

# Far Eastern Agriculture

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## Faster growing sugarcane setts

### Poultry:

Technologies for efficient  
poultry processing

### Equipment:

Tackling labour shortage

### Aquaculture:

The future of fish farming



VIV Qingdao 2021 preview – p20



The background of the entire page is a close-up photograph of a poultry processing line. On the right side, several raw poultry carcasses are hanging from metal hooks. On the left side, a large, sharp metal blade is visible, likely part of a plucking machine. The overall scene is industrial and focused on food processing.

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# Far Eastern Agriculture



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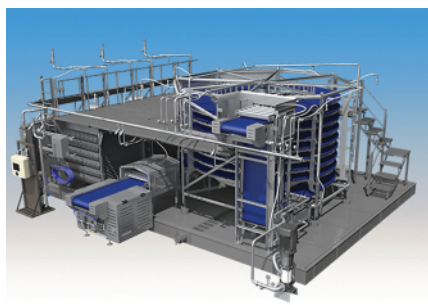
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## Skylo and FISHCOPFED partner to improve fishermen safety

SKYLO, THE WORLD'S first and most affordable end-to-end narrowband IoT solution, and India's National Federation of Fishers Cooperatives Ltd. (FISHCOPFED), have partnered to deliver Skylo's IoT-based solutions to marine fishing and aquaculture sectors.

As part of the partnership, Skylo and FISHCOPFED will work together to improve the welfare of fishermen and fish farmers to increase profits for the fishing community by using IoT technology.

The advanced solutions provided by Skylo for marine fishing and aquaculture include two-way messaging, SoS alerts, fish catch reporting, sensor integration for capturing different parameters on the quality of water for fish farming - empowering the fish farmers to make more informed and immediate decisions. FISHCOPFED will make Skylo's cost-effective, ubiquitous technology available to its 33 lakh fishers members, bringing about the digitisation of small-scale fishing and fish farming businesses in India.



Image credit: Adobe Stock

*The initiative focuses on rapid development and modernisation of India's fisheries sector.*

Rishikesh Kashyap, managing director of FISHCOPFED and COFFED, said, "After careful validation of multiple IoT solutions offered in the market and also after considering the two-way messaging transponder solutions provided to multiple states and UTs for marine fishing, Skylo has been selected to initiate the demonstration of satellite-based IoT technology."

"The government of India has been prioritising the rapid development and modernisation of India's fisheries sector with policy reform measures, including the transformative Pradhan Mantri Matsya Sampada Yojna (PMMSY). Complementing PMMSY and our honorable Prime Minister's goal of doubling fisheries production with the Blue Revolution, Skylo will boost the safety of fishers and revamp the productivity and reach of the sector several fold," Kashyap added.

## ADB, New Hope sign deal to support livestock farmers in South and Southeast Asia

THE ASIAN DEVELOPMENT Bank (ADB) and New Hope Singapore Private Limited (NHS) have signed a US\$20mn loan agreement to help poultry, aquaculture, and other livestock farmers in eight countries across south and southeast Asia.

Martin Lemoine, head of the agribusiness investment unit at ADB's Private Sector Operations Department, stated, "Shortages of agricultural inputs such as animal feed will have a severe impact on food availability, prices, and poverty if pandemic-related restrictions persist especially in countries vulnerable to the economic impacts of COVID-19. Livestock plays



Image credit: Adobe Stock

*The financing will support NHS's increased working capital needs and operating expenses in Bangladesh, Cambodia, Indonesia, the Lao People's Democratic Republic, Nepal, Philippines, Sri Lanka and Vietnam.*

a major role in food security as smallholder farmers rely on it for food and income. ADB's loan will help preserve supplies of affordable protein, as well as the livelihoods of smallholder farmers."

The financing will support NHS's increased working capital needs and operating expenses in Bangladesh, Cambodia, Indonesia, the Lao People's Democratic Republic, Nepal, Philippines, Sri Lanka and Vietnam. The funds will be used to purchase raw materials for animal feed production, to extend larger advances and longer payment terms to feed distributors and livestock farmers, and to provide personal protective equipment for workers. NHS provides animal feed and technical services to about 200,000 poultry, aquaculture and other livestock farmers in south and southeast Asia.

## Danisco Animal Nutrition expands the launch of Axta PHY GOLD in Asia-Pacific

DANISCO ANIMAL NUTRITION, a business unit of IFF's Health & Biosciences division, has announced the launch expansion of the industry-leading novel phytase enzyme, Axta PHY GOLD in Malaysia, Thailand and Australia.

Axta PHY GOLD was first launched in India in 2020 and will eventually be available across all markets in Asia Pacific, pending regulatory authorisations. Axta PHY GOLD is the most bioefficacious phytase currently available on the market, helping improve sustainability while delivering greater feed cost savings to producers.

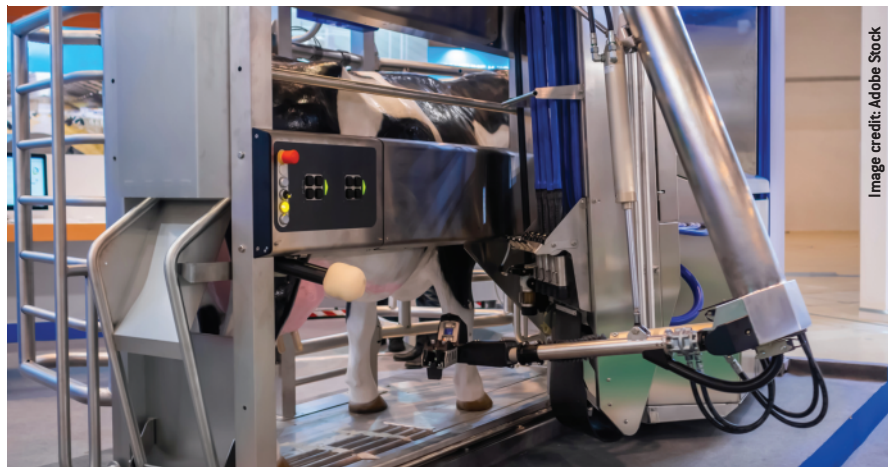


Image credit: Adobe Stock

*Phytate is the main storage form of phosphorus in all grains, which represents the basis of most plant-based diets used in animal production.*



## South Korea localises robot milking machine to support dairy farmers



Robot milking machines were first introduced to South Korea in 2006.

SOUTH KOREA IS localising a milking machine that will use a robot arm to autonomously extract milk, thus reducing burden off old dairy farmers.

According to government data, more than 40% of dairy farmers in South Korea are aged more than 60 years old. They spend an average of 42% of their work hours milking cows.

As reported in *Aju Business Daily*, the Rural Development Administration (RDA), an agriculture technology development body operated by the Ministry of Agriculture, Food and Rural Affairs, said that RDA and Dawoon, a domestic dairy farm robot maker, has localised a home-made robot milking machine. The robot will collect and send the biological data of

cows to RDA's big data centre for analysis.

Speaking to the press, Sung Je-hoon, RDA spokesperson, added, "The localisation of this robot milking machine holds a great meaning as it marks the beginning of the era of data-based digital dairy farming. Data will become a valuable asset to the development of South Korea's digital-based precision dairy farming technology."

RDA stated that the maintenance cost of the localised milking machine will be about 50% compared to foreign machines, reported the source. As the distribution of robots is scheduled for 2023, RDA's administrative body will promote the use of robot milking machines by providing government subsidies, the source further added.

## Agricultural production declined by 1.5% in Philippines

IN THE SECOND quarter of 2021, the value of agricultural production at constant 2018 prices has decreased by 1.5% in Philippines, mainly due to the decline in livestock and fisheries production, according to Philippines Statistics Authority.

Crops, which accounted for 56.2% of the total agricultural production, grew by 3.1%. Production of palay and corn went up by 1.2% and 6.3%, respectively.

Livestock production, which dropped by 19.3%, contributed 14.2% to the total agricultural production. Hog production decreased by 26.2%.

Poultry production, which shared 13.5% in the total agricultural production, recorded a 2.5% increase in the second quarter of 2021, from -4.7% decline in the same period last year. Duck, chicken eggs, and duck eggs posted production increments.

Fisheries, which contributed 16.1% to the total agricultural production, went down by 1.1%.

## EVENTS 2021

### SEPTEMBER

15-17

**VIV QINGDAO 2021**

Qingdao, China

[www.vivchina.nl](http://www.vivchina.nl)

22-24

**V-Connect Asia Edition**

Online

[www.v-connect2021.converve.io/program.html](http://www.v-connect2021.converve.io/program.html)

### NOVEMBER

2-3

**SUGAREX THAILAND**

Khonkaen, Thailand

[www.thaisugarexpo.com](http://www.thaisugarexpo.com)

11-13

**Livestock Philippines**

Pasay City, Philippines

[www.livestockphilippines.com](http://www.livestockphilippines.com)

11-13

**Asia Agri-Tech Expo & Forum**

Taipei, Taiwan

[www.livestocktaiwan.com/en-us](http://www.livestocktaiwan.com/en-us)

25-27

**Agri Malaysia**

Shah Alam, Selangor, Malaysia

[www.agrimalaysia.com](http://www.agrimalaysia.com)

### DECEMBER

1-2

**Palmex Thailand**

Suratthani, Thailand

[www.thaipalmoil.com](http://www.thaipalmoil.com)

9-11

**Agri Asia**

Gujarat, India

[www.agriasia.in](http://www.agriasia.in)



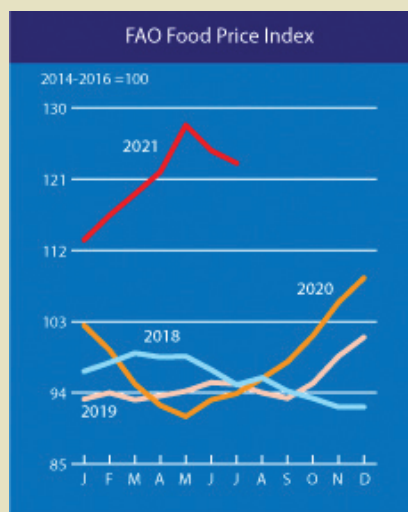
## FOOD OUTLOOK

THE FAO FOOD Price Index (FFPI) averaged 123.0 points in July 2021, down 1.2% from June but still 31% higher than its level in the same period last year. The drop in July reflected declines in prices of cereals, dairy products and vegetable oils which more than offset increases in meat and sugar quotations for the second consecutive month.

The FAO Cereal Price Index averaged 125.5 points in July, down 3% from June but 29.6% above its July 2020 value. International maize prices fell by 6% on better yields than earlier projected in Argentina and improved production in the United States of America.

International rice prices accelerated their decline in July to hit two-year lows, as new crop arrivals and currency movements compounded the slow pace of sales caused by high freight costs and logistical hurdles.

The FAO Vegetable Oil Price Index averaged 155.4 points in July, shedding 1.4% and declining for a second consecutive month to a five-month low. International palm oil quotations rebounded moderately in July, underpinned by lower output in major producing countries amid migrant labour shortage issues, primarily in Malaysia. Meanwhile, international prices for rape and sunflower oils also contracted,



reflecting, respectively, subdued global import demand and prospective record supplies for the 2021/22 season.

The FAO Dairy Price Index averaged 116.5 points in July, down 2.8% from June, declining for the second consecutive month, following 12 months of continuous increases. In July, international quotations for all dairy products represented in the index fell, with skim milk powder registering the biggest drop, followed by butter, whole milk powder and cheese, principally reflecting reduced

import demand for spot supplies.

The FAO Meat Price Index averaged 110.3 points in July, up marginally from June, putting the index 19.6% above the corresponding month last year. In July, quotations for poultry meat rose the most, underpinned by increased imports by East Asia amid limited production expansions in some producer regions, while those of ovine meat increased on high import purchases and seasonally declining supplies from Oceania. Bovine meat prices are strengthened, due to the tightening of global markets due to lower supplies from major producers and continued high imports, especially by China.

The FAO Sugar Price Index averaged 109.6 points in July, up 1.7% from June, marking the fourth consecutive monthly increase and the highest level since March 2017. The rise in international sugar price quotations was mostly related to uncertainties over the impact of recent frosts on crop yields in Brazil, the world's largest sugar exporter, already negatively affected by prolonged dry weather conditions. Firmer crude oil prices, which tend to prompt producers in Brazil to divert more sugarcane crushing to ethanol production, lent additional support to world sugar price quotations.

## India contributes US\$1mn for climate resilient agriculture in Zimbabwe

THE GOVERNMENT OF India has contributed almost US\$1mn to the United Nations World Food Programme (WFP) in Zimbabwe to help affected populations tackle climate shocks.

The contribution, provided through the India-UN development partnership fund, will be used to assist more than 5,200 smallholder farmers in Chiredzi and Mangwe districts.

Adel Abdellatif, director of the United Nations Office for South-South Cooperation, said that the contribution will ensure the social protection and resilience of smallholder farmers.

"This project is focused on increasing small grains production and market access. It will provide a good opportunity for successful Southern practices to be tested and scaled, improving the lives of rural Zimbabweans," added Abdellatif. The investment is crucial for agriculture dependant Zimbabwe – where the industry accounts for approximately 70% of the populations' occupation.

## Trio launches new app for aqua farmers in Asia

BLUE AQUA INTERNATIONAL, SAS and Hewlett Packard Enterprise are launching an app that offers farmers insights into water quality, feed management and animal health through real-time data analytics technology.

The application is specifically designed for farmers in Asia – taking into consideration common species grown, farm infrastructure, weather and insights on common disease challenges in the region.

Farmers will be able to receive alerts on the app informing them of any potential issues and the appropriate remedies. The constant collection of data can also help generate dashboards to provide users with analytical insights on the quality of their farms.



*Farmers will receive alerts for potential issues and appropriate remedies.*

Image Credit: Adobe Stock



## Syngenta Group reports 22% earnings gain

SWISS AGRICULTURE COMPANY Syngenta Group, which is preparing for a US\$10bn Shanghai listing, has reported that its earnings are up 22% in the first half, thanks to better sales and contributions from its China operations.

As reported in Bloomberg, the results came as the Swiss seed and fertiliser business owned by China National Chemical Corp is preparing to list on Shanghai's Star Board.

The company's Chinese unit has posted a 47% gain in first-half sales to US\$4.2bn and the crop protection segment saw a sales boost by 35%.

Syngenta Group China has delivered strong growth across all segments. The Modern Agriculture Platform (MAP), which provides farmers with access to market-leading products and services, more than tripled sales year-on-year, to US\$0.9bn in the first half, by providing farmers with products and services that enable them to grow more sustainably and produce higher quality crops that can be sold at higher prices.

This farmer-focused ecosystem continued to expand in China, adding 87 new centres since the beginning of the year. At the end of June, there were 413 MAP centres, with more than 200 partner organisations and 37 MAP products that connect consumers to the farms where their food is grown.



Image Credit: Adobe Stock

*Syngenta's farmer-focused ecosystem continued to expand in China.*

Syngenta helped the farmers from China's Henan province, where severe flooding killed more than 300 people in July, helping them with satellite images to figure out where the worst damage took place, and then scheduled drones for targeted fungicide and biostimulant applications, thus ultimately helping a significant amount of crop recovery.

## Pinduoduo launches Smart Agriculture Competition

CHINA'S LARGEST ONLINE platform for agriculture, Pinduoduo, China Agricultural University and Zhejiang University have jointly launched the 2021 Smart Agriculture Competition, an agricultural technology competition with the




*The competition is open to young agronomists and computer scientists from around the world.*

aim of fostering innovation and promoting agricultural modernisation.

Contestants will take a multidisciplinary approach, applying nutrition science, precision farming and other relevant technology to cultivate tomatoes. The winners will be judged on yield, nutritional value, environmental sustainability and commercial viability. The competition is open to young agronomists and computer scientists from around the world and offers a total prize pool of more than US\$154,000. A total of 15 teams will be shortlisted by the judging panel to present their plans. The four teams with the highest scores will proceed to the final round of the competition.


As reported by OpenGov Asia, digital technology is bound to play a bigger role in the country's steps toward rural revitalisation and agricultural modernisation.

*For more information and to register, please visit <https://smartagricompetition.com/en>*




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## ASEAN feed-to-food sector in focus at V-Connect Asia Edition in September

V-CONNECT ASIA EDITION, all set to be the largest digital B2B networking event for ASEAN's feed-to-food industry, will take place virtually from 22-24 September 2021 on V-Connect.net.

This event will provide participants with a convenient networking opportunity and the latest industry updates despite travel limitations. The digital event will open for 24 hours during the three days of the event.

The V-Connect platform is a digital platform developed by VIV and the ILDEX team to enable in-person B2B networking. At V-Connect Asia Edition, the attendees will unlock direct online access to buyers and other industry key players from all over Asia, including China and the Far East, the ASEAN markets and the Indian Continent.

"V-Connect Asia Edition" platform is expected to be the most powerful means of direct communication and the most



Image credit: Adobe Stock

*The aim is to boost the entire feed-to-food value chain in the region.*

effective way to acquire and update industry knowledge. Visitors can attend this event digitally for free and enjoy the

platform features as follows:

**Marketplace Integration:** Engage with key suppliers across global markets to increase brand awareness and secure new deals.

**AI-Powered Match-Making:** Enjoy intros with relevant exhibitors and break new ground in convenient online meeting rooms.

**Nuanced Networking:** Search suppliers, filter according to your needs and embark on new ventures.

**Real-Time Engagement:** Engage with potential suppliers in a range of real-time 1:1 or group meetings in Virtual Lounges, and choose from a voice or video call to suit your needs.

*Free registration is available for all professional feed-to-food visitors at <https://www.databadge.net/viva2021/reg/>. For more information, visit <https://v-connect.net/asia-edition>*

## Revitalising Vietnam's livestock, feed and meat industry

VIETNAM IS ALL set to host Vietstock 2021, in conjunction with VietFeed and VietMeat at the Saigon Exhibition & Convention Center (SECC), Ho Chi Minh City from 13-15 October. The show, which was established in 2004, will bring in 350 major exhibitors and a visitor and delegatory footfall of around 13,000 in its 10th edition. Key focus areas will be livestock, feed and meat from Vietnam, India, China, Cambodia, Laos, Myanmar, Thailand and southeast Asian regions.

Vietstock along with its co-located shows are expected to be a convergence of industry professionals, with a chance to connect and conduct business and create partnerships to further develop the farm-to-fork value chain in Vietnam. The country is considered as one of the fastest growing and high potential Asian countries, as far as livestock numbers and feed production is concerned.

According to Frost & Sullivan, Vietnam's per capita chicken consumption is forecasted to expand to 16.6 kg by 2021. To meet the projected needs, DBS bank estimates that 264 new breeding facilities and 694 new commercial farms will need to



Image credit: Adobe Stock

*The shows are expected to be a convergence of industry professionals, with a chance to connect and conduct business and create partnerships.*

start serving the industry.

In this line, the Vietnamese government is also driving to revamp and modernise its meat processing industry to meet this growing demand and consumers' expectations for clean and safe processed food.

Organised by Informa Markets, a division of Informa plc, Vietstock 2021, and its co-located events, are expected to create a unique synergy between each

sector, bringing together feed, livestock and meat sectors under one roof. The visitors will be able to source new products and solutions and gather new ideas from leading livestock, meat and aquaculture companies in the region. The event will also organise free international conferences and technical seminars where industry experts will lead the panel of speakers with interesting topics for the livestock, meat and aquaculture industries.



# Focus on tech at Agri Malaysia 2021

Visitors will experience scope for networking opportunities to connect with businesses, strategies and technical leadership across various and associated verticals of agriculture.

**ENTERING ITS FIFTH** edition, Agri Malaysia is a platform in southeast Asia for prospective trade opportunities, improved strategic cooperation and strengthening multilateral relationships between stakeholders from Malaysia and the rest of the world.

Organised by One International Exhibition Sdn Bhd, the exhibition is adopting the theme of 'Embracing Digitalization, Transforming Agriculture' which is curated to further promote the awareness and readiness of industry stakeholders to embrace new technology and modernisation of agriculture.

Agri Malaysia is set to feature a comprehensive showcase of products, technologies and solutions dedicated to the Malaysian agricultural sector, including crop protection, tractors and implements, farm construction engineering, seeds, farm tools and equipment, agricultural-related services, fertilising, irrigation, biotechnology and sciences, farm automotive, harvesting and smart farming and many more.

The Malaysian trade show is expected to provide visitors with scope for discussion and networking opportunities connecting businesses, strategy and technical leadership across the verticals of the agriculture



Image credit: One International Exhibition Sdn Bhd

*Agri Malaysia will showcase products, technologies and solutions dedicated to Malaysia's agricultural sector.*

industry and its associated sectors.

The exhibition programme run down includes conferences, seminars, outdoor live demos and an international showcase of products from participating brands showcasing their new line of products in agro-technology. ■



## VIV QINGDAO 2021

September 15-17  
Qingdao Cosmopolitan Exposition, China



International Trade Show From Feed to Food



VIVworldwide

[www.VIVworldwide.cn](http://www.VIVworldwide.cn)  
[WWW.VIVCHINA.NL](http://WWW.VIVCHINA.NL)

**VNU** 万耀企龙 **VNU** EUROPE

# Towards efficient processing and production

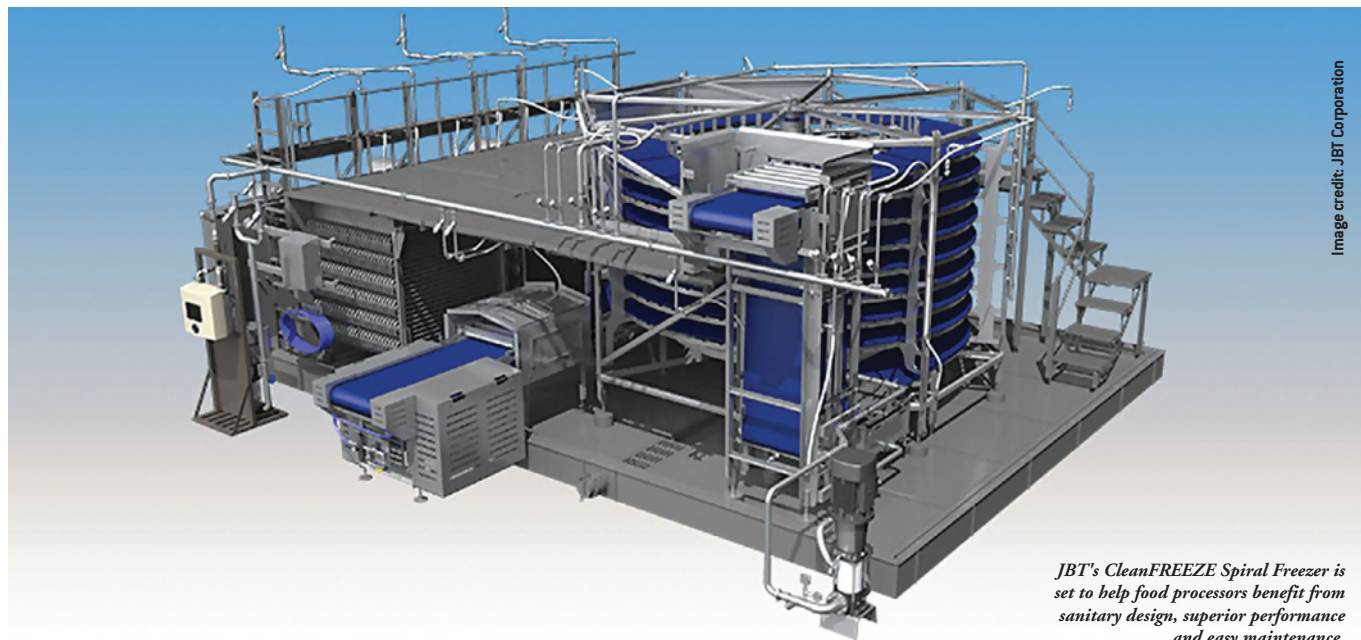


Image credit: JBT Corporation

*JBT's CleanFREEZE Spiral Freezer is set to help food processors benefit from sanitary design, superior performance and easy maintenance.*

The post-pandemic revolution across industries has put the focus on the movement to efficiency. The poultry meat processing equipment market size is forecast to increase at a Compound annual growth rate (CAGR) of 4.8% over the forecast period from 2021 to 2028, according to Research and Markets.

**A STUDY BY** the UN Department of Economic and Social Affairs reports that the world's population is expected to reach 10bn by 2050. The importance for optimum and economic usage of every available resource known to mankind has become more apparent as time goes by. Technologies around the world have adopted a seemingly common trend of improving design language around the processing machinery to increase levels of productivity. The area of poultry processing is no exception, with the maximum emphasis being laid on procuring high yield within improving time frames. Companies are always on edge, trying to find a new way to be more efficient, and setting benchmarks along the way in terms of significant time-cost savings.

Manpower and maintenance have also

been a key factor in the behavioural changes in the industry, with more and more importance being laid on the minimum requirements for handling plants, thus

**Segment leader of JBT Brittan Gill said that the freezer boasts a fully welded enclosure with minimal overlapping joints, sloped surfaces and capless solid plastic rails to eliminate bacteria traps."**

relying more on technology to simplify and abridge the various factors involved in food processing and production.

To this end, processing equipment majors JBT, Marel and others alike have rolled out new products for the growing poultry process market, which is expected to reach values of up to US\$350bn by 2022, according to a report by the Business Research Company. The steady compound annual growth rate (CAGR) of 3.8% experienced this year is mainly due to companies taking charge of revamping structures and the introduction of equipment, promising to deliver greater profit margins.

JBT Corporation has delivered its new line of freezers, the JBT Northfield CleanFREEZE Spiral. The freezer is designed for superior sanitation levels with high-volume processing with options for both packaged and individual quick freeze (IQF) products.

Segment leader of JBT Brittan Gill said that the freezer boasts a fully welded enclosure with minimal overlapping joints, sloped surfaces and capless solid plastic rails



to eliminate bacteria traps. JBT's Clean-in-Place technology takes care of sanitation from within.

Marel, which offers poultry processing services in more than 30 countries, has unveiled its Infrachill product line. The installation, also designed for better efficiency, has recorded more than 25% decrease in chill time reduction, directly translating to savings in time and cost. According to the company, the product can be delivered with their 'Plus' moistening technology. Marel's Infrachill comes equipped with double-slotted stainless steel air ducts with an accurate temperature management system.

Marel's 'Maturation Chilling System' is aimed at both tenderising and chilling the poultry product. The maturation tunnel follows a RapidRigor electro-stimulation system where the birds are rapidly chilled to prevent the growth of bacteria. Weight loss is kept to a minimum by applying moisture on outside surfaces and using cold air at high velocities. The chilling system uses a Sigma /T90 overhead conveyor system with

**Technologies around the world have adopted a seemingly common trend of improving design language around the processing machinery to increase levels of productivity."**

facilities for simple day-to-day operations.

The maturation chilling system is preceded and complemented by the in-line tenderness management system which is an integrated fully in-line process providing optimum plant logistics and scope for complete traceability. Marel says the formation and resolution of rigor mortis and the breakdown of proteins by a process named proteolysis are crucial concepts in the maturation process and essential in maintaining tenderness of the meat.

The Philippine poultry integrator Quezon Poultry and Livestock Corporation

(QLPC), has planned to expand its poultry processing plant with Marel, to support the automation of this existing plant to reach new levels of quality.

Gary Raya, plant manager of QPLC's processing plant, said, "The food service market, which we're in, collapsed. During lockdown all restaurants and hotels were closed. We had to find other ways of bringing products to our customers, so we turned our trucks into mobile markets. Although we're definitely doing better than most, our market is not yet back to where it was."

"At that time, our machines were no longer efficient due to breakdowns and a high consumables turnover. That's why we had to replace them and why we switched to Marel systems. In all of the processing plants I've seen in the Philippines and abroad, machines were more durable; they were all Marel," Raya explained about QPLC's situation in 2018, when he became responsible for the processing plant.

Early in 2020, QPLC started completely rebuilding the killing and evisceration departments to handle a capacity of 4,500 bph [75 bpm]. Automation replaced manual processes. QPLC managed to continue business in a rented processing facility nearby, while re-equipping and reinstalling their own plant, which became a kind of greenfield within an existing building but with a new roof and floors.

Earlier this year, BAADER launched its new product in the line of poultry processing. The BAADER 608 boasts a higher processing capacity. The product is designed to make the process of separating soft and solid components to a higher level of efficiency. The technology produces high-quality ground meat free of bone, elevating the product's value and ensuring maximum levels of yield. Baader maintains that the entire plant is designed around decreasing the amount of time required for cleaning and maintenance.

Baader's clean air chilling technology uses cold air flow directed through the cavity opening of the bird, achieving faster cooling times and processing from the insides. Simultaneously, cold air is also distributed on the outer surface of the bird, ensuring the moisture and meat juices are trapped in the bird. The system is designed in a single layer in order to prevent cross-contamination by dripping. ■



Image credit: Adobe Stock

*Manpower and maintenance are major factors in the poultry processing industry.*

# Innovations underway to accelerate production



*International companies are introducing cutting-edge technologies to optimise production in a cost-effective way.*

Image credit: Adobe Stock

The Asia-Pacific dairy market is projected to grow at a CAGR of 3.12% from 2020-2025, according to the market research firm Mordor Intelligence. China is the most significant market and India and Indonesia are the fastest growing markets in the region. Prince Kariappa reports.

**D**AIRY FARMING HAS mostly seen an upward trend in Asia with disruptors across different markets levelling up in terms of production and distribution. Any industry with rising consumer statistics is always doted to make inroads into other challenging markets.

Dairy is certainly one of them, and also constantly stands trial when it comes to 'carbon footprint' and emission standards. According to the Bulletin by the International Dairy Federation, dairy farming contributes to more than 80% of the environmental impact for milk.

Companies are always looking to innovate through their way to reduce their

contribution to global pollution. Yili, a dairy company from the Hohhot city of Northern China, ranks among the 'Global Dairy Top 5.' Yili has recently announced a partnership with agri-foodtech accelerator StartLife in the Netherlands. Through this collaboration, Yili aims to find its way into

**China is the most significant market for dairy primarily driven by increased consumption of dairy products."**

the ecosystem agri-foodtech startups which are always known to inflame innovations.

The partnerships formed by the programme are expected to develop ideas and reforms to further boost the industry, both in Europe and in China. The 'Yili Innovation Center Europe' set up on the campus of Wageningen University is ideally located in the 'Food Valley' in the Netherlands and is being dubbed 'strategically smart' for these reasons. Yili has made its way into the South East Asian market with its brand 'Cremo' that is available across Singapore, Malaysia, Myanmar and Laos.

Dairy logistics is another key area. The Netherlands-based Milkways has unveiled a patented technology that is set to transform the way of traditional milk production. The technology focuses on transporting large volumes of fresh milk in a safe way over long distances, ensuring high quality



dairy milk. Production is kept in the optimal region, with a low CO<sub>2</sub> footprint and competitive price. The strategy revolves around conducting production in areas with a suitable climate and abundant husbandry and cattle feed resources. This keeps production costs within a competitive price with the lowest possible CO<sub>2</sub> emissions.

Imagindairy, an Israeli start-up, is milking new technology to leave the cow out of the dairy equation. The company is creating true milk proteins that are indistinguishable from the real thing via a natural process of precision fermentation.

Imagindairy's proprietary technology recreates nature-identical, animal-free versions of whey and casein proteins that can be used to produce dairy analogs. This opens new opportunities to develop a full range of non-dairy products that perfectly mimic dairy versions yet contain no cholesterol, or GMO's. They also are lactose-free, serving consumers with lactose

intolerance or sensitivity. At the same time, the proprietary technology radically lowers the burden of dairy livestock on the environment.

Eyal Afergan, PhD, co-founder and CEO of Imagindairy, explained, "Our microflora-based production method was inspired by nature to recreate these proteins." The unique protein structure of dairy milk is what provides its characteristic texture, flavour, and nutritional value. Whey is a key source of highly biologically available protein. Imagindairy's animal-free dairy products boast the same complement of nutrients, from protein content to mineral composition, including calcium.

#### Asia-Pacific dairy market to see robust growth

The Asia-Pacific dairy market is projected to grow at a CAGR of 3.12% from 2020-2025, according to the market research firm Mordor Intelligence. The report further added that the rising demand for western

## Dairy farming contributes to more than 80% of the environmental impact for milk."

dairy products as natural snacks, fermented dairy products, such as yogurt, sour milk, etc, and product and packaging innovation is driving the dairy market growth. China is the most significant market for dairy, primarily driven by increased consumption of dairy products. India and Indonesia are the fastest growing markets in the region driven by increased population.

In a recent development, Dr R S Sodhi, managing director of India's Gujarat Cooperative Milk Marketing Federation (AMUL), has received the prestigious Tokyo-based Asian Productivity Organization (APO) award. The award is a representation of the unique farmer to factory model practiced in India. ■

## Cambodia launches measures to battle lumpy skin disease

CAMBODIA HAS STARTED taking measures to tackle lumpy skin disease (LSD) as infection numbers soared close to 10,000 across cattle in the nation, according to the general department of animal health and production, Cambodia. The Agricultural Ministry has placed an order of 200,000 doses from Africa which will be used to inoculate the cattle and a further order of 100,000 is to be placed for containment measures.

Tann Phannara, director-general for the general department of animal health and production, said that even though the disease is non-transmittable to humans and does not inflict high death rates among cattle, eradication has been put to top priority as it could hinder the country's production rates during the rainy season. As of 29 July, out of 399,663 registered cattle, 6,804 were affected by the disease with a recovery rate close to 65%. The disease is yet to be brought under control as 57 deaths were recorded and 2,375 still undergoing treatment.

After Cambodia, Thailand has also reported cases of LSD across its states close to the borders. Breakout of the disease in Cambodia started in early June, first in the



*Eradication of LSD is put as a top priority as it could hinder the country's production rates during the rainy season.*

provinces of Preah Vihear and Oddar Meanchey and notably spread to other provinces close to the Thai border. LSD has also been known to primarily affect young calves.

The minister of agriculture, Veng Sakhon earlier issued an announcement containing an emergency protocol to contain LSD and set up a daily Telegram team to analyse the spread of disease. "20,000 leaflets (for farmers and veterinarians) on LSD were distributed to broadcast, and we also distributed some

medicine to vulnerable provinces, including vitamins, sprayers, PPE, syringes, needles, gloves, boots and antibiotics," Sakhon said on his official Facebook account.

Cambodia Livestock Raiser Association director, Srun Prov said that even though the infection does not affect humans, their livelihoods are being impacted by the virus as the infected cattle prove to be inefficient for agricultural practices. Sometimes farmers need to wait for vaccinations and recovery of the cattle before they are employed again for agricultural purposes.

Image Credit: Adobe Stock

# A soluble solution for the development of sugarcane setts



*Spray treatment of sugar cane setts in the furrow with soluble nutrients and biostimulants.*

Image credit: Omex

**Dr Terry Mabbett speaks about the role of nutrients for the root growth and development of sugarcane setts.**

**S**UGARCANE IS TRADITIONALLY grown by vegetative propagation. Lengths of stalk or cane (about 300 mm) and commonly called setts are used as stem cuttings. Each sugarcane sett bears a number of buds that will grow and develop into shoots and new stalks (canes). Between 10-24 months of growth, development and maturation will be needed before the canes are ripe and ready to harvest for the high sucrose content.

Sugarcane is a conundrum. Once established, there is no stopping this fast-growing member of the grass family (Graminae). Like most grasses, sugarcane tillers to cover the ground and smother all weeds in its wake. However, the initial growth phase involving germination of sugarcane setts and growth of buds into shoots is a very slow and drawn out process, during which newly-planted sugarcane setts are highly susceptible to competition from all manner of weeds. Early growth sugarcane can be out-competed by the full range of tropical weeds including true grasses such as *Brachiaria reptans* (signal grass), sedges like 'nut grass' (*Cyperus rotundus*) and the classic broad-leaf, dicotyledonous weed including *Amaranthus spinosus* (spiny amaranth) and *Euphorbia hirta* (asthma plant).

## A kick-start for sugarcane

The complex and multistage nature of root growth and development is responsible for sugarcane's sluggish start, with three distinct and disparate rooting systems appearing at different stages of the plant's growth and development.

First-formed roots are of the sett itself and are characteristically thin, branched, superficial and transitory. These initial roots are followed by longer, straighter and more permanent stem (adventitious) roots. Main function of the stem roots is extraction of water and nutrients from the soil, but also provision of physical support through plant anchorage. Last but not the least are buttress roots that penetrate deep into the soil profile to anchor increasingly big and bulky sugarcane plants into the ground. By this stage, sugarcane has already achieved a significant height and density and as such is difficult to work in for fertiliser application.

**“Sugarcane is a conundrum. Once established, there is no stopping this fast-growing member of the grass family.”**



Soil nutrient provision is clearly not enough during the long and drawn out germination and early growth stages. Priming with soluble products which combine nutrients with biostimulants to boost growth is required. Spray application of soluble nutrients and biostimulants to sugarcane setts planted in the furrow offers farmers an ideal opportunity to prime the plants and speed up sett germination and growth to get new shoots out of the ground as soon as possible.

### The priming procedure

Omex Agrifluids designs, develops and sells high quality soluble nutrient products to farmers and growers throughout the world for use on the widest range of crops including sugarcane. Omex has long recognised the requirement for an early boost for germination, prompt and rapid growth and early plant establishment.

Omex's plant priming practice for sugarcane targets setts in the furrow with soluble nutrients and biostimulants to achieve earlier crop establishment and enhanced tillering and translating into more and bigger sugarcanes to cut at harvest time. In cooperation with distributors and farmers, Omex has monitored the early growth and establishment of sugarcane crops to show shoots coming out of the ground earlier and faster and looking stronger for at least two to three months after in-furrow priming. Growth is shown to be quicker and with plants more securely established in a shorter space of time.

There is another good reason for priming cane setts but frequently overlooked due to a general but misinformed view that sugarcane crops, because of their overall fast growth rate, high foliar density and size are not troubled by weeds. This may be true once the sugarcane tillers have covered the ground but certainly not so in the early stages of crop growth and development.

Weed control is most needed immediately after planting the setts because they will have to grow for a considerable time before reaching the stubble stage and to cover the soil. Indeed during this early growth stage weeds grow much faster than sugarcane and with more time and opportunity to establish because they will have started to germinate and grow soon after the last harrowing or furrowing.

Sugarcane will eventually cover the ground and form a canopy which effectively shades out weeds, but this will take four to five months for planted cane and three months for ratoon cane in a moist warm climate. Thus anything which gives sugarcane a kick start and a boost to growth in the early stages can only help to mitigate weed competition.

### A boost from Omex Bio 20

So what exactly are the nutrients, biostimulants and commercial products which underpin the Omex best practice for early stage growth and establishment in sugarcane? To discover more, I travelled to company headquarters at Kings Lynn in the County of Norfolk in the east of England to speak with Peter Prentis managing director at Omex Agrifluids.

"First on the sugarcane scene is our Omex Bio 20" said Peter Prentis, "applied as a spray to cane setts in the furrow. Omex Bio 20 is tried and tested product bringing together a comprehensive range of essential macronutrients and micronutrients, the action of which is boosted by inclusion of an organic material from a single variety of seaweed. The biostimulant property of the seaweed extract kick-starts growth of the sugarcane sett," he said.

"This makes Omex Bio 20 much more than a balanced formulation of essential plant growth nutrients because the biostimulant does just what the name implies. It stimulates root growth

**Soil nutrient provision is clearly not enough during the long and drawn out germination and early growth stages."**

and development thereby enhancing and increasing root biomass to maximise the access, absorption and utilisation of soil moisture and nutrients by the germinating sugarcane sett. Overall result is faster plant establishment and more rapid and resilient growth," added Prentis.

### Zinc, manganese and boron

Next on the Omex list for the treatment of setts in the furrow are two of the company's single micronutrient products. Omex 'Kingfol Zinc' and Omex 'Kingfol Manganese' provide zinc and manganese which are known to underpin the growth, development, yield and quality of sugarcane.

Omex Kingfol Zinc contains 70% w/v (weight/volume) zinc. "Zinc is the most widely found soil-based micronutrient but also the most inaccessible to crop plants because huge amounts are locked up as insoluble zinc and therefore unavailable to plant roots," said Peter Prentis. Shortfalls in naturally occurring plant-available zinc make

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*Sugarcane remains vulnerable to competition from weeds throughout the early growth and establishment stages.*



Image credit: Omex

deficiency of this essential micronutrient the most acute and widespread across the world's major field crops and sugarcane is no exception," he said.

Zinc boosts root activity and has a crucial role in early crop growth. A shortfall of zinc is reflected in a range of deficiency symptoms most prominent of which are reductions in tiller formation, shortening of the internodes and plants with thinner stalks showing a loss in turgidity. At leaf level zinc deficiency shows up as a conspicuous chlorosis (yellowing) of the veins and especially in young leaves. Areas of the lamina alongside the midrib and at the leaf margins stay green while the remainder is chlorotic. Leaves are generally fewer in number and shorter in length with a high frequency of tip death. The increasing development of red-coloured areas or lesions is caused by an accumulation of anthocyanin pigments. At the cell level zinc is a crucial co-factor for a number of enzyme systems.

Omex 'Kingfol Manganese' contains 52.8% w/v manganese. Like zinc, manganese is a significant factor in the activation of enzymes. A shortfall in manganese will quickly show up as a range of classic deficiency symptoms including chlorosis (yellowing) of the leaf lamina tissue between the veins from the leaf tip and towards the centre of young leaves. In instances of acute manganese deficiency the already chlorotic tissue may die, turn brown and split along the lines of necrosis with marked leaf twisting. Mature leaves may also succumb and show these deficiency symptoms but accompanied by reddish-coloured necrosis caused by accumulation of anthocyanin pigment. Inter-veinal leaf necrosis (manganese) rather than necrosis of the veins (zinc) is what distinguishes manganese deficiency from zinc deficiency in sugarcane.

Despite being essential to the health and quality of sugarcane, boron is frequently the most deficient nutrient in sugarcane plantations. This micronutrient's crucial role in a range of physiological and biochemical processes is well established, although boron is still the least well-understood of the micronutrients. Peter Prentis told Far Eastern Agriculture how sugarcane growers in Brazil, the world's biggest producer of sugarcane, use Omex Foliar Boron (11% boron and 4% nitrogen w/v) as a foliar spray.

#### Earlier growth and establishment

New shoots push out through the soil sooner and look stronger when sugarcane setts are treated in the furrow. They start to photosynthesise more promptly and at a faster rate, thus contributing to individual plant growth, establishment and development occurring that much sooner in the crop cycle. Compared with untreated setts in the same field the earlier appearing shoots continue to look stronger and more robust for a 2-3 month period, after which the advantage appears to fade as a more even stand is presented. However, 'proof of the pudding comes in the eating' or in this case harvesting of treated and untreated plants. Those treated with Omex Bio 20, Omex Kingfol Zinc and Omex Kingfol Manganese yield a higher tonnage due to bigger and heavier canes and, more crucially, having a higher sugarcontent.

Treatment of setts in the furrow with products containing key, single, soluble nutrients like zinc (Omex Kingfol Zinc) and manganese (Omex Kingfol Manganese) and others combining a broad range of nutrients in tandem with biostimulants products (Omex Bio 20) is becoming standard practice in the top sugarcane growing countries of the world. Omex sugarcane 'priming' products are already used in India, Thailand, Indonesia which together with China, Pakistan and Philippines rank among the top 10 sugarcane producers in the world.

Farmers and growers will clearly balk at the prospect of trying to spray well-grown sugarcane for the simple reason that they will be unable to move with any ease and efficiency through the crop with either tractor drawn/mounted sprayers or manually-operated sprayers. The only other option for spraying sugarcane at this advanced stage of growth and development is by aerial spraying.

Peter Prentis sums up the situation for sugarcane as follows. "Applying nutrients and biostimulants at the very beginning of the crop is by far the easiest option for sugarcane farmers and growers. It allows them to avoid the logistical constraints in relation to driving vehicles through or walking through well grown sugarcane with all the associated problems of achieving adequate spray coverage. However, the single biggest advantage of treating cane setts in the furrow is providing 'fledging' sugar plants with the right nutrient requirements and at the right time, which is the rooting and establishment stage of the crop. ■



# South Korea's long-term aquaculture development plan

Nearly 20% of the landmass of South Korea is non-functional due to mountains and a predominant 2,413 km coastline explains South Korea's inclination towards seafood.

**A**S PER THE Norwegian Sea food council, in the year 2019, South Korea went from being a peripheral seafood market to Asia's second-largest seafood market. Korea seafood market is projected to reach US\$13.6bn by 2027 from US\$11.2bn in 2020, growing at a CAGR of 2.81%, stated a Research And Markets report.

In South Korea, aquaculture such as adjacent water, shallow sea culture, distant waters, and inland water are practiced. Shallow water marine environment prefer aquaculture points as water area is between the shore and deeper water which is best-suited habitats for Korean seafood.

In recent years, a decrease in aquaculture and production in South Korea has led to the formation of various policies to increase aquaculture production. The government has prepared a long-term aquaculture development programme by increasing cultivation areas for both profitable and unexploited species.

## New salmon farming project

Artec Aqua AS has signed an agreement with K Smart Farming Co. Ltd (KSF), a joint venture between Norway-based Salmon Evolution ASA and Korean seafood giant Dongwon Industries Co, Ltd, to conduct a feasibility study for a 20,000 tonnes land-based salmon farming facility in South Korea. Artec Aqua is a wholly owned subsidiary of Oslo-listed Endúr ASA. Artec Aqua will conduct engineering, delivery, installation and commissioning of designed process related systems and equipment in the future build-out of the project.

The project plans to use a hybrid flow through system technology, such as the one Artec Aqua is delivering to Salmon



*In South Korea, seafood production is done in facilities like adjacent water, shallow sea culture, distant waters and inland water.*

Evolution's land-based facility at Indre Harøy in Norway.

"Salmon Evolution has through our cooperation at Indre Harøya gained first-hand experience of our specialist competence within engineering and delivery of land-based aquaculture facilities, and consequently they have introduced us to K Smart Farming. We look forward to working with K Smart Farming to realise this project. The project represents an important step on our journey towards becoming a major international supplier of land-based aquaculture facilities," said Ingegerd Eidsvik, CEO of Artec Aqua.

**Sustainable seaweed bags honours in South Korea**  
Haedam Co, a seaweed farm from South

**In recent years, a decrease in aquaculture and production in South Korea has led to the formation of various policies to increase aquaculture production."**

Korea, has become the world's first laver seaweed farm to receive certification from the ASC and MSC standards for sustainable seaweed production. Laver, popularly known as 'gim' in Korea is sold in its dry-sheet form and used as a snack or in making sushi globally. The company's laver is distributed through the Pulmuone brand and has export routes to Europe and the USA. The Haedam farm is responsible for producing the *Pyropia yezoensis* and *Pyropia tenera* species, which are cultivated on floating rafts constructed at sea.

The ASC-MSC Seaweed Standard includes social and industrial requirements that specify harvesting and farming activities, operate in a manner that minimises negative impacts on the environment and ensures employment rights and benefits communities. Patricia Bianchi, seaweed account manager for ASC and MSC, said, "Seaweed has many potential environmental benefits which is one reason it is becoming more popular. But if it's not done responsibly it can still have unintended environmental and social consequences, which is why it's so important that companies like Haedam commit to the most stringent standards or responsible and sustainable production." ■

Image credit: Adobe Stock

# Vietnam harvesting on improved agri-mechanisation

**Labour shortage, affordable machinery and government policies drive mechanisation across agricultural processes in Vietnam.**

**V**IENTNAM IS ONE of the Southeast Asian countries, which depends on agriculture as the state's primary source of income. The agriculture sector represents 14% of the GDP and employs around 36% of the nation's workforce, according to a World Bank study of 2020.

According to the Ministry of Agriculture and Rural Development in 2020, the level of mechanisation in agriculture is increasing in the pre- and post-harvest stages. Specifically, the rate of mechanisation of agricultural land preparation reached 94%; 42% of sowing and planting care reached 77% and that of rice harvest reached 65%.

Compared to 2011, in 2019, the number of tractors across the country increased by about 48%, combine harvesters increased by 79% and agricultural dryers increased by 29%. The farm power availability reached about 2.4 HP/ha cultivated. However, Vietnam is still far behind the average level of equipment for agriculture when compared to Thailand with four HP/ha, China eight HP/ha and Korea 10 HP/ha, according to the Ministry of Industry and Trade.

Vietnam is facing an acute shortage of labour in agriculture with the population shifting to construction and other fields expecting better income. This has been a crucial factor in the increased use of machinery across various processes. The shift in occupational structure from agriculture to different sectors is mainly occurring in the four regions: The Red River Delta, the North Central and the Central Coastal areas, the Mekong River Delta, and the South East.

## **Small harvesting machinery dominates**

According to the International Rice Research Institute, the country has 70



*Expectations of better income has been a crucial factor in the increased use of machinery across various processes.*

Image credit: Adobe Stock

million pieces of land; therefore there is 0.7 ha of land available for every family, which is made up of three to four pieces of land. Due to this high level of distribution inland, farmers favour smaller harvesters or two-wheel tractors which are convenient for small parcels of cultivable land and are highly efficient.

## **Declining agricultural machine demand due to Covid-19**

The demand for agricultural machines has decreased during the coronavirus pandemic. This was due to low production and also due to the closure of dealerships and retail

shops during the lockdown. Additionally, this was further fuelled by a decrease in farmer's income which led to postponing of agricultural machinery purchases. The demand for machines in the country remained low at the starting of 2020, however, there was an increase in demand in the second half of the year post ease in confinement. A slow recovery is expected in 2021. The manufacturers are expected to shift focus towards four wheel tractors along with the launch of precision agricultural products in accordance with the Vietnam Agriculture 4.0 agenda.

The topic of affordability for farmers has resulted in the growth of the rental market for agricultural machinery. Agricultural co-operatives and private enterprises are at the forefront in providing rental services for harvesting machinery, best suited for Vietnam's largely fragmented land size requirement. Equipment for threshing, tillage, threshing, storage, transportation and other processes are readily available and the practice is highly concentrated across the Mekong and Red River Delta. ■

**Farmers favour smaller harvesters or two-wheel tractors which are convenient for small parcels of cultivable land and are highly efficient."**



# Looming climate crisis poses new risks to Indonesia's palm oil

Indonesia's palm oil operations could become stranded assets under climate transitions on a global scale, according to an analysis from Orbitas, an initiative of Climate Advisers Trust.

**P**ALM OIL, INDONESIA'S main commodity, faces significant risks from policy and consumer responses because of climate change. If the world limits global temperature rises in line with the Paris agreement up to 76% – more than nine million hectares – of unplanted concessions, and 15% of the country's currently operating palm oil concessions, could become stranded assets.

Indonesian palm oil producers, who are pursuing unsustainable production, face new uncertainties as the world responds to deforestation's role in climate change and its effects on industries with global impact.

According to Orbitas, the risks and consequent opportunities relating to climate transitions – the actions that governments, consumers and others take to respond to climate change – are as

significant in agriculture as they are for energy and transport. According to the analysis, by 2040, palm oil prices are expected to increase by 29% and the cost of concession land is to increase by 52% in a 1.5-degree climate scenario. The increase in prices presents new challenges for the palm oil sector. However, it is also forecasted to experience an increase in market value by US\$9bn, as global demand is expected to increase. This seems to be dependant on an ambitious response by banks and investors, national and local governments, companies and civil society to create a strategy that enables the sector to take advantage of the growing demand for palm oil while cutting greenhouse gas emissions and protecting forests and peatland.

As recent IPCC report states, the world needs to end tropical deforestation – which

is often driven by the production of tropical commodities like palm oil to ensure mankind meets global climate goals.

According to the report, Indonesia alone is responsible for nearly 72% of global palm oil production and a threat to its operations on new palm oil plantations could prove detrimental on a global scale.

Mark Kenber, managing director of Orbitas, said that growth strategies premised on converting forests into palm concessions will have no future. He further added, "Deforestation from agriculture is already triggering many climate transition responses that will make growth in the palm oil sector from clearing land uncompetitive. However, for stakeholders who address climate transition risks seriously, there are lucrative new opportunities to diversify revenues, intensify output sustainably and continue to see growth."

Orbitas states that ultimately, coherent efforts are indispensable and the company's analysis indicates that the palm oil industry will enter a new era as a result of climate change, with the following detailed findings:

- The extent of a company's vulnerability to climate transition depends heavily on land-use strategies, emissions reductions, capital access and operational efficiency.
- Transformation to a sustainable business model is a profitable strategy.
- Land-use restrictions are driving up land prices, increasing land competition, and driving higher productivity.
- Smallholders will play an important role in increasing palm oil industry production and reducing future deforestation but need support from producers and financiers.
- Financiers should avoid investing in companies that have concession lands in areas of conservation value and have high carbon stocks, implement minimal NDPE policies, and/or whose business growth strategies depend on geographic expansion.
- The serious efforts of all the stakeholders and actors involved in this climate transition are indispensable. ■



*Transformation to a sustainable business model is a profitable strategy, according to Orbitas.*

# VIV Qingdao 2021 all set to kick off from 15-17 September

VIV Qingdao is one of the leading international trade shows for pig, poultry, dairy and aquaculture industries and focuses on business, innovation and technology in China. The show is all set to kick off from 15-17 September at the Qingdao Cosmopolitan Exposition.

**VIV WILL BE** entering its 21st year of networking and business in China as it is set to host VIV Qingdao 2021 from 15-17 September at Qingdao Cosmopolitan Exposition, Shandong. The expo will be centred with an exhibition space of several halls, expecting to draw professional participants from various corresponding industries to visit global and Chinese brands at the registered exhibiting booths.

In 2020, the yearly show was successful at the Qingdao Cosmopolitan Exposition, which welcomed a total of 16,557 professional visitors. At the same time, the global buyers joined virtually via the digital "Explore VIV" platform that registered 55,402 page views. Despite the COVID-19 limitations in travelling, VIV Qingdao 2020 presented no less than 40,000 sq m of exhibition space, with 352 featured companies covering the feed-to-food supply chain.

This year, the event will have a primary focus on networking within the verticals of breeding and hatching, feed production and processing, veterinary vaccine and animal protection products, biological safety and control, farmhouse construction and breeding equipment and animal waste treatment equipment for pork, poultry, milk and aquatic products. The event is scheduled to conduct more than 20 forums and interactive events with international exposure to the attendees. International speakers are set to constitute more than 40% of the keynote programmes.



*Attending VIV Qingdao 2021 enables the visitor to get up to date and hear the latest news from buyers and suppliers.*

Image Credit: VIV Qingdao

VIV Qingdao 2021 will continue to focus on trade services, enhance online business synergies and coordinate local and global buyer groups for customised interaction.

The show is also co-located with CIMIE – China International Meat Industry Expo, Horti China (for greenhouse technology) and Asia Agro – Food Expo (AAFEX 2021). The amalgamation of the shows is intended to bring a complete choice of exhibitors and suppliers in agricultural, food production technology and equipment.

In 2021, the event offers hybrid event solutions for international visitors with onsite and online trade match-making platforms to all exhibitors and registered visitors. Professional visitors attending in person or joining remotely can experience the connecting of supply and demand sectors which allows them to make appointments with selected suppliers from the exhibiting companies.

## **Safely connected**

Connect with the industry in China by registering at the event on [www.vivchina.nl](http://www.vivchina.nl)

and then joining the online trade match-making platform. The feature is free for all professional profiles of the livestock, animal protein, feed-to-food sector.

With this platform, VIV Qingdao safely connects supply and demand within the industry while giving the attendees the opportunity to meet new and existing valued customers and suppliers online. Attending VIV Qingdao 2021 ensures the visitor get up to date and hear the news from buyers and suppliers.

## **Global Pig Genetics Summit (GPGS)**

The Global Pig Genetics Summit is taking place from 16-18 September 2021 and is organised by VIV Qingdao and Agri-Intelligence Consulting. With this edition, VIV Qingdao is committed to build, together with its partners, the most influential global technology and business platform in the field of pig breeding and to provide international cutting-edge technology and solutions for China's pig breeding industry. ■

*For more information and registration, visit [www.vivchina.nl](http://www.vivchina.nl)*



## LEMKEN launches innovations to optimise its seed drilling machines

LEMKEN, A COMPANY that specialises in arable farming, has optimised its front hopper and coulter bar system, adding greater versatility to its range of seeding machines.

The latest addition of the ISOBUS technology to the Solitair 23+ front hopper and OptiDisc 25 coulter bar ensures precise, convenient adjustment and optimal utilisation of the machine fleet.

The new technology allows adjustments to be made to the seeding rate or width section control via the MegaDrill control on the tractor terminal. It takes strain off the operator, and ensures efficient use of consumables and seeding, without overlap of up to four width sections.

Combined with the rotary harrow Zirkon 12 and the OptiDisc 25 coulter bar, the Solitair 23+ front hopper forms a compact, agile drilling combination. This enables a better distribution of weight compared to rear-mounted systems, allowing smaller tractors to be used for efficient drilling technology.

The front hopper is suitable for both seeds and fertiliser, and is therefore, ideal for sowing maize in combination with the Azurit precision seed drill.

In addition to the 4 metres and 4.5 metres folding versions, the OptiDisc 25 coulter bar will be available in three metres and four metres rigid, and five metres and six metres foldable versions. These new folding variants feature an additional transport system for road use.

The transport support wheels take the load of up to 3.5 tonnes off the tractor's rear axle, ensuring that the tractor's maximum permissible axle load and gross weight are balanced. The additional



Image credit: LEMKEN

*The front hopper is suitable for both seeds and fertiliser.*

transport system locks and unlocks easily.

The parallelogram-controlled double disc coulters form the core of the OptiDisc 25 coulter bar and depth control rollers ensure seeds are placed precisely at the pre-set depth, with both mulch and conventional tillage. Also, coulter pressure can be mechanically or hydraulically adjusted independently of the seed depth.

The Solitair 23+ front hopper is available now, and the new OptiDisc 25 coulter bars will be available from January 2022.

## AGCO introduces Fendt Rogator 900 Series applicator

AGCO HAS LAUNCHED the new Fendt Rogator 900 Series applicator with adjustable clearance, bringing operators a single machine for applying liquid or dry crop care products at any time to any size crop.

As crop production practices evolve and farmers make more late-season passes to apply nutrients and fungicides or seed cover crops, the need for high-clearance equipment is greater than ever to clear tall crops such as corn, sugar cane, sunflowers and others. Now, farmers can use the Fendt Rogator 900 as their one machine to apply liquid or dry products any time – pre-plant or postemergence in short or tall crops and after harvest for fall fertilisation, burndown or cover-crop seeding.

“The Fendt Rogator 900 is the first of its kind – the only self-propelled, rear-mounted boom applicator with adjustable

clearance and easy conversion between liquid and dry systems for ultimate versatility,” said David Fickel, manager of tactical marketing for application equipment at AGCO. “Because the new



Image credit: AGCO

*The Fendt Rogator 900 can apply liquid or dry products at any time.*

Rogator can be equipped for nearly any type of crop care application, customers not only optimise their investment in the machine, but have greater control over when and how products are applied. That helps ensure better product use for higher yields and an overall better return on their crop care investment.”

The Fendt Rogator 900 Series has five models: RG932, RG934, RG934H, RG937 and RG937H, ranging from 315 HP to 365 HP. All models have AGCO Power 8.4L engines and are equipped with LiquidLogic liquid management (standard). All but the RG932 can be equipped with the Air-Max Precision R1 or R2 pneumatic boom spreader, ranging from 215 to 275 cubic feet in capacity.

Operators also benefit from the automatic traction control of the AWD SmartDrive system.

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The partnership aims to produce 100mn litres of fresh milk in the first year and will jointly invest in an integrated dairy farm in the town of Chuping in Perlis. The primary focus of the collaboration is to establish a dairy herd of 10,000 high-yielding milking cows to reduce Malaysia's dairy imports. Other potential areas include utilising agricultural land to produce most of the required animal feed for dairy farming and using the joint venture farm as a hub to develop small cattle fattening farms and animal feed farms by 2024.

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