

Far Eastern Agriculture

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Ensuring health management in livestock production

Thermal fogging for pesticides
in tree and bush crops

Aquaculture:
Enhancing aquafeed production in Asia

Equipment:
Farm sprayers boosting crop yields



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2020**

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Australian growers to first use BASF's Tirezor herbicide

BASF HAS RECEIVED the world's first registration for the company's Tirezor herbicide by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Australian growers of wheat, durum and barley will be first to use Tirezor-based products, marketed under the Voraxor brand. It allows them to enhance the spectrum and longevity of their pre-emergent weed control. Further dossier submissions for Tirezor in other countries across Asia, South and North America are planned.

The herbicide will give growers more choice for effective weed control and fill existing gaps in their weed control programmes, said Peter Weinert, vice-president Global Strategic Marketing Herbicides at BASF's Agricultural Solutions division. "Tirezor offers outstanding control of broadleaf weeds and will be a significant innovative tool for the suppression of annual ryegrass." Tirezor herbicide focuses on providing farmers a foundation for the control of weeds. As a compatible mixing partner, it features durable residual activity and displays strong performance on weeds with low use rates. Additionally, it is flexible for use on multiple crops. Targeted crops include corn, soybean, cereals, peanut, citrus, pome fruit, tree nuts, oil palm, pulse crops etc. According to BASF, Tirezor works by inhibiting the enzyme protoporphyrinogen oxidase (PPO), thereby disrupting the cell membrane of plants. It uses a novel binding mechanism for optimal control and burndown of broadleaf and grass weeds, which have encountered significant weed resistance issues.



Targeted crops include corn, soybean, cereals, peanut, citrus, pome fruit, tree nuts, oil palm, pulse crops etc.

Image credit: Adobe Stock

IRRI supports UN's call for more sustainable food systems

THE INTERNATIONAL RICE Research Institute (IRRI) strongly supports the plea of Antonio Guterres, UN secretary-general, to work together and leverage concerted action to avoid the worst impacts by COVID-19 to agri-food systems.

The COVID-19 pandemic is more than a health crisis. Over the last six months, we have witnessed its extreme socio-economic consequences, including grave threats to food security and nutrition. As the pandemic continues to take its toll and make an indelible mark on agri-food systems, IRRI is aligning its efforts to ensure a relevant, timely and well-coordinated response to safeguard the health and livelihoods of the poorest and most vulnerable.

Supporting Guterres' call to the UN member states to work together to build a sustainable food systems, IRRI has put forth analysis and research and joined multi-stakeholder conversations related to COVID-19. The organisation hopes to support policy- and decision-making across the countries where it works.

"We applaud the ongoing efforts by governments in Africa, Southeast Asia



Image credit: Adobe Stock

IRRI supports the efforts by governments in Africa, Southeast Asia and South Asia to ensure the steady supply of rice.

and South Asia to mitigate the impacts of the pandemic and ensure the steady supply of rice," IRRI stated in a news release.

IRRI encourages policy coordination and promotes better trade facilitation among local and national governments, the private sector and the greater international community.

Evonik to enhance sales and distribution of ProPhorce SR 130 for Indian subcontinent

TO FURTHER STRENGTHEN the partnership between Evonik and Swedish manufacturer Perstorp, the sales and distribution of ProPhorce SR 130 have been expanded to the Indian subcontinent such as India, Nepal, Sri Lanka, Bangladesh and Pakistan.

ProPhorce SR 130 is a butyric acid product that aims to provide a cost-efficient solution for in-feed application in livestock management. The product complements the mode of action of Evonik's probiotics and shows beneficial effects that can bring added value to customers when the products are used together.

"This partnership will help us to offer a full gut health portfolio in the region," said Dr Shreedhar Patel, vice-president for Evonik Animal Nutrition in Asia-Pacific South region.

"ProPhorce SR 130 is a unique gut health product with unrivalled butyric acid power because of its special formula and advanced esterification technology. It will reach more customers and create more value for the livestock industry in the Indian subcontinent through our distribution partnership with Evonik," commented Jim Ren, vice-president for Perstorp Animal Nutrition for Asia Pacific. The latest development will intensify the sales, marketing and distribution of the product in the new target markets.



ProPhorce SR 130 is a butyric acid product that aims to provide a cost-efficient solution for in-feed application in livestock management.

Image credit: Adobe Stock

Philippines developing new agri-aqua industrial business corridor

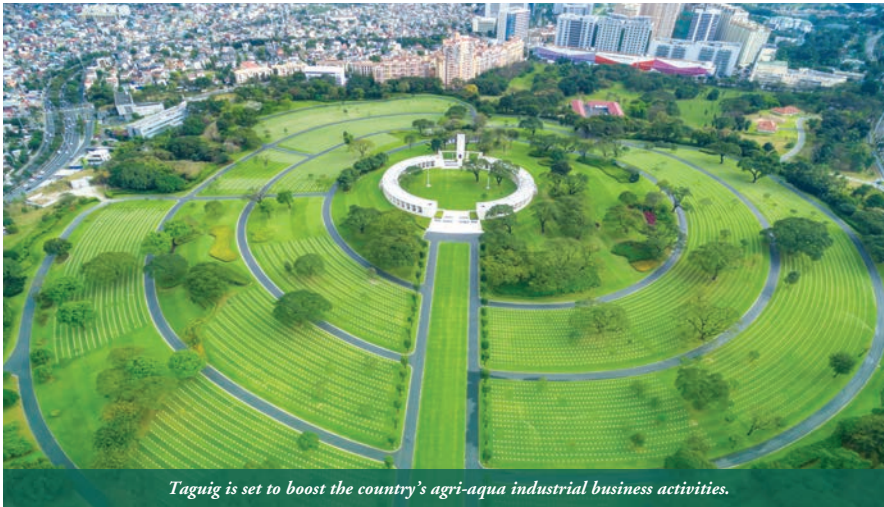


Image credit: Adobe Stock

Taguig is set to boost the country's agri-aqua industrial business activities.

PHILIPPINES' DEPARTMENT OF Agriculture is set to transform the city of Taguig as another "Agri-Aqua Industrial Business Corridor," which targets to enhance farmers' productivity and boost the national economy at the same time.

Speaking on 20 July, agriculture secretary William Dar said that the city could be the gateway to Metro Manila in many ways with the whole of Laguna Lake as a major ecosystem that needs to be rehabilitated to support aquaculture and be developed in a sustainable fashion.

"Farmers and fisherfolk from Rizal and Laguna could come directly to Taguig using their boats to bring their produce and see to it that we have all the cold storages, the warehouses and of course the open markets

for people to come in a big way," Dar added.

Bigger plans for Taguig City were identified during the signing of agreement for the Urban Agriculture Project (UAP) and meeting for the Multi-Agency Agricultural Government Assistance Programme (MAAGAP) Para sa Kinabukasan sa Taguig on 20 July 2020.

According to the secretary, MAAGAP is the phase one of a bigger concept of an agri-aqua industrial business corridor. Under the framework for a food-secured and resilient Philippines with prosperous farmers and fisherfolk, the programme applies the 'New Thinking in Philippine Agriculture' and explores rural-urban symbiosis and public-private community partnerships.

FieldMicro launches SmartFarm farming automation platform

FIELDMICRO HAS LAUNCHED a farm control monitoring system SmartFarm, a platform that uses smart technology to make farming simpler and more efficient.

FieldMicro's SmartFarm is powered by FieldBot, a portable remote-control device that connects to farm equipment/hardware. FieldBots are equipped with a built-in solar panel, a HD camera and sensors that monitor temperature, air pressure, humidity, motion, sound etc.

According to the company, the use examples include livestock monitoring and control, controlling farm gates, water troughs, winches, irrigation gates, rain gauges and any other items that are actuated, such as turning a pump on or off.

Besides, FieldMicro has announced partnership with John Deere to provide real-time data directly to the SmartFarm platform, providing greater insight into the operations and service history of farmers' tractors and equipment.

EVENTS 2020

AUGUST

3-5
Flower Expo Asia 2020
 Guangzhou , China
www.flowerexpochina.com/index.php?lang=en

17-18
Agriculture & Organic Farming
 Online event
www.agriculture.agriconferences.com

SEPTEMBER

4-6
Agri Asia
 Gujarat, India
www.agriasia.in

7-9
EuroTier China
 Chengdu, China
www.eurotierchina.com

17-19
VIV Qingdao
 Qingdao, China
www.viv.net

OCTOBER

14-16
VIETSTOCK Expo & Forum
 Ho Chi Minh City, Vietnam
www.vietstock.org/en-us

14-16
AgriTechnica Asia
 Bangkok, Thailand
www.agritechnica-asia.com

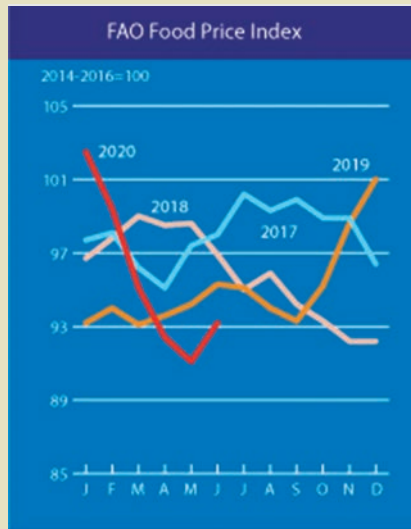
22-24
AgriLivestock Cambodia
 Phnom Penh, Cambodia
www.agrilivestock.net

FOOD OUTLOOK

THE FAO FOOD Price Index (FFPI) averaged 93.2 points in June 2020, 2.4 per cent higher than in May, representing the first month-on-month increase since the beginning of the year. Amid market uncertainties posed by COVID-19, the prices of vegetable oils, sugar and dairy products rebounded to multi-month highs following sharp declines registered in May, while in cereals and meat markets, most prices remained under downward pressure.

The FAO Cereal Price Index averaged 96.9 points in June, down 0.6 per cent from May and 1.9 per cent below the corresponding month last year. Downward pressure on wheat prices intensified in June, in part due to new harvests in the northern hemisphere, but also due to improved production prospects in a number of major exporting countries, in particular in the Black Sea region. Barley and sorghum export prices also fell in June, reflecting generally good production prospects amid timid global import demand.

The FAO Vegetable Oil Price Index averaged 86.6 points in June, gaining 11.3 per cent after declining for four consecutive months. The rebound of the Index mainly reflects higher palm oil values, while quotations of soy, sunflower



and rapeseed oils also appreciated. International palm oil prices rose sharply in June on account of both recovering global import demand, following the easing of COVID-19 related lockdowns in numerous countries, and concerns over possible production setbacks amid prolonged migrant labour shortages.

The FAO Dairy Price Index averaged 98.2 points in June, up four per cent from May. June marked the first increase in the value of the Index after four months of

consecutive declines, even though the Index remained 4.6 per cent below its level in the corresponding month of 2019. Price quotations for all the dairy products represented in the Index rose, but not to the pre-pandemic levels.

The FAO Meat Price Index averaged 95.2 points in June, down 0.6 per cent from May and six per cent below its June 2019 level. International price quotations for poultry and bovine meats fell, largely due to increased export availabilities in major producing regions, despite high import orders from China and the Middle East. By contrast, pig meat prices made a small recovery, mostly driven by a timid recovery in Europe on expectation of the easing of COVID-19 market restrictions.

The FAO Sugar Price Index averaged 75 points in June, up 10.6 per cent from May. The surge in crude oil prices provided strong support to sugar markets; it encouraged Brazil's sugar mills to use more sugarcane supplies to produce ethanol instead of sugar, thereby affecting sugar export availabilities. Furthermore, recent reports of bottlenecks in Brazilian ports due to the measures imposed to contain the spread of the coronavirus helped in pushing up the value of the Sugar Price Index.

Poly Glass and HLA form JV for freshwater aquaculture in Malaysia

POLY GLASS FIBRE (M) Bhd, Malaysia's fibre glass wool manufacturer, has announced to form a 50-50 joint-venture (JV) company with Hong Len Aquatic Sdn Bhd (HLA) to set up a freshwater aquaculture hatchery in Tanjung Malim, Perak.



The aim is to boost freshwater aquaculture sector in the country.

Image credit: Adobe Stock

As reported in The Edge Markets, Poly Glass will provide the land via its subsidiary Golden Approach Sdn Bhd (GASB) and HLA will equip the required aquaculture hatchery technology, operation model and market distribution network.

Vietnam plans to be fully ASF-free by 2025

VIETNAM AIMS TO free its more than 90 per cent communes from the African Swine Fever (ASF) by 2022 and the entire nation by 2025, as per the targets set in the nationwide African Swine Fever prevention plan 2020-2025.

The plan has been approved by the deputy prime minister Trinh Dinh Dung. It further targets to have 500 safe pig breeding facilities and 50 safe livestock chains to meet domestic demand and boost export, reported SGGP Online.



The country will further strengthen testing capacity.

Image credit: Adobe Stock

Innovations for regional animal farming markets in focus

EuroTier China will be held on Chengdu Century City New International Exhibition and Convention Centre.

THE SECOND EDITION of EuroTier China will take place in the city of Chengdu, China, from 7-9 September 2020. The EuroTier trade show includes animal expertise in all segments such as dairy, swine, cattle, poultry, sheep, fish and goat. Exhibitors will have the opportunity to exhibit the latest offerings in this sector to a growing and dynamic market.

Visitors and exhibitors from all segments of the animal farming industry from more than 40 different countries including South Korea, Taiwan, Thailand, Russia, Malaysia, Japan, Indonesia, Germany, Singapore and others are expected to participate.

Livestock market in China

According to the OECD-FAO Agricultural Outlook 2019, Meat Livestock, DLG Agrifuture Insights 2018 USDA Livestock and Products Annual Report, China is the top producer of pork even after the African Swine Fever (ASF) and second largest poultry producer in the world. Around 56.1mn tonnes of pork consumed in 2019 remain the primary source of animal protein for China's growing population. The report has further added that one in three farmers in China will be investing in their business in the next 12 month.

Animal focus: dairy, swine, cattle, poultry, sheep, fish and goat

EuroTier China 2020 will focus on breeding animals, breeding programmes, trade, reproductive technology; feed and other farm inputs; feed storage, feed production; animal housing and shed construction; keeping and feeding technology; climate and environmental technology; milking and cooling technology; technology for faeces, solid and liquid manure; transport vehicles, transport



A glimpse from 2019 event.

services; processing and marketing; equipment and accessories; management and consulting; veterinary medicine; livestock environment protection.

Under the hosted buyer programme, a resource-intensive selection of the major players in the industry will be given a personal tour of the exhibition, matching products and services to their needs.

The EuroTier China technical programme will cover a wide variety of trending and major topics. The 2020 technical programme topic include:

- 2nd National Animal Breeding Congress (organiser: NAHS)
- EuroTier Dairy Forum on Calf Health

“The 2020 technical programme will cover a wide variety of trending and major topics.”

(organiser: China Dairy Magazine, DLG)

- EuroTier China Dairy Forum on Milk Sheep (organiser: China Dairy Magazine, DLG)
- Fourth Animal Health and Food Safety Congress (organiser: National Animal Health Alliance)
- China Goose Conference (organiser: China Goose Association)
- International Congress on Chinese Medicine Application on the Antibiotics Free Feed (organiser: Chinese Medicine Alliance, CAAS Feed Institute, Beijing Agricultural College)
- International Biogas Forum (organiser: MoRA Biogas Institute, DLG, CBS)
- China Animal Vaccination Conference (organiser: Zhimu Magazine)
- Sino – German Trainee Program Closing Ceremony (organiser: CICOS + DLG)

The visitors' profile include national and international animal husbandry professionals (producers and farmers), cooperatives; processors; traders; associations; ministries and other institutions from the agrifood business sectors. ■

VIV marks 20 years in China



VIV Qingdao 2020

VIV Qingdao 2020 will be held in Qingdao, China from 17-19 September 2020.



Image credit: VNU Exhibitions Asia

VIV carries out a tailored programme to increase the participation value for exhibitors and visitors at this special edition of the show.

ORGANISED BY VNU Exhibitions Asia, VIV Qingdao cooperates with various industry associations, experts, government organisations and media partners to deliver high-level conferences and seminars on swine, poultry meat, eggs, dairy and aquaculture.

During 20 years of presence in China, VIV has served more than 5,000 exhibitors and welcomed more than 350,000 visitors in total. With its dedicated feed-to-food concept, VIV in China attracts Chinese visitors as well as international major buyers and market leaders. VIV Qingdao is held every year which makes it an even stronger international platform in the industry.

Some of the topics for the 2020 programme include profit improvement on layers and eggs; high-tech/ smart farming technology and equipment; animal disease monitoring and biosecurity forum; international sustainable solutions for animal waste treatment and others. The event will organise the Third Farm and Food Integration Forum; International Antibiotic-Free T20 Summit; International Poultry Innovation Outlook Forum; The Second Global Pig Genetics Summit (GPGS 2020) and Aquatic China 2020.

In the past 20 years, VIV attracted more than 5,000 exhibitors and 350,000 professional buyers from more than 80 countries and regions around the world."

Online trade match-making programme for free

VIV Qingdao 2020 provides an online trade match-making system to all exhibitors and pre-registered visitors to connect supply and demand of industry and make online appointments by selecting company profiles, product information and talking online.

HOW TO USE IT?



1. Scan the QR Code to Register:
2. Directly login VIV Qingdao 2020 ONLINE MATACH-MAKING system from confirmation page of pre-registration.
3. Look up company and product information.

VIV Qingdao 2020
September 17-19 | Qingdao Cosmopolitan Exposition, China

ONLINE TRADE MATCH-MAKING SYSTEM
WHEREVER YOU ARE, CONNECT WITH POTENTIAL PARTNERS AND BOOST YOUR BUSINESS ONLINE.

VNU 万福泰 VNU EUROPE

VIV in China 20 Years Campaign

Celebrating its 20 years of networking and business in China in 2020, VIV takes this opportunity to carry out a tailored programme that increases the participation value for exhibitors and visitors at this special edition of the show. Alongside the VIV Qingdao trade platform, a comprehensive 20 Years Campaign will give voice to the show attendees via the following unique features: interviews and stories, 20 year coverage, online workshops, thanks awards and celebration party.

Interviews and stories

VIV Qingdao 2020, together with leading industry media, focus on successful stories, from an international perspective, and on companies' projection plans into the future of China animal husbandry, providing extra exposure to all exhibitors via industry media interviews.

20 Years coverage

Looking back at the historical moments of VIV in China, the show will re-live the top moments of the industry in the last 20 years by sharing exclusive articles and visuals on all VIV social media platforms and through a special 20-years-in-China column on the official VIV Online portal, virtually bringing these 20 years "back to life." The best moments will be presented in a unique video broadcasted before and during the show.



Image credit: VNU Exhibitions Asia

The event will have high-level conferences and seminars on swine, poultry meat, eggs, dairy and aquaculture.

Online workshops

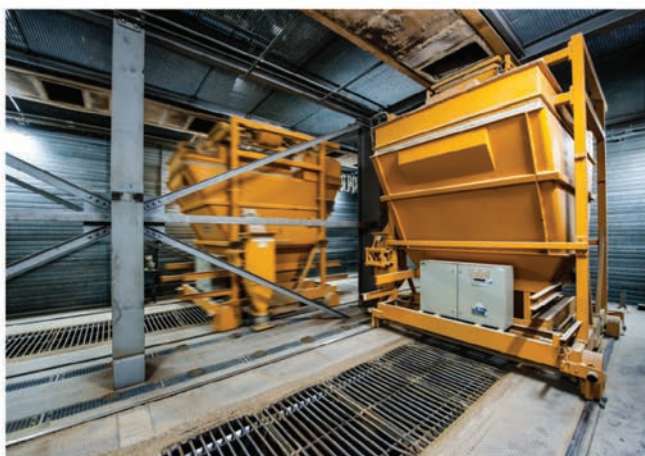
Extending events from offline to online, VIV Qingdao organises for the first time in 2020 a variety of online workshops and other sessions on multiple topics, such as animal welfare, cage free-egg production. The organiser will hold the online conferences during the exhibition period as well. ■

For the latest information, visit the official website www.vivchina.nl



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Hot fogging tips for tropical tree crops



Thermal fogging has been deployed to apply copper fungicides for control of black pod diseases that affect the cocoa pods and to apply insecticide to manage mirid bugs which infest young shoots, leaves and pods.

Image credit: Adobe Stock

Dr Terry Mabbett discusses the use of thermal foggers to apply pesticides to tree and bush crops.

THERMAL (HOT) FOGGING is widely used for public health pest control and is now in demand following the devastating worldwide pandemic caused by COVID-19. However, it is easy to forget that some of the very first hot fogging applications were of fungicide for foliar disease control in tropical tree crops. These are typically grown in monocultures on estates and plantations where the tree and crop canopies are sufficiently closed and microclimatic conditions such that thermal fogging, which is generally thought of as an indoor application, can be used effectively outside.

Thermal fogging is a highly specialised form of pesticide application. Liquid pesticide formulation subjected to ultra-high temperature in the fogging machine is converted into a vapour and released through a fogging pipe into the atmosphere. On interfacing with cold air, the vapour condenses into liquid to form clouds of tiny droplets which collectively form a fog.

Droplets constituting a fog should be no larger than 15 μ (micron) diameter,

although in practice most fogging machines produce some droplets above 20 μ . Smallest size droplets down to 1 μ produce the densest and 'impenetrable' fogs. By any measure of movement, minute droplets of such tiny dimension and mass and released with minimal momentum are prone to drift in air currents and loss into the atmosphere as pesticide drift.

For this reason, the traditional notions about fogging are for its use indoors in poultry houses, crop stores and greenhouses. Air currents generated by fans are often used to move and circulate droplets around the enclosed space, but the fog is eventually left to settle out over a long period in still air at a rate determined by the mass of individual droplets. In practice there is minimal droplet impaction on target surfaces, passive sedimentation being the overwhelming mode of droplet deposition. Experiments showing more than 90 per cent of fogged droplets are deposited on the upper surfaces of leaves are testimony to this fact.

Be that as it may, hot (thermal) fogging

has been successfully used in the field on tropical tree and bush crops in estates and plantations for many decades by taking advantage of special features of canopy structure and atmospheric conditions at certain times of the day. The fog is kept within the canopy and close to the ground for a sufficiently long period to allow droplets to deposit on the foliage for insect pest and disease control as appropriate.

Cocoa and rubber

Cocoa and rubber are two tropical tree crops in which special features of canopy form and structure have enabled thermal fogging to be used for insect pest and disease control. When stands of cocoa are properly managed the trees form a closed and self-shading canopy some five metres above the ground. Further covering and shade is provided by planting *Musa sp* (banana) and over-storey leguminous shade trees like *Erythrina (glauca) fusca* (swamp immortelle) and *E. poeppigiana* (mountain immortelle), used in lowland and higher elevation situations respectively, and *Gliricidia sepia* (mother of cocoa).

Thermal fogging has been deployed to apply copper fungicides for control of diseases like Phytophthora pod rot (black

pod) which affects the cocoa pods and to apply insecticide to manage mirid bugs (capsid bugs) which infest young shoots, leaves and pods. Providing the cocoa canopy is closed, the fog will remain for a long period, allowing droplet deposition mostly by sedimentation on shoot, leaf and pod surfaces. It will also provide a deposit for protection against fungal pathogens and kill insect and mite pests of cocoa by contact or stomach poison (ingestion) actions. Even though well-managed cocoa will form a closed canopy, fogging is best carried out in the early morning or late afternoon under temperature inversion conditions which help to maintain fogs near to the ground for a longer time.

Protection of the aerial portions of rubber trees presents an entirely different problem because most foliage is situated at the crown of the tree, often 20 metres or more above ground. When attacked by diseases such as powdery mildew (*Oidium heveae*) and secondary leaf fall (*Phytophthora species*) rubber planters and estate managers only have two practical application options – aerial spraying by fixed-wing aircraft or helicopter or thermal fogging from the ground.

Mature rubber stands comprise trees growing straight up to display a dense crown of foliage with relatively few leafy side branches. Such canopy structure and formation allows operators to release fog from the ground to be channelled up through the canopy and between the trees by the so-called 'chimney' effect and assisted by natural drafts of air between the trees.

Droplets rising through the canopy impact on the leaves in the crowns of trees, thereby forming deposits of copper fungicide and other fungicide products used

to control these common leaf diseases. The carrier liquids for pesticides used in thermal or hot foggers are oils chosen for their suitability of 'flashpoint,' but an added advantage is the tenacity they impart to fungicide deposits and residues.

Copper fungicides traditionally employed for hot fogging in rubber to control secondary leaf fall (*Phytophthora sp*) are naturally tenacious. And especially when deposited as ultra-fine particles that maximise the adhesive forces generated between fungicide particles and the leaf surface, thereby improving deposit tenacity and resistance to washing off by rainfall. Besides, widespread research conducted over the last 50 years has indicated use of oil-based carrier liquids enhances deposit tenacity, especially when the leaf has a thick and waxy cuticle that is simultaneously lipophilic (oil-loving) and hydrophobic (water repellent).

Banana, oil palm, coconut, tea and avocado

Musa species (banana) was one of the first tropical tree crops treated by fogging more than half a century ago on the French Caribbean Islands of Guadeloupe and Martinique. Pioneer French plant pathologists fogged copper fungicide in oil and mineral oils (banana spray oils) alone to control yellow Sigatoka disease (*Mycosphaerella musicola*) of dessert banana.

Though providing satisfactory control, fogging was largely superseded by the use of low volume mist blowers since they were better able to target the vulnerable unfurling leaf at the apex of the plant. In other parts of the world, aerial spraying has been widely adopted to satisfy both the logistics and economics of growing banana on much larger scales.

More recently, oil palm and coconut have benefited from the use of thermal fogging to control specific insect pests using insecticides dissolved in carrier oils. Unlike cocoa, neither of these crops can present a closed canopy, so it is even more imperative to fog at specific times of the day (usually early morning and late afternoon) under temperature inversion conditions.

Strong and stable temperature inversion conditions will even allow the successful use of fogging to protect low profile bush crops like tea. But care must be taken when fogging tea estates as the hot fogging pipe will be close to the leaves that are the harvestable part of the crop.

Mature rubber trees may be tall, but trees grown in nurseries either as seedlings for grafting (budding) and those cut back (coppiced) each year to produce the bud wood for grafting are no more than two metres tall. Typical rubber estates occupy huge areas and nurseries are correspondingly large to satisfy the demand for young trees. Nursery grown trees typically present a dense mass of foliage largely unsuitable for the use of portable sprayers, whether lever-operated high volume knapsack sprayers or shoulder-mounted low volume mistblowers.

Operators are unable to walk through the rows and spray without self-contamination by brushing against sprayed foliage. This constraint opens the way for fogging copper fungicides carried out under temperature inversion conditions to control foliar diseases like bird's eye leaf spot (*Helminthosporium heveae*) and anthracnose (*Colletotrichum heveae*).

Arthropod pests like the yellow tea mite (*Hemitarsonemus [Tarsonemus] latus*) which cause serious leaf and shoot damage in budwood gardens and seedling beds can also be controlled by thermal fogging using the appropriate insecticide or acaricide (miticide).

More recent and intriguing uses of thermal fogging for disease control are in avocado, with investigative work notably in South Africa. Copper fungicide applied through a thermal fogger provided the same if not a better level of control of cercospora spot or black spot (*Pseudocercospora purpurea*) as traditionally achieved using a low volume mistblower. The same dosage of copper fungicide was applied using the thermal fogger but in a much-reduced spray volume compared with the standard low volume mistblower treatment. ■



More recently, oil palm and coconut have benefited from the use of thermal fogging to control specific insect pests using insecticides dissolved in carrier oils.



Keeping livestock healthy on farm

Changes in regional climate patterns caused by long-term global warming could affect the geographic range of many infectious diseases.

China, Japan, India, South Korea and Australia are showing steady growth for vaccine development.

Image credit: Adobe Stock

THE GLOBAL LIVESTOCK population has seen steady growth over the past few decades. With the demand for livestock products increasing in developing countries, the concern for safe livestock populations is growing.

As the size of the average farm increases across the industry — for poultry, cattle, swine and fish — the risk of the rapid spread of infectious diseases also grows.

According to a paper by Malik, R. M., Yawson, R. M., & Hensel, D. (2009) *“Destination 2025: Focus on the Future of the Animal Health Industry.* St. Louis Park, Minnesota: Deloitte LLC & BioBusiness Alliance of Minnesota,” “Changes in regional climate patterns caused by long-term global warming could affect the geographic range of many infectious diseases, causing some regions to become more suitable for transmission. Ecosystem instabilities brought about by climate changes may stress land use and dislocate species. Those stresses, combined with increasing global trade and travel, could potentially influence the genetics of disease-causing microbes through mutation and horizontal gene transfer, giving rise to new interactions among animal hosts and the disease agents.”

Thus, a germ-free living environment is essential for the health and performance of animals to allow the farmer to keep the

pathogens out and prevent infectious animal diseases, ultimately accelerating production.

Diagnosis an essential part of disease management

Livestock diagnosis has emerged as an essential part of disease management and prevention of outbreaks such as avian influenza and animal tuberculosis. It helps in confirming the health status of animals and identifying pathogens. The early detection, management and control of animal diseases help to facilitate the safe trade of animals and animal products.

Increasing awareness for animal disease diagnosis and increased spending on farm animals are driving the growth of the global livestock diagnostics market, which is expected to grow at a CAGR of 7.8 per

“ A germ-free living environment is essential for the health and performance of animals to allow the farmer to keep the pathogens out and prevent infectious diseases.”

cent from 2019 to reach US\$1.85bn by 2027, according to Meticulous Research. The market growth is primarily driven by factors such as the rising prevalence of zoonotic diseases, rising demand for livestock-derived food products, favourable government initiatives and technological advancements in veterinary diagnostics.

Demand for vaccines is likely to increase as an alternative to pharmaceuticals and as a way to improve production, food safety, animal health and human health. The nature and rate of zoonoses, new and emerging diseases that can spread from animals to humans, mean existing laboratory tests must constantly be improved and new ones must be developed. According to Quince Market Insights, many Asia-Pacific countries such as China, Japan, India, South Korea and Australia are showing steady growth for vaccine development. The report said that the Asia-Pacific is estimated to register one of the highest CAGR for the Foot and Mouth Disease (FMD) vaccine market by 2028.

Combating ASF threat in Asia

In the Asia-Pacific, ASF is spreading at a worrying rate. In September 2019, the disease was confirmed for the first time in South Korea, where six cases were reported within a two week period. The disease has spread to the southeast Asian countries

including the Philippines where 12 cases were recorded in one area in a very short timescale. Now, ASF has been recorded at a rapid rate in China, Vietnam, Cambodia, North Korea, Laos, Mongolia, Hong Kong and Myanmar, creating a profound socioeconomic impact on areas with outbreaks.

MS Schippers' MS KiemKill disinfectant has proven efficacy against the African Swine Fever (ASF), a highly contagious viral disease currently spreading all over the world, particularly in Asia, making this an effective tool in the fight against this pandemic. According to the company, MS KiemKill is working fast with a broad spectrum of action and effective against many bacteria, fungi, yeasts and viruses in pig, cattle and poultry farming.

"It can be used to disinfect boots, equipment, materials and surfaces in animal housing and associated areas. MS KiemKill includes a colour indicator that shows the effectiveness of the disinfectant in



Image credit: Adobe Stock

The risk of the rapid spread of infectious diseases grows with the increase in average farm size.

a solution with water," stated the company in a press release.

A mathematical model developed to combat ASF

A team of scientists in Scotland and Spain has reported that culling and fast removals of animal carcasses are critical for the eradication of the disease.

Professor Andy White and his Heriot-Watt University mathematics research team worked with the SaBio group of the Spanish Game Resources Institute (IREC), UCLM & CSIC (Ciudad Real, Spain) to


develop the new model.

"ASF can rapidly devastate pig populations, there are outbreaks in China, Poland, Belgium and the Baltic states at the moment. In China, it has wiped out around 40 per cent of the country's pig population."

"Our mathematical model was used to understand the different ways that the virus could be transmitted," Professor Andy White said.


"To match the data, we showed that the infection needed to occur in three ways. Through contact between susceptible and infected wild boar, through contact between susceptible wild boar and infected carcasses and via individuals that survive the initial infection, but succumb to the disease after several months."

The model also suggests that it may be easier to control ASF in warmer climates. "Higher temperatures lead to faster degradation of infected carcasses, which also reduces the severity of an outbreak." ■



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KSE's dosing and weighing systems and automation solution

The company provides high-tech factory automation solutions to boost productivity.

KSE PROCESS TECHNOLOGY is developing dosing, weighing and transporting materials and automation solutions to help the manufacturers in the powders, granules and granulates sectors.

ALFRA dosing and weighing systems

KSE's ALFRA dosing and weighing systems have served the animal feed machinery for more than 80 years. The systems allow companies in the powder and granulate processing sectors to measure any product safely, flexibly and efficiently. Applying to micro, medium and macro components in all quantities, the dosing range of an ALFRA machine may vary from one gram to 10,000 kilograms.

From the intake of raw materials to solutions for the distribution of finished product, KSE supplies machinery for each step within the process. Purchasing and ALFRA machine is a good long-term investment as the systems generally have a fifty-year service life.

ALFRA DDW: The ALFRA DDW scale is used for weighing incoming raw materials, internal material transfer and where accurate weighing in a continuous product flow is required.

ALFRA silos: The ALFRA flexible silos are made of a special flexible and inert-coated textile type to prevent bridging and rat holes. In addition, they ensure fast and predictable product supply. Flexible silos offer a higher production capacity and dosing speed than stainless steel silos. They are easier and cheaper to transport and install than solid form silos.

ALFRA BBT: The ALFRA BBT can be used in any production environment to transport powders, granulates or granules in



KSE's ALFRA's hygienic design minimises the risk of contamination.

Image credit: KSE Process Technology

batches. For example, to transport a completely dosed batch to a mixer or to transport finished product to end silos or counter sets. Product damage and contamination are hereby prevented.

ALFRA ACT: The ACT is a safe, infinitely versatile transport between single or multiple sources and destinations. Materials are transported from weighers to mixers and from mixers to packaging machines, including the automatic filling of silos for finished products. There are different sizes of containers, up to a maximum of 5,000 litres. All containers can transport poorly running, cohesive and compressible materials. Safety barriers and security fencing with access locks contribute to the safety of the machine and personnel.

PROMAS ST Process Management Software
PROMAS ST Process Management

Software aims to improve performance and profit to feed factories. The accumulated knowledge in these industries has been applied in the software modules. As a result, the factory (including third-party machines) performs as expected. The producer can produce more tonnes and with higher quality.

“Our PROMAS ST Process Automation Software embodies more than 40 years of experience in animal feed and food production processes. Integrate your factory operations seamlessly with our unmatched expertise in the market. KSE operates globally – wherever you are, we can support you. PROMAS ST ensures incredibly simplified management, operation and maintenance – for simple plants to complex plants with thousands of I/O points,” according to KSE. ■

For more information, visit www.kse.nl

Healthy birds on the farm

Commercial poultry producers are implementing stringent measures to exclude pathogens and ensure health and hygiene in the facilities.



Image credit: Adobe Stock

Cleaning effect should be accurately and reliably done to ensure healthiness of the birds.

AS THE GLOBAL poultry market is expected to recover the COVID-19 impact and grow at a CAGR of eight per cent from 2021 and reach US\$406.9bn in 2023, according to ResearchAndMarkets, poultry processing companies are increasingly adopting cutting-edge health and hygiene management practices to optimise yields.

In regards to this, diseases affecting poultry will have a devastating effect on productivity, trade of birds, meat and other poultry products. There are a few poultry pathogens that are zoonotic and can have an impact on human health. Therefore, commercial poultry producers need to ensure stringent measures in their facilities to exclude pathogens by diagnosing the causes of diseases and recognising an emerging disease rapidly.

Biosecurity for stringent hygiene and disinfection

According to the UN Food and Agriculture Organization (FAO), biosecurity programmes are essential in maintaining poultry health and disease control in developing countries.

Birds should be sourced from a breeder whose bird health status is known to be good and should be of healthy appearance on arrival at the site. The new birds being introduced should be kept separate and be the last fed every day for an initial quarantine and observation period of one month. Potential signs of diseases such as dullness, reluctance to drink or eat,

diarrhoea, respiratory distress, a sudden drop in egg production, inability to walk or stand, abnormal position of head, neck or wings or sudden illness should be immediately reported.

More specialised disease prevention and control measures to support biosecurity on a site include vaccination and medication; eradication for egg-transmitted pathogens such as avian mycoplasmosis, avian leukosis and reticuloendotheliosis viruses; immunogenetic resistance to disease etc.

Cutting-edge hygiene and disinfection technologies

Roxell, one of the leading manufacturers of automated feeding, drinking, nesting and heating systems, is launching Koozii group nest that offers a comprehensive range of nests for broiler breeders and commercial layers. Koozii group nest is for every size of the house and every possible layout, regardless of the regional differences, such as climate, stocking density and the specific needs of the poultry farmer. The animal-friendly expulsion system focuses on preventing

hens from getting injured, which results in lower mortality rates. The fact that the hens cannot stay in the Koozii group nest at night is good for hygiene.

“The nests stay clean, which keeps the eggs clean too. This allows you to stop the hens going broody. The Koozii nest is easy to dismantle when you want to thoroughly disinfect it. The Koozii can help poultry farmers to increase their profitability in the short and long term,” stated the company.

MS Schippers’ MS Megades Novo is foaming, powerful disinfectant that is approved for the control of bacteria, yeasts and viruses in housing and means of transport. Poultry farmers can use the product on their farms to improve biosecurity and health status. According to the company, the product has components from the medical and human food sector and it is safe for materials, despite its strong disinfecting action.

Additionally, the company’s MS TopFoam Power aims to ensure a deep adhesion making high-pressure cleaning with water shorter and more effective, thus ensuring hygiene and health measures inside the farm.

Bart Nijhof, researcher at MS Schippers, said, “This allows us to determine the cleaning effect much more accurately and reliably. The principle is that the equipment cleans a plate with stubborn soiling in a standardised way. This way, we can accurately compare the effect of soaking agents.” ■

Enhanced hatchery hygiene programmes to control poultry pathogens and boost productivity.”

Boosting crop yield with farm sprayers

According to the market analysis by Mordor Intelligence, the Asia-Pacific agricultural sprayers market is projected to grow at a CAGR of 7.1 per cent from 2020-2025.

THE ADOPTION OF tractor-operated sprayers is increasing widely as they are more convenient and save time and energy of the farmer compared to the traditional portable sprayers. With the global population estimated to reach eight billion people by 2025, agricultural operations must be done in a smarter way to feed the growing population worldwide.

According to industry experts, leveraging technologies are critical to use agricultural land more efficiently. Farmers today have to control for bugs, weeds and many other plant-borne diseases and the large-sized sprayers can help growers to target various farming applications. The average farm size is, therefore, leading to taking on the advanced and upgraded large sprayers over the inefficient older sprayers to meet the farm need, thereby increasing its market growth from 2020-2025.

Precision agricultural adoption driving automated sprayer market

With the adoption of precision agriculture practices throughout the Asia-Pacific region, the farmers in the region are increasingly adopting scalable technological solutions to boost yields. The use of sensors, satellites and other data-collection platforms are becoming popular as they are less expensive and more effective for smallholder farms through service providers. Today, precision agriculture and automation are becoming commonplace, from aerial crop monitoring to the automated targeted spraying. The precision agriculture market is growing exponentially and, according to forecast reports, will be worth more than US\$10bn by 2025.

“Precision technologies will continue to be adopted by ASEAN at a faster pace than developed agriculture economies because they can leapfrog investment in expensive



Today, precision agriculture and automation are becoming commonplace, from aerial crop monitoring to the automated targeted spraying.

Image credit: Adobe Stock

mechanisation that carries debt and locks agriculture systems in the status quo for large-area cropping systems,” said David Frabotta, programme chair for Precision Application Asia Conference, held in Bangkok in November 2019. “Smallholder farmers can be nimble about the technologies they adopt and can migrate from virtually no technology to cutting-edge applications in a very short time. The Uber economy is creating instant access to mechanisation and service providers and smartphones provide agronomic diagnostics and decision support in the time it takes to download an app. It’s a formative time for agriculture systems around the world,” Frabotta added.

Thus, technological advancements have been a common factor driving the sprayers market in the Asia-Pacific market. According to the market analysis by Mordor Intelligence, the Asia-Pacific agricultural sprayers market is projected to grow at a CAGR of 7.1 per cent from 2020-2025, with China, Japan and India leading from the front in the cutting-edge sprayer adoption.

Cutting-edge product launches

Companies in the Asia-Pacific region are involved in investing heavily in R&D activities to launch more advanced products. For instance, Goldacres Pty Ltd launched a high-specification 4,000 litres

self-propelled sprayer designed primarily for vegetable crop protection. Mahindra & Mahindra’s Grapemaster Bullet is a tractor-mounted sprayer for Y-shape and Mandap vineyards that aims to provide performance with 17.9 kW (24 HP) and above tractors.

Major drone manufacturers such as DJI, XAG and Polardrone are expanding into Thailand, Vietnam, Myanmar, Indonesia and other important agriculture economies with their precision spraying and other technologies to help farmers boost productivity. Japanese manufacturer Yanmar R&D Europe (YRE) is focusing on a variety of field-based studies to bring added value to the agriculture industry and attract a new generation of workers to the land. One of Yanmar’s roles involves developing control systems for the multipurpose robotic arm for mobile manipulation including precision spraying in collaboration with other partners.

Senterra, a Minneapolis-based company, is leveraging top-quality GPS + INS (inertial navigation system) technology together with multispectral cameras and AI to create cutting-edge precision farming sensors. The company’s precise weed and pest maps serve as an input for modern large-scale sprayers which are designed to spray with decimeter precision. Spraying only where needed saves cost and reduces the environmental impact of chemical and fertiliser use. ■

Aquafeed innovation boost Asian production

Consumer demand for convenience and processed seafood offers profitable growth prospects and diversification to the region's aquafeed sector.

THE AQUAFEED MARKET is projected to reach US\$71.6bn, recording a CAGR of 7.2 per cent from 2020-2025, according to MarketsandMarkets research. One of the major factors driving the aquafeed market is increasing seafood consumption and increasing seafood trade.

The fishmeal segment is projected to be growing at the fastest rate during the forecast period, owing to the depleting amount of raw materials required for its production and increasing price levels. Fish farming in ponds, lakes, rivers and coastal waters is increasing to fill the gap between demand and supply. The increase in fish farming activities and aquaculture has led to increased demand for fish feed.

Asia-pacific advancing innovative feed manufacturing technologies

The Asia-Pacific aquafeed market is majorly driven by China and Vietnam. China is among the leading producers of aquafeed in the Asia-Pacific region. The processed seafood market in the region is undergoing significant transformation in response to the rapid urbanisation and diet diversification.

Companies in the Asia-Pacific region are investing in projects to provide innovative feed manufacturing solutions for the growth of aquafeed products and diversify the region's food sector. For instance, Adisseo and Calysta will build the first commercial-scale FeedKind production facility in Chongqing's Changshou district, China, to develop a major business supplying aquafeed ingredients in Asia.

The first phase is expected to start operating in 2022, delivering 20,000 tonnes of FeedKind protein per year. Hao Zhigang, chairman of Bluestar Group and Adisseo,



Fish farming in controlled conditions or under artificial settings have become an easier way to increase fish production and its availability for consumption.

said, "We will continue to give our strongest support to Calysseo in building the first high-tech, safe and environmentally-friendly manufacturing unit for FeedKind in Chongqing."

"We believe that project will be completed and put into operation, and will rapidly realise its returns, bring real benefits to consumers and provide more innovation capabilities for the industry," Zhigang further added.

GreenFeed Vietnam Corporation, a feed producer and breeding supplier, has designed an advanced proportioning software, which helps in producing the nutritious feed at a reasonable cost. They specialise in providing breeders in Vietnam with information regarding rapid weight gain, low feed consumption, prolificacy, high resistance to the environment and livestock conditions, which is expected to provide a positive outlook for the feed industry in the coming years.

In Indonesia, Cargill Aqua Nutrition has launched its first shrimp feed Harvestar that aims to meet the needs of local farmers for a more efficient shrimp feed to achieve a better yield. The company delivered the Harvestar feed product from its production facility in Serang, Banten, Indonesia, to customers in Lampung, South Sumatera, and West Java on 24 April. The feed, designed for vannamei shrimp, is made with 'premium-quality' raw materials and an immunostimulant.

Local content for sustainable development

As there is no commercial aquafeed mill in Panay Island in the Philippines, feed companies have to ship their supply from Luzon, more than 300km to the north by sea and land. Edwin Mayo, chair of the Panay Aqua Farmers Cooperative (PAFC), said that transporting feeds from feed millers in Luzon costs an additional US\$2 per bag so they are hoping to produce feeds locally using local ingredients such as corn which is abundant in their province.

To address this concern, the Southeast Asian Fisheries Development Center (SEAFDEC) is finding ways to soften the impact of COVID-19 on the aquaculture industry in Capiz province, the seafood capital of the Philippines, on the possibility of establishing a local aqua feed mill in Capiz and producing feeds using local ingredients to lower the cost.

Speaking to a webinar organised by the Aquaculture Nutritionists Network and Jefo, Dr Albert Tacon outlined the challenges faced by the aquafeed sector and the ways to tackle these challenges. According to Tacon, global aquafeed players need to focus on developing quality ingredients and live feeds; reducing the import of raw materials; investing in greater R&D facilities and using local ingredients for the sustainable development of the region. ■

ANNUAL AGRICULTURAL BUYERS' GUIDE

2020

Section One - Supplier listings by categories
Section Two - List of suppliers
Section Three - Contact details of agents in Asia

PLEASE MENTION FAR EASTERN AGRICULTURE WHEN CONTACTING YOUR SUPPLIERS

Section 01

Cattle
Dairy Processing
 Evans Vanodine International PLC
Exports
 Henke-Sass, Wolf GmbH
Feed
 Unipoint AG
Health Products
 Evans Vanodine International PLC
 Henke-Sass, Wolf GmbH
 Unipoint AG
Veterinary Equipment
 Henke-Sass, Wolf GmbH

Chemicals
Disinfectants
 Evans Vanodine International PLC
 Intraco Ltd. n.v
Fertilizers
 Omex Agrifluids Ltd.
Formulation Agents
 Omex Agrifluids Ltd.
Minerals
 Omex Agrifluids Ltd.
Plant Growth Regulators
 Omex Agrifluids Ltd.

Crops
Cultivation Equipment
 Monosem
Drilling, Planting Equipment
 Monosem
Planters
 Monosem
Harvesters
 CNH Industrial Services (Thailand) Ltd
Horticultural Equipment
 Swingtec GmbH
Integrated Pest Management
 Swingtec GmbH
Processing, Cassava
 CNH Industrial Services (Thailand) Ltd
Processing, Rice
 CNH Industrial Services (Thailand) Ltd
Sprayers, Hand
 GOIZPER GROUP - Goizper Spraying Business
Sprayers, Knapsack
 GOIZPER GROUP - Goizper Spraying Business
Sprayers, Rotary Atomizer
 GOIZPER GROUP - Goizper Spraying Business

Sprayers, ULV
 GOIZPER GROUP - Goizper Spraying Business
 Swingtec GmbH
Spraying Accessories
 GOIZPER GROUP - Goizper Spraying Business
Sugar Processing
 CNH Industrial Services (Thailand) Ltd
Tractors
 CNH Industrial Services (Thailand) Ltd

Feed
Additives
 Intraco Ltd. n.v
 Morningbio Co., Ltd.
 Unipoint AG
Concentrates
 Intraco Ltd. n.v
Premixes
 Intraco Ltd. n.v
Supplements
 Morningbio Co., Ltd.
 Unipoint AG
Vitamins
 Morningbio Co., Ltd.

Other
Analytical Services
 Omex Agrifluids Ltd.
Animal Health
 Henke-Sass, Wolf GmbH
 Malaysian Vaccines and Pharmaceuticals Sdn Bhd
 Unipoint AG
Biological Crop Protection
 Omex Agrifluids Ltd.
Biotechnology
 Omex Agrifluids Ltd.
Fogging Equipment
 Swingtec GmbH
Laboratory Equipment
 Henke-Sass, Wolf GmbH
Micronutrients
 Omex Agrifluids Ltd.
Mould Inhibitors
 Unipoint AG
Odour Control
 Unipoint AG
Pest Control
 Omex Agrifluids Ltd.
Seaweed Extract
 Omex Agrifluids Ltd.
Silos
 KSE Process Technology B.V.

Sorting Equipment
 Marel
Veterinary Instruments
 Henke-Sass, Wolf GmbH
Weighing Equipment
 Marel
 KSE Process Technology B.V.

Pigs
Exports
 Henke-Sass, Wolf GmbH
Feed
 Unipoint AG
Health Products
 Evans Vanodine International PLC
 Henke-Sass, Wolf GmbH
 Malaysian Vaccines and Pharmaceuticals Sdn Bhd
 Unipoint AG
Pest Control
 Swingtec GmbH
Veterinary Equipment
 Henke-Sass, Wolf GmbH

Poultry
Consultancy
 Meyn Food Processing Technology
Evisceration, Portioning
 Marel
 Meyn Food Processing Technology
Feed
 Unipoint AG
Handling Equipment
 Meyn Food Processing Technology
Health Products
 Evans Vanodine International PLC
 Henke-Sass, Wolf GmbH
 Malaysian Vaccines and Pharmaceuticals Sdn Bhd
 Unipoint AG
Housing
 Intraco Ltd. n.v
Poultry Vaccines
 Malaysian Vaccines and Pharmaceuticals Sdn Bhd
Processing
 Marel
 Meyn Food Processing Technology
Slaughtering Equipment
 Marel
 Meyn Food Processing Technology
Veterinary Equipment
 Henke-Sass, Wolf GmbH

Section 02

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At KSE Process Technology you can find everything your factory needs to dose, weigh and transport your materials. As a manufacturer of powders, pellets and granules, you can also contact us for high-tech factory automation. KSE is a family business that has grown steadily over the last 40+ years to become a worldwide concern.

The portfolio of ALFRA dosing and weighing solutions covers everything from micro up to macro components, with dosing rates from 20 grams to above 6,000 Kg. KSE's future-proof PROMAS ST process control system completely automates animal feed and food industry factories. Remote support with on-line diagnostics and a 24-hour helpdesk are available to our customers around the world. Although many of our products are standardized, all our systems can be optimized to your requirements with different options and modifications.



Malaysian Vaccines and Pharmaceuticals Sdn Bhd

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Web: www.mvp.com.my
E-mail: drfarah@mvp.com.my
MVP, "The sole veterinary vaccines manufacturer in Malaysia" produces MyVAC brand of quality live and inactivated vaccines that are safe and effective as protection against debilitating diseases such as Newcastle Disease (ND), Infectious Bronchitis (IB), Oumboro Disease (IBD), Foul Pox (FP), Egg-Drop Syndrome Disease (EDS), Duck Pasteurellosis (DP), and Foul Cholera (FC). The vaccines are produced in accordance to GMP that strictly requires stringent standards of safety, quality and efficacy.

Agents:

Malaysia - Zagro Chemicals Sdn Bhd
Vietnam - Vietnam Greenvet Joint Stock Company
Indonesia - PT Biomedical Technology Indonesia
Pakistan - Al-Asar Enterprises
Philippines - Universal Robina Corporation
Hong Kong - Vai Lung Hong Agribusiness Ltd



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Marel is the world's leading supplier of innovative poultry processing systems and services for all processing capacities, from 500 to 15,000 bph, and for all process steps, from live bird handling to further processing. In cooperation with our customers we innovate the industry, driving excellence in performance, food safety and sustainability.

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Singapore - Marel Singapore Pte Ltd
Thailand - Marel Poultry SE-Asia
Vietnam - Marel Vietnam



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At Meyn, we are 100% dedicated to support poultry processors reaching their highest potential. From live bird handling to deboning. Our poultry professionals are located all over the world. To stand side by side with our customers. Physically, culturally and in a business sense.

Agents:

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Malaysia - Euroasiatic Jaya Sdn Bhd
Malaysia - Poullive Sdn Bhd
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Vietnam - Euroasiatic Jaya P.T.



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French Company, whose head office is in Largeasse (France), specialized in the manufacture of agricultural machinery and in particular, precision planting for maize, rice, soya, sorshum, peanut, sunflower, etc and cultivating equipment



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Korea - Daeyoung GS Co. Ltd.
New Caledonia - Austral Import
Papua New Guinea - Brian Bell Chemicals
Philippines - Alog & Company Inc.
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COVID-19 impact on Asia-Pacific agriculture and role of mechanisation



Farm mechanisation can play a major role in supporting countries to respond to the crisis.

Image credit: Adobe Stock

A webinar organised by the UN Economic and Social Commission for Asia and the Pacific (ESCAP-CSAM) in June reiterated the major role of regional exchange and cooperation for the development of agriculture sector.

THE IMPACT OF the COVID-19 pandemic on the agricultural sector has brought unprecedented challenges to the rural population in Asia and the Pacific who are predominantly engaged in agricultural activities.

The pandemic threatens to not only stagnate progress towards the Sustainable Development Goals including Goal 1 (No Poverty) and Goal 2 (Zero Hunger), but has the potential to reverse the gains made in recent years, thus jeopardising the global community's shared promise to 'leave no one behind.'

Sustainable agricultural mechanisation can play a crucial role in supporting countries in the region to respond to the crisis.

A webinar on Impact of COVID-19 on Agriculture in the Asia-Pacific Region and Role of Mechanisation was organised on 18 June 2020 by the Centre for Sustainable Agricultural Mechanisation of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP-CSAM).

The webinar discussed how the COVID-19 pandemic has impacted the agricultural sector in Asia and the Pacific, and how the region can support recovery and build resilience to future crisis through sustainable mechanisation.

"In the span of a few months, there is virtually no aspect of human life that has been left untouched by the COVID-19 pandemic. As is so often the case with crisis, the pandemic has hit the poor, the vulnerable and the marginalised disproportionately hard, depriving people of

■ The pandemic has brought unprecedented challenges to the smallholder farming community in the Asia-Pacific region."

lives as well as livelihood," said Kaveh Zahedi, deputy executive secretary of ESCAP.

In the context of impact of COVID-19 on agriculture, he remarked, "Sustainable agricultural mechanisation is among the solutions that can strengthen the resilience of the farming community to crisis."

During the webinar, experts from Thailand and Sri Lanka presented country-level perspectives on the impact of the pandemic on agriculture including, for instance, difficulties in timely marketing and sale of agricultural produce and restrictions on transportation and trade. Panelists from the Republic of Korea and China highlighted the potential of innovation, particularly in the areas of ICT-enabled mechanisation and post-harvest mechanisation, in enabling recovery from the crisis and building long-term resilience of farmers in the region.

The webinar, which was broadcast live on YouTube to more than 1,000 viewers, concluded by underscoring the need for response measures to be inclusive and to address the needs of smallholder farmers, rural women, elderly workers and youth. It reiterated the major role of regional exchange and cooperation during this time. ■

Cambodia signs MoU with Japan's Yamato Green for 'safe vegetable'

THE MINISTRY OF Agriculture, Forestry and Fisheries of Cambodia has signed a Memorandum of Understanding (MoU) with Japan's Yamato Green on the development of the 'safe vegetable' sub-sector for the domestic market and export.

The MoU was signed for various purposes. The deal will strengthen the Cambodia-Japan friendship and cooperation with agricultural sector development.

Secondly, the contract will strengthen and expand investment cooperation and develop the production of vegetable cultivation processing, packaging exports to the domestic and overseas markets through the use of technology from Japan.

In addition, the agreement will help improve the quality of vegetable safety and



Image credit: Adobe Stock

The MoU provides the farmers with a golden opportunity to change their production habits.

the continuity of supply to meet the needs or according to consumer and export market preferences. The pact will enhance production capacity (use of value-added chain and market trends) and the use of inputs.

Cambodian minister of agriculture, forestry and fisheries Veng Sakhon said the MoU reflects the Japanese government's willingness to financially and technically support the development of the Cambodian vegetable production network and shape it to take advantage of the needs of the market.

"They emphasise the modernisation of all vegetable production chains, and the transformation of family operations into agro-industrial production to ensure quantity, supply, quality and security for domestic demand and export," he said.



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Preservation tech is crucial to driving higher margins across agrifood value chain

The report has outlined important protection and preservation technologies to help companies achieve significant reductions in pre-consumer food loss and post-consumer food waste.

FOOD LOSS AND waste (FLW) causes an estimated US\$1 trillion in economic losses globally each year, constituting major humanitarian and economic crisis, leading the United Nations to set a goal of reducing global FLW by 50 per cent by 2030, according to Lux Research's report "Preserving the Food Chain"

The report has outlined important protection and preservation technologies to help companies achieve significant reductions in pre-consumer food loss and post-consumer food waste.

"Preservation and shelf life extension technologies are important across the agrifood and health ecosystems, something the pharmaceutical and pesticide industries have long understood," stated Harini Venkataraman, PhD, lead author of the report and research analyst at Lux.

The report documents best-in-class protection and preservation technologies across six segments of the agrifood value

“The penetration and adoption of biological and digital tools will play an important role in shaping the future of preservation tech,” said Harini Venkataraman.

chain and highlights emerging technologies companies need to invest in now to take full advantage of the benefits of preservation tech, including novel natural preservatives, edible coatings and active packaging technologies. "The penetration and adoption of biological and digital tools will play an important role in shaping the future of preservation tech," added Venkataraman.

Lux Research predicts developments in

all six segments of the value chain in the coming three years. On farms, integrated crop protection will become industry-standard, while post-harvest wax coatings will lose dominance to a mix of bio-based coating solutions. Within food production, biopreservation methods will achieve performance parity with conventional preservatives. Distributors will adopt digital tools more liberally to manage supply chains, and within homes, expect point-of-use sensors to flourish, driven by consumers' concerns about the safety and reliability of purchased products.

The COVID-19 pandemic has enhanced the need for supply chain resiliency, which will continue to drive innovation in a persistent fashion long after the peak of the global crisis passes. Emerging from this crisis will require effective preservation technologies from farm to fork to mitigate demand shocks, improve margins and reduce overall FLW. ■



Image credit: Adobe Stock

Preservation technologies can help companies achieve significant reductions in pre-consumer food loss and post-consumer food waste.

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