Food & Agriculture Newsletter

Confederation of Asia-Pacific Chamber of Commerce and Industry

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Contents

Message from ACFA Chairman

It is with great pleasure and a sense of shared purpose that I address you as the Chairman of the Asian Council on Food and Agriculture. As we gather momentum in our commitment to shaping the future of food security and sustainable agriculture in our region, I am honored to convey a message that underscores our collective efforts.

As we navigate the complex landscape of food security, sustainability, and innovation, it is paramount that we continue to collaborate, innovate, and adapt. As we all know, Asia plays a pivotal role in feeding a growing global population, and our collective efforts are crucial in ensuring food access, reducing waste, and promoting sustainable practices. In these unprecedented times, the pandemic has highlighted the resilience and adaptability of our sector. We must harness this momentum to drive positive change. Let us invest in research and technology, support our farmers, and advocate for policies that promote equitable access to nutritious food.

I invite all stakeholders, from governments to NGOs, academia, and industry, to work hand in hand in pursuit of a more sustainable and resilient food system. The challenges before us, from climate change's impact on crop yields to the need for equitable distribution, demand a unified approach. Together, we can shape the future of agriculture in Asia and contribute to global food security.

Thank you for your unwavering dedication to this cause, and I look forward to our continued collaboration and progress.

Warm regards,

Pradeep Kumar Shrestha
Chairman
The Asian Council on Food and Agriculture (ACFA)

Land Consolidation is How We Achieve Economies of Scale in Agriculture

In the meeting to discuss possible solutions for raising productivity and achieving economies of scale under the Kapatid Angat Lahat Agri Program (KALAP) were, (standing from left): Francisco Dizon of Dizon Farms, Ramon Garcia of DFNN, Winston Uy of Universal Leaf Phils., Nando Cojuangco of Central Azucarera de Tarlac, Go Negosyo Senior Adviser Dr. William Dar, James Amparo of Yovel East, Simon Bakker of Kennemer, Carl Benedick Chung of Bounty Fresh, and (seated, from left) Michael Tan of LT Group, Go Negosyo founder Joey Concepcion, Sen. Miguel Zubiri, Christian Moellerr of Lionheart Farms, and Ruth Novales of Nestlè

Land has been on my mind lately because it is becoming central to the conversations that I and the KALAP (Kapatid Angat Lahat sa Agri Program) group have been having with people from several sectors. It figured prominently in a conversation we had recently with Sen. Migz Zubiri as we discussed some possible solutions put forward by members of our group on issues that stand between the Philippines and agricultural productivity.

You had me at agriculture," he told us. The good senator describes himself as an agriculturist by birth, education and profession. Hailing from Bukidnon, he knows all too well how a productive land can bring so many benefits. He saw with his own eyes that corporate farming works.

You need to approach agriculture as a business, and for a business to work, you need a business model to follow. And for farming as an industry to become productive, you need to achieve economies of scale.

This much we have threshed out as we go about finetuning KALAP. This Go Negosyo initiative promotes inclusive growth, sustainability, competitiveness and development by integrating MSMEs, small-holder farmers and fisherfolk into the value chain of big-brother agri companies.

We have already forged formal agreements with the DTI, DA, NCIP, NTA, DENR, PCA and NIA last March, and have had several discussions with them, along with the 15 big agri companies that have agreed to become big-brothers – mentors – to small farmers.

In our discussions, it always comes back to scale. When we talk to other countries it becomes apparent that it is the one crucial component that the Philippines lacks, one that can be traced to the flaws in our land reform program.

The senator describes himself as a total believer in land consolidation, and I agree with him. We can only achieve economies of scale if we consolidate our lands. The agrarian reform law, as it stands now, is preventing farmer-beneficiaries from using their land as collateral for loans. That land, for many, is their only access to capital. And for anyone who has ever tried to farm, you know that you need a lot of money to till the land.

Most banks will not likely lend to small farmers because agriculture is often seen as risky. So risky, in fact, that they would rather pay millions in fines than risk billions in what they think is a risky loan. While land is commonly considered as collateral, banks would never touch a CLOA (Certificate of Land Ownership Award, the document given to recipients under the agrarian reform program), given all the restrictions on its sales or disposal. The sad part is, a CLOA is all these small farmers have.

Just put yourself in the farmers' shoes: you own the land and by rights you should be able to sell it or at least be able to use it as collateral for agricultural inputs. On the other hand, we must protect the spirit of why this land was given to farmers: that is, to make it productive. What use would it be if the land does not serve its purpose?

Why can't the land be bought by a returning OFW who wishes to come home and become an agripreneur? Why can't a neighboring farm buy the land and expand so it can increase its productivity? What is preventing cooperatives to aggregate the land so that the farmers – as a group – can achieve scale in the same manner as a big corporation?

The way forward is for farmers to group together: whether by forming strong cooperatives or by integrating into the value chain of a big corporation.

If you fly across the Philippines, you will see a lot of idle land, much of it still contiguous. The natural question would be, how come these lands are not being farmed? How come there are hardly any farms? Why is it that a country like the Philippines, blessed with hectares upon hectares of land, and even thousands of kilometers of coastline, is not assured of food security, nor become an agricultural powerhouse? Why indeed.

From our discussions about the issues of land, several solutions have been proposed in order to achieve economies of scale. The solutions will require a lot of hard work, and I expect many challenges ahead. The work will involve untangling years of bureaucratic red tape, uncovering why one government agency's functions overlap with another's – practically clearing out a garage filled with decades of unresolved issues and forgotten decisions.

In fact, if there is one thing that we can agree on with the progressive groups, it is that the lives of our farmers have barely improved, even after the many earnest attempts to implement land reform and throughout the iterations of land reform over the decades. So you have to ask yourself: where did we go wrong?

Land has always been a painful, contentious issue in the Philippines. Former president Marcos tried to address it with land reform when he was president, doing so with the best intentions to alleviate poverty. I believe he was right in pushing for it, and

had he the benefit of hindsight that we have today, he would agree that farmers having only a few hectares of land to farm is not the way forward.

The idea is not to abolish land reform but to update it with what we know now, and what we know is this: we need these lands to become productive, and they can only become productive if production achieves scale. We can achieve scale if these lands are consolidated, and they can be consolidated if they can be transferred freely to those who can farm them more efficiently.

There are already proofs of this concept – Lionheart Farms in Palawan and Universal Leaf in Ilocos. In both cases, farmers' lives were vastly improved.

I don't know what prodded me to do it, but I brought up the subject of land reform and our KALAP proposals with President Marcos Jr. during our PSAC meeting last week. He listened patiently. He didn't say yes, but he didn't say no, either, and that is enough for me.

NEGOSYO

Japan takes steps on Farm Policy to Raise Food Security

The government on June 2 moved forward with preliminary plans to overhaul its agricultural policy to improve the nation's food security, including a plan to reduce the country's dependence on imports.

The new concept governing the direction for policies on food, agriculture and rural areas was adopted at the day's meeting of the government's task force on measures to secure stable food supply, headed by Prime Minister Fumio Kishida.

Kishida ordered farm minister Tetsuro Nomura to create by the end of fiscal 2023 a road map toward implementing specific measures to ensure food security.

"We'll evaluate the food security situations even in ordinary times and create a system for the government to take all-out steps to secure food during a contingency situation," Kishida told the meeting.

Japan's calorie-based food self-sufficiency rate is 38%, which is the lowest among the Group of Seven countries. Food shortages are a growing concern worldwide due to unstable food production caused by climate change.

The war in Ukraine – which is a major exporter of grain – has also worsened the ongoing food crisis in developing countries.

Kishida suggested that the government will work to increase the domestic production of wheat, soybeans, and feed grains, all of which Japan relies heavily on imports. The government also aims to make farmers pass on production costs adequately to companies and consumer and promote agricultural technologies, Kishida said.

According to the plan, domestic production will be increased by expanding the production of items for which Japan is highly dependent on imports, with a stable food supply secured by stockpiling.

Also, the promotion of exports if "indispensable for maintaining the foundation of agricultural production at a time when the domestic market is shrinking due to the declining population," the outline said.

The concept called for creating a forum for those involved in the supply of food, from producers and processors to distributors.

Farmers may have difficulties passing on higher costs promptly to consumers amid rapidly rising fertilizer prices. The government will compensate for gaps under clear criteria.

Japan Times

As Fertilizer Import Prices Soar, Japan Farmers Look to Home

With fertilizer prices soaring due to the weak yen and the Russia-Ukraine war, compost made from livestock waste is being re-evaluated, as it can be procured domestically unlike chemical fertilizers that rely almost entirely on imports for their raw materials.

In Kyushu, agricultural cooperatives have taken initiatives to process compost into pellets for easier distribution. Farmers have also been exploring so-called "field-livestock cooperation," in which livestock farmers supply compost to field farmers who produce rice and vegetable, while field farmers supply rice straw and rice to livestock farmers for feed.

With such initiatives, agricultural cooperatives are aiming for a stable supply of raw materials and a reduction in environmental impact. However, cost-cutting remains a challenge.

Local circulation

JA Kikuchi, an agricultural cooperative headquartered in the city of Kikuchi, Kumamoto Prefecture, is a pioneer in field-livestock cooperation. Boasting one of the largest livestock farming areas in Kyushu, the cooperative has established three compost processing facilities.

The facilities take in the manure that farmers ferment themselves from cattle and chicken feces and process them for a fee. At the facilities, the manure is further fermented until seeds that many have been mixed into it are killed to prevent weeds from growing in the fields. The most difficult part is adjusting the water content, JA Kikuchi officials say.

The final stage of drying takes place at JA Kikuchi's facility in Koshi, Kumamoto Prefecture, where some of the compost is processed into pellets. "The manure is turned into fully matured compost

Tomoyuki Nagata holds pellets made from compost at a processing facility in Koshi, Kumamoto Prefecture.

here, and then dried in the sun and by stirring for several months to reduce the water content to 25% to 30%," says Tomoyuki Nagata, director of the facility.

The facility has a reputation for the quality of its processing, and 40% of its compost if sold outside the areas JA Kikuchi oversees, including other cooperatives in Kumamoto Prefecture and the one in the city of Fukuoka.

JA Kikuchi took on compost processing after the livestock waste law was fully enforced in 2004.

To prevent odor and water pollution, the law prohibits the disposal of excrement by piling it up in the open or buying it by digging the ground, and requires farmers to properly manage it by setting up composting facilities. However, as some livestock farmers were unable to handle the waste on their own, JA Kikuchi established the processing facilities in around 2006.

This was followed by the expansion of the cultivation of rice for feed using compost. With consumption of staple rice declining, the cooperative has been encouraging field farmer to switch to rice for feed since 2008. Such rice is mixed into compound feed at a consignment company and supplied to livestock farmers.

"This allows us to recycle local resources and at the same time maintain the function of irrigating groundwater in the rice paddies," says Osamu Misumi, head of the cooperative. "In addition, the amount of carbon dioxide emissions from the transportation of imported grains can be greatly reduced."

The ratio of rice used in compound fee started at 3%, but it had been raised to 8% in recent years and was boosted to 20% in November in response to soaring feed prices.

Holstein bulls raised on compound feed containing locally produced rice have been branded "Ecome Beef," nicknamed after "eco" for ecology and "kome," or rice.

In may 2023, JA Kikuchi began selling composite fertilizers that use a different ratio of compost pellets for each of the major crops in the region, including paddy burdock and watermelon, in an effort to enhance circular agriculture in the region.

One drawback is the time it takes to produce the compost. Currently, it takes about six months to make the final product from the time farmers bring in their manure, limiting the amount of processed compost.

"We need to significantly cut down the time taken to increase the amount of processed compost," Misumi said. JA Kikuchi has formed a consortium with a university and a research institute to develop a technology that estimates which parts contain high water content so that the drying process can be concentrated. A test on the technology is scheduled for this fall.

Wide-area Distribution

In October 2022, JA Miyazaki began selling a compound fertilizer containing compost pellets made from pig and chicken manure that came from its directly managed farms and other sources.

The 2019 revision of the fertilizer control law made it possible to mix compost with chemical fertilizers, which had not been allowed before because of inconsistent levels of water in compost and a possible of rice straw contained within it from barns.

"The revision allowed us to make effective use of local resources and aim to recycle within the region," a JA Miyazaki official said, adding that the soaring fertilizer prices have also accelerated their efforts. The pellets have the advantage of being easy to transport and disseminate through the use of machinery.

According to the farm ministry's Price Index of Agriculture, the price index of fertilizers rose to as high as 155.2 as of March against 100 in the base year of 2020, while the price index of agricultural products was at 107.1. this indicates that the price increase in production materials is not reflected in the price of fam products, which makes compost attractive to farmers facing increasingly severe business conditions.

JA Kagoshima has also been supplying fertilizers containing compost pellets since July 2022. In 2023, Ja Kagoshima began a wide-area distribution trial with JA Zen-Noh Miyagi, an agricultural cooperative in Miyagi Prefecture in the Tohoku region that excels in rice production.

During the trial, they plan to ship a total of 60 tons of compost pellets from Kagoshima Prefecture and 140 tons of rice straw from Miyagi Prefecture. They will compare transportation costs for using railroads, trucks and ferries, and study issues that may arise during the trial.

The project, which was first considered about three years ago, had been on hold, but is started up again in October 2022 when Miyagi Prefecture participated in the so-called Wagyu Olympics held in Kagoshima Prefecture. The readily available compost pellet in Kagoshima moved the discussion forward.

During the talks, Kagoshima officials explained that they wanted to find ways to secure a stable supply of raw materials domestically from the perspective of food security as imported feed and fertilizer prices continue to rise.

Meanwhile, officials from Miyagi Prefecture said that there are no farmers in the prefecture who have used compost pellets before, and that they want to study the effects on crop yield and quality.

In the statement issued at the Group of Seven farm ministers meeting held in the city of Miyazaki in April 2023, ministers called for effective use of domestic agricultural resources, and Japan's farm minister, Tetsuro Nomura, emphasized the promotion of field-livestock cooperation.

The farm ministry has set targets to reduce the use of chemical fertilizers made from imported raw materials and fossil fuels by 30% by 2050, and to increase the self-sufficiency ratio of feedstuffs from 25% in 2018 to 34% by the year starting in April 2030, in effort to reduce dependence on imported raw materials.

However, the cost is a bottleneck to wide-area cooperation, and those involved agree that government support measures are essential. “A certification system for crops using compost should be established,” JA Kikuchi’s Misumi said. “A panel should also be for formed to match regions in Kyushu that can supply compost with regions that cannot,” he said.

Japan Times

Flying Tractors are a Window into the Future of Farming

Drones are used to pollinate pear blossoms at a farm in Cangzhou, Hebei province, China. | REUTERS

Early one recent morning Vidalia, Georgia, third-generation farmer Greg Morgan launched an AG-230 drone carrying eight gallons of fungicide over a field of sweet onions.

The chemical, which is essential to crop survival in this humid state, would typically be dragged and dripped from a 500-gallon tank behind Morgan’s 10,000-pound tractor. Now it fell in a find mist from the spray jets of an 80-pound drone scudding 10 feet above his cash crop.

Vidalia Onions are a $150 million local industry that, like peaches, tomatoes and other specialty crops in the Southeast, have become increasingly vulnerable to climate change. Morgan has joined the vanguard of farmers who are turning away from tractors and toward drones as they adapt to this rising cost of chemicals and contend with hotter temperatures, heavier rains, heartier weeds and prolific pests.

Farmers have been using drones over the past 20 years mainly for aerial imaging – scanning farms from the sky with cameras to map where crops are thriving and failing. Now drones are being designed for hands-on crop management: enabled to spray herbicides, insecticides and foliar fertilizers with precision, and even to distribute seeds in planting season.

A “featherweight flying tractor” – that’s how Arthur Erickson, chief executive of manufacturer Hylio, described the company’s agricultural drones. The Houston-based startup has seen demand for its drones soar over the past three years; roughly 700 of Hylio’s drones are now at work treating 700,000 acres of cropland annually – including Morgan’s farm.

Early adopters like 46-year-old Morgan are driving a major shift in the business of food and signaling a reality that investors and leaders of industrial agriculture should heed. Drones are poised to significantly disrupt the tractor industry, and unlike many other high-tech agricultural trends, this one is actually good for small- and mid-sized farmers – and a big win for the planet, to boot.

In the eight months since Morgan made his $40,000 investment – a whole lot cheaper than the roughly $700,000 it would have cost to replace his old ground rig – it has cut his fuel costs and already reduced his agrochemical usage by about 15%. The drone has also enabled him to work his fields after heavy rains – when the grounds is often too sodden for heavy equipment – and has spared his crop from the routine damage caused by tractors. It has also saved his soil from the compaction, bogging and erosion caused by farm machinery.

I first saw an agricultural drone (an “agrodrone”) at work in summer 2022 on a 2,000-acre soy and corn farm in Iowa. Fifth-generation famer Brian Pickering and his 22-year-old daughter launched an MG-1P Rantizo drone manufactured by the Chinese giant, DJI, that spanned 9 feet wide with 8 whizzing propellers. Throughout the morning, the Pickerings guided their drone to spray an organic pesticide at a rate of about 2 gallons per acre and 14 acres per hour. In the afternoon it drizzled rye seeds across swaths of soy fields at a rate of 25 pounds per acre, sowing the cover crop that would grow after harvest.

These aerial acrobats use less than a tenth of the energy of ground tractors – and they don’t squash the crops, rut the earth or even touch the soil. Watching the drone at work, I got the same feeling I had when I test-drove my electric sedan after years of driving a bulky, gas-guzzling station wagon: that I was witnessing a better future.

Morgan’s onion farm offered even more convincing evidence. While Pickering runs a big commodity farm with a research and development budget to match, Morgan struggles to stay profitable on his 300 acres. The drone purchase for him was not a whiz-bang new toy, but a survival tool that allowed him to minimize his expenses. As Hylio’s Erikson sees it, drones “are like little X-wing fighters. They give small farmers the tools to be as efficient as some of the most advanced tractor technology at a fraction of the cost,” he said. And with far simpler hardware that farmers can operate and fix themselves.

As the hardware of agrodrones becomes increasingly sophisticated – with smaller, longer-lasting batteries and lighter, stronger carbon-fiber frames – so does the software, which is being developed by startups such as Canada’s Precision AI. The AI software will enable drones to use computer vision to identify exactly where and how much chemical is needed, plant by plant rather than blanketing an entire field with the same treatment.

Drones won’t completely replace tractors anytime soon. Their payload is limited to about 20 gallons, not nearly enough to handle the hundreds-of-pounds-per-acre fertilizer applications required between harvests. But they’re certainly capable of displacing the expensive, wasteful crop-dusting of herbicides and fungicides still performed by airplanes and helicopters across millions of acres.

Whereas crop-dusting spreads chemicals that bleed beyond the edges of the fields, drones deliver the chemicals in fine

mists directly into the crop without overspill. The nimble flyers can work around obstacles like powerlines and trees, drastically increasing the efficiency of chemical applications.

While the advantages of agrodrones are significant, the two largest tractor producers – Deere & Co. in the U.S. and Mahindra & Mahindra in India, have begun to invest only half-heartedly in drones, which are currently a tiny fraction of John Deere's $52 billion empire. The titans of mechanized agriculture may be slow to recognize it, but the era of flying tractors has arrived.

At his Georgia farm, Morgan says that, for now, he's keeping a low profile with his drone as he learns how to wield the new tool. "I like to keep it hid," he said. Farmers are widely thought to be skeptical and old-fashioned, and for good reason – they've seen a lot of high-tech gadgets come and go that weren't worth their salt.

"But I've been very well pleased with it," Morgan said, "The fact of the matter is, the thing works."

Bloomberg

Danone Pins Turnaround Hopes on Artificial Intelligence

By Dasha Afanasieva

Making the yogurt of the future requires a cast of 21st-century helpers: machines learning, gut science and even a mysterious artificial stomach.

At a new Danone facility near Paris, researchers feed dollops of yogurt into globular glass vessels and plastic tubes designed to mimic the human gut. Once the bacteria inside show they can survive the digestive juices, artificial intelligence is put to work to probe their potential health benefits.

To consumers bombarded with claims about the supposed power of probiotics, the goal may sound familiar: souped-up yogurt. But the owner of Activia and Actimel is betting technology can yield answers on which friendly bacteria work best and why, giving its products a scientific edge at a time when revenue is lagging and consumers are growing wary of processed food.

"The long-term business strategy of Danone is very much about turning around dairy," says Deputy Chief Executive Officer Juergen Esser. "Everything about brining the right ferments, the right health benefits and making it shine to the consumer is critical."

Whether it's the start of a tech-powered food revolution or just another layer of savvy marketing intended to get consumers to pay more for a pot of yogurt, Danone needs it.

The 104-year-old French company is in its second year of a turnaround effort orchestrated by Esser's boss Antoine de Saint-Affrique. The dairy unit has suffered falling volumes in seven of the last nine years. Sales volumes in the division – the company's largest, with plant milks like Alpro as well – fell 4% in 2022 as consumers traded down to cheaper brands in response to the cost-of-living crisis.

"The only way that Danone can revive its business is by investing in a superior product that would support better pricing power," says Bruno Monteyne, an analyst at Bernstein.

Danon is betting its dairy experience and its own library of bacteria will give it an edge over rivals like Nestle. The company spent about $100 million on the new facility that opened in February, bringing together the research lab that houses the robot stomach, co-working spaces and a consumer-testing area in a suburb best known for its nuclear research.

The labs have gained access to patient samples and health profiles for the AI to sift through with collaborations, including on project with the University of California at San Diego and another closer to home called Le French Gut that aims to analyze the micro-biome of 100,000 volunteers.

At the root of the approach is fermentation, a chemical process that has been around for millennia. But not all bacteria and yeasts are created equal, so Danone's artificial stomach tracks the journey the probiotics take after they leave the yogurt pot.

Contained in a torso-sized glass case, the stomach simulates the absorption of food during the digestive process. It helps Danone to determine which candidates endure stomach acids and enzymes, assessing their ability to settle in the gut.

"If you are studying a probiotic, it has to survive," explains Raish Oozer, Danone's director of microbiome and probiotics research.

The promising bacteria will get studied further to see how they interact with fibers and vitamins in food. Danone won't allow the stomach, developed with Dutch firm TNO, to be photographed because its workings are top secret. The reporter is ushered on before being able to make a sketch.

Machine learning takes over afterward to find connections between the chosen bacteria and health conditions. The AI pores over stool samples, medical histories and past scientific findings, searching for links to anything from weight loss to immunity.

"The technological advances help a great deal," says Jan Knol, senior director of research and innovation at Danone. "It's a hugely complex ecosystem that we can only understand by measuring a lot of things, and then we have to make sense of all the data."

Some of the AI is still in development for different but related research, like evaluating the quality of infant formula.

Danone partners include Microsoft's Azure platform and Amazon.com's Amazon Web Services.

Researchers have toiled for years on the interactions between microbiome and immunity. But as it mines years of data, Danone doesn't need to invest anything. Evidence to frame a marketing message that connects bacteria to benefits may be enough for a new yogurt or baby milk to command a premium.

"It's not like a drug that has to undergo very rigorous testing," says Kim Barrett, who has studied the microbiome and is vice dean for research at the University of California Davis's School of Medicine. "Pretty much anybody can make a claim about anything, because these types of products are generally recognized as safe."

Barrett praises companies like Danone and Nestle for investing in research to document the health benefits of their products.

Their efforts come as the food industry faces something of an identity crisis. Having eradicated the variety and freshness that fed a thriving gut microbiome, companies have turned to probiotics to supercharge their products with beneficial bacteria now that scientists recognize how crucial the community of trillion of organisms living every person's bowels are to immunity, gaining and even mental health.

Archer-Daniels-Midland, which supplies ingredients across the industry, invested more than $30 million in a Spanish facility producing probiotics earlier in 2023. Nestle sells more than a dozen different forms of the supplements through its Garden of Life brand. Beverage companies have also jumped on the bandwagon with drinks like kombucha, a fermented tea. But the probiotics badge isn't always enough to guarantee success. Kellogg dropped a version of its Special K cereals with probiotics added in 2022, saying it hadn't garnered enough loyal fans.

At Danone, the yogurt renaissance resonates. Founder Issac Carasso was a doctor from the Balkans who began selling yogurt to pharmacies in Spain, concerned about the malnutrition and gut disease among local children. He named the firm Danone after his son Daniel. The company went global after Daniel, who moved to the U.S. from France during World War II, bought a small yogurt shop in New York City and added a layer of jam to its plain offerings.

The sweeter product was a hit, and Carasso renamed the local branch Dannon. The reformulation is emblematic of the tension between making food healthy and making it sell. For years, companies enticed consumers with sugar, contribution to a global obesity epidemic. The trend is showing signs of reversal but some still view the industry's latest efforts as an attempt to solve the problems it helped create – and doing so by offering another layer of processed foods.

Tim Spector, a British author and microbiome researcher, advises eating thirty different plants a week instead, including nuts and seeds. Food manufactured by the likes of Danone an Nestle may have a "nice health halo," he says, but "half of their products are poisoning us and the other half are pretending to make us healthy."

Most of Danone's dairy products are low in sugar and salt – the company points out its high score on a global nutrition index. But like other big food groups, Danone uses additives like corn starch and sweeteners like sucralose, which has been linked to poor gut health.

What Danone does bring to the table is heft. Isabelle Esser, who is in charge research and innovation at the company, says it's hard to effect change without catering to the masses.

The enthusiastic Belgian engineer joined the industry precisely because creating impact requires volume, she says, and she dreams that the company could one day come up with the product to help people with diabetes.

The goal is "you take it every day and it's not a pill, it's food as medicine," says Esser, who is not related to Danone's deputy CEO. "And then over time we'll build either you immunity or build your resilience."

The science could also spare Danone some mishaps of the past. The company was ordered to change the labeling and marketing for its Activia yogurt and DanActive dairy drink about 15 years ago in the U.S. to drop "exaggerated health claims." It had to pay as much as $35 million to reimburse customers who argues Danone's U.S. subsidiary was charging a premium for scientific assertions it could not back up, such as relief against constipation. A year later, it faced restrictions in the Europeans Union, where regulators also clamped down on health assertions, limiting tis ability to advertise specific benefits.

The new push to "make sure that we have substance," as Saint-Affrique has described it, set off a licensing race to lock up therapeutic claims. Nestle, which has its own bacteria cultures, has patented a strain that's in the same species as the one present in Danone's Actimel, zeroing in on a heat-treated form that offers the advantage of a longer shelf life and documenting its ability to increase the production of interleukin-10, a protein key to inflammation and immunity.

Danone research, meanwhile, showed that consuming its yogurt reduced the development of insulin resistance and fatty liver in obese mice. The study sponsored by the company pointed to an increase of beneficial compounds in the animals' livers, prompting it to secure patents that allow it to tout liver and sugar metabolism benefits for at least three types of these ingredients.

The French company says there's more to come from this burgeoning space at the intersection of food and medicine.

"If we want to make sure that the consumer is finding our products superior to others, we need to make sure that we have the right arguments underpinned by the right science," says Esser, the deputy CEO who oversees finances and technology at Danone. "You will see, it will make a difference.

Bloomberg

The state of food security in Thailand and 4 key challenges

The state of food security in Thailand is currently grappling with various challenges in the wake of global food shortages. To ensure sustainable food security, the Kingdom must address four key issues identified by the Food and Agriculture Organisation (FAO).

The availability of food is a critical factor for human survival. Food scarcity can have a profound impact on health and productivity, leading to potential conflicts, and having sufficient food is considered a vital aspect of stability.

Recognising its significance, the United Nations has designated food security as the second goal of the Sustainable Development Goals (SDGs), aimed at eradicating hunger, achieving food security, improving nutrition, and promoting sustainable agriculture.

The FAO has reported a growing severity of global food shortages since 2014. Key factors contributing to this trend include escalating climate change, resulting in global warming, natural disasters, water scarcity, and their detrimental impact on agricultural production. Additionally, the growing population, shrinking agricultural land, and the emergence of epidemics and conflicts between countries have further amplified the instability of food security.

Growing global food shortage

According to the FAO's Global Report on Food Crises 2022, nearly 193 million people in 53 countries worldwide faced food insecurity in 2022. This number has increased by approximately 40 million people compared to the previous year due to rising food prices. The increased food prices have particularly affected countries with low-income populations, as food expenses typically account for at least half of their total expenditures.

The World Bank has also highlighted that a 1% increase in food prices pushes an additional 10 million people into extreme poverty. Consequently, it is crucial to implement measures to address this issue and ensure the resilience and survival of populations within each country.

Thailand ranks 64th for food security

Thailand ranks 64th in global food security according to the 2022 Global Food Security Index (GFSI), which assesses and reports on the food security situation in 113 countries worldwide. Thailand's score of 60.1 out of 100 represents a slight improvement from the previous year's score. In the Asia-Pacific region, Thailand ranked 9th among countries in the Pacific-Asia group and 15th among countries with medium-high income levels, indicating a relatively favourable food security situation.

Despite this ranking, under the FAO's definition of food security, which comprises four components: availability, accessibility, utilisation, and stability, there are still significant issues that Thailand needs to address. The following are the major issues that Thailand must focus on in its battle for food security:

Food Availability: This entails increasing food production in Thailand to ensure an adequate and consistent quantity of food. The Self-Sufficiency Ratio (SSR) is a measure used to gauge this, indicating the proportion of domestically produced food compared to the total amount consumed in the country throughout the year. Thailand has achieved an SSR exceeding 100% for staple and important food items commonly consumed by the majority of Thai people, including rice, chicken eggs, chicken, pork, and farmed shrimp. Additionally, Thailand can also export some food products to generate income for the country.

Food Access: This refers to the ability to obtain quality and nutritious food resources, reflecting the issue of hunger. According to The Global Hunger Index (GHI) report in 2023, Thailand has a moderate level of hunger, ranking 53rd out of 116 countries. Approximately 8.8% of the total population in Thailand, equivalent to approximately 6.2 million people, lack adequate nutrition.

Food Utilisation: Food utilisation involves understanding and benefiting from food in a suitable manner, including hygienic food preparation that adheres to nutritional principles. In Thailand, there is still a lack of knowledge, understanding, and behavioural practices aligned with good nutrition, resulting in inadequate

intake of essential nutrients. Taste is prioritised by 22.5% of Thai people when it comes to food consumption, according to the Health Behaviour Survey of the National Statistical Office in 2023.

Food Stability: This refers to the ability to access sufficient food even during times of crisis, without the risk of food shortages. Global economic conditions and challenges posed by climate change significantly impact food stability. Thailand has developed systems for emergency food and water management, disaster prevention, early warning, mitigation, and promotion of sustainable agriculture. Additionally, self-reliance at the household and community levels plays a crucial role in ensuring access to food and water during various crises. The impact of the Covid-19 pandemic on food security in Thailand was not severe due to the important role played by communities.

According to the National Statistical Office's survey on the impact of the Covid-19 pandemic on households in Thailand in 2022, households faced challenges related to food, such as limited food variety and inadequate consumption of nutritious and beneficial food. Low-income households experienced more serious food problems across all dimensions compared to the highest-income households.

While Thailand currently has sufficient food production to meet the needs of its population, there are challenges and limitations in future food production, particularly within the agricultural sector. Additionally, there are constraints in accessing quality and safe food, especially for low-income individuals, those living in remote areas, and those facing unsafe food production. Moreover, issues related to lack of nutritional knowledge, poor dietary habits, and food waste pose significant challenges for Thailand.

Asia News Network

How data and artificial intelligence can drive Asia's sustainable farming future

By Ahmed Mazhari, President, Microsoft Asia

I grew up in a little hill station town called Shillong. It's a beautiful area in India's northeast corner that's called the "Scotland of the East" and not far from where they grow tea in Assam. It's about 50 miles from the rainiest place in the world near the border with Bangladesh.

The economic inequality I saw growing up taught me to try to understand what the wider community is dealing with; to understand what so many people are doing every day just to survive. We can all do more and give back.

With only one-fifth of the world's agricultural land, Asia hosts more than half of the global population. Climate change and increasing food prices are critical threats to long-term food security – more than 1 billion people lack access to sufficient food across the region. The situation is part of a global trend that the United Nations calls an "unprecedented food emergency".

Meeting Asia's food demand will be challenging due to slowing gains in agricultural productivity, overexploitation of natural resources and increasing water scarcity. As the region becomes more urban and prosperous, food prices will continue to increase unless supply can keep up with demand. To feed Asia's growing population more sustainably and efficiently, the way food is produced must change.

Technologies like artificial intelligence (AI), sensors and drones can help increase agricultural productivity, food safety and agri-food system sustainability. From the soil – where better farming practices can mitigate climate change – to the shelf – where customers look for products with minimal carbon footprint – Asia's agriculture and food value chain is primed for innovation.

Building sustainable farms of the future

Microsoft's goal is to democratize data-driven insights to help all farmers and organizations achieve more and transform the agri-food value chain to become more productive and more transparent, and drive shared value all the way back to producers.

Microsoft recently announced Microsoft Azure Data Manager for Agriculture in preview. What began with Project FarmBeats, an ambitious research initiative to collect and transform agricultural data, has now evolved into a timely commercial solution. Azure Data Manager for Agriculture extends the Microsoft Intelligent Data Platform with industry-specific data connectors and capabilities to connect farm data from disparate sources.

For example, industry leader Bayer's FieldView platform ingests data from Azure Data Manager for Agriculture's satellite and weather pipelines to produce insights on potential yield-limiting factors in growers' fields. Bayer has also developed a set of digital solutions available to enterprise customers that provide timely insights on crop health, weather forecast, crop growth tracking, and more.

Data-driven agriculture is also a foundational component of Land O'Lakes's digital offerings, including the Truterra sustainability tool. This innovative digital service provides farmers with insight into how different agricultural practices impact water, nitrogen and carbon on a farm, enabling them to track their soil's carbon sequestration, among other applications.

Meanwhile, BharatAgri, an Indian agricultural start-up, leverages data from satellite imagery to monitor crop health and analyze farms as small as 1/40 of an acre. This year alone, more

than 50,000 farmers are expected to receive satellite images of their farms from BharatAgri, which will help reduce crop losses on over 100,000 acres of farmland.

Data-driven agriculture

Globally, data-driven agriculture has been gaining momentum as one of the most promising approaches to addressing the food security challenge. According to the International Food Policy Research Institute, data-driven agriculture techniques can increase farm productivity by as much as 67% by 2050, while simultaneously cutting down on agricultural and food losses.

However, the high costs of adopting new technologies can also be a barrier for low-to-middle-income countries. This is especially critical for Asia where smallholder farmers are the major group, with 450 million producing more than 80% of the food consumed in the region.

Data-driven agriculture starts with collecting information about the farm, which can be especially difficult in rural communities that lack digital infrastructure. This data is obtained from a variety of sources, including sensors, drones, tractors, weather stations and satellite imagery, making affordable internet connectivity a necessity.

Over time, all these data streams can be used to indicate useful practices and make suggestions based on previous crop cycles, resulting in higher yields, lower inputs and fewer environmental effects.

For maximum impact, the right data needs to be leveraged for the right purpose and at the right time. But the enormous size and complexity of agri-food systems, coupled with their fragmented nature, pose challenges to unlocking big data's potential economic value, which is projected at over $100 billion in Southeast Asia alone. To secure more inclusive growth, smallholder farmers must be empowered to participate in modern agri-food value chains.

AI for better agricultural insights

With so much agriculture-relevant data generated across the farm – as collected using sensors in the soil to satellites orbiting the earth – many farmers and organizations just don't have the right resources to harness these large amounts of data effectively. The agri-food value chain also comprises a complex system of stakeholders and activities, so datasets remain siloed without interoperable systems for managing them.

The good news is AI can help in breaking down data silos and transform a huge amount of complex agricultural data into actionable insights. Based on years of study in Microsoft Research and thought leadership established with Project FarmBeats, we released FarmVibes.AI – a suite of tools aimed at guiding decisions at every phase of farming.

FarmVibes.AI workflows, which are run on cloud technology, provide rich predictive and prescriptive insights on soil health, weather patterns, carbon sequestration, waste tracking and more. They can help farmers predict the ideal amounts of fertilizer to use and where to use them, forecast temperature and wind speeds, and inform when and where to plant and spray, among a range of other agricultural applications.

These insights won't be possible without data fusion techniques powered by AI, which combine data streams from sources like weather station data, drones or satellite imagery. This also helps to unlock cost-efficient gains and improve accessibility to digital agriculture solutions. Leveraging AI can reduce the number of sensors and drones needed, thereby reducing the cost of on-farm hardware.

The natural language capabilities of today's large language models can also help make these technologies more accessible for farmers who are not as technologically savvy. Through Project FarmVibes.Bot, for example, smallholder farmers can communicate simply and effectively to query data or relay insights.

Empowering farmers with data and AI

The availability of affordable internet-connected sensors – underpinned by cloud technology and AI – can empower farmers to capture and track operational data, whether it's from the soil, equipment or livestock. Using AI technology, farmers can generate insights based on that data to apply precision agriculture or predictions for improving yields, while conserving precious resources.

Data and artificial intelligence can also augment farmers' special knowledge and intuition of their farms to make much more informed decisions. With better insights, farmers can increase harvest and production efficiency, reduce food waste, create nutrient dense and high-quality products, reduce environmental impact, and provide transparency to stakeholders.

World Economic Forum

Singapore to host new ASEAN Academy on Responsible Investing in food, agriculture, and forestry

Grow Asia has partnered with NTU Singapore to launch a new certified training course on responsible investing. With US$205 billion in untapped investment opportunities across Southeast Asia1, the ASEAN Academy on Responsible Investing equips professionals with the skills to execute sustainable investments in the food, agricultural, and forestry sectors.

The program is hosted by the Singapore Agri-Food Innovation Lab (SAIL) – a collaboration between NTU Singapore and Enterprise Singapore.

Grow Asia, a multi-stakeholder platform that builds partnerships for more sustainable food systems has launched the ASEAN Academy on Responsible Investing. The four-month pilot program equips professionals across the food, agriculture, and forestry sectors with the skills to design and implement more responsible and sustainable investments.

The course is delivered by Grow Asia and hosted by the Nanyang Business

School at Nanyang Technological University, Singapore (NTU Singapore), and the Singapore Agri-Food Innovation Lab (SAIL) – a collaboration between NTU and Enterprise Singapore to drive innovation and collaboration among companies in the agri-food sector and accelerate developments from the lab to market.

The programme consists of in-person workshops and e-learning modules specifically tailored for the ASEAN context. It's an ideal entry point for professionals working in both private and public sectors, as well as start-ups, non-profits, and civil society organizations in the region.

A study by the global consulting firm, Bain and Co., highlights that there is an untapped US$205 billion in annual investment opportunities across Southeast Asia's food, agriculture, and forestry sector. To cater to this growing demand, the ASEAN Academy on Responsible Investing provides practitioners with the skills they need to make investments that generate not only financial returns, but also environmental, social, and governance outcomes.

Beverley Postma, Executive Director, Grow Asia, said, "We are honoured to partner with NTU on this ground-breaking Academy. Grow Asia's mission is to break down silos that exist between the public and private sectors by identifying solutions that are urgently required to transform food systems and generate positive social, environmental, and financial returns. Education is a vital tool to lead such large-scale change. By addressing the skills gaps that exist in the ASEAN investment landscape, this exciting new programme equips professionals in the food and agricultural sector with the knowledge they need to accelerate investment for food systems transformation."

The program covers in-depth knowledge of responsible practices in the food, agriculture, and forestry sectors. It is built upon the 10 ASEAN Guidelines on Promoting Responsible Investment in Food, Agriculture and Forestry. Expert trainers support participants and can apply their learning to real-world projects. The training also offers region-wide and in-person networking opportunities for like-minded professionals, allowing them to collectively brainstorm solutions for investment challenges.

Professor Boh Wai Fong, Deputy Dean, NBS and co-Director, SAIL, said, "NTU's innovation in the agri-food tech space has led to the setting up of the Singapore Agri-Food Innovation Lab (SAIL) in 2021. Riding on this momentum, the new training programme under Grow Asia' new ASEAN Academy will be supported by NTU's experts to provide a high quality and effective platform for professionals to learn. Through the programme, we hope the participants can go on to pursue successful sustainable investments in regional agrifood, facilitating economic growth for the sector. This is in line with the NTU Sustainability Manifesto, which aims to propel the University's wide-ranging efforts in sustainability over the next 15 years and solidify its position as a leader in sustainability."

The initiative is supported by the Government of Japan through the Japan-ASEAN Integration Fund (JAIF) and the Swiss Agency for Development and Cooperation (SDC).

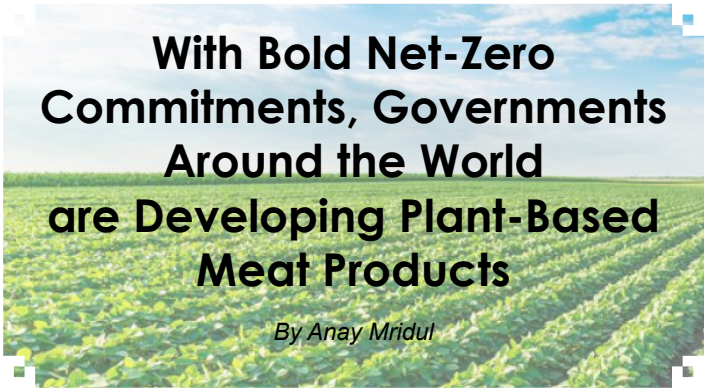
About Grow Asia

Grow Asia is a multi-stakeholder platform established in 2015 by the World Economic Forum and the ASEAN Secretariat to cultivate more inclusive, resilient, and sustainable food systems in Southeast Asia. Grow Asia does this by brokering commercial and non-profit partnerships between the global and regional public, private, civil society, academic, and farmer organizations that make up the Grow Asia Network, creating an ecosystem that supports knowledge sharing, collaboration, innovation, and policy change.

Grow Asia comprises the regional Grow Asia Secretariat in Singapore; 6 Country Chapters; and 44 Working Groups, organized around specific cross-cutting issues (e.g., agritech) or value chains (e.g., corn). Today, Grow Asia engages over 640+ partner organizations through its Country Chapters in Cambodia, Indonesia, Myanmar, Papua New Guinea, the Philippines, and Viet Nam, reaching 2.5 million smallholder farmers.

In 2020, Grow Asia was accredited as an Entity Associated with ASEAN due to the important role Grow Asia plays in the region, particularly in facilitating multi-stakeholder partnerships for sustainable agriculture development.

Asia Food Journal



The governments of Taiwan and Saudi Arabia have joined a growing list of countries backing the vegan industry, announcing startups and funding, respectively, to create plant-based meat.

Taiwan plans to produce whole cuts via a spin-off startup, while Saudi Arabia has signed two agreements with companies to produce vegan alternatives to meat and dairy. In a year where COP28 has confirmed it will serve mostly vegan food, these are two steps that further link the plant-based industry with governments and lawmakers. But how do these initiatives line up with these nations' net-zero ambitions and consumption?

Taiwan MOEA's plant-forward push

Taiwan's Ministry of Economic Affairs (MOEA) announced a special pavilion for the Technology Division at this year's Bio Asia Taiwan exhibition (July 26-30). Among the two highlighted achievements of the pavilion was the creation of a novel texturisation technology to make whole-cut plant-based meat.

The MOEA will launch a startup by the end of 2023 to produce this alt-meat. It argues that current options on the market are much different from conventional meat, as they are made up of ingredients that are dismantled, emulsified and recombined. The technology developed by the Department of Industrial Technology introduces a multidirectional fibre structure that can emulate the muscle structures of beef, pork, chicken and fish.

The MOEA suggests the alt-meat is healthier than its counterparts given its simple processing. Using wheat and soy proteins eschews the need for additives and emulsifiers, while providing all the essential amino acids and a high protein content. The nutritionally complete nature of the food is what sets it apart from traditionally tenderised meat substitutes.

The MOEA's alt-meat was exhibited at Bio Asia Taiwan 2023 | Courtesy: Bio Asia Taiwan

The product has been tested at scale, and is said to be eco-friendly and in line with a low-carbon economy, with samples showcased at Bio Asia Taiwan. The new startup will further develop the technology to add to Taiwan's product portfolio as it competes in the global vegan market.

According to Dupont, demand for plant-based meat will surge by 25% across Asia-Pacific between 2020 and 2025. Taiwan already exports 80% of all vegan meat produced in the country, and has launched initiatives promoting a plant-forward diet. Its Meat Free Monday organisation secured over 100 pledges from political candidates participating in the 2022 elections to support a Veg-Friendly campaign.

In January, Taiwan approved a landmark climate bill mandating the government to promote low-carbon, plant-based diets. And in the country's 2050 Net-Zero Transition plan, a low-carbon diet lands top of the pyramid of promotion strategies. This includes the consumption of "low-carbon cultivated agricultural food products", as well as a push for zero-waste and low-carbon-diet literacy, and food agriculture education.

However, while the climate bill earned praise for highlighting food's role in tackling climate change – food systems are responsible for a third of all global greenhouse gas emissions – others called for a more blatant approach against animal-based meat.

"As the world comes to grips with the importance of food systems in addressing climate change, we are delighted to see an emphasis on low-carbon diets in Taiwan's climate legislation," said Wu Hung, CEO of the Environment and Animal Society of Taiwan. "In light of this development, we call on the Executive Yuan to revisit its 2050 Net Zero Emissions Pathway and Strategy and take steps to address excessive meat consumption."

Saudi Arabia promotes healthy vegan food

In Saudi Arabia, officials from the Saudi Ministry of Environment, Water and Agriculture have inked deals with the Cooperative Societies Council, Saudi Greenhouses Management & Agri Marketing Co, and Ayla Food Options Co to develop alt-protein products with locally sourced plants.

The government body aims to encourage a healthy food culture among citizens via high-quality vegetarian substitutes and tap into advanced technology to produce these dairy and meat alternatives. The signing ceremony was accompanied by an exhibition where visitors could sample these vegan products.

Saudi Arabia has among the world's highest meat consumption per capita ! Courtesy: Mishaal Zahed/Unsplash

Saudi Arabia has also committed to a net-zero target, with an aim to reach the goal by 2060. But it has the biggest net-zero-busting plans for oil and gas expansion in the world, according to the Guardian. Its government also launched a sustainable agriculture challenge this year, which calls for climate-smart farming solutions to improve food production and address food security. But the country has among the highest meat consumption per capita in the world, which exacerbates the need for more programmes like these.

Global governments go green

With these moves, Taiwan and Saudi Arabia are the latest countries whose governments are boosting the development of the alt-protein industry. According to the Good Food Institute, plant-based meat will capture 6% of the global meat and seafood markets. It also reports that Denmark, Sweden and Switzerland have committed over $150M in research and development for plant proteins. Meanwhile, the US Congress allocated $6M to the Department of Agriculture and California promised $5M to three universities for alt-protein research and development.

A host of other countries have been endorsing vegan foods around the world. As part of its Eat Right India campaign, the Indian Ministry of Health and Family Welfare released a poster promoting plant-based food. And in January, Germany announced it was finalising its National Nutritional Strategy, which spotlighted a shift to plant-based diets. Likewise, Scottish capital Edinburgh banned meat in all public schools, hospitals and nursing homes as part of its plant-based pact.

Expanding from plant-based meat, even cultivated protein is seeing a massive amount of interest. The Dutch government has invested €60M into its cellular agriculture industry, while Australian-American startup Change Foods has received two government grants for its animal-free cheese. And in Israel, the world's largest cultivated meat consortium was approved in April 2022, with $18m in funding.

Green Queen

The 2nd Agri-Food Tech Expo Asia returns this October with exclusive previews in Jakarta and Bangkok

AGRI-FOOD TECH EXPO ASIA

Asia's only focused exhibiting platform for agri-food technology Agri-Food Tech Expo Asia (AFTEA) returns for its second edition this year from 31 October to 2 November at Sands Expo & Convention Centre.

The Asia-Pacific region is expected to account for 60% of global consumption by 2030, and is also home to some 450 million smallholder farmers who contribute up to 80% of the region's food supply. Against this backdrop, there is a critical need to increase global agri-food tech financing activity and industry development to ensure a more sustainable future for the region. AFTEA was created to inspire local stakeholders and empower them to make informed decisions, as well as help accelerate collaborations, opportunities and solutions as a region.

A Constellar event with international content partner DLG (the German Agricultural Society), its inaugural edition last year welcomed over 6,000 attendees from 66 countries, and 163 exhibitors from 24 countries with 9 national pavilions from Canada, France, Germany, Indonesia, Israel, Republic of Korea, Singapore, The Netherlands and the United Kingdom. 2022's edition also facilitated over 500 business meetings and 55 sandbox sessions over the event days.

Building momentum with the key theme 'Enhancing Food Ecosystems for A Sustainable Future', AFTEA 2023 will deep-dive into three focus areas – Innovation, Sustainability and Safety – to explore solutions and technologies that will enhance every stage and aspect of the food production and manufacturing supply chain for future generations in the Asia-Pacific region.

Regional Roadshows @ Jakarta and Bangkok

In the lead-up to AFTEA 2023 in October, regional roadshows in Jakarta (Indonesia) and Bangkok (Thailand) will provide the industry and invited media an exclusive preview of the latest technologies and solutions to check out at the exhibition in Singapore. They are also opportunities for in-market practitioners and experts - industry leaders, governments, and communities - to share first-hand insights and build their network to advance agri-food technology in the nation.

Thailand and Indonesia were selected as host countries of the upcoming roadshows as they are among the top three Southeast Asian countries with the highest contribution to GDP and jobs by their agri-food sectors. Indonesia's agri-food sector holds an unparalleled position in the economy and plays a pivotal role in its future economic development, while Thailand has been accelerating nationwide digital transformation plans for the local food and agriculture industry in recent years, focusing big data, smart agriculture, e-commerce and agribusiness improvement.

- Jakarta (Indonesia): 2 August (10am – 2pm Western Indonesian Time) at JS Luwansa Hotel, Rasuna Said Kuningan South Jakarta.

Speakers include GAPMMI Chairman Adhi S. Lukman and PISAgro Executive Director Insan Syafaat and spokespersons from Ministry of Agriculture and Ministry of National Development Planning (BAPPENAS).

- Bangkok (Thailand): 23 August (2pm – 4pm Thailand Time) at Grand Center Point, Terminal 21.

Speakers include the Advisor for the Minister of Agriculture and Cooperatives, and Thailand President of the Thai Society of Agricultural Engineering, Dr. Dares Kittiyopas, and spokesperson from Bureau of Agricultural Commodities/ Department of Agriculture Extension.

New Highlights @ AFTEA 2023

On top of Living Lab showcases, Sandbox sessions and the business-matching opportunities, this year's edition will also see the debut of the Culinary Lab and Founders' Hub for more experiential product demonstrations and journey sharing by industry stakeholders. More details will be shared nearer to date.

AFTEA is a key participating event of the Singapore International Agri-Food Week (SIAW), hosted by Temasek and Singapore Food Agency (SFA) and supported by the Economic

Development Board (EDB), Enterprise Singapore (ESG), and the Singapore Tourism Board (STB).

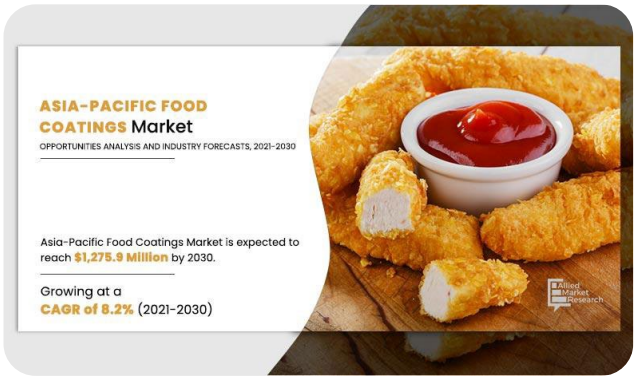
Supporting trade associations for AFTEA 2023 include the Singapore Manufacturing Federation (SMF), French Chamber of Commerce in Singapore (FCCS), Singaporean-German Chamber of Industry and Commerce (SGC), APAC Society for Cellular Agriculture (APAC-SCA), Canada-ASEAN Business Council, The Indonesian Food & Beverage (GAPMMI), Partnership for Indonesia's Sustainable Agriculture (PISAgro) and the Japan Association for Cellular Agriculture (JACA).

Find out more about Agri-Food Tech Expo Asia.

About Constellar

Constellar connects a global eco-system of event partners and consumers through a holistic portfolio of intellectual property (IP) in the Meetings, Incentives, Conventions and Exhibitions (MICE) industry. As Asia's partner of reference for curating innovative event and venue experiences, Constellar activates impactful networks to bring global markets, businesses and consumers together for sustainable growth. With our expertise and dedication, we are invested in helping you build trusted relationships with stakeholders for the long term and enabling cross-industry collaboration through world-class audience engagement solutions. Visit Constellar for more information.

PR Newswire



According to a new report published by Allied Market Research, titled, "Asia-Pacific Food Coatings Market by Type, Application, Form, and End User: Opportunity Analysis and Industry Forecast, 2021–2030," The Asia-Pacific food coatings market size was valued at $562.5 million in 2020, and is projected to reach $1,275.9 million by 2030, registering a CAGR of 8.2% from 2021 to 2030.

Increasing popularity of fast-food restaurants majorly boosts the growth of the Asia-Pacific food coatings market. China and Japan are the largest consumers of food coatings, owing to the presence of large urban population base and surge in the number of quick-service restaurants (QSRs) such as McDonalds, Burger King, Wendy's, Subway, and Dunkin' Donuts. These outlets rely on the use of food coatings such as batter, breading, oven coating, predust, and others to improve taste and enhance the visual appeal of the served food items, thereby fueling the market growth. In addition, growth of retail chains in India, China, Thailand, Vietnam, and others leads to large-scale usage of food coatings as well as beef, pork, poultry, seafood, and other meat products. Food coating serves as an important ingredient used during cooking fried and crusted meat, which further increases its demand; thereby, driving the growth of the Asia-Pacific food coatings market.

The global coronavirus pandemic has created a number of challenges for exporters in the developing and developed countries. Challenges for engaged stakeholders in the food coating market are likely to prevail owing to widespread restrictions across the continent. Supply chain disruption, lack of availability of worker, complete shutdown of hotels & restaurants, lack of tourism, demand-supply volatility has negatively affected the Asia-Pacific food coatings market opportunities. Moreover, restriction on the movement of goods along with quarantine and lockdown measures imposed by governments are key challenges food coatings players are facing during this pandemic.

In 2020, the predust coatings type segment accounted for the highest market share in the Asia-Pacific region, and is anticipated to grow at a significant CAGR of 4.7% during the forecast period. Predust or duster is a type of food coat that contains unprocessed flour or a blend of egg whites, starch, and other minor ingredients such as spices and salts. It is dusted on a food product to prepare the surface of a substrate before the second coating is applied.

As per the Asia-Pacific food coatings market analysis, the meat & seafood segment accounted for the highest share in the market in 2020. Meat & seafood products are rich in essential minerals, and micro- & macronutrients, especially vitamin B12, iron, zinc, selenium, and protein. These products can be cooked in a variety of ways wherein food coatings help enhance the organoleptic properties and visual appeal of the cooked meat & seafood products. Moreover, increase in affluent population coupled with emergence of sedentary lifestyle supplements the Asia-Pacific food coatings market growth.

As per the Asia-Pacific food coatings market trends, in 2020, China accounted for the highest share in the market, and is projected to witness significant revenue growth from 2021 to 2030, owing to increase in affluence, rise in fast food outlets in the region, and high consumption of meat. According to the Organization for Economic Co-operation and Development (OECD), the total consumption of poultry meat in China was 23,210.24 kilotons in 2020 compared to 22,845.36 kilotons in 2019.

India is anticipated to exhibit the highest growth rate in the Asia-Pacific food coatings industry, owing to increase in consumption of meat and rise in the number of quick-service restaurants (QSRs). Furthermore, upsurge in disposable income

and busy lifestyle have persuaded people to adopt convenient food options such as fast foods and ready-to-eat meals, which include predust, batter, breadings, and other products. This change in consumption pattern is expected to drive the growth of the food coatings market in the Asia-Pacific region.

Key findings of the study:

- By type, the predust segment was the highest contributor to the market in terms of value, and is estimated to grow at a CAGR of 4.7% from 2021 to 2030.
- By application, the meat & seafood segment accounted for the highest Asia-Pacific food coatings market share in 2020, growing at a CAGR of 7.2% from 2021 to 2030.
- By form, the dry segment accounted for the highest market share in 2020, growing at a CAGR of 7.5% from 2021 to 2030.
- By country, China occupied the maximum share in the market in 2020 and is expected to be the dominating country during the Asia-Pacific food coatings market forecast period.

Newswires

Collaborative partnership to enhance cellular agriculture in Japan and Asia-Pacific region

A partnership between the Asia-Pacific Society for Cellular Agriculture (APAC-SCA) and the Japan Association for Cellular Agriculture (JACA) has been established with the signing of a Memorandum of Understanding (MoU).

This collaborative agreement is designed to enhance the development and expansion of cellular agriculture in Japan and the wider Asia-Pacific region.

The partnership is designed to enhance the development and expansion of cellular agriculture in Japan and the wider Asia-Pacific region. (Image source: Adobe Stock)

"Establishing long-lasting ties with key stakeholders and other associations regionally and globally is a key asset in the strategic development of the industry for APAC-SCA," said Peter Yu, programme director, APAC Society for Cellular Agriculture. "Through this MoU we reverberate the message and necessity of a key tenet of the industry – global collaboration."

As part of the agreement, JACA will gain improved access to the global network of the cell-cultured industry. Simultaneously, APAC-SCA will assume a more prominent role in facilitating regulatory advancements in Japan. The two organisations will collaborate on various initiatives, including knowledge sharing and the development of a risk communication strategy for their members.

The ACA, which operates as a collaborative effort between industry, academia, and the government, has been actively involved in establishing regulations for the production and distribution of cell-based food products like cultivated meat, eggs, and dairy across Japan. In a recent event, it brought together approximately 150 stakeholders, including members of the Japanese Parliament, government officials from Japan and other countries, industry associations, member companies, academia, and media representatives. The objective of the gathering was to reach a consensus on essential measures for ensuring food safety in the cultivated food sector, as well as methods to protect the rights of Japanese farmers regarding branded-animal cells such as Wagyu.

The MoU follows an announcement in February by Japan's Prime Minister, Fumio Kishida, signalling the country's commitment to developing a cell-based agriculture industry primarily focused on cultivated meat and fish. This strategic move aims to reduce Japan's carbon footprint.

As per GFI APAC, an industry think tank, the current interpretation of existing laws allows for the potential sale of cultivated meat in Japan. This regulatory opening presents an opportunity for Japan to emerge as a global leader in cultivated meat and attract the interest of international start-ups in this sector. The recently established MoU, along with the government's plan, will provide a framework for advancing the industry.

Deregulation in the cellular agriculture industry is progressing, with Singapore's Food Agency being the sole entity to have approved cultivated meat for sale so far. However, last week brought positive news as two California-based cultivated meat producers, Eat Just and Upside Foods, received label approval from the USDA. This milestone represents the final step before obtaining full production and distribution approval throughout the US.

Far Eastern Agriculture

About CACCI

The Confederation of Asia-Pacific Chambers of Commerce and Industry (CACCI) is a regional grouping of apex national chambers of commerce and industry, business associations and business enterprises in Asia and the Western Pacific.

It is a non-governmental organization (NGO) serving as a forum for promoting the vital role of businessmen in the region, increasing regional business interaction, and enhancing regional economic growth. Since its establishment in 1996, CACCI has grown into a network of national chambers of commerce with a total now of 28 Primary Members from 26 Asian countries and independent economies. It cuts across national boundaries to link businessmen and promote economic growth throughout the Asia- Pacific region.

As an NGO, CACCI is granted consultative status, Roster category, under the United Nations. It is a member of the Conference on NGOs (CoNGO), an association of NGOs with UN consultative status.

For more information, please visit www.cacci.biz.

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