cash to our beneficiaries, in the form of actual cash, through vouchers, e-cards, et cetera."

Sloan's organization has already field-tested a pilot project in Jordan's Azraq refugee camp, where Syrian refugees can use iris-identification technology at a cash register to buy food and supplies. The amount of money is then passed on via a blockchain-based computing platform. The program is currently private and used only by the WFP, making it more of a database project than a real blockchain. But Sloan said it could serve as a "tool to bring different partners and organizations together to collaborate and make the industry much more effective."

'Scary implications'

The expansion of blockchain is not without risk. Besides the technical constraints, such as the need for an internet connection, blockchain poses some basic questions about governance and data protection. How to ensure, for example, that key information about refugees is not hacked by dictatorial regimes? Who authenticates the data? Which countries accept virtual portfolios?

"It's hard to navigate the regulatory environment or the lack of it," said Rosa Akbari, technology advisor at the US charity Mercy Corps. Her group recently teamed up with tech giants Microsoft and Accenture for the ID2020 Alliance, working on a virtual identity model to help refugees. "We need to have more understanding of what is going on and we want to have a seat at the table," said Akbari. Blockchain has enormous potential but still has a long way to go, she said. In fragile states, and dealing with people facing great hardship, "there could be some scary implications if we don't do it responsibly," she said. — AFP