CACCI
Food & Agriculture Newsletter
Volume 16 June 2021

## Contents



# Message from CACCI Director-General

As Director-General of CACCI, I am pleased to present the sixteenth issue of the Newsletter of the Asian Council on Food and Agriculture (ACFA) to all our colleagues in the food and agriculture sectors, and other CACCI members and associates.

This issue highlights the trends, the latest news and interesting reports on food and agriculture in the Asia-Pacific region. I hope that you will find the articles included in this Newsletter of great value, and look forward to your contribution to the Newsletter in the future.

As many of you may know, this Council has been a valuable platform for information exchange and networking for all representatives from the region's food and agriculture industries. Therefore, all CACCI members are encouraged to take advantage of the Council and the Newsletter as channels to voice their opinions and viewpoints.

My Best Wishes

Ernest Lin
Director-General
The Confederation of Asia-Pacific Chambers of Commerce and Industry (CACCI)

# 5 Ways to Transform Our Food System to Benefit People and the Planet

*By Petra Hans, Head of Portfolio, Agricultural Livelihood at IKEA Foundation*

*Residents tend to their crops in a football field that has been converted into a community farm in Manila, Philippines. As the world's population continues to grow, people will depend on farmers for food more than ever before.Photo: Ezra Acayan/Getty Images*

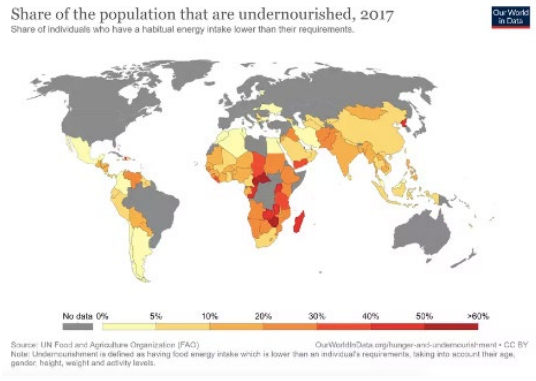
Food is essential for our survival, a fundamental requirement of life and the provider of strength, vitality and energy. It is also the keeper of our cultural traditions and indispensable to our social lives — think of any celebration, and it will involve food.

However, our relationship with food is dangerously imbalanced. We produce enough food but nearly one in 10 people still don't have sufficient to eat, and three billion cannot afford a healthy diet. At the same time, we waste one-third of all food produced along with the natural resources that went into its production.

Our food and agricultural systems stretch planetary boundaries beyond their limits. By valuing quantity over quality and driving farmers to produce monocrops for low prices, we use the natural resources needed for sustained production and degrade the land, leading to climate change and extreme weather events.

As the coronavirus crisis unfolded, we started to understand how fragile our food systems are. We saw news stories of food destroyed, milk dumped and crops rotting in the fields, while consumers faced empty shelves. Our complicated global supply chains couldn't adapt fast enough to our changing realities.

To mend our damaged relationship with food, there are critical questions we need to answer: How do we produce sufficient food that's healthy for both the people who produce it and the people who eat it? How do we ensure our food systems are fair, resilient and equitable? How can we feed our growing global population and protect our planet for generations to come?




*Our World in Data*

We have a choice: We can continue to grow our food systems in a linear, exploitative and extractive way; or we can move to a system that promotes biodiversity, regeneration, nutritious food, equity and healthy people.

We believe the decision is clear. We must choose to work with the planet — not against it — for the benefit of people and the planet by following these principles:

**Harness the Regenerative Power of Our Earth**

This is critical to overcoming the biggest challenges of our time: a degrading environment, loss of biodiversity and climate change. Regenerative agriculture leads to healthy soil, capable of producing high quality, nutrient-dense food. It also improves rather than degrades the land and supports productive farms and healthy communities and economies. This helps safeguard farmers' livelihoods so they can grow the food we need now and in the future.

**Build Stronger Local and Circular Food Systems**

Building stronger local and circular food systems helps to keep valuable natural resources, minerals and nutrients in the loop. Circular agribusinesses not only provide excellent environmental solutions, they also create jobs and reduce countries' dependency on imports.

Wastewater, for example, can be treated to extract important finite minerals like phosphates. Food loss and waste can be composted so valuable nutrients return to the soil instead of being thrown away. And organic farm waste can be used for bioenergy to power homes and agribusinesses. New, nature-based technologies, such as the use of black soldier flies to compost waste, can generate multiple useful products including compost, fertilizer and animal feed.

**Give Farmers a Voice and Support Their Planet-Positive Choices**

As the world's population continues to grow, people will depend upon farmers for food — more than ever before. We must empower farmers to drive solutions and be at the forefront of a global regenerative revolution by making them an integral part of policy discussions. They can help build the system of products and services that are locally relevant and reduce dependency on patented and/or chemical inputs.

**Move From Low Cost to True Cost**

Paradoxically, cheap food is expensive for people and the planet. It keeps us locked into an unsustainable food system that costs the global economy significant amounts of money. The current price of food does not factor in the health bill generated by unhealthy diets or the cost of land degradation and biodiversity loss.

Furthermore, low wages for farmers make agriculture an unpredictable and often unsafe sector. To get back on track, we need greater consumer awareness and public policies that value nutritious diets, a healthy environment and farmers who practice


*United Nations*

regenerative agriculture.

**Foster Radical Collaboration**

Though we're hopeful for the future, we are quickly running out of time. We urgently need to remove the barriers that prevent us from transforming the way we produce and consume food. This involves changing mindsets, trying new things and learning fast.

We don't yet know all the answers, but we do know that business-as-usual is the problem. We must change course and do it now. This is only possible through collaboration between farmers, consumers, funders, governments, businesses and NGOs.

Together, we can work toward a food system that not only feeds us but also celebrates life — one that nurtures people, adds color and flavor to our plates and palates and, most importantly, ensures a future for ourselves on this planet.

This piece was originally published in the World Economic Forum.

*Brink*

**About Author**

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*Petra Hans is a program manager at the IKEA Foundation. She manages and oversees program partnerships, and manages our Soft Toys campaign.*

# Taiwan, Philippines launch agricultural internship program

*By Chung Yu-chen and Emerson Lim*

An agricultural internship program between Taiwan and the Philippines formally kicked off on April 8, 2021, with 50 Filipino farmers expected to be sent to Taiwan for one year after completing a basic Mandarin language course.

*Photo courtesy of MECO*

"The internship program is the first between the Philippines and Taiwan," Angelito Banayo, chairman and representative of the Manila Economic and Cultural Office (MECO) in Taiwan, told Central News Agency (CAN) on April 8.

"It (the program) is expected to further deepen the pragmatic relations between the Philippines and Taiwan, especially at a time when exchanges between most countries in the world are greatly affected by the COVID-19 pandemic," Banayo said.

The program fulfills a memorandum of understanding (MOU) signed between MECO and its counterpart, the Taipei Economic and Cultural Office (TECO), in Manila in late 2020.

In the Philippines, 50 young farmers from different parts of the country, both male and female, participated in an orientation program for the project and will begin to take their basic Mandarin language classes online on April 9, in preparation for their eventual deployment to Taiwan in June 2021.

The Mandarin classes will be facilitated by TECO.

"Thank you for the opportunity of this internship. It gives us a chance to serve our country through food production," said Rendale Ragas, one of the interns.

After arriving in Taiwan, the interns will be accommodated in housing or facilities prepared by the host farmers and learn about local farming skills and technologies through classwork and fieldwork, including crop planting and animal husbandry.

The interns are expected to stay in Taiwan for one year and will receive allowances from their hosts during their time here.

Banayo expressed his belief that the interns will learn a lot in Taiwan, praising the island for being able to export farm produce of excellent quality despite the limited available arable land.

The farmers, selected by agriculture authorities in the Philippines, were supposed to depart for Taiwan as early as March, but this was postponed due to the pandemic.

Taiwan and the Philippines enjoy healthy cooperation in the agricultural sector. Aside from exchanges between educational institutions on both sides, agricultural cooperation meetings have been held annually between high-level officials from the two sides since 2005.

In July 2019, a demonstration mushroom farm was established in the northern Philippines as a result of bilateral cooperation, to teach local farmers mushroom cultivation skills and explore export opportunities for Taiwan's agricultural equipment and materials.

*Central News Agency*

# Taiwan, Vatican Reap Harvest of Smart Agriculture at Joint Farm

*By Matthew Strong*

*Taiwanese know-how built vertical farm in Rome in just 3 months*

Taiwan and its only European diplomatic ally, the Vatican, on Friday (January 15) marked the first harvest of a joint farm focused on smart agriculture and environmental principles.

The Taiwanese-designed indoor farm sits on 60 hectares of land in southwest Rome owned by a Catholic foundation providing education and work opportunities to young refugees, Central News Agency (CNA) reported.

Taiwanese Ambassador Mathew Lee on Friday (January 15) toured the facility, which was launched by a team of engineers and agricultural experts from Taiwan after just three months of preparations. He said the project was inspired by Pope Francis' call for a more active response to environmental problems and climate change.

The farm uses the technique of vertical farming, in which vertically stacked shelves are used to grow plants through more efficient management of temperature, irrigation, and lighting. Less land and water are required to produce higher yields in vertical farms, and fewer fertilizers and pesticides are needed.

Friday's tour featured a meal prepared with herbs and vegetables grown at the farm, according to CNA.

*Taiwan News*

# Baked sweet potato vending machine in southwest Japan to link agriculture and welfare


*Sunao Matsuoka of Nofuku Sangyo holds a pack of baked potatoes taken out of a can in Miyakonojo, Miyazaki Prefecture, on April 8, 2021. (Mainichi/Shunsuke Ichimiya)*

A vending machine stocked with baked sweet potatoes was placed in this southwestern Japan city on April 8, 2021 in a project linking agriculture and welfare.

The rare vending machine introduced by Hyuga-based company Nofuku Sangyo is stocked with potatoes baked and canned by disabled people working at factories in the prefectural cities of Hyuga and Nobeoka, who receive a portion of the profits.

It is located along Route 10 at 3 Kamikawahigashi, Miyakonojo, Miyazaki Prefecture. In March, the company also set up another machine at the Oita Matsuoka rest stop on the Higashi-Kyushu Expressway in Oita.

Yuji Kodama, 66, president of Nofuku Sangyo, was thinking about how to utilize the approximately 1 hectare of farmland he had inherited from his late father. Then he came up with the idea of selling baked sweet potatoes from a vending machine, which would allow disabled people to work even on rainy days without incurring additional labor costs. With the cooperation of Sunkey Co., a vending machine sales company based in the city of Kagoshima, he built a special machine.

It looks like an ordinary vending machine, but when you put money in it and push the button, an aluminum can with a pack of baked Beniharuka sweet potatoes inside pops out. Buyers can choose between hot and cold products, priced at 500 yen (about $4.5) for the regular 190 grams and 400 yen (about $3.6) for the 110-gram portions. Empty cans placed in the collection box next to the vending machine are reused.

Sunao Matsuoka, 66, a sales representative of Nofuku Sangyo, commented, "People could use the canned potatoes as preserved food or gifts, as they have a shelf life of one year."

(Japanese original by Shunsuke Ichimiya, Miyazaki Bureau)

*Mainichi Japan*

# Geo-tagging, mobile cash transfers come together to help farmers in Bangladesh

*By Elma Zahir, Wesley De Witt, Eun Joo Allison Yi, and Christian Berger*

In the wake of the COVID-19 pandemic, the World Bank supported the Government of Bangladesh to activate emergency cash transfer schemes for vulnerable smallholder dairy, poultry and aquaculture farmers to safeguard their livestock and fish assets. Production of eggs, poultry meat, dairy products and farmed fish have been particularly affected by marketing disruption during lockdown and by increased animal feed price. Under the new cash transfer program, approximately 700,000 farmers were identified as unique beneficiaries.

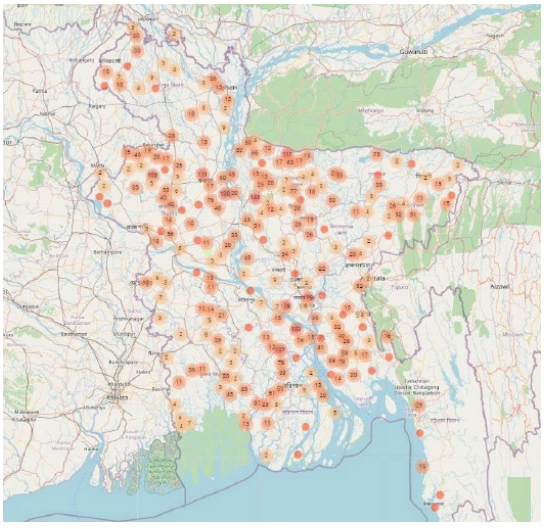
*With the help of technology and World Bank support, the Bangladesh government was able to immediately give out emergency cash transfers to 400,000 vulnerable farmers during the pandemic. Photo: World Bank*

Immediate roll-out of these emergency funds was necessary, while also ensuring that it reached the right beneficiaries who had been pre-selected. However, paper-based surveys made it hard to pinpoint the exact location of beneficiaries, especially in hard-to-reach areas such as coastal regions. Additionally, monitoring efficient fund disbursement would be difficult during the pandemic.

Inspired by the use of Geo-Enabling Initiative for Monitoring and Supervision (GEMS) technology, the Project Management Units (PMUs) of World Bank supported investment operations in the agriculture sector of Bangladesh were quickly trained on the use of remote supervision tools.

The Livestock & Dairy Development Project (LDDP) in Bangladesh immediately applied the technology to prepare for emergency cash transfers to 620,000 vulnerable livestock producers impacted by the pandemic. The Bangladesh Sustainable Coastal & Marine Fisheries Project (BSCMFP) also used the technology to support cash transfers to 78,000 coastal aquaculture farmers. Training was key for implementing agencies to adapt and apply the technology.

**How does GEMS technology work?**



GEMS is supported by the Korea Trust Fund for Economic and Peace-Building Transitions (KTF); it gathers digital data from the field using open-source tools, which then automatically feeds into a centralized MIS. Exact beneficiary location can easily be identified and plotted with the convenience of GEMS geo-tagging where a point on a map represents data on beneficiaries, including pictures and type of farm. These data are populated on a dashboard in real-time. Using free tools enabling mobile data collection like KoBoToolbox can increase the speed and efficiency of data collection. This can help large volumes of data be digitally transferred to central databases instantly with the help of a simple mobile device. New data can be continually sent from field officers to central offices, leading to immediate real-time response.

A first tranche of approximately 450,000 livestock beneficiaries had originally been identified for cash transfers using traditional methods. However, to eliminate possible duplications and to save time, GEMS provided the perfect solution. The beneficiary count shrunk down to 407,000 unique beneficiaries under LDDP's first tranche. Pinpointing the exact location and checking data for half a million beneficiaries, GEMS helped eliminate any double-counting and other manual entry inaccuracies.

Cash transfers relied on partnering with the two leading mobile money service providers in Bangladesh: agreements were signed with bKash and Nogod to transfer emergency funds automatically to the mobile accounts of individual beneficiaries. The first cash transfers began on February 17, 2021. Now, a digital interface is being developed to map aggregate results for policymakers and the general public.

**Way Forward**

Given the success of GEMS technology, the Department of Livestock Services at the Ministry of Fisheries and Livestock is applying to its countrywide deworming program which covers over 2 million cattle owned by 280,000 farmers. The instant data collection can now help assess whether the right dosage of medicine is being provided and provides immediate feedback.

Digitization is a part of the broader modernization process of the Government of Bangladesh, and its response to Covid-19 is catalyzing and accelerating that change. With the help of precise location maps, benefits and recipients can be vividly narrated for effective communication. Eventually, the Ministry of Fisheries and Livestock will strategize new ways of working towards a more efficient public administration, where use of digital tools would spearhead innovation to address evolving development challenges. While national level policy change takes time, this Ministry is now ready for follow-up actions using new digital tools and will soon be able to make better evidence-informed,

real-time public policy choices.

*World Bank Blogs*

**About the Authors**

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Elma Zahir has been working with the Geo-Enabling initiative for Monitoring and Supervision (GEMS) team at the FCV Group. For the GEMS engagement she is the regional lead for the South Asia Region and co-lead for MENA Region. She also leads the Communications and Knowledge Management agenda for GEMS.

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Wesley De Witt is a Geographer with the GEMS team. Along with being the regional lead for East and Asia Pacific (EAP) Region, he is responsible for researching and applying novel field-appropriate technologies and approaches to Monitoring & Evaluation.

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Eun Joo Yi is a former science, technology and green growth program manager. She joined the World Bank Group in February 2013; since June 2020 she is based in Dhaka to oversee the Environmental Sector portfolio in Bangladesh.

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**Senior Agriculture Specialist**

Christian Berger was Director for Animal Production and Processing Industry at the French Ministry of Agriculture at the time of the mad cow crisis, based in Paris. He moved to the United States in 2002 when he was appointed Agriculture Counsellor of the French Embassy, focusing on agriculture policy and trade issues, including the multilateral Doha Round trade negotiations. He joined the World Bank Group as Senior Agriculture Specialist in January 2009. Initially based at Headquarters in Washington DC and working for the Africa Region, he was particularly in charge of developing a strong agriculture and livestock investment portfolio across West Africa, particularly in Sahel countries. He moved to the World Bank Country Office of Bangladesh in August 2019, where he oversees the Agriculture Sector portfolio, including analytical work, policy development, and investment operations. His expertise is in policy making, international trade, food security, rural development, and natural resource management, drawing on 35 years of experience in both developed and developing countries acquired across Africa, Europe, North America, Asia, and the Middle East.

# How COVID-19 could accelerate the digitization of the food supply chain

*By Qingfeng Zhang, Jan Hinrichs*

*Digital solutions are offering new ways to produce and distribute food. Photo: Omer Rana*

Digital technology is taking a growing role in the world's food supply, from farm to fork. The right policies would ensure that the benefits are shared.

The coronavirus outbreak has acted as a catalyst for an inevitable long-term trend: the increasing role of digital technology in the supply chain revolution.

Lockdowns across the world in the wake of COVID-19 have not only restricted people's movement but also their access to traditional sources of food. This has prompted the search for alternatives, especially in urban centers.

Consumption patterns have had to change, with consumers seeking out reliable food delivery services, as they try to shorten the supply chain, and cut out bottlenecks. An Indian online grocery platform has moved to a community selling model where it is asking apartment complexes to put orders together for their residents. This helps the company meet consumers' demand despite having a smaller-than-usual workforce.

Out of town, farmers, seed and fertilizer suppliers, as well as food wholesalers and distributors have turned to online platform services as distribution and marketing channels. E-commerce and other smart logistic fulfillment services have been helpful in matching supply and demand for agricultural produce. As a result of lockdown restrictions vegetables were being discarded by farmers in the Malaysian Cameron Highlands. An e-commerce platform connected vegetable farmers to last-mile delivery service providers and consumers in Kuala Lumpur.

With social distancing and quarantine measures not likely to be going away any time soon, food supply chains require further digital innovations to be ready.

The food value chain for staple commodities (rice, wheat, corn, soybeans) is less sensitive to labor shortages from movement restrictions. But the logistics in distributing the commodities from farms to consumers is heavily affected by such restrictions.

High-value commodities (fruits, vegetables and livestock products) are perishable and sensitive to labor shortages at the production level on farms and in sorting, packaging, and processing. Besides the movement restrictions, limited labor availability can quickly derail these supply chains. A vivid example is the closure of meat processing plants in the United States and Europe due to

COVID-19 cases among staff.

In the People's Republic of China, disruptions to the flow of seeds, fertilizers, and temporary labor for the spring planting season threatened farming productivity. Regular distribution channels were disrupted at retail and wholesale points and hit by plummeting demand from shutdown of restaurants and canteens. Thanks to several policies targeted at keeping "green channels" open, overall food prices and availability remained stable. However, there have been shortages in some locations where lockdown measures resulted in large amounts of unsellable seasonal vegetables and fruits backlogged or even unpicked in farms.

E-commerce enterprises developed dedicated agricultural product or labor platforms, which helped reduce the mismatch of supply and demand in countries throughout the region. Thai durian was sold through an e-commerce platform to customers in the People's Republic of China during lockdown in Thailand.

Digitization has also helped to set up and optimize the logistics and fulfilment services required for distributing food during COVID-19 disruptions. At locked-down urban communities, COVID-19 has accelerated the trend toward the use of online platforms for food purchases.

In remote rural areas, digital infrastructure plays a critical role, making food accessible and reducing the risk of food perishing. Farmers with online marketing skills and simple food products that do not need complex processing and packaging have been able to sell their products directly to consumers. Most interventions have been targeted at delivering packaged food from retail outlets to consumers.

In some cases, this has shortened food supply chains for high-value commodities that are perishable and highly sensitive to any movement restrictions. Digitally connected farms, farmer cooperatives, sorting, packaging and processing enterprises have been able to connect directly to consumers through online platforms, shared sale points, and smart logistics.

Individual small-scale farmers cannot be expected to attend to production management issues and at the same time specialize in online marketing of their food products. A recent study among farmers in Southeast Asia and East Asia has shown that only a small fraction of farmers with smartphones are using dedicated e-commerce applications.

But giving farmers access to e-commerce requires support to standardize production, organize the farmers, and build logistics capacity in remote areas. The private sector has a comparative advantage in expanding and adapting e-commerce and other platforms into food supply chains.

Free two-way flow of information with direct feedback loops about food characteristics such as price, safety and origin of production is essential for an effective food supply chain.

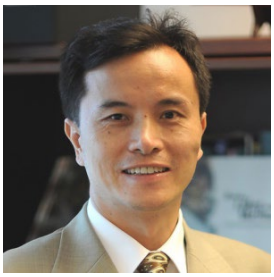
There is no doubt that digitization has helped improve existing supply chains and catalyzed supply chain restructuring. However, key enterprises and supportive government policies are the drivers for the evolution of food supply chains to be more robust to restrictions such as COVID-19.

More investment is needed in public sector food safety and quality certification to service decentralized and digitally connected food value chains. Investments into a more digitally connected and decentralized food processing supply chain with linkage to alternative logistics providers would increase resilience.

Only with further investments into cold chain logistics, warehouses, packaging and processing capacity closer to production areas can we reap the benefits from digitization. Urban consumers would benefit from increased resilience of the food chain while rural areas would be provided services and income opportunities.

*Asian Development Blog*

**About the Authors**



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*As Chief of Rural Development and Food Security (Agriculture) Thematic Group, Mr. Qingfeng Zhang is leading and overseeing ADB's overall rural development, natural resources, food security, and agriculture operations by providing relevant and practical technical advice.*

*During his last 16 years with the Bank, Mr. Zhang processes and administers loan and technical assistance projects in green agricultural value chain, efficient use of natural resources (land, soil, water as well as agricultural wastes), climate resilient agriculture, rural renewable biomass energy, healthy agriculture-ecosystems, food safety, and internet plus agriculture. He published over dozens of knowledge products, Opeds and blogs on agriculture, natural resources and environment. Prior to joining ADB, he was a Director at the State Environmental Protection Administration in Beijing; a Senior Environment Specialist at the World Bank in Washington; and a Research Fellow at the Hong Kong University of Science and Technology.*

*Mr. Zhang is a Chinese national. He holds a doctoral degree in environmental engineering from the Tsinghua University; and a master's degree in water resources management, and a bachelor's degree in hydrology from the Sichuan University. He was also trained at the Harvard Business School through its Executive Development Program.*

**Jan Hinrichs**
**Senior Natural Resources Economist, East Asia Department, ADB**

*Mr. Hinrichs joined ADB as Natural Resources Economist in 2015. He is designing and implementing loan and technical assistance projects in the agriculture sector of East Asian countries. Developing projects with the application of internet connected sensors to enhance traceability and access to e-commerce has been a focus of his work. Prior to joining ADB, Mr. Hinrichs was working at the UN FAO since 2005 where he was primarily responsible for designing and supervising value chain studies for technical and policy papers on the economics of transboundary disease control. Mr. Hinrichs received his Doctoral, Master's and Bachelor's degrees in Agricultural Economics from Humboldt University, Berlin, GER in 2005, 2002, and 1998 respectively.*

# Finding the 'good seed' and agricultural responsibility

*By Mine Ataman*

*A combine harvester reaps seasonal wheat at a farm in northwestern Edirne province, Turkey, June 20, 2019. (AA Photo)*

States have to consider agriculture as one of their key strategic topics, as the increase in food prices, climate change and income losses continue to climb. The world's current agenda falls short in fighting these negative occurrences; therefore, more concrete steps need to be taken.

In recent years, governments have approached agricultural activities as ways to build a healthy society.

Production in agriculture and sustainability are basic principles, but they alone are not enough as the environment issue is another significant principle to focus on.

According to the Food and Agriculture Organization (FAO), sustainable nutrition should be safe, healthy and nutritious, and have a low environmental impact.

Nutrition is also considered an element that contributes to the survival of generations.

In this context, feeding people with healthy food should be planned in a way that minimizes the agricultural impact on the environment.

Especially in the last 10 years, many studies conducted by both nongovernmental organizations (NGOs) and states have focused on environmentally sensitive sustainable agriculture and fair-sharing food systems.

According to the data, 2 billion people are obese while 821 million people suffer from hunger. However, these jarring numbers are still not enough to mobilize the world.

The problem of the food supply is the world's common problem, but you, as an individual, cannot have any impact on the sharing of food.

It is an ethical problem, and strategies should be developed accordingly.

**Seed concerns**

When it comes to agriculture and food in today's societies, the first concept that comes to mind is finding the "good seed." The good seed discussed is suitable for the war on climate change and is cost-effective. It can offer a nutritional model for the future, can produce value-added products and, what's even better, it can be plant-friendly.

In this context, individual and social responsibility plays a big role in the good seed's journey from plant to table.

It is true that individual efforts fall short in the fair sharing of food, but that does not mean that we cannot have any contribution in raising nutritional awareness with our preferences and decisions.

For a new and healthier society, we all need to act responsibly. Planting good seeds may be an observably great idea for our future.

**Turkish need**

In Turkey, the national seed bank also needs to be strengthened. In order to produce agricultural products and form a suitable nutritional model, the national seed issue must be prioritized. Necessary support should be provided and agricultural products should be accordingly specialized. Because, as Savaş Akcan, the president of the Seeders Union of Turkey (TÜRKTOB), said, the "bullets of food wars are seeds."

Efficient production requires efficient planning. Decision-makers need to support the food industry and practices for good seeds. Relevant technologies also need to be supported for functional production activity. In particular, a cooperation model for local and small businesses can enhance productivity.

In order to ensure the availability of healthy foods in all kinds of environments, including homes and schools, many arrangements are required. Accessing healthy food such as milk, eggs and cheese in schools should be easier than it is now. Planning daily nutrition with functional food is vital, and in nutrition programs, rich protein sources should top the list. By focusing on relevant legal regulations, governments can make a good start.

Since we cannot solve fair food sharing and healthy eating with numbers, we should make some "ethical decisions" in our shopping routines. For example, not buying junk food is the best choice. It is our responsibility to support the agricultural sector by making choices in food. From affordable prices to brands, there are many factors in determining shopping behavior, and we can make these based on ethics.

In this sense, instead of the concept of "from field to table," we can introduce the concept of "from seed to table" into our lives and create a happy future with the ethical decisions we make individually and socially.

With smart choices, we can protect our future and influence all processes of agriculture and food from seed to table. Agriculture is a sector that guarantees public health, and we have to protect it.

*Daily Sabah*

# FAO and WFP launch global consultation to help alleviate hunger and transform agri-food systems

*The online public consultation will feed into the organizations' strategic outlooks and provide a platform to share ideas to accelerate achieving the Sustainable Development Goals (SDGs)*

The Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) have launched an online public consultation to obtain inputs on how the UN agencies can collaborate in key areas in the coming years.

*The consultation will focus on five main themes: the impact of COVID-19 on global development goals; Climate and the Environment; Gender Equality; Strengthening Data and Innovation; Inclusion and Equity.*

The consultation will feed into the operationalization of FAO's Strategic Framework 2022-2031 and the preparation of WFP's Strategic Plan 2022-2026. It is open to anyone wishing to have their voice heard, including civil society, farmer organizations, the private sector and research organizations.

The platform provides a space to hear from partners on concrete ways to accelerate the achievement of shared goals and common approaches towards achieving the Sustainable Development Goals (SDGs).

The consultation will focus on five main themes in the context of food systems transformation and hunger alleviation:

1. Impact of COVID-19 on global development goals;
2. Climate and the Environment;
3. Gender Equality;
4. Strengthening Data and Innovation;
5. Inclusion and Equity, including leaving no one behind.

The online consultation is held on the engagement platform SparkBlue and ends on 12 May 2021.

FAO's Strategic Framework 2022-2031, which will be submitted to the FAO Conference 2021 for approval, seeks to support the 2030 Agenda through the transformation to more efficient, inclusive, resilient and sustainable, agri-food systems for better production, better nutrition, a better environment, and a better life, leaving no one behind.

WFP is also developing its Strategic Plan 2022-2026, which will describe the impact pathways through which WFP is expected to Save and Change Lives in the next five years, and improve WFP's accountability towards implementation of and contribution to the SDGs.

*The Food and Agriculture Organization of the United Nations (FAO)*

# Small family farmers produce a third of the world's food

*New FAO research focuses on contributions of farmers with fewer than two hectares*

The world's smallholder farmers produce around a third of the world's food, according to detailed new research by the Food and Agriculture Organization of the United Nations (FAO).

*A farmer in Ghana.*

Five of every six farms in the world consist of less than two hectares, operate only around 12 percent of all agricultural land, and produce roughly 35 percent of the world's food, according to a study published in World Development.

Smallholders' contributions to food supply varies enormously between countries, with the share as high as 80 percent in China and in the low single-digits for Brazil and Nigeria. The analysis highlights the importance of improved and harmonized data to obtain a more granular and accurate picture of agricultural activities for policy makers.

"It is imperative that we avoid the use of the terms family farms and small farms interchangeably; the majority of family farms are small, but some are larger and even very large," said Marco Sánchez, Deputy Director of FAO's Agrifood Economics Division and co-author of the article with Sarah Lowder and Raffaele Bertini, who were with FAO during the research.

In 2014, a flagship report from FAO calculated that nine out of 10 of the world's 570 million farms were family farms and produced around 80 percent of the world's food. The new research - "Which farms feed the world and has farmland become more concentrated?" -aims to clarify the prevalence of farm sizes.

The updated estimates are that there are more than 608 million family farms around the world, occupying between 70 and 80 percent of the world's farmland and producing around 80 percent of the world's food in value terms. The new research teases out estimates of farm size: around 70 percent of all farms, operating on just 7 percent of all agricultural land, are less than one hectare, while another 14 percent of farms, controlling 4 percent of the land, are between one and two hectares, and another 10 percent of all farms, with 6 percent of the land, are between two

and five hectares.

Meanwhile, the largest one percent of farms in the world - greater than 50 hectares - operate more than 70 percent of the world's farmland, with nearly 40 percent of agricultural land found on farms larger than 1000 hectares.

**Why knowing about farm size matters**

Such precisions matter for international organizations and policy makers aiming to develop public policies and investments to support family farming, to increase the productivity of smallholders and improve rural livelihoods, as endorsed by the United Nations Decade of Family Farming 2019-28. They also help improve awareness of the state of medium and large-scale farms whose role is also critical to achieving Sustainable Development Goals 1 (eradicating poverty), 2 (achieving Zero Hunger), 10 (addressing inequalities) and 12 (achieving more sustainable production patterns).

To be sure, large regional variations highlight the importance of general levels of economic development. Farm size generally increases with average national income levels, with 99 percent of farms in high-income countries larger than five hectares compared to only 28 percent in low-income countries.

Regional and local factors are also illuminating. Smallholdings occupy a much larger share of agricultural land than the global average in regions such as South Asia and sub-Saharan Africa.

Farm size does not always correlate with the production of specific commodities. For example, in Mongolia, farms not owned by households but organized as business units and organizations account for 90 percent of wheat production. In Tanzania, there are only a handful of large farms occupying only 7 percent of agricultural land, but they are responsible for 80 percent of the country's wheat output and 63 percent of its tea.

Likewise, changes in farm size must be grasped in local context. An increase in medium-scale farms in Zambia, for example, appears to be attributed to salaried urbanites rather than smallholders increasing the land under their control. Interestingly, there has been an increase in the number of smallholdings in Brazil and the United States of America - both agricultural powerhouses - even though the share of cropland controlled by large farms has increased. Whether that reflects growing inequality or a boom in locally sourced and consumed foods warrants further study, the authors say.

**Data gaps**

While the new research - and rich publicly-accessible data sets - offers the most complete information available today, it is hampered by uneven and often antique data.

"Rough approximations based on generous assumptions" could be improved on with more country-level data on production, farm size, commodity types, prevailing employment modalities as well as data on income and owners' residences, the authors say, noting that information on production by farm size is only available for very few countries today.

Much of the data available comes from agricultural census reports, consolidated in the FAO World Programme for the Census of Agriculture, while accessing raw agricultural census data would add precision, the authors note. The censuses also present limitations, as some countries haven't conducted one for decades and many others exclude non-family entities that operate farms.

*The Food and Agriculture Organization of the United Nations (FAO)*

# Transparent and open food commodity markets are vital for food security and nutrition

*A shop assistant arranges food products at Prospekt supermarket, in Yerevan, Armenia.*

*Director-General QU Dongyu highlights the importance of keeping supply chains functioning amid COVID-19 pandemic in his address to FAO Committee on Commodity Problems*

Open and transparent food commodity markets and efficient supply chains are paramount to ensure that everyone has access to adequate, safe and nutritious food during the COVID-19 pandemic and beyond, FAO Director-General QU Dongyu said on March 10, 2021 at the opening of the 74th Session of the FAO's Committee on Commodity Problems (CCP).

"The pandemic has resulted in a dual shock to food and agricultural markets, hitting both: supply and demand," Qu said. He pointed out that the measures introduced to control the virus caused disruptions to agri-food supply chains affecting the global trading system and, in particular, the least developed countries that depend on trade for their food security.

To this end, the Director-General noted that FAO's work under the mandate of the Committee on Commodity Problems helped to calm markets and guide policy decisions, by providing up-to-date information on market conditions, monitoring policy developments, and proposing policy options to avoid the health crisis turning into a global food crisis.

Referring to the pandemic as "an astonishing wake-up call on the fragility of our agri-food systems and the vulnerabilities we face," the Director-General stressed that the current crisis also provided an opportunity to redouble and refocus global efforts to build back better.

"It made it clear that business-as-usual is no longer a viable option, and that we must change our food consumption and production patterns," the FAO chief said alluding to the challenge of transforming global agri-food systems towards safer and more nutritious food for everyone, while ensuring environmental sustainability.

**Spike in global food prices**

In his remarks, Qu also expressed concerns about the spiking food prices, registering their ninth consecutive monthly rise in February and reaching their highest level since July 2014. He said it would make it difficult for many countries to pay their food import bills, with potential implications for food security and nutrition, especially for the most vulnerable and poor.

To address this issue, he underlined the importance of increasing transparency for market conditions and policies to reduce uncertainty and ensure the proper functioning of commodity markets. Doing so requires investment and capacity development, he added, encouraging FAO Members to use such mechanisms as the Agricultural Market Information System (AMIS) and the Global Information and Early Warning System (GIEWS).

Despite a crucial role trade plays in providing the variety and availability of foods to consumers, the Director-General also warned about certain risks it poses. He highlighted that trade liberalization must be accompanied by measures to ensure that farmers and workers that are adversely affected by import competition are covered by adequate social protection programmes and have access to technical support to build capacity to improve their productivity.

**Bridging the digital divide**

The Director-General also welcomed the Committee's intention to focus on digital innovation among other issues this year.

"The future of agriculture is in digital technologies. They can produce significant gains in terms of efficiency, help markets to function better, and facilitate food trade", he noted, citing as an example e-commerce in food and agricultural products which helps to enhance farmers' access to markets.

However, to ensure that these gains are shared by all, it is crucial to reduce the current digital divide and address the specific needs of smallholder farmers, Qu added.

The Director-General reiterated FAO's support to all Members with innovative and transformative approaches, including FAO's evidence-based, country-led and country-owned Hand-in-Hand Initiative, the holistic COVID-19 Response and Recovery Programme, and the newly developed FAO Strategic Framework that focuses on the agri-food systems transformation to make them more efficient, inclusive, resilient, and sustainable.

**COVID-19 impact on commodities**

During the opening session, FAO Chief Economist Máximo Torero Cullen provided additional insights into the impacts of the COVID-19 pandemic on various agri-food commodity markets and trade. He said that monitoring of market and policy responses to COVID-19 has proved that agri-food systems are more resilient than other sectors of the economy. Global food markets remain well supplied and prospects are favourable, at least for basic foodstuffs.

However, he stressed that the problem was more about the access to food rather than its availability. Torero said that the global economic contraction triggered by the pandemic resulted in increasing unemployment rates and an overall reduction in incomes and purchasing power, forcing people to switch to cheaper, less nutritious diets.

While vegetable oils, sugar, meat, dairy and fisheries products have all been affected by the declining or stagnating demand, the meat and fisheries sectors have been more affected by disruptions in production processes and restrictions on the movement of workers and fishing vessel crews, Torero added.

**About CCP74**

CCP is the oldest FAO's Technical Committee established in 1949 that reviews global issues impacting the production, trade, distribution and consumption of food and agricultural products. It is made up of 113 FAO Members, plus observers.

The Committee's 74th Session, taking place virtually on 10-12 March, is reviewing the latest developments in food and agricultural markets and examines market outlook, including medium-term projections. The delegates will also discuss the findings of FAO's flagship publication The State of Agricultural Commodity Markets (SOCO) 2020 on the theme "Agricultural Markets and Sustainable Development: Global value chains, smallholder farmers and digital innovations". Furthermore, CCP74 will provide guidance on FAO's work programme in commodity markets and trade for the period 2022-25 and beyond.

*The Food and Agriculture Organization (FAO)*

# Resilience kept NZ agriculture strong through pandemic

*By Jessica Marshall*

*Researchers found that the ability to cope with adversity, finding new ways of doing things and getting on with the job, were important in how the NZ agriculture sector performed so well during the pandemic. Photo Credit: Kieran Scott*

*A new report has found that Kiwi ingenuity and a drive to "make it work" were crucial to New Zealand's primary sector managing the Covid-19 pandemic.*

The study was carried out by AgResearch and the New Zealand Institute of Economic Research (NZIER) – along with several science research organisations in New Zealand and Australia.

Some 194 NZ farmers and workers from the agriculture and food systems sector were surveyed online – along with a further 127 Australian farmers and agriculture workers – about the

impacts of Covid-19 during the period to June 2020.

Many respondents acknowledged overall negative effects, additional stress and pressure from the pandemic and response. The effects specifically mentioned include reductions in the availability of agricultural inputs and specialised and non-specialised labour. Also mentioned were distribution difficulties, reduced capacity in processing plants, and changes in market demand.

The report found that NZ's agriculture industry began to feel the impact of the pandemic in late-February and early-March. It states that "the reduction in tourist arrivals substantially affected demand for agricultural products through the restaurant and fast food trade, both of which were shut down."

Despite the difficulties faced by those in the primary sector, only 47% of New Zealand respondents viewed the effects on their farms or businesses negatively over the period studied. A further 37% said the effect was neutral.

Those interviewed in New Zealand said they also found positives coming out of the pandemic experience, such as opportunities for new markets for their products and increased community appreciation of their sector.

"The term resilience is a buzzword that's probably a bit overused," says AgResearch senior scientist Dr Val Snow.

"But it's clear from our analysis that the in-built ability to cope with adversity through various means, find new ways of doing things and get on with the job, were important in how farmers and their supporting industries performed so well."

Snow says that while many farmers were already dealing with drought conditions, they were able to manage through the extra difficulties. She adds that relatively high technology use and strong connections in the New Zealand sector also meant the industry was well-placed to respond to the pandemic.

"Although the outlook is more positive now with access to vaccines looming, many of those we heard from expect impacts of the pandemic to linger for some time. We will be interested to see how those impacts change over time, and that is where further research will be valuable."

Snow told Rural News that there is no reason to think that this resilience would dissipate in 2021.

*Rural News*

# Future of agriculture grows under Seoul's subway stations

*By Kim Hae-yeon*

*Experts introduce the facility during the opening showcase of Metro Farm at Sangdo Station in September 2019. (Farm8)*

*Children line up in front of a Metro Farm to experience and learn about agriculture in January 2020.(Farm8)*

Walking down the stairs from exit No. 2 of Sangdo Station in southwestern Seoul, its not easy to miss a white and green signboard that reads "METRO Farm."

A method of what's known as "smart farming," Metro Farms can create nature-friendly environments while being located inside urban subway stations, using AI and Internet of Things (IoT) technologies.

Sangdo Station's exit No. 2 was originally left unattended, merely serving its purpose as a meet-up plaza. Since September 2019, the space is now a farm full of sprouts and herbs.

The 394-square-meter cultivation facility is a complex space consisting of an "Auto-Farm," where robots manage basic sowing and harvesting, a "Farm Cafe," which sells fresh salad and juice, made from crops harvested on the same day, and "FarmX," a zone where visitors can learn about the future of agriculture.

The Seoul Metropolitan Government, Seoul Metro, and the agriculture company Farm8 have come together for this project. In 2004, Farm8 started out as a firm that produced and distributed vegetable salads. Over time, the company shifted gears to conduct research on indoor farming as a method of sustainable agriculture that can operate regardless of weather conditions and has succeeded in developing high-tech distribution centers.

The three organizations worked together to enhance the ecological sensitivity of Seoul as a city, and allow young people living in urban districts to experience agriculture with their own eyes.

"We tried our best to make Metro Farms a lively experience, where visitors can get a grasp of its possibilities and to be recognized a place where technology meets nature," senior manager of Farm8 Yeo Chan-dong told The Korea Herald.

Since the very first showcase of Metro Farm at Dapsimni

Station in eastern Seoul in May 2019, Yeo explained that they have made progress in creating urban agricultural jobs and expanded Metro Farms across the city.

An average 7.5 million people take the subway each day in Seoul, according to Seoul Metro. This means that passersby will naturally encounter Metro Farms on their way to work, home or to meet family and friends.

"Our assignment for the new year is to make Metro Farms more popular and sustainable," Yeo spoke with confidence, "In other words, not only presenting the experience, but eventually making a system for the crops grown to be made a competitive quality to suit the needs of the public."

*The Korea Herald*

# More eyeing a bite of alternative meats sector

*By Shabana Begum*

*Mr Lin Xiangliang, chief executive of local biotech company Esco Aster, with a packet of cell-cultured meat. The firm is working to get a Singapore Food Agency licence for one of its labs to produce novel food ingredients. This will enable it to help food tech firms mass produce alternative proteins affordably. ST PHOTO: CHONG JUN LIANG*

*Over 15 start-ups have set up base here in past two years amid growing awareness of impact of rearing livestock*

Home-grown novel foods such as cell-cultured and plant-based meats could soon feature more regularly on menus in Singapore.

Over the past two years, more than 15 alternative protein start-ups have set up base in Singapore, Ms Bernice Tay, director of food manufacturing at Enterprise Singapore (ESG), told The Straits Times (ST).

"Local food manufacturers such as Tee Yih Jia and Growthwell have also started to invest in research and development, and production of plant-based meat products, in response to evolving consumer demand," she added.

More firms here are entering the emerging field of alternative proteins amid growing global consciousness about the massive carbon footprint of rearing livestock for food, which produces about 15 per cent of all global greenhouse gas emissions, according to the United Nations Food and Agriculture Organisation.

A study of 10,000 users' data and 62,000 reviews on sustainability app abillion, which helps users find vegan food options, found that local consumers' interest in plant-based pork and chicken products saw a sevenfold increase last year compared with 2019.

Alternative meat products also saw a 306 per cent jump in consumer reviews on the app.

Singapore became the first country to approve the sale


of a cell-cultured product last December. The cultured chicken bites by Californian firm Eat Just were made available for home delivery via Foodpanda last Thursday (April 22), until May 6.

A report by The Good Food Institute, which promotes protein alternatives, revealed that a record US$3.1 billion (S$4.1 billion) was invested in alternative proteins globally last year - three times the capital raised in 2019.

Ms Tay said ESG is working to further grow the number of companies in this space. The agency partnered five global accelerators to support the growth of 100 agri-food tech start-ups. "We have also anchored several accelerators and venture capitalists in Singapore to nurture and invest in agri-food tech start-ups, including those in alternative protein," she added.

Global food ingredient and flavour supplier ADM on April 22 launched its plant-based innovation lab in Biopolis to offer solutions and expertise in the areas of proteins, texturing and flavour to help firms enhance their products and cater to the Asian palate.

Dr Vinayaka Srinivas, who comes from the life sciences field, co-founded local start-up Gaia Foods in 2019 to develop cell-based cuts of pork, beef and mutton. Seeing the popularity of Impossible burgers then, he saw the potential in developing alternatives to slaughtered meat.

Mr Lin Xiangliang, chief executive of local biotech company Esco Aster, said most cultured meat start-ups here are still at the research and development phase, and will need a platform to make more food - especially if they do not have their own pilot facilities.

The firm - which develops vaccines, cell and gene

therapies, and diagnostic products - is working to get a Singapore Food Agency licence for one of its labs to produce novel food ingredients.

This will enable it to help food tech firms mass produce alternative proteins affordably.

Its proprietary bioreactors can be used for growing cell-cultured meat, while its fermenters can be used for plant-based and micro-bial proteins.

Professor William Chen, director of Nanyang Technological University's Food Science and Technology programme, said Singapore is one of the leading countries in the alternative protein space, mainly because of its strong biomedical core.

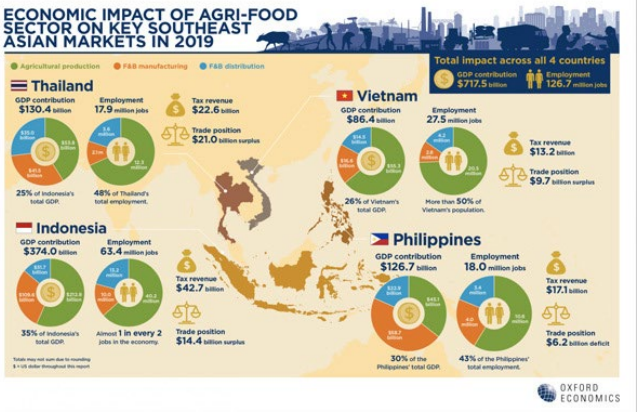
"Fermentation technology is very similar to vaccine production, and cultivated meat is very similar to tissue engineering," he said.

"The growth potential is certainly bright if we can export the technology for alternative proteins to South-east Asia and beyond. Singapore can be positioned as a hub for these innovations."

*The Straits Times*

# Vietnam's potential to drive agri-food recovery ranks second highest in the region

*The agri-food sector could play a major role in Vietnam's recovery.*




As a key pillar of the national economy, Vietnam's agri-food sector remained resilient during the COVID-19 pandemic and has great potential to drive economic recovery, ranking second in the region.

However, a report by Oxford Economics states that while the sector can be a significant driver of Vietnam's post-COVID-19 economic recovery, supply and demand risks, fiscal policy measures, and a drawn-out pandemic could disrupt this trajectory.

Commissioned by the Food Industry Asia (FIA) to better understand the challenges and economic impact of the agri-food sector faced in 2020, The Economic Impact of the Agri-Food Sector in Southeast Asia report highlighted that the agri-food sector's role is pivotal in driving Vietnam's economic recovery, creating employment, and putting food on the table at stable prices.

According to the report's Economic Recovery Matrix, Vietnam placed second across 10 countries when it comes to the sector's expected economic recovery, with a score of 6.6 out of 10, coming in just behind Singapore. This is in part due to Vietnam having contained the COVID-19 virus relatively early and minimised the economic fallout. The sector had remained resilient during the COVID-19 pandemic, seeing a 4 per cent growth in 2020, or a $3.7 billion increase in GDP contribution.

Pre-pandemic, Vietnam's agri-food sector demonstrated strong contributions to the national economy. Findings from the report show that in 2019, Vietnam's agri-food sector made a GDP contribution of $86.4 billion. The sector is also responsible for half of the entire workforce with 27.5 million jobs, making it the single most critical source of employment in the economy. The sector also contributed a total of $13.2 billion in tax revenue.

This was largely driven by Vietnam's dominant agricultural industry, which contributes over $55.3 billion in GDP, which is nearly two-thirds of the entire sector. However, the agri-food industry saw greater diversification over the years as both food and beverage manufacturing and distribution saw double-digit growth between 2015 and 2019.

Commenting on the findings, Mary Tarnowka, executive director of AmCham Vietnam, said that while the local agri-food sector has demonstrated great resilience against the challenges of the pandemic, further developments on the COVID-19 virus, supply and demand risks, and fiscal risks still have great potential in disrupting Vietnam's growth.

"The effects of the pandemic have been felt widely and deeply across all sectors, including agri-food, but as a significant pillar of our national economy, the sector demonstrated its resilience by achieving robust growth throughout 2020. The crisis can be an opportunity for Vietnam's agri-food sector to drive our economy to greater heights, promoting food security and sustainable growth, while continuing to support over half of our country's entire workforce," said Tarnowka.

"We should continue the diversification of the sector that we've seen pre-pandemic, where we deepen our capabilities in higher value-adding roles in ag-tech, manufacturing, and services," she added.

FIA's executive director, Matt Kovac, shared the same sentiment on a need to understand the current and future risk landscape to future-proof Vietnam's agri-food sector.

Kovac said, "The report highlighted a range of substantial short-term and long-term challenges facing the agri-food sector in Vietnam, and that it remains crucial for policymakers to recognise and work around these risks, given the scale of the sector's contribution to Vietnam's jobs and GDP. With strong headwinds projected for 2021, it is imperative for the Vietnamese government to remain mindful of this with any policy that could impact the industry."

Echoing this, James Lambert, director of Economic Consulting Asia for Oxford Economics said, "As Vietnam looks to continue its trajectory of being one of the fastest growing economies in the world, it is important that policymakers provide the most conducive conditions for the agri-food industry to grow and thrive, and that any fiscal policy implemented is carefully planned, designed, and communicated. That will allow the industry to continue to provide the economic benefits it has delivered over recent decades."

Lambert notes that fiscal adjustments can include sales tax hikes, which could potentially dent demand and household wellbeing, given that more than a third of household spending in Vietnam is accounted for by food and non-alcoholic beverages.

*VietNamNet*

# Food traceability guide launched in Australia

Deakin University has launched a new guide that is designed to help Australian agrifood businesses track and trace food products from the farm gate to the dinner plate.

The *Australian Guide to Implementing Food Traceability* (AGIFT) was developed in partnership with GS1 Australia, Woolworths Group, and Meat and Livestock Australia's Integrity Systems Company.

The 11 learning modules in the guide cover everything from on-farm production, manufacturing, distribution and retail-to-consumer information and exporting, and are designed to be 'stackable' with businesses able to incorporate all modules into their operations or pick and choose the ones they need.

Dr Hermione Parsons, Industry Professor and founding Director of the Centre for Supply Chain and Logistics (CSCL), explained that the AGIFT builds national consistency and integrity into Australia's food traceability systems and ultimately gives a clear line of sight along a product supply chain.

Parsons said the guide responds to the needs of both industry and consumers by explaining the 'who, what, where, when and how' of tracking and tracing food products.

"It's clear that the current standard of being able to trace one step forward and one step back within the supply chain is no longer enough, with consumers calling out for more detail about how their food is produced," she said.

"Consumers want to know they can trust any claims a business is making about a food product being organic, Halal or part of a sustainable supply chain. And, in a worst-case scenario, they want to know that any food safety notices and product recalls will be handled as transparently and efficiently as possible."

Tony Boll, Chair of Deakin University's Food Traceability Laboratory and former CEO South Pacific, DHL Global Forwarding, said AGIFT will benefit not only consumers, but also growers, manufacturers, distributors and retailers.

"For the first time, the industry will have an easily accessible methodology that can be used by everyone along the length of the supply chain, enabling information to flow freely regardless of software or technology," Boll said.

"And with Australia's recent announcement that it aims to boost its food export target to $100 billion by 2030, the timing has never been better."

The Australian Guide to Implementing Food Traceability can be purchased through Deakin University's Centre for Supply Chain and Logistics. Further information is available on the Implementing Food Traceability website.

*Food Processing website*

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