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POTATO REVIEW

NOVEMBER/DECEMBER 2023

POST-HARVEST EXPLORATION

Show guide and floor plan for BP2023

New series looking at legislation and compliance

NPI AWARDS 2023: SHORTLIST ANNOUNCED

National POTATO INDUSTRY Awards
22nd NOVEMBER 2023
THE OLD SWAN, HARROGATE

PLUS: GB Potatoes' first year | Sourcing seed for 2024 | Machinery updates

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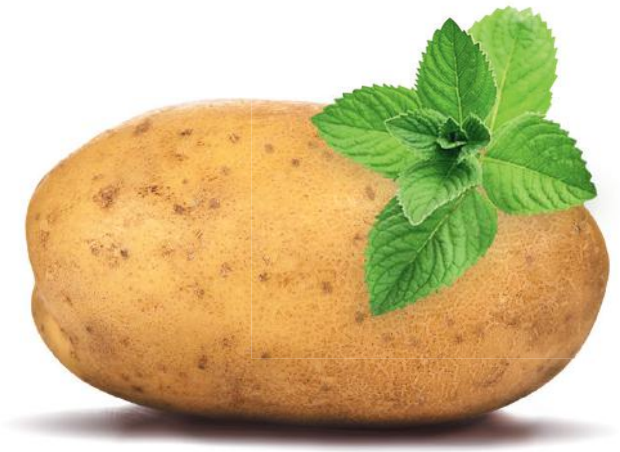

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Editor's letter

IN the last of the 2023 *Potato Review* editions, we have a whole host of information to share with you as we enter the winter months.

After surviving the demise of AHDB, the Grow Your Own Potatoes project has continued to thrive and expand and is on the lookout for more members of the British potato industry to get involved. We spoke to Project Manager Sue Lawton about its evolution and future.

Researchers in the UK, Germany and the Netherlands are making important discoveries to better understand potato blight (Phytophthora infestans) and we share their latest findings.

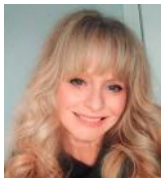
BP2023 has left behind the uncertainties of the covid era and bounced back, with more exhibitors than ever before, plus a full seminar line-up. We bring full details in our latest show round-up and include a full 12-page show guide and map in the middle of the magazine.

One year after its inception, GB Potatoes Chair Mark Taylor looks back on the organisation's first 12 months and what has been achieved, and in our Professional Profile feature we interview its new CEO.

We talk to Andrew Goodinson, Agronomist and Potato Specialist at Hutchinsons, who shares his experience of some of this year's grower challenges, how these were managed, and how to monitor soils, while our storage feature focusses on the Crop Storage and Post-harvest Solutions (CSPS) facility network partnership and the work it is undertaking.

Elsewhere we look at sourcing seed for 2024, how genetic matter may give black-grass an evolutionary advantage, molecular priming for yield enhancement and PhD research which is providing positive possibilities relating to genetic complexity.

With the National Potato Industry Awards just weeks away now, we bring you the full shortlist of category candidates, following a meeting by our independent judging panel in early November, and we also feature the first in a new series which will look at legislation and compliance.



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Consortium clinches research grant

A CONSORTIUM of key industry, academic and farming partners, including Emerald Research Ltd (ERL), Dyson Farming, Bangor University, The James Hutton Institute and Light Science technologies, have won an Innovate UK grant for a project that will explore regenerative approaches to growing commercial potato crops.

In collaboration with a consortium of key industry, academic and farming partners, including Dyson Farming, Bangor University, The James Hutton Institute and Light Science technologies, the three-year programme is titled Transformative Reduced Inputs in Potatoes (TRIP)

The TRIP programme is dedicated to exploring innovative regenerative approaches aimed at revitalising farm soil organic matter. Additionally, it focuses on finding solutions to tackle the environmental challenge posed by greenhouse gas emissions in the UK's potato farming industry, with a particular emphasis on reducing the notable levels of CO2 and N2O emissions.

Large scale commercial potato crops require intensive soil cultivation to prepare the seedbed and typically require levels of inputs (fertilisers, herbicides, fungicides and insecticides) in order to produce crops that meet commercial quality and tonnage requirements.

Conventional potato production's current carbon footprint comprises: Fertilisers (55%, including N2O emissions from soil application of nitrogen fertiliser), storage energy (29%), seed (9%) and transport (5%).

Simon Fox, MD of ERL, said: "We believe that this project has the ability to fundamentally change the soil tillage and input regimes used to produce potatoes in the UK."

He added: "We are excited about the very real potential not only to reduce the carbon footprint of UK potato production, but to do so in ways that are practical and economically rewarding for the farmer."

Throughout the three-year programme, led by Dyson Farming, there will be regular updates from the consortium partners through the official TRIP communication channels and from farm-scale and replicated trials taking place through the farming partners SDF Agriculture, F G Pryor and Son Ltd, Colwith Farm Potatoes Ltd. and CP Richards & Son Ltd.

10-year celebration

OXBO International, formerly branded as Ploeger, is celebrating a 10-year milestone of successful potato harvesting in the UK, having delivered its first machines in 2013.

The company, whose headquarters are in Fakenham, Norfolk, recently rebranded itself as Oxbo. In recent years, it has seen rapid growth in its service and spare parts departments which led to a recent upgrade of its workshops. It distributes to Norfolk, Lincolnshire and Yorkshire.

Kids' dates for growing and harvesting announced

KIDS Country, the education programme run by the East of England Agricultural Society for children aged five to 11 years, has launched its 2023-24 academic year events calendar, featuring potato growing and harvesting, and all events now run on-site in schools.

Kids Country's Education Manager, Sandra Lauridsen, said: "We are offering a more flexible approach, with our whole events programme re-worked to deliver our usually fully booked events programme into the playground and classroom. Teachers don't need to worry about stretching the budget to coach costs, and we hope this will help even more children experience Kids Country events."

Planting activities will take place on March 5th, 6th and 8th, and harvesting will take place on July 9th, 10th and 12th. For more details, or to get involved, contact Sandra here. **slauridsen@eastofengland.org.uk**

Cyber criminals target group in run-up to shareholders' meeting

POTATO breeder Royal HZPC Group BV recently fell victim to cyber-theft, losing an undisclosed amount of cash to criminals.

The breeder made a formal announcement that, as a result of a form of cybercrime, a "large amount of money" had been transferred to a bank account belonging to criminals.

"We are working together with the banks and the police to limit the damage. The outcome of this is still far from certain. An external forensic investigation has started," the announcement stated.

Enhancing soil health for sustainable growing

Teresa Meadows

BASIS Registration, a provider of educational solutions for the agricultural sector in the UK, has created a resource to help those in the potato growing sector deepen their understanding of soil health and sustainability.

Its newly-launched "Improving Soil Health Series" on BASIS Classroom is an online educational series carefully designed to further educate and equip growers, land managers, advisers, agronomists, and industry stakeholders on how to enhance soil health through informed decision-making and practical application.

The series allows participants to complete short individual topic areas or opt for a bundled approach. The courses focus on key aspects, including soil structure, organic matter, biology, and the creation of strategic soil management plans.

Head of Environment at BASIS, Teresa Meadows, said: "The autumn is a good time to be out assessing soils on your own farm or your client's, when soils are moist and ahead of cultivations to check for structure and soil biology. These courses provide the background to soil structure, biology and soil organic matter, what to look for, how to carry out any assessments, plus practical guides to download and complete and the management practices that can be done, depending on what you find and the areas that you would like to improve."

"The courses also align closely with the new actions for soils under the Sustainable Farming Incentive (SFI) in England with the 'Creating a Soil Management Plan' course, providing all the technical details and template to deliver this action for your business or for your clients, which will be invaluable for advisers."

Drill cover crops with match funding this autumn


Dr Alex Cooke

GROWERS drilling cover crops across the Midlands are being reminded to make the most of match funding and free specialist advice on offer via Severn Trent's Environmental Protection Scheme (STEPS).

Up to £175/ha is available to match fund seed purchases, as well as support from the water company's team of agricultural advisers, on-farm soil testing and at-home webinar advice – free-of-charge.

Dr Alex Cooke, Principal Catchment Management Scientist at Severn Trent, said maximising future crop productivity and water quality.

"The most beneficial cover crop mix for each individual field will depend on the soil type, nutrient levels and any pest or disease that may be present. For example, biofumigant species, such as Brown or Indian mustard and radish, can help control soil-borne pathogens, while deep-rooting species, such as radish, can scavenge nitrogen and retain it for use by subsequent crops."

The main STEPS match funding is available to growers in priority catchments to address issues such as nitrates reaching watercourses. For more information and full eligibility criteria visit **www.stwater.co.uk/steps**. The STEPS application window closes on December 31st, 2023.

34th CUPGRA conference

THE 34th CUPGRA Annual Cambridge Potato Conference will take place on December 12th and 13th at Robinson College, with this year's theme being 'Looking forward to disruptive solutions'.

In the Eric Allen Memorial Lecture 'Understanding how potatoes grow, determines how to grow potatoes', young scientists will share their research and is a free-to-attend event, even for those not registered at the conference.

On Tuesday evening, the Potato Barons' Christmas Feast will take place in St John's College Great Hall. After-dinner speaker will be Cambridge MP Daniel Zeichner and there will be entertainment by the 'Gentlemen of London'.

The Wednesday workshops will take place in Robinson College's new state of the art conference centre, the Crausaz Wordsworth Building.

The conference, which is also being registered for BASIS points, regularly attracts more than 200 members of the industry.

£58 million investment for crisps manufacturer

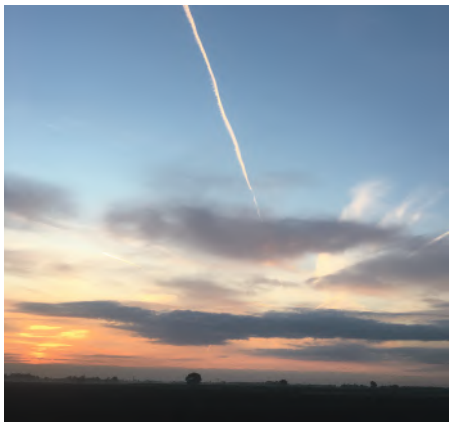
PEPSICO has announced a £58 million investment in its Walkers Leicester factory, the biggest investment in the UK in the past 25 years.

The Leicester factory is one of the world's biggest crisp factories and home to Walkers crisps and snacks, which celebrates its 75th birthday this year. The investment will see a new manufacturing line installed, the replacement of existing machinery with more sustainable equipment, as well as an extensive upgrade of employee facilities for the site's 1,120-strong workforce.

Seminars aim to help growers maximise opportunities

FRESH from attending British Potato the week before, potato growers might like to check out the seminar programme at CropTec on November 29th and 30th which will be held at the NAEC, Stoneleigh for the first time this year.

Access to new markets, issues around crop nutrition, robotics, using data in decision making, crop protection and changing regulation will be amongst the topics covered.



Mental health support from supply group

SUPPLY chain specialist, AKP Group, sponsored the recent Take One a Day's photography exhibition, a project dedicated to finding positivity in surroundings and supporting mental health.

Take One a Day was created by amateur photographer Paul Gutherson in November 2020, after he unexpectedly discovered a person who had died by suicide during a morning dog walk.

‘Let us be prosperous’ says international potato body

PROSPERITY remains a primary focus for the International Potato Center (CIP) which has just launched its annual report.

The significant economic value that root and tuber crops (RTCs) generate for farmers worldwide is highlighted in opening speeches by Director General Simon Heck and the Board of Trustees Chair Helen Hambly Odame.

Guide to SFI and CS payments

ORGANIC certification body Organic Farmers & Growers (OF&G) has published a technical guide outlining how the Sustainable Farming Incentive (SFI) and Countryside Stewardship (CS) payments can be combined by growers to deliver increased payments of up to 50% when compared to historic BPS rates.

The financial benefits are highlighted in the new technical leaflet, which has been prepared by William Waterfield of the Farm Consultancy Group.

The technical leaflet can be downloaded from the OF&G website. Defra previously announced farmers can now apply for SFI payments.

Invitation to take part

THOSE operating in the UK’s fresh potato supply sector are invited to showcase their brand, service or product and network with retail, wholesale and hospitality professionals at a spring show.

The Fresh Produce Consortium (FPC) is partnering with the International Food & Drink Event (IFE) to introduce a new fresh produce section at ExCeL, London, from March 25th to 27th. More details are available on the IFE website.

Do you sell or supply a farm shop or deli?

THOSE selling and supplying within the UK potato sector are invited to join those exhibiting their produce, plus the latest in equipment, labelling and packaging solutions over the three-day Farm Shop & Deli Show next spring.

The show, which takes place at the NEC, Birmingham from April 29th to May 1st, will feature new launches, live events and sessions, and trend-setting food and drink to give you an insight into the industry people driving the market.

It will run alongside the Food & Drink Expo, National Convenience Show, The Forecourt Show and The Restaurant Show, as part of the UK Food & Drink Shows and one badge will provide access to all five shows. The show will also reveal the winners of the Farm Shop & Deli Retailer Awards plus the worthy winners for the Product Awards.

‘Help us cultivate a brighter future’

After surviving the demise of AHDB, the Grow Your Own Potatoes project has continued to thrive and expand over the years. Now run as an independent education project, it’s looking for more members of the British potato industry to get involved.

ORGANISERS of the Grow Your Own Potatoes Project, which seeks to educate school children about where potatoes come from, how they grow and the health benefits, have announced that the 2023 event was its most successful yet, with more than 6,500 free potato growing kits being distributed to schools nationwide, reaching almost 200,000 children

Sue Lawton, who was originally employed by AHDB and has continued to manage the project following its demise in 2021, described it as ‘a significant milestone’. She said: “We are steadily gaining ground, and building Grow Your Own Potatoes back to what it was pre-potato ballot.”

She added: “The response was nothing short of incredible. The children’s enthusiasm was infectious, and the impact undeniable. However, our vision extends far beyond this accomplishment. Our goal for 2024 is to reach even more young minds, spreading the positive word about potatoes and cultivating a lifelong affinity for this remarkable and nutritious vegetable.”

Launched in 2005, Grow Your Own Potatoes (GYOP) was originally delivered by the Agriculture and Horticulture Development Board (AHDB) and delivers Grow Your Own packs of seed potatoes, grow bags and instructions to around 15,000 classrooms each year, giving school children an insight into where their potatoes come from.

Following the demise of AHDB Potatoes, Skea Organics and Potato House, family-run businesses breeding and growing seed potatoes in Angus and Perthshire, donated seed potatoes and offered support to keep the project running. One of the first primary school-based growing projects, it has now become the largest of its kind with more than six million children taking part annually.

As well as Skea and Potato House, current supporters include McCain, Branston, the British Potato Trade Association, Tesco, E Park & Sons, Puffin Produce Ltd, Cygnet PB and IPM and the search is on for more new sponsors from within the British potato industry, to help keep the programme going.

“Our goal for 2024 is to reach even more young minds, spreading the positive word about potatoes and cultivating a lifelong affinity”

“The more companies from the potato industry that come forward to sponsor GYOP, the lighter the financial burden on all contributors. By aligning with us, you not only make a direct impact on the future of the industry but also ensure that potatoes remain at the forefront of consumers’ minds for generations,” said Sue. “Let’s cultivate a love for potatoes in the next generation and keep them at the forefront of consumers’ minds.”

More details on sponsorship are available from the GYOP website at **www.growyourownpotatoes.org.uk** or by contacting Sue on 07792 209478 or sue@potatohouse.co.uk.

Registrations are now being taken for the 2024 project. Kits are limited and will be issued on a first-come first-served basis.

The finalists of 2023...

GROWER/GROWING MANAGER OF 2022-2023

We had some excellent nominations for the Grower of 2023 award, all of whom are working hard to keep their own businesses running successfully as well as sharing good practice. We narrowed our shortlist down to the following four candidates …

Bradley Sykes

Bradley grows for the French Fries and frozen products market on around 1,000 acres in Yorkshire and is a 'first timer' having set up on his own, with no farming background or family business. Now operating with seven full time staff (14 at peak times), he supplies for McCain's and was a speaker at the Future Farmers of Yorkshire event earlier this year. One of the largest potato growers in Yorkshire, his determination is seen as exemplary and he always "gets the job done."

Chris Suckling

Farming 600 acres in Suffolk, Chris has made a notable impact by raising public awareness about potato growing, helping charities, and providing a community service. Having survived a life-threatening accident several years ago, he has been fund-raising for the East Anglian Air Ambulance which came to his aid, while holding an annual Open Farm Sunday event in conjunction with registered charity LEAF, which has grown in size year-on-year. During the COVID pandemic, Chris launched the Potato Hut which continues to help members of the public struggling to source basics.

Nick Taylor

Nick has been commended for his commitment to improvement, experimentation and collaboration with researchers, agronomists and other growers to find sustainable and resilient solutions in the sector. Farming 395 acres of potatoes in Shropshire, his collaborations have included two Innovative Farmers field labs - one on trap cropping to reduce potato cyst nematode and another exploring alternative control of wireworm. An organic farmer, integrated pest management and selecting blight-resistant varieties are core to his business.

Sophie Bambridge

Norfolk grower Sophie farms 800 acres for the French fries/frozen market and has full industry engagement with GB Potatoes, CUPGRA, NIAB, McCain, Greenvale, virus and PCN working groups. She is felt to be an exemplary model of a young mother forging a path in a predominantly-male industry and leading by example, providing a site for regenerative potato production projects and more.

BEST INNOVATION 2022-2023

The past two years have seen some notable innovations aimed at improving various stages of the potato supply process and we've enjoyed reading about them all. Here's our shortlist …

Buster: A PCN-resistant variety developed by IPM Potato Group Ltd.
DIG: A data management and stock control platform (Data Intelligence for Growers).
The SmartSolaTM: A control system for potato stores developed by Crop Systems Limited.
Honesty®: A new liquid tuber treatment produced by BASF.
BAS657: A late blight fungicide produced by BASF for growers.
TuberLog: An Electronic Potato which reduces losses caused by bruising, developed by Martin Lishman Ltd.
Meloidogyne fallax control: Technology, protocols and genome sequencing work developed by Fera Science Ltd.
Aponic Limited: A vertical farm that sprays nutrient solution onto roots developed by Jason Hawkins-Row
Bulk Potato Slider Detector System: A system developed by Fortress Technology.

BEST ENVIRONMENTAL/ SUSTAINABILITY INITIATIVE

Working to create a less energy-intensive but more cost-effective practice is an ongoing challenge. Some of the accomplishments we felt were worthy of shortlisting are as follows …

KP Snacks (Intersnack Group) – 'Reducing our impact on nature'

The company has partnered with Sustainable Futures and a number of its UK potato farmers to measure on-farm greenhouse gas emissions through the Cool Farm Tool, and to understand potential opportunities for emissions reduction. It has also been piloting the use of cover crops in potato production.

Crop Systems Limited - SmartSolaTM

This control system can cut the cost and the carbon footprint of potato storage, to the benefit of both the business and the environment. It enables store operators to optimise the use of home-generated green energy and minimise the use of bought-in electricity.

Marcus Palmer - Algifol

Marcus (MJP Supplies), brought to the UK market a seaweed biostimulant which is improving root structures and disease resistance within potato crops. Manufactured in Germany, Algifol is made from brown algae gathered from the ocean, dried and refined through special processes.

BEST MARKETING WORK / BEST MARKETING CAMPAIGN

Good marketing strategies can build awareness and business openings. Here's our shortlist of successful campaigns for 2023's title …

Grow Your Own Potatoes (GYOP): This primary school potato growing initiative was originally launched by AHDB but over the past two years has been taken to new heights while being run by Andrew Skea/Sue Lawton/ Potato House with a strong marketing campaign.
Super Sagitta: HZPC's #SuperSagitta marketing campaign on Twitter received an enthusiastic response. Mugs were sent out to those that purchased and grew the variety and posted photos.
Natural Plant Protection brand: The marketing of UPL's Natural Plant Protection brand took a transformative approach to marketing biopesticides and biostimulants
Maincrop Potatoes: Having diversified into a programme with a Geersing potato specialist to breed sustainable varieties resistant to blight and use of lower inputs, this merchant/packer has used social media extensively and engaged in community awareness-raising practices, such as meeting the local MP.
Perfecting Potatoes Together: Over the past two years this BASF campaign has sought to establish a network that would collaboratively support each by sharing interesting stories, news and events.
Kids Country: The educational arm of East of England Agricultural Society) campaign promoted hands-on learning experiences about potato growth and for children.
Golden Kings: A disruptive pack design and three-tiered free-standing display unit were created to market Greenvale AP's new brand of potato.

MACHINERY AND IMPLEMENTS

Machinery manufacturing never stands still! Companies are always endeavouring to streamline and improve processes, and we've seen some noteworthy entries. Here's our shortlist …

PACE bag/weigh/seal system: The upgraded system from Pace Mechanical Handling Ltd uses Servo Drive technology and the latest touch screen displays, working together with an online gateway system.
Ceres 450/Maschio: A new development to AVR's Ceres 450, combined with the Maschio power harrow, aims to increase usage of soil cultivation and planting of potatoes in one passing, especially in stone-rich areas.
Puma 4.0: Upgrades to AVR's harvester include Comfort Drive and Autosteer function for increased ease of use and accuracy.
Python: This newly-developed twin conveyor for high capacity, product-friendly transporting of potatoes from the receiving hopper to the store loader, was developed by AVR.
GB 430: GRIMME's introduction of a sliding axle to the GB 430 has made it a more a viable belt planter.
GEN 3 VARITRON 470: With this latest version of the VARITRON 470, growers now have the option of a four-man picking platform. This is the first four-row self-propelled harvester GRIMME has ever produced with a four-man picking platform.
SELECT 200: New features introduced last year to this GRIMME trailed potato harvester include a telescopic axle, VarioDrive, redesigned MultiSep, Active Steering, longer main web, SmartView Camera system, CCI Controls and MyGRIMME connectivity.

AGRONOMIST OF 2023

Agronomists are the cornerstone of successful potato growing, but who has made the most note-worthy impression over the past two years? Here's our list of shortlisted nominations …

Eric Anderson

Eric has shared his wealth of knowledge, ranging across soil health, nematodes, nutrition, crop health, blight control and desiccation. Scottish Agronomy has run many independent field trials to back up its advice. Once harvested, Eric advises on storage and storage diseases. His knowledge has helped many to weigh up all the risks and plan the most economical route to a profitable crop.

Martyn Cox

Martyn has worked tirelessly in the pursuit of understanding of wireworm. He undertook a Wireworm Review, with the support of CUPGRA and Marc Allison from NIAB, and has been an ambassador for best practice in understanding and controlling the pest. Over the past two years, he has helped the industry raise its game when it comes to monitoring and managing, bringing about huge cost savings.

Andy Alexander

Having amassed a lifetime of experience in potatoes, Norfolk agronomist Andy has given wise council to countless agronomists and growers looking to understand the challenges and technical issues encountered by the industry. He has been a frequent contributor to potato periodicals and has an immense knowledge of all potato agronomic matters from seed and irrigation, through to storage and skin quality.

Andrew Goodinson

Andrew has a wealth of knowledge and expertise as an agronomist stretching over 35 years and now acts a trainer and mentor to others. He currently offers agronomy and strategic advice on behalf of Hutchinsons across a range of farms in Herefordshire covering 14,000 hectares, sharing good practice.

John Sarup

John is felt to have contributed an alternative perspective to 'standard' potato production, providing a three-dimensional perspective of soil, the environment and crop growth. He is an advocate of advanced crop nutrition and biostimulant use based on trial results and works to disseminate this information to all growers.

HESCOTT-MEREDITH MEMORIAL AWARD

Science and research are a key element in aiding potato growing practices, helping battle pests and disease, creating new tolerant varieties and improving storage methods. Four stood out as potential candidates for this award …

Andy Evans

Andy has provided services that have encompassed research, consultancy, and education. He has been involved in research on aphid-borne viruses in potatoes, the management of potato cyst nematode (PCN) using biofumigant crops and soil amendments and has written over 15,000 reports.

Martyn Cox (Blackthorn Arable)

Martyn has spent the best part of his working life studying wireworm and devoted many hours and resources to helping the industry learn how to manage and control the pest. He is regarded as an industry legend and is always willing to share his time and knowledge.

Harry Duncan

Harry has mentored countless PHD students throughout his career. He has maintained close collaboration with researchers and the whole industry, on subjects including CIPC distribution, analyses, contamination and stewardship. Although retired, Harry continues to share his valuable knowledge and experience.

Philip Burgess

Having spent a long career in science and practical application at every technical level for multiple organisations, Philip has sought to improve grower performance. In his role as lead consultant and researcher for scottishpotatoes, he aims to bridge the gap between researchers and on farm consultancy. A pathologist by training, his career has spanned both research and commercial production of seed and ware potatoes.

BEST YOUNG ACHIEVER

Encouraging future generations to enter the potato industry and carry the baton for years to come is paramount, so what young achiever deserves this title? Seven were shortlisted …

Kieran Hardy

Fieldsperson & Trials Day Manager Kieran joined Wholecrop Marketing Ltd in November 2021 to look after its potato growing base and organise its trials day. Since then, he has gained the confidence of its grower base and established the trials day as one of the best in the country. He also manages the company's crisping storage and his contribution is described as 'invaluable'.

Dom Hill

Dom is a PhD student studying the physiological responses of potatoes to drought stress using 3D imaging techniques. Over the past four years he has conducted important research into how potato varieties respond to drought stress on a physiological level as part of a BBSRC-funded Waitrose Collaborative Training Partnership with Branston Ltd.

Bradley Sykes

Bradley, a first-generation grower, is felt to be a great example of how hard work and determination reaps rewards for a new entrant to the industry. A guest speaker at the recent Future Farmers of Yorkshire Spring Debate, he has visited local agricultural colleges to speak to students and is keen to bust the myth that you have to be born into farming to succeed.

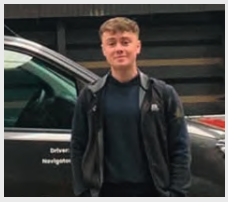
James Pitman

James is a PhD researcher, using metabolomics to decipher the metabolic activity underpinning potato sprouting, and translating this insight into development of novel sprouting suppressants. His research findings are being used to inform novel sprouting suppressant development.

Joseph Mowbray

Lincolnshire-based Joseph is a Director of Tom's Potatoes, supplying Potatoes to Markets and Chip Shops. The thriving business was founded nearly three years ago by Joseph and his business partner Tom Carter, originally delivering just a couple of bags of potatoes to a local store. It has now grown into a successful enterprise that delivers daily to markets from London to Tyneside.

Thomas Carter



A co-founder of Tom's with his partner Joseph, Thomas has helped to transform a small potato delivery service into a thriving business that serves customers all across the country and, as the business continued to grow, remained grounded in the core values of providing the best potatoes and outstanding service.

Joseph Marshall

Research and Development Agronomist Joseph came back to Eurofins following a year's placement, in which he stood out as an excellent student. This season he has taken over the management of applications at the largescale Potato Blight Platform site in Derbyshire.

STORAGE/REFRIGERATION ACHIEVER

Which company or individual has made the most notable impact on potato storage over the past two years? There are four shortlisted candidates …

Farm Electronics Ltd: The company developed the COOL5 system which uses EC ventilation fans to achieve optimal air flow and energy-efficiency for potato storage as well as using a limited amount of natural refrigerant (R290) and features Vision Controller.
Ray Andrews /Crop Systems Limited: CSL's SmartSolaTM control system can manage up to 10 stores at the same time, directing energy to the one that needs it most.
UPL Ltd: The company's Fazor (maleic hydrazide) and Argos (orange oil) products for potato storage in the market have become two of the sector's critical products for potato storage.
Tim Kitson: Tim has supported both Lamb Weston and the Lamb Weston potato supply base by getting 'under the skin' of storage sites, supporting development of new in-store technology. He has been a key player in the potato storage sector for more than 27 years and is often introduced as 'the potato storage specialist'.

BRITISH POTATO INDUSTRY AWARD

Effectively a 'lifetime' contribution to the potato industry, we have six worthy candidates shortlisted for this award …

Walter Simon

Walter has been a grower and advocate for potatoes for more than 40 years. Now retired from growing, he still actively promotes positive messages around potatoes. He has appeared on TV and radio, judges local growing competitions and has helped with the launch of Root Zero, a carbon neutral potato brand.

Andy Alexander

Andy is a respected key figure in both the UK and beyond these shores, spreading knowledge and encouraging improvements in all aspects of potato agronomy. He has been a mentor to many in the sector, demonstrating not only a fundamental understanding of grower needs and challenges, but also contributing to food industry bodies where he has represented grower perspectives in meeting consumer expectations.

Debbie Winstanley

Debbie has made a huge contribution to the potato R&D landscape, working across multiple supply chains and through CUPGRA. Passionate about developing clear communication between growers and retailers, supporting sustainable supply chains and waste reduction, she has maintained positive working relationships with growers and suppliers over many years.

Nick Cesare

As Managing Director of PACE Mechanical Handling, Nick Cesare marked four decades of supplying robotic and automated packing and palletising lines to growers, packhouses and food processors this year. This has incorporated 250 successful installations, and his dedication to helping improve the potato packing process and helping bring about cost and labour savings to the potato industry is ongoing,.

Adrian Cunnington

Adrian has been at the forefront of potato storage research for a generation, running trials, managing the Sutton Bridge facility and providing detailed advice to growers around the country. He is internationally recognised as a leader in the field of storage.

Peter Peebles

Hailing from Perthshire, Peter has worked in the potato seed industry for more than 40 years, starting with his father's business, Peebles Brothers, which became Greenvale AP Ltd. He is well regarded throughout the Scottish seed industry and respected in international circles. He is always willing to share his knowledge and experience.

Record trade stand figures at potato show

BP2023 leaves behind the uncertainties of the covid era and bounces back with more exhibitors than ever before, plus a full seminar line-up.

WITH the harvest season typically concluded and preparations for the new year in motion, the new organisers of the British Potato Show say the next event on November 22nd and 23rd at the Yorkshire event centre in Harrogate will be bigger and better than ever, with a record amount of trade stands.

Seminars also make a welcome return at this year's show, presenting visitors with technical talks, along with current industry topics and issues.

Show evolution has continued with crop production exhibits being joined by an ever-expanding range of post farm expertise. So, while growers will be catching up on everything from varieties to sprout suppression, factory staff will be exploring developments as diverse as water treatment, haulage and the very latest in optical sorting and whole crop utilisation.

Visitors to BP2023 will have access to scores of Europe's leading potato companies. The latest in potato research and developments will be shared at the event, along with breakthroughs in production and processing. All types of farm, packing and processing machinery will be on display and a number of buyers, suppliers and advisers from all sectors in the supply chain will be amongst those attending.

Adding an extra layer of prestige to the event, the National Potato Industry Awards will be held at the Old Swan in Harrogate on the first evening of the show, Wednesday, November 22nd. The awards are a celebration of excellence and innovation within the potato industry.

Registration for the show is free, and anyone still wanting to exhibit is advised that there are only a few stands now left, so it will be 'first come first served'.

For further details, email bpinfo@warnersgroup.co.uk or contact Robyn Teague at robyn.teague@warnersgroup.co.uk or by calling 01778 395 022.

Regenerative growing debate

EMERALD Research Ltd (ERL) will be tackling the question 'Can potatoes be grown regeneratively on a commercial basis?' on November 22nd and 23rd when it attends BP2023.

A consortium of commercial and academic organisations have launched a three-year project, 'Transformative Reduced Inputs in Potatoes' (TRIP), funded by Innovate UK. ERL will be asking growers and industry experts to cast their vote on whether they think it is possible to grow potatoes regeneratively on a commercial basis with the three response choices:

1. Yes – it is possible to commercially grow potatoes regeneratively.
2. There is a middle position for potatoes to be part of a 'regenerative rotation'.
3. No – it is not possible to grow potatoes regenerative at a commercial level.

During the course of the three-year TRIP field trials, ERL's OptiYield soil analysis, nutrient recommendations and product formulations will be used and evaluated against standard farming programmes and a number of different nitrogen and phosphate regimes.

One aim of the project is to evaluate using alternative application methods and approaches to see if it is possible to reduce the total overall inputs consumed by the crop while still achieving a commercially saleable crop – aiding profitability and sustainability.

The first full set of TRIP field trial results will be published at the event. This year's trials tested a number of variable combinations:

- Base nutrition provided by FYM, green waste and a reduction in nitrogen of 50%
- Fungicide or biological approach with either Maxim and Amistar or Consortium
- Foliar nutrition applications
- Additional foliar – Blight programme or Diamond PR

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Information at your finger tips:

+ Weather forecasting (available up to 2 and 8 days ahead)
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+ Wide and developing range of pest & disease forecasts
+ Multi-depth soil moisture and ETo data

Localised weather information is available at any time in the RHIZA Connect app

Visit Agrii and RHIZA at stand AAH at The British Potato Show

For more information, please contact: rhizaweather@agrii.co.uk, info@agrii.co.uk or ring (0)330 0949150.

One year in...

GB Potatoes Chair **Mark Taylor** looks back on the first 12 months and what has been achieved.

THE support we've been given by members of the British potato industry over the first year has been deeply encouraging and while we still have much to do, including building a greater membership, we have achieved much. This puts us in a great position heading into year two.

The pressures and vagaries of the weather never seem to be far from our thoughts and 2023 has thrown up some real extremes. From a wet, slow, and delayed start to planting the record-breaking temperatures of June followed by a very unsettled and wet July and August, only to be topped off with a heat wave in early September – not what you'd call a "normal year"!

I think crop development in the later stages of the growing season surprised us all. We are still seeing some variability across crops but much better than early indications suggested. We now need a good run to get that crop safely into store.

It's obvious to all in the industry that the risks in growing potatoes in GB are high and are increasing. The work and focus of GB Potatoes looks to understand some of these pressures and support the industry with direct engagement and practical solutions.

First year accomplishments

The early months saw us establishing the board and putting our business structures in place. With the recent appointment of Scott Walker as our part-time CEO, this structural work is now nearing completion. We are delighted to have Scott on board, and I know he is looking forward to developing the remit, impacts and outputs from GBP.

Graham Bannister and I attended many excellent field and variety days over the summer and enjoyed the positive reception and active discussion around GBP. It would be fair to say that these events proved a successful "recruiting ground" and membership has grown.

Apart from the many trade events we have attended, what else have we been doing?

We established a working partnership with CUPGRA. Both organisations have committed to work together to ensure scientific research and innovation in field practice are increased through appropriate collaboration for the purpose of the sound commercial production of potatoes.

We are looking to develop a close working relationship with SPO (Seed Potato Organisation). Discussions are underway to explore how GBP and SPO can come together and retain a clear focus to deliver the needs of the GB seed sector.

Potato cyst nematodes (PCN) inflict significant crop losses. That is why with partners CUPGRA and support from PCN Action Scotland, GB Potatoes has set up a PCN forum with representatives covering all stakeholders. Our ultimate goal is to minimise the impact of PCN on the GB potato crop. The group is determined to support practical solutions.

The loss of active substances often vital to crop protection is a constant source of anger among growers and advisers. To tackle this issue we have set up a Plant Protection Products (PPP) Forum. Collaborating with people across the industry, the forum will focus on supporting the evidence base to maintain the current range of PPP for potatoes.

Of all the crops grown in GB, potatoes has one of the highest water usage. That is why GB Potatoes is taking an active role in the Water for Food Group. This group aims to be the single point of contact for technical matters relating to water resource management and drought planning in the agri-food sector.

GB Potatoes, in partnership with SDF Agriculture and Potato Storage Insight, is currently working on a project to set up a Strategic Potato Store for on-going testing, evaluation and dissemination of data and practical solutions on topics directly relevant to the potato storage industry. We have agreed with Winters Lane Storage (long Sutton, South Lincs) for them to host year one of the project and are very grateful for their support. We will also be looking to have a processing store and add a seed store given time.

Coming together after harvest

I very much looking forward to industry coming together at BP2023 in Harrogate in November. GB Potatoes is involved in the seminar sessions, and I hope to see many of you at our session entitled 'Turning Challenges into Opportunities'.

Following on from Harrogate, many of us will then meet in Cambridge for the CUPGRA conference in December. Again, a great opportunity for us to come together as an industry.

Ready to tackle 2024

The GB Potatoes message of collaboration remains as strong now as when we started the journey of establishing a new organisation to represent the industry. We thank the early members for their confidence in us and we are determined to make GB Potatoes the champion of the UK potato industry and the respected dedicated, sector-specific voice for the industry.

The objective for GB Potatoes is simple, we are here to ensure a viable future for GB potato production. GB Potatoes is a platform for the potato supply chain to collaborate to tackle the long list of issues facing the industry and to be a respected voice to talk to government bodies and work with them to address emerging challenges and realise opportunities. I hope the illustration of activity above gives you a sense of some of our priorities and encourages many more in the industry to join up and be part of our future plans.

There is no monopoly on good ideas or how things can be taken forward. We welcome the opportunity to discuss 'What GB Potatoes can do for you?' Please come and talk to us. PR

GB Potatoes

‘Another challenging growing year’

We talk to **Andrew Goodinson**, Agronomist and Potato Specialist at Hutchinsons, who shares his experience of some of this year’s challenges, how these were managed, and how to monitor soils.

Based in Herefordshire, Agronomist and Potato Specialist Andrew Goodinson has been working for Hutchinsons for 17 years and looks after nearly 8000 ha of farmland, including the Welsh borders, south Shropshire and Worcester. Most of the potato crops he looks after are destined for the crisping or processing markets. This month he looks at the challenges growers faced this year, discussing some of the key ways these were addressed, and reflects on factors for consideration when planning for next year’s crop.

Management plans for the 2024 potato season, while taking into account the past two difficult growing seasons, need to be based on time frames of at least five years, advises Andrew.

“To yield well, potatoes need solar radiation to photosynthesise and create starch, so need the crop needs to be kept green and healthy as long as possible to ensure that profitable, good quality yields are achieved,” he said.

The cost of inputs to achieve this varies from year to year, and while fertiliser costs have gone down from this time last year, their management and utilisation remain the same.

“At the moment fixed costs appear to be higher, and this will affect grower profitability. But everything needs to be measured and analysed properly before taking decisions,” he said. “Budgeting needs to reflect the real world and emotional planning is not conducive to a healthy business.”

But this can be challenging especially as the potato sector – particularly in the Herefordshire region – as much as 60% of land used for growing potatoes is rented. Short term contracts – such as for one-year potato growing– are not conducive to long-term soil health.

Longer term agreements would be more helpful, he says.

“A profitable crop comes from good soil management for five years beforehand, so if a landlord is taking measures to make soil more resilient and productive, both potato grower and the soil benefit.”

Andrew said soil testing methods need to change, as only monitoring phosphate, potassium and nitrogen limits understanding to very basic levels, while a better understanding is needed of the soil’s potential for performance and how to make best use of the resource. ➜

Medium and long-term resources in the soil will help keep inputs to those that are really necessary and impact on yield.

By planting cover crops, you need to bear in mind that you are providing an environment for both beneficials and pests such as wireworm to proliferate.

Stubble turnips provide green cover and an income from the land prior to potatoes.

He recommends using the 'Gold Soil' test which shows exactly what is going on in the soil, including ratios and balances that are critical to healthy, good quality, yields.

"Using a Gold Soil test on soils which are heavy, or slump and run, helps identify the reasons behind these properties, so you can take appropriate measures if necessary," said Andrew. "For example, the 'skinny' Herefordshire soils quickly turn to porridge when there is heavy rain, but when they dry, they become as hard as brick. This is because the magnesium-calcium ratio is out of balance.

"We are addressing this by applying calcium as gypsum once every four or five years, which, at approximately £55/ha, is a good investment."

Building better understanding of short, medium and long-term resources in the soil will also help keep inputs to those that are really necessary and impact on yield, he adds. Andrew suggests taking samples from two fields - one that is productive and one that is not doing well, and comparing the differences.

He sees a future for testing for pathogen and inoculum levels in the soil prior to planting. "We are good at testing for PCN, and free-living nematodes, but given the risks of potato growing, the industry could benefit for tests looking for existing inoculum causing diseases such as Verticillium, powdery scab or rhizoctonia."

Monitoring rhizoctonia risk currently just involves observing whether there have been outbreaks in a particular field in previous potato crops. Andrew firmly believes a protocol for testing for this pathogen would reduce potential losses.

"When planting this year, we frequently saw that the chits prevented the seed flowing as well as it should do on the newer belt planters. They bunched together and lots of chits were broken off."

He said growers could also do more to avoid introduction of pathogens into soils by undertaking more seed testing when it arrives on farm. "Despite difficulties in taking proper random samples from where the seed potatoes are stored in boxes or bags, it is a good idea to sample for Black Dot, Powdery Scab and Blackleg," he said.

When considering adding soil amendments, cover crops, manures and mustards into the rotation, he emphasises the need to do so on a field-by-field basis.

"For example, chicken manure affects soil workability, but it is high in phosphate so we need to take care where we use it, especially as many people apply to much phosphate in any case," he said.

Cover crops also play an important role in soil health, he adds, with choices including stubble turnips to provide green cover and an income from the land prior to potatoes. The use of cover crops helps improve soil structure, hold nutrients in the top soil and provide grazing for livestock. He adds that while there can be more wireworm activity and damage because the roots provide a food source, the overall benefit of cover crops needs to be taken into consideration.

"By planting cover crops, you need to bear in mind that you are providing an environment for both beneficials and pests such as wireworm to proliferate."

Reflections on 2023 growing season

It was a difficult start to the 2023 growing season. A cold, wet spring resulted in planting being delayed by about three weeks across many regions, and seed potatoes went into cold, wet and less than ideal conditions.

Some fields were above field capacity, and the usual process of cultivation - allowing to dry, ridging, and allowing to dry again before planting - had been compromised, with many fields needing to be left 24 hours longer. ➜

"What made things worse was that the seed potatoes were taken out of cold stores to warm up and because they had to wait for the conditions to come right for them to go in, they tended to chit more than normal," said Andrew.

"Developing these long chits takes energy out of a tuber, and they lose weight and turgidity so if they get broken off, it can affect early vigour as new chits have to grow out of other eyes.

"When planting this year, we frequently saw that the chits prevented the seed flowing as well as it should do on the newer belt planters. They bunched together and lots of chits were broken off. It was particularly noticeable because the belts needed cleaning more often to remove the loose sprouts."

Some of the impacts of 2022 also came back to bite, as the long hot season last year meant some of the seed potatoes were more physiologically aged, leading to variable emergence across the field.

"Rooting was compromised in crops that had gone into wet soils and this manifested as nutrient deficiencies late on in the season, which we addressed with applications of magnesium (Mg) and phosphite fairly early on."

He said weed control strategies worked well as soils were damp.

Fortunately, when crops emerged, the June weather had turned hot and dry, and as 2022 had been a low blight year, there had been little carry-over of inoculum so the late blight risk was low.

However, as spring turned into early summer, June temperatures increased and as a result, many crops did not reach full canopy, with subsequent yield implications.

"In general, potato crops do not like temperatures over 23oC and shut down. As a result, they never reached full canopy, and had potentially serious yield implications as tuber numbers were down as well due to de-sprouting and the physiological age of the seed.

PCN testing is never taken for granted, but more testing could be done to prevent Verticillium, powdery scab or rhizoctonia.

"This meant that management techniques needed to ensure that the tubers were kept within the sizes specified by customers."

Early irrigation prevents scab

As crops were stressed, many growers started their irrigation early, which also helped them keep common scab (Streptomyces scabiei) at bay.

The next challenge was a rapid infestation of aphids in the second part of June, which particularly hit susceptible varieties such as Russet Burbank.

Aphid sprays started from June 20 onwards, and Andrew stresses their importance to prevent aphids vectoring virus from already-infected plants to uninfected ones.

"Seed-borne virus had already been recorded in just three or four plants in a row, plus the occasional individual plant, which is quite an unusual pattern." he notes. "It is very hard to control aphids in seed crops because of the lack of plant protection products. There is wide insensitivity to pyrethroids, leaving us with Insyst (acetamiprid) for ware and processing crops and Tepekki (flonicamid) for seed potatoes."

This year many of the crops needed some help to meet their yield and quality potential, reflects Andrew, revealing that his strategy to mitigate stress caused by these biotic and abiotic challenges was to use the results of tissue tests taken across the county and apply relevant foliar feeds including seaweed-based products that included magnesium, phosphite, and potash.

Moving into July, the weather changed and there was lots of rain, with the first cases of late blight (Phytophthora infestans) being identified by the beginning of August in susceptible crops of Russet Burbank and Melody.

"As a result we changed our programme frequency from seven days to four or five, and alternated the actives we were using.

"Fortunately – and perhaps due to the weather conditions – the blight did not spread."

Samples were duly taken and sent to the James Hutton Institute as part of the Fight Against Blight campaign, and all were identified as being 36_A2.

"While this is a fit and aggressive strain, we were relieved that there were no instances of 43_A1, which has been found to be insensitive to mandipropamid."

43_A1 was first found in Denmark in 2018 and has been found as far away as Portugal, but fortunately so far has not yet been identified as having arrived in Britain.

"This year we saw more botrytis in crops."

"Skinset was much slower than last year, but the tubers had lower dry matter content and were more turgid, so they were less susceptible to bruising."

Leaf symptoms

Andrew also reports many physiological symptoms on leaves which were hard to identify correctly. They could have been early blight (Alternaria), botrytis or even the result of magnesium or phosphate deficiencies, so these were sent away for analysis.

In some fields there were signs of Verticillium wilt, and sclerotinia as well showing on the stems.

Some crops also showed symptoms of ozone spotting from high light intensity.

"Scientific reports reveal that it usually happens when crops are in an active growing stage, and damage is usually most visible on the underside of leaves.

"This year we saw more botrytis in crops and we think that we saw this in cereals as well.

"In addition, historical records show that we used to use a lot of chlorothalonil in crops and this possibly was masking the effects of ozone spotting.

"Anything that affects the green leaf area also has an effect on yield, and because climate change is so important to our sector, we need to understand more about this leaf disorder in greater detail."

He goes on to note that this year's July and August were very different from 2022, so while the extra rain meant that yields became more average (despite there being fewer, larger tubers) because the crops stayed green for longer, the other side of the coin was that desiccation took longer.

"Skinset was much slower than last year, but the tubers had lower dry matter content and were more turgid, so they were less susceptible to bruising.

"It has been a challenging season and we have learned a lot about the physiology of the potato, and how we can use that information going forward to tighten up on certain areas of management which we have identified.

"Nonetheless we cannot base all our changes on one season in isolation." PR

Agronomist and Potato Specialist Andrew Goodinson said some fields were above field capacity this year.

"This is a truly collaborative effort to support R&D in this important part of the food chain."
Dr Rosie Bryson, CHAP

Safeguarding crop storage research

Organisations unite to establish post-harvest exploration facilities.

THE demise of the Agriculture and Horticulture Development Board (AHDB) Potatoes arm, coupled with the closure of Sutton Bridge Crop Storage Research, has paved the way for the establishment of a new network of post-harvest research facilities across the UK.

This development marks a significant step forward in advancing capabilities in preserving and managing harvested potatoes.

The Crop Storage and Post-harvest Solutions (CSPS) facility network spans across three strategic locations within the UK. This newly-established network is the result of a collaborative partnership between ADAS, Crop Health and Protection (CHAP), the Natural Resources Institute (NRI) at the University of Greenwich, and the James Hutton Institute (JHI). Together, they have joined forces to establish and operate the CSPS facilities, aiming to advance research and innovation in crop storage and post-harvest approaches.

Prof Sheryl Hendriks, Director of the Natural Resources Institute (NRI) said: "In order to protect food supply chains and minimise food waste it is vital that resources for research to improve crop handling and storage are fit for purpose. This cannot be covered by an individual organisation but requires a strong national network."

The facilities offer a diverse range of advanced capabilities such as the ability to simulate multiple supply chain environments while exercising precise control and monitoring over essential storage conditions – temperature, humidity, and atmospheric composition such as variable CO2 levels.

Initial research priorities will focus on developing pre-harvest and post-harvest monitoring and modelling techniques to predict storage potential, as well as supply chain tracking and monitoring, optimising store management for energy efficiency, exploring automation and labour-saving opportunities, testing potato sprout suppressant technologies, and evaluating sustainable packaging materials.

'Cinderella of the supply chain'

Prof Derek Stewart, Director of the Advanced Plant Growth Centre (APGC), at The James Hutton Institute, said: "Crop storage research is always the Cinderella of the food supply chain research portfolio, despite the fact that it underpins the whole thing. We don't eat all that we harvest immediately and so need to store many crops.

"This new initiative should herald a new wave in data-enabled crop storage research and see it better integrated with the growing environment to determine the impact of agricultural growing practices and innovations therein. The new storage research units are at a scale that mimic industrial crop storage but allows for the flexibility to deliver state-of-the-art research and impact in the agrifood sector."

The CSPS facility network aims to enhance food supply chain resilience by addressing key challenges including food waste reduction, extended shelf-life, and optimisation of the food value chain from primary production to retail.

Technical Director at ADAS, Dr Faye Ritchie, said: "ADAS is pleased to be part of and co-invest in this important capability. Our applied field and post-harvest supply chain research will be enhanced by the new facilities and partnership of expertise. We look forward to helping deliver solutions for clients, such as to increase resource use efficiency or reduce waste, improve energy efficiency, and ensure supply chain resilience."

Stakeholder engagement

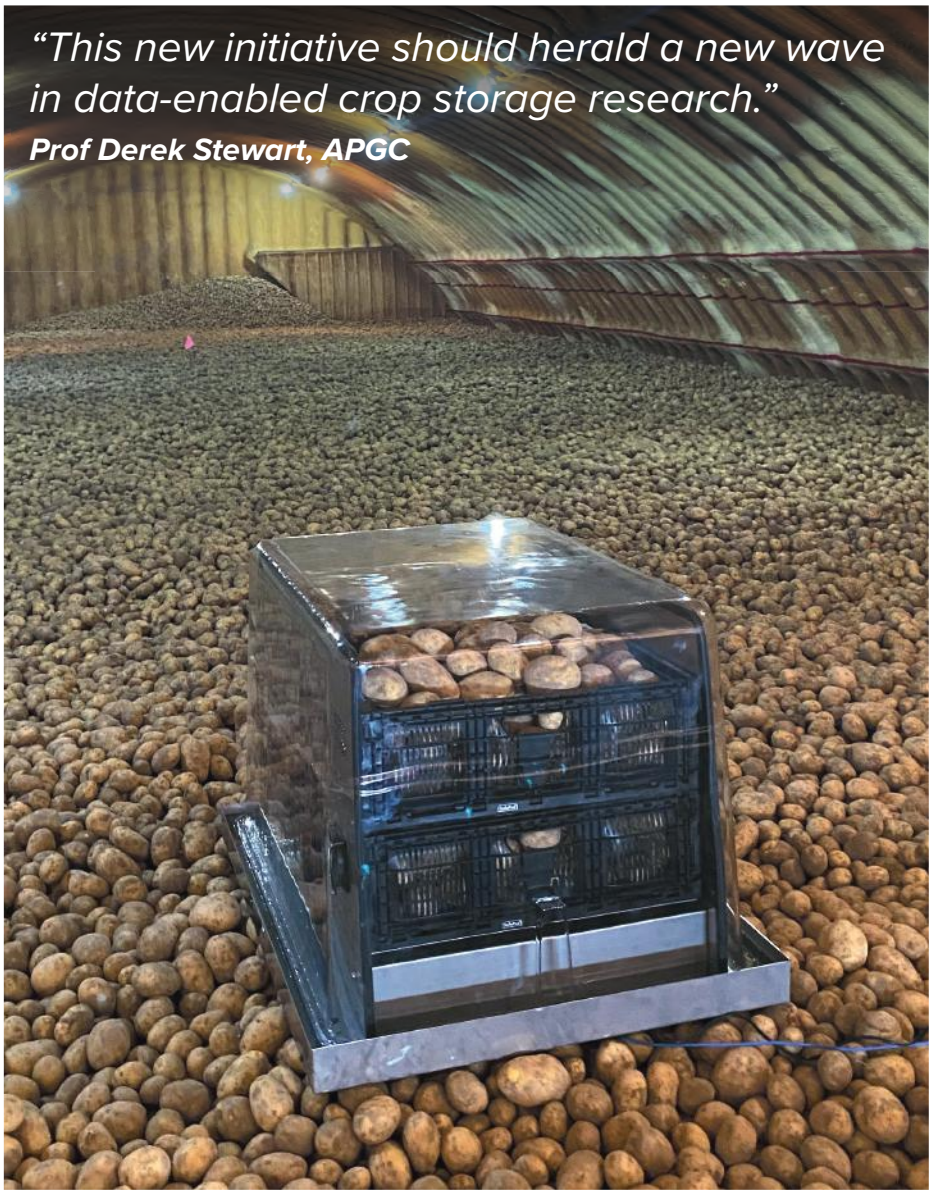
Stakeholders will have the opportunity to engage in vital research focused on developing sensors, tags, and bio-indicators to enable better management of produce quality. An additional interest will be on investigating innovative methods to control microbial decay and spoilage after harvest will be tested and lastly, understanding and controlling the biological factors influencing food storage and shelf-life.

Vice Principal for Enterprise and Knowledge Exchange at Scotland's Rural College (SRUC), Dr Susannah Bolton, said: "Post-harvest losses of fresh produce represent a huge risk for growers of high value crops, and effective storage is required to keep these losses at minimum.

"Threats to effective storage include loss of chemistry and increasing energy costs, and research is urgently required to find viable alternatives. Industry-scale storage research facilities such as those now provided through CHAP are essential to test the viability of these new technologies to build credibility and drive uptake."

Dr Rosie Bryson, Head of Marketing and Communications at CHAP, further added: "At CHAP we are really pleased to have been able to help facilitate the establishment of the CSPS facilities across the UK with funding from Innovate UK supported by further funds from ADAS, the Scottish Government and the University of Greenwich.

"This is a truly collaborative effort to support R&D in this important part of the food chain, we are just at the start of this new journey but already we have had tremendous support and interest from the industry." PR



Open day aids charity

CHARITY the Farm Safety Foundation, better known as 'Yellow Wellies', benefited from a raffle organised by potato grower and seller 3 Shires recently.

The open day, which featured trial plots and a large range of stands including machinery suppliers, agronomists, plant nutritionists, plant breeders and others, took place near Knutsford and attracted a steady stream of visitors.

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"We have found it to be clean to use, safe and with no restrictions on entering stores and there are no residues in the crop - this makes management easier. The service we have received has been outstanding with prompt assistance with my questions that have arisen. We still have potatoes in store for delivery in July without any sprouting whatsoever and therefore the cost of treatment is good value"

"I use Restrian because its competitively priced, easy to use and is zero residue with no harvest interval"

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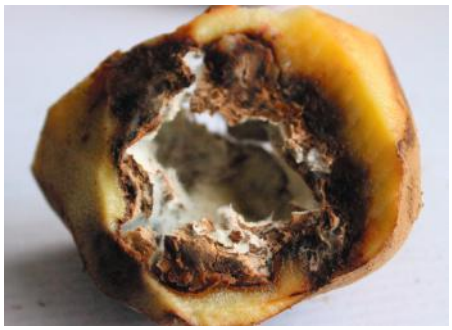
Potato with the right antennae

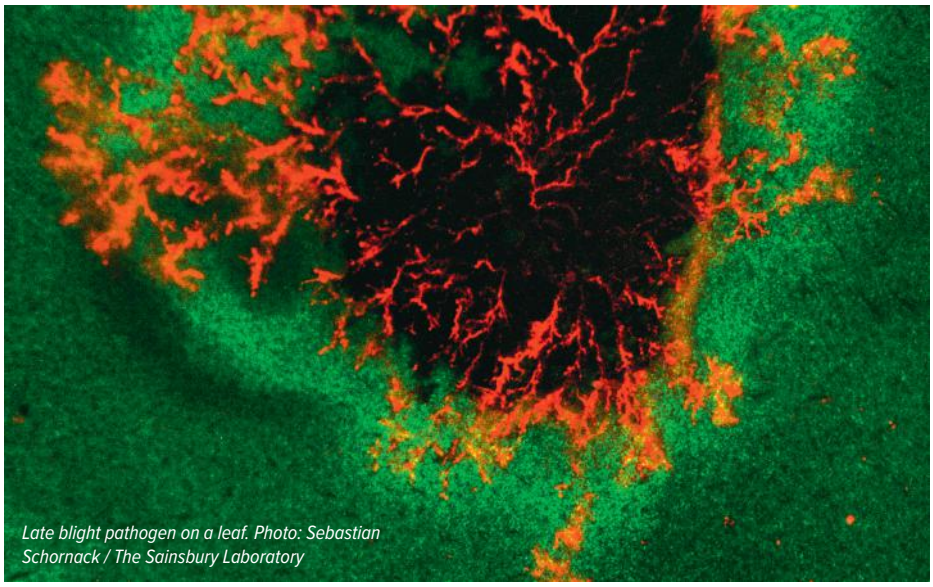


Rotting potato tuber following late blight infection. Photo: I.Sácek/ Wikimedia Commons

Origin of novel broad resistance to late blight found in wild potato relatives.

RESEARCHERS from three universities in the UK, Germany and the Netherlands are making important discoveries in their efforts to better understand potato blight (Phytophthora infestans) and how to make the crop more sustainable.

Their research has been published in the renowned scientific journal Science. Vivianne Vleeshouwers, a plant scientist at Wageningen University & Research described blight risk as "a continuous arms race between the potato plant and Phytophthora".



Late blight pathogen on a leaf. Photo: Sebastian Schornack / The Sainsbury Laboratory

"The plant fiercely defends itself. An invasion of the "fungus" (actually an oomycete) immediately triggers a number of defence responses, such as making part of a leaf die off in a controlled manner to stop the advance of the disease. However, Phytophthora is able to repeatedly bypass these defences by means of mutating," she said.

Recognising the disease

To defend itself, the first thing the plant has to do is recognise the pathogen. "The plant has receptors for this, a kind of antennas. These bind tiny pieces of Phytophthora protein, which is the signal that something is wrong. This is when the defense responses kick in. So it is very important that the plant can actually detect the disease and has the right receptors in place to activate its defences," Vivianne said.

These receptors are located either inside or on the outside of the cell. Receptors inside the cell are encoded by specific R genes (R stands for resistance), and potato breeders take advantage of these. They develop resistant varieties by selecting for these R genes. However, the problem is that the Phytophthora manages to break through that resistance, time and again.

"Much less is known about the receptors on the outside, on the cell surface, the PRR receptors. These receptors drive more general immune responses," said Vivianne. "Plant breeders are currently focusing their attention on R genes, but more fundamental research is required to be able to benefit from less specific defense responses by the PRR.

To this end, Wageningen University & Research is cooperating with the University of Tübingen (Germany) and The Sainsbury Laboratory in Norwich (UK).

"We have been studying a specific type of PRR receptor called PERU. It binds a special piece of Phytophthora protein, Pep-13, which triggers the potato plant to recognise the disease. It was generally assumed that PRR receptors hardly change over time (a well-known example is the very stable receptor that recognises bacteria flagella). But we found that PERU actually does exhibit dynamic evolution, and changes much faster than the more well-known PRR receptors. This is a totally new insight."

Complexity of PRR receptors

According to co-research leader Thorsten Nürnberger of the Centre for Plant Molecular Biology (ZMBP) at the University of Tübingen, the research results show that the evolution of immune receptors on the cell surface of plants (the PRR receptors) is much more complex than we previously thought. "There is not just one version of this receptor, but several variants that can recognise different binding molecules (the proteins of Phytophthora, ed.). This is a completely new finding," he said.

"Several wild potato species have variations of PERU. We have those plants in our collection and we can look back in time, as it were, to find out how they evolved," Vivianne said. "Once you understand their evolution, you can look for ways to translate that into applications. By selecting for the right receptors, you can increase the plant's resistance to the disease."

The researchers traced the origins of the plant's evolution to the Andes. The receptor is called PERU, which stands for Pep-13 Receptor Unit. But of course, it also refers to the country of origin. By coincidence, the first author of the Science article, PhD student Yerisf Torres Ascurra, is herself from Peru.

The insight into this type of receptors (and more will undoubtedly follow) paves the way for the sustainable potato of the future, according to the researchers. This plant will have specific resistance genes, as well as enhanced general defensive responses.

"Before today, breeders focused on R genes. However, the resistance they offer is constantly being thwarted. By studying how wild potato species survive in an environment where they are constantly assailed by diseases, we can discover what mechanisms they use, and then introduce these mechanisms in our own potato varieties," Vivianne said. PR

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Seed buyers are urged to order from merchants as soon as possible, as quality seed is likely to be in short supply for 2024.

Sourcing seed for 2024

Quality seed is the foundation for maximising yield and quality in the daughter crop. We share advice on its acquisition, taking into account agronomic challenges faced in seed-producing regions of Great Britain and Europe this year.

WARE potato producers are being urged to secure seed stocks early for next spring's crops and take delivery as soon as possible where they have suitable storage.

Requesting a seed tuber virus test before purchasing is also advised, following another high aphid pressure season, leading to fears of raised virus levels in stocks.

Growth spurt

Some earlier planted potato crops struggled to get going in the cold spring, then warm and wet weather through July and August led to a spurt in crop growth.

Reports from Scotland suggest that some seed potato producers have a lot of oversize seed as a result. Whilst later planted crops did manage to catch up, yields are average.

This variability – combined with a lower GB seed area overall – means that saleable seed tonnage for spring 2024 is likely to be constrained and Eric Anderson of Scottish Agronomy says ware producers should look to lock-in orders as soon as possible.

"If you want good quality seed, talk to your seed merchant now and I would advocate that buyers take delivery as soon as possible, so they have control of how it's kept until planting," he said.

He also urged seed buyers to request a treatment with a storage fungicide at source, applied as soon as possible post-harvest.

At the time of writing, soils in seed producing areas remained relatively warm as harvest rolled on, so dry rot could be a risk on susceptible varieties. Gangrene and skin spot could come into the frame at the tail end of lifting if soil temperatures fall.

Silver scurf is another threat once in store – particularly in red-skinned varieties – because spores are likely to be lurking within the dust on the building's fabric and around grading equipment.

To cover all bases, Eric recommends 150ml/t of Gavel (imazalil) combined with 60ml/t of Storite Excel (thiabendazole). He also stressed that the mixture is for seed only, so tops should be split off before application.

"Seed growers should put Storite Excel in the mixing tank first and maintain constant agitation before adding Gavel. Using a direct injection system will reduce any antagonism between the two products and the risk of blocked nozzles," he said.

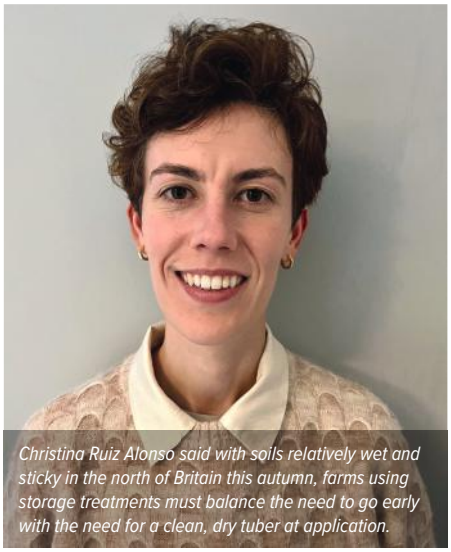
Sticky conditions

Christina Ruiz, Certis Belchim's Technical Account Manager, says with soils relatively wet and sticky in the north of Britain this autumn, farms using storage treatments must balance the need to go early with the need for a clean, dry tuber at application.

Most will harvest straight into boxes and then put the seed directly into store. Split grading into saleable seed size fractions and treating as soon as tubers are dried and stable will ensure best efficacy from storage treatments like Gavel.

"If you want good quality seed, talk to your seed merchant now and I would advocate that buyers take delivery as soon as possible, so they have control of how it's kept until planting."

Eric Anderson, Scottish Agronomy



Christina Ruiz Alonso said with soils relatively wet and sticky in the north of Britain this autumn, farms using storage treatments must balance the need to go early with the need for a clean, dry tuber at application.

Eric Anderson Scottish Agronomy

"The process of grading will also clean excess soil from tubers and maximise coverage as they pass through the application area," said Christina.

She also stressed the need for correct set up and calibration of applicators to obtain the best efficacy from the limited number of products available to treat storage diseases, and to reduce operator exposure.

Variable speed roller tables are the best method of presenting tubers to the application area, whilst a hooded sprayer with a twin nozzle rotating arm, like a Team Sprayers CTC 2, are the most accurate type of applicator.

Unprecedented virus

As a result of high aphid vector pressure from emergence of seed crops in key areas such as Scotland and Yorkshire, it is important to request a tuber virus test before agreeing a seed purchase.

No official data has been released by SASA or APHA on virus found in inspections, but anecdotal evidence and symptomatic plants found during rogueing suggest that levels of potato leaf roll virus (PLRV) could be unprecedented in 2023.

There is also likely to be relatively high levels of non-persistent viruses, like PVY, thrown into the mix, and affected stocks should not be planted on where infection is significant.

"Leaf roll virus was almost eradicated six years ago, except on three susceptible varieties, but in Scotland in 2022, leafroll was recorded in 9.4% of the seed area inspected, up from 5.2% recorded in 2021 and 3.5% recorded in 2020.

"The base level of leaf roll infection has grown substantially," Eric said.

There is likely to be a level of primary infection this year that would not be visible at growing crop inspection, so tuber testing is important to ensure you aren't working in the dark, he adds.

"It applies to home-saved seed as well, particularly if there has been a less robust insecticide programme applied."

Seed management

Getting the healthiest seed on to farm early will also have benefits for how the seed is managed up to planting, with Frontier's Darren Wonnacott saying the past couple of seasons have been a wake-up call in this area.

More specifically, there were emergence issues with some seed stocks last spring, which is thought to have been caused by a culmination of factors.

Potato plants were subject to significant heat stress in summer 2022 and seed tuber dormancy was reduced as a result.

Crops were also carrying a lot of field heat at harvest, and the extended duration of cooling required to get seed down to holding temperature reduced the vigour of some stocks.

Early plantings then went into cold and wet soils and in some cases, planting was held up by heavy, localised rain and led to seed tubers being sat in jumbo bags for a sustained period.

"I think it underlines the importance of good seed management and the earlier ware producers can get it on farm, the more control they have over the whole process," said Darren.

Back-to-basics

Basics include decanting bags into boxes and then transferring to a cold store held at about 4C. Neither boxes nor store should have been exposed to withdrawn sprout suppressant CIPC (chlorpropham).

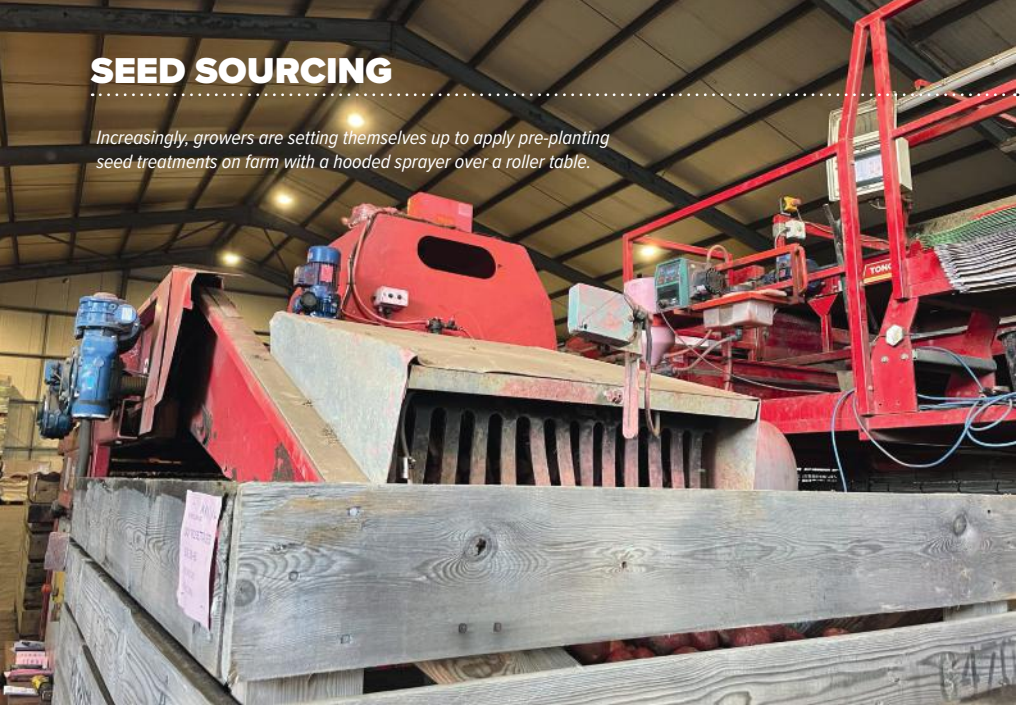
While there is still a powder seed treatment in RhiNo DSG (flutolanil), which gives growers the flexibility to apply at planting, many farms are now switching to liquid seed treatments for control of key diseases like rhizoctonia.

Like storage treatments, these can be applied by seed suppliers at source, but increasingly ware growers are setting themselves up to treat on-farm so they control the whole process.

Darren says applying products including RhiNo and Maxim (fludioxonil) at decanting, but before going into cold storage is a good idea. This avoids handling seed a second time before planting, which can damage tubers and promote further disease ingress.

Like storage treatments, application should be via a hooded applicator over a roller table, where available, to optimise active loading on the seed and subsequent control of target diseases. ➜

Seed buyers are advised to request a storage fungicide treatment at source to limit development of diseases like dry rot ahead of delivery in the spring.



Increasingly, growers are setting themselves up to apply pre-planting seed treatments on farm with a hooded sprayer over a roller table.

"With the cold and dull start there was a lot of rhizoctonia pressure last season, particularly in the East of England."

Darren Wonnacott, Distribution Specialist, Frontier

"With the cold and dull start there was a lot of rhizoctonia pressure last season, particularly in the East of England.

"Growers achieved some very good results with flutolanil applied early over a roller table. It's certainly a very good option if targeting rhizoctonia alone," he said.

Eric also advocates getting liquid seed treatments – targeted at rhizoctonia – on in good time, before there is any risk of dormancy break of the seed, as not all treatments can be applied after eyes open.

"RhiNo has good persistency and can be applied no more than 120 days before planting. For Maxim it's 90 days. That leaves plenty of time to play with, even if treating in January or February."

Late blight threat from EU seed

There are reports of widespread tuber blight infection from across Europe, which is another factor to consider if potato growers consider sourcing seed for next spring.

Continental Europe faced significant late blight pressure this year and with a new genotype resistant to CAA fungicides now widespread, it has been a struggle to control.

This is compounded by European growers not having access to multi-site inhibitor fungicide mancozeb as a reliable mixing partner throughout programmes.

Scottish Agronomy's Eric Anderson says there have been cases where growers haven't heeded best practice and applied straight CAA fungicide sprays.

"I'm aware of incidents of mandipropamid not working where it was wrongly applied as a solo product in the presence of EU_43_A1. As blight became established in the crop, Zorvec Endavia (oxathiapiprolin + benthiavalicarb) was also used inappropriately to firefight.

"Oxathiapiprolin also didn't work as expected where applied after visible late blight infection was present in the field, which is contrary to the product label. There are big problems brewing in Europe," he said.

Where these control failures have produced viable zoospores and infected tubers in seed crops, there is the potential for it to spread the insensitive strain elsewhere, including the UK.

The latest Fight Against Blight genotype monitoring data from David Cooke and his team at James Hutton Institute (JHI) shows EU_43_A1 has not been sampled during 2023, and Eric urges the industry to try and keep it that way for as long as possible.

"Seed from affected areas can't legally be exported to Scotland, but there is the possibility of a direct market Europe to England, so growers do need to be careful what they are buying.

"In Great Britain, tolerance to tuber blight in seed is 0.5% in SE and E certified seed and even that is enough to create at least 1 foci of blight per hectare next year." PR

Seed buyers are advised to request a storage fungicide treatment at source to limit development of diseases like dry rot ahead of delivery in the spring.

Tuber blight infection is present in European seed crops this year, so British growers should be careful if importing stocks from the continent.

SHOW DIRECTORY

Welcome to the British Potato Show 2023

THE PREMIER EVENT FOR THE POTATO INDUSTRY

THE POTATO INDUSTRY EVENT BP2023

NOVEMBER 22&23

HARROGATE YORKSHIRE EVENT CENTRE

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INSIDE

- A-Z exhibitor listings
- Exhibition Plan
- Seminar timetable
- Articles from industry bodies

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Welcome

Greetings esteemed guests and industry enthusiasts,

A warm and enthusiastic welcome to BP 2023, proudly presented by Warners Group Publications! Our seamless collaboration with the accomplished Steve Wellbeloved and his exceptional team has paved the way for a flawless handover, ensuring the continued excellence of this event. Alongside Potato Review Magazine and the prestigious National Potato Industry Awards, we stand united in our dedication to bringing the industry together, fostering collaboration and driving progress.

This event stands as a vibrant platform where the industry congregates, poised to engage in fruitful business interactions. We extend our gratitude for your unwavering support, and we are thrilled to announce a robust floorplan that anticipates high visitor numbers. The resounding return of almost all 2021 exhibitors, coupled with the resurgence of those previously constrained by pandemic-related travel limitations, paints a picture of great anticipation. Joining our steadfast regulars will be a record number of newcomers, as this event has rightfully earned its reputation as the paramount 'potato' affair.

Our unwavering commitment to maintaining the show's sharp focus on potatoes and its profound impact on businesses remains resolute. As we unveil an array of cutting-edge innovations, our canvas broadens to encompass every facet of the industry, spanning from the inception of the cropping cycle to the talented artisans who craft and package processed delights. The symbiotic synergy between Potato Review Magazine, the National Potato Industry Awards, and our show only amplifies their prominence within this specialized market domain.

We extend our heartfelt appreciation to our exhibitors, sponsors, trade partners, and media allies for their indispensable contributions. It truly takes a united effort to orchestrate this grand gathering, and everything is meticulously set for an event that promises excellence and productivity.

I look forward to seeing you there. Your feedback is invaluable to us, so please don't hesitate to share your thoughts.

Until then, here's to a monumental BP 2023!

Sally Dodds, **Head of Events, Warners Shows**

Contents

BP2023:
Warners Shows, The Maltings, West Street, Bourne, Lincolnshire PE10 9PH

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INDUSTRY SEMINARS

Wednesday 22/11/2023

TECHNICAL AND BUSINESS

10:45 - 11:30am
Chap: Applying Agri-Tech solutions to potato production: Some case studies

12:45 - 13:30 pm
Potato Storage Insight Ltd: Tackling storage challenges on energy and sprout suppression

14:45 - 15:30pm
World Potato Markets: The British potato market – trends and prospects

Thursday 23/11/2023

CURRENT INDUSTRY ISSUES

10.15 - 11:00am
National Potato Innovation Centre: How science organisations can work better together and with industry to help potato production in the future

12.15 - 13:00pm: GB Potatoes: Turning Challenges into Opportunities

STAGED IN MAIN SEMINAR ROOM
(off Hall 1 Foyer – the main show entrance)

Why you can't afford to miss BP2023

The whole industry, in the same place, at the same time, ready to discuss the issues that matter to you!

THE POTATO INDUSTRY EVENT
BP2023
NOVEMBER 22&23
HARROGATE
YORKSHIRE EVENT CENTRE

BP2023 covers every aspect of the industry. Unique among shows, it's as relevant to those who process and retail the crop as it is to those who produce it. So it's an unmissable chance to gauge the mood, update on trade changes, take stock of competitors and learn more about innovations at every level of this progressive, fast moving industry. With so much change in the air can you afford to miss this vital update?

Where would we have been without emails, texts, phone and internet to keep potato business moving? But there comes a point when new developments need examining first hand and better deals are sealed in person.

IN SHORT, IT'S TIME FOR A BRITISH POTATO EVENT!

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WHY YOU SHOULD BE AT BP2023

All types of machinery – farm, packing, processing, packaging

Dozens of potato businesses from across Europe

Business news, emerging opportunities and valuable contacts

Buyers, suppliers and advisers from across the whole supply chain

The very latest in potato agronomy

Hall 1

100 Grimme UK Ltd
101 Rowlinson Packaging
102 Sun Chemical
103 RS Hall Engineering Ltd
104 PotatoWorld Magazine
105 Team Sprayers Ltd
106 East Riding Sacks Ltd
107 Restrain Ltd
108 Caledonia Potatoes Ltd
109 Agrico UK Ltd
110 Martin Lishman Ltd
111 Animal and Plant Health Agency
112 VAM WaterTech
113 Burdens Specialist Vegetable Machinery
114 Tong Engineering Ltd
115 Broadwater Machinery Ltd
115 Rushlift
116 Bauer GmbH
117 R S Cockerill (York) Ltd
118 Nufarm
119 Standen Engineering Ltd
120 Whole Crop Marketing Ltd
121 Payne Crop Nutrition
122 UPL Europe
123 Stored Crop Conservation Ltd
124 Vita-Rhize UK Ltd
125 Bayer CropScience
126 Potato Review
National Potato Industry Awards
127 B-hive Innovations
127b Greenvale Seed
127c Field Farm Tours Ltd
128 McCain Foods (GB) Ltd
129 BASF
130 Farm Electronics Ltd
131 SASA
132a MJP Supplies
132b CXCS Ltd
133 B H Leake
134 Briggs Irrigation
135 Potato Storage Insight Ltd
136 Juno (Plant Protection) Ltd
137 CUPGRA
138 The Crop Smith Ltd
139 CHAP - Crop Health & Protection
140 Greens of Soham Ltd
141 Farm Trans
142 Sipcam UK Ltd
143 Meijer Potato UK
144 Richard Austin Agriculture Ltd
145 Cornerstone Systems Ltd
146 Azotic Technologies Ltd
147 Greencrop
148 Bateman Sprayers
149 ScanStone
150 Alt-Group
151 AVR Machinery
152 FMC Agro Ltd
153 Corteva Agriscience UK
154 Agrii
155 Fibrophos P K Fertilisers
156 Clifton Rubber
157 NFU Energy
158 OMEX Agriculture
159 Certis Belchim
160 Howseman Agriculture
DripUK Irrigation services
161 Netafim UK
162 Fenland Mobile Services
163 Bradley Refrigeration Ltd
164 AB Texel UK
165 ICL UK Sales
166 Omnivent
167 DormFresh
168 Solana Seeds UK Ltd
169 MSE Systems
MSE Hiller
170 Syngenta
171 Sencrop
172 Verbruggen
173 British Potato Trade Association (BPTA)
Fresh Potato Suppliers Association (FPSA)
Potato Processors' Association Ltd (PPA)
Snack, Nut and Crisp Manufacturers' Association (SNACMA)
174 Wolds Produce Ltd
175 E Park & Sons Ltd
176 Yara UK
177 Nutricor Agronomics Ltd
178 Thomas Bell & Sons Ltd
179 Agri-tech Services (UK) Ltd
180 Scotts Precision Manufacturing Ltd
181 Cullen Allen Norika
182 Cheffins
183 HK Timbers Ltd
184 Chafer Machinery
Horstine
185 SRUC/SAC Consulting
186 Biofresh Safestore Ltd
187 Crop Systems Ltd
188 IPM Potato Group
189 James Hutton Ltd
190 Cygnet Potato Breeders Ltd
191 Wroot Water Limited
192 HarvestEye Ltd
193 Emerald Research Ltd
194 Garford Farm Machinery Ltd
195 Fera Science
196 Abergavenny Boxes Ltd
197 Techneat Engineering Ltd
198 AgVantage UK Ltd

Hall 2

200 Websters Insulation Ltd
201 Statech Solutions Ltd
202 Hub4Parts Ltd
203 The Vegetable farmer
204 Soil Moisture Sense Ltd
205 Bradley Engineering Ltd
206 Xact Prepack
210 BioAtlantis Ltd
214 Ploeger UK Ltd
215 Egatec A/S - Mpack UK Ltd
216 Agritec International Ltd
Watson & Brookman Engineers Ltd
217 Newtec Odense (UK) Ltd
218 Projx Services Ltd
220 Haith
221 TOMRA
222 David Harrison Handling Solutions Ltd
223 Pace Mechanical Handling Ltd
225 Polar Systems Ltd
228 Jaycraft Food Machinery UK Ltd
229 ULMA Packaging
230 GIC Ltd
232 The Machine Install Company Ltd
233 Agrimech
234 Downs Vision Ltd
235 Welvent Ltd
236 Pan Anglia (Country Merchants) Ltd

Outdoor display area

OS1 Edwards Farm Machinery Ltd
OS2 AgVantage UK Ltd
OS3 Standen Engineering Ltd
OS6 Grimme UK Ltd
OS8 Agrimech
OS9 Tong Engineering Ltd
OS10 Grimme UK Ltd
OS12 Scotts Precision Manufacturing Ltd
OS13 Priory Potato Vodka
OS14 Terry Johnson Ltd
OS20 Farm Trans

THE POTATO INDUSTRY EVENT BP2023

NOVEMBER 22&23

HARROGATE
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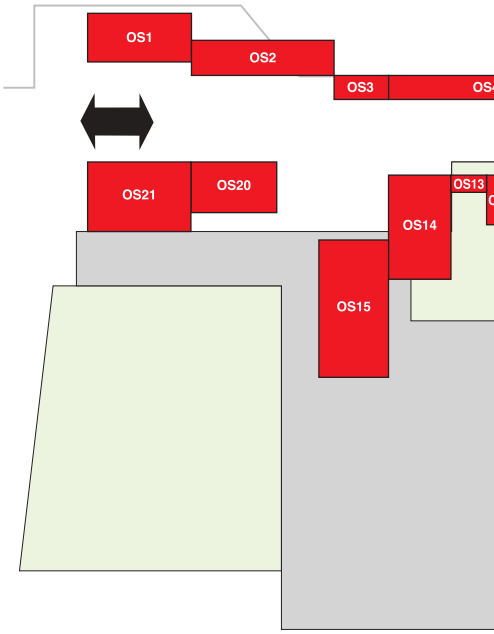
OUTDOOR EXHIBITS



Key

- Information point
- Event control
- First aid
- Access routes between exhibition areas
- Female toilets
- Male toilets
- Disabled toilets
- Cloakroom
- Food
- Beverages
- Press room
- Seminar room

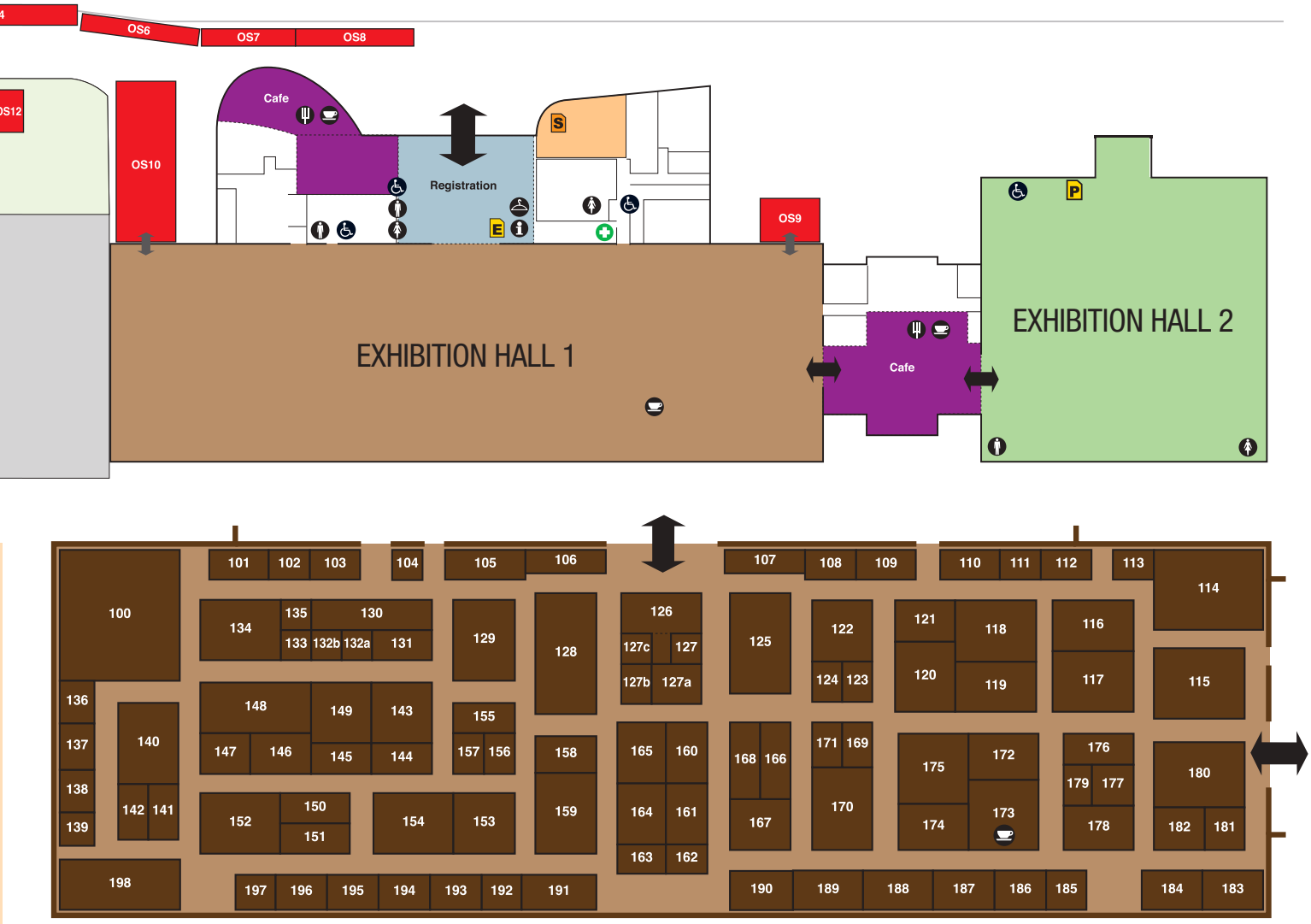
Site map

Finding exhibitors

For convenience the listings on this map are numerical. Alphabetical listings can be found overpage. Full listings for each exhibitor including contact details and description can be found in the back section of the Show Directory.

Information & queries

Please go to the desk in the entrance foyer (Hall 1)



Listings and layout as at late September, but the organisers reserve the right to amend these as circumstances dictate. Please see maps at the event for late entries.

About the Potato Processors' Association

Whilst challenges have been abundant over the last two years, there are also great opportunities for the UK potato industry, says Andrew Curtis, Director General of the Potato Processors Association. With UK processed potato sales exceeding more than £4bn and UK processing sites sourcing 95% of their crop locally, the sector is in a great position to tackle issues head on.

The Potato Processors' Association (PPA) is the umbrella trade association for UK manufacturers of frozen and chilled chips and potato products, potato crisps, potato-based snack products and dehydrated potatoes. Membership is open to any UK manufacturer and includes the leading manufacturers in these sectors.

Our role is to ensure that the UK maintains a world-leading potato processing industry that is technologically advanced, socially & environmentally responsible, competitive, and sustainable. We act to protect the interests, values, and concerns of our members through active engagement with HM Government, Devolved Administrations and all relevant stakeholder organisations in the UK and also the EU.

PPA operates two main committees, the 'Food Law and Consumer Committee', which mainly deals with factory and commercial issues, and a 'Primary Production Technical Committee' which deals with all aspects of potato growing, handling, and storage, with the aim of optimising marketable yields of raw potato material for the sector.

PPA is closely linked in with the European Snacks Association, the European Potato Processors' Association, FoodDrinkEurope, GB Potatoes and the Food and Drink Federation, putting us at the heart of regulatory discussions and developments both in the UK and in the EU, and ensuring that the sector has a strong voice.

PPA is also an active participant in many cross-sector platforms, for example the Water for Food Group (which is due to publish its Water Resource Management Plans for the Agri-Food Sector, and Framework for Producing Drought Plans for the Agri-Food sector, in late 2023). PPA has also played a key role in groups such as the CIPC Stewardship group, the Potato Value Chain in Europe (securing a tMRL for CIPC) and has been at the centre of recent efforts to secure authorisations for alternative actives for use in storage in the UK.

Collectively PPA members are the largest customer for UK potatoes, purchasing around 1.47 million tonnes annually (approximately 46% of the estimated potato volume in 2022), and accounting for circa 94% of all potatoes processed into frozen chips and potato products, potato crisps and snacks produced within the UK.

As a sector, we also directly employ over 13,000 people. If we were to include other dependent jobs, including those within the farming sector, the total is more than double this number. The sector therefore makes a clear and significant contribution to the country's economy, with the value of the UK processed, and prepared potatoes market estimated at more than £2.7 billion, and the sliced potato crisps market estimated to be worth an additional £1.27 billion in 2022 .

Challenges over the last two years

Since the potato industry last met in Harrogate in 2021, UK and global supply chains have continued to suffer from significant market uncertainty, with the number of issues and challenges that the sector faces seeming to multiply monthly.

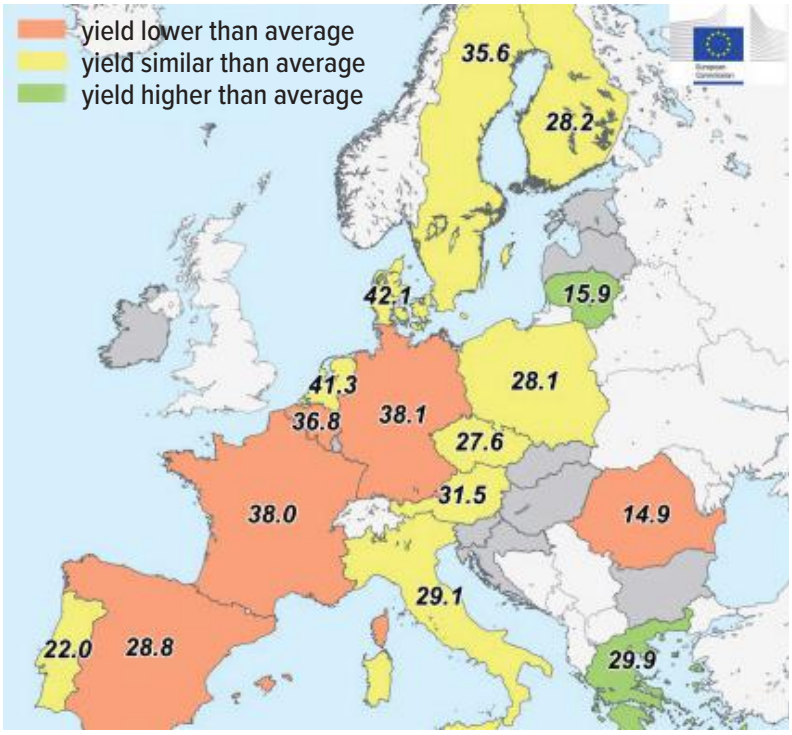
Brexit (remarkably the referendum took place over 7 years ago), the Covid pandemic and the loss of AHDB Potatoes are still very much live issues, and their impacts continue to be felt, with the sector been forced to adapt to a new and constantly moving legislative environment and working practices.

However, in 2022, just as we seemed to be turning a corner the sector was suddenly hit by the additional stresses caused by the Russian invasion of Ukraine. The invasion significantly impacted on energy costs, on access to diesel and to fertilisers, and has ultimately contributed to massive inflationary pressures across the whole global economy.

Climate change has also presented increasingly significant problems for the UK potato sector, with a hot dry

Country	Potato (t/ha) AVG 5 yrs	2021	MARS 2022 forecasts	%22/5 yrs	%22/21
EU	**34.2**	**36.3**	**33.4**	**-2**	**-8**
AT	32.0	34.1	31.5	-2	-8
BE	40.9	42.9	36.8	-10	-14
BG	-	-	-	-	-
CY	-	-	-	-	-
CZ	28.2	29.4	27.6	-2	-6
DE	41.6	43.8	38.1	-8	-13
DK	41.6	42.3	42.1	+1	-0
EE	-	-	-	-	-
EL	28.0	25.5	29.9	+7	+17
ES	31.9	32.9	28.8	-10	-13
FI	28.7	27.5	28.2	-2	+3
FR	41.4	41.4	38.0	-8	-9
HR	-	-	-	-	-
HU	-	-	-	-	-
IE	-	-	-	-	-
IT	29.2	29.2	29.1	-0	-0
LT	15.0	13.1	15.9	+6	+22
LU	-	-	-	-	-
LV	-	-	-	-	-
MT	-	-	-	-	-
NL	41.8	42.0	41.3	-1	-2
PL	27.4	30.0	28.1	+3	-7
PT	22.7	24.6	22.0	-3	-11
RO	16.7	16.5	14.9	-11	-10
SE	34.4	34.8	35.6	+4	+2
SI	-	-	-	-	-
SK	-	-	-	-	-

Potato - Yield Forecast 2022
Mars forecast versus average yield (t/ha) 2017-2021



MARS Bulletin Vol. 30 No. 10 (2002)

ABOVE: Challenges and opportunities abound for the UK potato industry, says PPA director general Andrew Curtis.

BELOW: Whilst the UK has seen a very wet season in 2023, EU yields appear to have been impacted by extreme heat.

summer in 2022 threatening agricultural drought, and excess water in Autumn of the same year causing problems for lifting, leading to one of the lowest estimated yields in recent years.

Whilst river-flow and ground water recovery in 2023 has been remarkable, it has also led to late and reduced planting which will likely have consequences for this season's yield. Our competitors in Europe have also been impacted by drought, in 2022 and 2023, with overall yields estimated to have fallen by around 8% in 2022 as a result of weather patterns , and major EU producers particularly badly hit (Belgium 14%, Germany 13% and France 9%).

Climate change also threatens to bring us further challenges, such as increased blight and aphid risk, and from invasive species such as the Colorado potato beetle. Other emerging issues include regulations on contaminants, soil health and emissions.

Future challenges and opportunities

Despites the many challenges, the potato processing sector remains positively engaged and is actively pursuing research and support in areas such a regenerative agriculture, improved potato storage and sprout suppression, pest and disease management, and improved use-efficiency of land, soil, water and crop nutrition.

Some of this work is already being undertaken on a one-to-one basis between individual manufacturers and growers, whilst other projects involve an array of research bodies including as CUPGRA, JHI and CHAP. Cross sector bodies such a GB Potatoes also have the knowledge base and potential to help co-ordinate whole strands of work. As GB Potatoes continues to grow PPA will continue to support, and we hope to get to a point where they are able to take a leading voice on issues of concern to the potato sector as a whole. We hope that this will put us in a great position, to tackle whatever issues arrive in the near future.

Lastly, the recently published Genetic Technology (Precision Breeding) Act 2023 also offers the potential for the UK sector to utilise a range of breeding technologies, such as gene editing (GE), to make targeted genetic changes to produce beneficial traits. This will theoretically allow a range of foods, including potatoes, with health, environmental or commercial benefits to be developed more quickly than traditional breeding methods. These new breeding technologies may help to tackle some of food security and climate change issues that threaten the sector. However, these technologies should not be seen as a panacea as there are still many commercial aspects to consider, including the cost and time in developing varieties and taking them through to a commercial application. Furthermore, grower, consumer and retailer perceptions need to be considered alongside the potential issue for exports to the EU (where these technologies are not yet authorised) and even within the internal market in the UK.

The future is challenging, no doubt, but with our current representation, the direction of travel, and the willingness to act, the sector is in a great position to lead again and tackle whatever issues are heading towards us.

I) Water for Food Group. https://www.ukia.org/waterforfood/#:~:text=The%20Water%20for%20Food%20Group,is%20considered%20an%20essential%20need.
II) Source: PPA own data, collected from members annually. Latest data May 2022. Covers period 1/06/21 -31/05/22.
III) Source: Calculation based on PPA own data (above) and Defra. Agriculture in the United Kingdom 2022. Chapter 7 Data set, which includes "Table 7.11a Potatoes; production, value, supply and use (a)" and "Table 7.11b Potatoes". https://www.gov.uk/government/statistical-data-sets/agriculture-in-the-united-kingdom
IV) Source: Kantar 52 w/e 22 January 2023.
V) Crop monitoring in Europe - October 2022 Vol. 30 No 10. https://publications.jrc.ec.europa.eu/repository/handle/JRC127966

THE POTATO INDUSTRY EVENT BP2023

NOVEMBER 22&23

HARROGATE YORKSHIRE EVENT CENTRE

Meet the sponsors

We take a look at the sponsors for British Potato 2023

GOLD

AGRIMECH®

Agrimech is an award-winning agricultural machinery solutions and supply company, making and maintaining equipment for all stages of the weighing, bagging, tray-filling and palletising process. We are also very proud to have received the Queen's Award for Enterprise last year. From initial design to finished product, every process is overseen by our in-house staff and our machinery is stainless steel, meeting the very highest and strongest standards. When a customer purchases an Agrimech product, it's the start of the relationship, not the end. We make the finest quality machines possible, and our staff know exactly how they work. Our team's dedication to service and support has seen us win numerous national customer care awards, so whatever the issue, you know that with Agrimech, you are in the safest and wisest hands. We're also proud of our revolutionary remote engineering system called Agrilink, which enables us to take a virtual visit to your machinery anytime, anywhere.

BRANSTON

Branston was formed back in 1968 as a co-operative of local farmers all growing around the Branston area. Over the years we've embraced the changes in farming and retail to become one of the largest buyers and packers of potatoes in the UK. Our sites are strategically located in the heart of some of the country's best potato-growing land, with a dedicated producer group focused around each one. We firmly believe in a sustainable future for the UK potato industry, and we're delighted to be supporting the British Potato event as a Gold sponsor again this year.

GRIMME

Grimme is a world leader in the manufacture of innovative root crop machinery and supplies an extensive range of specialist equipment to the UK potato industry.
This includes machines designed for soil preparation, planting, irrigation, trailed-harvesting, self-propelled harvesting, handling, grading and much more.
When a UK grower purchases a Grimme machine, they're also investing in the UK's largest network of trained root-crop machinery specialists. We are dedicated to supporting our customer's needs through a national network of local dealers who offer comprehensive sales and aftersales support for Grimme equipment. Backed by spare parts distribution and technical after-sales support from our head office at Swineshead, making sure every Grimme customer gets the very best support.
This year Grimme will have some great aftersales products for you to learn about, including extended warranty, service packages and the online innovation of MyGRIMME. Come and visit the team for some great hospitality and learn first-hand how our experience and award-winning innovations make the experience.

SILVER

As the largest purchaser of British potatoes, McCain has been building strong relationships with growers for over 50 years, partnering with 250 farmers. We have a dedicated seed business in Scotland and five production facilities across the UK. With a household retail brand, foodservice business and 'quick service restaurant' range, McCain makes one in three UK frozen potato products. With a focus on sustainable farming, we are committed to supporting the long-term viability of the British potato industry.

Haith are renowned for their market leading innovative machinery and systems for root crop handling, designed with ease of maintenance, gentle handling, and efficiency in mind. From single machines to turnkey facilities to suit growers, processors, and packers of all sizes. In 2022, Haith received their second Queen's Award for Enterprise in the Innovation Category, this time for the Rota-Tip TE Box Tippler which is used to transfer crops onto washing, sizing, and packing lines. Handling solutions you can trust.

NEWTEC

NEWTEC Designed and Manufactured in Denmark
Newtec is a leading manufacturer of weighing, packing and sorting machinery primarily for the fruit and vegetable industry. We're passionate about helping you optimize your production and solving your business challenges with our innovative solutions. To do so, we focus on quality and long-lasting relationships when designing and manufacturing our machines. We have given the industry over 25,000 machines in our 45+ years of manufacturing and are always looking to the future.

DOOSAN

Rushlift will ensure that you always have the right type of machine for your agricultural needs. Outright purchase, contract hire or short-term rental options available. We also make sure that we support you throughout the lifetime of your equipment, with our team of dedicated business managers and highly skilled engineers.

From nematicides to tuber treatments to foliar fungicides, Bayer's portfolio of crop protection products helps growers and advisers grow potatoes profitably and sustainably. Our innovations enable growers to manage pest threats, protect against disease and meet market specification and with nearly £5 billion invested in research and development in 2020, we will continue to develop innovative solutions to the challenges of the future. We look forward to welcoming you to the Bayer stand.

TONG

Leading UK manufacturer Tong Engineering is renowned worldwide for unrivalled build quality and the most advanced handling systems for efficient and gentle grading, optical sorting, washing, polishing, processing and box handling. From concept design through manufacture, project management and installation, Tong works closely with customers to offer the complete potato handling solution from post-harvest to pack. Featuring the latest handling technologies alongside intelligent and automated controls, Tong equipment is designed to ensure minimal labour requirements whilst maximising capacity and yield.

BRONZE

We believe potatoes deserve our investment; in terms of time, expertise, knowledge, and protection. Our collaborative and holistic approach provides solutions that help you unlock the potential – and the profits – in your potato crops. It's how we've developed a strong portfolio of highly effective products – including Enervin® SC, Honesty® and ALLSTAR® – and why we've one of the most innovative crop protection pipelines for potatoes. Join us and find out how we can Perfect Potatoes Together. Subscribe to our newsletter & podcast here: agricentre.basf.co.uk/potatoes

DormFresh Ltd offers the most advanced products and application methods to help control sprouting in potatoes, thereby extending their market life and increasing storage periods. Our highly experienced research and development team continually investigates new chemicals and application methods, while concurrently developing new equipment to allow us to remain at the forefront of technology.

Watson & Brookman and Agritec offer a vast range of machinery for the food processing industry. With over 44 years of experience, we can assist customers in designing bespoke solutions for specific projects and pride ourselves on producing quality, high- care equipment.

UPL is on a mission to change the game; to make every single food product more sustainable. As a market leader in sprout suppression, our new biocontrol orange oil ARGOS is now available in the UK and Ireland.

Alphabetical listing

Stands beginning with a 1 are located in Hall 1 and stands beginning with a 2 are located in Hall 2.
Stands beginning OS are located in the Outdoor Display area.
Please note that exhibitors relevant to all parts of the supply chain, from seed to supermarket, are located in all three display areas – so please visit them all to avoid missing out.

Numbers refer to stand plans shown on the previous page.
For exhibitor contact details and descriptions see the full listings in the back section of the Show Directory.

Location

Yorkshire Event Centre on the Great Yorkshire Showground.
Easy to find and masses of free parking!

Opening times

9am – 5.30pm Wednesday 24th November
9am – 4pm Thursday 25th November

Travel

Road: Via A1(M): From the South M1 – A1(M).
From the North A1(M).
From the East M621 – A1(M).
From the West M56 – M62 – A1 (M).
Exit A1(M) at Junction 47 and follow Harrogate A59, then A658 and then A661. At the traffic lights on the A661 next to the Sainsbury's store, turn left onto Railway Road.

From Leeds A61 or Bradford A658: At the roundabout joining the two routes follow signs for York/A1 along the A658. At the next roundabout take the A661 signed Harrogate. At the traffic lights on the A661 next to Sainsbury's store, turn left onto Railway Road.

The show will be signposted on all major approach roads. **The postcode for Satnavs is:** HG2 8QZ. Please follow event-specific signage and traffic marshals' directions as you arrive onsite.
Limited disabled parking is available for Blue Badge holders adjacent to Hall 1. Please contact us in advance for a car pass or speak to a traffic marshal on arrival. The specific entrance gate will be clearly signed.
Rail: Harrogate is located midway between the mainline stations at Leeds and York, with regular commuter services on the local line.
Timetables: www.nationalrail.co.uk
The venue is c.2 miles from Harrogate's main train station, where taxis and buses are available to complete your journey.
Hornbeam Park station is a little closer to site and connected by the Showground Greenway if you wish to cycle or walk.
Taxis from this station should be pre-booked.

Air: Leeds Bradford International Airport (LBIA) is c.13 miles from the venue. **Flight information:** www.leedsbradfordairport.co.uk
Taxi transfers widely available. Alternatively, the Airport Direct 737 bus runs hourly to Harrogate bus station, from where you can take a taxi or the 770 bus to the showground.

CPD points

BASIS and NRoSo attendance points are available. Please go to the Enquiry Desk in Hall 1

Tickets

Get in FREE and avoid queues by registering at: **www.bp2023.co.uk**
See it all – come for both days!
See website for accommodation options.

Enquiries

- **Email:** info@bp2023.co.uk
- **Telephone:** 01743 455886
- **Visitor website:** www.bp2023.co.uk

Scott Walker, newly-appointed CEO of GB Potatoes.

"Even a bag carrier can bring long-term benefits"

Scott Walker, the newly-appointed CEO of membership organisation GB Potatoes, shares his background with *Potato Review*.

Q: Tell us a little about yourself...
I was CEO of NFU Scotland, the leading farm lobbying organisation in Scotland, for 11 years until November 2022. I now run my own consultancy business providing support to individual businesses and trade bodies on policy development, policy implementation and stakeholder engagement. Alongside my position at GB Potatoes, I am Executive Manager for the Scottish Association of Meat Wholesalers an association that accounts for almost 100% of the Scottish red meat processing industry. I think meat and potatoes is a good balance. I enjoy working for both sectors and representing their interests.

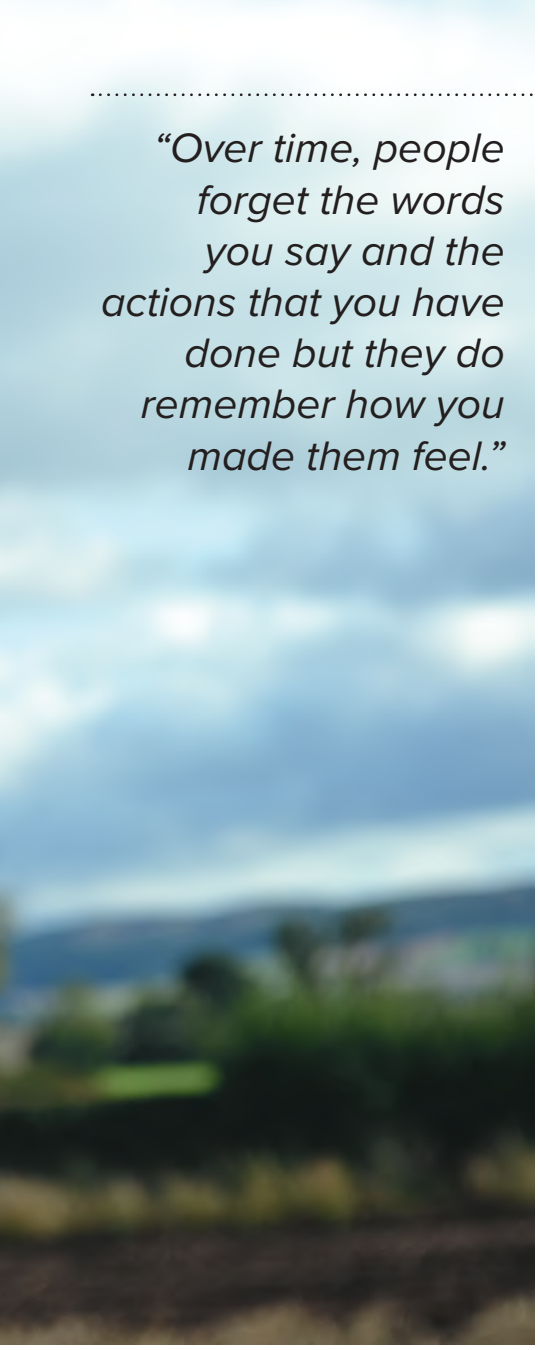
Q: How did you embark on your career path and go about achieving your goals – tell us how you came to be in your current position?
Business and government have always interested me. I studied Applied Economics at University. Economics is about learning how the economy works and how government decisions impact on businesses and people. The benefit of doing applied economics is that you don't just learn economic theory but also how to apply the theory to real life circumstances.

We live in a soundbite society, where many issues are portrayed as a black and white choice. In economics, you learn to appreciate there is more than one side to an argument and see issues from different perspectives. Rarely is there a simple black and white choice. Decisions are far more nuanced with every choice having some benefits and negatives. This gave me a good grounding for the career path I followed.

I joined NFU Scotland a couple of years after leaving university. I always describe my first role as being a bag carrier. While I did economic analysis for the policy team, I also literally carried the bag of the Chief Executive to meetings. The benefit of doing this was that from day one I accompanied him to all the big important meetings he attended. I learned a lot watching how he interacted with government officials, politicians and senior executives within the industry. A lesson it taught me was that even the less important roles, such as carrying someone's bag, can deliver a lot of long-term benefits.

Q: What experiences have helped to shape your career and inspire you?
I have had a lot of positive experiences during my career. There are some that stand out and have shaped how act.

Early on in my career I accompanied the CEO to a meeting with a government minister.



"Over time, people forget the words you say and the actions that you have done but they do remember how you made them feel."

The Minister had never met me and didn't know me but on meeting me, he introduced himself and welcomed me by name. During the meeting he asked my opinion. It left me with a good impression of him. We all want to feel as if we matter, and this Minister made me feel that way. It takes only a few words to leave a good impression. Over time, people forget the words you say and the actions that you have done but they do remember how you made them feel.

I have worked with a lot of great people over the years and I have learned a lot from each of these people. A common thread is that they always listened to others for advice but made their own decisions and stood by the decisions they made.

It is important to recognise your own limitations and ensure that you plug these gaps with the people you hire or the networks with which you surround yourself.

Most government officials and politicians are looking for a solution to a problem. When you go to talk to them about a problem, always go with a solution. They may not always use your solution, but they will be more willing to engage with you again if they know you are someone who delivers solutions rather than simply restating the problems.

Q: What are your main goals currently?
GB Potatoes has been running now for one year and has already established itself as a body that can bring together all corners of the potato supply chain – growers, packers, processors, seed supply, research organisations, independent advisors, trade associations - to collaborate. I want to make GB Potatoes the champion of the UK potato industry and the respected, dedicated, sector-specific voice for the industry. By working together with other trade associations and industry bodies, we will promote our sector's interests.

Collaboration is key. The objective for GB Potatoes is simple: We are here to ensure a viable future for GB potato production. GB Potatoes is a platform for the supply chain to collaborate to tackle the long list of issues facing the industry and to be a respected voice to talk to government bodies and work with them to address emerging challenges and realise opportunities.

For anyone who has been sitting on the fence about joining GB Potatoes, I urge them to get on board.

Q: What challenges is the industry facing at the moment and what more could be done to meet and overcome these?
Seed import and export restrictions following the UK's departure from the European Union, soil-borne pests, access to water for irrigation, rising costs of production, availability of labour and a shrinking armoury of crop protection products are just some of the challenges facing the sector. A collaborative approach across the supply chain and with Government is needed to tackle these challenges. GB Potatoes is best placed to be the voice for the sector and build partnerships to put in place solutions to these industry problems.

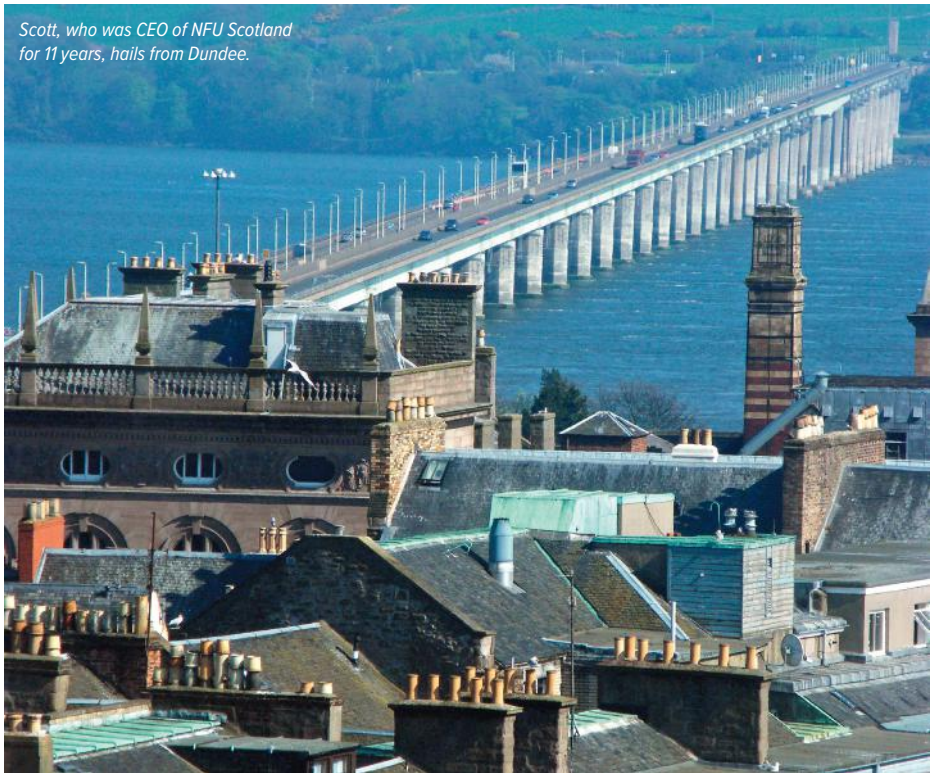
Q: What tips do you have for the future generation?
There are four thoughts I would like to share.

First, when you are starting your career, say yes to every opportunity that comes your way. It will push you out of your comfort zone. You will end up meeting more people, gaining more experience and growing in confidence. Later on, only say yes to the things you are really excited about.

Secondly, in everything you do find the positive. It is easy to find a negative, but you will enjoy life more by finding a positive in everything that you do.

Thirdly, Achievement requires some sacrifice. You can't have everything, and you will have to turn down doing some things you want to do in order to achieve your goals. In order to excel at something, you need to put in the time and work that others will be unwilling to do.

Finally, take responsibility for your actions and mistakes. No one wants to hear excuses. People just want to know it won't happen again. Knowing how to make a heartfelt apology is a great skill to develop. PR



Scott, who was CEO of NFU Scotland for 11 years, hails from Dundee.

Molecular priming for yield enhancement

New project to focus on crop tolerance to stresses associated with climate change.

THE James Hutton Institute (the Hutton) is collaborating with leading research groups and industrial collaborator BioAtlantis in a new European research project called CropPrime.

With EU Horizon funding of up to €1 million confirmed, CropPrime will develop 'Molecular Priming' technologies, which will enhance crop yield under stressful conditions caused by climate change.

The project will primarily focus on developing novel technologies to improve crop tolerance to stresses associated with climate change. One important aspect of the project will be the identification of natural compounds found in "plant biostimulant products" (which trigger natural plant processes that enhance nutrient use efficiency), derived from marine algae such as seaweed, produced by BioAtlantis, based in County Kerry, Ireland.

Additionally, the project will work on developing RNA (similar to DNA)-based fungicides to reduce fungal infections in crops. The overall goal of this research is to develop sustainable agri-tech products to help crop growers protect and enhance their crops against adverse weather conditions such as drought, heat, cold, and water-logging, which are becoming more frequent due to climate change.

The project partners will investigate the molecular mechanisms underlying plant stress and how these relate to the physiological processes that support crop resilience.

The project consortium brings together expertise in plant systems biology, chemistry, genetics, and biostimulant technology from research institutions in Europe, Africa, and South America. By pooling their efforts, the consortium aims to provide sustainable solutions for crop protection to growers.

Senior Biochemist and Plant Physiologist at The James Hutton Institute, Dr Robert Hancock, said: "This ambitious endeavour aligns perfectly with our mission to drive innovative solutions for sustainable agriculture in the face of climate change.

"By harnessing the power of 'Molecular Priming' technologies and leveraging natural compounds derived from marine algae, we aim to enhance crop resilience and protect against the increasing stresses brought about by adverse weather conditions.

"The CropPrime project exemplifies the power of international collaboration and knowledge exchange, and we are excited to contribute to the global impact of this research. Together, we can pave the way for a more resilient and productive future in agriculture." PR

Get cover against seed-borne diseases

Treating seed maximises tubers with Maxim 100FS helps to protect mother tubers from seed-borne diseases and maximises marketable yield through increased tuber numbers, more consistent sized tubers and improved skin finish.

The move to liquid seed treatment delivers more even application and coverage of the seed tuber surface, to achieve consistently reliable results against seed-borne diseases, according to Syngenta Technical Manager, Andrew Cunningham.

Research and field trials with Maxim 100FS has shown:
- Greater number of eyes opening
- Stronger earlier crop rooting
- Increased tuber numbers
- More even tuber size at harvest
- Improved skin finish

Liquid fungicides can give good coverage, be cleaner to use and removes an operation on the planter, allowing operatives to focus on getting crops planted in good order, he points out.

"A further advantage of Maxim 100FS is the distinctive red colour, which clearly indicates seed tubers have been effectively treated."

To assess for potential seed-borne disease issues, Andy urges growers and agronomists to have intended seed stocks inspected at source for signs of infection at the earliest opportunity.

MAXIM 100FS has activity against a range of seed-borne diseases of potato seed tubers:
- **Black scurf** (*Rhizoctonia solani*)
- **Silver scurf** (*Helminthosporium solani*)
- **Black dot** (*Colletotrichum coccodes*)

Field observation of effects on:
- Common scab (*Streptomyces scabies*)
- Dry rot (*Fusarium spp*)

"This gives the chance for potatoes to be Maxim 100FS treated before seed is delivered onto farm, or to organise for on-farm treatment." Growers operating on just-in-time delivery for planting, or not set up to handle or store seed, can have seed conveniently treated at source.

Over recent seasons, specialist applicator manufacturer, Team Sprayers, report new Storemaster CTC2 equipment, developed in conjunction with Syngenta, has been installed by seed producers and, increasingly, by ware growers gearing up for Maxim 100FS use.

Providing seed with a healthy start using Maxim 100FS seed treatment, coupled with Amistar and Nemathorin to tackle soil-borne pathogens and pests, gives the foundation for improved crop yields and tuber quality," advocated Andy.

Top Tips to get the best from seed treatment:
- Inspect or test seed early to assess treatment requirements
- Apply liquid seed treatment to achieve even tuber coverage
- Use Team Sprayers' Storemaster CTC2 for application
- Choose Maxim 100FS to control a wide spectrum of skin diseases
- Combine with Amistar as a soil treatment at planting, to target soil-borne diseases with an integrated disease management solution

Find out more about the integrated approach to seed and soil health programmes at planting, at the pre-season Syngenta Potato Science Live events. Look out for more details.

LEGISLATION AND COMPLIANCE

‘Small changes, cumulatively, make a big difference’

In the first of a new series of columns looking at legislation and compliance within potato growing, **Stacy Griffiths** of Herefordshire-based consultancy CXCS, discusses simple steps growers can take to reduce their carbon footprint.

A lot of farmers assume they’ll be carbon-neutral, so are surprised by the results of their first carbon audit. But the reality is that farmers – particularly potato growers – are going to have emissions and they will probably be higher than expected, so the focus should be on monitoring your footprint and making small changes.

These, cumulatively, can make a big difference.

Taking such measures has become even more important for many after the LEAF Marque Standard assurance scheme ‘raised the bar’ for members in terms of greenhouse gases, carbon sequestration and carbon footprinting. These revised standards, which were introduced following a public consultation, took effect from April 1st.

It’s new territory for a lot of potato growers who might not have carried out a carbon audit before, but it’s going to become increasingly necessary as a prerequisite for selling into quality markets.

All of Tesco’s nearly 500 UK fruit and veg growers, for example, are now LEAF Marque-certified, and the supermarket recently committed to ensure its entire global fresh produce supply chain be certified by 2025. It’s only a matter of time before other retailers and businesses follow suit, too.

For potato growers, the highest emissions are likely to result from fuel use, followed by inputs such as sprays and fertiliser. While it’s impractical or impossible to avoid using such items, there are some relatively straightforward steps you can take to improve your business’s overall carbon performance.

Could you introduce or use more renewable energy? Battery storage can have a role, too, providing power for when the potato store is operational. If you’re buying-in energy, purchasing from renewable sources or on renewable tariffs will also reduce your emissions.

There are opportunities to improve your carbon sequestration, in tandem with reducing emissions. Look at which aspects of environmental schemes such as the Countryside Stewardship and the Sustainable Farming Incentive could work on your farm. These could bring much-needed revenue, too.

It might also be possible to plant or regenerate hedgerows and, although there are concerns about replacing productive agricultural land with trees, agroforestry can be good for the environment and improve yields.

A lot of it comes back to soil. If you’re looking after your soil, it’ll be looking after you. It’s important to be proactive, so it’s worth starting soil testing if you’re not already doing it, then using the results to inform decision-making.

It’s not a legal requirement to test soil organic matter, but this is critical when it comes to sequestration, so as soon as you have more than one year of data you can begin to see a trend. It’s important to use the same carbon calculator from year to year because they work differently and you need to be able to compare like-with-like. It’s also important to make comparisons across the same time periods.

Potato growers face challenges because a lot of cultivation is intrinsically involved in the enterprise and the time of year when the crop

is lifted can present issues for soil structure. But it’s all about continuous improvements and the bigger picture of the whole farm. Can you reduce ploughing elsewhere, for example? Can you move towards Controlled Traffic Farming or combine cultivation practices to reduce field passes? Can you grow cover crops or incorporate more grass leys into rotations?

The pressure applied to farmers to take control of their carbon footprint is only going to increase, whether it’s from market pressures or government legislation.

With some estimates suggesting the agricultural sector is responsible for producing about 10% of all greenhouse gases (GHG) in the UK, the NFU has set the goal of reaching net zero across the whole of agriculture in England and Wales by 2040. Meanwhile, the UK government has committed to a legally-binding target to bring all GHG emissions to net zero by 2050.

Carbon auditing can be complicated and involve lots of paperwork, but the LEAF Marque Standard isn’t setting out to expose any shortcomings you may have. It’s about encouraging you to collect the information you need to demonstrate your direction of travel and devise an action plan for long- and short-term measures that suit your farm and your system and will reduce your carbon footprint.

Potato-growing has always been a high-risk enterprise. It’s capital-intensive, labour-intensive and heavily reliant on the weather – so growers have always understood risk. It makes sense to view your carbon footprint as another potential risk – but one you can, to some extent, manage and control. PR

New MD for sprout control solutions provider

RESTRAIN, a provider of ethylene-based sprout control solutions, has appointed Dr Benedikt Cramer as its new Managing Director.

Current MD Dirk Garos will take up a new role as Strategic Director.

Benedikt was formerly Managing Director at Nufarm Germany, a supplier of agrochemicals.

He said he believes this growth will be underpinned by innovation. "The development of Restrain's technology never stops and I'm a strong believer in customer centricity. It's customer feedback that will drive further improvements and in addition to working with our customers, we will engage with other stakeholders - food industry, processors, advisors, channel partners etc. - in different markets all over the world."

Food sorting and handling appointment

JACK Lee has been appointed Group President, Food Sorting and Handling Solutions, for Duravant, a provider of sorting, conveying and other process automation systems to food processors globally whose companies include Key Technology, Multiscan, PPM Technologies and WECO.

Having most recently served as President of Key Technology Americas and WECO, Jack joined Duravant in 2022 and has more than 20 years' leadership experience in industrial automation. He will now oversee strategic and operational initiatives for the group.

Chairman and CEO of Duravant Mike Kachmer said: "By establishing this new group within our food processing segment we're able to coordinate a broader solutions offering, leverage technology and product development expertise, and align our lifecycle support services to efficiently meet the growing integration needs of customers around the world."

GB Potatoes appoints new CEO

FORMER Chief Executive of NFU Scotland, Scott Walker, has been appointed as the new part-time CEO for GB Potatoes.

Scott worked for NFU Scotland for 25 years and brings a wealth of experience with him, which the organisation hopes will help to support its future growth and enable it to better support British potato growers and suppliers.

His part-time role with GB Potatoes compliments with Scott's other work with the Scottish Association of Meat Wholesalers where, also on a part-time basis, he leads engagement with government bodies, the supply chain, food business leaders and the operations of the association.

Scott Said: "I am delighted to be joining GB Potatoes. It has achieved a lot in its first year and I am eager to use my experience to build on what has already been accomplished. It is important that the potato industry has its own strong clear voice and I look forward to making the industry's voice heard.

"Collaboration is key. The objective for GB Potatoes is simple: We are here to ensure a viable future for GB potato production. GB Potatoes is a platform for the supply chain to collaborate to tackle the long list of issues facing the industry and to be a respected voice to talk to government bodies and work with them to address emerging challenges and realise opportunities.

"For anyone who has been sitting on the fence about joining GB Potatoes, I urge them to get on board."

Mark Taylor GBP Chair added: "As we move into our second year of operation securing such a strong candidate as Scott will significantly move on our agenda and build on work already underway. We are delighted to have Scott on board and look forward to developing the remit, impacts and outputs from GB Potatoes. With a strong base in place, we see a very exciting 2024 ahead".

GB Potatoes Organisation ltd is incorporated as a business limited by guarantee and not for profit, funded by voluntary membership with an annual subscription.

Harry takes up role with crop insights company

CROP INSIGHTS tool HarvestEye has appointed Harry Tinson as General Manager.

Harry has several years of experience in global aftermarket sales and marketing, having overseen JCB's international network of 750 aftermarket dealers, where he gained an initial insight into agri-tech and farming machinery sales.

He later moved within the Bamford group to Wrightbus' fleet support service offering AllServiceOne, as sales director for parts and services.

Fitting to harvesting or grading equipment, HarvestEye is a tool that delivers whole-field visibility on the size, shape and variability of crops as they are lifted.

Harry has already met with several growers to see how HarvestEye is supporting their needs.

He said: "This interaction is vital for us to make better business decisions, enhance the product that we can offer and diversify its compatibility for cost and eco-efficiency across a number of food supply chains. With HarvestEye having started to establish significant presence in a selection of global markets, particularly in Western Europe and through its partnership with Elders in Australia, I'm looking to spot opportunities where we can make the biggest impact to support more customers."

Upending a breeding bottleneck

PhD research provides positive possibilities relating to genetic complexity.

THE dream of every potato breeder is to combine all the desirable characteristics that can make potato more productive and resistant to the effects of climate change, diseases and pests.

The process, however, is far from straightforward because of the complex genetic make-up of potato and its outcrossing nature.

PhD candidate Corentin Clot of the Netherlands' Wageningen University & Research has made a number of discoveries related to potato sexual reproduction that could simplify breeding of the crop.

As we all know, potato is one of the major staple crops worldwide, making it crucial to create varieties that combine excellent qualities with resistance against diseases and pests. Yet, the journey to develop these varieties is complex.

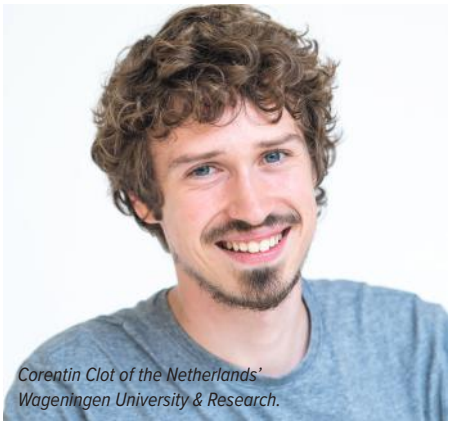
"Most potato varieties are tetraploid, which means they possess four copies of each chromosome, each containing its own hereditary information," said Corentin.

This genetic complexity poses a challenge when it comes to passing on desired traits from crossing parents to their offspring, he said.

Corentin said: "To ensure that these traits can be transmitted as a whole into the next generation, the parents must be 'homozygous'. This implies that identical versions of the gene are present on all chromosomes. This is easily achieved in diploid potato through one round of self-fertilization. We call this first step fixation."

Self-compatibility in cultivated varieties

To enable fixation, Corentin investigated the trait of self-compatibility. This is the rare ability of a diploid potato to fertilise itself with its own pollen. In the first year of his PhD research, Corentin made a surprising and important finding. He discovered that



Corentin Clot of the Netherlands' Wageningen University & Research.

the gene involved in self-compatibility – the so-called Sli gene – is already present in tetraploid potato varieties.

"In previous research, the Sli gene had only been described for the diploid wild species Solanum chacoense. I discovered that this gene is widely present in contemporary potato varieties. This insight provides us with a more favourable starting point for breeding, as we don't have to rely on wild material.

"This insight provides us with a more favourable starting point for breeding, as we don't have to rely on wild material."

Corentin Clot, PhD candidate, Wageningen University & Research

This immediately leads to a second finding. We thought that self-compatibility was a rarity, but if the Sli gene is ubiquitous, it means that pollen fertility of many diploids is a serious bottleneck for the breeder."

Crosses between diploid and tetraploid parents

Compared to diploid potatoes, tetraploid varieties have been improved for many quality traits and high marketable yield. Thus, Corentin looked for a way to cross tetraploid varieties with diploid parents that can transmit their fixed set of traits. "Normally, crosses between parents with unequal ploidy levels are not possible. When gametes (reproductive cells) are formed, the genetic material is halved. The pollen of a diploid parent will contain one copy of each chromosome, and the eggs of a tetraploid variety two copies of each chromosome. The triploid embryos resulting from such a cross cannot develop into seeds."

However, if during pollen production the halving of chromosome number fails, a diploid parent will produce 'unreduced pollen' which can successfully fertilise the eggs of a tetraploid, Corentin says. "Although this phenomenon was already empirically exploited by breeders, it was not clear how the restitution of chromosomes during gamete formation was genetically regulated. I have now localised the main hereditary factors that contribute to this trait. After fixation, this chromosome-restitution is the second step of our innovation."

A 'Third way' of breeding

Corentin's findings offer a new approach for potato breeders. "With our two-step strategy of fixation and restitution, we want to exploit the efficiency of a single selfing for trait fixation in diploids, while avoiding the loss of vigour that will arise after multiple rounds of self-fertilization. This phenomenon known as inbreeding depression is a tremendous challenge that researchers working on hybrid breeding must overcome: true-seed hybrids require fully homozygous inbred parents."

With the two-step strategy, we only aim for fixation of a set of important genes and stay away from inbreeding, Clot says. "The partial inbreds we have in mind offer perhaps a more realistic option. Our proposed approach offers a middle path solution, a 'third way' between conventional breeding and the true seed hybrid breeding scheme of potato."

In his postdoc, Corentin is collaborating with breeding companies to translate his research into practical applications.

"Together we hope to find a realistic and efficient way to breed better potato varieties," he said. PR

"It was not clear how the restitution of chromosomes during gamete formation was genetically regulated. I have now localised the main hereditary factors that contribute to this trait."

Price hikes despite high production

POTATO prices are soaring in Bangladesh, even though growers this year grew a record 10.4 mln tons, cutting the buying power of consumers.

Within one week, prices increased by Tk5 per kilogram to a maximum of Tk45 in Dhaka's markets, as per the Trading Corporation of Bangladesh, which is being blamed on supplies falling short of demand. The current price is 57% higher than that a year ago.

Prices are going up as traders and growers of large-scale operations, who store potatoes in cold storages for sale during the lean season, are taking it slow in releasing their stocks, according to stakeholders.

Ware exports at five-year low

EXPORTS of ware potatoes from Morocco are at a five-year low, despite the fact that it is increasing other fruit and vegetable products.

Information and analytics platform EastFruit has reported that the Moroccan fresh potato exports have shown a negative trend for several years, with shipments in the 2022/23 period falling to a minimum.

Four years ago, Moroccan potato exporters delivered around 100,000 tons (valued at $26 million) to foreign countries but since then, external sales have been decreasing almost every year by 44% to 48%, while the export revenue has dropped almost five times in a few years, and Morocco moved from 21st place in 2019 to 25th in 2022 in the list of world exporters.

The current season was even worse. For the period from July to June, only 27,900 tons of potatoes were delivered to foreign markets, respectively, with sales bringing the minimum revenue for five years – $5.7 million.

At the same time, the geography of potato supplies from Morocco has expanded significantly. For example, in the MY 2016/17, Moroccan potatoes were delivered to only 24 foreign markets, and today they reach consumers in 44 countries.

Despite the fact that European countries occupy leading positions in the list of world importers of potatoes, the main destinations for such supplies from Morocco are primarily African countries.

Moroccan potato exports to the EU reached their maximum in the MY 2018/19, when Europe faced a severe drought. Moroccan suppliers increased sales to European countries (for example, 22,000 tons of potatoes were delivered from Morocco just to Spain) amidst the emerging deficit. Then, a year later, supplies to European markets decreased significantly and are practically absent today.

In February 2023, the Moroccan government banned the export of potatoes, onions and tomatoes to African countries as part of the fight against rising prices for these products. This decision is felt to have affected foreign trade.

ARC tech changing the seed game

APICAL Rooted Cuttings(ARC) technology is changing the game in India, according to the annual report from the International Potato Centre (CIP).

CIP's India Project Manager Ravindra said: "We think it is going to change the whole seed sector here– CIP has put clean seed in the hands of 50,000 farmers around the world, boosting yields and incomes by as much as 50%. The government here is looking at that and early trials we did in Assam and starting to see its potential here, and it's huge."

Currently, seed production in India is dominated by large companies based in Punjab that use aeroponics to produce cuttings, a way of producing plantlets without soil. With projects in Haryana (north), Meghalya (northeast) and Karnataka (south), the ARC initiative plans to put seed production back in the communities where it is needed.

Apical rooted cuttings are produced in a screenhouse from tissue culture plantlets grown under controlled sterile conditions to ensure they are disease-free. Each plantlet can produce more than 100 rooted cuttings which are then bought by seed producers who multiply the seed in the field. Each cutting can produce 10-20+ tubers which, after a further round of multiplication, can be sold as certified seed to farmers.

"Apical Rooted Cutting (ARC) has the potential to be a game-changer for smallholder potato farmers in India," said Dr. K.M. Indiresh, Vice-chancellor and Director of education at the University of Horticultural Sciences, Bagalkot Karnataka, India. "By reducing cost and enhancing accessibility to quality seeds, ARC can significantly contribute to the prosperity and sustainability of smallholder potato farmers in the country."

Lakshima Devamma has established a nursery to produce apical rooted cuttings alongside her existing vegetable production business. She said the response has been high, providing a new source of income for her family and a new source of quality seeds for both men and women in her community.

"Last year I produced around 300,000 cuttings, and this year, I am looking to produce one million," she said.

Late blight app

THE International Potato Center (CIP) has partnered with Plant Village, an agriculture data platform that acts like a virtual extension agent, providing growers with tailored information and real-time advice on growing and managing their crops.

CIP provides data from its mobile app Nuro. The partnership will help to increase potato production, a staple food source of income for many families in Kenya, which in turn will improve agro economics across the continent. The app, available for free download, offers information on weather patterns, soil health, pest outbreaks, and advice on crop management and post-harvest handling.

Plant Village and CIP are now working to expand the use of the app to other countries in Africa, including Rwanda and Uganda, where potato production is also a significant source of income for smallholder farmers.

"In areas where extension services are limited like Kenya, farmers often lack knowledge about different plant diseases affecting their crops," said Mathew Korir, part of Plant Village in Kenya.

"This app fills this gap by helping farmers to learn about various disease symptoms. Using the app, they can easily differentiate between diseases and receive accurate management and control information."

To access more specific advice, farmers can upload photos of their crops and receive customised advice on managing any issues they are experiencing. The app also includes a feature that allows farmers to connect with buyers and markets, helping them to sell their produce directly and earn better prices.

"In one instance, a group of farmers learned to diagnose late blight in their potato plants by using the app," said Korir. "This was a new concept for them since they couldn't differentiate between early and late blight symptoms. We trained them how to use it to get recommendations on immediate control measures like removing and burying affected plants to prevent disease spread."

Rot concerns despite prolonged summer

WHILE a prolonged summer drought has slowed Wisconson's potato harvest in the US, growers are concerned about rot.

Wisconsin Public Radio (WPR) recently reported that around 70% of the state's potato crop has already been harvested but some producers are now delaying their work out of fear the unseasonable heat could cause the harvested potatoes to rot.

Sales Director for Wysocki Family of Companies, Kevin Schleicher, said his Portage County farm is only halfway through harvesting potatoes, despite starting earlier than normal, because of rain and abnormally warm weather in recent weeks.

Amanda Gevens, Potato and Vegetable Pathologist for the University of Wisconsin-Madison's Division of Extension, said potatoes are already generating heat heading into harvest through respiration and if weather conditions further raise the temperature of tubers, it will be difficult to properly cool them down for storage.

She said that while refrigeration is a great option to cool potatoes at harvest, the system must have the capacity to handle the high heat load and stressed that fresh air must be provided to purge carbon dioxide.

The probability of losses through pythium and pink rot, which increase substantially in the heat, is high.

However Executive Director for the Wisconsin Potato & Vegetable Growers Association, Tamas Houlihan, said producers can't wait too long to bring in their crops as frosts always come at some point in October.

Breeder to introduce commercial varieties

FOLLOWING 15 years of developments and cultivation trials, Dutch potato breeder Solynta will introduce its first commercial varieties to the market in 2024.

The breeder claims its 'F1 hybrid breeding technology' means it will be possible to grow highly resistant potato varieties faster that require far fewer crop protection products during cultivation.

The product was well received at the recent Potato Europe in Tournai in Belgium.

Solynta Business Developer Jos Aben said extreme weather this year, with weeks of no rain followed by excessive rainfall was a clear demonstration of the challenges facing growers. "That demands robust varieties or, at least, hardy potatoes. That applies to all segments (consumer, industry, and starch potatoes). Variety specifications per growing region must, of course, be considered, too," said Jos.

Sales holding up despite higher store prices

DESPITE the outlook earlier in the year, Dutch potato yields are looking good according to Frank Poelman, a buyer for Landjuweel, which specialises in supplying a range of pre-packed fresh potatoes.

In a recent interview with Fresh Plaza, Frank said: "Yields were disastrous in the country's southwest early in the season. But the kilos have since increased so much, we may even end up with an above-average harvest."

Potato sales are still very smooth, for now. "Despite the higher store prices, sales are holding up in almost the entire market. Lately, prices dropped slightly, but that's not detrimental to sales. It was tricky to do promotions with the early season's high prices."

Frank does not think prices will fall significantly more any time soon.

He said: "There has been quite a demand for ware potato over the past year by the French fry sector. But, growers need a healthy outlook to keep cultivating table potatoes in the coming years. That doesn't greatly concern me because often, in recent years, it turned out there were enough potatoes left, after all. So, a somewhat lower acreage is quite acceptable to the market."

According to Frank, this season's traditional varieties like Bildstar and Eigenheimer yields are, unusually, lagging behind other varieties. "They yielded no more than 40 tons per hectare and their season began much later too. Normally, by now, we'd already start the first big promotions with these varieties, but they're now four weeks behind schedule."

This year, too, there is enormous Phytophthora pressure.

"It's often not evident during grubbing but shows up later. Just about every batch is affected. We'll, thus have to be very alert to that. The inferior batches are usually cleared out around the end of the year. But, after this growing season, quality remains a challenge," Frank said.

Belarussian potato harvest at 257,000 tons

AROUND 256,600 tons of potatoes had been harvested in Belarus by the start of October, according to an announcement by the Belarusian Agriculture and Food Ministry. The yields average 352.9 centners per hectare.

The retail price range for Belarus potatoes in October is between US$ 0.6 and US$ 1.3 per kilogram or between US$ 0.27 and US$ 0.59 per pound(lb). The retail price range in Belarusian Ruble for potatoes is between BYN 1.52 and BYN 3.28 per kilogram or between BYN 0.69 and BYN 1.49 per pound(lb) in Minsk and Barysaw.

In August, the country's president, Aleksandr Lukashenko, stated that there would be a renewed focus on the potato crop, which he said is "very cost-effective and promising".

On a national scale, there were many issues to be solved. These included the revision of the seed production system, setting up specialty farms, building storage facilities and logistics centers.

The president was quoted by The Belarusian Telegraph Agency (BelTA), the state-owned national news agency, as saying: "Potatoes from Africa and other countries at high prices in June, July and August should be ruled out. You need to ensure domestic products at low prices. The surplus can be exported. But first you need to feed your people."

Potato is a staple in the Belarusian diet and the country is estimated to get through around 180kg of potatoes every day. Nikolai Leshik, Head of Crop Farming of the Belarusian Agriculture and Food Ministry, has previously stated that 300,000 tonnes of Belarusian potatoes are exported every year.

The potato was first brought to the Belarusian lands at the time of the Polish-Lithuanian Commonwealth. It was a delicacy then. Mass cultivation began in the middle of the 18th century. At first it was grown mainly in the Grodno region and only a hundred years later in all Belarusian regions. Gradually it turned into the main national vegetable.

Last year, a total of 3.857 million tonnes of potatoes were harvested in the country - more than enough to feed the country. Of those, 300,000 tonnes were exported. This season, the planted area was reduced by 2,000 hectares.

Minsk Oblast and Brest Oblast have traditionally the country's largest areas planted to potatoes. Their fields grow 50% of Belarus' potato crop.

New edition snacks

SWEDISH snackers have a new limited-edition potato snack flavour to enjoy.

Having already proved to be a best seller in Norway the Paprika and Sea Salt variety has been introduced to the Estrella regular crisps range.

Estrella Maarud manufactures and markets salted snacks in the Nordic and Baltic countries under the brands of Estrella, Maarud and Taffel.

Crisps brand upgrades

FRYING and packaging machines have been upgraded by American crisps brand Mister Bee which was acquired by the West Virginia Potato Chip Company over a decade ago.

Following a redesign of its manufacturing space, a new TNA Robag 3ci vertical form filling and sealing machine has been installed which Mister Bee President Mary Anne Ketelsen says has vastly improved output.

In a recent interview with 'Snacks' she said: "Previous machinery could only run 20-25bpm, whereas now my new TNA machines, I can run 100-115bpm."

The company has also invested in a new fryer.

Celebrating regional offerings

JAPANESE crisps manufacturer Koikeya has begun making speciality crisps based on types of potatoes harvested in different regions.

Recognising that different potato varieties have different characteristics, the manufacturer's latest flavours are following the same theory, encouraging consumers to recognise and celebrate each region's differences.

DANISH snackers voted Chili Cheese as their favourite crisps flavour in a recent competition launched by manufacturer KiMs.

Black-grass has small loops of DNA that are outside the plant's chromosomes

"Our findings show that blackgrass has eccDNAs, and on them are copies of chromosomal genes we know to be correlated with herbicide resistance."
Dr Dana MacGregor

A clue from DNA loops

Research reveals tiny circlets of genetic matter may give black-grass an evolutionary advantage.

A NEW study has shown that whether or not black-grass will be resistant to herbicides depends on more than just what is on its chromosomes.

Rothamsted researchers, in collaboration with scientists at Clemson University (USA), have found that black-grass has small loops of DNA that are outside the plant's chromosomes. These loops, called extra-chromosomal circular DNA (eccDNA), are not inherited in the same way that the chromosomes are. They evolve separately from the main genetic structures in the cell nucleus and could help explain how black-grass can rapidly develop resistance to herbicides or other stresses.

The research team identified the similarities and differences in the eccDNA in both resistant and sensitive populations. Although the numbers and size of detected eccDNAs varied between the populations, comparisons managed to identify shared and unique genes and protein coding. Compared to black-grass that are herbicide sensitive, the eccDNA of herbicide-resistant black-grass have extra copies of genes known to confer herbicide resistance, including genes related to herbicide detoxification.

Previous analysis of resistant and non-resistant varieties had clearly shown that resistance develops across multiple genes, but until now the mechanisms of how black-grass could rapidly evolve these differences have been hard to pin down. The researchers have shown that a combination of differences in chromosomal and eccDNA encoded genes might be responsible for the rapid evolution of herbicide resistance in black-grass.

Rothamsted's Dr Dana MacGregor was part of the study group.

Rothamsted's Dr Dana MacGregor, who was part of the study group, said: "Because of advances in sequencing, we are now finding eccDNAs in many different species and are starting to understand what they do. Our findings show that blackgrass has eccDNAs, and on them are copies of chromosomal genes we know to be correlated with herbicide resistance.

"Having these eccDNAs may contribute to the genetic diversity we see in black-grass and explain how it has so successfully adapted to man-made and abiotic stresses, including herbicide treatment." PR

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GROWING TOGETHER

Rain provides good working terrain for European show

PotatoEurope moves to Belgium this year, with exhibitors from 16 countries.

POTATOEUROPE 2023 moved to Belgium this year, with around 10,089 visitors visiting the venue in Kain, near Tournai.

Alternating year-on-year between Germany, France, the Netherlands and Belgium, PotatoEurope's previous two Belgium editions were held in 2015, when there were 9,520 visitors, and 2019 when there were 10,683.

While the overall number of visitors was slightly down on 2019, organisers say the number of foreign visitors has been steadily rising. This year 33% were from outside Belgium, in comparison to 25% in 2015 and 27% in 2019. These were drawn from more than 50 different countries.

There were 208 exhibitors (225 in 2019) from 16 countries and harvesting demonstrations. Despite the dry weather on the demo days, the rain from a few days earlier had prepared an excellent working terrain for the harvesters.

With a net harvesting area of about 20 hectares, the visitors were able to get a good idea of the 12 machines, in terms of what they can do and how they differ from one another. The five loading lines also generated a lot of interest. Much attention was paid to the increasingly extensive options for cleaning and sorting the product.

There were also demonstrations of alternative haulm desiccation methods and mechanical weed control. The increasingly urgent social pressure on our sector to work more sustainably is causing more and more farmers to realise that other techniques are needed. During PotatoEurope 2023, they were able to see some of these techniques in action and compare their results.

The crop yield was higher than during the previous edition, although it was less uniform across the four fields used. This was primarily because of the poor weather conditions in spring during planting and the severe drought thereafter. As in 2019, Challenger and Fontane seed potatoes were used. The average yield of the 24 hectares of harvested potatoes exceeded 50 tonnes/hectare.

On the eve of the event, PotatoEurope 2023 was officially opened with a 'Kick Off' event at the Tournai City Hall. Around 150 guests listened to talks on the future of potato cultivation in the Euro-region, innovation in the machinery sector and the potato sector viewed through an American lens. The evening ended with a reception serving potato dishes.

PotatoEurope was organised by Fedagrim, in partnership with ILVO, CRA-W, CARAH, FIWAP, and PCA. Case IH, Dezeure, ING, Lutosa, Manitou, Mydibel, Syngenta were amongst those taking part.

The next edition of PotatoEurope will take place in Villers-Saint-Christophe, France on September 11th and 12th, 2024. PR


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Python puts the squeeze on crop-handling challenges

THE newly-launched AVR Python is AVR's latest generation of twin conveyor belts and offers a high capacity, extremely potato-friendly option for crop handling, thanks to features such as the moving raised edges.

The AVR Python is easily transportable and very easy to operate.

One of the typifying features of the AVR twin conveyor is a stable and robust frame that also offers a high degree of maneuverability.

The machine has been designed to allow both conveyors to be positioned at all possible angles relative to each other. Thanks to the independent height adjustment of the product intake and discharge outlets and the electronic length adjustment, the Python can be installed in every position on the line.

A tandem construction with four casters and the 360° rotatable main wheels allow the machine to be moved by only one person.

The clever design of the conveyor belts with raised edges ensures that the product never comes into contact with the metal frame parts, thus guaranteeing an extremely soft product flow. The combination of a fully adjustable transition between the first and second conveyor belt and a drum measuring 160mm in diameter ensures that drop heights are reduced to an absolute minimum.

In addition, the raised edges create a trough to accommodate the secure conveyance of large volumes. As the section at the centre of this trough remains entirely flat, the Python also lends itself to the manual inspection of your crop.

The AVR twin conveyors are designed to relieve the user's work. Standard equipment includes a frequency converter, electronic length adjustment, and a belt control system. Additionally, the installation of AVR Line Control software allows the Python to communicate with all other AVR machines in the line.

The Python is available in two lengths: A twin conveyor comprising two belts each 7m long, and a model with belts 9m in length.

New ridging hood on the Ceres 200M

TO ensure sufficient loose soil in the tractor track, a frame with subsoiler tines has been added to the Ceres 200M's ridging hood.

Manufacturer AVR says this ensures better ridge formation and consequently optimal growing conditions for the seed potato.

The Ceres 200M is a mechanically driven, two-row mounted planter.

The planting system is based on the same principle as used in the Ceres line, but in this machine it has been reduced to its simplest form. Available options are lighting, two types of fixed bunkers (600 kg and 1,350 kg), electrical agitators in the cup belt, a ridging hood and a fertiliser unit.

Rear-mounted MultiForce now also on 4x90

AVR's high-capacity cultivator, the MultiForce, was recently tested for the first time in French fields in a new version - rear-mounted on 4x90.

The successful trial has resulted in the company announcing that a limited series will be launched in 2024.

New range of optical sorters

KEY Technology has introduced a new range of optical sorters.

The COMPASS® sorters are arguably the easiest to use on the market, according to the manufacturer which is a member of the Duravant family of operating companies, with simplified system operation, sanitation and maintenance.

Duravant Group President - Food Sorting and Handling Solutions, Jack Lee, said:

"Optical sorting technology has developed significantly over the last decade. Until now, more advanced sorting capabilities meant a system that was also more complex to operate and costly to maintain. COMPASS is the first sorter that breaks that paradigm – it offers consistently high sort accuracy, a compelling ROI and significantly simpler and more intuitive operation than any other food sorting system." The sorters join the company's VERYX® and ADR food inspection systems.

Certa 40 Integral: A new planter for 2024

DEWULF has developed a new planter for the 2024 growing season, the Certa 40 Integral, which it unveiled at Potato Europe.

An evolution of the SC 300 Compact, the cultivator's nine large wheels carry the weight of the machine and provide the automatic working depth control. As a result, they guarantee sufficient carrying capacity even in light and/or loose soil.

The rotor shaft is fitted with thicker flanges and the cultivator has an angle sensor on the rear board, which controls the cylinders for the nine depth wheels.

The 3.5-tonne bunker and the planting elements form a single unit and are optionally equipped with weighing cells. The planting elements are an upgraded version of the long-established CP elements.

Among other improvements, the planting tube is adjustable to accommodate the tuber size, and each planting element is individually hydraulically driven. As such, the manufacturer states that it is easy to create spray tracks and variable planting is possible.

The opener beam is mounted in a parallelogram fitted with cylinders, allowing the planting depth to be easily adjusted from the cabin.

The covering discs, measuring 410 mm in diameter, are each mounted on their own suspension arm. The discs for each pair of rows are attached to a central hollow section by means of a top link, with the pressure on those discs adjustable from the side.

'Everyone can play their part'

FORTRESS Technology has designed an industrial-sized Bulk Potato Slider Detector System to keep potatoes free of metal contaminants, stressing that everyone in the supply chain can play their part in keeping tubers contaminant-free.

When creating the robust design, Fortress was mindful that potatoes have a number of product attributes that can affect the accuracy of metal detectors. These factors can impact a metal detector's ability to distinguish between potatoes and metal contaminants, leading to false signals and consequently wasted produce.

Drink cans casually discarded in crop fields, machinery nuts and bolts, or wire fencing blown down in a storm, can all be turned into the smallest metal fragments by powerful harvesters which can then become embedded within a potato. Detecting any fragments will depend entirely on the direction that a bouncing potato is passing through the metal detector. In one orientation, the signal for the needle may be huge. But if turned 90 degrees, a needle-like piece of metal may pass through the metal detector's electromagnetic field undetected with little to no disturbance.

To combat this, Fortress has engineered a metal detector with a rolling-system rather than traditional belt. It provides a stronger signal than stagnant objects.

Fortress European managing director Phil Brown said: "The potatoes roll through the metal detector to limit the chance that a needle misses detection due to orientation effect." He said the technique worked remarkably well in all test cases, with the customised metal detection unit reporting minimal false positives and superior accuracy and metal detection sensitivity.

To ensure the potatoes were run at the highest performance level, Fortress engineered a special VLF (very low frequency) coil. This allows all potatoes to appear as dry products on the machine, essentially ignoring the product effect caused by soil, grit and moisture.

Another essential feature designed for harsh, rigorous production environments is the BSH rugged casing. This helps to provide better stability and metal detector performance for when rolling potatoes collide with the sides of the system as they are funnelled down the conveyor.

Phil said the task of contamination control is no longer reserved for food processors. It stretches right up the supply chain. With the focus shifting from analysing hazards to preventing them, contaminant detection from farm right through to fork is essential to securing new business deals and guaranteeing the delivery of consumer-safe products.

Safety in the fast-evolving food sector places heavy emphasis on shared responsibility, said Phil. "Upstream inspection after harvesting and before processing is now widely regarded as best practice. Although product tampering is extremely rare, in the last decade Fortress has observed a large uplift in enquiries from root vegetable and potato farmers and bulk processors for robust gravity and conveyor metal detection systems. These can help to prevent future adulteration and contamination events from causing potentially catastrophic damage to brand reputations."

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Tackling machinery costs: How repairing can help

WITH inflation making huge impacts on agricultural input costs this year, UK growers need to avoid the cost of replacing expensive and integral equipment while choosing whether to repair or replace machinery will be a key factor.

Andrew Powles, Managing Director at FPE Seals, worldwide distributor and manufacturer of polymeric seals and hydraulic cylinder parts, said it's important to understand the age of the machine or the components, how integral it is to the business, and the job it performs, when considering whether repairing or replacing are viable options.

"Replacing frequently-worn parts such as seals, hydraulic cylinder parts and gaskets can be a great, cost-effective option to keep a machine running and avoid downtime – particularly when paired with implementations and strategies including predictive maintenance," he said. "Naturally, a replacement will sometimes be the sensible option, but only when repair options are unfeasible and machinery is completely at the end of its lifespan."

Effective and quality repair work can reduce the amount of downtime within the business, so strategies such as predictive maintenance can avoid this outcome, said Andrew. Predictive maintenance uses technology, real-time reporting and data in order to monitor parts and components of machinery that may be susceptible to faults and address these before they develop into critical production issues.

When new machinery is ill-affordable, repairing and maintaining to reduce downtime can be crucial. The reduction of downtime in the potato growing industry is huge as jobs are time-sensitive and certain tasks can only take place in small time frames.

Andrew added: "Further benefits of repairing agricultural equipment relate to the safety and satisfaction of the workforce responsible for operation. This has positive impacts in more ways than preventing injuries while at work.

"The nature of agricultural products means machinery is designed to get jobs done quickly and effectively, and that comes with an element of risk and chance of injury. Of course, safety procedures are in place, but keeping machinery up to the right standard and checking for the need of repairs will enhance the safety of operatives."

By keeping machinery running with repairs, the business will be able to operate smoothly, with operatives working to their schedules. Production will continue, with workers confident they are using well-maintained, fit-for-purpose machinery, rather than suffering a breakdown and waiting for unspecified periods of time for a replacement, he added.

Predictive maintenance can massively reduce or even remove downtime. In cases where a machine needs to be out of service for repairs, the time will be less than waiting for a new machine to be ordered, delivered and installed. Various factors, particularly if shipping overseas, can affect delivery times, making waits unpredictable.

Often there is also the cost of training to consider.

Andrew said: "New machinery may be evolved from the previous model. Even in these instances, staff may require hours of training to be brought up to speed. Repairing a machine everyone is familiar with, providing it is still capable of high-level performance, means that work and production can commence as soon as the repair is completed."

Coupled with techniques such as real-time monitoring and predictive maintenance, repairs can ensure that new machinery is only required in the rare cases when the machine and components no longer make fixing it viable, he concluded.

Vibratory conveying systems introduced

NEW vibratory conveying systems designed to feed pick-and-place robots on the packaging line have been introduced by Key Technology.

Each series of integrated conveyors meters, separates, singulates and/or aligns to provide optimal separation, speed and orientation for the robotic system to pick-up. By minimising hand packing, the systems are aimed at increasing production efficiency, reducing labour and improving sanitation.

Suitable for primary or secondary packaging, these systems can handle frozen potato products.

The integrated conveying system often begins with an optional shaker or belt conveyor to meter product, if needed. Then, a separating shaker evenly spreads product, followed by a singulating shaker that directs product into single-file lanes. The next shaker aligns the product in the correct direction, if required, and achieves the optimal speed to feed one or more pick-and-place robots, which are installed on one or both sides of the conveyor.

Products that are not picked up by the robots can either be collected in a hopper or recirculated to the beginning of this system.

The conveyors have stainless-steel bed surfaces, open designs and oil-free drives. When a processor automates primary packaging, sanitation is further enhanced by eliminating the manual handling of unpackaged products in the packing process while reducing the chance of accidental foreign material contamination by a worker.

New modular version of sorter

DOWNS has extended its range of optical potato sorters with the arrival of the I-CropVision, a modular version of the CropVision.

The machine incorporates the same technology and numerous benefits.

By integrating the I-CropVision free standing unit into existing installations, all potato growers can now get benefits of the unique performance of the CropVision.

As an independent version of the CropVision, the I CropVision has the advantage of being integrated into existing installations, regardless of the manufacturer, location or year of manufacture.

The new format is highly versatile. It can be fitted into an existing COMBI grader at harvest time, behind a box tipper for shipping potatoes, or in the middle of a sizing or packaging line. Completely

autonomous, it uses the same tried and tested technology as the CropVision, ie an artificial intelligence algorithm that qualifies all potatoes (green, cut, misshapen, rotten) as well as waste.

Double effect ejector fingers drive the product to one of the three outputs: Good product, second quality and waste.

The independent I-CropVision module is available in different widths: 1.1, 2.4 and 2.8 metre.

Compact irrigation boom is lighter and easier to transport

BRIGGS Irrigation has launched a new irrigation boom designed to make transport and handling as easy as possible.

The R52 Compact has a structural width of 52 metres but can irrigate a width of up to 72m when fitted with sprinklers at either end. Accurate Nelson R55 VT sprinklers are used to ensure uniformity across the entire wetted width.

The new boom can be folded to just under 2.9m to ensure road transport is convenient, safe and straightforward. A 'travel kit' is to also be provided as standard, allowing the boom to be towed safely at speeds of up to 25mph.

As with all Briggs booms, the new Compact can be set up or folded for transport by just one person. A 500 kg weight reduction compared with existing models makes it even easier to handle and helps reduce ground compaction.

In addition to the 52m model, 46m, 40m and 35m booms are available and a high level 'elevation' version for tall crops can also be supplied.

The boom's four-wheel chassis includes components manufactured at its factory in Corby, while a new central tower and base is common to standard models and those that can be elevated. A stock boom can therefore be converted into an elevated version at reduced cost.

The new design also allows the booms to fit into standard curtain side trucks, helping to simplify transport across the continent to the company's many European agents.

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NOVEMBER 22&23

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BP2023 covers every aspect of the industry. Unique among shows, it's as relevant to those who process and retail the crop as it is to those who produce it. So it's an unmissable chance to gauge the mood, update on trade changes, take stock of competitors and learn more about innovations at every level of this progressive, fast moving industry. With so much change in the air can you afford to miss this vital update?

INDUSTRY SEMINARS

Wednesday 22/11/2023

TECHNICAL AND BUSINESS

10:45 - 11:30am
Chap: Applying Agri-Tech solutions to potato production: Some case studies

12:45 - 13:30pm
Potato Storage Insight Ltd: Tackling storage challenges on energy and sprout suppression

14:45 - 15:30pm
World Potato Markets: The British potato market – trends and prospects

Thursday 23/11/2023

CURRENT INDUSTRY ISSUES

10.15 - 11:00am
National Potato Innovation Centre: How science organisations can work better together and with industry to help potato production in the future

12.15 - 13:00pm
GB Potatoes: Turning Challenges into Opportunities

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Stand 176

Get the most out of your potato crop this season!

Better nutrition improves potato yield and quality

Making sure your potatoes are fully supplied with all the nutrients they require is the best way to improve crop yield and ensure good tuber quality. Find us at BP23 to discuss your crop further!

YaraLiva TROPICOTE - A high quality calcium nitrate product for field application an spreads accurately up to 24 metres

YaraMila MAINCROP - Compound granular fertiliser perfect for potato crops where sulphur is not required

YaraVita MAGPHOS K - Foliar phosphorus that improves potato tuber size during bulking and is widely tank-mixable

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