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African Farming

and Food Processing

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Farming Calendar 2022

SEPTEMBER

25-27 AgrikExpo 2023 ABUJA
www.agrikexpo.com

OCTOBER

5-6 Poultry Africa KIGALI
www.poultryafricaevent.com

12-14 agrofood Kenya 2023 NAIROBI
www.agrofood-kenya.com

13-15 Agro & Poultry East Africa Nairobi NAIROBI
www.mxmexhibitions.com

27-29 EthiopeX & ALEC ADDIS ABABA
www.africanlivestock.net

NOVEMBER

6-10 SIMA Paris PARIS
www.m-en.simaonline.com.com

9-13 EIMA International BOLOGNA
www.eima.it

15-18 EuroTier 2022 HANOVER
www.eurotier.com/en

29-1 Dec agrofood West Africa ACCRA
www.agrofood-westafrica.com

DECEMBER

1-3 Agrofood & Plastprintpack West Africa ACCRA
www.agrofood-westafrica.com

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Ethiopia gears up for poultry and livestock trade shows



One of the popular categories at EthiopeX is feed production and storage that explores feedstuff preparation.

ETHIOPEX, A POULTRY inputs, technology and solutions international trade show, is gearing up to welcome visitors at the Ethiopian Skylight hotel from 27-29 October.

"The exhibition was well attended with quality clients who really have an interest in making business connections and not just looking around and only visiting. It is not our first time, and we will definitely be attending next year," said Roland Deinz, general manager - East Africa, Big Dutchman, a prominent exhibitor from last year. One of the popular categories at the fair is feed production and storage that explore feedstuff preparation, feedstuff conveyors and accessories, and milling, mixing and metering systems. Another is feed and farm inputs, where options for water treatment additives, insecticides and pesticides, and manure additives are explored.

Meanwhile, the African Livestock Exhibition & Congress or ALEC will also be held from 27-29 October. It will take place at the Ethiopian Skylight Hotel, Addis Ababa, which is the official hotel partner for the event. On the first day, visitors can explore from 11 am to 6 pm, while on the second day, it starts at 10 am and will finish at 6 pm. The timing for the third day is 10 am to 4 pm. With 26 countries participating last year, it attracted 50 exhibitors, 3,072 visitors and more than 400 delegates.

SIMA calls on farmers to invent agriculture of the future

SIMA, THE INTERNATIONAL exhibition of solutions and technologies for high-performance and sustainable agriculture, will open to visitors from 6 to 10 November 2022, at Paris Nord Villepinede. For its centenary edition, the show is looking towards the next 100 years with the launch of its first ever opinion survey among farmers, on the sector's and profession's future.

As a nod to the exhibition's 100th anniversary, SIMA will launch its first opinion survey to invent the agriculture of the next 100 years. Aimed at farmers in France, the purpose of the survey is to let them have their say on their everyday activity and find out their vision on the future of farming.

The five main themes are addressed:

- The future of the farming sector and the new challenges they face,
- New technology in the agricultural world,
- Organic agriculture,
- Diversification of farms,
- Diversification of farming disciplines.

As a token of appreciation for their response, SIMA will give each farmer two invitations to visit the show, which will also give them access to exclusive meetings with influencers from the



As a nod to the exhibition's 100th anniversary, SIMA will launch its first opinion survey to invent the agriculture of the next 100 years.

sector in attendance at the show.

Finally, drawing on the responses received, SIMA will draw up a white paper on the theme of "the agriculture of the future." This publication will call on a working group of experts who will contribute their vision on this theme, and will be supplemented by feedback of farming professionals.

Meanwhile, SIMA, in association with AXEMAN and the NUFFIELD International

network, is launching the SIMA Farming Awards. The contest aims to highlight the novel initiatives and innovative farming practices of French and European farmers. To compete in this first edition, farmers must be engaged in a sustainable transition process and be able to demonstrate the societal, economic and environmental impact of their innovation.

For more details, visit: en.simaonline.com

EuroTier 2022 to highlight production trends in animal farming

EUROTIER, A TRADE fair for professional animal husbandry and livestock management, will kick off this year in Hanover, Germany. Starting from 15 to 18 November, around 1,600 exhibitors from 55 countries will be participating in the fair.

This year, the theme is 'Transforming Animal Farming', highlighting the production trends for pig, cattle and poultry. Part of it will be held as digital events, starting in October on www.dlg-connect.com, which is developed by DLG (German Agricultural Society), EuroTier's organiser. The EnergyDecentral trade fair that will be held in parallel, will focus on the possibilities of decentralised energy generation.

"Our international event and congress programme with its long-running EuroTier features such as the TopTierTreff alongside a new start-up exhibition area 'DLG-AgrifutureLab' as well as the EnergyDecentral trade fair, EuroTier will be setting standards in terms of product and topic diversity. In short, EuroTier is the international industry platform and network of professional exchange," said Ines Rathke, EuroTier project manager, DLG.

National pavilions from Denmark, Finland, France, the United Kingdom, South Korea and the USA, among others, reflect the international character of the trade fair.

Some of the highlights of the fair include

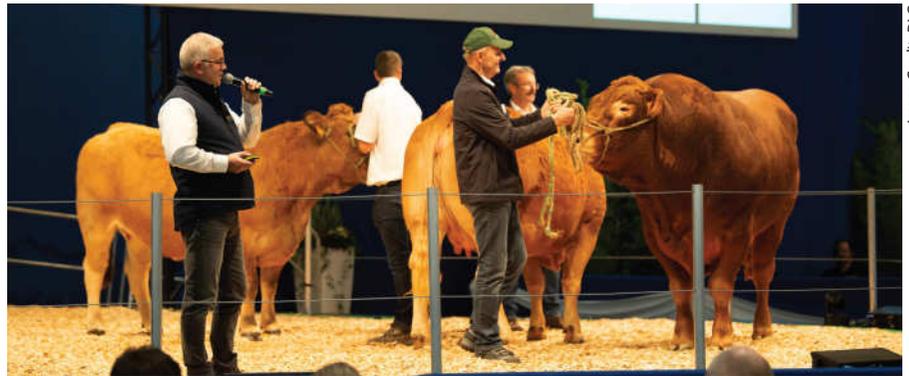


Image Credit: DLG

The trade fair for professional animal husbandry and livestock management will kick off in Hanover, Germany.

integrated animal housing concepts for sows, piglets, finishing pigs as well as dairy cows and pullets; presenting innovative feedstuffs, feed processes and formulations; direct-farm sales feature, which is a first at EuroTier; the 'aquaculture lounge' to discover opportunities in the production of fish, mussels, crayfish and aquatic plants; 'Network Focus on Animal Welfare', which will be answering questions on current animal welfare issues, and 'TopTierTreff', which is a must for national and international cattle breeders as leading breeding companies from the dairy and beef cattle sectors present live animals.

There will be the 'DLG Pig and Poultry' forum, where participants will weigh the

options of diversifying or sticking to specialising – it is particularly relevant for pig farms in the export-oriented countries of Germany, the Netherlands, Belgium and Denmark. Another interactive session will be on milk production and cattle farming.

EuroTier is also a platform for numerous industry events and congresses. Those include the 'Cattle and Pig Event', 'International Poultry Conference', 'Animal Health Event' and 'DLG Talks Animals' on the topics of food security, climate change, animal welfare and sustainability.

In addition, the German Association of Practising Veterinarians (bpt) will hold its annual congress at EuroTier, and host a veterinary trade fair as well.

Technical innovations to get a boost at EIMA 2022

AFTER THE SUCCESS of the 2021 edition, EIMA International is now back on track for the 2022 edition and will be held in Bologna from 9-13 November.

This year's edition, the 45th in the history of the international exhibition of agricultural machinery, returns the exhibition to its usual schedule, marking the restoration of the biennial rhythm that will continue with the 2024 edition. Expectations are high for this event, which was presented at Fieragricola in Verona by FederUnacoma, the association of agricultural machinery manufacturers. It is the direct organiser of this exhibition that ranks among the world's top events in terms of number of exhibitors, number of visitors, international spread and quality of technologies on show.

To date, 835 manufacturers have already formally applied to take part in the event (585 Italian and 250 foreign), with a demand for space that has already reached 80,000 sq m. Simona Rapastella, director general of FederUnacoma, said that this is a brilliant start, which leads them to expect a final number of exhibitors and a committed surface area in line with the results recorded in the pre-pandemic EIMA editions.

"Never like in recent years, conditioned by the health situation and the limitations imposed on public events, has the trade fair sector questioned itself on its own future and on the possibility that exhibitors and visitors may have developed new needs and new expectations. For this reason, we have subjected EIMA to capillary monitoring, trying to highlight its strengths and possible critical points," Rapastella added.



As many as 835 manufacturers have already formally applied to take part in the event.

Image Credit: FederUnacoma

FederUnacoma's monitoring data, combined with those of specialised companies such as GRS or official bodies such as UFI (International Exhibition Union), confirm a trend towards a reduction in trade fair participation to the benefit of a few events that have a strong international character and act as catalysts for the sector. Field surveys also show a growing expectation for the level of services, especially for operators who see the trade fair as a specific place for business relations.

Aviana Uganda 2022 International Poultry and Livestock Expo to take place in Kampala, Uganda

UGANDA, KNOWN AS the 'Pearl of Africa' is a country with fantastic natural scenery and a rich mosaic of tribes and cultures. While travelling through the region, you will be captivated by its beauty, safety and accessibility. More than half of the world's remaining mountain gorilla population can also be found in Uganda. The country is bordered by South Sudan to the north, Kenya to the east, Congo to the west, and Tanzania and Rwanda to the South. Livestock represents an essential part of Uganda's agriculture, culture, and economy. Statistics suggest that the total number of cattle, sheep, and goats more than doubled between 2002 and 2008, with the number of pigs and chickens growing by 88% and 59% respectively. On the other hand, beef and milk production both increased by 8% in 2008 alone.

Livestock are particularly important to subsistence agriculture. 7 out of 10 Ugandans rely on livestock for their livelihood. According to the National Livestock Census 2008, poultry population was 37.4 mn, cattle population 11.4 mn, goats 12.5 mn, sheep 3.4 mn, pigs 3.2 mn and dogs 1.6 mn. Moreover, poultry numbers in 2008 were 37.4 mn, which rose to 38.6 mn.

Aviana Uganda 2022 "International Expo for Poultry and Livestock" will be held in Kampala Uganda from 28-29 October 2022 at UMA Show grounds in Lugogo, Kampala, Uganda. The event will present a gateway to East Africa by providing a platform to exhibit products, services and innovative technologies to top decision makers, thus helping to create business partnerships.

Aviana Uganda, a Poultry and Livestock Expo will exemplify a single aim of prosperity in the African animal health sector, with the mission 'Animals Health Nations Wealth'. Aviana Africa will also be holding a Mega Exhibitions and Conferences on Poultry, Dairy and Aquaculture in Uganda. The event will witness more than 10,000 visitors worldwide. More than 200 Exhibitors from more than 25



The International Poultry and Livestock Expo will take place from 28-29 October

countries will be participating. Exhibitors will include companies belonging to various industries ranging from animal pharmaceuticals companies, poultry feed manufacturers and animal feed manufacturers to dairy processing machinery companies, chicken processing plants and milking machine manufacturers. Numerous business export opportunities are waiting for the African continent. This includes feed supplements, poultry equipments, veterinary pharmaceuticals, API formulators, hatcheries, breeders, feed raw materials, etc. There will also be a high class Poultry and Dairy Conference which will be taking place for two days from 28-29 October 2022 which will give attendees an opportunity to directly interact with expert industry professionals. Visitors from East Africa like Kenya, Uganda, Rwanda, Burundi and Tanzania will be attending the event.

Adesina to attend 77th UN General Assembly

THE 77TH SESSION of the UN General Assembly is scheduled to take place in New York City from 13-27 September 2022.

The African Development Bank Group head, Akinwumi Adesina, along with other world leaders will be joining the event to discuss a plethora of topics focussing on global issues such as the impact of climate change, the war between Russia and Ukraine, and the COVID-19 pandemic.

Delegates led by Adesina will be participating in numerous high-level meetings including a presidential dialogue group on nutrition, the Global Food Security Summit, and the inaugural meeting of the Global Leadership Council for the Global Energy Alliance for People and Planet, among many others. Adesina will also be attending other important conferences such as the Nigeria International Economic Partnership Forum and meeting with development partners such as the director general of the World Health Organisation, Tedros Adhanom Ghebreyesus.

Other notable participants expected to attend the event include Nigerian President Muhammadu Buhari, Bill Gates, co-founder of the Bill and Melinda Gates Foundation, Mark Zuckerberg, CEO of Meta, Facebook's parent company, and Satya Nadella, Chairman and CEO of Microsoft Corporation.



The UN General Assembly is scheduled from 13-27 September 2022

Massey Ferguson becomes a 'go to' tractor

A LOCAL DAIRY farming operation in KwaZulu-Natal is now more grateful than ever for joining the Massey Ferguson family due to its cost-effectiveness and wide application of its tractor range.

The MF Global tractor series (MF 4700, 5700 and 6700) is defined by its broad utility of fitting into many different tasks at any farm. The MF 6711 provides sufficient power to pull some of the heavier feed wagons, while its affordability has seen the largescale adoption of the MF tractor range in the Stubbs' operation. "It has become our 'go to' tractor," explained Nick Stubbs, general manager of Stubbs Farming Partnership. In addition, the MF 6711 front loader with guidance is used for precision work such as spreading fertiliser and lime on pastures.

Nick pointed out that the move to MF at the Nottingham Road operation was accompanied by adopting Trimble technology which made it easier for farm workers who were tractor drivers with limited formal education to adapt quickly to the latest technology. Another major benefit of MF is its fuel economy. Nick highlighted that smart farming techniques adopted at Stubbs were regular grid sampling of all soils on the lands, which helped him determine where and how much corrective measures could be applied in terms of fertilisers and lime to boost growth productivity.

"It is not about what it costs to buy a new tractor. It is not about what it costs to do a 1,000-hour service on a tractor. What it really depends on is what the tractor or implement costs you over 8,000 or 10,000 hours, or however long the lifecycle is meant to be," stated Andrew Nicholson, manager of Massey Ferguson tractor dealership Farm Maintenance Services (FMS). This year Massey Ferguson, a worldwide brand of AGCO is also excited to announce a fresh look for its iconic Triple Triangle logo and its new 'Born to Farm' brand identity in celebration of its 175th anniversary.

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Namibia lifts suspension of live cattle exports to South Africa

NAMIBIA HAS LIFTED the suspension of live cattle exports to South Africa following the lifting of the restriction on movement that was imposed to control the foot and mouth disease (FMD) outbreaks in the neighboring country, an official disclosed. In a statement, directorate of veterinary services chief veterinary officer Albertina Shilongo, said, the move comes with conditions that require all trucks transporting live animals to be registered with the Directorate Veterinary Services. Trucks must also be cleaned and disinfected by individuals accredited by the South African Veterinary authority before returning to Namibia.

Tanzania imposes new rules on foreign grain traders

KENYAN GRAIN TRADERS seeking to import maize from Tanzania will now be required to register their companies in Dar es Salaam as the country imposes stricter rules to protect its commodities and jobs from shifting abroad.

A notice issued by Tanzania's Ministry of Agriculture wants foreign traders to register their companies in Tanzania to enjoy better terms and ensure a smoother flow of their commodities across the border. Tanzania's Agriculture minister Hussein Bashe said in an interview with The Citizen that the country has not stopped the issuance of permits but has put in place processes to control the arbitrary export of grains. The measures include the mandatory requirement to secure export permits and the need for foreign exporters to register their entities domestically.

Nigeria to improve wheat production with locally modified seeds

NIGERIA, AFRICA'S LARGEST buyer of wheat, is partnering with food company Olam International Ltd. to develop seed varieties of the grain that are suitable for its climate, which will boost local output and cut dependence on imports.

"Olam unit Crown Flour Mill Ltd., has

produced so-called nucleus seeds suitable for the West African nation's topography and climate," said Ashish Pande, the country head for Olam Agri Nigeria.

Nucleus seed is the initial amount of pure seed of improved variety or parental lines of a hybrid produced under supervision of the

plant breeder who has evolved that variety of hybrid. The nucleus seed is genetically 100% pure and does not contain other physical impurities. The nucleus seed is produced strictly under isolation so as to avoid both genetically and physical contamination. Nucleus seed should retain original vigour of the variety or parental line.

Africa's most populous country placed restrictions on wheat imports before Russia's invasion of Ukraine disrupted supply. But it harvested less than 1% of the 4.7 million tons of the grain it consumed in 2021, according to the US Department of Agriculture. The surge in the price of the cereal crop helped fuel the inflation rate for food, which rose to 22% in July from a year earlier.

Domestic wheat production has been hampered by lack of appropriate seed varieties that can be grown in local weather conditions, high fertiliser costs and the lack of irrigation facilities.

The new seeds "give some assurance that the investment of Olam will accelerate production" in Nigeria across the wheat-farming belt, Kachalla Mala, the principal research officer at Lake Chad Research Institute, said at the briefing.



Image Credit: Adobe Stock

Olam unit Crown Flour Mill Ltd., has produced so-called nucleus seeds suitable for the West African nation's topography and climate

Kgora farmer training centre acquires hatching machine and introduces hatchery management training courses

THE ACQUISITION OF a large hatching machine by the Kgora Farmers Training Centre in Mahikeng is expected to intensely increase the poultry production capacity at this institution to 12,000 chicks a month. The machine is both a hatcher and setter combined. It can also hatch ducks, geese, quail and pigeons.

This is an upgrade as the hatchery that the centre was using before could only produce up to 2,000 chicks per week and could not meet the high demand of chickens meant for food security projects.

Kgora is a state-owned agricultural skills training centre based in Mahikeng and tasked with a responsibility to improve farming skills of all levels. The centre for the first time introduced basic hatchery management training to its list of skills development courses last year. The aim of the course was to train aspiring poultry as well as experienced

farmers to improve their results.

Farmers enrolling for this training would learn the practical aspects of hatchery management, which included the biology of fertile egg production and handling, setter and hatcher environment, processing day-old chicks and hatchery biosecurity.

In response to these developments, MEC Desbo Mohono said this was indeed an improvement and a step in the right direction. "We welcome this development, and this means we will now be able to produce more broilers. This also means we will now increase the number of beneficiaries because the chickens that we produce here are donated to farmers in the province for rearing and others are donated to different applicable projects as part of departmental food security programmes," MEC Mohono pointed out.

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Rwanda makes beans more nutritious

BEING A WIDELY cultivated crop, beans have been considered the main staple food in the country and have also been promoted as a priority crop under the Government Crop Intensification Programme (CIP). Beans rich in iron and zinc are not only considered healthy, but are also known for being sustainable, inexpensive and cost-effective. Moreover, within just a span of six months, beans have increased iron levels in Rwandan women and boosted their memory and performance.

A report published by the New Times mentioned that around US\$5mn has been invested to develop high-yielding bean varieties. More than 45 new varieties, including 18 that were bio-fuelled, have been released in the country.

Six innovators claim victory at Pitch AgriHack

THE 8TH EDITION of Pitch AgriHack saw six African agritech innovators claim victory this year. Winners were awarded cash prizes up to US\$10,000 and also given a chance to present their businesses to representatives at the African Green Revolution Forum (AGRF). "Pitch AgriHack is about creating impact through investment in the young agritech entrepreneurs of Africa," said Mumbi Maina, Agribusiness Dealroom Lead at AGRA. "Beyond the prize money, we seek to catalyse relationships between our finalists and future collaborators and investors. These are the relationships that will revolutionise the food system," she added. Another invite-only category called 'AYuTe Africa Challenge' will be awarding grants up to US\$1.5mn to ventures that are already generating measurable impact for smallholder farmers in Africa.

AGRA and GAIN sign five-year cooperation agreement at AGRF 2022

ON 5 SEPTEMBER 2022, the leaders of the African Green Revolution Alliance (AGRA) signed a new five-year agreement with the Global Alliance for Improved Nutrition (GAIN), a Swiss-based foundation launched at the United Nations in 2002 to tackle the human suffering caused by malnutrition. The agreement took place at the 2022 African Green Revolution Forum (AGRF) in Kigali.

GAIN executive director, Lawrence Haddad mentioned that the

AGRF has gone on to become the landmark annual event on the continent, and managed to bring governments and partners together around food security and making safe, nutritious foods produced in a sustainable way available to all Africans. "AGRA is thus a critical partner for GAIN in helping deliver strategies which African government are adopting in the face of the current food crisis," said Haddad.

The cooperation agreement covered GAIN support to the AGRF and working with AGRA to strengthen ties between smallholder farmers and African agri-food companies, which in turn emphasised better access to finance and technical skills for SMEs involved in the agri-food sector.

"As the impact of climate change on African agriculture grows, we need to accelerate actions to promote investments for sustainable agriculture ensuring that Africans everywhere can have better access to safe and nutritious foods," stated AGRA president, Agnes Kalibata. "As we double down to strengthen delivery systems and the agriculture ecosystem across countries in Africa, GAIN's expertise in nutrition and food systems will be a major support to this," she added.

Joint efforts are also being made to strengthen the thinking behind nutritious food systems in the African agriculture and agri food landscape. This includes work on the development of food system metrics which will significantly help governments and development partners plan to improve access and availability of nutritious foods. Haddad pointed out that GAIN would soon be launching a new report on tools for assessing progress in food system transformation.

Furthermore, Kalibata on behalf of AGRA expressed her delight for being able to renew their partnership with GAIN. "On behalf of all of us at AGRA we congratulate the Board and staff of GAIN on your 20th anniversary this year, and we are delighted to be renewing our partnership with you at this time," she said.



Image Credit: Adobe Stock

AGRA is a critical partner for GAIN in helping to deliver strategies which are being adopted in the face of the current food crisis

Global fava bean protein market projected at US\$85.6mn by 2032

THE GLOBAL FAVA bean protein market is projected to expand at a steady annual growth rate of 4.2% to be valued at US\$85.6mn by 2032, according to market research provider Fact.MR.

Currently, the market is estimated at US\$56.7mn in 2022, and is predicted to expand at a healthy CAGR of 4.2% during the forecast years of 2022-2032.

North America has dominated the global market by holding 38.5% market share in 2021, which is estimated to rise to 39.9% by the end of 2032. Together, North America and Europe represent 69.3% of the overall market share in 2022. The gradual shift from meat or dairy-based protein toward plant-based ingredients is a key factor driving the consumption of fava bean proteins.

To generate more popularity, manufacturers are upgrading fava bean protein formulations by adapting innovative ways to extract and process the final product. Additionally, varied processes have been endeavoured to standardise fava bean protein's bio-accessibility and digestibility. Consequently, enhanced fava bean protein quality will drive its penetration across regions.

Intensifying veganism across the world due to a rising awareness about vegan diets and high digestibility is also one of the supporting factors that will propel the adoption and consumption of fava bean proteins going forward. Moreover, key industry leaders are predominantly taking efforts to bring innovation in fava bean protein products, for which, they are investing in developing R&D facilities.

Bell Equipment to increase its manufacturing footprint in Northern Hemisphere

JSE-LISTED MANUFACTURER OF heavy equipment for construction, mining and agriculture, Bell Equipment plans to increase its manufacturing footprint in the Northern Hemisphere.

Bell Equipment CEO Leon Goosen said that through this initiative, the group aims to improve responsiveness and efficiencies by manufacturing more of its articulated dump truck (ADT) product closer to suppliers and the markets in which they are sold.

Goosen said that the capacity created in the group's Richards Bay factory would be used for additional products that were going to be introduced in the Southern Hemisphere market over the next few years.

He added that the Richards Bay manufacturing facility has been identified for diversification involving underground mining equipment, while the group would also be seeking contract manufacturing opportunities using the core competencies and assets of the facility.

Goosen also pointed out that increased demand for commodities, country-specific post-Covid-19 stimulus packages and an increase in infrastructure spend in a number of markets stimulated demand for the group's products during the six months to the end of June 2022.

However, he stated that supply chain challenges in the same period unfortunately constrained sales and prevented Bell Equipment from fully capitalising on these strong demand conditions.

He mentioned that the group has healthy order books in all regions for the remainder of the 2022 financial year and expected global demand for its products to continue to increase. In addition to this, the group's manufacturing operations increased planned production in response to global market growth.

JOSKIN Polska is expanding



The total area of the JOSKIN Polska site will be increased to 73,000 m².

Image Credit: JOSKIN

FROM MARCH, 2022, the JOSKIN Polska site has undergone a major development with the construction of a new storage hall. With this new building, the total area of the JOSKIN Polska site will be increased to 73,000 m².

As part of the JOSKIN Group's long-term development strategy, the 163 m long and 87 m wide building, which is scheduled for provisional acceptance in early 2023, will have one storey, four aisles, 13 doors and several overhead cranes. The main goal of this building will not only be to increase the existing storage capacity, but to also allow changes to the current organisation of the site. In particular, the high-bay warehouse of the assembly workshop, which is currently located in the existing buildings, will be moved there.

These moves will optimise internal transport, improve work organisation and centralise semi-finished products in one area. In total, approximately 40 people will be employed there.

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Already in its third edition, the event once again brings the full supply chain of Feed to Food to the poultry industry professionals in sub-Saharan Africa.



120 exhibitors from around the world at Poultry Africa 2022 Expo



Image Credit: VNU Europe

Visitors can see practical solutions and discover new products to solve daily poultry business issues.

POULTRY AFRICA IS ready to kick-off in less than two months. Leading suppliers from Europe, Asia, Middle East, the US and Africa will showcase the best in poultry products and services at this unique B2B international trade show, powered by VIV worldwide. Already in its third edition, the event once again brings the full supply chain from Feed to Food to the poultry industry professionals in sub-Saharan Africa from October 5-6, 2022 in Kigali, Rwanda.

The show presents 120 exhibitors of the poultry broiler and layer production sectors, including feed, feed ingredients and additives; compound feed milling equipment; animal health and pharmaceuticals, breeding and hatching, genetics, farm management systems, farm production, slaughtering, processing and

handling. This is the most complete event to attend in 2022 and can help visitors find practical solutions and discover new products to solve daily poultry business



The event is truly a sub-Saharan platform, with visitors from Rwanda, Nigeria, Uganda, Kenya, Ghana, Ethiopia, South-Africa, Sudan, and many more countries.

issues. This will also help in taking production to the next level.

At Poultry Africa, VDL Jansen will introduce the renewed RearMaxx, a multi-tier system specially designed to train pullets effectively and use the house area optimally. Hendrix Genetics will launch their Medium Hybrid Turkey breed, and a new range of colored traditional layers which has been developed by the collaboration of Sasso and Layers. Other exhibiting brands of this edition are Adisseo, Abusol, Aviagen, BAADER Food System, Big Dutchman, CEVA, Chore-Time, DANISCO, Evonik Africa, Güres, Hubbard, Jamesway, Lipidos Toledo (LIPTOSA), Petersime, Plasson, SKA Poultry Equipment, Yemtar, and many more.

The event is a sub-Saharan platform, with visitors from Rwanda, Nigeria, Uganda, Kenya, Ghana, Ethiopia, South-Africa, Sudan, among many others. Visitors have the opportunity to meet the industry at Poultry Africa. **B**

The show presents 120 exhibitors of the poultry broiler and layer production sectors, including feed, feed ingredients & additives, compound feed milling equipment, animal health & pharmaceuticals, breeding & hatching, genetics, farm management systems, farm production, slaughtering, processing & handling.

Professional visitors' access to the Expo is free upon registration available on www.poultryafricaevent.com.

The Leadership Conference offers the opportunity to gain in-depth knowledge from industry leaders.

Strong line-up of international experts at Leadership Conference



Image Credit: VNU Europe

ON 4 OCTOBER, one day prior to the Poultry Africa 2022 Expo opening at the Kigali Convention Centre (KCC), the Leadership Conference will offer the opportunity to gain in-depth knowledge from industry leaders.

The online pre-registration allows you to save up to 30% off the Leadership Conference onsite ticket price.

The conference has limited seats, thus pre-registration is recommended to secure the possibility to attend.

The Leadership Conference hosts high-

level industry experts from Rabobank, WPSA, Traide, Vetworks, NABC and many more. The programme addresses key topics for successful poultry production, including:

- Market outlook: an overview of current events and opportunities in Rwanda and sub-Saharan Africa.
- Trade & Marketing: traditional Strategy Dual Purpose Poultry Marketing and customer relations.
- Eggs: development of egg production, consumption and opportunities in Africa.
- Farm Management: on biosecurity and

the importance of farm management.

- Dutch Solutions: smart solutions for African Poultry Farms, by NABC and the Dutch Embassy.
- Data Management: using data for egg optimisation and a hands-on workshop record keeping.
- Feed Management: managing feed and feed costs on poultry farms.

The event benefits from very good accessibility and visa on arrival, which makes it easy for all attendees to enter Rwanda, a country that is famous for its high level of safety and security in the region.

The Leadership Conference opens on 4 October from 09:00 – 17:00 (Central Africa Time). Poultry Africa exhibition opens on 5 & 6 October from 10:00 – 17:00. **📍**

Register now for your free Expo Ticket on the official website www.poultryafricaevent.com.

The event benefits from very good accessibility and visa on arrival, which makes it easy for all attendees to enter Rwanda, a country that is famous for its high level of safety and security in the region.

Poultry organisations are coming up with helpful guides to aid running hatcheries as efficiently as possible. Robert Daniels reports.

Getting hatcheries up to scratch

ONE OF THE top stories making the media rounds within Africa's poultry circuit is that Tanzania has totally banned the importation of day-old chicks in an attempt to protect local hatcheries and limit the inflow of substandard chicks that are saturating the market.

This is the second time the country has imposed such a regulation (after doing so in 2016, although this was later rescinded). The Government hopes the measure will shield local poultry producers who are having prices undercut by chicks arriving across the country's borders.

In order to take complete advantage of this opportunity, it is essential that Tanzanian hatcheries and their management teams ensure their facilities are up to standard and operating at maximum efficiency. Fortunately for them, and indeed all hatcheries across the continent, there has been an influx of helpful guides published from leading poultry organisations to help them do just that.

Getting to grips with top tips

One of these guides has been made available by Aviagen, under the title; 'Hatchery Tips 2022'. It provides a wealth of useful tips,



Image Credit: Adobe Stock

The Tanzanian Government has taken measures to limit the inflow of substandard chicks and protect local hatcheries.

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Wet floors can have several negative effects on incubation conditions and chick quality such as water vapour having a cooling effect on eggs and slowing their embryo development.

explaining detailed information on topics from hatchery maintenance plans through to the importance of calibrating carbon dioxide sensors regularly.

For instance, of the tips stresses the importance of egg turning. With incorrect turning angles or complete turning failures among frequent issues, it is essential to check if the eggs are being turned when expected, if all the trolleys/trays are turning. Also, if the turning is smooth and gentle, and if the turning angle is correct on all the trolleys/trays. The result of not doing so could lead to issues such as increased levels of dead embryos or unabsorbed albumen covering some chicks.

Tip 12 advises to always keep setter floors dry – something that is not regularly paid the attention it deserves. However, the Aviagen guide states, wet floors can have several negative effects on incubation conditions and chick quality such as water vapour having a cooling effect on eggs and slowing their embryo development. In addition, high machine temperatures can create an ideal environment for promoting the growth of mould and bacteria which thrives on wet surfaces. This can then be carried onto the eggs through water vapour and even penetrate the shell.

The guides Tip 29 touches on chick weight loss post pull, advising an understanding on what is normal. While chicks tend to naturally lose weight after hatching (through things like residual yolk being used up), there is obviously limits here. While it is important to note the parameters for a healthy chick here, it should also be kept in mind that chicks kept under less optimal holding conditions can have their weight affected – too hot, for instance, and chicks will pant and lose more weight.

Of hatchability measures and hatching design

Another useful handbook for rearing healthy chicks has been released by Cobb-Vantress, which explains the principles as related to broiler breeding stock and highlights the main aspects of hatchery management from egg production to chick delivery.

The guide covers everything from exploring hatchability measures of success and farm controlling factors through to hatchery design and sanitation and is packed with essential information to run an efficient, effective and clean hatchery.

An example of the practical advice on offer includes an exclusive section dedicated to hatching egg management. Tips include ensuring floor eggs are packed separately from nest eggs and clearly identified; checking for hairline cracks on eggs via candling and ensuring these are recorded in order to more accurately determine the cause of the issue; placing hatching eggs carefully into an incubator or transport tray, small end down, to keep the yolk centered in the middle and reduce the risk of bacteria getting to the yolk; and grading eggs carefully to make sure chicks that are produced are able to reach water and feed.

High machine temperatures can create an ideal environment for promoting the growth of mould and bacteria which thrives on wet surfaces. This can then be carried onto the eggs through water vapour and even penetrate the shell.



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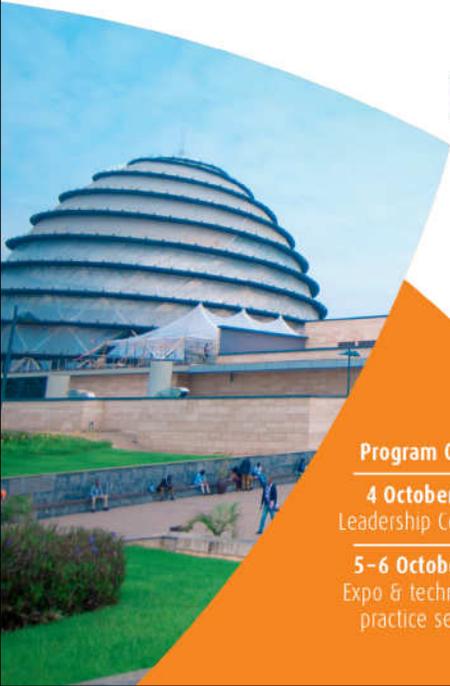
It is important to place eggs carefully to avoid cracks.

As the management guidelines state, it is essential to have a sound understanding of the principles involved in incubating eggs and hatching chicks in order to ensure maximum hatchability and good quality day old chicks. For directors of hatcheries, it is therefore vital to read up on the literature to ensure these are understood and reflected in their business. **E**



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Poultry breeding involves the process of mating poultry, which is most commonly done to increase or maintain the current flock or improve certain characteristics of selected individuals like size, weight, meat quantity, egg production, plumage, or a combination of these factors.

Healthy chickens hold the key to boosting farmers' livelihoods

WHILE STARTING A breeding program may sound simple and straightforward, a report published by the College of Agriculture, Food and Environment's department of Animal and Food Sciences mentioned that an important prerequisite to starting such a program would be to have a basic understanding of general poultry genetics and breed selection. For instance, roosters may not always be required for hens to lay eggs. However, in order to ensure production of a high percentage of fertile eggs, it is important to have a sufficient number of roosters in hand. Raising heritage turkey varieties on the other hand, does not require natural mating. For the production of fertile eggs, artificial insemination may be necessary for larger sized turkeys.

Moreover, while traditional breeding techniques involve cage housing systems for laying hens, some organizations such as Open Philanthropy, based in California have been supporting animal welfare scientists and offering grants to promote new breeding approaches that involve providing cage-free housing and improving the health of laying hens. The HenTrack project by Michael Toscano, animal welfare scientist at the University of Bern's Veterinary Public Health Institute (VPHI), Hendrix Genetics in the Netherlands and Lohmann breeders in Germany, is receiving extensive support from



Developing the poultry sector can significantly enhance the livelihood of smallholder farmers in sub-Saharan Africa

Image Credit: Adobe Stock

Open Philanthropy, along with a grant of US\$2.7mn to aid in their research.

The project which is scheduled to begin in 2023 is being carried out in an experimental barn located at the Aviforum, a state-of-the-art large-scale, cage-free research facility used by the Center for Proper Housing of Poultry and Rabbits (ZTHZ) in Zollikofen, Switzerland. Being a world leader in animal welfare standards, chicken welfare in Switzerland remains a national priority. However, issues such as keel bone fractures still persist. The ZTHZ is

hence actively working to find solutions by improving the interior design of barns. Besides this, the ZTHZ mainly focuses on behavioural research using a number of novel tracking methods. For instance, mini-receivers are worn around chickens' legs and measurement systems using radio frequencies are used to get a deeper insight into poultry welfare. Moreover, these techniques also reveal consistent behavioural patterns of laying hens.

"In the project, we want to find out which traits relate to the welfare and health of the

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laying hens in order to breed more robust and resistant chickens for cage-free housing while maintaining high performance in Switzerland and worldwide," said Toscano. In addition to this, the project also aims to incorporate new traits (phenotypes) into the breeding programs of industrial partners by combining behavioural patterns, thus resulting in the production of healthier and robust breeds of laying hens.

The dean of the Vetsuisse Faculty in Bern, David Spreng was extremely pleased about Open Philanthropy's support and funding. "I am very happy about this big funding award. It underlines the high quality of research at the Bern Vetsuisse Faculty on animal health and welfare," he stated. Teun van de Braak, product manager at Hendrix Genetics and project member of HenTrack also pointed out that the research being carried out in Switzerland would help them better understand chicken behaviour and teach them how to integrate the new traits related to hen welfare in their day-to-day breeding programs.

In Ethiopia, a two-day workshop was held by The Tropical Chicken Genetics Solutions (TPGS) initiative at Bahir Dar University which aimed to explore possible techniques to boost the effectiveness of complementary chicken-based interventions, while also documenting the lessons learned from the program. The initiative was primarily aimed at addressing income, nutrition and empowerment challenges in Africa, Asia and beyond. "TPGS is working towards broader and larger impact with an emphasis on local chicken breed development and conservation. It is taking an integrated approach involving new partners and donors, with more intervention countries and organiza-

tional innovation," explained the project's principal scientist, Taddesse Dessie.

Presentations were also organised by the TPGS team to highlight the importance of strengthening chicken genetics to make poultry development more sustainable in the tropics. With poultry being the major livestock species in Africa, Mulugeta Yitayih Birhanu, a socio-economist at ILRI and one of the presenters at the workshop pointed out that developing the sector would notably enhance the livelihoods of smallholder farmers in sub-Saharan Africa.

ILRI scientist Christian Tiambo also mentioned that the vast biodiversity of African

poultry would potentially offer solutions to boost the global poultry industry's resilience, in-turn promoting low-input farming systems for sustainable livelihoods.

Participants at the workshop also took part in group discussions to discuss the roles of the private sector and academic institutions in sustainable poultry development. The workshop finally came to an end with the TPGS co-coordinator and principal scientist Olivier Hanote, clarifying that the project would be introducing varieties of chicken that would complement existing indigenous chicken breeds rather than replacing them. **D**

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TPGS is working towards broader and larger impact with an emphasis on local chicken breed development

Healthy birds ensure a thriving business for poultry farmers and suppliers. A well managed gut health can empower birds to fight off diseases.

The key to good gut health

A HEALTHY GASTRO intestinal system is important for poultry to achieve its maximum production potential. If gut health is compromised, digestion and nutrient absorption get affected, thereby compromising the bird's performance and welfare. When properly managed, good gut health in poultry empowers birds to fight off diseases. Gut consisting of various pH and micro biota throughout helps prevent infections.

Perstorp, a provider of specialty chemicals for animal nutrition, has launched Gastrivix Avi to help this cause. It is a gut health solution combining the benefits of valeric and butyric acid. The company claims it is the first to pioneer the commercial use of valeric acid in animal nutrition, following successful trials of Gastrivix Avi. Like butyric acid, valeric acid is naturally created by the gut microbiota of broilers, although in too small quantities for optimal gut health during production cycles. Perstorp has used complex organic chemistry to create esters of valeric acid, which were tested over many years in a multitude of combinations with butyric acid esters to develop the right synergy, and the best match with nature.

The solution has been created to meet the bird's biological needs, support gut integrity and promote reliable growth and performance. Perstorp believes that the solution will solve multiple challenges for the industry, by reducing feed volumes for the broiler's lifecycle, providing consistent growth results, and boosting ROI.

At the International Conference on Poultry Intestinal Health, Hamlet Protein presented a study about the effects of anti-nutritional factors of soybean meal on the intestinal health of starter chicks.



Image Credit: Adobe Stock

Gastrivix Avi has been created to meet the bird's biological needs, support gut integrity and promote reliable growth and performance.

Dr Antonia Tacconi, global product manager of Gut Health at Perstorp said, "We can now prove that the synergy of these two esterified acids works better than one. After multiple trials, we have seen a reliable and consistent improvement on feed conversion ratio (FCR) for broilers thanks to the effects of butyric and valeric acid. With valeric acid, we have essentially found the missing ingredient."

Gastrivix Avi is a dry product that is easy to handle, palatable, has no dangerous goods restrictions and has no odour issues. Perstorp believes the product represents a new important step in supporting and improving animal performance.

Findings to ensure a good gut

Meanwhile, Hamlet Protein, a global name in specialty protein ingredients for young animal nutrition, has presented new findings at the seventh International Conference on Poultry Intestinal Health, which took place in Cartagena de Indias (Colombia).

The company stated that for the first time, a scientific study was conducted on the effects of anti-nutritional factors of soybean meal on the intestinal health of starter chicks. The outcome provided relevant insights to poultry nutritionists on the level of stachyose and raffinose they can afford to have in starter diets.

Hamlet Protein presented the results of a scientific study carried out with professors Sam Rochell, Guillermo Tellez and Doctor Kyle Teague from the Department

of Poultry Science of the University of Arkansas (the USA).

The scientific trial was set up to demonstrate how soybean stachyose and raffinose harm intestinal health in starter chicks. In addition to the productive performance of the chicks, several intestinal parameters were evaluated: intestinal permeability, fecal moisture, epithelial morphology, cellular immune response. The results showed that the level of stachyose and raffinose in the feed of young chicks indeed has an effect on their productive performance and on their intestinal health.

Guillermo Tellez added, "New insights were acquired on the linear effect of dietary stachyose and raffinose levels on the ratio of heterophils/lymphocytes in blood, which is a marker of immunological stress in birds. For the first time, the level of these two antinutritional factors in starter chick diets has been shown to have a negative effect on immune stress at the systemic level: the higher the content of stachyose and raffinose in feed: the higher the heterophils / lymphocytes ratio in blood."

Alfred Blanch, category manager poultry at Hamlet Protein, added, "In other words, worse feed efficiency. Regarding the live weight of the chicks, we observed that levels below 1.2% of stachyose + raffinose in feed can have a positive effect, possibly due to a certain prebiotic role of these two compounds. However, when 1.2% of stachyose and raffinose in feed is exceeded, the weight of the chickens does not

increase, and feed efficiency significantly worsens." Hamlet Protein will continue evaluating data from this project, focusing on microbiota, and will share further data when they become available.

An all-round solution

Adisseo, a global leader in nutritional solutions for animal feed, has contributed to improving gut health in poultry through its product Alterion. It is a complete probiotic solution for poultry specifically designed to help deliver consistency. Made from a unique spore forming *Bacillus subtilis* strain, it has an innovative formulation that ensures a hassle-free usage as well as an optimal activation in the small intestine. By acting positively on the gut microbiota, Alterion has a beneficial dual action on both performance and microbial balance.

The properties and effects of the solution

By acting positively on the gut microbiota, Alterion has a beneficial dual action on both performance and microbial balance.



Adisseo's Alterion has a beneficial dual action on both performance and microbial balance of poultry.

Image Credit: Adobe Stock

are visible on both performance and gut health. It acts in providing a consistent improvement of growth indicators (2.5% FCR) in standard as well as in digestive challenge conditions. Once in the gut, the solution activates and works at three different levels to provide the most efficient and consistent results.

It contains spores of *Bacillus subtilis* DSM29784. The spore form naturally protects the bacilli from pressure, acidity

and temperature. This makes Alterion stable under harsh pelleting and gastric conditions ensuring its efficiency where it matters most: in the animal's gut. The innovative formulation of *Bacillus subtilis* DSM29784 spores enables a homogeneous distribution of the spores when mixed with a calcium carrier. This ensures low dust, low sedimentation of the spores, no demixing and a homogeneous mix of the active agents in premixes and feed every time. **B**

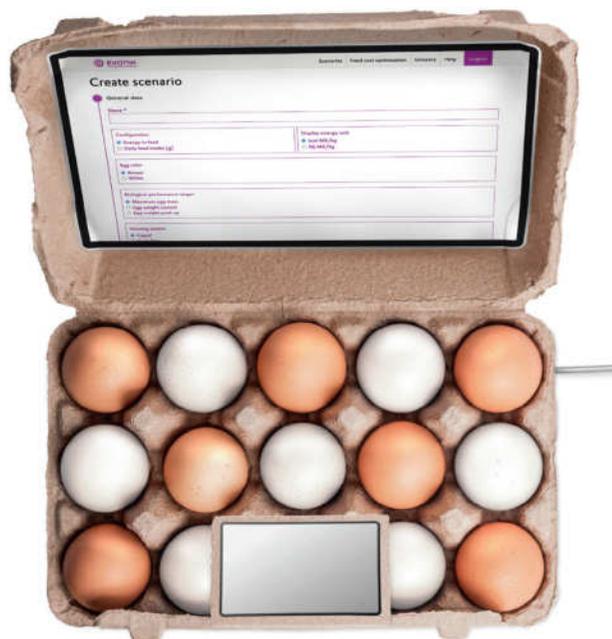
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High demand for eggs and poultry meat has led to a significant increase in the cost of poultry feed. Various governments and independent organisations are taking initiatives to improve feed production.

Boosting poultry feed production

CHEAP, **LOCALLY-PREPARED FEED** has started replacing high cost commercially-produced feed. In 2019, the EU funded project on improved livelihoods through sustainable intensification and diversification of market-oriented crop-livestock systems in southern Malawi (CLIM2)

introduced a dual-purpose hybrid chicken breed called Kuroiler chicken in Malawi from Tanzania.

These hybrid breeds which were originally bred in India are known to outperform local chicken breeds under free range, semi-intensive and intensive management systems. Initially, when farmers were providing expensive commercial feed to their Kuroiler chickens, they noticed a sharp fall in egg production. However, soon after they began using locally-prepared feed, they started noticing a significant increase. Moreover, locally-prepared feed managed to halve the feed costs, hence greatly benefitting smallholder farmers.

"We are happy that we are now able to produce more number of large eggs using our own feed at a reduced cost. This will increase the company's profit and it will improve our household income. It will also improve nutrition in our communities. It helps us in diversifying our business," said Salima Phiri from Zaone Poultry Company, a Small and Medium Enterprise (SME) established under the CLIM2 project in Malawi. A study conducted to compare the quality of locally-prepared and commercial feed showed that hens given locally-prepared feed performed better with an average of 20 eggs per day in comparison to 9 eggs per day by hens that were fed commercially-produced feed.

Moreover, as a result of hikes in poultry feed cost, Ghana's northern regional director of agriculture, Hajia Hawa Musah challenged Women in Poultry value chain (WIPVaC) to consider options for securing funds to support soy and maize cultivation by its members. She emphasised that this initiative would not only reduce the cost of feed production, but also empower women and in turn address the key goals listed under the UN Sustainable Development Goals (SDGs) of 2030.

"Agriculture has been identified to be central to addressing most current development challenges faced by developing countries," said Musa in a report from Ghana News. "An integrated crop and livestock farming system will enhance our food systems resilience and sustainability,"



High cost commercially-produced poultry feed is being replaced by cheaper locally-prepared feed.



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she added. Musa also highlighted the importance of providing continuous training, stating that it would undoubtedly transform women enterprises in the poultry value chain. She mentioned that poultry keeping, particularly by women had other advantages. For instance, it would help reduce burden of trekking long distances to run business, reduce stress and would also provide adequate time to handle family and domestic issues, particularly for those not in the public service.

Over the past few years, WIPVaC-Apex has partnered with numerous organisations and institutions including The World Initiative for Soy in Human Health (WISHH) and AMPLIFIES to exchange information and secure availability of American soy and

Ondulla Toomer, a research chemist with ARS explained that the paper-thin peanut skins had high nutritional value and could potentially open the door to new, value-added markets.

improve egg production. Executive committee member Patricia Dzesu mentioned that they were looking forward to building a strong relationship with WISHH in order to exchange information and secure availability of American soy. "Once we are able to get more soy readily available, then our members will be able to produce continuously," she said.

Research published in the US Department of Agriculture mentioned the use of peanut skins as an efficient addition to poultry feed. The process of turning peanuts into peanut butter, snack food, candy ingredients, oil and other products involved stripping the nuts of their skin. Ondulla Toomer, a research chemist with the Agricultural Research Service (ARS) in Raleigh, North Carolina explained that these paper-thin skins had high nutritional value and could potentially open the door to new, value-added markets. Moreover, peanut skins also contained bioactive compounds, including antioxidants that would play a role in neutralizing free radicals in the body.

While exploring the benefits of adding peanut skins to poultry diets, Toomer, along with other collaborators began evaluating



Image Credit: Adobe Stock

The nutritional qualities of peanut skins are being harnessed by adding them to poultry feed

low inclusion levels of these skins, since the tannin content present within them could reduce the digestion of protein from the feed. In addition to this, the researchers also examined the presence of allergenic peanut proteins in egg and meat samples produced from birds that were fed peanut-containing diets. However, results came out negative, indicating no traces of these allergens.

All in all, boosting poultry feed production not only benefits farmers, but also promotes women empowerment by bridging the gap in women non-accessibility to services, thereby setting an example for generations to come. **B**

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Evonik provides nutritional recommendations for laying hens under different production conditions such as animal breed, bird age, or housing system.

AMINOHen: The egg industry nutrition software

BALANCED FEED IS essential to sustainable egg production. In-depth knowledge of nutrient requirements is the key to effective diet design but gaining a full and current overview can be challenging, as it usually involves reviewing multiple sources, such as country animal nutritional guidelines, genetic management guides, animal nutrition textbooks etc. In addition to the challenge, is the fact that most of these information sources are not updated regularly, especially in the context of modern genetic layer development.

Evonik Animal Nutrition is working on solutions to make egg production more sustainable. As a specialist in animal nutrition, they focus on efficient feeding of laying hens. With the new software AMINOHen, egg producers, feed compounders, laying hen breeders, and other players in the value chain can optimise layer feeds with regard to nutritional requirements and feed costs. Evonik

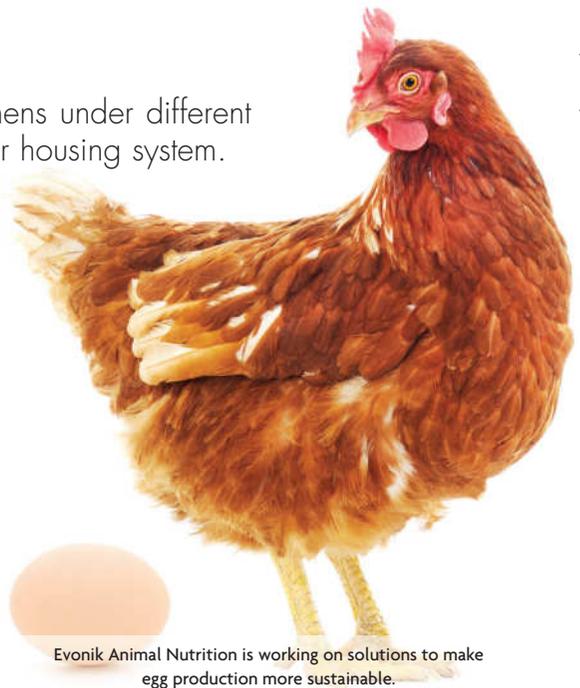


Image credit: Evonik

Evonik Animal Nutrition is working on solutions to make egg production more sustainable.

provides nutritional recommendations for laying hens under different production conditions, such as animal breed, bird age, or housing system. The software is based on the most current nutritional concepts for laying hens from poultry institutions, Evonik research, and commercial feeding practices around the world.

AMINOHen is a digital solution that combines the most up-to-date nutritional concepts for laying hens in production from poultry institutions, Evonik Animal Research and commercial feeding practices around the world. The software presents nutrient requirements for laying hens under different production conditions in dynamic and flexible week-long feeding programmes, adapted to the needs of modern genetically advanced layers.

It lets the customer design up to 15 feeding phases along 100 weeks of layer age, generating dynamic and flexible week-long feeding programmes. The software sets up nutritional recommendations based on specific feed intake or energy level in the diet, estimating feed intake per feeding phase for better feed production planning AMINOHen enables you to adjust nutritional recommendations for maximum egg mass or egg market needs, controlling egg size or pushing up egg weight along the laying cycle AMINOHen offers the option of designing a feeding programme, including 'pre-peaking' diet.

The use of balanced amino acids diets is important to reach the maximum genetic potential. Evonik Animal Research team has developed and validated 'Ideal amino acid profile' as a base for optimal laying hen performance. However, while amino acids are part of the whole success, there are other important nutrients to consider to achieve a great egg, especially the ones related to eggshell quality. AMINOHen also provides mineral recommendations and proper distribution of coarse particle of calcium in the feed.

The software provides nutritional recommendations for laying hens under different production conditions, such as animal breed, bird age, or housing system. The creation of feeding programmes using individual production data or uploaded performance data from one of 36 commercial layer breeds. The most comprehensive solution is based on production data from Layinsight-Porphyrion for precise nutrition. It allows the most accurate nutritional recommendations outcome according to each farm and flock conditions.

AMINOHen is helpful with the feed manufacturing planning, it can be configured as metabolisable energy needed in the feed and get an estimation of feed intake per bird per feeding phase, or directly indicating the feed intake expected and the system will provide the energy needed per bird. 

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Governments of Niger and Zimbabwe have introduced poultry schemes and collaborated with organisations to create employment opportunities.

Empowerment through poultry

THE REVAMPED PRESIDENTIAL Rural Poultry Scheme in Zimbabwe will see as many as 3 million households receiving 10 indigenous poultry chicks each, as part of a targeted empowerment programme. The scheme, which is set to be launched this month, requires rural households to apply their knowledge in rearing indigenous poultry.

The chicks, which will be more than 30 million, will be 10-weeks-old. Households will also get chicken mesh and stress packs. In an interview with *The Sunday Mail*, permanent secretary in the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development Dr John Basera, said, "Rural households used to keep their road-runners for meat and eggs to supplement their diet occasionally and rarely for sale. But under this scheme, we want to change their mindset so that they now start to do it as a business to make sure they will be financially stable."

Meanwhile in Niger, a modern poultry farm has been established for the benefit of Mouradou Feri Women's Group that operates in the village of Gorou Banda in Niamey. The literacy rate among women is below 10%. Girls who cannot go to school because of limited opportunities are forced to get married at a young age.



Image Credit: Adobe Stock

A modern poultry farm in Niger has been provided with 1,100 chickens.

It is one of the priorities of the Nigerian government to integrate women to social and economic life, and Turkish Cooperation and Coordination Agency is supporting the government's efforts by running projects in diverse sectors. The farm has been provided with 1,100 chickens, two-and-a-half tons of chicken bait, vaccines, and supplementary equipment. **B**

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With the African economy relying heavily on livestock and agricultural production, the need for access to veterinary care has become more critical than ever.

Defence against deadly diseases

SUPPORTING AND MAINTAINING one of Africa's most powerful industries – agriculture – is the most vital aspect of creating a sustainable environment for the future of the continent's people.

Livestock is a crucial component of Africa's economy, accounting for up to 30% of agricultural GDP.

"With rising incomes and urbanisation in Africa quickly shifting dietary habits towards increased meat consumption, the livestock sector will play a crucial role in ensuring food and nutrition security and fostering economic growth in the years ahead," said Ousmane Badiane, co-chair of the Malabo Montpellier Panel.

A report by the panel identifies animal health as one of the challenges facing Africa's livestock sector. Most often, herds face extreme weather conditions, zoonotic diseases and malnourishment, making it difficult to maintain successful farms. Some of these diseases – Africa Swine Fever, Brucellosis, Foul Pox and Rift Valley Fever – can wipe out entire herds and livestock if unchecked. Animals' well-being plays a pivotal role in the future of livestock and food security itself. This underscores the need for farmers



Image credit: Adobe Stock

A slump in livestock production means food shortages and increasing poverty and disease across Africa.

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to take good care of their animals to provide humans with a health supply of meat, eggs, milk and fish, thus ensuring human health for generations to come.

A slump in livestock production means food shortages and increasing poverty and disease across Africa. With the African economy relying so heavily on livestock and agricultural production, the need for access to veterinary care has become more critical than ever.

The United States Agency for International Development (USAID), the Food and Agriculture Organization (FAO) and a number of non-profit and government organisations are providing African countries with veterinary assistance with a view to improve livestock health for a sustainable agriculture industry.

Weaknesses in veterinary surveillance systems in Africa have emerged during recent outbreaks of infectious diseases such as Rift Valley Fever and Highly Pathogenic Avian Influenza. Conventional passive surveillance has proven largely ineffective due to poor capacity and compliance, and many countries are not able to sustain active surveillance activities. As a result, public veterinary services and the commercial livestock sector are unable to detect and successfully manage to respond in a timely manner to outbreaks of new disease threats, nor to manage successfully the control of trans-boundary diseases, many of which remain endemic in parts of the continent.

This situation not only compromises the development of livestock trade, but also creates a continuing threat to human public health

A sustainable livestock sector will foster an inclusive economic growth, improve livelihoods, sustain animal health and welfare, and address environmental issues.

since the majority of emerging infectious diseases are zoonotic, shared by animals and humans.

Strategies are needed to ensure that surveillance systems meet the challenges posed by emerging infectious diseases, while recognising the context of resource limitations. Identifying appropriate tools and incentives that encourage the full participation of both public and private actors will be critical.

There is need for a holistic and inclusive approach to livestock sector policies and technical actions that include all stakeholders within the food system. Enhanced private sector participation and strong partnerships with the sector are vital steps to growth.

"A sustainable livestock sector will foster an inclusive economic growth, improve livelihoods, sustain animal health and welfare, and address environmental issues," the Food and Agriculture Organisation (FAO) stated.

Southern African Development Community

Although livestock production offers the Southern African Development Community (SADC) region an opportunity for accelerated economic growth, low productivity, lack of efficient and effective animal disease control, lack of marketing infrastructure, poor market access of livestock products, lack of availability of information, and other associated factors, hinder regional self-sufficiency in livestock products.

Initiatives undertaken to address difficulties and challenges to the sector include: the Livestock Information Management System (LIMS) developed to create animal health yearbooks, analyse animal health data on a monthly basis, development of livestock marketing initiatives and the generation of quarterly trade data.

The Transboundary Animal Diseases (TADs) project is designed to strengthen regional institutions in order to identify, diagnose and control the serious socio-economic impacts of transboundary animal diseases such as foot and mouth disease, contagious bovine pleuropneumonia (CBPP), rift valley fever, pestes des petits ruminants (ovine rinderpest), African swine fever, and to make livestock a tradable commodity. Funded by the African Development Bank (AfDB), the US\$21.6mn project aims to make significant progress towards managing, controlling and eradicating transboundary

Initiatives undertaken to address challenges facing the sector include the Livestock Information Management System developed to create animal health yearbooks, analyse animal health data on a monthly basis, development of livestock marketing initiatives and the generation of quarterly trade data.

animal diseases through improved capacity for detection, identification, monitoring and surveillance of these diseases.

Zambia

The Zambia Government in conjunction with the World Bank is implementing the Livestock Development and Animal Health Project (LDAHP) through the Ministry of Livestock and Fisheries.

"The project seeks to improve smallholder productivity of selected livestock production systems, improving smallholder access to markets, animal disease control, as well as better natural resources management," the ministry said.

Specifically, the project is targeting selected species, including cattle, small ruminants (sheep and goats), pigs and poultry for smallholder producers in Eastern, Central, Lusaka, Southern and Western provinces and parts of Copperbelt province.

Initiatives to provide veterinary assistance to improve livestock health in Africa would be ineffective without the help of non-profit and government programmes. Vet training gives local farmers the opportunity to utilise their own experience and technical training to give livestock the best care possible.

Healthier animals are an avenue to more food, production revenue and booming agricultural industry for the entire continent, thus reducing the number of people living in poverty.

Productivity, health, and sustainability of livestock must be jointly addressed through broad-based innovations, especially in animal nutrition, vet services, and digitisation of markets. **15**



The Transboundary Animal Diseases project is designed to strengthen regional institutions in order to identify, diagnose and control the serious socio-economic impacts of transboundary animal diseases

Image credit: Adobe Stock

Omex Agrifluids has recognised the requirement and opportunity for an early boost to germination for securing rapid early growth and establishment of the sugarcane crop. Dr Terry Mabbett reports.

Foliar feeding sugarcane



Sugar cane sets in the furrow undergoing spray treatment with soluble nutrients and bio-stimulant products.

Image Credit: Omex

SUGARCANE IS AN important cash crop for an increasing number of African countries, with Angola, Cameroon, Sudan, Uganda, Kenya, Tanzania, Zambia, Malawi and South Africa, among the most competitive on a world scale. Compared to other field crops, sugarcane takes a relatively long time (10-24 months) to grow, mature, ripen and be ready for harvest. However, as a commercial cash crop, sugarcane is generally more safe and secure and therefore, worth the wait. These crops do not need expensive pest control solutions like the ones required for cotton and do not have the social and political baggage which trails tobacco. Its growth and development is traditionally divided into the following phases:

- Germination phase – sprouts form on planted pieces of sugarcane (stem) called setts
- Tillering phase – the production of side shoots, starts 15 to 20 days after the first sprouts appear
- Grand growth phase – starts 120 days after sugarcane setts are planted and lasts for up to 120 days in a 12-month crop
- Maturation and ripening phase – lasts three months

Like other crops, sugarcane requires feeding too. However, its growth pattern is such that use of soil-applied, solid, fertiliser becomes practically impossible, let alone effective or efficient, once the tillering tendency of this essentially huge grass gets underway to cover the entire field area. Foliar feeding is the answer to this.

Sprays of soluble nutrients can be applied when sugarcane setts are in the furrow, throughout the vegetative growth phases and up to the ultimate maturation and ripening phase, prior to harvest. So what are the mechanics of foliar feeding sugarcane and at what stages are the key nutrients required in the growth cycle of this crop? Omex Agrifluids, an R&D based company with a provenance in the design, manufacture and marketing of soluble nutrient products for application to crops worldwide, has the answers.

Much of the Omex expertise and experience with sugarcane using the company's portfolio of products has been gained in

South America and particularly Brazil, one of the world's biggest producers of cane sugar. That said, a number of African countries have already established their own recommendations for the use of Omex products for the foliar feeding of sugarcane.

Dr Ben Odunlami technical sales manager (Africa) and managing director Peter Prentis, whose remit includes product development and sales throughout Asia, spoke to *African Farming* at the company's headquarters. They explained how despite the crop's overall growth rate, eventual size and density, sugarcane is a notoriously slow crop to start and therefore requires nutrient priming to ensure new, strong shoots to sprout rapidly from the setts and to push through the soil. It is propagated from short lengths of stem cuttings or setts, each with a number of buds. Buds develop into shoots and grow into new 'stalks' (canes) which are harvested for their rich sucrose content. It takes between 10-24 months before the canes are ready for harvest, but surprisingly for such a generally vigorous crop, its initial growth phase – germination of the setts, growth of the buds into shoots and establishment of the root system – is a very slow and drawn out process.

Nutrient priming

At the root of sugarcane's tardy take off is the complex unfolding of root development with three separate and disparate rooting systems appearing at different stages of the plant's growth and development. The initial roots of the sugarcane sett itself are thin, branched, superficial and transitory.

These are followed by stem roots which are longer, straighter and more permanent. These second stage roots have two primary functions – to supply water and nutrients and to provide physical support to the rapidly establishing plant. Finally, the buttress roots will go deeper into the soil to anchor the now substantial plants firmly into the ground. By this time, the crop will have already grown to a considerable height and density and will be difficult to work inside for fertiliser application.

Image Credit: Omex



The early growth of sugarcane can be boosted by spraying soluble nutrients.

However, Ben and Peter said the initial slow growth phase presents growers with an early window of opportunity at the very time when the crop requires a nutrient boost, to kick start germination and to secure establishment of the setts as rapidly and securely as possible. It offers farmers a valuable opportunity to carry out growth priming procedures by applying soluble nutrient formulations to the setts in the furrow.

Omex has recognised the requirement and opportunity for an early boost to germination for securing rapid early growth and establishment of the sugarcane crop. The company's recommendations for sugarcane are now underpinned by the treatment of setts in the furrow with soluble nutrients and bio-stimulants to achieve earlier crop establishment and enhanced tillering to give more and bigger canes to cut at harvest time.

To this end, Omex in cooperation with distributors and farmers across the sugarcane world, has monitored early growth and establishment with a multitude of measurements. What they essentially found is that shoots emerge from the ground earlier and faster, and looking stronger for at least two to three months. Growth is quicker and the plants become more securely established in a shorter space of time.

There is another good reason for priming planted cane setts but often overlooked due to the misinformed view that sugarcane, because of its overall fast growth rate, high foliar density and size, is not troubled by weed competition. This may be true once the sugarcane tillers have covered the ground. It is certainly not the case during the early growth phases of the crop.

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

Later, the plants will cover the ground and form a canopy to shade out weeds, but this takes four to five months for planted cane and three months for ratoon cane in a moist warm climate. Thus, anything which gives sugarcane a kick start and a boost during this early growth phase can only help mitigate weed competition.

Product profile and portfolio

Omex offers a range of soluble nutrients and commercial products for early stage growth and establishment in sugarcane.

"Firstly, the sugarcane 'sett' and scene is Omex Bio 20, applied as a spray to setts in the furrow," Ben said. "This tried and tested product combining a full range of essential macronutrients and micronutrients, and boosted by the addition of organic material derived from a single variety of seaweed, stimulates early growth activity of the sugarcane sett," added Peter.

Ben and Peter informed that Omex Bio 20 is more than just a balanced formulation of essential plant growth nutrients. "This bio-stimulant does just what the name says, by stimulating root growth and development to promote greater root biomass and to ultimately maximise access, absorption and utilisation of soil moisture and soil nutrients dissolved therein. The net result is quicker establishment and faster and stronger early plant growth," they added. Next on the list for treatment of cane setts in the furrow are two of Omex's single nutrient products. They are Omex Kingfol Zinc and Omex Kingfol Manganese featuring a pair of essential micronutrients which underpin the growth, development, yield and quality of the crop.

Omex Kingfol Zinc contains 70% w/v (weight/volume) zinc. "Zinc is the most widely spread soil-based micronutrient but invariably the most inaccessible to crops because huge amounts are locked up as insoluble zinc and therefore unavailable to plant roots," Peter explained. Plant available shortfalls in naturally occurring soil-based zinc make deficiency of this essential micronutrient the most acute and widespread across the world's major field crops," Ben added.

Omex Kingfol Cu/Mn/Zn is especially appropriate and useful if soils are deficient in available copper which is a crucial co-factor for enzymes involved in photosynthesis.

Zinc stimulates root activity and is well established for its crucial role in early crop growth. Deficiencies of zinc in sugarcane are reflected in reduced tillering, shorter internodes and thinner stalks,

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Some growers find it more convenient to use the Omex Kingfol 'combination' product containing zinc, manganese and copper, for good growth of the plant.

exhibiting a loss in turgidity. At the leaf tissue level, zinc deficiency shows up as a marked chlorosis (yellowing) of the veins and especially on young leaves. The area around the midrib and the leaf margin remains green but the leaf blade is otherwise chlorotic. Leaves are less numerous and generally shorter in length with a high incidence of leaf tip death. Presence of red areas or lesions is due to the presence of anthocyanin pigment. At the cell level, zinc is a crucial co-factor for a number of enzyme systems.

Omex Kingfol Manganese contains 52.8% w/v manganese. Like zinc, the manganese micronutrient is an important enzyme activator. Deficiencies will rapidly show up as chlorosis of the leaves but in this case, it shows in the leaf lamina tissue between the veins from the leaf tip and towards the centre of young leaves. In cases of acute deficiency, the chlorotic tissue may die, turn brown and split along the lines of necrosis, with marked leaf twisting. Mature leaves are also affected, but in this case, are accompanied by reddish coloured necrosis. This indicates the presence of anthocyanin pigment. Inter-vein leaf necrosis rather than necrosis of the vein itself is what distinguishes manganese deficiency from zinc deficiency in sugarcane.

Ben informed that some growers find it more convenient to use the Omex Kingfol 'combination' product containing zinc and manganese together with copper. This contains copper, manganese and zinc at 8.0% w/v, 33.0% w/v and 11.0% w/v respectively. Kingfol Cu/Mn/Zn is appropriate and useful if soils are deficient in available copper which is a crucial co-factor for enzymes involved in photosynthesis. Copper is clearly an essential micronutrient for all crops and especially sugarcane, which quickly 'lets the farmer know' when in deficiency. Young leaves are soon affected with green splotches which graduate into bleaching, stalk and meristems lack turgidity and internode length and tillering are reduced. Last but not least is Omex Performa (Zinc, Boron, Molybdenum plus seaweed extract as a biostimulant). Boron and molybdenum, both present in Omex Performa, are the two least well-known and understood micronutrients but essential.

Molybdenum has a role in nitrogen fixation with deficiencies affecting both stalks and leaves. Stalks are shorter and more slender than usual, full-grown leaves show yellow streaking with

generally slow vegetative growth. Boron has a vital role in the translocation of sugars. Deficiencies show up rapidly in young leaves which may be distorted with translucent lesions (water sacs) along the leaf margins. Affected plants have many tillers, brittle and bunched leaves and dead apical meristems.

Why prime sugarcane?

With prompt early treatment of cane setts in the furrow, new shoots emerge more quickly and look significantly stronger. These new green shoots start to photosynthesise more rapidly, thus contributing to growth, establishment and development that much sooner in the crop cycle.

Compared with untreated setts in the same field, these earlier emerging shoots will continue to look stronger and more robust for two to three months after which the advantage appears to fade as a more even stand is presented. However, the proof of the pudding is in the eating or in this case, the harvesting of treated and untreated plants. Those crops treated with Bio 20, Kingfol Zinc, Kingfol Manganese, and other Omex products recommended for sugarcane, yield higher tonnages due to bigger and heavier canes and, more crucially, higher sugar content.

Early treatment of setts in the furrow with Omex soluble nutrient and bio-stimulant products is now carried out in many of the key sugarcane growing countries of the world including Angola, South Africa, Brazil, India, Thailand and Indonesia. Farmers and growers will clearly balk at the prospect of trying to spray well-grown sugarcane as they will be unable to move inside it with ease, be it by using tractor drawn/mounted sprayers or manually-operated sprayers. The only other option for spraying during the more advanced stages of growth is aerial application of nutrients.

Ben and Peter summed up the situation for foliar feeding of sugarcane by saying that applying nutrients and bio-stimulants at the very beginning of the crop is by far the easiest option for farmers and growers. "They can avoid the logistical constraints on driving vehicles through or walking through well-grown sugarcane with all the associated problems of achieving adequate spray coverage. However, the biggest advantage of treating the setts in the furrow is providing these plants with the right nutrient requirements at the right time," they concluded. **E**

Using phosphorus fertiliser in grains promotes root growth, improves crop quality, and increases stalk strength.

The right fertiliser for good growth

THE GLOBAL PHOSPHATE fertiliser market is expected to grow at a compound annual growth rate (CAGR) of 5.7% from 2022 to 2029, with a value of US\$60.84bn in 2022, according to a report by *Newswires*. This is due to increased demand from agricultural producers for fertiliser containing essential nutrients such as nitrogen and potassium.

Fruits, vegetables, cereals, and pulses are examples of major agricultural products. Using phosphorus fertiliser in grains promotes root growth, improves crop quality, and increases stalk strength.

Phosphorus (P) is an important plant nutrient and is often the least accessible macronutrient and most frequently deficient nutrient in agricultural soils. Its deficiency is a crucial factor in restricting plant growth and has prompted the wide use of phosphatic fertilisers to maximise yields. Phosphorus is relatively immobile (moves very little) in the soil. Thus, it will not leach like nitrate and sulphate or be carried to plant roots by soil water. Furthermore, P from phosphate fertiliser will readily react with soil minerals making it less plant available.

When granular phosphate fertiliser is added to moist soil, it quickly dissolves releasing orthophosphate ions to the soil solution. Most liquid phosphorus fertiliser is ammonium polyphosphate, which when added to soil reacts with water to form orthophosphate. Over time these ions react with calcium and other ions forming less

As crop target yields increase, more phosphorus fertiliser is required to meet plant requirements.



Image credit: Adobe Stock

plant available phosphorus compounds.

As crop target yields increase, more phosphorus fertiliser is required to meet plant requirements. As a source of plant phosphorus, rock phosphate has often been shown to be equal or better than synthetic phosphate fertiliser under acid soil conditions and equal or better than synthetic fertilisers under neutral or basic soil conditions when the rock phosphate is blended with acidic agents such as elemental sulphur, humates and/or biologicals. According to a report by *Market Screener*, Rock phosphate (RP) fertilisers have long-lasting residual effects. A single

application of reactive rock phosphate is often effective for a number of subsequent crop years, if applied at a heavy enough rate. Rock phosphate also has the advantage of being slow release fertiliser and does not readily leach or runoff.

Intensified agriculture relies on maximising crop production by using nitrogen and phosphorus fertilisers to overcome nutrient constraints on cultivated plants.

According to OEC, In April 2022 South Africa's Phosphatic Fertilisers exports accounted up to US\$87,854.68 and imports accounted approximately up to US\$65,297.40. **E**





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Professional filtration in micro-irrigation

FILTRATION OF IRRIGATION water is one of the most important aspects when building a functional and efficient micro-irrigation installation. A filter has two very important actions on installations:

Clogging of the emitters: To protect the system, the filter must be adapted to the quality and type of irrigation water.

Proper functioning of system: A clogged filter generates a loss of pressure and if the loss is excessive, a decrease in the functionality of the irrigation system. A poorly sized filter gets dirty quickly (and often) can lead to poor and uneven irrigation.

Irritec filters allow for the best filter protection for every irrigation system. The simple and safe structure – a result of careful building technology – reduces the need for maintenance. Resistant to pressure changes and external stresses, Irritec filters are characterised by a robust and flexible filter element.

The hydraulic capacity is ensured even at high pressures and the filter elements guarantee maximum filtration efficiency. The variety of filtration grades available is able to meet all filtering needs.



The variety of filtration grades available is able to satisfy all filtering needs.

Image Credit: Irritec



The hydraulic capacity is ensured at high pressures and the filter elements guarantee maximum filtration efficiency.

Image Credit: Irritec

This section includes: Plastic Filters – Y, Plastic Filters – Rotofilter, Plastic Filters – Rotofilter Twin, Plastic Filters – Rotodisk Automatic, Metal Filters, Metal Filters – Screen Filters, Metal filters – Hydrocyclone and sand filters and Metal Filters – Scan Filter, Automation Kit, Filters Accessories.

Y filters

Irritec filters enable the best filtering protection for any irrigation system. Their simple and safe frame minimises the need for maintenance. These filters can withstand pressure changes and external stress, and their main feature is the strong and flexible filtering element.

Rotofilters/Twin Rotofilters

Made from reinforced polyamide, Irritec T filters and Rotofilters are suitable for both inline and angle installation. The two different closing systems, the different combinations and dimensions of the filtering elements and the available filtering grades allow you to choose always the most suitable system for every filtering need.

Plastic Filters Rotodisk Automatic

The Automatic Rotodisk filter is a T filter made from polyamide reinforced with fiber glass, provided with a special mechanical-

hydraulic system for the automatic backwashing. Automatic Rotodisk filters, when installed in a group of filters and used with suitable hydraulic valves and control unit, maintain a continuous irrigation cycle and reduce the waste of water and the maintenance of the filtering station.

Metal filters: Screen filters, hydro-cyclone and sand media filter

Irritec metal filters are manufactured with cutting-edge machines and material. Weldings, cuts and holes are characterised by high precision and reliability. The welders assigned to manufacture metal filters are all highly qualified and licensed according to UNI EN ISO 9606-1: 2013 Standard. The protection obtained through epoxy powders also makes the filter durable.

Filtaworx

Filtaworx's range of fully automatic self cleaning filters have been designed and built in Australia by an experienced team of engineers using the latest 3D CAD software. Filtaworx filters are one of the most technically innovative self-cleaning filters available, combining proven high performance, reliability and economy in a compact robust design. **E**

The harvesting equipment market is expected to grow from US\$22.42bn in the year 2021 to US\$30.11bn by 2027, at a CAGR of 5.08% from 2022 to 2027.

Harvesting success



Massey Ferguson's new five straw-walker, MF Activa combine range offers versatile harvesting in a wide range of crops and conditions, from small grains to maize, soybeans and rice.

Image Credit: Massey Ferguson

FARMING MACHINES AND equipment are critical to the success of a farmer. These tools help make farming easier and more efficient.

The harvesting equipment market is expected to grow from US\$22.42bn in the year 2021 to US\$30.11bn by 2027, at a CAGR of 5.08% from 2022 to 2027. Here's a look at some of the developments in the sector:

Massey Ferguson, a global brand of AGCO, has announced the introduction of its completely renewed MF Activa range of five straw-walker combines, which deliver more power, additional features and the option of the renowned, performance-enhancing Multi Crop Separator option on all models.

Three new, straightforward and dependable models are designed to deliver flexible and high quality harvesting in a wide range of crops for small to medium sized farms. On top of the standard grain configuration, all are available in anti-wear and rice versions.

A completely new 260hp model, the MF Activa 7344, now heads the range. This is joined by the new 226hp, MF Activa 7343 and 185hp, MF Activa 7342 – all available

with the option of the well-proven Multi Crop Separator as well as electronically controlled hydrostatic transmissions and significant cab upgrades.

"These machines are designed specifically for those looking to secure their own harvests. MF Activa combines offer users an unrivalled combination of the latest technology with exceptional comfort and control, ease of use and well-proven features," says Jérôme Aubrion, director marketing Massey Ferguson, Europe & Middle East.

The new features are:

- Updated MF Activa combine range offering three models from 185hp to 260hp, with an extremely well proven threshing system as well as being available in special rice and anti-wear versions.
- Independent concave adjustment – front and rear – set electrically from the cab.
- Sectional Concave design enables concaves to be quickly and easily changed when moving between different crops.
- Multi Crop Separator option increases overall separation by up to 20% on all models.

- New modular grain pan with removable plastic inserts to ease cleaning.
- Choice of Freeflow or Powerflow headers for MF Activa 7343 and MF Activa 7344.
- Latest Stage V, four-cylinder and six-cylinder engines specifically tuned to deliver economical high torque and power for harvesting operations.
- Redesigned, electronically controlled, three-speed hydrostatic transmission.
- Uprated cab provides more comfort and ease of control with seat-mounted armrest, air-suspended seat and electronic transmission operation.

Versatile harvesters

Massey Ferguson's new five straw-walker, MF Activa combine range offers versatile harvesting in a wide range of crops and conditions, from small grains to maize, soybeans and rice.

Three new models, with powers from 185hp to 260hp, share a similar drum and concave threshing system. The threshing system employs a 600mm diameter, 1,340mm wide drum fitted with eight rasp bars. A perfect grain sample is ensured thanks to independent – front and rear – electrically operated concave adjustment.

Switching between crops is straightforward, due to the sectional concave, which enables operators to quickly change between a large or small grain sections.

Threshing system to suit all crops and conditions

The optional output-enhancing Multi Crop Separator (MCS) is available on all models for optimum separation. This increases separation by up to 20% and improves harvesting flexibility, while preserving the straw quality. Uniquely, this additional separator has the ability to rotate the concave completely out of work when it is not required.

A new modular grain pan, as used on Massey Ferguson's larger combines, is fitted

with removable, hard-wearing plastic sections. These further improve versatility making it much easier to clean when working in difficult conditions and in crops such as soybeans and maize.

Ensuring even feed

MF Activa 7343 and MF Activa 7344 models can be equipped with Massey Ferguson's highly regarded Powerflow header. This table uses a continuous belt feed to gather crops and deliver an even 'heads first' feed, while significantly reducing losses. Available in widths from 5.5m-6.2m, it is proven to boost output by up to 73% in oilseed rape, 15% in wheat and 12% in barley. The MF Activa 7342 is equipped with the Freeflow header in widths from 4.8m to 6.0m and this is also available for use on the two larger combines up to 7.6m wide.

The headers are easy to mount to the feeder house and quickly connected-up with Massey Ferguson's hydraulic Multicoupler. Automatic header height control is standard, while lateral flotation is an option.

Innovative tool

A new harvesting tool, PickLogger, collects

location data now allows farmers to easily determine the amount of fruit produced in a specific area of an orchard, almost down to a single tree.

The GPS coordinates gathered with every snip are sent to the cloud and combined with weight data to produce harvest progress maps. The accumulated data assist farmers in making critical in-season decisions. At the end of the harvesting period, the yield maps produced from the recorded data are collated with other available agricultural information, such as soil classification, soil chemical analysis, leaf data, irrigation data, and pest data. This allows for well-informed decision-making and the formulation of corrective strategies, Agri Technovation stated.

According to Erald Smith, head of Agri Technovation's services portfolio, PickLogger is the first fruit-harvesting tool of its kind to collect such accurate location data and incorporate it into yield maps. Up to now, producers could only look at an orchard's performance from an absolute-average perspective with data provided from the packhouse and other harvest-monitoring systems.

"The greatest benefit or value-add

John Deere is revising its 8000 and 9000-series forage harvesters for 2023, with the focus primarily on the smaller models of the 8000-series, but the 9000-series also receives updates to boost performance.

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Image Credit: Agri Technovation

With a fully integrated application, PickLogger enables more accurate traceability from the fruit on the retailer shelf right down to an almost per tree basis.

[feature] is that it allows the agriculturist to home in on the variance within each of the orchards and accordingly develop corrective management strategies. The eventual result is increased harvest yields over time," Smith added.

The enhanced level of in-field data measurements that the PickLogger collects also creates opportunities for a variety of other insights.

A radio-frequency identification (RFID) tag that marries each fruit picked to a crate or bin used in the harvesting process, allows PickLogger to integrate with packhouse systems.

Using the PickLogger with RFID tags facilitates the creation of employee efficiency statistics and indicators that can be used in-season for greater employee productivity.

With a fully integrated application, it also enables more accurate traceability from the fruit on the retailer shelf right down to an almost per tree basis, according to Smith.

Upgraded forage harvesters

John Deere is revising its 8000 and 9000-series forage harvesters for 2023, with the focus primarily on the smaller models of the 8000-series, but the 9000-series also receives updates to boost performance. A new top-of-the-range machine is also being added to the pick-up model range – the 30R – which increases output, especially in the upper horsepower segment.

In addition to this, the 8100, 8200 and 8300 models will receive additional horsepower. The 8100 harvester with the 9-litre engine now delivers a maximum power of 431 hp and replaces the current 8200.

The power increase of the smaller 8000 models is rounded off by the new 8300, which now has a maximum output of 505hp instead of the previous 490 hp. For 2023, the 8200 forage harvester receives the larger 13.5-litre engine and therefore increases its output by 34 hp to 465 hp.

It has also introduced HarvestMotion Plus, which provides a torque increase and more power at low engine speeds. As a result, the 9700 forage harvester now delivers up to 825 hp.

Furthermore, all self-propelled forage harvesters in the 9000 series are now equipped with the newly designed discharge chute, which is 20 cm longer than the previous version.

Due to its optimised contours and design, it enables a higher throughput and provides a better overview during chopping. Equipped with a large 80 cm diameter auger, deep 20 cm auger flights and 6 tine bars with 6.5 mm tines pick up, the new R-series pick-ups are designed for high throughput. 

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Cost of compound feed production across the continent has shot up due to inefficiencies and infrastructure issues. However, not all hope is lost as efforts are on to mitigate these.

Supporting Africa's feed milling sector

NUTRECO, A GLOBAL animal nutrition leader, has received a US\$4.8mn grant from the Bill & Melinda Gates Foundation to accelerate the implementation of localised, sustainable complete feed production in sub-Saharan Africa, driving forward Nutreco's purpose of 'feeding the future'.

Compound feed production across the continent is one of the lowest in the world, and one of the most expensive due to inefficiencies and infrastructure challenges. As a result, small-scale livestock producers face declining incomes and uncertain futures, unless they gain access to quality animal feed.



Image Credit: Aobe Stock

Small-scale livestock producers face declining incomes and uncertain futures, unless they gain access to quality animal feed.

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The grant will directly fund 21 Hendrix4U complete feed production projects initially in Ghana, Ivory Coast, Nigeria and Uganda. Hendrix4U provides a 'factory-in-a-box' for rural areas ensuring access to quality compound feed production for small-scale producers, in a financially sustainable way.

The 37 Hendrix4U projects in total, which all include a full-service package for small-scale feed production, will not only improve local feed value chains, but also critically improve the profitability of over 15,000 poultry and dairy producers.

Nutreco CEO Fulco van Lede said, "More than half of the projected global population growth in the coming decades will take place in Africa, and many will face food insecurity and hunger if no innovative solutions are developed to increase the sustainable production of food in the region. Today's grant funding serves as validation of the work we are doing in Africa to equip producers with the right tools to future proof their livelihoods – and as a result, ensure high quality food and produce is accessible for communities throughout the continent." In addition to the facilities themselves, feed producing distributors gain access to training and education in the following fields:

Local raw material quality control programme: Applications to evaluate raw material qualities and nutritional values to validate the use of local crops for specific animal nutrition.

Concentrates portfolio: Mitigating the risk of contamination with mycotoxins and supplementing the local raw materials to ensure a balanced diet.

Nutritional advice: Immediate, customised, and on-site nutritional advice via the Hendrix Pocket Advisor (App) transferring raw material data into customer specific mixing directions (least cost formulation).

Production and operations: Feed mill commissioning, production and operations workflow support.

Market development support: Hendrix & Trouw Nutrition brands endorsement, complete feed portfolio management and sales (assistance) support. For example, the SMEs will receive technical assistance (ToT) on farm and feed management support.

Business management support: Feed mill management, finance, and business acumen. Nutreco partners with and supports organisations around the planet to ensure it can play its role in Feeding the Future.

Investing in food security

Many companies are investing in constructing feed mill plants and



Many companies are investing in constructing feed mill plants and developing related equipment, in Africa.

Image Credit: -Aobe Stock

developing related equipment, in Africa. This is to strengthen the food security system in the continent. ma, a machinery company that also deals in feed mill plants, will establish a feed mill in Sudan with its brand, Viteral.

Viteral, the brand of ma Makina serving the feed technology sector, has started the shipment of the third feed mill that will be established in Khartoum, Sudan. The fully automated feed mill will have a production capacity of 20 tons per hour, ma Makina continues to contribute significantly to the feed production in the region with the new projects it will put into use.

The mill will be equipped with state-of-the-art machinery such as the VHM Hammer Mill, VHF Mill Feeder, and VPP Pellet Press. With the system to be established on two lines, the feed facility will also be able to make production by using either a single or double line, when necessary.

The project includes a steel constructed building, and will include two raw material silos with a capacity of 4,500 tons, as well as crushing, dosing, pelletising, transport, and packaging departments.

Meanwhile, De Heus Animal Nutrition has begun construction on a new feed mill near Abidjan, Ivory Coast. The construction of a greenfield compound feed factory has started just outside of Abidjan in the new industrial zone of PK in Attingue' with an initial capacity of 100,000 MT pa.

With the full portfolio of concentrates and complete feeds, the company aims to continue serving the needs of the farmers in Ivory Coast and in the future local export destinations. Mark Hop, general manager of De Heus Ivory Coast, acknowledges the timing is right to take the step towards local

production to solidify the leading position it has built as Koudijs Animal Nutrition.

"With the design of the factory we take future developments into account, as well as the high quality and safety standards to ensure production of great quality feeds in a safe and environmentally friendly manner," he added.

IFC and Zambeef Products PLC, two leading agribusiness companies, are joining forces to boost food security and strengthen Zambia's agricultural sector to create jobs and help fight poverty. Zambeef will use the funds to upgrade its feed mill, develop more animal housing, purchase new farm equipment and develop 1,000 hectares of irrigation land, among others.

IFC will invest up to US\$35mn in Zambeef to support the company's three-year plan to expand its food production and processing capacities, and enable it to source more key inputs, such as wheat, dairy, and animal feed ingredients, from local suppliers. The project is expected to improve Zambeef's value chain, which will result in increased access to high quality and affordable protein foods.

"Zambeef has grown with the Zambian people, providing jobs, livelihoods and world-class shopping for our customers by adding value to local produce. This latest support from IFC is part of our US\$100mn investment strategy to expand that even further," said Faith Mukutu, CEO, Zambeef Products PLC.

Carlos Katsuya, IFC's Senior country manager for Zambia said, "IFC's investment in Zambeef will continue to help develop and diversify this key sector, create thousands of jobs and provide quality, affordable food to Zambian consumers, while expanding access to best practices and finance for the sector in the region."

The project will enable Zambeef to introduce a new health and biosecurity management system across its animal production chain. This will facilitate easier trade and allow for the safe transfer of live animals and products to prevent entry of diseases that could be circulating in domestic or regional markets. 

Zambeef will use the funds to upgrade its feed mill, develop more animal housing, purchase new farm equipment and develop 1,000 hectares of irrigation land, among others.

An antidote to dwindling productivity

AT A TIME when Africa is facing an agriculture production crisis, fertiliser giants such as OCP, along with the African Development Bank Group are jointly hosting the Africa Fertiliser Financing Forum in Casablanca to address key challenges and boost pan-African agricultural productivity. Experts have argued that low agricultural productivity in Africa comes down to low fertiliser usage, with limited availability along with improper quantity, packages, and timing being the major causes. According to a report published by Morocco World News, the event which is scheduled to take place from 11-13 October 2022 aims to bring together farmers, financial institutions and agricultural specialists and highlight the importance of fertilisers for Africa's food security ambitions.

AGRA announces new five-year strategy for 2027

AGRA RECENTLY LAUNCHED its new five-year strategy aimed at helping governments tackle hunger by building resilient food systems. The new strategy comes as a response to recent global and African calamities. These events resulted in a desperate need to accelerate agricultural transformation. AGRA's president, Kalibata mentioned that gaining accessibility to a choice of inputs that provided a clear yield differential, coupled with market availability could significantly change farmers' lives. "Our new strategy therefore will see us do more of what works for farmers and will see us trying to understand markets better," stated Kalibata. AGRA's strategy aims to focus on key areas of work from their previous strategy in addition to the three critical areas: climate change, gender, youth and inclusion work, and transforming African diets.

Mastercard Foundation Scholars lend a helping hand to bolster Africa's yield

THE MASTERCARD FOUNDATION Scholars programme fosters the development of Africa's future leaders in diverse sectors, including agriculture. Scholars are committed to using their skills, knowledge, and networks to address challenges and drive innovation.

The programme includes initiatives such as the Scholars Entrepreneurship Fund (SEF), which was launched in 2018, and the Social Venture Challenge (SVC), a partnership with the Resolution Projects entering its seventh year. Both give scholars and alumni an opportunity to pitch their ideas and bring them to life. Since 2016, more than 140 scholars have been awarded resolution fellowships and their ventures are spread across 19 countries.

33% of the scholars surveyed were reported to be running ag-related businesses.

Motivated by their childhood experiences of hunger and severe drought in Turkana, Kenya, Mastercard Foundation scholars Lucia Lebasha and John Awiel, in 2016, created an award-winning social entrepreneurship project called Save the Pastoralist Initiative (STPI). What began as an educational communications effort involving online writing, blogging and posting agricultural articles online in local newsletters and social media went on to become a demonstration farm established in the region's economic centre, Lodwar.

The project currently supports 43 farmers

(24 women and 19 men), providing training on agronomic farm inputs and linkages to markets for their products and financial institutions.

In 2017, the Universidad EARTH Graduates Association (UNEGA) team introduced sustainable farming techniques such as micro-gardening, including vertical, pyramid, and bio-intensive farming, through their demonstration farm in Kabubbu Village, Uganda. These techniques have helped farmers double and triple their yields without increasing the land required for cultivation.

In 2020, Esnath Divasoni from East Harare, Zimbabwe, developed innovative and indigenous farming techniques that were eco-friendly and mitigated malnutrition and food insecurity. She also ventured into an unfamiliar terrain – cricket farming.

The Mastercard Foundation Scholars programme, through initiatives like SVC and SEF and university partnerships like the one with EARTH University, which focuses on entrepreneurship and transformative leadership in agriculture, provides scholars with opportunities to address local challenges, develop entrepreneurship skills, and leverage agriculture to impact their communities positively.

As they do so, they create opportunities that drive learning and leadership for themselves and their peers.



The Mastercard Foundation Scholars program provides scholars with opportunities to address local challenges and leverage agriculture to impact their communities positively

Image Credit: APO Group

WUWM Conference 2022 to address global food supply challenges

A RECENT MARKET report from the World Bank showed that global conflict, supply chain disruptions, and the continued economic fallout of the COVID-19 pandemic would most likely retain global food prices at historically high levels until 2024.

Among the factors largely responsible for price inflation includes record levels of food wastage, a reduction in farm labour capacity, and food export bans implemented by around 23 countries. The World Union of Wholesale Markets (WUWM) Conference 2022 is scheduled to take place at the Abu Dhabi National Exhibition Centre from 19-20 October 2022. The conference aims to bring together government bodies with leading fresh food producers and wholesale market authorities. "We are actively working with global partners to

share key learnings and address the critical challenges facing global food supply chains today," said H.E. Saeed Al Bahri Salem Al Ameri, director general of Abu Dhabi Agriculture and Food Safety Authority (ADAFSA).

UAE companies participating in the conference will discuss some of the major projects being undertaken to enhance access to fresh food and reduce wastage. Under the theme, 'Global food security in the XXIs: Risks, challenges and solutions to ensure resilient and sustainable fresh food supply chains', WUWM Abu Dhabi 2022 will be one of the most significant meetings of the global food industry held this year, building on the work of their 2021 conference which examined the food supply challenges in the post COVID-19 world.

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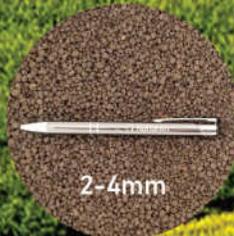
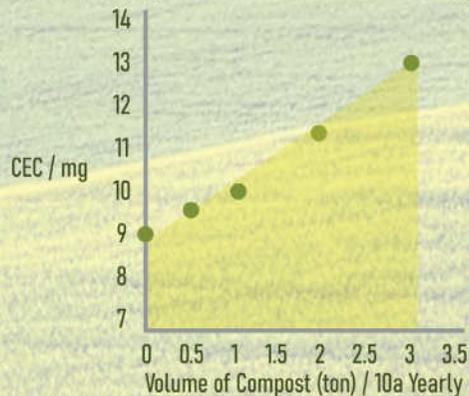
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Case IH's AFS Connect tools can seamlessly synergise mechanical operation in a field

CASE IH HAS announced two new updates to the suite of AFS Connect tools available to producers: AFS AccuSync machine coordination and productivity-boosting AFS Connect features. With their introduction, producers can share real-time data between machines in the same field for a fully connected operation. New features will enable growers to use their connected fleet more efficiently, with insights dynamic machine reporting, machine reports and CSV exporting, CAN parameter visibility and archived vehicle benchmarking.

"As harvest approaches, we're excited to release tools to help producers make faster, smarter decisions while they are facing challenging weather and economic conditions," Kendal Quandahl, AFS marketing manager, said. "AFS AccuSync is a game changer for farmers who've long desired a way to intuitively manage and link their equipment and feature updates for AFS Connect give operators more ways to use data for better in-field outcomes."

Designed with the intent to help producers work smarter, not harder, AFS AccuSync harnesses the power of a connected fleet and puts it in producers' hands through easy-to-use, real-time data sharing technology. The result is a fully connected operation that offers greater productivity and efficiency. With subscription, growers can connect multiple machines in a field to ensure all operators work together efficiently by sharing coverage maps and A/B guidance lines for all seasons of use.

AFS AccuSync enables section control based on operation coverage at the field level. It helps save on costly inputs by preventing overseeding in previously planted areas. The tool can gather accurate data on tillage, planting, seeding, nutrient application, spraying and harvest. It ensures parallel passes by all equipment, provides accurate yield maps where less-than-full swath is used, and prevents operators



Image Credit: Case IH

New features will enable growers to use their connected fleet more efficiently.

from accidentally making skips and control overlaps.

AFS AccuSync offers easy setup and uses parameters for maximised uptime. Users can gain access through the familiar AFS Connect management platform to make the most of existing data. Implementation and remote machine monitoring are simple for fleets of all sizes, thanks to full compatibility with most Case IH equipment using 4G telematics hardware (P&CM) and the AFS Pro 700 display and/or Pro 1200 display. Now, updates to AFS Connect are aimed to create a highly integrated user experience.

Producers now gain a daily summary of fleet-centric parameters for review, as well as additional dropdown menus to gain deeper-level reporting on specific field information.

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SEC Exports discusses the importance of effective warehouse storage infrastructure for minimisation of food wastage.

Warehouse storage helps deliver field to fork

AS FOOD SECURITY comes increasingly under the spotlight with the challenges of a growing population and ever-changing consumer tastes, producers in the agriculture and farming industries are under increasing strain to deliver quality foodstuffs to their expanding network.

With this pressure comes tough challenges for the industry. Using survey data from across Africa, the Department of International Trade (DIT), identified key issues facing the farming and wider agriculture sector. Most notable was that in some territories a staggering 40% of produce can be lost between harvest and plate. This significant wastage is mainly due to inappropriate warehouse storage, spoilage from stock rotation, supply chain delays, and chill chain control. Additionally, poor equipment and inefficient warehousing and distribution processes contribute to the unsustainable loss.

Increasing investment into food processing capability highlights the need to have the right process, equipment and warehouse storage infrastructure. By implementing an intelligent warehouse design and carefully selecting suitable equipment for warehouse storage for ambient, chilled or frozen areas, growers and producers will optimise the available space, ensuring streamlined operations and minimal food wastage.

Expertise in storage design and automation can take food production to a higher level in the form of vertical farming where the space used for growing is fully optimised.



Image Credit: Dexion

Integrating high quality storage equipment is a significant factor in enabling an intelligent warehouse to safely store more products.

Expertise in storage design and automation can take food production to a higher level in the form of vertical farming, where the space used for growing is fully optimised. Renewable energy provides power for lighting and HVAC with 95% less water is used in cultivation compared to traditional methods, with controlled use of nutrients to reduce wastage.

Vertical farming offers a high yield of quality produce on a small footprint, easily located within towns and cities to ensure fresh produce is available to the growing population or fodder for livestock, freeing up valuable space for additional cultivation.

SEC Exports has its 20 years' experience in designing and installing intelligent warehouse solutions for the agri-farming sector. Just one of its many projects featured a tea plantation in Kenya, where warehouse design utilised the full height of the building, doubling storage capacity, reducing wastage, significantly increasing safety for workers, and improving the flow of goods.

Integrating high quality storage equipment such as Dexion pallet racking and shelving is a significant factor in enabling an intelligent warehouse to safely store more food products in the most appropriate way to avoid wastage or spoiling of items, as well as increase pick efficiency, prior to reaching its destination. **E**

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As the agricultural drones market continues to create opportunity, how can agriculture optimise the safety and efficiency the technology offers?

Delivery, distribution and productivity: the future of agricultural drones

DRONES ARE OFFERING bolstered efficiency, safety and productivity in the agricultural sector. Drones provide a number of advantages and features, such as crop monitoring, data insights, seed planting, crop management and consistent delivery.

As technology advances, so does its suitability for the industry, with newer models having the ability to determine overall crop and plant health, land distribution, and crop lifecycle. This helps farmers in maximising yield, understanding crop planting and optimising efficiency.

Recent market insight from Fact.MR, a major analyst in technological advancement, showcased that the agricultural drone market is set to create significant opportunity over the next decade.

Despite the promise of opportunity, deploying drones across the continent carries its own challenges.

A recent report from the African Union (AU) and NEPAD explained, "Challenges... may be classified under four broad



Image Credit: Unitrans Africa

Drones represent market opportunity galore across the continent.

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categories: technological, economic, social, and legal and regulatory. These include capability, reliability and battery autonomy; commercial batteries for small unmanned aerial vehicles (UAVs) allow 24-40 minutes flight fully charged before battery replacement is required. UAVs' reliance on communications from a ground operator for control make them vulnerable to signal loss from interference, flying out of range or hacking."

On the challenges that operators must rise to for the successful

"...a skilled workforce is required by the UAV industry, whose competencies range from planning flight itineraries, piloting UAVs, operating GIS and data analysis software..."

deployment of drones, the report continues, "More importantly, a skilled workforce is required by the UAV industry whose competencies range from planning flight itineraries, piloting UAVs, operating GIS and data analysis software, interpreting data, and providing agronomic or spatial planning advice."

"There exists social challenges, which span a range of issues including security, the right for privacy, data acquisition, storage and management, causing harm or nuisance to people and animals, damaging property, employment, etc."

Even the exact function of the technology holds question marks. Worldwide, farmers are implementing drones for planting, irrigation monitoring and real-time livestock management. Its use in Africa continues to be drone surveying and crop spraying. Environmental and functional differences may continue to distinguish Africa's implementation of the technology in the future.

With the role of drones in African farming in its infancy, challenges may continue to arise, notably in the lacking regulation around UAVs.

While the benefits of implementing a drone force into the industry are boundless, there remains significant questions over the technology's role in the future of farming. **D**

Image Credit: Adobe Stock



Competencies are a key component of establishing drones as the future of farming.

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