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Gulf Agriculture is a publication from Matt Media Intl. Ltd. (UK) and is read by agri professionals, farm managers & owners, landscape consultants, contractors, agri-equipment suppliers, horticultural engineers, greenhouse managers, agronomists, veterinary surgeons, ministries, poultry & dairy breeders, importers, distributors, manufacturers and wholesalers of food and agri inputs.

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Printed and published by
Matt Media© Intl. Ltd.(U.K.) 2024



Cover Photo Courtesy: lyris (formerly RedSea)

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KROHNE CONDUCTS IMPACTFUL WATER INDUSTRY WORKSHOP IN QATAR

KROHNE, a leading global provider of industrial measurement technology, recently hosted a successful customer workshop in Qatar. The event brought together international experts and key stakeholders in the water and wastewater management sectors to explore the latest advancements in measurement solutions.

The workshop, conducted in collaboration with KROHNE's long-term partner in Qatar, Field Industrial Solutions, highlighted how KROHNE's innovative technologies address critical challenges in water and wastewater management across the Middle East and Africa (MEA) region. Key aspects covered included:

- **Optimizing Water Resource Management:** KROHNE solutions enable precise monitoring and control, empowering data-driven decisions for sustainable water use.
 - **Ensuring Water Quality:** Advanced measurement technologies guarantee water quality compliance and safeguards public health.
 - **Minimizing Losses:** KROHNE's accurate flow measurement tools help detect and mitigate water leaks, promoting resource conservation.
 - **Enhancing Process Efficiency:** Smart sensors and integrated systems streamline operations, reducing costs, and improving reliability in water and wastewater treatment plants.
- Qatar's investment in water technology and knowledge exchange sets a vital example

for the wider region. This workshop underscored the significance of such initiatives in addressing shared water challenges and driving sustainable development and should open the doors for further conversations to achieve global sustainability goals in conserving and protecting vital water supplies for a growing population.

Quote from Frank Janssens, VP Middle East and Africa, KROHNE, "Collaboration and knowledge sharing are essential to building a resilient water future in the Middle East and Africa. KROHNE is committed to partnering with industry leaders, like our trusted partners at Field Industrial Solutions in Qatar, to deliver innovative solutions that create long-term value for our customers and the communities they serve."

DUBAI SME SUPPORTS HATTA'S AGRICULTURAL ENTREPRENEURS AT INAUGURAL HATTA FARMING FESTIVAL

The Mohammed bin Rashid Establishment for Small and Medium Enterprises Development (Dubai SME), a subsidiary of Dubai Department of Economy and Tourism (DET), participated at the first ever Hatta Farming Festival,

hosting a workshop and showcasing entrepreneurs and small and medium enterprises (SMEs) from Hatta's agricultural sector. Held from 23-27 February at Hatta Hall, the inaugural festival was launched to inspire and

empower local farmers in one of the UAE's oldest agricultural regions and educate the community about environmental practices.

Further cultivating

agricultural enterprise, Dubai SME delivered a workshop to introduce the services and privileges it provides as support for entrepreneurs and SME owners and to encourage them to launch projects. Services from Dubai SME included supporting the issuance of 45 fee-exempt commercial licences for startups in Hatta to date. To showcase Dubai SME projects in the region, participants including Muhammad Khalfan Humaid Al-Mutaiwei (Alberi Cafe), Ahmed Mutawa Muhammad Khalfan Al-Badwawi (Black Rose Cafe), and Abdullah Jumah Mohammed Ahmed Al Yamahi (Fritz Café L.L.C) provided services at the festival.



NEW AGRICULTURAL SOLUTIONS NEEDED TO SECURE INVESTMENT IN SAUDI ARABIA FOOD SECURITY, WARNS EXPERT

Cutting-edge agriculture solutions to save water, cut inputs and grow profits are needed to give investors the confidence to invest in Saudi Arabia, claims a leading agricultural engineer.

And Cesar Sakr, of leading agricultural supplier ARTAT Trading Company in Riyadh, warns that investment will be critical to the Kingdom achieving its 2030 food security ambitions.

With a rapidly growing population and economy, Saudi Arabia has bold ambitions to unlock thousands of acres of

land for food production while also creating huge green spaces and developments.

However, these ambitions face major challenges, particularly when it comes to access to water. Despite significant investment in desalination, wastewater and irrigation technologies, agriculture will remain the biggest consumer of water and new cutting-edge solutions are needed.

Crop production specialist Cesar says: "Saudi Arabia is one of the most water stressed nations on earth, and we need to find ways to maximise crop production while minimising water use and crop inputs.

"We need significant investment to achieve our food security ambitions. To secure that investment, we will need

new solutions for farmers and growers to help them maximise crop outputs, while minimising inputs so they can return a profit and give investors confidence in agriculture."

ARTAT Trading Company is a leading agricultural supplier in the animal production domain but has created a new division focussed on crop production, aligning itself with the Kingdom's ambitions for self-sufficiency in food production. The business has been developing a network across the Kingdom with Engage Crop Solutions over the past six months.

One of the first new technologies it is bringing to Saudi Arabia is a transformational water technology called Aqualatus that allows growers to cut their water use by half while still maintaining crop quality.



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DUBAI MUNICIPALITY ACHIEVES A NEW RECORD IN TREE PLANTING IN DUBAI DURING 2023

Dubai Municipality successfully planted more than 185,000 trees in the Emirate in 2023 as part of its afforestation initiative, with an average of 500 trees daily, increasing the total green area by 234 hectares, up from 170 hectares in 2022.

This achievement highlights the Municipality's commitment to fostering sustainable development and preserving the environment for future

generations. The seeks to increase green spaces in residential areas, urban areas, as well as main and secondary roads and bridge intersections. The initiative further places a major emphasis on enhancing air and soil quality, in addition to elevating the city's aesthetic appeal.

H.E. Dawoud Al Hajri, Director General of Dubai Municipality, emphasized that the Municipality's Green Dubai's initiative is a year-round effort and adheres to comprehensive engineering and planning standards, which are in line with Dubai's modern lifestyle and its urban and

architectural development and supports the vision of the wise leadership in making Dubai the best city for living in the world.

Furthermore, H.E. also stated that the initiative reflects Municipality's efforts to increase green spaces, improve urban and natural environments, and promote environmental sustainability, thereby positioning Dubai as an aesthetically pleasing, sustainable, and appealing city. HE added that the objective is to provide a better living environment for residents by enhancing the quality of life and overall wellbeing.

EDAMAH AND BADIA FARMS PARTNER ON INNOVATIVE NEW AGRICULTURAL PROJECT IN BAHRAIN

Bahrain Real Estate Investment Company (Edamah), the real estate arm of the Kingdom's sovereign wealth fund, Bahrain Mumtalakat Holding Company (Mumtalakat), announced a strategic partnership with Badia Farms, a leading controlled environment food producer, which will invest several million dollars in a new sustainable farm in the Kingdom of Bahrain. The initiative will enhance Bahrain's agricultural industry by introducing innovative sustainable farming practices from an experienced agricultural producer.

Badia Farms is a mission-driven sustainability company that focuses on the development and production of different varieties of fruits, vegetables, and plants. Part of the Bahrain-based Green Corp food investment management platform backed by Gulf Islamic Investment group (GII), with its US\$4.5 billion assets under management (AUM), Badia Farms was the first commercial high-tech vertical farm in the Gulf region to produce fresh fruits & vegetables year-round. Its objective is



to transform conventional farm growing methods across the GCC through technology, science and innovation.

Badia Farms secured the land for its Agricultural Oasis in Hamala, Bahrain through a competitive bidding process on the Government Land Investment Platform, emerging as the successful bidder for the plot. Under the agreement, Badia Farms will lease an area of 50,000 sq.m. from Edamah to implement sustainable and urban farming practices, producing a diverse range of fresh fruit and vegetables.

The project will implement the latest hydroponic farming techniques, while recycling water and biodegradable matter for re-use on the project and using solar panels to create clean, green power. Its hydroponic systems in controlled environments (such as greenhouses) will ensure year-round crop production, reducing dependence on seasonal variations, enhancing Bahrain's food security and addressing the challenges of limited arable land and water scarcity.



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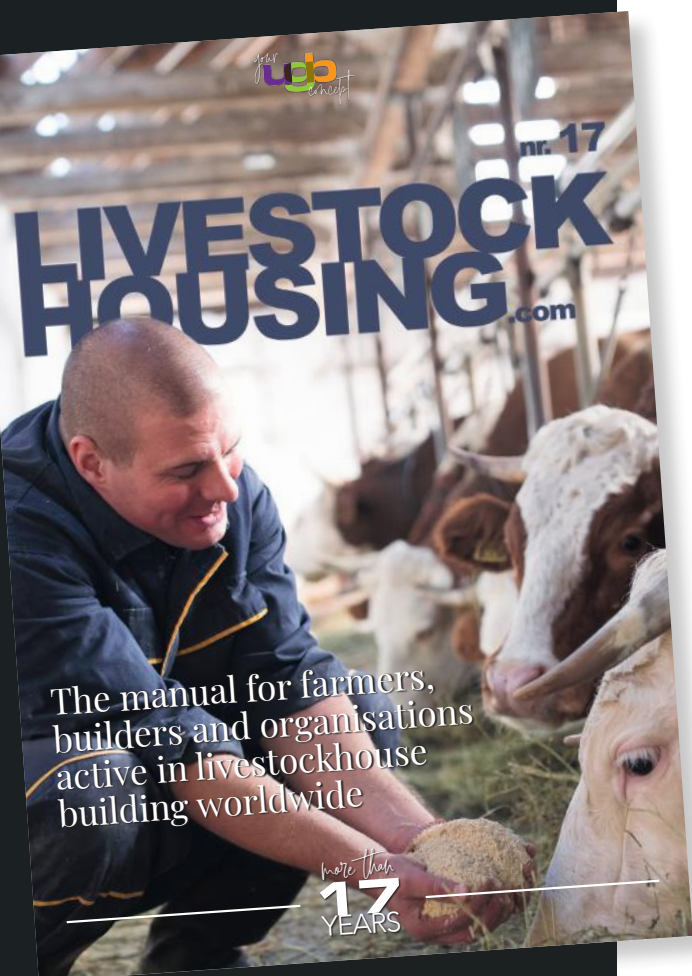
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FPC FUTURE EXPO, CO-LOCATED WITH LAMMA ANNOUNCED FOR 2025

The Fresh Produce Consortium (FPC) have officially announced their forthcoming FPC FUTURE EXPO 25, a landmark event to be co-located with LAMMA and set to redefine the agricultural landscape.

Scheduled for 15-16 January 2025, FPC FUTURE EXPO is poised to be an epicentre of agritech innovation, offering an exclusive glimpse into the technologies reshaping horticulture.

With its focus on cutting-edge agritech innovation, robotics, automation, vertical farming, AI and more, this event is not just a gathering but a window into the future, spotlighting the most advanced technological breakthroughs in the industry.

Over 40,000 attendees will have the opportunity

to experience first-hand the latest developments in AI-driven innovations, vertical farming trends, sophisticated robotics and ground-breaking biotechnological advancements.

More than just an exhibition, the expo is a dynamic forum for the exchange of ideas and knowledge.

Renowned industry experts will take the stage throughout the two days to discuss the latest trends and breakthroughs in agritech innovation, offering insights into the future of high-tech horticulture. Their perspectives will not only inform but inspire, painting a picture of a technologically advanced agricultural future.

"FPC FUTURE EXPO 25 is a must-attend for anyone passionate about being at the forefront of agritech advancement and is a pivotal moment for the horticulture industry," says FPC's Chief Executive, Nigel Jenney.

FRANCE WILL BE HOSTING THE UPCOMING IDF WORLD DAIRY SUMMIT

Paris will be hosting the International Dairy Federation (IDF) World Dairy Summit from October 15 to 18, 2024. It is a milestone event which brings together the entire dairy community. This event provides an opportunity to share success stories with all the different stakeholders (dairy farmers, processing companies etc.) as well as the challenges facing the business (economic and social crises, changing societal expectations from consumers and ecosystems) and join forces to achieve a resilient, innovative and attractive dairy sector.

The summit aims to strengthen its members' resolve to find increasingly sustainable solutions to meet growing demand. This goal is embodied in this year's chosen theme: "Proudly

committed to a sustainable world". The 4-day summit will be attended by 53 delegations hailing from all corners of the globe. The agenda will include visits to dairy farms and processing plants across France to showcase the very best the French dairy sector has to offer.

The 2024 Summit is of strategic importance at a time when the dairy sector, its markets and stakeholders are directly impacted by geopolitical risks, climate change, rising raw material costs and the depletion of natural resources.

The event will provide an opportunity to share success stories with all those involved in the dairy business (farmers, processing companies etc.) as well as the challenges they face (economic and social crises, changing societal expectations from consumers and ecosystems) to achieve a resilient, innovative and attractive dairy sector.

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SUCCESSFUL RESULTS FOR THIS YEAR'S FRUIT LOGISTICA

FRUIT LOGISTICA remains the heartbeat of the fruit and veg business: more than 66,000 visitors, alongside a further 24,000-plus exhibitor staff and 450 media representatives, took part in the show. 2,770 exhibitors presented their innovations.

This year, FRUIT LOGISTICA again positioned itself as an international meeting place for the industry - four out of five trade visitors came from abroad. With visitors from 145 countries and exhibitors from

94 nations, Fruit Logistica was more international than ever.

The world's leading fruit and veg industry show brings together the trade's top decision-makers, with attendance from the entire international value chain. More than 70 per cent of this year's trade visitors were decision-makers. The opportunity to meet with old friends and new potential partners came at a crucial time, with several major challenges such as cost pressure and climate change continuing to make life tough for the international fruit and vegetable industry.

"So many of the visitors and exhibitors we spoke to said it

was a really great feeling to be back at FRUIT LOGISTICA and catch up with so many people from all over the world in one place," said event director Kai Mangelberger. "For us, that's a really pleasing result, and makes us even more determined to build on that success. Especially in challenging times like these, face-to-face meetings at Fruit Logistica are more important than ever. With this in mind, it is certainly good news that we will not be increasing stand rental prices in the coming year."

The next FRUIT LOGISTICA will take place from 5 to 7 February 2025 in Berlin.

EMIRATES FLIGHT CATERING FULLY ACQUIRES BUSTANICA, THE WORLD'S LARGEST INDOOR VERTICAL FARM



Emirates Flight Catering, one of the world's largest catering operations, has fully acquired Emirates Bustanica, formerly called Emirates Crop One, and its consumer brand Bustanica, the world's largest indoor vertical farm.

This strategic move establishes Emirates Bustanica as a fully UAE-owned company, helping sustain the country's vision of enhancing food and water security and its agricultural capabilities. The acquisition empowers Emirates Bustanica to leverage its local expertise and the latest tech know-how to meet the growing demands of the market.

Located near Al Maktoum International Airport at Dubai World Central, Bustanica's 330,000sqft facility has the capacity to grow more than 1 million kilograms of exceptional quality leafy greens a year, equivalent to 3 tonnes daily, while using 95% less water than conventional agriculture.

Operating under the brand name Bustanica, the produce is available across all major retailers in the UAE such as Spinney's, Waitrose, Carrefour, and Choithrams. Customers on Emirates and other airlines enjoy this farm-fresh

produce in their salads and meals.

Since its launch in July 2022, Bustanica has become a part of UAE's dinner table conversations, thanks to its growing range of leafy greens, herbs and microgreens that can and should be eaten straight out of the box – even tap water can contaminate the produce. Bustanica's produce is grown without pesticides or herbicides, and is 100% clean, fresh, and nutrient-rich. Bustanica produces a variety of lettuce, spinach, parsley, and kale.

Bustanica is driven by powerful technology – machine learning, artificial intelligence, and other patented technologies – and a highly specialised in-house team that includes agronomy experts, engineers, horticulturists, and plant scientists.

More recently, Emirates Bustanica was a preferred produce supplier for COP28, a recognition of its commitment to sustainability and environmental responsibility.

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JOÃO MARCELO GOMES NAMED PRESIDENT OF KEMIN ANIMAL NUTRITION AND HEALTH - EMENA

Kemin Industries, a global ingredient manufacturer that strives to sustainably transform the quality of life every day for 80 percent of the world with its products and services, has appointed João Marcelo Gomes as President of Kemin Animal Nutrition and Health – EMENA (Europe, Middle East, and North Africa) following the promotion of Dr. Stefaan Van Dyck to Group President – Animal Nutrition and Health for Kemin Industries worldwide.

Gomes joined Kemin in 2019 as President of Kemin Animal Nutrition and Health – South

America. In 2023, he was named President of Kemin Food Technologies – EMEA (Europe, Middle East, Africa). A business developer at heart, Gomes has held various executive positions throughout his nearly three-decade career, focusing on sales, marketing, and business and people development in animal nutrition and health companies.

In his new role, Gomes succeeds Dr. Van Dyck, who spent the past six years as head of the business unit. Dr. Van Dyck now oversees all of Kemin's animal nutrition and health business units around the world. He replaces G.S. Ramesh, who is now focused on two of the company's newer business units, Kemin AquaScience™

and Kemin Biologics, which serve the aquaculture and animal vaccine industries, respectively.

"I'm eager to join the EMENA region and work together to continue the team's success, execute Kemin's growth strategy, and take the business to the next level," said Gomes. "Over the past few years, Kemin has invested significantly in the EMENA region with new production sites, innovative technologies, and local experts supporting customers. In the upcoming years, we will continue to focus our efforts on feed efficiency, feed protection, animal productivity, and cost reduction—all while investing in efficiency and progress toward net zero greenhouse gas emissions."

MAJOR BELGIAN FACTORY INVESTMENT MARKS DEVELOPMENT OF NEW HARVESTER SET TO ENHANCE ARABLE FARM EFFICIENCY

In a major development in high-capacity harvesting set to help large farms gather their crops more efficiently and more sustainably, New Holland Agriculture is to launch worldwide the new CR11 combine harvester, allowing farmers to cover more hectares in less time to use fuel as efficiently as possible – and all thanks to significant investment in the brand's factory in Zedelgem, Belgium. The machine's gentle threshing action minimizes

damage to the grain, while new developments within the CR11 ensure almost all grain retained as it passes through the harvester, meaning losses are close to zero, with only straw and chaff exiting at the rear.

The New Holland CR11 combine harvester gained international recognition during its global unveiling to the world's farmers at Agritechnica 2023, the German exhibition that is the world's largest farm machinery show,

where it received the only Gold Medal assigned at the fair's Innovation Awards. The prestigious recognition was particularly meaningful given the event's guiding theme, "Green Productivity." Engineering ingenuity from Zedelgem incorporated into

the New Holland CR11 has the potential to reduce harvesting time per hectare by up to 25%, and lower fuel consumption by around 20%. Along with a wider 15m cutting width that means fewer field passes are required, this all also helps significantly reduce related carbon emissions.

The machine's environmental credentials are further boosted by a new automated system to spread the straw residue back across the cutting width to the field surface, to aid soil organic matter content, and reduced ground compaction courtesy of large tyres or tracks that spread harvester weight over a large area, helping save on tillage before the next crop season, further reducing the fuel needed for a full crop cycle per hectare.



HVLS FANS FOR DAIRY FARMS

Boosting Animal Productivity with Large Ceiling Fans and THI Control

Increasing animal productivity is key to boosting business profitability in agriculture. We spoke with Shukhrat Narmetov, the project manager at Vetromaster, to discover how the use of big ceiling fans can enhance productivity and profits, while also introducing the crucial concept of THI (Temperature and Humidity Index).

Q: Where are big ceiling fans used in agriculture, and why are they necessary?

A: Big ceiling fans, which are also known as High Volume Low Speed (HVLS) fans, find their primary application in dairy farming. They have been proven to enhance profitability by creating comfortable conditions for animals. Cows often experience heat stress in high temperatures, leading to decreased milk production due to reduced feed intake. HVLS fans can mitigate this, resulting in an average milk yield increase up to 20%, or 4-8 liters per day. Additionally, they help prevent heat-related health issues and improve reproductive capacity.



Q: How do fans affect the indoor environment?

A: HVLS fans are increasingly popular in dairy farms because they improve the microclimate. They reduce ammonia vapor concentration near the floor, which can negatively impact animal health and productivity. These fans are also almost silent, ensuring they don't cause noise stress in animals. They are highly economical, with low power consumption.

Q: What types of HVLS fans are available, and how do you choose the right size?

A: Vetromaster offers HVLS fans in various diameters, ranging from 3 to 7 meters. The choice of fan size depends on the room's parameters and the desired air circulation. Generally, larger fans are more efficient, covering a larger area.

Fans can be adjusted for speed and direction to ensure optimal performance.

Q: Can you tell us about fan control, especially automatic modes and THI?

A: Vetromaster employs a unique fan control system, which not only automates fan operation but also takes into account the Temperature and Humidity Index (THI). This index is a key factor in determining animal comfort. The system calculates THI and selects an operating mode that proactively prevents heat stress, addressing the cause rather than the consequence. You can also program the fans to operate at specific settings by time or day of the week. Manual control is available for those who prefer it.

Q: Do you offer calculations for specific facilities?

A: We recommend trying out our fans through a test drive program. We install a fan for 14 days so that companies can assess its efficiency before making a decision.

Q: What is the geographical reach of your company?

A: Currently, we have a strong presence in Russia, Belarus, Uzbekistan, and Kazakhstan. We have also expanded into the UAE market, with plans to serve the Gulf region. Our comprehensive services include delivery, installation, warranty, and maintenance. Our HVLS fans are low-maintenance and come with a warranty of up to 5 years, with a lifespan exceeding a decade.

In conclusion, Vetromaster's HVLS fans are a valuable tool in improving animal productivity and farm profitability by creating a comfortable and efficient microclimate in agricultural settings. With the added benefit of THI control, these fans are at the forefront of modern farming technology.

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ADAFSA COLLABORATING CENTRE FOR CAMEL DISEASES DEVELOPS 1ST PROFICIENCY TEST FOR PPR VIRUS ANALYSIS IN CAMELS

The Abu Dhabi Agriculture and Food Safety Authority Collaborating Centre for Camel Diseases, which is accredited by the World Organization for Animal Health (WOAH), has successfully developed the first proficiency test for peste des petits ruminants (PPR) serology in camels. This test is part of a pioneering programme implemented by the centre in collaboration

with the International Reference Laboratory for the Peste des Petits Ruminants (CIRAD) in France.

This is the first global initiative to assess the performance of this type of analysis, with the aim of validating methods for detecting antibodies to PPR virus in camels. This will facilitate serological surveys and determine the role that camels may play in the transmission of infection to small ruminants.

The first round of the programme involved seven laboratories from several countries and will provide data on the efficiency and accuracy of PPR antibody detection methods in camels.

Asma Abdi Mohamed, Director of the Biosecurity Affairs Division at ADAFSA, said: "This achievement represents a major step forward for the centre in supporting global efforts to eradicate PPR by 2030. We look forward to continuing our collaboration with CIRAD and all the participating laboratories to make further progress in this area."

Abdi Mohamed added that the test is the first of its kind worldwide to measure the efficiency of PPR analysis in camels. It will help to evaluate the efficiency of the test kit used in international laboratories and improve the capacity of participating laboratories worldwide.

NOVEL SEED ENHANCEMENT TECH MAKES DESERTS BLOOM

Extreme weather events—heatwaves, droughts, extreme cold snaps—pose significant threats to agriculture, contributing to the phenomenon of desertification. Globally, fertile lands are increasingly being degraded, losing the ability to sustain life and grow food. AgriTech start-up SaliCrop, Ltd., has pioneered a breakthrough seed treatment to transform arid terrain into flourishing landscapes to growing food.

Leveraging its expertise in desert technology, the company developed a novel, non-GMO approach to bolster seeds' resilience to abiotic stresses brought on by extreme climate challenges. SaliCrop's solution can help boost crop cultivation in arid regions, raising yields and elevating the value to marginal lands, turning them into arable stretches more fit for growing food. The result is greater food security for the future.

SaliCrop's benefits already are

taking root in Spain's tomato industry. Saline soil and heat stress are considered the worst abiotic stressors. Dry soil with excessive salt content hinders the germination and growth potential of numerous crops. Soil salinity is largely attributed to rising sea levels which leads to seawater intrusion in coastal areas and the weathering of rock. This is exacerbated by irrigation with brackish water which for many farmers is unavoidable.

SaliCrop's proprietary seed enhancement technology is the brainchild of Rēā Godbole, Ph.D., co-founder and CSO of SaliCrop. Godbole is a plant biologist who hails from a dynasty of agronomists. She dedicated time



assisting smallholder farmers in coastal regions of Mumbai contending with substantial soil salinity setbacks in efforts to grow crops such as rice and beetroot. Godbole and Devir, a mechanical agronomist who established the first Arab-Israeli life science technology greenhouse in Nazareth, Israel, began conducting trials in Israel growing wheat and vegetables using saltwater irrigation in a closed facility.

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SUPERSOIL

NEOM ANNOUNCES JOINT VENTURE WITH TABUK FISHERIES COMPANY TO ESTABLISH TOPIAN AQUACULTURE

NEOM, the sustainable regional development taking shape in northwestern Saudi Arabia, announced the establishment of a joint venture with Tabuk Fisheries Company. Endorsed by the Ministry of Environment, Water and Agriculture (MEWA), the joint venture, Topian Aquaculture, aims to support the National Livestock and Fisheries Development Program in achieving its ambitious goal of producing 600,000 tons of fish products annually by 2030.

The joint venture builds on the Memorandum of Understanding between NEOM and Tabuk Fisheries Company signed in 2021 and will establish Topian Aquaculture. The venture will include a hatchery that is expected to become the largest in the MENA region by the end of 2024 and has a planned capacity of 42 million fingerlings and marine-pen production facilities, with production of finfish in the pens projected to reach 20 kt per year.

Topian, the NEOM Food Company, is the key facilitator of the venture, which aligns with its commitment to developing a robust, sustainable aquaculture sector in the Kingdom to support food security and self-sufficiency,

and ensure the production of fresh, healthy seafood in Saudi Arabia and beyond. This strategic agreement, unveiled at the Saudi International Marine Exhibition (SIMEC) in Riyadh, outlines Topian Aquaculture's role in advancing the aquacultural landscape locally and regionally.

Nadhmi Al-Nasr, CEO of NEOM, said: "Topian Aquaculture reflects NEOM's mission to implement innovative solutions that strengthen key industry sectors, while mitigating our impact on the environment. The strategic joint venture with Tabuk Fisheries Company highlights the role collaboration plays in NEOM's goal of redefining business and in meeting the national objectives of Saudi Arabia."

CARGILL LAUNCHES REVEAL™ LAYERS, A FIRST-OF-ITS-KIND, NON-INVASIVE NIR TECHNOLOGY

As the poultry industry continues to explore ways to achieve gains in

hen laying production, Cargill's REVEAL™ Layers can help poultry layer producers get there. Using Cargill's innovative, non-invasive Near-Infrared (NIR) technology, producers and nutritionists have immediate access to body composition assessments of their hens. This allows them to make real-time decisions regarding diets to support their flocks' long-term production and performance.

It is believed that overdeveloped fat pads in laying hens are problematic for long-term egg production and optimal liver function. Cargill's REVEAL™ Layers uses NIR light technology to measure the bird's fat pads. The results are then uploaded

and analysed, providing producers and nutritionists with actionable data which can be used to adapt the diet to achieve the optimal layer body composition. Not only could this trim feed costs, but it can also maximize egg production and boost profitability, setting a new standard in supporting the long-term performance of laying hens.

"REVEAL™ Layers is part of Cargill's holistic approach to monitor body fat and egg production, supporting the producer and nutritionist to make educated decisions regarding the diet. As we navigate the challenges of feeding a growing global population, these insights pave the way for more sustainable and efficient poultry production," explains Lieske van Eck, Senior Scientist at Cargill.



AG-TECH START-UP WEEDOUT RAISES USD8.1 MILLION TO FIGHT WEED RESISTANCE

Ag-tech start-up WeedOUT, Ltd., announces it has secured USD8.1 million in A-round funding. Leading the round is Fulcrum Global Capital, a prominent US agri- focused VC with ties to a vast network of farmers across the US. The infusion of new capital will advance the company's mission to combat weed resistance through its breakthrough green solution.

Other participants in the equity round include Bunge Ventures, the investment arm of the leading agriculture and food company Bunge (NYSE: BG), and the Singapore Headquartered agrifood tech fund Clay Capital (formerly VisVires New Protein, VVNP). The new funding is in addition to several grants received by the company from the Israeli Innovation Authority.

WeedOUT's solution could solve one of the greatest threats to agriculture and food security: herbicide-resistant weeds. The company created a novel and environmentally conscious approach to significantly curbing proliferation

of weeds that no longer respond to commonly used chemical herbicides.

"Resistant weeds that plague crops are a major challenge for farmers globally — and the situation has only worsened," asserts Kevin

Lockett, partner at Fulcrum Global Capital. "Fulcrum Global is excited to support WeedOUT's cutting-edge biological platform and the unique approach it has pioneered to address the resistant weed problem. The company's integrated management approach aligns seamlessly with existing farm practices and could enable growers worldwide to produce more food on the same amount of land and in a much more sustainable way."

WeedOUT's novel method takes inspiration from sterility techniques used successfully since the 1940s for



controlling populations of unwanted insects, such as mosquitoes and flies. It centers on a proprietary weed pollen derived from the male plants. This sterile pollen fertilizes the female weed ovules, yielding nonviable seeds and effectively impeding the growth of a new generation of resistant weeds.

Since the introduction of the sterility technique 80 years ago, the realm of insect control has not encountered any resistance issues, and it is considered one of the safest methods ever developed. WeedOUT is the first to apply this time-tested method to weed control.

INTRODUCING HORTI AGRI NEXT (HAN) ASIA 2025: ELEVATING THE HORTICULTURAL AND AGRICULTURAL TRADE PLATFORM FOR ASIA

VNU Exhibitions Asia Pacific, renowned for its expertise in organizing successful trade fairs and conferences in Southeast Asia, is thrilled to announce the launch of HAN ASIA 2025, a trade exhibition dedicated to Horticulture and Agriculture that covers the entire supply chain.

With the strategic

re-branding of horticultural and agricultural exhibitions in Asia, VNU Exhibitions Europe and VNU Exhibitions Asia Pacific are positioned as the leading and complete Seed to Food trade hub for Asia Pacific and beyond. With the launch of HAN ASIA, VNU Exhibitions Asia Pacific simultaneously introduces regional satellite events in the countries of Vietnam (May 2024) and Indonesia (September 2025), co-locating the events under the name HAN Select, with the successful livestock trade shows of the ILDEX Series.

The new international platform for Asia, HAN ASIA,

will be held during March 12-14, 2025 at IMPACT, Bangkok, Thailand, parallel to VIV Asia 2025, focusing on the latest products, innovations, and advances in the fields of horticultural food production, landscaping, controlled environment practices, environmental conservation, arable land planting, harvesting, and processing of crops, as well as land and water resources management and new enhancing technologies. The fusion of HAN ASIA and VIV Asia creates Asia's largest Agri-food trade fair—a powerful collaboration of innovation and excellence.

IPM ESSEN 2024 SHINES ON ITS 40TH ANNIVERSARY



The International Plant Fair IPM ESSEN continues to make history: Despite a nationwide rail strike, approximately 36,000 trade visitors attended the Essen Trade Fair from January 23 to 26, 2024, to explore innovations in the areas of plants, technology, floristry, and equipment presented by 1,403 exhibiting companies from 43 countries. The 40th edition of the world's leading horticultural trade fair was distinguished once again by the notably high quality of its professional audience. Significant interest was directed towards climate-resilient and biodiversity-promoting plants, as well as innovations for resource-efficient production. In comparison to the previous year, IPM ESSEN 2024

experienced an increase in the internationality of its audience.

The approximately 36,000 visitors included registered trade visitors, national and international media representatives, as well as honored guests.

"The green industry once again demonstrated its relevance to contemporary issues at the 40th IPM ESSEN. Horticulture is powerful and innovative, as we have seen and proven over these four days," reflects Eva Kähler-Theuerkauf, President of the State Association of Horticulture North Rhine-Westphalia and Chairwoman of the IPM Trade Fair Advisory Board.

The fact that IPM ESSEN is the leading platform for the international horticulture sector to plan for the upcoming



season, place orders, or make investments is evident in the 71 percent high proportion of trade visitors with purchasing and procurement competencies within their own companies. In 2023, this figure stood at 66



ESSEN, innovations such as a watering robot and solutions for automated weed control were presented. The new special exhibition “Utility Vehicles” featured electric-powered mobile solutions for use in horticulture.

IPM ESSEN 2024: Platform for Green Industry Awards

Once again, IPM ESSEN served as the stage for numerous awards, where the industry annually honors its best. The kick-off on the first day of the fair was the Novelties Showcase by the Central Association of Horticulture (ZVG) for newly bred plants and new wild and growth forms. The winners included *Catharanthus roseus* ‘Soirée® White’ from MNP/Suntory (category Bed and Balcony Plants); *Pericallis cruentus* *Mandala® Plus* Magic Purple from Dümmer Orange (Spring Bloomers); *Zygopetalum* ‘Oxygen Optimistic’ (AK8) from Alpha Orchids Breeding (Blooming Indoor Plants); *Aloe vera* *Medivera* from Amigo Plant (Green Indoor Plant); *Helleborus hybrida* *Frostkiss* *Vibey Velvet* from AllPlant (Perennials); *Eutrema japonicum* ‘Hana Utogi’ from FitzGerald Nurseries Lt (Balcony Fruit/Vegetables); *Pyracantha coccinea* ‘Orange Star’ from Hoogveen Plants (Shrubs); and *Mangave* *Mad about Mangave®* ‘Praying Hands’ from Cactusmania di Manera Bruno in Ventimiglia, Italy (Special Prize). The Audience Award also went to Eclipse Bigleaf *Hydrangea* from First Editions by Bailey Nurseries International from Minnesota.

The next IPM ESSEN is scheduled to take place from January 28 to 31, 2025, at Messe Essen.



Approximately 30 percent of visitors placed orders during the fair, while over 60 percent plan to make purchases based on the information obtained at IPM ESSEN. The list of buyers primarily featured new and innovative plant breeds. Currently trending are climate-resilient species that can withstand heavy rain and heat – a factor increasingly significant in both private gardens and urban green spaces. The guided tours focusing on climate-resistant trees and insect-friendly perennials attracted a large number of attendees.

Sustainability was also a recurring theme in the technology exhibition area. The Innovation Center for Horticultural Technology, for instance, provided information on peat substitutes and resource-efficient production. Automation processes have also seen an increase in horticulture, with the importance of artificial intelligence growing. At IPM

percent. “This is precisely what makes a high-caliber trade fair. Despite the ongoing rail strike significantly restricting travel, the right visitors were on site,” explains Oliver P. Kuhrt, CEO of Messe Essen.

DESIGNED TO GROW WITH LESS WATER

Grodan, part of ROCKWOOL Group, is the world's leading supplier of stone wool growing media solutions for professional greenhouse growers. Controlled Environment Agriculture (CEA) is designed to grow food and medicinal crops more resource efficiently than conventional soil-based cultivation, making it possible to produce higher yields using less water, less land, less fertilisers and fewer if any chemical pesticides.

Why this matters? Because the global population keeps getting bigger while natural resources shrink. Having reached eight billion by late 2022, the world will add another two billion people in the next 30 years, many of whom will live in urban environments. That means we will need to produce 50 percent more food than in 2012 to feed the world's people.

Yet soil is being lost to degradation between 10 and 100 times faster than it is forming, while climate-induced water stress threatens productivity of conventional soil-based agriculture in many parts of the world. Controlled Environment Agriculture is key to supplying urban and other populations with fresh, healthy food for the future.

ROCKWOOL Chief Marketing Officer Mirella Vitale comments,

"Being rooted in science, Grodan's soilless growing media and digital services allow for predictable crop production year-round – anytime, anywhere – with yields up to 40 percent greater than soil-based options, while using less land, water, fertilisers, and pesticides than conventional agriculture. That means we can feed and treat a growing population while simultaneously reducing the burden on the land and other resources. In the best of senses, 'less is more' when it comes to future-proofing crop production.

Grodan Managing Director Hub Janssen adds, "Together

with our data-driven digital systems to continuously monitor crops' health and growing needs, Grodan's stone wool substrates allow professional growers to steer crop cultivation efficiently and sustainably, sometimes with 10 or more growing cycles in a year. That also includes being able to recycle the stone wool substrates after fully exhausting its capacity. In a nutshell, this is the essence of Grodan's new 'Designed to grow' brand initiative".

Changing course on regulations

Another important issue is that current regulations focus almost exclusively on production methods. This is important but increasingly insufficient as demand for crop production grows while available resources shrink. To rectify this imbalance, ROCKWOOL and Grodan believe the regulatory focus needs to shift away from a focus on production methods toward greater emphasis on the broader impact of crop production – including the impact on other resources including land, water, and biodiversity as well as the circularity of the crop production.

For more information, visit
www.grodan.com/designedtogrow

MECHANICAL HOEING MACHINE FOR ORCHARD, VINEYARD AND TREE NURSERIES



The hoeing machine, also available in the Middle East, is known for its unique rotary hoe system with damage-free roller probe. The hoe unit is guided tightly around the tree by the roller probe, without touching the tree.

Van Tuijl Innovations has developed this intra-row-weeder called WEEDELETE®. Two

versions are available: the RS-Series hoes both between and in the rows of the trees and is available in different working widths. The ZRS-Series hoes only in the blackstrips with the trees, sparing the grass strips in the paths. For optimal results, the hoeing depth can be easily adjusted. The weeder, already working in North America, Europe and Asia, also takes obstacles and

driphoses into account. The hoeing machine is suitable for all soil types, and ground following. Therefore it always hoes at the same shallow depth. It can also be used in plant nurseries like conifers, shrubs, multi-stemmed trees, etc.

For more information, visit www.vti.nl or contact info@vti.nl

WEEDELETE®

HOEING MACHINE

- For orchard and vineyard and tree nurseries
- Levelling effect
- Several types
- For all soils
- Rotary hoe
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GROWINBAG™ CULTIVATING BLUEBERRIES: A MODERN APPROACH TO BOUNTIFUL HARVESTS

In the ever-evolving world of agriculture, growers are constantly exploring innovative methods to enhance plant growth and maximize yields. One such trend gaining popularity is the cultivation of blueberries in grow bags, a modern and efficient approach that brings a multitude of benefits to both seasoned and novice growers.

Precision in pH Control:

The success of blueberry cultivation hinges on maintaining acidic soil conditions, a requirement often challenging to achieve in traditional garden beds. Grow bags offer the advantage of precise pH control, allowing gardeners to tailor the soil composition to the exact needs of blueberries. This fine-tuned environment promotes

robust growth and optimal nutrient absorption.

Enhanced Drainage for Healthy Roots:

Healthy roots are the foundation of a thriving blueberry plant. GrowinBag™, with their excellent drainage properties, prevent waterlogging and subsequent root rot—a common concern in less aerated containers. This



feature ensures a well-ventilated root system, contributing to the overall vitality of the plant.

Air Pruning for Robust Root Systems:

Our GrowinBags are made from top quality prime virgin materials that promotes air pruning, a natural process that stimulates the development of a dense and fibrous root system. This not only enhances nutrient absorption but also encourages the production of more fruits, resulting in a more prolific blueberry harvest.

Portability and Flexibility:

GrowinBag™ offer the flexibility of cultivating blueberries in

various locations. Their lightweight and portable nature enables growers to optimize sunlight exposure by easily moving the plants to different spots. This adaptability is especially valuable for those looking to make the most of available sunlight.

Disease Prevention and Low Maintenance:

The elevated position of grow bags reduces the risk of soil-borne diseases, providing a cleaner and healthier environment for blueberry plants. Additionally, the low-maintenance nature of grow bags simplifies the cultivation process, saving time and effort

for the growers.

Growing blueberries in our grow bags is a contemporary and efficient method that aligns with the evolving needs of modern growers. From precise pH control to enhanced root development, the benefits of this approach contribute to a more successful and rewarding blueberry cultivation experience. Embrace the future of cultivating with GrowinBag™ and savor the sweet fruits of your labor.

Join the growing number of blueberry plantations using GrowinBags, contact us for more information
liliana@growinnovate.com,
 +34 682 391 431



QUALITY AND GUARANTEE: THIS IS WHAT YOU GET WITH SOUTHERN SEED PRODUCTS

Vegetable seeds from Southern Seed's continuously evolving modern breeding have resulted in successful and established products on the worldwide market, particularly our Solanaceae range. Our variety TINKITE' F1 is the master of beef cluster tomato where the combining of the red shiny colour and the firm pulp makes it a very aesthetic tomato. Appearance has a great impact on the average consumer's choice, but that is not all: our tomato is also a guarantee in technical terms: with its average weight of around 280-320 grams per fruit, it has an excellent shelf life and

high and intermediate resistances. If your requirements are cherries ones, we can offer you all colours.

GUSTAVO F1 in red and SUMMER F1 in yellow are two premium quality fruits, where the Italian care of products emerges. Both have a strong resistance to cracking and an excellent long shelf life. Together these two, BUZZ F1 is the particular small cherry tomato: A simple bite can release an infinite sweetness. With its high brix degree, around 12, it is used for raw consumption but also for cooked one. The peculiarity is the fruit weight of 6-8 gr. Not only tomatoes, but also peppers in yellow, orange and red, respectively PANAREA F1, ALICUDI F1 and STROMBOLI F1. Names' origin comes from islands Eolie, where nature is uncontaminated and the environment is perfectly balanced; Following this principle, these 3 snack peppers are thought to satisfy consumers of all ages, easy to digest, very sweet flesh, perfect for every

family's member. Another product that is characterized by a sweet and good taste is the elongated watermelon KAMELIA F1. Its weight is around 12-15 kg. It is also very tolerant to heat and cold temperatures, able to performance well in different transplant period. For Eggplant, it is necessary to mention VENERE NERA F1: It fits for fresh and also industry market. The satisfaction of customers will be always our first aim.

For more information, visit
www.southern-seed.com

JOHN DEERE TAKES 9RX TRACTOR TO NEW DIMENSION WITH THREE ALL-NEW MODELS

John Deere has launched its most powerful series tractor ever built at this year's Commodity Classic show in Houston, Texas, USA, expanding the 9RX range with the 9RX 710, 770, and 830 models. With unprecedented pulling performance, enhanced operator comfort and the latest precision agriculture capabilities packed in a vehicle width of less than 3m, the new 9RX models are well suited to the European and CIS markets.

Exceptional Pulling Performance

The new 9RX models are equipped with the 18-litre JD18X engine, which provides up to 913

maximum horsepower at low specific fuel consumption and up to 4,234 Nm of torque with the top model. Notably, it achieves full Stage V compliance without the need for Diesel Exhaust Fluid (DEF) /AdBlue®. The triple hydraulic pump option with a maximum flow rate of up to 636 l/min and the hydraulic Intelligent Power Management (IPM), which provides up to an additional 40 hp if required, deliver enough power even for the largest, hydraulic-driven implements. The new fully-mechanical e21™ PowerShift™ transmission with Efficiency Manager utilises the high engine performance and torque of the 9RX effortlessly, while the

automation familiar from the e23™ transmission ensures exceptional driving comfort. Its 21 gears feature close spacing, allowing operators to easily set the appropriate speed for different tasks. The new undercarriages with their larger 1,200 mm diameter drive sprockets come with a wrapping angle of 110° and 7.5 drive lug engagement. The maximum ballasting weight of 38,100 kg ensures that power and torque are effectively transferred to the ground. While the increased horsepower dimensions of the new 9RX require a larger vehicle concept, the minimum ground pressure level remains at 0.58 kg/cm², comparable to the current smaller 9RX models.





URBAN CROP SOLUTIONS INNOVATIVE INSTALLATION FOR MULTILAYER CULTIVATION

Urban Crop Solutions embraces the challenge of enhancing space-efficiency in agriculture and horticulture. The 12-meter-high vertical greenhouse of Agrotopia in Belgium becomes the remarkable stage for an innovative project, marking a significant transformation in the field of vertical horticulture. The project's objective is to provide effective solutions for space utilization, positioning Flanders as a leader in innovation and sustainability within the agri-food industry.

In 2021, Agrotopia, a pioneering research and demonstration greenhouse, opened on top of the REO Auction's warehouse in Roeselare (Belgium). With an impressive 6000 m², Agrotopia now stands as the largest rooftop greenhouse in Europe. The research within Agrotopia focuses on the development of advanced cultivation techniques, including hydroponics and vertical horticulture. To realize an innovative multilayer cultivation system, a specific space has been allocated in the 12-meter-high vertical greenhouse of Agrotopia. The design and engineering, procurement and construction of this groundbreaking

cultivation system have been entrusted to Urban Crop Solutions, marking a significant stride toward sustainable and efficient cultivation methods in the agricultural sector.

The vertical cultivation system will consist of three towers, each reaching 10 meters high, with 18 moving tables per tower. By cultivating on different layers, optimal space utilization is achieved. This technique is particularly known in closed systems, where environmental factors can be controlled, albeit at a high energy cost. This new cultivation system explores multilayer space utilization in the greenhouse and is designed to maximize the use of natural sunlight. To supplement light if necessary, the towers are equipped with dynamic lighting. Plant development can be influenced by adjusting the light spectrum of the LEDs. This combination of greenhouse and the precision of a closed system results in an innovative and sustainable cultivation environment with maximum flexibility. Construction of the installation commences in the first quarter of 2024, with completion scheduled for late 2024.

Agrotopia comprises 13 different

sections equipped with cultivation systems for hydroponic leafy greens (MGS, DFT) and fruiting vegetables (substrate mats). Maarten Ameye, research leader for covered horticulture at Inagro, explains that the new vertical cultivation system will initially focus on leafy greens, strawberries, and sprouts. "We specifically target the cultivation techniques of crops crucial to greenhouse and urban horticulture, supporting our growers and stakeholders in these sectors. The knowledge gained will be translated into current systems and greenhouses to further innovate and sustain today's greenhouse farming. Based on the results, we can also provide advice for the practical implementation of such systems, both locally and internationally. After validation, the systems will be made available as a testplatform for technology developers and research institutions, enabling them to develop and leverage innovations in high vertical cultivation in collaboration with growers."

For more information, visit
www.urbancropsolutions.com

LEADING SUSTAINABLE AGTECH – IYRIS – FORGES STRATEGIC PARTNERSHIP WITH MAGRABI AGRICULTURE

Iyris (formerly RedSea), the sustainable AgriClimate Tech business whose pioneering technology advances commercial farming in hot climates globally, announces the signing of a Memorandum of Understanding (MoU) with Magrabi Agriculture – the leading Egyptian fresh produce provider to 60 countries.

The strategic MoU covers sales of iyris' cutting-edge technologies – including its award-winning SecondSky greenhouse covers and data platform, and access to all upcoming iyris innovations – to Magrabi Agriculture, for deployment in its Egyptian farming facilities and to support its international operations.

Magrabi Agriculture will benefit significantly from using iyris' innovative solutions in its farming practices. SecondSky covers alone can reduce energy consumption by over 40%, water use by 30%, and profitability by 28% - potentially

transforming Magrabi's farming operations, improving its sustainability and profit margins, and enhancing produce quality.

iyris' recent strategic rebrand from RedSea has cemented its transition to a pure-play technology company, focusing on the commercialization and development of AgriClimate technology solutions.

This announcement also follows iyris' appointment of Bruno De Oliveira as VP East Africa & Egypt to bolster its operational team in the region, following increased customer demand.

Bruno De Oliveira, VP of East Africa & Egypt at iyris, commented: "I am thrilled to announce this MoU with our valued partners at Magrabi Agriculture. This builds on our rapid growth in Egypt – a market that knows, firsthand, the impact of accelerating climate change, and where growers can benefit from our suite of AgriClimate technologies. This news shows our commitment to

partnering with sustainable operators – and we are excited to have Magrabi in our portfolio of esteemed, market-leading partners."

The MoU is a major step in advancing commercial farming in the region, and hot climates globally. The partnership reinforces iyris' exceptional regional reputation and its engagement success with the largest growers in target market countries. The growers recognize the potential impact and improved profitability that iyris' technologies bring to agricultural practices.

The partnership will build on iyris' presence – with 30 hectares of iyris SecondSky roofs already installed on a major government-owned site in Egypt.

iyris' sustainable agriculture technologies are now deployed and used by growers in eleven countries across five continents.

For more information, visit
www.iyris.com



BIOGROW: “SUBSTRATES CREATED BY GROWERS FOR GROWERS”

French farmers at the service of growers all over the world

Today, Biogrow is one of the leading producers of cocopeat substrates.

Farmers across the world have been using our organic substrates for over 40 years. SARL VILA - a company belonging to French fruit and vegetable growers in the South of France - was at the origin of the brand Biogrow.

In the south of France, where our head office is located, our primary activity for decades has been growing fruit and vegetables. It's thanks to this long-established experience that we've been able to develop our substrate range over the last 25 years. Our production sites situated in India, Sri Lanka, Brazil and the Philippines, produce ecological and efficient substrates for soilless culture systems across the world. Our presence in Europe, the Americas and Asia enables us to work closely with growers from all over the world in order to supply them with efficient substrate solutions whatever their growing practice or individual requirements.

Biotechnology – the engine of our development

Our substrate producers have

been enriched by the practice of hydroponic culture and the use of organic substrates. On their own production sites in Brazil, India, Sri Lanka and the Philippines they are developing efficient and completely renewable substrates in collaboration with biotechnology researchers. These substrates satisfy consumers' growing requirements for eco-responsibility since they are the cleanest and most renewable substrates to be found in the market.

Demanding quality approach

We create innovative substrates derived from biotechnology that comply with very demanding quality criteria. Rigorous and standardized quality controls are applied by Biogrow to ensure that the substrates deliver the same level of performance in all the sites. From production to shipping through to planting, samples are regularly collected by our Quality Control inspectors, and then transferred to the laboratory of each site for analysis. Humidity levels, levels of conductivity of materials, and the conformity of each order are checked.

Sustainability

The world is changing and consumers are becoming more and more demanding with regard to ecologically responsible products that are eco-friendly, sustainable, pesticide free, organic, etc. It's a big challenge for growers to change their ways of working and becoming sustainable can be a synonym of “big investment”. That being said, in spite of the current challenges it's a really exciting time to be a part of the substrates industry and see all the positive changes that are happening, especially within the hydroponics sector, which is what we specialize in.

Growers all over the world are now looking for solutions to help them respond to this growing demand for planetfriendly food and that's where we come in. Biogrow produces substrates that come from a sustainable resource and respect the environment. And with a number of new and exciting projects in the pipeline the future is looking bright.

For more information, visit
www.bio-grow.com

HIVEKIT RELEASES “FARM MANAGEMENT IN A BOX”

Hivekit - a UK/Germany based developer of Operations Software just released a compact version of their cloud platform that can run on-site without an internet connection. This enables farmers and agricultural operators to truly own their data, be independent of third party services and operate locally under any conditions.

Hivekit combines asset, staff and vehicle tracking with metrics and sample collection. It displays all collected data in a 3D version of your farm - complete with moving vehicles and farm staff, harvest performance and soil sample

overlays and custom dashboards for each type of asset.

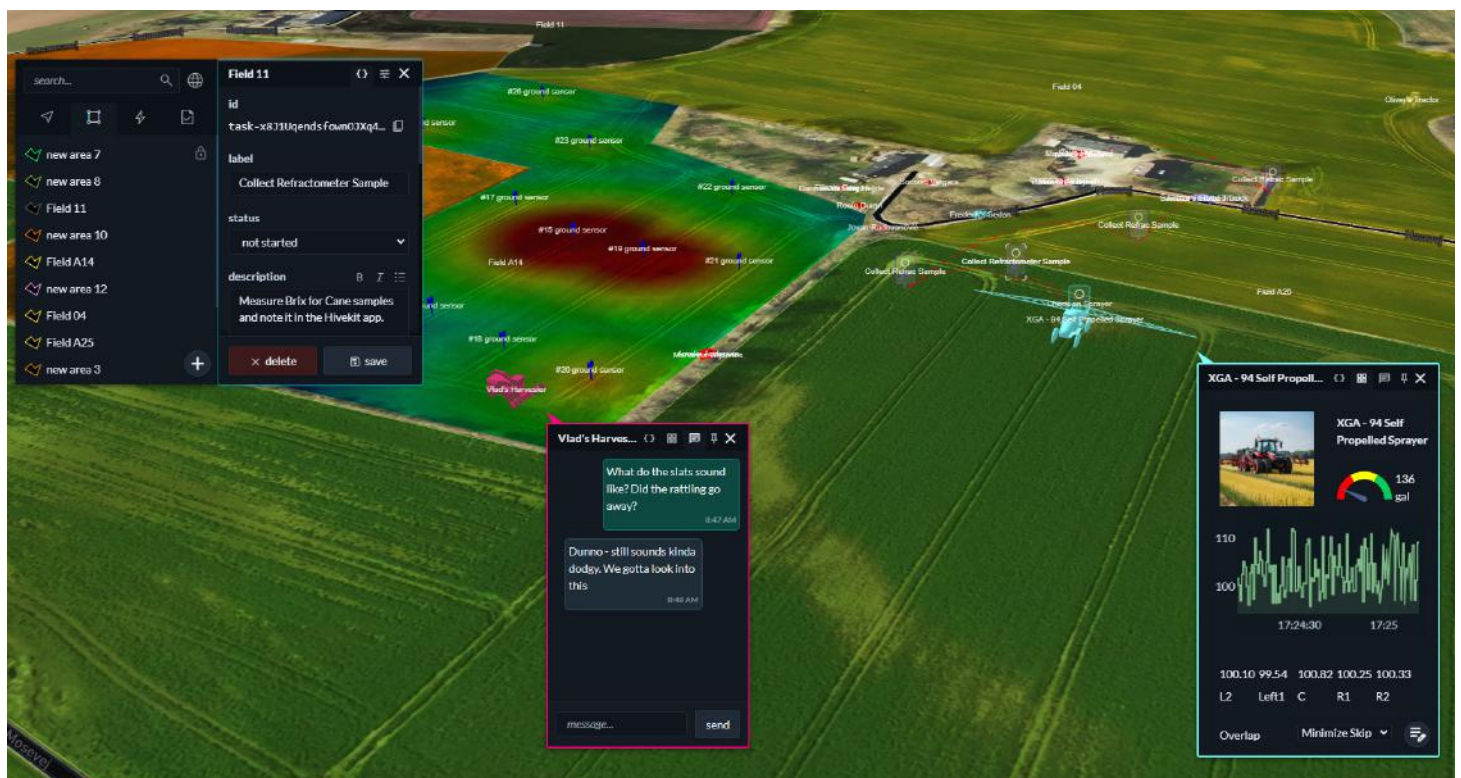
From here, farm managers can assign tasks and give commands that Hivekit translates into individual instructions and forwards to farm staff and machines. Hivekit also allows to automate recurring processes with simple macros: Fertilizer running low? Let Hivekit assign the nearest staff member to fill it up again, all without the need for intervention by the farm manager.

All this comes now in a compact form factor. Hivekit's "Farm Management in a box" is a single file that can run on any computer

on the farm, stores data locally and comes with open APIs that make it easy to connect vehicles and equipment, regardless of vendor.

"Farmers are increasingly weary of being locked into vendor ecosystems and relying on external online services to manage their operations" says Hivekit CEO Wolfram Hempel. "With the "in a box" concept we wanted to provide a real alternative that puts the farmer back in control."

For more information, visit www.hivekit.io/solutions/farming-agriculture



HEALTH AND ORGANIC FARMING EXPERTS SHARE THEIR INSPIRATIONAL SUCCESS STORIES IN 'SHARJAH TALKS'

Leading experts in organic agriculture, wellness and nutrition asserted that organic farming is the agriculture of our forefathers, debunking the notion of it being a foreign concept. The discussion centred around the positive impact of home mini-farms on psychological well-being and family unity, and how to achieve a state of balance and harmony among all elements of the human entity, including body, mind, spirit, and emotions.

This came during the second Sharjah Talks, a collaborative initiative organised by the Department of Statistics and Community Development (DSCD) in partnership with the Sharjah Government Employees Club (SGEC).

The event, themed 'Sustainable Harvest: Organic Agriculture and Nutrition Wellness,' took place at the Shajar project in Al Jada, Sharjah and was graced by the presence of key dignitaries, including Sheikh Sultan bin Abdullah Al Qasimi, Director of DSCD, Ahmed Hamad Al Suwaidi, Chairman of the SGEC, along with department heads, and employees.

Soil is the foundation of the food cycle

The first panel discussion, titled 'Cultivating Sustainability: From Soil to Table', brought together Saeed Al Rumaithi, a UNICEF Climate Change Ambassador Co-founder of 'The Organic Farm', and Eman Al-Marri, organic home farming expert. Al Rumaithi emphasised that organic farming is the agriculture of our forefathers. "I am on a mission to raise awareness in the community to transform unused spaces in homes into mini-farms."

He stressed that soil is the foundation of the food and fungal cycle, and preserving it is key to transitioning to sustainable farming. "Stimulating the production of microbes in the soil makes it suitable for farming even if the amounts of fertiliser are small. I advise farming projects not to buy seeds from the market but rather extract seeds from their produce due to their adaptability to the local environment."

Home Farming: Comfort and Family Cohesion

For her part, Eman Al Marri, a home organic farming expert, said: "Organic farming is my passion, hobby, and message to the people; I started it to prove that the UAE soil is suitable for farming. Our land is ready for agriculture, but we must learn the right methods suitable for our climatic and environmental conditions."

She added, "Home gardens greatly improve the quality of life for families and children, improve immunity, and increase happiness and comfort levels. They also strengthen family cohesion when family members share in gardening tasks; I believe my work in reviving the soil is one of the greatest charities I can offer to myself, others, and the universe."

Harmony in Health: Nourishing the Body, Mind, and Soul

In the second panel discussion titled 'Harmony in Health: Nourishing the Body, Mind, and Soul', Chef Luca Cobre, from Healthy Farm Eatery, highlighted the comprehensive nature of wellness: "True health encompasses not just what we eat but also includes regular exercise and herbal intake. It's about a collective effort where different health practices complement



each other."

Delving into the significance of organic food, Cobre added: "The organic movement, emerging as a response to the overuse of pesticides and hormones in agriculture, signifies a return to our ancestral roots of natural farming." He stressed that organic certification ensures that consumers purchase products that are verified to be free from harmful substances.



nourishes the mind, body, and soul in unison."

Speaker Mahdiah Al Jed, Co-founder of Hikma, emphasised the importance of balance in achieving health, not just physically but also emotionally and spiritually. "Herbalism also plays a big role in guiding individuals towards innate healing through nutrition, lifestyle changes, and the support of plants and herbs."

Shereen Al Mulla, Co-founder of Hikma, stressed the need to acknowledge and address symptoms as signals from the body rather than suppress them. "We need a back-to-basics approach, which includes eliminating toxins, opting for organic food, exercising, getting quality sleep, and exposure to sunlight."

Little Farmer Experiments

The day's event also featured a session titled "Little Green Thumb: Experiments of a Little Farmer," where 8-year-old farm owner Musleh Al Aryani highlighted how his project utilises air AC units' water for irrigating crops. He expressed his aspiration to contribute to enhancing the nation's food security when he grows up.

Concluding the event, the Shajar project hosted a workshop facilitated by Heba Elias, the project's coordinator, who introduced participants to organic farming methods.

Health.. A State of Holistic Wellness

For her part, Dima Khalaf, Founder of Wellness by Dima, said: "Health transcends the mere absence of disease. As a holistic nutritionist, my practice is about embracing the entirety of our being—physical, emotional, spiritual, and mental. It's about nurturing every facet of ourselves to achieve a state of comprehensive wellness that

March-April 2024



SUSTAINABLE RICE PADDIES: RISO GALLO CHOOSES XFARM TECHNOLOGIES' DIGITAL SOLUTIONS TO DIGITALISE ITS SUPPLY CHAIN

A multi-year project aims to digitalise Riso Gallo's entire supply chain participating in the 'Rice that sustains' project by 2026, with a particular focus on the agronomic part.

During the closing ceremony of the Mario Preve Award, xFarm Technologies, a tech company specialising in digitalisation and sustainability projects for agri-food supply chains, and Riso Gallo, one of the largest rice mills in Europe and one of the oldest in Italy, presented the results of the 2023 pilot project and the start of the most intense phase of their collaboration. The aim of the project is to completely digitalise Riso Gallo's supply chain, which currently consists of more than 180 farms participating in the "Rice that sustains" project, in order to guarantee full traceability of the activities carried out in the field, production efficiency and thus greater environmental and economic sustainability of the supplying farms. In 2023, six pilot farms were involved in testing the technologies of

xFarm, totalling more than 400 hectares digitally mapped. The goal for 2024 is to increase the number of users by developing a dedicated platform to manage the entire rice supply chain.

A comprehensive project focusing on the rice supply chain

The project was launched in the 2023 season, during which pilot farms used IoT (Internet of Things) sensors and the xFarm platform. The aim is that, within four years, all participating farms will be using the digital tools provided free of charge by Riso Gallo. The farmers involved so far have been given special sensors, including weather stations and soil moisture sensors, and have received customised training carried out by xFarm Technologies in collaboration with Riso Gallo's team of agronomists, to learn the features of the platform and be

supported every step of the way. "With last season's pilot project, we wanted to start collecting feedback from farmers. The farms involved showed great interest and understood the added value of the initiative. This enthusiasm is extremely positive and is key to encouraging the spontaneous adoption of the tools in all the farms participating in the 'Rice that sustains' project," says Giacomo Luddeni, B2B Execution Manager at xFarm Technologies.

The aim is to work with Riso Gallo to develop a dedicated platform for all companies in the Riso Gallo supply chain to help them adopt more virtuous agronomic practices. This will allow rice production to become more efficient and sustainable, thanks to technologies such as DSS, while certifying the product through precise field data and communicating the added value to the consumer.

Agronomic support against rice diseases to improve sustainability

xFarm Technologies and Riso Gallo will develop two main innovations specifically for Riso Gallo's 'Rice that sustains' supply chain. The first is a sustainability indicator dedicated exclusively to rice cultivation, which will make it possible to identify the most virtuous agronomic practices and to have a complete sustainability report on the

required and, consequently, the environmental impact.

"xFarm is very attached to the rice crop, as it was one of the first crops on which we have developed our technologies. This is why we are particularly pleased to be working with a brand like Riso Gallo to digitalise one of the most important rice supply chains in Italy and internationally. This ambitious project will help rice farmers to improve agronomic

preserving soil fertility and all environmental resources. We immediately recognised the value of xFarm and a commonality of values and objectives, so we decided to work with them to develop a tool that effectively supports farmers, and allows them to develop their business in a responsible, effective and efficient way," said Riccardo Preve, Managing Director of Riso Gallo.

supply chain at the end of the season. It will make it possible to assess and compare the impact of the different rice varieties grown or the different agronomic techniques used, in order to make choices that have the least impact on the environment. The second is a specific DSS for rice blast fungus, a particularly aggressive fungal disease. This specific DSS will be calibrated for the main varieties of interest for Riso Gallo. The development and calibration work will start in 2024 and will be carried out by a team of agronomists, engineers and researchers in the form of experimental trials to calibrate the models as well as possible. This will provide accurate information on the best time to carry out treatments, protecting the crop while reducing the number of interventions

management and sustainability, while at the same time making production more efficient through the use of specific DSS for rice diseases. Rice blast fungus is one of the most economically damaging diseases in agriculture worldwide. This is one of the reasons why we believe that this project can become a benchmark within the European agri-food sector and encourage more and more farmers to adopt more sustainable agricultural practices," said Matteo Vanotti, CEO of xFarm Technologies.

"This important and innovative partnership is part of the path that Riso Gallo has undertaken to promote an increasingly holistic approach to sustainability, capable of generating tangible impact and guaranteeing ever higher product standards, while



REINKE IRRIGATION AND CROPX DEBUT FIRST-OF-ITS-KIND PIVOT-MOUNTED SENSOR TO MONITOR FIELD-SPECIFIC CROP WATER USE

CropX Technologies, a global leader in digital agriculture solutions, announced the launch of a new product in partnership with Reinke Irrigation to refine water management for farmers through field-specific Evapotranspiration (ET) measurements of crop water use. Reinke Direct ET™ by CropX is an innovation that provides affordable Actual Evapotranspiration (ETA) measurements with a sensor mounted on a Reinke center pivot irrigation system, available exclusively through Reinke.

With the demands on irrigation water rising, the need for precision in irrigation is only becoming more pressing. ET values indicate the total water used by plants and evaporated from the soil. Reinke Direct ET™ by CropX offers measured, not modeled,

field-specific values without need for any additional calculations. This offers farmers using Reinke center pivots a practical solution to manage water resources with greater precision. By measuring the amount of water that their crops use, Reinke Direct ET gives farmers daily insights into their field's water needs, enabling informed irrigation decisions on when and how much to irrigate their crops. This innovation aims to promote water-efficient practices and support sustainable farming using a device that is easy to install and maintain and does not require removal at the end of the season.

Reinke is a leading center pivot manufacturer based in Deshler, Nebraska, who continues to empower growers throughout the world. Working together with CropX, they are ensuring growers use water and other resources in the most efficient way. By combining

farm data, real-time conditions, and agronomic knowledge, Reinke and CropX provide the grower with powerful insights and advice for their agronomic operations.

In addition to Reinke Direct ET™ by CropX available on the Reinke center pivots, CropX is also releasing its Actual ET sensor, a device that can be installed in any field to measure Actual Evapotranspiration (ETA). When used in combination with a CropX soil sensor as part of the CropX agronomic farm management system, growers will have access to the most accurate overview of water-plant usage and soil water availability to bring the highest accuracy to irrigation decisions. The underlying ET measurement technology was developed by Tule Technologies, which was acquired by CropX in January 2023.

JOINT LAUNCH ADVANCES PRECISION IRRIGATION GROUNDBREAKING CROP WATER MONITORING SYSTEM



In November last year, Fancom joined forces with HATO, well-known supplier of high-quality agricultural lighting. In the partnership with HATO, two strong brands with a rich history join forces. And poultry, pig and mushroom farmers worldwide can reap the benefits of this. Working closely together and sharing knowledge creates a unique synergy of first-class lighting together with intelligent automatic control of the light in each house.

Together we can offer a lighting system that automatically adjusts intensity, light colour and lighting schedule according to the animals' needs. Lighting that takes account of animal behaviour and is fully integrated into the climate and feeding process in the house. With the main goal of optimising the animals' living environment, but also saving costs and improving efficiency.

Jacques Janssen, Director Sales & Marketing of Fancom on this cooperation: "Our new product line for agricultural lighting fits perfectly into our drive towards the farm of the future, where we use smart house technologies to control all farm processes from one central location in order to create superior farm conditions in which the animals can perform optimally."

The joint commitment of Fancom and HATO to advances in agricultural



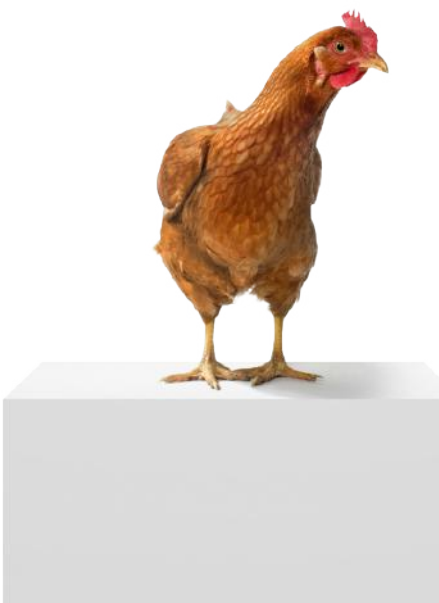
FANCOM AND HATO JOINED FORCES FOR ADVANCES IN INNOVATIVE AGRICULTURAL LIGHTING

lighting marks a progressive step. We know better than anyone how agricultural lighting can make a huge difference to livestock farmers and their animals, how it improves performance and reduces costs. Together, we continue to invest in pioneering agricultural lighting and we aim to make our solutions available to all livestock farmers, wherever they are in the world.

Max Obers, Commercial Director at

HATO Agricultural Lighting on this partnership: "This collaboration marks an important moment in our ongoing mission to illuminate the global agricultural sector with our expertise. Our partnership combines HATO's proven knowledge in animal welfare with Fancom's innovative approach, ensuring our joint success."

For more information, visit
www.fancom.com



PREPARING THE LIFELONG LAYER

Well begun is half done, an old saying which also is true for egg producers as a good quality pullet helps to reach the targets set for the productive life of laying hens

By Rafael Lera,

Poultry Veterinarian, Hendrix Genetics Layers

The pullet rearer has about 17 weeks to develop this tiny day-old chick into a ready to lay laying hen. The productive life of a laying hen has increased drastically over the past decades and because of balanced genetic selection this is still increasing 1 week with every new flock that enters the poultry house. Keeping laying hens all the way up to 100 weeks of age without molting is no longer exceptional, it is not the global standard yet, but more and more proven results are clearly there. A

good quality pullet is essential to get the best out of your flock, in this technical paper we aim to describe some of the main objectives and targets to be reached during the rearing period.

The rearing period is of major importance for the performance of the flock later in life. The productivity of a flock depends to a large extent on the successful attainment of bodyweight targets from an early age. Also egg size profiles during lay and the feather cover during the productive period are influenced by the development of the pullets.

During first weeks in rearing, management should focus on rapid and steady chick growth while the

second half of the rearing period is the right time to work on developing feed intake capacity. In addition to this, achieving a proper uniformity within a flock is also essential to obtain good laying performances.

The different chick development phases in the rearing period

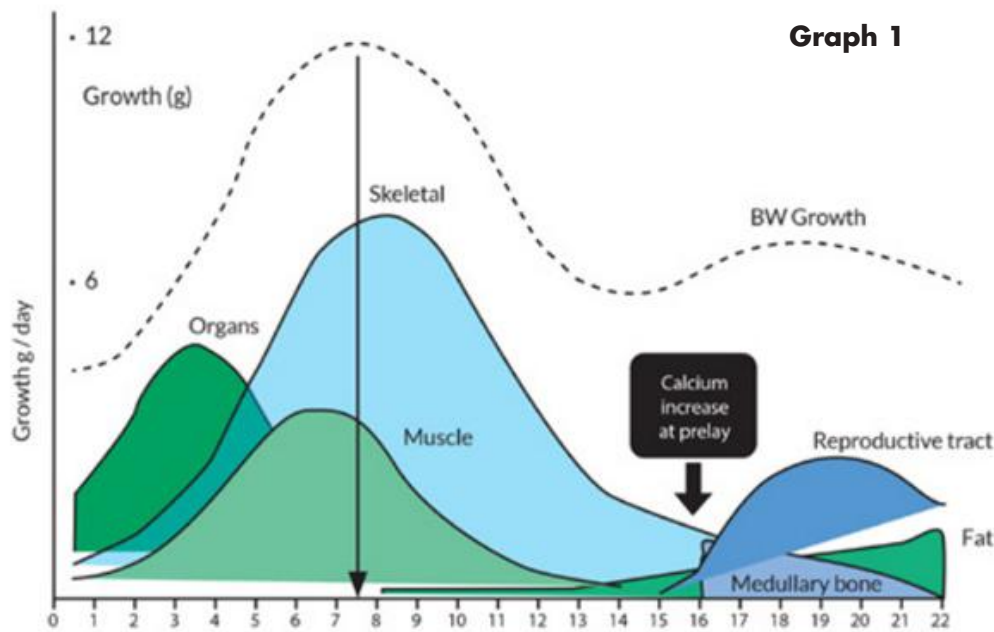
The main objectives during the brooding period are:

- Rapid growth to reach body weight target at 5 weeks of age
- Good uniformity from the beginning
- Maintaining excellent livability

From day old to transfer, the chicks will grow slowly, and organ development occurs at various



Bodyweight development



laying performance: slow onset of lay, poor and late peak of production and increased number of small eggs. The number of feeders and drinkers, feed distribution, the presentation of the feed and the farmers' management are strong contributors to ensure uniformity. Heterogeneity at early age has a negative impact on uniformity at the end of the rearing period, before birds are transferred.

Building the potential during the growing period

After a good start during the brooding period, the main goal of the growing period is to ensure the full development of the birds so that they reach their highest potential for producing eggs later in life. The objectives during the growing period are:

- to establish a good feeding behavior pattern
- to develop the digestive tract (crop and gizzard)
- to obtain a good uniformity of at least 80%
- to achieve the recommended body weight at sexual maturity

These objectives can be achieved by:

- correct stocking density, proper feeding and drinking equipment and housing conditions
- a lighting program adapted to the rearing conditions
- a good standard of beak

ages. A lack of growth during any of the growth stages can have a detrimental impact on the 17-week-old pullet quality. Any delay in growth at 4-5 weeks of age, will be reflected in a reduction in bodyweight at 16 weeks and then in performance, particularly in mean egg weight in temperate climates. Keep in mind that two pullets with the same bodyweight haven't necessarily developed the same body composition, it all depends on the growth curve. Good growth curves result in good pullet development. The growth and developments of laying hens is split in the following stages (visualized in graph 1):

- The first 3 weeks are devoted to a rapid development of the organs of the digestive tract and the immune system.
- From week 3 to week 6, skeleton and muscles are rapidly growing. Bodyweight at 5/6 weeks is the most important determinant of pullet quality. Any delay in growth at this stage is harmful to the birds, as it will have a detrimental impact on pullet quality and body composition, which will in return

impact negatively the birds' performance.

- From week 7 to week 15 growth rate is starting to slow down. By 12 weeks skeleton is almost completely developed and the pullets are practically fully grown in terms of size.
- The final stage is characterized by ovary development and rapid growth of the reproductive tract. Sexual hormonal regulation takes place around 18 weeks and leads to sexual maturity around this age. Medullary bone also develops during this period, about 2 weeks before first egg is laid.

At all stages of chick development, flock uniformity needs to be reviewed. The objective is to have a very high uniformity to facilitate flock management and proper light stimulation. It is well known that low flock uniformity leads to poor egg





treatment (when local legislation allows the application of beak treatment)

- correct disease prevention: good biosecurity and adapted vaccination program
- good management of the feeding program and feeding techniques

Feeding Technique

Feed management in rearing has an impact on feed consumption later in production. The idea is to develop the digestive tract during the rearing phase to prepare the birds to eat enough during the laying phase, especially immediately after transfer, when feed intake should increase sharply in just a few weeks.

The crop is the bird's feed storage organ. Rapid feed consumption during rearing leads to crop development. Therefore, feed consumption during the rearing period needs to be fast enough and eating speed will depend mainly on feeding times and feed texture. Birds naturally eat earlier in the morning, when their digestive tract is empty, and in the evening, to satisfy their energy needs throughout the night. It is important to take advantage of this natural behavior and get empty feeders in the middle of

the day.

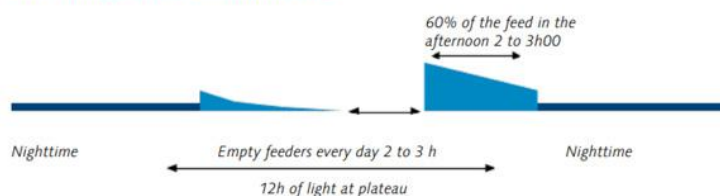
The feeding techniques used between 5 and 16 weeks are designed to avoid the build-up of fine particles in the feeders and to encourage crop development through rapid feed intake. By nature, chickens are grain eaters with a strong preference for coarse particles. Fine particles are more difficult for birds to eat; therefore, they spend more energy for the same quantity consumed. The accumulation of fine particles in the feeding system leads to under-consumption. To ensure the birds can get all the necessary nutrients of the diet, it is essential that the feeders are emptied every day from week 5 of age onwards. Even at earlier age it is recommended that chicks get used to empty the feeders at least once per week. This "empty feeder" rule applies equally to pullets and layers.

To encourage rapid consumption, we recommend that the complete daily ration

should be given about 2 to 3 hours before "lights off". At "lights on", because the digestive system is empty, the birds will eat finer particles. If the feeding system does not allow the entire daily ration to be given in one distribution, distribute 60% of the daily ration in the early afternoon and the 40% in the morning at "lights on". This feeding routine can be started between 4 and 8 weeks according to the feeding equipment in use. The length of time, during which the feeders are empty, should be gradually increased, so that by around 10-12 weeks of age the feeders are empty for a minimum of 2 to 3 hours per day.

Pullet feed presented in coarse particles helps gizzard development. We recommend using a feeding system which distributes feed rapidly throughout the house and enables the birds to finish all the feed distributed each day. This encourages the birds' intake capacity and avoids fine particle accumulation. Feed

Feed distribution management in rearing



troughs with rapid chains are the best option, with the easiest feed intake control. If pan or tube feeders are used, they should be adapted specifically for this technique.

Developing the gastrointestinal tract and feed intake capacity, by both developing the gizzard for optimal digestion and by training the pullets to eat, are key to help them to rapidly increase their feed consumption in the first few weeks of lay and therefore a much smoother transfer towards the laying phase.

Monitoring development

Weekly measurement of growth is an absolute must to check the actual development of the flock. Early detection of abnormal weight gain is of extreme importance to determine what corrective actions must be taken. Late attempts to correct low bodyweight are not efficient at improving body composition and frame size. In addition to this, monitoring of body weight is essential to calculate the appropriate quantity of feed to be issued, as requirements vary according to the energy level of the diet as well as the house temperature and the health status of the flock. Besides the average body weight of the flock it is also important to calculate its uniformity. The objective is to have a high uniformity to ensure an even response across the flock to management techniques, treatments and especially to light stimulation. If all the birds within a flock have a uniform development, they will react as one and they will be easier to manage.

Method of weighing control:

- Weighing time should be

fixed, preferably in the afternoon.

- It is recommended carrying out individual weighing and using histogram type weighing sheets (see the chart above) which shows immediately the weight distribution within the population.

- A sample of a minimum of 100 birds should be taken to obtain a good estimate of mean bodyweight and uniformity. However, if the flock is divided into separate pens, it is necessary to take a sample of 60 birds from each pen and then to calculate the overall mean. When rearing in cages, weigh all the birds from 5 or 6 cages, chosen at random, in different parts of the poultry house (upper and lower tiers, start and end of feeding lines), to make up a significant sample. All the birds from these same cages should be weighed every week.

The most important factor in judging the quality of a flock is its uniformity. A batch is uniform when at least 80% of the weights lie within a range of $\pm 10\%$ of the mean. Using modern weighing devices, it is also possible to obtain the

coefficient of variation (CV), which is the ratio of standard deviation to the mean of the population expressed in %. A CV below 8% is good.

If uniformity/CV % is outside the target range, it is necessary to identify the causes and to check:

- Stocking density
- Available feeder space
- Distribution and height of feeders and drinkers
- Speed of the feed chain
- Feeding technique: accumulation of fine particles
- Feed texture: if inadequate it leads to feed selection
- Feed composition and quality
- Quality of beak treatment
- Vaccination status and possible post-vaccinal reactions
- Health condition of the flock: disease and parasitism presence

Depending on the identified causes and the conclusions that can be drawn from the analyses, corrective actions should be implemented, and management adapted to improve the uniformity of the flock.

For more information, visit

www.layinghens.hendrix-genetics.com

4.8 Body weight recoding chart

Grams	No. Birds	10	15	20	25	Rearer
600						
20						Rearing
40						Actual
60						Mean WL
80						792
700	x x x x x					Target
20	x x x x x x x x					Weight
40	x x x x x x x x x x x x x x					790
60	x x x x x x x x x x x x x x x x					Grams
80	x x x x x x x x x x x x x x x x					Over/(under)
800	x x x x x x x x x x x x x x x x					2
20	x x x x x x x x x x x x x x x x					% evenness
40	x x x x x x x x x x x x x x x x					+ or - 10 %
60	x x x x x x					86,21
80	x x x x					+ or - 10 %
900	x x x					
20	x x x x					
40						St. Dev
60						53,65
80						cv %
1000						6,8

Time of Weighing a.m. / p.m. Weighed by: _____

Comments _____

THE BENEFITS OF PROPER DAIRY BARN VENTILATION

Ventilation is a critical aspect of dairy farming, with profound benefits for both the cows and the overall operation. Adequate ventilation in dairy barns ensures a comfortable and healthy environment for the cows, contributing to improved milk production and animal well-being. Let's explore five key advantages of proper ventilation in dairy cow facilities.

First and foremost, barn ventilation plays a pivotal role in maintaining optimal air quality. Adequate airflow helps dissipate harmful gases such as ammonia and carbon dioxide, which can accumulate in poorly ventilated barns. We typically want to see airspeeds at 3' from the bedding to range from 5 to 7 mph. This not only enhances the cows' respiratory health, but also minimizes the risk of diseases, while creating a cooling effect leading to a more productive herd during heat stress. While during the colder months, air exchange and movement are the key factors. When deciding on new construction builds, like

natural ventilation with recirculation fans, tunnel or cross ventilation with exhaust fans, airflow must be your main design factor.

Temperature control is another crucial advantage of ventilation. During hot summer months, effective ventilation systems help reduce heat stress in dairy cows. Research has shown that when THI (temperature humidity index) reaches 68, the cow begins to heat stress. At this point we need to begin being aggressive with temperature management. On the other hand, in cold weather, proper ventilation prevents the buildup of moisture and condensation, creating a warm and dry environment for the cows. Properly regulated temperatures year-round are key to maximizing milk production and reproductive efficiency.

Moreover, good ventilation contributes to cow comfort. It's plain and simple, cows that are comfortable produce more milk. Ventilation systems ensure that the barn environment remains comfortable by preventing

temperature extremes and humidity buildup. A stress-free environment also reduces instances of lameness and other health issues, somatic cell count rises, resulting in a longer and more productive life for the cows.

Effective ventilation promotes efficient feed consumption. That's the key word, "effective." Cows that are comfortable and have access to fresh, clean air tend to eat more consistently, leading to increased milk production. Proper air circulation also minimizes dust and airborne contaminants that can affect feed quality. This is vital in maximizing the nutritional intake of the cows, which directly impacts their milk output. How do you know you are purchasing "effective" ventilation products? Make sure your fans are tested from accredited ventilation sources like AMCA (Air Movement Control Association) or BESS Labs (The Bioenvironmental and Structural System) from University of Illinois. Most fan companies are sourcing fans from overseas, that have no third-party testing. Make sure your ventilation has reliable data.

For more information, visit
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