



THE BRITISH POTATO INDUSTRY AWARDS 2023

20-page supplement inside

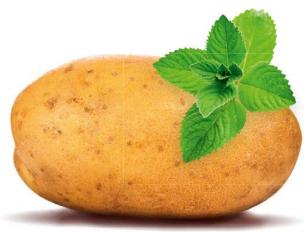


BLIGHT NEWS | FERTILISATION | STORAGE/SPROUTING UPDATES

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# **Editor's letter**

WELCOME to another new year! With 2023 now behind us, we can take a look at what we've learned over the past 12 months and what we have to look forward to in 2024.

With November having marked the return of the British Potato Industry Awards and British Potato Industry Event, it was great to kick off the festive season early, catch up with everyone, learn about the newest introductions to the potato market and celebrate achievements throughout the supply chain.

Our 20-page awards supplement is now available as a digital publication on our website here, and we've also included as a pull-out in this issue of the magazine - turn to page 27.

Full coverage of BP2023 is available on page 9 if you'd like a recap of what was at the show or missed anything.

The events marked the beginning of a new era for us as we brought the show, awards and magazine under one roof in a bid to streamline the British potato offering. You've no doubt noticed the new logo on the front of the magazine and show stand. We're hoping you will all see this as 'change for the better' but would like to reassure all our long-term readers that we'll still be offering our usual feature, news and technical updates.

The next step will be a new, more streamlined website where you'll be able to find show, news and awards updates in one place. Once this is fully up and running, we'll be sharing a link via our e-letter and in the next issue of the mag, so keep your eyes peeled.

With Winter established and Spring around the corner, this issue's features focus on soil recovery, fertilisation, sprout control/storage, variety news and some new projects, as well as the usual machinery, agtech, international and industry updates.

Plenty to kick off 2024 to a rousing start!



Stephanie Cornwall

News round-up

**British Potato 2023** 

Trap Crop Open Day





**GB Potatoes** 

**Fertilisation** 



Storage

**TRIP Project** 





New year predictions

**Agtech** 

**Machinery** 

**Appointments** 



#### January/February 2024

#### Editor

Stephanie Cornwall 01778 395055 stephanie.cornwall@warnersgroup.co.uk

#### **Multimedia Sales Executive**

Theresa Geeson 01778 392046 theresag@warnersgroup.co.uk

#### **Publisher**

Juliet Loiselle 01778 391067 Julietl@warnersgroup.co.uk

#### Design

Dean Cole deanc@warnersgroup.co.uk

#### **Subscriptions**

01778 392464 subscriptions@warnersgroup.co.uk

#### Subscriptions & advertising copy

Potato Review, Warners Group Publications, The Maltings, West Street, Bourne, PE10 9PH

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# Industry encouraged to sign up to first SPot Stores project

A NEW project to help fine-tune storage practices has been established by a consortium of GB Potatoes, storage specialist Adrian Cunnington of Potato Storage Insight, and agronomist Simon Faulkner from SDF Agriculture.

Industry partners involved in the storage sector are being encouraged to sign up to the Strategic Potato Stores project, which has been based on the Strategic Potato (SPot) Farms model run by AHDB Potatoes prior to its demise.

The first grower meeting was held in Wisbech before Christmas and the first SPot Stores chosen. The potatoes loaded will be used for trials. There are also plans for an open day in May. Growers and their advisers attending the open days will get to see the set-up then return to find out how practices develop over future seasons.

Adrian said: "Currently there is a lack of practical research in storage, and very limited funding available for any R&D. However, rather than revisiting old trial results on paper, we believe that practical activity will help growers better understand how to refine their own performance. Working together to build better practice will help improve returns as we will be monitoring costs such as energy."

"These trials will demonstrate the contrasts of what can happen with a range of varieties subjected to different strategies, and with some of the currently available sprout suppressants. To be sustainable and make a realistic margin, potato stores need to be profitable, so tuber quality needs to be good and costs transparent and controlled.

"Seeing things done in a commercial set-up helps our hosts and partners share experiences with visitors who can then go home and confidently apply them in their own stores."

Learnings from the SPot stores will also be shared at other workshops run by GB Potatoes in Yorkshire and Shropshire this year.

GB Potatoes Chair, Mark Taylor, said: "At GB Potatoes we are committed to supporting work to on potato storage strategies, with knowledge being shared across the industry. Our work will focus on 'practical solutions' which have the potential of immediate impact. Workshops, together with demonstration sites, will bring our industry together to share best practice and consider simple changes to refine farm practices."

In addition, PCN-resistant varieties are being stored in two south Lincolnshire stores for additional evaluation. This follows the successful first year of field demonstrations held in conjunction with SDF Agriculture and Hutchinsons.

Simon Faulkner added: "This will assess the storability of useful PCN resistant varieties that are set to help growers' develop an effective strategy against PCN."

## Institute donates 7.5-plus tonnes of potatoes to FareShare

THE James Hutton Institute, home to the UK's potato research centre, recently donated 932 bags of locally-grown potatoes to Scotland's leading food redistribution organisation, FareShare.

The 7,835 kg donation was collected by FareShare at the Institute's campus at Invergowrie and taken to the charity's five Regional Centres in Aberdeen, Alness, Dundee, Edinburgh and Glasgow to

be shared with communities in need ahead of the festive season.

The donated potatoes were grown as part of a large-scale field trial, successfully undertaken in 2023 at the Hutton's Balruddery Farm.

The field trial included a range of well-known varieties which, when harvested, were bagged separately and donated to FareShare.



These varieties are among 100 varieties of potatoes the James Hutton Institute has developed over the past century with legacy research and industry partners.

FareShare is dedicated to redistributing good-to-eat surplus food to charities, helping communities across the country tackle food waste and hunger.

Commercial Officer at FareShare UK, Clare O'Keefe, said: "We are

hugely grateful to the James Hutton Institute for providing such a generous donation to FareShare for the second year in a row. The food distributed is used by many different types of community groups, including food pantries, community cafes, after-school clubs, and homeless shelters."







# Variety set for faster scientific research

BREEDER Royal HZPC Group has introduced a universal potato variety designed specifically for academic institutions which it claims will simplify and accelerate basic research on potatoes.

From the start of next year, academic institutions within the European Union will have access to the variety set, which HZPC says includes in vitro plantlets with unprecedented genetic diversity and offers numerous advantages for researchers and scientists engaged in potato research.

Stan Oome, Program Leader Molecular Biology, said: "The chosen approach offers an unprecedented amount of expertise and resources. It includes genetic information, genotyping, and even ready-made crosses, saving valuable time and investment. We are specialists in tetraploid genetics. allowing researchers to benefit from our advanced tools and techniques to support their projects."

He added: "We aim to increase knowledge about this beautiful crop to contribute to the global food supply. In a rapidly changing world, cooperation is essential."



## **Baby Hasselbacks are born**

MCCAIN Foods has announced the launch of its biggest new product development in over a decade, Baby Hasselbacks.

McCain Baby Hasselbacks feature skin-on, pre-sliced whole baby potatoes and each 653g bag includes a sea salt and cracked black pepper flavour sachet. Baby Hasselbacks are both vegan and gluten-free. They have been drizzled with vegetable oil and slow baked and are now available at Waitrose, ASDA, Tesco, Sainsbury's, Morrisons, Iceland and Co-Op.



# Lincolnshire supplier completes acquisition of Yorkshire business

AKP Group, a UK potato supply chain specialist based in North Lincolnshire, has completed the acquisition of Wolds Produce, based in York.

Wolds Produce was set up as a potato trading business in 2004, offering crops from the Yorkshire Wolds region to packers. The company has since grown to become a major potato supplier into the crisping, chipping and potato seed industries, and currently trades more than 50,000 tonnes of potatoes in the UK and abroad.

Arundel Kerr Produce Ltd (AKP Group) was established in 1999 by Richard Arundel and Bruce Kerr and works with a network of growers and partners to deliver potatoes to the retail, processing and food service sectors in the UK and overseas.

Wolds Produce will continue to operate independently under AKP Group, and all employees will retain their current roles.



## European call for wireworm collaboration

EUROPEAN Potato Association, Europatat, is calling upon researchers and industry professionals to share information about ongoing research and any other related activities which will help control the spread of wireworms in potatoes.

Europatat has emphasised the need for enhanced knowledge sharing and collaboration among researchers and industry stakeholders and has encouraged researchers and professionals with relevant information to contact its Secretariat to share information about relevant initiatives and to explore potential collaboration opportunities.

Those interested in getting involved should email secretariat@europatat.be



# Supplier's first electric truck will be making trips to farms

SUPPLIER Branston has introduced the first, fully-electric truck to its fleet, Following a successful trial in June this year with Volvo dealer Crossroads Truck and Bus Ltd.

The company's drivers are being trained to use the new Volvo FM Electric 4x2 truck.

When compared to a traditional diesel truck, the Volvo FM Electric 4x2 truck could save up to 50 tonnes of carbon emissions each year, provided the correct infrastructure was in place UK-wide for maximum charging efficiency.



# Help with spraying efficiency

GROWERS in the Severn Trent catchment area had an opportunity to learn about improving spray efficiencies in a series of virtual workshops recently, where they received a free set of low drift spray nozzles.

The Swap Your Nozzles webinars organised by Severn Trent Water gave advice and information on how to



reduce spray drift and reduce the risk of pesticides reaching watercourses.

## Fairness for growers call as yet unanswered

MORE than 81,000 British shoppers have signed a petition urging the 'Big Six' supermarkets and suppliers to treat British growers more fairly.

The petition calls for the government to amend the Grocery Supply Code of Practice (GSCP), so that supermarkets are required to buy what they agreed to buy, pay what they agreed to pay, and pay on time, without exception. It has secured the backing of high profile supporters like Dragon's Den star Deborah Meaden, chef Rick Stein and wildlife TV presenter Chris Packham. Green Party peer Natalie Bennett also backed the campaign and raised it in the House of Lords.

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## 'Government must double production Science needs to divert from bleak future'

THE UK government is being urged to double the amount of potatoes and other vegetables that are produced through nature-friendly farming after the House of Lords dubbed the future of the sector as "bleak".

The warning was issued in a report published by the cross-party House of Lords Horticultural Sector Committee. Advice from the Soil Association for more research into sustainable farming practices was also included in the report.

The Soil Association is calling for manifesto commitments from all political parties which includes doubling investment in naturefriendly growing across the UK, doubling production through nature-friendly farming and intervening in supply chains so that retailers take greater responsibility and provide contracts that incentivise growers.



# Apply for free sprouting treatment

GROWERS have until the end of January to take advantage of an offer to receive free sprouting treatment.

UPL is giving 20 potato growers the chance to receive enough of its potato sprout suppressant, Argos (orange oil), to treat 200 tonnes of potatoes in-store.

Potato growers can apply by visiting the UPL website.

# your slugs

RESEARCHERS at the UK Governmentfunded AgriTech centre, Crop Health and Protection (CHAP), alongside scientists at the John Innes Centre (JIC), desperately need slugs to support research and are urging growers to 'harvest' any they find in their field.

Dr Jenna Ross OBE from CHAP said: "Slugs are arable farming's biggest pest issue which, without adequate control, is estimated to cost the UK industry about £43.5M per year. Developing solutions to tackle these pests sustainably could be a game-changer for the entire industry and wider supply chain.

"Farmers urgently need alternative control measures that are effective, sustainable, environmentally and societally acceptable, and economically viable. Researchers at CHAP and JIC are conducting vital research that will help us achieve this, but in order to succeed we need as many slugs as possible."

Those looking to put slugs found on their land to good use are encouraged by the British On-Farm Innovation Network (BOFIN) to sign up as Slug Scouts.







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# Resilience and dynamism in abundance

Show exceeds organisers' expectations with enhanced visitor figures and interaction.

HE British Potato Event 2023, held at Yorkshire Event Centre, Harrogate, recently attracted record visitor numbers and seminar interaction.

The two-day event brought together growers, agronomists, packers, processors, researchers

agronomists, packers, processors, researchers and innovators and its new organisers, Warners Group Publications (owner of *Potato Review*) said it exceeded all expectations.

"The event witnessed an impressive turnout of exhibitors, industry leaders, and visitors, making it a hub of activity and networking," an organisers' announcement stated.

Attendees had the opportunity to connect with peers, share insights, meet manufacturers, see the latest machinery and innovations, and forge partnerships while exhibitors unveiled the latest technological advancements in potato farming, from state-of-the-art machinery to innovations highlighting the industry's commitment to efficiency and sustainability.

A series of seminars and discussions provided attendees with knowledge and insights. There was a strong focus on the importance of sustainability in potato production, with exhibitors and speakers showcasing eco-friendly practices and solutions that align with the industry's growing sustainability goals and the event offered an opportunity for professionals to earn BASIS and NRoSO points and enhance their knowledge base.

The organisers' announcement stated: "The knowledge shared, relationships formed, and innovations unveiled are certain to influence and drive positive change. The success of BP2023 demonstrates the resilience and dynamism of the potato industry, reaffirming its position as a vital component of agriculture in the UK."

Many of the attendees acknowledged that the industry is going through difficult times, particularly after two consecutive difficult growing seasons, but most said they were keen to address those challenges.

The return of seminars proved popular. Delegates were keen to discover what has been happening in the markets, hear from the main processors within storage, and learn how research is supporting the future of the potato sector.

There was a wealth of expertise available on show stands, with agronomists, scientists and industry specialists happy to talk to visitors about the potential to help address particular problems and challenges. Others came principally to network with business partners and friends.

## Market update and opportunities

2023 was the smallest planted area on record, reported Cedric Porter of World Potato Markets, speaking at the seminar entitled





'British Potato Markets, Trends and Prospects'.

There has been a drop of 22% since 2011, but yields, measured in tonnes per hectare over this period, have held relatively steady.

Reviewing the evolution of the market since 1973, Cedric said peak production was in 1992, and if average yields were maintained, it would still be the second lowest potato crop. This raises concerns about self-sufficiency, which is currently around 63% – and may dip below 60% in 2023, although it could also mean that there are opportunities for GB growers to exploit.

Digging deeper into the different categories, he noted that estimated growing areas for the 2023 area compared to the last full AHDB area figures for GB in 2020 for pre-pack had fallen by 18%, fresh bagged, chipping and seed by 15%. Processing crop also fell by 8%. →



Growers in GB have had a difficult season for lifting because of heavy rain and it has been the same story for parts of the EU, while Spain and Portugal have had a drought.

Cedric said: "As a result, despite a larger growing area having been planted, the final production figures will depend on how much they are able to lift. We may end up with a tight market, which could result in an increase in the value of the crop.

"While 90% of processing crop is grown on contract, the proportion for seed and pre-pack is lower, so looking at the overall market, at least 75% is likely to be contracted. This may result in an increase in free-market prices, but potatoes grown on contract will not increase in their value.

"Consumption fell in 2022, but the good news is that the British still love their spuds."

He added that despite fewer potatoes being consumed in GB, they still command a bigger market than bread.

Nevertheless, Britain is increasingly reliant on processing cops being imported from Belgium and the Netherlands. In the 2022-2023 season, this rose to 830,000t from 730,000t the previous year.

"We need to ask ourselves whether there is room for another processing plant as more people turn to potato products rather than fresh potatoes, so that more of the processed crop can be grown here. For example, it could present an opportunity for a Dutch or Belgian company to invest as there is little room for expansion in those countries," said Cedric.

"There are lots of reasons to love potatoes. They deliver nutrients and energy. The challenge for our market is to raise sales and awareness of young people between 18 and 34 years." Thanks to marketing campaigns in these countries such as 'Potatoes, prepare to be surprised - Europe's favourite since 1536', in Flanders, sales are holding steady, he said, adding that in Ireland they rose in 2020 and 2021 and although this has now eased back, Irish volume sales figures are still higher than 2019.

# Seed exports to EU: Dialogue is changing

Since Britain left the EU, exports of seed potatoes to the trading block have ceased, however there is genuine interest in restoring bilateral trade for seed potatoes, show-goers heard.

Technical Affairs Director at Europatat, Romans Vorss, and Gerard Croft of the British Potato Trade Association gave an update on the state of affairs in a seminar at BP2023.

Both sides are working closely in a push to restore the trade, whether it be in full or partial, said Romans.

Gerard noted that one of the challenges the industry is facing in restoring the seed potato trade with the EU is that seed potatoes are controlled by lots of different pieces of legislation.

These are primarily plant health and phytosanitary requirements, but there are also seed potato marketing legislation and official controls. These can be complicated and changing one element can have implications by setting precedents elsewhere.

Gerard said: "We are looking in detail at the legislation to try to find ways for us to reopen the trade. Support and lobbying from the industry to help reopen the trade is vital."

Romans said it is not just GB seed potato growers who want to restore trade with the EU. The European traders agree, although it may be in a different form from pre-Brexit relations. He said Europatat had approached the EU Commission, but received a disappointing reply. Nevertheless, the issue drew the attention of politicians in the European Parliament, particularly when the Members learned that seed potato exports had ceased.

Europatat was able to present their point of view.

"We were very pleased with the outcome of the meeting, as we had almost all the Members of Parliament supporting us, and they also invited a technical expert from a Walloon Research Centre who has reported that there is no reason not to allow the import of seed potatoes.

"We do not want to give anyone false hopes, but as there are elections coming up in both GB and the EU, and we do not yet know who will be the President of the Commission next year, the dialogue is changing on both sides.

"For example, there is now a EU/GB agreement on Horizon (an EU science research program), so there may be a chance that GB seed potatoes will be tabled for discussion once again, hopefully opening up exports to EU countries."

#### Bringing science into practice

Researchers and agronomists working together is key to facilitating innovations which will keep the potato industry relevant and profitable, said Prof Ian Toth, Director of the newly-founded National Potato Innovation Centre.

Speaking at the seminar 'How science can work better together and with industry', he pointed out that one of the challenges of the GB potato sector is that research is often done between individuals but with often little coordination.







#### **BRITISH POTATO INDUSTRY EVENT 2023**



This is set to change because Ian and his team will be working across organisations to support a wide range of science outputs for the good of the industry in addition to creating skilled jobs in innovative new industries.

Initiatives include gene discovery and breeding, to produce new varieties with a wealth of useful traits, such as drought and high/low temperature tolerance and disease resistance alongside nutrient use efficiency and quality.

"Breeding new varieties features high on the list, as we cannot afford to wait 20 years for new disease-resistant varieties to come through," said Ian. "We have the advantage that at the James Hutton Institute we house the Commonwealth Potato Collection comprising 1,500 potato types representing half of the world's potato species, which will help us identify relevant genes for improving varieties."

Work will also focus on improving the resilience of production systems, through the use of precision agriculture, improved water and fertiliser efficiency, pest and disease control and how to make the most from artificial intelligence (AI).

"One of the most interesting new features is the ability to recognise volunteer potatoes in fields of other crops so that herbicides can be directed accurately to that particular plant, saving chemical use by up to 95%," said Ian.

"Because of the importance of controlling volunteers to reduce proliferation of pests such as PCN that are threatening potato production, these innovations are likely to be crucial to the potato sector."

He also announced that the National Potato Innovation Centre will be working to develop innovative potato products. This will include bio-actives for medicine and cosmetics, plant factories for vaccines, starch for plastics and functional foods, such as proteins.

One example is Solanesol, which is an important molecule in medicine and cosmetics and is currently extracted from waste tobacco. However, there are problems with supply and costs and potato could provide a solution to this.

"It is also present in the potato plant and can be extracted from the haulm, therefore offering an opportunity to make better use of the whole plant and increase grower revenue by entering in a £billion global market," said Ian.

As the project develops, it is envisaged that more people from science, industry and government will get involved in the.

"In addition to coordinating academic organisations in Britain, we will also be collaborating with other international bodies such as the International Potato Centre and CIP to help grow our international collaboration and ensure that our science is informed by industry," said Ian.

#### **ADAS** new focus on crop storage and poor harvest solutions

Since the closing of Sutton Bridge Crop Storage Research, the industry had been struggling with potato and horticultural storage research. To help industry bridge this gap, the consortium Crop Storage and Post-harvest Solutions (CSPS) was formed. It is a collaboration between the Advanced Plant Health Growth Centre (part of the James Hutton Institute), ADAS and the

Natural Resources Institute (NRI) (part of the University of Greenwich) which hosts the Produce Quality Centre.

Dr Faye Ritchie, Technical Director at ADAS, who is part of the consortium announced that the new storage research facilities are now up and running.

Facilities were funded via capital investment secured by CHAP via Innovate UK, with additional funding from the Scottish Government and ADAS. These include four and six tonne experimental chambers as well as mini-storage systems (P-Pods) with the ability to control temperature and CO2. These will be used for the development and testing of sprout suppressants, in-store disease management in addition to assessing varietal suitability for storage to improve breeding for storage resilient varieties.

Plans are also in place to develop new projects to enhance understanding of the biology behind crop break-down and rots, and develop innovative methods to control it or slow it down.

"The focus will be on improving handling and storage to minimise waste and losses," said Faye. "This will include monitoring to optimise store management, particularly around the savings to be made from improving energy efficiency."

#### Fertiliser producers share advice on stands

WITH many supermarkets pushing their suppliers to reduce their carbon footprint, fertiliser is increasingly in the spotlight, Nik Johnson, Director of JSE-Systems, told *Potato Review* during a visit to the company's stand at BP2023.

As a result, many growers are looking to tick the right boxes but they still need their nutrition programmes to be effective.

Nik said: "Trials using Fibrophos as a source for P and K in potatoes have gone very well, and have found it to be an effective fertiliser because it raises the P and K indices on these fields and supports nutrient uptake at throughout the growing season.

"As it has other important elements such as calcium and sulphur, in addition to trace elements - everything except nitrogen - it provides a complete base fertiliser. It has the added benefit of also being carbon neutral, as it is based on ash from recyclable sources from green electricity production."

Because it is ash, there are no pathogens in the fertiliser, and he emphasises that nutrient consistency is unvarying because it is always made from the same, consistent fuel sources.

Supermarkets, including Tesco, are supporting the product, added Nik, because of its carbon-friendly credentials alongside the agronomic efficiencies and cost effectiveness.

Systemic nitrogen (N) fixating Encera bacteria can help growers achieve a consistent yield increase of 4t/ha, revealed Azotic Technologies Technical Sales Manager Joe Griffiths.

Speaking on the company's stand at BP2023, he explained that Encera bacteria (Gluconacetobacter diazotrophicus), which were originally found in sugarcane, are able to form a symbiotic relationship with potato plants. Once introduced, the bacteria move systemically and are able to colonise new growth, providing a consistent supply N to the cells throughout the growing season.

Joe said: "The bacteria require the plant to be actively growing, and we currently recommend to apply only when the air temperature is above 10 deg.C to ensure the bacteria will be active. Ideal conditions for colonisation would be warm and not too dry - but once the bacteria is in the plant it is buffered from the weather.

He added that trials had also identified that late foliar applications also worked well with trials indicating a higher response in tubers per metre when applied as a foliar spray.

The product, which is a University of Nottingham spinoff, launched in the US in 2019, and has available in the UK since 2023.

Turn to page 22 for our fertilisation focus. →

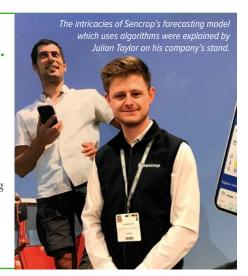
#### Making use of new algorithms

THE intricacies of a forecasting model which uses algorithms to find which weather forecast is most suited to a particular location were explained Julian Taylor, Marketing Coordinator at Sencrop.

Talking on the company's stand, he explained that the wireless network technology uses new in-house developed algorithms to read and compare information from the locally-available weather stations. Information gathered typically includes local agri-environmental data including air temperature, rainfall and humidity in real time.

Julian said: "The information from each weather station is then assessed for accuracy, comparing them to see which performed the best. The software then uses this information to offer the most accurate, up-to-date forecast for that particular location."

The new technology enables growers to make more informed decisions on when to apply phytosanitary inputs such as fungicides and pesticides.



#### Working towards efficient and profitable potato production

THE problem with current fertiliser recommendations is that they are all based on RB209, said Simon Fox of Emerald Research, whose stand at the event proved very popular with visitors on both days.

He explained that the system that remains largely unchanged since the 1970's, which in turn is based on simple laboratory methods from even earlier, such as Olsen P test developed in Colorado in 1954 for maize.

"We have spent the last 20 years redeveloping soil analysis and its interpretation that, for the first time, takes into account all the complex interactions and influences within the soil through our OptiYield nutrient availability modelling software.

"The OptiYield system combines fertiliser, foliar nutrition, biostimulants and microbials into a single set of crop recommendations spanning the full lifecycle of the crop.

"As our growing number of farming partners will attest, we regularly see marketable yield increases of 15 - 25% over standard, while significantly reducing inputs. This obviously provides both economic and environmental benefits.

"In the past, following RB209 recommendations, phosphate levels in the soil have been treated like a bank, and in the majority of UK soils, the phosphate often gets 'locked up' and unavailable to the crop, while providing an increased risk of nearby waterway pollution through soil particle erosion."

Simon added that a three-year project, 'Transformative Reduced Inputs in Potatoes' (TRIP) has been consortium of commercial and academic organisations including Dyson Farming Research, Bangor University, the James Hutton Institute, and Emerald Research.

As part of the project, field trials based in Cornwall and Pembrokeshire are following

the OptiYield soil analysis, nutrient recommendations and product formulations and results are being evaluated against standard farming programmes and a number of different nitrogen and phosphate regimes.

Preliminary trials in 2023, in one replicated field trial, produced an increased yield of around 33% with reduced inputs when compared to the 'standard' control, he said, adding that these trials will be repeated and extended in 2024.

"For Emerald Research, the key objective of the project is to evaluate alternative approaches to see how far we are able to reduce the total overall inputs, while still achieving equal or better yields and simultaneously improving sustainability and the overall regeneration of the soils across the full crop rotation."

• Turn to page 52 to read our spotlight feature on TRIP.















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The project's team members are focussing on understanding the factors affecting trap cop success.



.....

#### Open day attendees get an insight into progress of project featuring two trap crops.

UMPER crops of DeCyst<sup>™</sup> Prickly and Broadleaf, two PCN trap crops, greeted those who attended a recent open day in Shropshire.

The open day event near Newport attracted potato growers, agronomists and stakeholders from across the supply chain, who were shown the latest progress made by the Innovate UK-funded project in their second year of on-farm trials. The trap crops were grown by host Neil Furniss and the team at Produce Solutions and have shown impressive project progress to date.

This year has seen particularly remarkable progress, thanks to promising findings regarding suitable pre- and post-emergence herbicides that can be used with trap crops to enhance their early competitive abilities, with the possibility of extended usage in the future pending extensions for use.

Project Lead and Trials Manager at
Produce Solutions, Dr Bill Watts, said: "Our
project focusses on understanding the factors
affecting trap cop success. Ensuring the
DeCyst" seed is shallow drilled into moist soil
with some consolidation for seed-soil contact
is critical to success. A follow-up residual
herbicide such as aclonifen (Emerger", Bayer)
guarantees low weed competition until full
groundcover (EAMU pending)."

Part of the consortium, growers J. Bubb, J Foskett Farms and TC & N Taylor, have been focusing on optimising the best drilling practices to ensure the successful establishment of these challenging crops. Field scale trials have demonstrated that, despite being a small-sized seed, common combi-drills offer an excellent option for drilling the trap crop seed, possibly by raising moisture levels in the seedbed, thus encouraging germination.

Another option is using precision vegetable drills where available, with Nick Taylor reporting favourable results with a precision-drilled seed mix of DeCyst<sup>--</sup> Prickly & Broadleaf. As an organic grower, the lower level of soil disturbance with this technique also limits weed seed germination, keeping the crops clean. Alternatively, Shropshire-based grower John Bubb has seen promising results with interrow planting of DeCyst<sup>--</sup> combined with clover and buckwheat in a standing crop of wheat, which flourished after combining, giving complete ground cover.

Collectively, these efforts have accumulated compelling evidence on optimising the performance of trap crops and their integration into current farming systems.

#### **Seed-soil contact**

But getting the crop drilled is only half the challenge, next is ensuring good seed-soil contact owing to the smaller seed size and the drier conditions frequently experienced during the typical sowing window of May to June. Depending on the conditions, this might involve some consolidation to optimise germination and subsequent biomass growth.

Dr Ivan Grove of Curious Raven Ltd, who has been using UAVs to record biomass in the trials said: "Ground cover and crop volume has benefited little from using additional heavy flat rolls post sowing this year due to sufficient early rain after sowing."

"However, using Cambridge rolls post sowing is always recommended to consolidate the seedbed for good soil to seed contact and reduce moisture loss."

Once establishment has been achieved and the weeds are under control, the goal is to maximise crop biomass to ensure high trap cropping potential. Additional management is needed to help reach the ideal target of >700 g/m2 or >7 t/ha for DeCyst" prickly ensuring a high root density and sufficient exudate release to stimulate PCN hatch; work is ongoing to identify ideal biomass requirement for DeCyst" Broadleaf and other species.

Graham Tomalin of VCS Potatoes
Ltd commented on the nutrition trials
undertaken in the East of England this
season. He said: "We've been looking at
the canopy development across the three
DeCyst" species following applications of
potash and phosphate at drilling, whilst
also experimenting with the use of poly
ammonium phosphate in comparison to
standard granular Triple Super Phosphate
(TSP). Although not yet complete, preliminary
observations indicate that phosphate is
important to maximise crop biomas."





# Exploring efficacy of new product

In parallel with the trial and current efforts to optimise the existing commercial products DeCyst<sup>\*\*</sup> Prickly and Broadleaf, the consortium has also been working on a new trap crop product known as DeCyst<sup>\*\*</sup> Podium (Solanum chenopodioides – tall nightshade). Researchers Dr Matthew Back and Dr Kasia Dybal have been delving into the efficacy of this new upcoming product, whilst the wider consortium has been exploring how best to grow in the field.

Dr Matthew Back, Reader in Nematology, and Dr Kasia Dybal, Researcher in Nematology, from Harper Adams University added: "To date we've examined PCN (Globodera pallida) multiplication within two glasshouse experiments when grown with and without the DeCyst" Prickly, Broadlead, and Podium along with potato and fallow controls.

"So far, this has shown how higher biomass led to a greater reduction in PCN, with Broadleaf resulting in >75% reduction and 50% for Podium. We're now moving on to see if this is also true for the other PCN species (G. rostochiensis)."

Those attending the open day shared their experiences with trap crops as well as thoughts on the project. For those who were new to trap crops, the event offered an introduction into the topic area and provided future ideas, highlighting the role of trap crops as part of an integrated pest management (IPM) approach to PCN, particularly when stacked with other tools such as rotations and conventional management practices.

"This is a great example of how public funding enables true cross sector collaboration and synergy."

Dr Alex McCormack, Innovation Lead, CHAP

Dr Alex McCormack, Innovation Sector Lead in Agronomy for project partner CHAP, said: "This is a great example of how public funding enables true cross sector collaboration and synergy by combining the skills, expertise and experiences of growers, agronomists, consultants and researchers to accelerate on-farm innovation. "I'm eagerly looking forward to the next steps, where we will be working on creating a comprehensive grower agronomy guide and producing high-quality video materials to broadcast the message to growers and agronomists, so stay tuned and keep an eye out for upcoming developments!"





After a wet season, bare fields can look slumped and compacted. Time to recover This autumn tested many fields above and beyond their limits and this month **Andrew Goodinson**, Agronomist and Potato Specialist at Hutchinsons, looks at soil health and resilience, and how to help it bounce back.

NE bad year should not be a reason to abandon long-term soil health strategies. This is particularly important because soils which have been well managed are better placed to recover.

"Lifting - particularly for those who were lifting late - has been messy, but those fields are not going back into potatoes in 2024," Andrew said.

"They need to be given time to recover. It is better not to do anything, even if you have deep wheelings, because if you go in to try and level it, you will end up creating yet more compaction as well as smearing the soil.

"If you have pooling in one area, then digging a channel to help it drain will be beneficial, but if not, then leave it alone until late spring when it is drier."

He finds that spring-applied gypsum is useful for improving soil structure and permeability and will help solve problems.

"Field mapping and a high-definition soil analysis are also key to getting the most from the crop as they facilitate a tailored methodology rather than a flat-rate approach where some areas may get more than they need while others are left wanting.

"Soil mapping allows variable rate fertiliser and lime applications to optimise nutrition applications. These analyses help build long term soil management and/or resilience when done on your own land, but they are not so attractive on rented land, especially if rented on a short-term contract."

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.



When it comes to planting this year's potato crop, patience will be key. Spring cereals will be the traditional choice in fields not left in a poor state apart from being wet. If they are in very bad condition, he suggests growers should opt for a late planted crop such as maize, spring oats, or grow a cover crop to allow a good entry back into wheat.

"Returns on spring cereals are marginal, so on damaged land they are less likely to be profitable. If you are on rented land, you need to have some honest discussions with the owner about what happened and what is needed to help the land recover," Andrew said.

In general, well-managed fields harvested well, particularly those that were lifted in September, while others never reached their potential. Either way, he recommends analysing what went well and what did not go so well from the strategy devised last spring.

"Soils for potatoes are subjected to so much cultivation to plant, and then to lift the potatoes, the soil is moved again, leaving a fairly low pore space. This year, because of the heavy rains, the pore space was soon filled with water, making drainage much more difficult," said Andrew.

"Points to ponder include whether headlands were planted and the row direction in the field was aimed at minimising runoff and easing harvest. This year we have seen the impact of excess cultivations, and the effect this has had on soil health.

"On the plus side, self-propelled harvesters did a better job than conventional harvesters, as they have a bunker and can unload onto trailers strategically placed on headlines, or sometimes even on the verge the other side of the hedge.

"However, this does slow down operations, and can create a different challenge for potato growers whose operations are spread over a large area as they need more time to get round the crop, leaving their systems stretched when conditions are not ideal."





#### The importance of trials to optimising profitable crops

Trials, when properly constructed, are key to moving forward with yield, quality attributes and therefore profitability, said Andrew.

"One of the areas we, as an industry, need to improve is to get the most from the potato plant in its early stages of development, particularly in the time leading up to tuber initiation. Trials to build better understanding of nutrition and the role of biostimulants as early growth promoters will help us get there."

With so many different forms of nutrition, from base fertilisers to foliar sprays, he warns that it is too easy to just apply N to a crop but it is often not the right answer.

"We also need to move away from thinking that putting something on the crop at some stage during the growing season will be of help especially if the rates used are made to fit the cost."

He also notes that there are concerns about late blight resistance and how products work on the different blight strains.

"Since the demise of AHDB Potatoes, agronomists are key to unlocking the science of healthy production, and it is really important to work closely with colleagues and enhance our collective knowledge and avoid repeating work that has already been done," said Andrew.

"Trials are an important way of doing this because it helps us build a better database from which we can work. They do, however, need to be done in the right way."

On-farm trials play an important role as long as the potato crops being tested are planted in the same soil when replicated.

A recent trial Andrew did with one of his growers reviewed a number of potato seed treatments, assessing effectiveness on a number of parameters, including tuber number, average tuber quality, tuber weight and gross output per hectare. These findings were then evaluated for price effectiveness.

"If you have a higher number of tubers but they have quality issues such as growth cracks, something will need adjusting. Sometimes when we look at our trials results, we are surprised by the outcomes, and there have been times when the trials have shown us that the older best practice methods can be better than some of the newer innovations," he said.

Other recommendations, such as seed rate guides, can be adjusted because variables such as the season and planting time can vary year-onyear. For example, soils that can hold moisture better than others may be able to support higher tuber numbers, but this needs to be tested before going ahead to reduce risk, he said.

Physiological age of seed potatoes can also differ, particularly after a stressful growing season such as 2022, so adjustments may need to be made here as well.

"If you do trials with the varieties you are growing, testing them in a range of different situations, it helps you really get to know how to get the best out of that variety whatever the season throws at you."

#### Cover cropping

Because of the moisture while soils were still warm, autumn 2023 had been good for establishing cover crops, Andrew said.

"We noticed that where cover crops had been planted in the margin, or had beetle banks, there was less run-off and soil erosion."

He added: "As we have gained more experience with them, we have become better at balancing them for nutrient cycling and soil retention, which helps to retain nutrients such as nitrogen, potash, sulphur and phosphate, which occur when there is heavy rain and reduce subsequent runoff."

He adds that leaf litter from a cover crop, by temporarily holding the water, gives the

soil more time to soak it up. Slowing down the rate also allows water to percolate into groundwater reservoirs, so the soil can remain moist for longer.

"Each inch of rain weighs 2460t/ha (1000t / acre), so no wonder that after a wet season, bare fields can look slumped, compacted and wet."

Generally speaking, cover crops need to be planted early - before mid-September - but if this has not been possible, he points out that home-saved spring oats, peas or beans are options because they will grow in the cooler temperatures.

In the west, stubble turnips have become popular because they can be used for grazing, and therefore provide an income from bare land.

"One of the questions I get asked is whether a cover crop used for grazing loses some of its benefits because the top biomass is removed. However, the root structure underneath remains intact, helping to hold the soil together and preventing run-off, as well as increasing organic matter." →



#### **SOIL HEALTH**

Nonetheless, they need to be properly managed and have a run-back area so that the livestock can get out of the mud and wet, if necessary, he emphasises.

"Another option is a short-term ryegrass ley for winter grazing – and this can be particularly useful if you have brassicas and/or legumes in your rotation. For example, if you grow peas or beans, winter-grown legumes can increase the incidence of for bean seed fly the following spring (important in veg crops).

"If you are growing vegetable brassicas or oilseed rape, not only you will need to assess whether the cover crop will increase the risk of club root but you may also see brown/white mustard volunteers in the crop."

"Cover crops can be included as part of Sustainable Farming Incentive (SFI) schemes and using them means some useful income can be gained before planting potatoes. Additionally, growers have the option of using some bio-fumigant species in the cover crop mix to help manage PCN numbers."

## Biofumigants help reduce PCN levels

January and February are a good time to carry out potato cyst nematode (PCN) sampling, as long as the soils are not too soggy, as it can reduce accuracy. Testing for Free Living Nematodes (FLN) is best left until as close to planting as possible, he advises.

He also encourages growers to try biofumigants to help reduce PCN infestation levels. With the threat of losing some nematicides, cultural strategies for PCN management are likely to become ever more important.

"Biofumigants need to be treated as a crop, they need to be established at the right time and the correct nutrition needs to be in place because first you need to establish a good crop. Andrew found self-propelled harvesters did a better job than conventional harvesters in 2023, as they unloaded onto trailers on the verge the other side of the hedge.

Its destruction - through the maceration and incorporation – is key."

He said the tissues of brassica plants contain both glucosinolates and myrosinases. When the plant cell tissue is damaged, the two compounds react to produce the chemical fumes that can be toxic to some organisms, such as PCN, when they are incorporated into the soil.

Stubby root nematodes transmit Tobacco Rattle Virus (TVR), and one of the problems is that weeds from the same Solanum family, such as black nightshade, plus others including chickweed, can support and maintain populations of the virus.

"So, if you have these on your land, they will need good management."

Partly driven by cover crops and less soil movement for combinable crops taking place in the autumn, wireworm infestations have been increasing.

"Wireworm, which are the larvae of the click beetle, feed for around five or six months of the year, and populations are higher when potatoes are grown after a grass ley which has been laid for at least five years," said Andrew. "The adults are attracted to grass strips and flower mixes, but the larvae do not like compacted, saturated soils or soil temperatures below 8degC"

The unfavourable late harvesting conditions in 2023 led to a threat of bacterial soft rots in store, and Andrew has seen at least one sample where the soft rot bacteria had infected the tuber through wireworm holes.

"We have also seen cases where the mother tubers had become infected with soft rot if seed was sprouting removal before planting but did not break down until later in the season, meaning we had bacterial soft rots in the field."











CEO of GB Potatoes, **Scott Walker**, discusses the pivotal role that Government policies play in shaping the viability of potato farming.

N recent weeks, I've engaged with the Food Security Unit of the Scottish Government and contributed insights to the UK Government team responsible for drafting the upcoming 2024 UK Food Security report, scheduled for release before the year's end. You might wonder why!

The answer lies in recognising the pivotal role that Government policies play in shaping the viability of potato farming in the UK. Whether that be policies related to land use, regulations on water usage, commitments to net-zero targets, or initiatives focused on plant health, various government actions are intricately woven into the fabric of our industry.

While potatoes are just one element within a complex and interconnected food system, GB Potatoes engagement with the UK Government and the devolved administrations presents an opportunity to underscore the significance of potatoes in the broader food security framework of the UK.

The diversity of food supply, encompassing staples like potatoes, is crucial for ensuring a resilient and sustainable food system capable of navigating diverse challenges and adjusting to shifts in the environment or market conditions.

Recent years have brought to the forefront the vulnerability of food supply chains in the UK. Factors such as Brexit, the ongoing challenges posed by the COVID-19 pandemic, and geopolitical events like the war in Ukraine have collectively impacted food production and the intricate supply chains that guide products from farms to processors, culminating in their journey to consumers through retailers or the hospitality sector.

The unpredictable nature of weather conditions adds another layer of complexity, with potato producers acutely aware of the substantial impact weather can exert on production. At the back end of last year, it was the prolonged period of wet weather. The year before that, the standout memory for many growers was the unrelenting drought and consequent demand on irrigation.

These varied climatic challenges underscore the dynamic nature of the agricultural landscape and the resilience required within the sector to navigate and mitigate the impacts of such diverse weather patterns.

The UK Government Food Security Report plays a crucial role in shaping policies to foster resilience within the food supply chain. It serves as a platform that we can use to draw attention to issues of importance, such as understanding how the specification demands set by retailers and processors can significantly influence whether the potato crop will sustain us until the subsequent harvest.

Considering that over half of the potato crop is cultivated on leased land, it can also help show how government policies can substantially impact landlords' willingness to rent land for potato production.

Engaging with the Food Security Units within government provides us with an opportunity to raise these concerns and other pertinent issues that exert considerable impact on potato production.

The next time you're asked about the significance of potatoes in the context of food security in the United Kingdom, the resounding answer is a definitive "yes."

Potatoes hold a crucial role as a dietary staple, providing a substantial source of essential nutrients, including carbohydrates and fibre. Their cost-effectiveness and energy density make them a cornerstone in meals. Beyond their nutritional value, the versatility of potatoes as an ingredient is noteworthy.

Whether served as fresh produce, transformed into frozen products, crafted into chips, or fashioned into snacks, their adaptability allows the industry to meet evolving consumer preferences and diverse culinary demands. As a result, potatoes emerge not only as a dietary mainstay but also as a linchpin in fostering a resilient and sustainable food system in the United Kingdom.

Being the voice of the British potato industry is what GB Potatoes is all about, so if you haven't joined us already, now is the time. The more members we have, the louder our voice becomes. You can join here https://www.gb-potatoes.co.uk/become-a-member or give me a call or drop me an email to discuss what we are about in more detail.





# **Keeping crops healthy**

*Potato Review* looks at some of the newest contenders within fertilisation, and shares manufacturers' feedback on their individual benefits and performance.

OTATOES are a hungry crop, requiring many nutrients throughout the growing season and if fertlisation falls short, it can have a notable impact on potential harvests.

Researchers are continually looking at ways to boost performance in different areas and three recently- introduced product ranges are now available to UK growers, with manufacturers claiming different benefits from each.

One new biostimulant brand, Algifol, which made its debut at the British Potato show in November, detailing results of three recent field trials, claims to be a worthy weather opponent.

The trials, which were conducted last year, supported the company's claims that it helps crops cope with stress and extreme weather while increasing and improving potato yields.

A field trial on Melody undertaken in Cheshire by 3 Shires Ltd found that three one-litre applications of Algifol throughout the season produced a 29.6% increase in the number of tubers. In the sweet spot for packing potatoes of 40-64mm, there were 27.3% more tubers. The tubers treated with Algifol were also 22% heavier than those grown under standard farm practice.

A second trial on Accord by 3 Shires Ltd showed that Algifol increased the uniformity of the crop and produced an 18% increase in weight compared to standard farm practice.

The third trial was undertaken on Accord and Lady Rosetta by Whole Crop Marketing at South Cave farm near Hull. Two test fields were utilised, with Algifol increasing tuber numbers by 13% and 7% compared to standard farm practices.

"All three trials were undertaken in very challenging growing conditions, which is a real positive for Algifol as it makes the results even more impressive," said Marcus Palmer, Director of MJP Supplies, Algifol's UK distributor. "Algifol is growing in popularity, and our sales have increased every year since I first started marketing Algifol to UK growers back in 2005. Whilst it is anecdotal feedback, every grower who has used Algifol this year has said they're really pleased with



how it has helped their crop, and we're receiving lots of repeat orders, which is fantastic."

Grower Andrew Megginson of J K B Megginson & Sons Ltd in Driffield said the canopy on this year's crop stayed "lovely and green" throughout the season despite some very challenging weather after being treated with Algifol. "The yield was up, and we were delighted with the uniformity of size and the overall quality of the crop when it was lifted," he said. →







# PCN IPM STRATEGIES

Potato cyst nematodes (PCN) cost the potato industry over £30 million a year resulting in lost yield, limiting tuber numbers, reduction in quality and ongoing management costs.



rowers and agronomists are increasingly looking at Integrated Pest Management (IPM) techniques in a bid to halt the continued spread of PCN. The challenge has been exacerbated by the dominance of the more difficult to control PCN species, Globodera pallida, now present in 95% of populations.

G. pallida has created greater issues since it effectively survives longer as viable dormant cysts between potato crops in the rotation. The hatch of juveniles is prolonged through the spring and the most commonly grown commercially viable varieties have offered little or no resistance or tolerance to the species.

Used as part of an IPM strategy Nemathorin offers key elements to enhance overall results, according to Andy Cunningham, Syngenta Technical Manager. "It is essential to get control where growers are looking to protect crop yields with moderate infestations of PCN, even with varieties that exhibit PCN resistance, but not tolerance," he advised. Trials have not only shown that varietal tolerance can be affected by multiple environmental factors but also that Nemathorin can help to protect yield in land that would be considered to have high infestations (>15 eggs/g of soil), however, in this scenario, it is worth considering planting in other ground.

He urges growers to take advantage of the Nemathorin Calibration Offer, available through the company's Partnership Plan scheme, to ensure equipment is ready for potato planting, and to always follow the best practices promoted by the Nematicide Stewardship Scheme.

#### **SOIL PATHOGEN CLEAN UP**

Further pressure on potato prices makes achieving any premiums for quality even more important.

Tuber size, skin quality and processing consistency can all be adversely affected by soil pathogens over the growing season, including black dot on tubers - which has proliferated in repeated late, wet harvest conditions along with Rhizoctonia solani (black scurf) increasingly affecting plant growth.

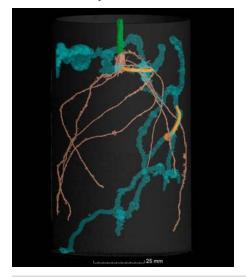
Soil treatment with Amistar at planting has long been proven to effectively reduce

the incidence of pathogens during the growing season, resulting in cleaner and more consistent tubers at harvest.

Results of recent Syngenta Amistar application research revealed an average of 52% increase in yield of marketable tubers over untreated, on multiple sites and successive years of trials.

In a severe black dot situation, the cleaner Amistar sample showed a 64% increase in the proportion of the tubers with less than 12.5% surface damage. Along with an improvement in cleaner skin finish with every application technique trialled in a severe silver scurf situation, compared to more than half the untreated crop failing a 5% or less surface area affected assessment.

The research also suggested new recommendations for Amistar application, especially on modern belt planters operating at faster forward speeds. Full results and new



application recommendations are available on the Syngenta website and will be presented at Syngenta Potato Science Live events during the spring.

#### WIREWORM TARGET

Reports of serious tuber damage from wireworm are more widespread than ever, particularly in arable rotations, where grass weeds, ecological habitat areas, reduced seed treatments and fewer cultivations through the rotation, are all believed to contribute to greater larvae pest pressure.

Growers can utilise Nemathorin applied at 15 kg/ha specifically to target wireworm, or get the beneficial effects from the full 30 kg/ha rate where PCN are being targeted. Historical trials in the UK have shown Nemathorin was equally as effective, or better, than other nematicides that were available at the time and often only used in preference for economic cost. 🕮



#### **POTATO SCIENCE LIVE**

Look out for your invitation to one of the regional Syngenta Potato Science events around the UK this spring - giving an insight in industry issues and new agronomic options for profitable potato production. Visit the website www.syngenta.co.uk for more information.

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Produced by Neomed Pharma GmbH in Germany, Algifol is a concentrated brown algae gathered from the North Atlantic, dried and refined to maximise its wealth of trace elements, vitamins, enzymes, amino acids, carbohydrates, polyuronides and growth-regulating plant hormones.

The manufacturer says it can help lower the carbon footprint of the crop by improving fertiliser uptake through better rooting and improved photosynthesis, which reduces leaching and losses to the atmosphere.

#### 'Better nitrogen absorption'

OCI Global's newly-launched fertiliser, Dynamon, is an N plus S fertiliser containing 24% nitrogen and 7% sulphur and is characterised with a unique mixed in yellow granule.

Dynamon's optimal synergy of nitrogen with sulphur ensures rapid and most effective nitrogen absorption in crops, according to OCI's Global head of agronomy, Dr Thomas Mannheim.

"The addition of sulphur into Dynamon's composition helps to optimise nitrogen use efficiency and ensures nutrition is available in the most effective way. The positive synergy between nitrogen and sulphur, plus the ability to provide all crops with sufficient amounts of sulphur during growing season, makes it an extremely efficient product," he said.

## New options through controlled release

CONTROLLED Release Fertiliser (CRF) products, which have performed well in European trials, are also providing new options for UK growers this year.

CRF's higher nitrogen use efficiency (NUE) increases productivity and significantly reduces the carbon footprint of production,

according to ICL UK Speciality Fertilisers Manager Andrew Judd.

"Unlike other fertilisers, CRFs are temperature-based fertilisers that are designed to release optimum daily quantities of nutrients to crops over a specific timescale. This ensures nutrient availability can be matched to the specific crop requirements more effectively, which leads to higher NUE and reduces nutrient losses," he said.

CRFs also have environmental benefits, such as reduced nutrient leaching, he added.

CRFs works by covering granules with a semi-permeable coating that allows water to pass through it to dissolve the nutrients contained within. The process is temperature sensitive. As soil temperature rises, cracks develop in the coating, drawing in water to dissolve the nutrients inside.

"The water then carries these out into the soil for the plant roots to take up. When soil temperature decreases, nutrient release slows down. This process can last for months with the release of nutrients specifically tailored to individual crop requirements," said Andrew.

"The continuous release of nutrients through the main part of the growing season

when plants need them most, means only one application of CRF is usually required compared."

Being low electrical conductivity (EC) products, CRFs can be safely used at planting or pre-planting and can be broadcasted or direct drilled.

Agronomist Scott Garnett said an extensive set of trials had been carried out on potato crops across Europe and further afield.

"In one particular trial in Belgium, a 26% increase in potato yields for CRF compared to the grower's usual ammonium nitrate (AN) based regime, was recorded. In other trials in Holland, the income gain from such benefits was 14% for CRF compared to a conventional CAN-based two-application approach and we've seen similar yield lifts over regimes using urea treated with DMPP nitrogen inhibitors.

"Furthermore, independent analysis of 19 trials in Holland showed the combined benefits of CRF technology to reduce the carbon footprint of potato production by 11%."

Similar results are now being repeated closer to home with major lifts in productivity, financial performance and environmental benefits seen in UK trials, he says.

"Phosphate plays a pivotal role in boosting root development - essential during the early stages of crop establishment - which in turn drives plant health and ultimately yield and quality."

David Booty, OMEX







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#### **FERTILISATION**

"One trial carried out in in Yorkshire, for example, showed the controlled release of nitrogen from CRF increased NUE to 82% and boosted seed potato yield by 10%, delivering an extra £736/ha compared to the grower's standard AN-based practice. These are real world trials comparing CRF to some of the of the most popular conventional fertiliser regimes with the benefits to yields, margins and the environment."

The two CRF product ranges now available to UK growers are ICL 's Agrocote and Agromaster.

Agrocote is a 100% coated nitrogen fertiliser designed to provide crops with a continuous supply of nitrogen throughout the growth cycle. The longevity of the release can be tailored depending on the needs of the crop. It contains 44% nitrogen and can be used either as a straight nitrogen fertiliser that can be directly applied to crops or blended with other nutrients.

Suitable for all soil types, it is particularly effective in lighter soils where N is prone to losses from leaching, as well as areas where the use of Nitrogen is restricted, Andrew said.

He said the use of Agrocote can also help reduce the amount of Nitrogen applications during the season. "One application at planting can supply the entire nitrogen needed for the growing year in many crops."

The other range, Agromaster, combines Agrocote N with ICL PKPluS to provide tailormade NPK formulas for a range of applications.

"Agrocote provides the controlled release nitrogen and the PKpluS delivers the other key nutrients, phosphorus, potassium sulphur, magnesium, and calcium. The PKpluS gives an initial early release of these key nutrients which is then sustained alongside the controlled release of nitrogen from the Agrocote over the growing season.

#### Specialised liquid range

OMEX Agriculture has added a new specialised and premium quality NPKS liquid fertiliser range, Multiflo, to its product portfolio. The Multiflo NPKS liquid fertiliser range has been technically engineered to boost yield and quality whilst reducing fertiliser inputs.

"The Multiflo range of grades includes NP's, NK's and NPK's, which are all available with sulphur for enhanced efficiency," said OMEX Commercial Director Rob Burton. "The range offers accurate, easy application in all seasons, with a choice of formulations for precision nutrition to work in multiple farming systems.

"UK growers are already familiar with our Nitroflo range of liquid nitrogen fertilisers, and we are confident that the NPKS Multiflo range will bring additional agronomic and economic benefits throughout a crop's lifecycle." OMEX Technical Development Manager David Booty adds that phosphate is a key constituent in getting crops off to the best start possible.

"Phosphate plays a pivotal role in boosting root development - essential during the early stages of crop establishment - which in turn drives plant health and ultimately yield and quality. Unlike traditional granular forms of P, Multiflo is 100% water soluble, which is significantly higher than any alternative in the marketplace currently, meaning it's instantly available for crop growth."

He said independent and company-led trials had shown core benefits to using the liquid fertiliser. "Where Multiflo was applied on a seedbed potato trial, a £138/ha benefit was recorded and in a salad potato trial, a 6t/ha yield increase."

The Multiflo range of liquid fertilisers also offers practical solutions to many daily challenges faced by growers. For example, application is a one-person operation and it offers an easy, safe handling for the operator, with no heavy bag lifting or cutting issues and no storage or bag disposal challenges.

"CRFs are temperature-based fertilisers that are designed to release optimum daily quantities of nutrients to crops over a specific timescale. This ensures nutrient availability can be matched to the specific crop requirements."

Andrew Judd, ICL











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## **EVENT SPONSORS**



NUFARM is a provider of agronomy solutions and herbicides. As a global crop protection and seed technology company, it has been helping growers fight disease, weeds and pests for more than 100 years.



MCCAIN Foods is the UK's largest manufacturer of frozen potato products. As well as having its own seed business in Scotland, it has a team of expert agronomists and works closely with 250 British growers.



GRANTHAM-based machinery manufacturer Farm Electronics offers complete crop storage systems for potatoes, onions and vegetables. The company specialises in refrigerated cooling, ventilation and electronic control systems and automated controls.

## **CATEGORY SPONSORS**









# INTRODUCTION

## **Juliet Loiselle**, Awards Host and Publisher, Warners Group Publications

t was, as always, a pleasure and honour to host and celebrate excellence within the British potato industry at the 2023 awards event.

Challenge is something those involved in the growth and supply of potatoes are well used to facing head-on while scientific advances, new resistant varieties and technological enhancements are continually helping us to adapt to those challenges. Manufacturers work hard to bring machinery enhancements that ease the processes of irrigation, harvesting, cleaning, sorting and packing while the whole supply chain is working hard to meet sustainability expectations and more.

The evening was all about rewarding companies and individuals across the sector, who, over the past two years, made standout contributions in each of these areas.

As those who attended the awards will be aware, Potato Review magazine, The National Potato Industry Awards and the British Potato Event are now all under one roof with Warners Group Publications. This means we can ensure you get the most comprehensive coverage, support and range of updates on the sector as a whole and we're looking forward to the next chapter!



### Stephanie Cornwall, Editor, Potato Review

OTATO Review magazine seeks to keep the whole industry informed about what's happening in the potato supply chain. Over the past five years, we've sought to widen our coverage and provide an end-to-end news conduit that keeps the whole industry up to date with latest developments, trends and insights.

Sharing good practice is a key theme and the launch of the British Potato Industry Awards (formerly known as the National Potato Industry Awards) has provided an excellent opportunity to highlight this and reward those making valuable contributions. It's a delight to be involved.

Just as Potato Review has grown in size and content, there has been an increase in awards entries and categories.

Winners were chosen after tough deliberation by the independent panel of judges and should be justly proud. Those who received Highly Commended awards were incredibly close, with scores being almost neck on neck.

All the finalists and nominees are achievers within their own right, having made enough of an impression to receive at least one nomination. So, to all those who took the time to put forward nominations, sponsor the event, or join the celebration dinner - congratulations and I hope to see you all at the next event in two years' time!



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# **ROD'S RETURN**

Welsh comedian who impressed TV and sporting personalities also finds favour with British potato industry members.

OD Woodward, the Welsh comedian whom Peter Kay describes as "a young Dave Allen" was back to host the 2023 National Potato Industry Awards.

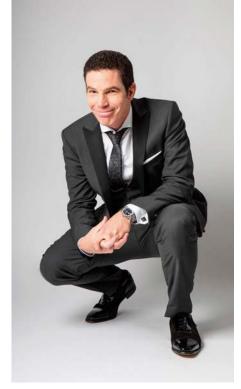
Rod is the son of Welsh sports writer Karl Woodward, the longest-serving journalist for the national newspaper of Wales, The Western Mail and his wit has found favour with many TV and sporting personalities.

Bob Monkhouse described him as "the best of the new bunch", while Barry Cryer said he is "a brilliant young comic with great style and repose". Former English footballer and

manager, Jack Charlton, said he was "the best in the business" while author and former MP Jeffrey Archer said he is "a super comedian".

One of the few performers ever to be invited back to the Royal Variety Performance, Rod has written for and presented on BBC 2W and fronted his own radio show.

After he hosted the National Potato Industry's last instalment in 2021, he brought the house down and organisers were asked by many of those attending if he could return for the next event. His popularity was even greater than that of football legend Kevin Keegan who hosted the awards' launch event in 2019.







# THE JUDGES

HE British Potato Awards event would not be possible without our independent panel of judges, who give their time voluntarily to assess each entry in every category.

This year they had their work cut out, with some really close

This year they had their work cut out, with some really close scoring. Organisers have paid tribute to their diligence and time they put into this, before subsequently arriving at clear and worthy winners.

This year, the panel of judges consisted of the following:



#### **Jim Godfrey OB**

Jim is a former NIAB Board director and Director of RJ & AE Godfrey, a family farming business in North Lincolnshire. He has also served as Chair of The Potato Marketing Board and on the committees of the Scottish Crop Research Institute, Sentry Farming Group plc and the International Potato Centre (CIP) amongst others. Jim was awarded the OBE for services to agricultural research in Scotland in 2002.



#### **David Nelson**

For the past 33 years, David has served as Agronomy Director for Branston Ltd, one of the UK's largest potato suppliers. Fondly known by some as 'Dr Potato', his skill set includes potato physiology, potato diseases and their control, breeding and variety development, agronomy in UK and warm climates, integrated crop management and more.



#### Mark Taylor (Chair GB Potatoes Organisation Ltd)

Mark is a Director with his wife Jo in Agrimark Consulting Ltd based in South Lincolnshire. Previously he was Director at Fennarc Produce Ltd supplying fresh potatoes and root veg for 28 years. Currently sitting on the governing body of GB Potatoes, Mark is also Chair of Nene Potatoes Ltd, Chair of the Fresh Potato Suppliers Association, NED Caledonia Potatoes Ltd and Board member with British Growers.



#### Jon Rooke

Jon is President of the British Potato Trade Association (BPTA) and hails from North Yorkshire. For the past decade Jon has been UK Seed Supply manager for potato breeding company HZPC. Prior to that he was Own Growing Manger for Greenvale AP, supplier of fresh and organic potatoes.



#### **Paul Coleman**

With more than 38 years' experience in the potato industry, Paul is Managing Director at Crop4Sight, a company that provides data-driven solutions to potato growers and processors which he co-founded. Prior to that he spent 23 years as Technical Director at Greenvale AP Ltd. He is also Director and shareholder at Restrain Company Ltd, whose ethylene system helps to suppress sprouting in potatoes, which he co-founded from an R&D perspective in 2005.



#### **Stephanie Cornwall**

Stephanie has held the position of Editor for Potato Review since joining its parent company, Warners Group Publications, in 2018. She has overseen its growth in content and readership, as well as the launch of its website and associated e-letters. Prior to joining Warners, she was Editor of magazines covering fast-moving consumer goods, packaging and retail and worked in public relations for companies including agricultural machinery group AGCO.

# **BRITISH POTATO INDUSTRY AWARD**

Effectively a 'lifetime' contribution to the potato industry, there were six worthy candidates shortlisted for this award, who have made continuous efforts and impacts on the British potato industry during the 2021-2023 period.



#### WINNER:

#### **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.

#### **FINALISTS:**

Walter Simon: A grower and advocate for potatoes for more than 40 years. Now retired from growing, he has been actively promoting positive messages around potatoes.

Andy Alexander: A respected figure in the UK and beyond who has spread knowledge and encouraged improvements in all aspects of potato agronomy.

Debbie Winstanley: A key collaborator who has worked across multiple supply chains and through CUPGRA to ensure work continues on the most relevant issues of the time.

Nick Cesare: A mechanical handling expert with four decades of supplying robotic and automated packing and palletising lines to growers, packhouses and food processors this year.

Peter Peebles: A Perthshire native who has worked in the potato seed industry for more than 40 years and is well regarded throughout the Scottish seed industry and in international circles.







# **GROWER/GROWING MANAGER OF 2022-2023**

With such strong entries in this year's grower category, judges also awarded a Highly Commended in addition to the winner's award, and paid tribute to the other finalists.



#### **WINNER:**

#### **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.



# Highly Commended 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 various 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.

#### **FINALISTS:**



#### **Bradley Sykes**

Growing for the French Fries and frozen products market on around 1,000 acres in Yorkshire, Bradley set up on his own with no farming background and is one of the largest potato growers in Yorkshire.



#### **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.

# **AGRONOMIST AWARD**

Agronomists are the cornerstone of successful potato growing and many were deemed to have made a note-worthy impression over the past two years. Again, the judges had their work cut out choosing a winner, with more than one nomination for each of the finalists detailed here. After much deliberation, Eric Anderson was chosen as the ultimate winner, with John Sarup being Highly Commended.



#### WINNER **Eric Anderson**

Eric has shared his wealth of knowledge, ranging across soil health, nematodes, nutrition, crop health, blight control and desiccation over the past two years, and has helped many to weigh up all the risks and plan the most economical route to a profitable crop.



### HIGHLY COMMENDED

#### 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.

#### **FINALISTS**

#### **Martyn Cox**

Working tirelessly in the pursuit of understanding of wireworm, Norfolkbased Martyn has helped the industry to raise its game when it comes to monitoring and managing.

#### **Andy Alexander**

Norfolk agronomist Andy has given wise council to many, sharing his knowledge of all potato agronomic matters from seed and irrigation, through to storage and skin quality.

#### **Andrew Goodinson**

Andrew offers agronomy and strategic advice across a range of farms in Herefordshire covering 14,000 hectares.













# **BEST YOUNG ACHIEVER**

A newly-introduced category for 2023, this award seeks to recognise those aged from around 18 to 30 within the past two-year timescale who have made a noteable impact within the potato industry.

andidates were drawn from within growing, supplying, research and agronomy. Both the winner and Highly Commended candidates were felt to be contributing something that will benefit the sector as a whole, while the five other finalists were praised for their determination and personal achievements.



# **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 finding are being used to inform novel sprouting suppressant development.



#### **HIGHLY COMMENDED 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.

#### **FINALISTS**

#### **Kieran Hardy**

Fieldsperson & Trials Day Manager Kieran joined Wholecrop Marketing Ltd in November 2021. Since then, he has gained the confidence of its grower base and established the trials day as one of the best in the country.



First-generation grower Bradley was felt to be a great example of how hard work and determination reaps rewards for entrants to the industry and was guest speaker at the Future Farmers of Yorkshire Spring Debate.



#### Joseph Mowbray and **Thomas Carter**

Lincolnshire-based Joseph and Thomas founded Tom's Potatoes, supplying potatoes to markets and





chip shops which has grown over the past two years into a successful enterprise that delivers daily to markets from London to Tyneside.



#### Joseph Marshall

Research and Development Agronomist Joseph stood out as an excellent student and now manages applications at the largescale Potato Blight Platform site in Derbyshire.



























































































# **BEST ENVIRONMENTAL OR SUSTAINABILITY** INITIATIVE

Working to create a less energy-intensive but more cost-effective practice is an ongoing challenge. There have been some noteworthy accomplishments made in terms of environmental and sustainability terms over the past two years. Judges awarded a 'Highly Commended' as well as a winner in this sector and were impressed by the work done by all the finalists.

#### Crop Systems Ltd (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.





#### HIGHLY COMMENDED **KP Snacks**

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.

#### **FINALISTS:**

#### **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.



#### Simon Fox -**Emerald Research:**

Simon has worked tirelessly with international and UK research institutions developing an optimised soil analysis system. In the past two years, the system has been developed and more potato growers have benefited environmentally and economically.









# STORAGE/REFRIGERATION ACHIEVER

Many companies and individuals are making notable impacts on potato storage and we were keen to hear nominations for those who had made breakthroughs in this area over the past two years.

his newly-introduced category attracted some impressive entries, and led to a 'Highly Commended' being awarded as well as a winner.

#### WINNER 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'.





#### **HIGHLY COMMENDED**

#### 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.

#### **FINALISTS:**

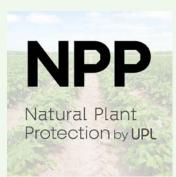
#### **Farm Electronics Ltd**

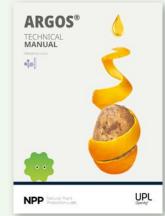
The company developed the COOL5 system which uses EC ventilation fans to achieve optimal air flow and energy-efficiency for potato storage as well as using a limited amount of natural refrigerant (R290) and features Vision Controller.



#### **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.





# BEST INNOVATION 2022-2023

The past two years have seen some notable innovations aimed at improving various stages of the potato supply process and judges enjoyed reading about them all.

#### **WINNER**

# DIG (Data Intelligence for Grower)

A data management and stock control platform (Data Intelligence for Growers).





# HIGHLY COMMENDED IPM Potato Group (Buster)

A PCN-resistant variety developed by IPM Potato Group Ltd.

#### **FINALISTS:**

#### 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.







# MACHINERY AND IMPLEMENTS

MACHINERY manufacturing never stands still! Companies are always endeavouring to streamline and improve processes, and the past two years have been no exception.



# WINNER Grimme GB430

GRIMME's introduction of a sliding axle to the GB 430 has made it a more viable belt planter.



### HIGHLY COMMENDED AVR 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.



#### **FINALISTS**

#### 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.

#### **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.

#### **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.

# BEST MARKETING WORK/ BEST MARKETING CAMPAIGN

GOOD marketing strategies can build awareness and business openings. Whether it's encouraging more people to make a career in the industry, improving consumer awareness, launching a new product or offering a new service, such campaigns help keep the British potato industry thriving and judges decided to award a Highly Commended as well as a winner in this category.

#### WINNER

#### **Potato House 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.



# HIGHLY COMMENDED Kids Country

The educational arm of East of England Agricultural Society) campaign promoted hands-on learning experiences about potato growth and supply for children.



#### FINALISTS

#### **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, to explain the industry and promote everything it has to offer.

#### 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.



#### **Golden Kings**

A disruptive pack design and three-tiered free-standing display unit were created to market Greenvale AP's new brand of potato.









# **HESCOTT-MEREDITH MEMORIAL AWARD WINNE**

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. This award category was newly introduced for 2023 and four stood out as potential candidates for this award. The ultimate winner received his award from Stephanie Cornwall, Editor of *Potato Review* magazine, sponsor of this category.

#### **WINNER 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.





#### **FINALISTS Andy Evans**

A key contributor to research on aphid-borne viruses in potatoes and management of potato cyst nematode (PCN).



#### **Philip Burgess**

Lead consultant and researcher for scottishpotatoes, whose career has spanned both research and commercial production of seed and ware potatoes.



#### **Martyn Cox**

Regarded as an industry legend, having spent the best part of his working life studying wireworm and helping the industry learn how to manage and control the pest.





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Potato storage industry specialists offer insights based on their latest experiences with sprout suppressants.

INCE the withdrawal of sprout suppressant chlorpropham (CIPC), growers, store managers and fogging contractors have been adapting to recently-approved products, as well as different uses for older ones.

Many in the industry have found that sprout control has been satisfactory since the loss of the active, which was once considered indispensable.

CIPC delivered excellent sprout suppression at a comparatively low cost. In addition, the residual control component meant it was easy to use and flexible enough to account for variability in potato stores and applicators.

Much progress has been made in the past two years and the outlook is far better providing the right strategies and steps are followed, according to the specialists who spoke to *Potato Review*.

Independent consultant and store manager at Potato Solutions Tim Kitson says it's important to work closely with your customer base and make sure you know their priorities before deciding which sprout suppressant to use.

Current options for the processing sector include 1,4-Dimethylnapthalene (DMN), Biox-M (mint oil), ARGOS (orange oil), and ethylene, underpinned by maleic hydrazide (MH) which is applied in the field. 1,4-DMN received approval for use in GB for the 2022-2023 storage season, although it has been used in other countries for a number of years.



Chris Francis, Potato Storage Treatment.



UPL's Potato Technical Expert Geoff Hailstone.



Adrian Cunnington from Potato Storage Insight.



Tim Kitson, Potato Solutions.

Tim used 1,4-DMN for the first time in processing stores that he manages, and his overall assessment is that he has gained great confidence in the product's ability to deliver a good result even when storage conditions are not ideal.

2022 provided challenging conditions for storage, as potatoes in the field were exposed to excessive heat with high day degrees resulting in tubers being physiologically older than normal at harvest, Tim said. In addition, he had some fields where it had been impossible to apply MH to kickstart dormancy.

"Following the advice from Dormfresh to make the first application of 1,4-DMN promptly, we applied three weeks after loading. As the weather remained mild, ambient stores were warm and after structured assessments, we reapplied as and where required.

"I was concerned at this point, and spoke to some store managers in the Netherlands, who have been using 1,4-DMN for a number of years. They calmed my reservations and told us to keep going."

Tim monitors sub-samples weekly within the store to assess development. He said he was pleased to find that by January, potatoes had slowed down their respiration rate, become dormant and were looking good.

By the end of July, he said a total of three applications of 1,4-DMN had been made, with good quality tubers still coming out of store at the end of June, and one of the stores was still going at the end of July, without showing any movement.

"A total of three applications of 1,4-DMN were made, with good quality tubers still coming out of store at the end of June. This has helped us develop real confidence in 1,4-DMN," he said.

He stressed to store managers the importance of teamwork and said







# "1,4-DMN has done a better job than many expected at the start of the season, with minimal weight loss too."

Chris Francis, Potato Storage Treatment

collaboration with the customer base is key to knowing when they will be looking to move tubers, so they can ensure that the harvest interval for 1,4-DMN is adhered to.

Reflecting on the different sprout suppressants now available, he notes that the industry is now in a better place than it was when CIPC use was ubiquitous.

"All the products have their niche uses. For example, ARGOS is cost effective for short term storage situations in bulk stores."

He explains that as ARGOS and Biox-M work on contact and provide reactive treatment to sprouting and are good at cleaning up sprouting issues, they both need good air distribution. It is easier to find this within bulk storage than in box stores, many of which are still overhead throw (OHT) style.

"On the other hand, 1,4-DMN is more mobile and able to move well in stores," Tim said.

All the products applied in stores Tim oversees are done by fogging contractors, with good coordination with the store owner/manager to ensure good temperature and air flow to avoid condensation.

"All the products have caused minor scorch on crops. For example, ARGOS and Biox-M create problems round cabling. However, the damage has been minimal and have created no long-term issues."

He also warns that some sensors and CO2 detectors may need to be removed prior to applications as they can be corrupted.

Moving on to talk about ethylene, he reports that it works well and is simple to operate although there can be fry colour complications.

"This is variety dependent, and as processing varieties are being developed with greater sugar stability, the impact on fry colour may decrease in the future."

Getting the best results also depends on best practice store management, and Tim recalls that he is often asked about weight loss.

"Good store management will help keep it at a low level, but passing drier air across tubers will always result in some weight loss. But it varies according to the time the fans are running, humidity and air temperature. There are differences from year to year. "Also, if you have issues such as soft rot, you will have to run the fans, and this will cause some dehydration of the other tubers."

Running newer control systems in stores will help keep weight loss to a minimum, he said, adding: "It doesn't detract from the store manager's role, which is still vital, but the technology supports the end result."

Looking forward to the 2023 harvest, he points out that applying MH will be challenging again, this time because incessant showery weather in July had not provided ideal conditions for applying MH.

"Nonetheless, we are confident that we are able to control sprouting, including in the absence of MH, and can output good quality stored potatoes twelve months of the year."

#### 'Everything has a place'

All the modern sprout suppressant chemicals have certain uses and all of them work well under the right conditions, according to Chris Francis of Potato Storage Treatment.

1,4-DMN is the closest alternative to CIPC for the processing sector. Chris said he had wanted to use it in combination with CIPC for many years. He said: "Last year the tubers going into store were already stressed from the adverse weather during the growing season, and 1,4-DMN has done a better job than many expected at the start of the season, with minimal weight loss too."

Looking at the options in our toolbox now, he notes that 1,4-DMN works differently from the other suppressants as it has a residual effect, while Biox-M and ARGOS work on contact to burn off the sprouts.

"We have used extensively both Biox-M and ARGOS with very good results and both benefit from short withholding periods," he said.

"We are finding that using a combination of products can help store managers work with any scenarios they may find themselves in.

There is definitely a place in the market for all of the products available to us now.

"The key to good sprout suppression is attention to detail by all involved. Growers, store managers and applicators working in unison all have their parts to play. We need to look closely at ventilation rates going forward. I find high ventilation rates always causes earlier repeat treatments and tuber weight loss".

He goes on to say that since the withdrawal of CIPC, maleic hydrazide (MH), which is applied in the field before harvest has become the backbone for sprout suppression.

"It is now used in combination with all the different sprout suppressants available to us."

#### Orange oil

Once CIPC was lost in 2020, an in-field application of maleic hydrazide became the most crucial element of sprout suppression. It provided the only source of residual control to help extend the tuber's natural dormancy.



#### **SPROUT SUPPRESSANTS**



Manufacturer UPL said there were several reports of poor sprout control in-store last season when Fazor had not been applied to the crop.

While ethylene and spearmint oil were available as in-store sprout suppressants when CIPC was still in use, uptake was low until the 2020/21 storage season.

In 2021, UPL launched Argos (orange oil), which provided an additional in-store option. It works by burning the growing points off the tuber. Critically, treated potatoes can be removed from the store 48 hours after an application, giving growers flexibility when selling crops.

UPL's Potato Technical Expert Geoff Hailstone said: "I have seen it remove very large sprouts, although I would not advise letting tubers reach this stage. Late application risks poor control and encourages secondary sprouting around the apical sprout. The ideal timing is when 20-30% have 'white points' just visible, allowing longer intervals between treatments and a lower final cost.

"The active ingredient in Argos is pure, foodgrade orange oil, sourced from the food chain with an exceptionally sustainable footprint. It leaves no residues in the tubers and does not taint their flavour."

Data from UPL estimates that DMN made up just over half of the sprout suppressant market last season, with the remainder split between spearmint oil and Argos. Ethylene was not represented in the data, although it is well known that it is requested to be used in all McCain stores.

DMN is thought to extend the tuber's natural dormancy.

#### **Information gap**

Adrian Cunnington from Potato Storage Insight said there is no longer the 'flexibility' that CIPC offered, because of the gap in information.

"We cannot dip in and out of stores like we once could. We also never had to worry about building a programme because we used it through the season."

A programmed approach to sprout control is on the minds of storage advisors. Many feel they need more data to decide which products fit best in a particular position. Traditionally, AHDB would have fulfilled this role, but the loss of the potato levy has left a research gap.

There are similar worries among application contractors who feel caught in the middle. The main concern in the potato trade is who will be liable if sprout control is unsatisfactory. Advisors believe the situation is exacerbated by variability between potato stores, contractors and varieties.

UPL is doing more trial work, investigating Argos sequenced with other options. The manufacturer is investing in new in-store automated sensor technology to complement its data analysis and hopes this will enhance the efficacy of Argos through more accurate and precise application timing.

"Last season, UPL began a potato sprout inhibitor stewardship 'big data' project to examine the best way to use programmes of different products for short, medium and long-term storage for different markets," said Geoff. "We want to improve our understanding of the different levels of control growers achieve. This should lead to better and more cost-effective potato storage."

#### 2023/24 storage season

"Some farmers are struggling to understand the air movement in their stores," said Adrian. "CIPC allowed them to get away with this, but the new alternatives require greater attention to detail. All new products have had initial application issues that have affected the quality in a few of the stores they have treated. Fortunately, this is becoming less frequent as we understand how to apply them safely,".

"Like with all of the other new products, some growers experienced issues with Argos in its first year of use. When we investigated them, we found it was almost always attributed to insufficient product circulation in the store. When this happens, part of the store can receive an extreme overdose, damaging the potatoes."

Before fogging, Geoff stresses the need to switch the refrigeration off 24 hours in advance to homogenise the store temperature. Growers should also check that their fans have variable speed capability, giving a uniform slow airflow throughout the store.

There should be sufficient space in front of the fog outlet to allow dispersion before contact with the potatoes. The store should not be overfilled to ensure sufficient headspace above the potatoes for the fog to disperse.

"UPL invested significant time discovering the cause in each case and advising contractors. I am delighted to say this paid off with no reported issues with Argos last season," said Geoff.

Adrian urged growers to focus on air circulation when applying all the CIPC replacement products. Air will always take the easiest route, and many potato stores need to have constraints to airflow, such as plenums incorporated to avoid short-circuiting and aid a uniform airflow that penetrates the boxes.

Fans should be set to deliver an air velocity of approximately 2 - 4 m/s. This should be enough push to overcome any airflow restriction but not fast enough to risk focusing the sprout suppressant on one area of the store.

"It seems all the new options can occasionally result in some secondary sprouting. Because of this, I would strongly encourage frequent checks to ensure treatments are well-timed," said Adrian.

Adrian and Geoff both spoke at a recent potato sprout suppression workshop hosted by UPL and attended by potato storage advisors across the UK potato industry.

"It seems all the new options can occasionally result in some secondary sprouting. Because of this, I would strongly encourage frequent checks to ensure treatments are well-timed."

Adrian Cunnington, Potato Storage Insight







# PCN and blackleg in the spotlight

# Conference reveals latest research findings on pests.

THE spotlight was firmly on PCN and blackleg at this year's CUPGRA (Cambridge University Potato Growers' Association) conference, which took place just before Christmas.

Agronomist Eric Anderson spoke about the current problem faced by the seed sector in Scotland, where



Eric Anderson.

globodera pallida is proving a major pest to crops, while Prof Ian Toth, of the James Hutton Institute, discussed the link between free-living nematodes (FLN) and blackleg.

Infestations of PCN have been multiplying, and data shows there are more than double the rates that there were around eight years ago, Eric told those at the conference, adding that growers must have a SASA clearance certificate for land before they can plant.

Few potato varieties are resistant to the pest and authorisation for the nematicide Nemathorin (fosthiazate) will be withdrawn on October 31st. Eric said this will present a new challenge for the Scottish seed and ware industries, adding that trap crop establishment has been 'inconsistent' in Scotland.

"We urgently need varieties that have both resistance and tolerance to PCN," he said.

Awareness needs to be raised with land agents, as the problems are more prolific on rented land where landlords only consider short-term gains rather than looking at long-term soil health, Eric told those at the conference. With that in mind, a programme entitled PCN Action Scotland is targeting those involved with renting seed potato land, which will detail integrated pest management.

"An integrated control programme requires co-ordination at all levels," said Eric.

Meanwhile, root damage by free living nematodes (FLN) could be an important factor in blackleg pectobacterium atrosepticum infection, Ian Toth revealed.

Sharing latest research funded by Scottish Government, Defra, BBSRC and NERC through the Bacterial Plant Diseases Programme, he said the team at the James Hutton Institute, in collaboration with the University of Dundee, is looking at damage caused to roots by FLN, which provides an entry point for blackleg bacteria. He said the bacteria sense when the root is damaged and colonise there.

The team is looking at harnessing microbial populations to defend the plant, as well as breeding varieties that have more resistant roots.

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Soft rot on a tuber. Photo: Blackthorn Arable

# Make better use of energy and resources

Keeping costs and disease down during storage is a key challenge at this time of year. *Potato Review* spoke to a grower, sanitisation specialist and storage consultant who each had advice to share.

KENT grower is making significant cost savings with the help of technology that is helping him make his storage facilities more energy-efficient.

Philip Smith, owner of Monkton Court Farm, near Ramsgate, Kent, installed 'SmartSola' across the 3,500 tonne stores built by Crop Systems Limited.

He said these have performed excellently over the past five years, enabling him to keep potatoes in 'just harvested' condition, while achieving low running costs thanks to equipment such as glycol fridges.

That performance is being further improved by 'SmartSola', he says. Crop Systems Limited recently launched the 'SmartSola' system to enable users to make optimal use of their home-generated energy, while minimising bought-in power. It monitors the energy generated from all sources – solar power, hydro, wind or biomass –then deploys it to



Technology advancements such as SmartSola can help keep down storage energy costs.

optimum benefit across up to 10 stores. The system monitors and manages all aspects of the store's energy use

"We use around 300,000 kWh of electricity every year across our four stores. With energy costs having risen so much, we need to ensure we make best use of home-produced solar energy as possible," said Philip. "SmartSola has helped us achieve this aim by intelligently

controlling our store run times. Stores are switched on in sequence as the solar energy becomes available.

"On many days, our stores run entirely on the energy generated by our own solar panels, which avoids the cost of imported energy completely.

"We normally store crops at 2.7°C with a 0.2°C differential, so when the solar panels are producing enough power in the day, we take the opportunity to over-cool to 2.5°C. Then if the next day is dull and the panels cannot produce enough power, we can avoid using mains electricity because the energy we need to run the store is effectively stored in the potatoes.

"The programme offers a great deal of flexibility, allowing the store manager to prioritise stores or set different parameters for each store. It has worked extremely well for us and has become an important tool in our store `management."





## Hygiene key to avoid soft rot spread in potato stores

SCOTTISH potato growers are urged to remain vigilant against soft rots this storage period, with appropriate ventilation and meticulous hygiene key to avoid spread in seed and ware crops.

A relatively dry June and July meant mother tubers lasted longer than they typically would before breaking down to Pectobacterium infection – the principal cause of soft rots – during the 2023 growing season.

When wetter weather did set in and trigger breakdown, tubers were already well-developed in the ridge, increasing the risk of the problem spreading during storage.

SAC Consulting Potato Specialist Kyran Maloney says there have been some reports of late blackleg in seed and ware crops towards the end of the growing season. Recent storms compounded the threat where potatoes still awaited harvest.

He says assessing risk by hotboxing tuber samples is advised and there are tests available at plant clinics to establish the bacterial loading on tubers post-harvest.

Where risky stocks are identified, immediate and judicious ventilation to dry the crop and desiccate any rotten tubers that may already be breaking down is key. A rapid temperature pulldown is also important if the risk of condensation is well-managed.

"Growers should resist the temptation to pick any rots off early, as this will spread any bacterial infection through the crop when put over a grading line. Only once soft rotting tubers have been mummified with ventilation should they be graded out," Kyran said.

For seed producers, first grading offers an opportunity to split crops into seed fractions and further assess potential disease issues. Storage disease treatments like Gavel (imazalil) should be applied in seed crops at this stage where risk of fungal storage diseases like dry rot, skin spot or gangrene is identified, he said.

"Unfortunately, seed treatments are not effective against the bacteria that cause soft rots, so if there is a high risk, introducing moisture by applying a fungicide may do more harm than good," said Kyran.

Kyran Maloney says growers should resist the temptation to pick any rots off early



Storage disease treatments should be applied in seed crops where risk of fungal storage diseases like dry rot, skin spot or gangrene is identified.

"On many days, our stores run entirely on the energy generated by our own solar panels, which avoids the cost of imported energy completely."

Philip Smith, owner of Monkton Court Farm

He adds that hygiene is paramount during grading to avoid additional spread of bacterial soft rots before seed reaches customers in the spring.

"Cleaning the grading line as often as possible with a disinfectant like Jet 5 (peroxyacetic acid) will avoid making any problems worse. Clearly, it's impossible to disinfect between every stock, but even a little more attention to cleanliness will make a difference.

"It's particularly important to clean down after an infected stock has passed through, starting with a clean slate before the next one is processed."

Finally, Kyran urges all growers to start high grade seed procurement early this year, as high virus vector pressure and recent stormy weather may result in tight supplies for some varieties this spring.

"Have those conversations now and it will ensure there are no last-minute surprises ahead of planting," he said.

#### Microbial problems

STOZONE, manufacturer of sustainable store and box sanitisation to potato growers and stores in England and Scotland, has reminded those storing potatoes to take care when storing boxes outside, as well as within store, and to make sanitisation a key focus.

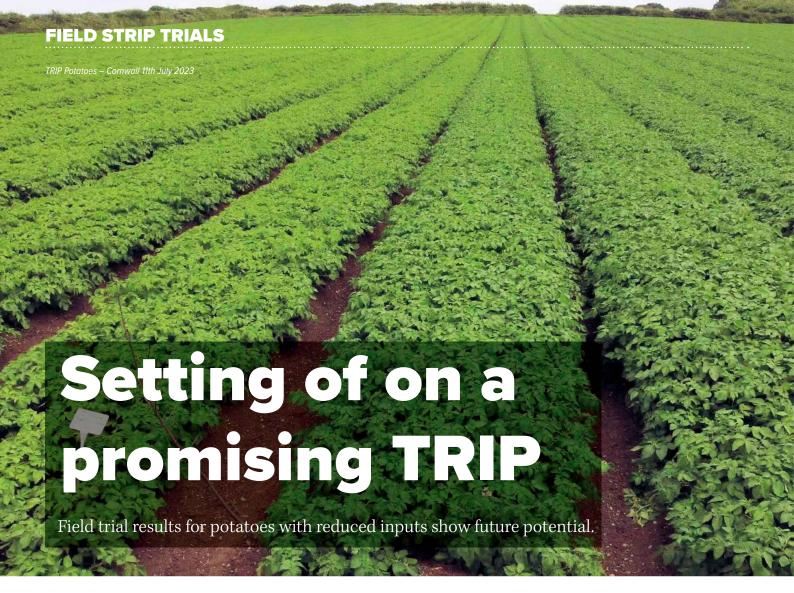
Growers are faced with a range of harmful, damaging and costly mold, fungus, rots and bacterial growth, spread and spoilage during storage in cold and ambient stores each year.

Mould, fungus and bacterial growth such as Silver Scurf and Botrytis in potato stores, can begin during the storage of boxes outside, within stores themselves when empty and through the build-up of spores, molds, fungus contained within refrigeration and other moisture-containing air systems.

"Silver scurf and botrytis are a number of common seasonal microbial problems facing growers and stores each year. Without appropriate sanitisation applications, mould, fungus, rots and bacteria can grow, spread and increase loss of crop through spoilage. Additional storage problems can occur with the use of water-based hygiene processes, which can assist in the growth and spread of micros during storage." a company spokesman said.

Chemical sanitisation applications may also pose microbial growth issues, if applications need to keep below current MRLs (Maximum Residue Levels), which don't fully eliminate moulds and fungi.

"If MRLs are exceeded to achieve results, this has the potential for detection of chemical residues on produce, in addition to possible internal detection during storage respiration and loss of efficacy," he warned.



ESULTS of the first season's Innovate UK-funded Transformative Reduced Input in Potatoes (TRIP) project have now been released by Emerald Research Ltd (ERL), throwing up five key areas of interest that will now be explored further.

Emerald Research, which specialises in biological solutions and advice, is running farm field strip trials, commercial field-scale trials and replicated pot trials for the project, along with Dyson Farming Research and leading potato growers across the country.

To date, the field trials have been completed at the Cornish and Lancashire sites.

#### **Cornish trial site**

The objectives of the Cornish trial were to establish if both soil and foliar applied fungicides can be reduced or eliminated and to establish whether reduced rate seedbed fertilisers or manures could provide commercially-viable yields when supplemented by foliar nutrition and biostimulant combinations.

Five treatment types were applied, with varying results (see treatment summary table).

Treatments 1-5 had an Emerald Research foliar nutrient programme following a full OptiYield\* soil analysis and an OptiYield nutrient recommendation programme was implemented.

The base fertilisers were applied to the seedbed - either at 50% or 100% - of Treatments 4, 5 and 6 (Control). Treatments 1 and 2 received only farmyard manure and Treatment 3 received only green waste.

The Green Waste treatment (T3) was not sampled, as the very low level of nitrogen present in the GW was insufficient for realistic growth comparison. Trials next year will probably seek to supplement GW with some additional seedbed nitrogen, or look to apply foliar nitrogen at an earlier stage.

# Conclusions and working hypotheses

Following the full statistical analysis of the trial data, there were five areas of interest that will be tested and explored further in the following seasons' replicated trials.

Firstly, the accuracy and validity of Standard Soil Analysis, the OptiYield analysis clearly showed that the soil would significantly lock up soil phosphate leading to greatly reduced availability. The use of full-rate fertiliser using standard soil analysis recommendation, as in

#### **Treatment Summary**

Treatment	Base Nutrition	Fungicide & Biological	Foliar Nutrient Programme	Other Foliar
1	FYM (20t/ha)	Maxim + Amistar	Yes	ODX only
2	FYM (20t/ha)	MMXOnly	Yes	ODX only
3	Green Waste	MMXOnly	Yes	ODX only
4	50% Standard	Maxim +Amistar	Yes	Blight programme
5	50% Standard	MMXOnly	Yes	Blight programme
Control	100 standard	Maxim + Amistar	No	Blight programme

Trial compounds: MMX = Mixture beneficial micro-organisms, ODX = Novel biostimulanrfelicitor







the control, considerably under-recommended phosphate, leading to poor crop response in relation to the cost of fertiliser added.

Secondly, the yield results showed that the use of either FYM or half-rate (50%) seedbed fertilisers in combination with foliar fertilisers provided yields equal to, or greater than, the yield from the Farm Standard (conventional) approach.

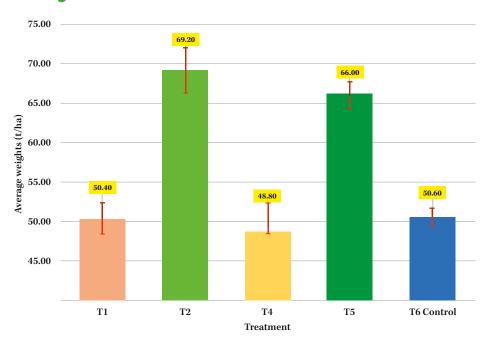
Thirdly, it can be concluded that the substitution of MMX at planting has resulted in a significant increase in overall yield of 33.46% between the groups.

Fourthly, the Cornish trial results supported the previous independent trial work carried out by the University of Bangor over several years, which has shown that the development formulation ODX is both an active biostimulant and a highly active disease resistance elicitor.

Finally, in this trial, two treatments did not receive the standard blight spray fungicidal programme, but ODX only at each "blight spray interval". Despite not receiving any blight spray the crops remained blight-free throughout the season. The variety (Jazzy) is prone to Late Blight and 2023 was a high blight pressure year.

Over the next two trial seasons, the findings of this season's trials will be further tested in multiple locations. Currently the initial results indicate that it is possible to produce a viable commercial crop with fewer inputs.

#### **Average Treatment Yields**



#### **Trial results**

Treatment	Average Dig Weights	Average Count >30mm	Average Count >30mm
T1	2.44 kg	40	30
T2	3.34 kg	44	16
T4	2.60 kg	35	21
Т5	3.38 kg	51	15
T6 Control	2.58 kg	36	17



# Fajah makes its debut

New variety with large tubers unveiled at annual variety show, while qualities of two young, innovative varieties are also spotlighted.



Fajah, bred by Renze Rispens, is a strong variety with large tubers

"The battle for acreage has begun... that is why we have decided to specialise even more in seed potatoes."

Jan van Hoogen

NEW variety, Fajah, was unveiled and two existing varieties spotlighted at the annual Variety and Seedling Show at Agrico Research recently.

The Dutch breeder and grower, which supplies seed potatoes and table potatoes to the UK and other international markets, celebrated its 50th anniversary in 2023. This year's event in Bant was dedicated to its 50th anniversary.

Various activities were organised throughout the past year for members, growers and employees to celebrate Agrico's 50th anniversary and the anniversary was also the focus of this year's show.

The spotlight varieties, Jacky and Lugano, were presented to visitors who were also given an opportunity to explore the breeder's potato 'walk of fame'. It was also the last variety show for outgoing Chairman, Jan van Hoogen, who is to be succeeded by Mark Zuidhof.

Jan stressed the importance of developing, growing and marketing sustainable seed potatoes and table potatoes suitable for climates and markets throughout the world.

"The battle for acreage has begun and therefore we as Agrico will have to protect our position. That is why we have decided to specialise even more in seed potatoes," he said.

The new introduction to the Dutch Variety
List, Fajah, was bred by
Renze Rispens. Fajah is a strong variety with large tubers and a relatively high dry matter content.
It is an early maturing crop with yellow skin, good heat tolerance, virus resistance and a high yield, visitors were told.

Every year Agrico also selects a number of varieties that warrant extra attention. These spotlight varieties are young, innovative varieties, that are currently taking the market by storm. Jacky and Lugano were chosen for different qualities.

Jacky is seen as a promising small size ware variety.

Jacky is seen as a promising small size ware variety, with very high tuber numbers per plant. The variety is perfect for the ware potato segment and the chilled market, visitors were told. Lugano has large tubers and good processing qualities. As well as very broad nematode resistance, it stores well. This makes Lugano very successful in the French fries industry and the traditional markets.







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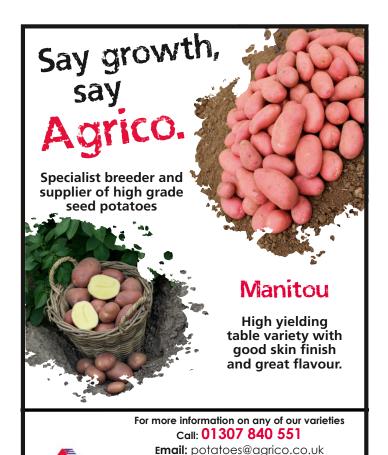


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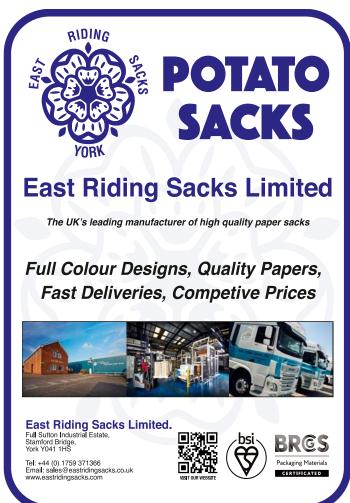


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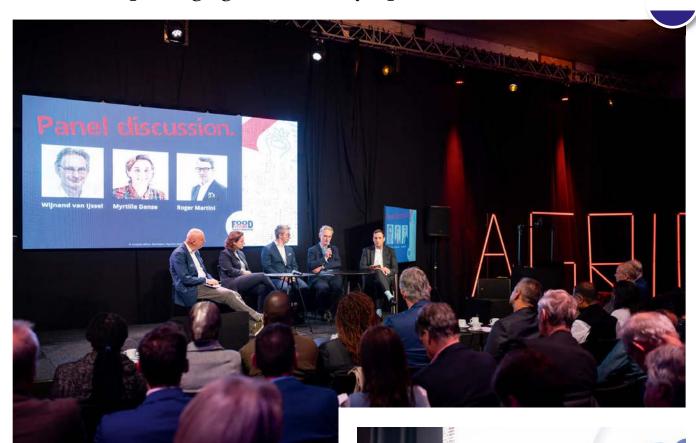


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### Breeder helps stage global food symposium



POTATO breeder Agrico joined forces with SeedNL, an organisation that aims to improve farmer access to quality seed for potato and other vegetable crops, to hold an international symposium looking into food security issues worldwide recently.

During the symposium, entitled Food Systems Transformation, experts advocated for a more strategic and long-term vision on providing food security and the need for transformation of current food systems.

It examined the development of the entire value chain up to consumer demand, appropriate to local conditions, including sustainable production, storage facilities, processing, market development and distribution, innovations, investments and the cooperation of multiple and diverse stakeholders.

The focus was on what is needed locally and having a good understanding of the market.

Founder of HCSS, Rob de Wijk, spoke, among other things, about how everyone can benefit from food as a strategic asset and what policy shifts are needed to do so. "Elections are coming up. I have read all the party manifestos and in almost all of them there is no attention to the geopolitical dimension of food, while it is of enormous importance and a very complex matter," he said.

Bart de Steenhuijsen Piters, from Wageningen University, spoke about what is involved in building a sustainable food system.

Kenya's ambassador to the Netherlands Ms M Shava argued that the transformation of the African food system and the strategic value of food cannot be separated from the broader context. "The money needed to transform African food systems is not going fairly to Africa. Value is not being added at the place of production (Africa). The trade laws force us to add the value on the Western



side of the world. That is one of the critical factors affecting food systems," she said.

After the speakers, the panel discussion with Wijnand van IJssel (Senior Advisor Food Security at Ministry of Foreign Affairs), Myrtille Danse (head of corporate engagement & partnerships at Solidaridad) and Roger Martini (Policy analyst in agriculture at OECD) discussed what policies are needed to bring change in this. The panel indicated that it is a complex issue and that attention to the urgency is growing. Answers are not simple, but require a long-term vision rather than the short-term focus often seen in elections.



### New branch opens in lead-up to major milestone



IN the year leading up to its 175th anniversary, field machinery manufacturer AVR has opened a new branch in German, which signifies a significant expansion of the company.

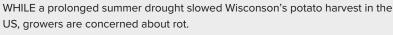
This new subsidiary will serve as a strategic base of operations for AVR enabling it to provide up-close and prompt assistance to its German customers and dealers.

Managing Director Stefan Top said: "Germany is one of the most important potato producing countries in Europe and is therefore an extremely important market for AVR.

"To serve our German customers even better, there was a need to expand and further establish our presence in Germany. To enhance this presence even more, we decided to set up a separate support centre for the German market."



### Education on sustainable practice







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.







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#### Late blight fungicide resistance management update at BP2023

OPULATION monitoring revealed little change in the British late blight population during 2023, but the threat from resistant strains in Europe is still looming large and will require the use of robust anti-resistance fungicide strategies, growers have been warned.

In June, potato growers and agronomists were informed that the vital Fight Against Blight (FAB) service, which monitors late blight genotypes and shifts in fungicide sensitivity, would continue after securing industry sponsorship.

FAB Project Leader David Cooke presented the latest annual results at the British Potato Event in Harrogate on the stands of Platinum sponsors Certis Belchim and UPL in November.

He reported that there had been no significant population changes in GB during 2023, with 36\_A2 (51%) and 6\_A1 (34%) still dominating the 830 genotypes isolated from 1,500 samples sent to FAB at the James Hutton Institute in Dundee.

Further good news for British growers is that the genotype EU\_43\_A1, which is insensitive to CAA-inhibitor fungicides like mandipropamid, has still not shown up in FAB sampling.

Sensitivity testing of the main GB genotypes against five key fungicide actives (ametoctradin, amisulbrom, oxathiapiprolin, propamocarb and zoxamide) is led by JHI's Alison Lees and she found no efficacy concerns this year. However, preliminary information from Euroblight shows EU\_43\_AI's presence is increasing on the continent, accompanied by difficulties in controlling it.

Corteva has also confirmed resistance to oxathiapiprolin, contained in products like Zorvec Enicade, in some parts of northern continental Europe, including the



James Cheesman, Technical Manager at Certis Belchim



David Cooke, FAB Project Leader.

Netherlands, Belgium and northeast Germany. Confirmation of a single finding of EU\_43\_A1 in a sample taken at Teagasc's research station at Carlow, Ireland, further fuels concern about this genotype's continued spread across Europe.

It will make planning fungicide strategy much more complicated in the future.

"Control programmes here in GB will need much more careful consideration for 2024," David said.

Technical Manager at Certis Belchim, James Cheesman, said the news across the channel means GB growers must use all modes of action available when constructing balanced programmes.

These fungicide groups should be mixed and alternated as much as possible, and incorporating multisite inhibitor mancozeb will also be important.

He added that the use of fluazinam, in products like Shirlan, declined slightly following the discovery of insensitive genotype 37\_A2, but it failed to establish widely. Fluazinam remains effective against dominant GB genotypes, and against the threat of EU\_43\_A1 if it establishes itself next season.

"That makes products like Shirlan an ideal partner for groups affected by resistance, like CAA-inhibitors, which should continue to have a place in programmes," he said.

"Resistance management remains key, so when using Ranman Top (cyazofamid), the product for the control of tuber blight, growers should always mix it with an alternative mode of action

He said Cymoxanil and propamocarb are good partner options, either alone or in combination, depending on blight pressure.

"Both actives will help protect the long-term efficacy of cyazofamid," said James.

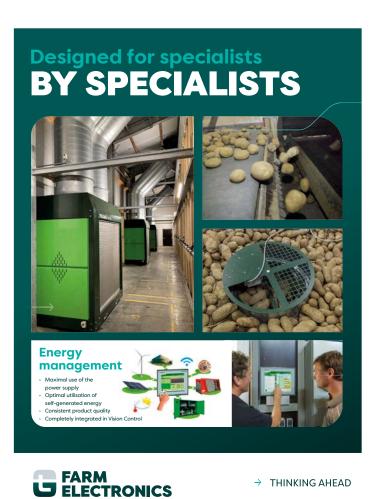














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# 

2023 was a challenging and memorable year, with many unpredictable events and challenges. Potato Review asked five panellists from different sectors of the potato industry to look into their crystal balls and predict what 2024 has in store for us...



#### **MARCUS PALMER**

Marcus is a grower with more than 260 acres in South Lincolnshire, and since 2005, the UK distributor of Algifol, a seaweedbased biostimulant for potato crops.



#### NICK CESARE

Nick is Managing Director of PACE Mechanical Handling. He has been working in agriculture for more than 40 years.



#### ADAM JOHNSON

Adam is Group Marketing Manager for agricultural machinery manufacturer GRIMME UK.



#### **DUANE HILL**

Duane is Managing Director of Haith Group, a supplier of vegetable handling systems.



#### **LUKE MURPHY**

Luke is Director of GIC, a manufacturer of vertical form fill and seal packaging machines for potato packers.







# What, if any, climate changes do you foresee?

Marcus: I am a bit sceptical about climate change. It could just be the way weather patterns and cycles go. We've had these extremes in the past. I listen to my father, who's 88, and we've had these sorts of extremes more than once in the past. We've seen sales of Algifol increase at times of climate stress, and we know that using Algifol reduces the effects of climate stress. I see all biostimulants becoming a mainstream product going forward.

**Nick:** I predict that the climate will get more erratic, and we will have a lot more extremely high temperatures, which will present a lot of challenges for us to deal with.

Adam: GRIMME will be focusing on how it can reduce its impact on the climate in 2024. The main part of this will be coming from the Potato Light project. This government-backed project aims to reduce the amount of carbon released when planting crops like potatoes. Over the next four years, we aim to help develop innovative solutions to reach these ambitious goals and hopefully have a significant impact on the climate because of this.

**Duane:** I think we will have a recordbreaking summer in terms of temperature. I think we will have the hottest summer ever, and I'm hoping that next year's autumn will be significantly drier than this year's. Potato growers certainly need a break from the weather!

**Luke:** We can only expect more unpredictable weather with the increasing effect of climate change.

## What's your business outlook for the next 12 months?

Marcus: People are becoming more aware of biostimulants, natural products, and stress-busting products, and we want this to continue. I think we will see more of the larger growers turning to biostimulants, and I think we will see an increase in the number of large, 1,000-litre containers sold in 2024. We want to make people more aware of Algifol, and we're making progress. that was evident at British Potato, with several people coming onto our stand saying they'd heard of us or read about us.

Nick: By the end of the year, we will have reduced our carbon footprint considerably, by fitting solar panels to our factory and making the move to electric cars. 2024 will be the year in which we update the design of our automatic sack presenters for use with open-mouth sacks. I think our business will

continue to grow, and we will go into 2025 with more design engineers and three new apprentices working for the business. I think we will also have a dealer network established in the United States by the end of this year.

**Adam:** GRIMME plans to extensively demonstrate its award-winning GB-430 belt planter with sliding axle in 2024. We will also be having a big focus on Potato Days UK in September where growers should be able to see the latest products from GRIMME, including some new innovative features.

**Duane:** We will realise our plans for expanding our production facilities as we need more space to meet increasing demand. We will also be recruiting new talented people, including a supply chain manager. Our new products from 2023 - the ProDry, QuantaFill and Rota-Tip PRO - will be in full-scale production and sold to customers around the world, including some new countries, such as India. We will also be launching other new and exciting innovations.

Luke: After the turbulence of the last few years, with COVID, Ukraine, and the cost-of-living crisis leading to inflationary pressure and supply chain issues, particularly in electronic componentry, a period of stability will be welcome. We are looking to review the manufacture of our equipment and streamline the production process to reduce lead times. We are also taking a critical look at our designs to ensure we offer the best product at the most competitive pricing we can. With my business partner Andy Beal and I becoming longer in the tooth, we will further invest in the upcoming younger talent we have in the business to make it fit for the future.

### What issues is the potato industry likely to face?

**Marcus:** Production and input costs are rising fast and will continue to do so in 2024. I think the focus on return on investment from a grower's perspective will be a crucial issue for suppliers to overcome in the year ahead. All suppliers are going to have to justify the use of their products.

There will likely be more legislation that will affect what types of chemicals can be used, and this will present challenges for growers of all sizes. Producers will be under more pressure this year from product developers and consumers who are increasingly concerned about what has been used in the growing process regarding pesticides and fertilisers.

The potato industry will also have to look at sustainability in 2025. The cost of machinery, fuel, utilities, chemicals, and treatments are all

increasing, and the investment needed to grow potatoes is rising rapidly, which could mean smaller growers cannot afford to continue. 2024 could be the year in which lots of smaller growers could leave the industry, and having just a few massive players left will not be ideal.

**Nick:** The issues we faced in 2023 will continue in 2024 and beyond, namely a lack of skilled workers, more vacancies than jobseekers and the ongoing after-effects of Brexit.

**Adam:** (declined to comment)

**Duane:** I think there will be further consolidation in the supply chains of major supermarkets. This happened in 2023 with potatoes, and I think it will spread to other fresh produce. I want to believe that margins throughout the supply chain will even across the fresh produce production process.

Luke: Last year's challenge was the shortage of parts experienced during and post-COVID, which thankfully appears to be nearing an end. The challenge for 2024 will be skills. As employers, we still find hiring experienced engineers of the right calibre challenging. Good engineers between 35 and 55 are a rare breed, reflecting the manufacturing landscape that existed when they were young men embarking on a career. Therefore, companies like ours use apprentices extensively to fill the gap and learn the skills from the older guys nearing retirement. I hope 2024 will be the year in which more incentives are offered to employers to encourage them to hire and train apprentices. We are grateful for the new legislation allowing the super deduction of P&M expenditure against corporation tax.

# What will the political outlook be?

Marcus: There's a lot of despondency out there at the moment. I think we will see a change in Government, but whether they can do any better than the current Government remains to be seen.

**Nick:** The general election will result in a hung parliament.

Adam: (declined to comment)

**Duane:** The general election will lead to a change of Government, with labour getting into power. I hope we will see whoever gets into office increase the support for both British manufacturing and food production.

**Luke:** I struggle to listen to Radio 4 anymore as it is depressing. Parties of all colours →

#### **NEW YEAR PREDICTIONS**

seem to just constantly blame each other's incompetence, when whichever party was in Government would have one heck of a job pulling the UK out of the crisis that has occurred owing to many factors beyond their control, such as COVID and Ukraine and the consequential energy crisis.

Most people want a sensible, positive, and honest environment where politicians can say it as it is without being pulled up for being insensitive or politically incorrect. However, I can't see this happening anytime soon and predict a Labour Government at the next election, which then becomes increasingly unpopular as it fails to meet the needs and aspirations of the public owing to the very same financial pressures that restrict the current regime. You can't make a silk purse out of a sow's ear is the polite metaphor!

### What personal goals are you setting for 2024?

**Marcus:** I want to travel more next year and spend more time with family.

Nick: (declined to comment)

**Adam:** My personal ambition is to climb the national three peaks within 24 hours, something that's been on the cards for a while now

**Duane:** I will make more time to read. I like to read about business strategy, mindset and personal development in particular. I also want to make more time for my family.

**Luke:** I don't set personal ambitions. I am very content and just wish to continue this way.

# What are your sport predictions or aspirations?

Marcus: (declined to comment)

**Nick:** My passion is football, and I can see Ipswich Town being promoted to the Premiership. Arsenal will win the Premiership, and Sheffield United will be relegated.

**Adam:** GRIMME is proud to support Beverley Braves under 11's rugby team in 2024, and we hope to see them victorious at the end of the season.

**Duane:** England will win the Six Nations. They were excellent in the World Cup and will go one step further in 2024.

**Luke:** I want to see Leeds United promoted so they can join next year's Premier League relegation battle!

# What technological advancements are in the pipeline?

Marcus: I think next year will see the use of technology expand. We will see drones used to help with spraying and where to spray. I think satellite imagery will assist with spot treatments, helping growers apply chemicals only where needed, reducing costs, and helping the environment.

Nick: (declined to comment)

**Adam:** In 2024, GRIMME aims to release several more technology innovations at its in-house exhibition GRIMME Technica in November. These innovations will focus on making growers more efficient by maximising machinery output.

**Duane:** 2024 will be the year in which vehicle manufacturers move to hydrogen as a way to power cars, lorries, and tractors. I saw this at AgriTechnica, and more companies will follow Kohler, New Holland and JCB in looking at alternative fuels for vehicles. I think the number of cyber attacks on companies and people will increase, and AI will be part of this problem, with scammers using this rapidly-developing technology in more sophisticated scams. In line with this, we will see more businesses investing large amounts of money in the cyber economy.

**Luke:** Artificial Intelligence has only been with us a year but already looks to be the dawn of a new and potentially-frightening world. I'm predicting legislation being drafted to regulate this new technology.

#### How will the economy fare?

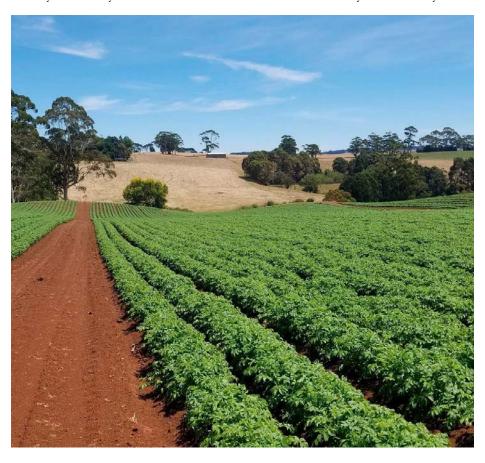
**Marcus:** I like to judge things with my eyes. Everywhere I go, I tend to see people spending money. I'm not sure we can believe everything we read, and we will see the economy grow in 2025.

**Nick:** I think we will see inflation come down, but the labour shortages will mean the UK's economy will remain steady throughout 2024.

**Adam:** Reduced planted acreage, a cool, wet spring, and an extremely wet harvest pushed potato prices up in 2023. We expect prices to rise further for crops that store well in 2024, which will affect capital investments for growers in 2024.

**Duane:** I don't see interest rates coming down in 2024. I also predict that the increase in the national minimum wage will mean some companies will have to carefully consider whether they employ more people or look to automate more, especially as there is already a shortage of people wanting to work in agriculture.

**Luke:** The economy will be flat, but inflation will fall back to 2.5% by the end of the year.









## Grower cousins launch digital platform

launched a digital platform which aims to provide growers with visibility on operations.

James and John Fairlie, cousins and neighbouring farmers from Angus, decided to create the bespoke platform to automate manual administrative tasks such as reviewing timesheets and processing payroll and invoicing, while providing real-time operational data and analytics.

WO potato-growing cousins have

James was UK Young Farmer of the Year 2017 and runs Fairlie Farming Co, a ware potato and cereals business together with a commercial scale biogas plant while John runs Balmirmer Farms' ware potato, cereals, and beef cattle enterprises. Before returning to the family farm, John qualified as a chartered accountant, following which he spent eight years in corporate finance roles.

Their combined expertise and experience of the challenges facing the potato industry, which is still predominantly operating analogue systems, prompted them to come up with the app which can be used by farm workers and managers.

Yokit provides on-the-go smartphone app-based worklog functions that enables everyone, from family-staffed farming businesses to multi-site operators to easily, digitally record key information on the go including recording hours worked, yields and diesel used.

James said: "Running a busy farm day-to-day, while also having a detailed understanding of where immediate improvements can be extremely challenging, especially when essential information can only be collated from various sources, often well behind the point it could be impactful."

The cousins have spent two years developing the app from when they first came up with the idea after facing significant postharvest month end paperwork piles.

"We want to make daily admin tasks easier for everyone in farming and so we designed Yokit to be incredibly simple for all users at all levels," said James.

The interface also gives farmers visibility on operations, with real-time access to information that can be easily analysed to drive decision making.

Kyle Kennedy, a computer science Master's graduate who has developed high profile projects, such as protecting London from airborne threats during the Olympic games, is collaborating with the cousins and is Yokit's Technology Lead.

James Fairlie said phase two of Yokit is already under way. →



# New forecasting features create data synergy



ENCROP has launched three new features which are claimed to provide more precise and reliable forecasting up to six days ahead.

The forecast comparator pulls forecast data from all the main weather models that inform UK, regional, and local forecasts, including HRMN5, operated by the Met Office, into a single, easy-to-read graph. The user can compare all the forecast models by meteorological measurement including rainfall, temperature, humidity, and wind speed.

The model ranking feature ranks all the forecasting models in order of reliability for each type of meteorological measurement. As it is based on Sencrop weather station data, the ranking is specific to each user and changes depending on location and time of year.

The third feature is tailored forecasting. This means users can generate a tailored and

evolving forecast for the chosen location using both the main weather models and their own and surrounding Sencrop weather stations. Essentially, this creates a 'new model' which continually evolves as weather stations record data for the location.

The three new features, developed by the company's in-house team of researchers, engineers, data scientists, and software specialists, have been created in response to an identified need.

Sencrop's UK B2B Manager Mark Herriman said: "Weather forecasts are used to plan farm work and help producers to anticipate weather and disease risks which informs their application of plant protection products and irrigation.

"It's not uncommon for farmers to consult three or four different weather forecasts, which are all on different websites or phone apps, and that makes the difficult and often inaccurate interpretations, even more difficult.

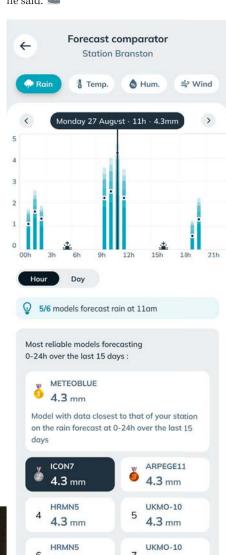
"We speak daily with farmers across the 31 countries we now operate in, to understand their day-to-day needs and challenges, and those discussions have highlighted that forecast accuracy and reliability is a massive hurdle in being able to anticipate and plan."

Mark said the new features create a synergy between different data streams, comparing information from field monitoring with forecasts from established weather models. More than 60 million weather data points are received every day.

"What's really important is that this information is accessible and easy to interpret, with farmers able to use their smartphones to access ultra-precise, ultra-local weather

information like temperature, humidity, wind speed, and cumulative rainfall on their sites, with the ability to generate information and forecasts that can better inform them.

"We are working with some of the UK's leading agronomy consultants to enhance access to data and its interpretation," he said.









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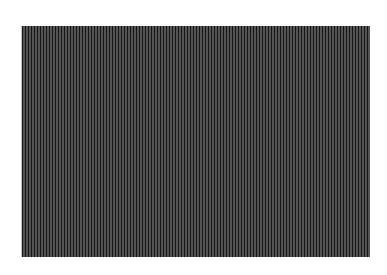
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# Sorting/grading manufacturer receives recognition

TOMRA, which develops post-harvest sorting and grading machinery for the potato industry, has received an International FoodTec Award.

Its machinery was recognised for using artificial intelligence and cloud technology to improve food safety, quality, and traceability while increasing process efficiency.

Presented by the German Agricultural Society, DLG, the awards honour developments in innovation, sustainability, and efficiency in the food technology sector.

TOMRA's solutions use pre-trained models to teach computers how to process data, such as complex patterns in photos. In combination with different sensor technologies, these images of foreign material captured by TOMRA sorters are analysed by a deep learning model and help to constantly improve the solution by continuously retraining the model.

TOMRA's Foreign Material Identification solution is integrated with the cloud-based data platform TOMRA Insight which automatically extracts data from sorting machines to provide real-time and retrospective insights into raw materials and machine performance.

# Parts and user manuals in online facility

HANDLING equipment manufacturer, Tong Engineering, has announced the launched a new website with updated features to showcase its range of equipment for grading, cleaning, washing, tipping, filling, processing, optical sorting and more.

Marketing Manager Carole Metcalfe said it provides customers with an improved interface that reflects how users view things online. "As such, the new website presents more equipment detail, imagery and videos that truly demonstrate the capabilities of Tong equipment," she said.

The new design and structure make browsing natural and easy, ensuring visitors can quickly and comfortably

find what they are looking for and make an informed decision when looking for potato handling equipment, she added.

The new site links
through to the company's
online user-manual store,
TongHUB, where customers
can view user-manuals and
spare parts for their equipment.



# New version rotary tiller launched

STANDEN Engineering Ltd has launched a new version of its POWAVATOR model.

The new model, the POWAVATOR HS400 rotary tiller will be available in 2024. It is available in two-bed straddle and triple-bed options, giving growers the ability to create a two or three-bed machine which is designed and engineered to suit their precise requirements and soil type. The 400/140 two bed folding model is still available but without the HS400 upgrade.

The HS400, which has seen three seasons of field testing, has narrower side drives, minimising soil disturbance, and making them simpler to maintain

The deeper hull design with a larger distance between the top of the rotor and the hull, gives reduced time wear of approximately 50% and fuel consumption of around 25% and has a lower power requirement.

The new main gearbox design is rated to 400hp and above and it has a faster rotor speed of 330rpm from 266rpm.

There is an optional wider point for convex body, or square body option, giving a wider furrow bottom to accept large quantities of stone and the machine is available with Shearbolt or Auto-Reset legs and a rear hood option for planting systems that don't require a destoner.

The new HS400 model's improved capability also extends to the POWAVATOR HS400 Bed Tiller, which combines the effectiveness of the rotary tiller with the bed forming capability of the Standen BX Bedformer series.

Within each range there is the choice of a number of different working widths from 1.8m up to 6.0m, to suit 72" / 1.8m wheelings and 80" / 2.0m wheelings as well as different bed forming body/rear wheel configurations.

Manual or Hydraulic parallel linkages attach the body to the mainframe or a KW linkage arrangement is available which allows angle adjustment of the body instead.

Standen is offering on-farm demonstrations of the new HS400 models.





# Three-bed folding haulm topper introduction



GRIMME UK is to introduce a new Germanmade three-bed folding haulm topper in time for 2024's potato harvest.

The Toppa 600 is the first-ever folding haulm topper to be built in Germany with two, two-row toppers at the rear and a two-row topper at the front to span six rows in total.

Designed for the UK's 90cm rows, the Toppa 600 offers hydraulic depth control, a floating frame so that the chassis follows the contours of the row, and a specially designed blade configuration which chops and blows the cut haulm into the bottom of the row placing it well out of the way from the lifting process.

With the ability to lift the left or right arm for transportation and single-sided haulm topping, the Toppa 600 has an incredibly low power consumption, needing just a 140hp tractor, significantly reducing soil compaction.

GRIMME is also offering optional automatic row-finding feeler arms that run in the rows, sensing its sides and moving the cutting blades left and right to keep them central, thereby eliminating scalping.

A pre-production model tested by J Haig Hamilton & Sons in East Lothian, Scotland, was displayed at British Potato 2023. As the Toppa 600 will be available with 0% finance and a five-year warranty, GRIMME UK's potato specialist, Ed Hodson, expects 2024's stock of the Toppa 600 to sell quickly.

"Our UK range of haulm toppers have always been a popular choice and have performed exceptionally well, but by having our German factory oversee production, we are now better placed to take advantage of the incredible amount of research and development that is undertaken in Damme," said Ed. "We have several pre-production Toppa 600s for order, and as this particular model offers several unique features, we expect them to sell quickly as growers seek the ideal combination of features, performance and price. GRIMME has also taken into account the pressures currently faced by growers and is offering the Toppa 600 with interest-free payment options.

"The Toppa 600 took pride of place at the British Potato Show in November, and everyone who saw it was impressed with what it has to offer."

The Toppa 600 will be joined by two other models later in the year: The Toppa 400 with four-row capability and the eight-row Toppa 800.

To find out more about the Toppa 600, visit **www.grimme.co.uk**, email **sales@grimme.co.uk** or call 01205 822300.

# New self-propelled sieving harvesters make their appearance

DEWULF is unveiling a redesign of its flagship Enduro this month - just over three years since it was initially introduced to the general public.

The latest generation of the four-row self-propelled sieving harvester on tyres features a new ring elevator, which the manufacturer says has significantly increased the processing capacity. The combination of larger bag volume, higher running speed and better product distribution have boosted the capacity by around 50%. The construction of the ring elevator has also been simplified.

The Enduro will now be available in a 4 x 90 cm configuration to meet growing market demand in globally.

Dewulf offers two engine options on the second-generation harvester. In addition

to Scania's well-known 450 hp engine, a heavier-duty 550 hp version will now also be available. This is intended to meet the needs of users who require extra power, such as those who work in hilly conditions and at higher harvesting speeds.

There is also an optional telescopic wheel axle on the  $4 \times 75$  cm version.

The new design features fewer guards, mainly for improved accessibility, while the main frame is now sturdier and stiffer. The (larger) anthracite-coloured fuel tank also provides a more balanced overall look of the machine.

The aspects that were praised on the first-generation Enduro have remained

unchanged, such as the continuously adjustable inclination angle (from 0 and 12°) on the available cleaning modules.

For a harvester on tyres, the Enduro boasts excellent traction.

The first units of the second-generation Enduro are rolling off the production line and will be seen in the field and on the roads during the 2024 harvest season.



### David joins Tong team



VEGETABLE handling equipment manufacturer, Tong Engineering, has appointed David Wilson as its new Sales Manager.

David joins Tong with more than 33 years of industry experience, which originally started at G&J Peck Ltd in Ely, initially in parts, then as Area Sales Representative selling agricultural equipment to the local farming community. In 1999, David joined Standen Engineering Ltd as UK Sales Manager, where he progressed to Sales Director. Later, David worked at Cheffins Auctioneers, in the root crop side of the business, as an Associate and regular Auctioneer.

Sales Director at Tong Engineering Charlie Rich said: "We have known David for many years, and his deep understanding of the ongoing needs of the vegetable handling industry makes him the perfect addition to our team."

David joins Tong Engineering at a crucial juncture as the company embarks on a progressive path of growth, with the recent acquisition of Terry Johnson Ltd, manufacturer of the Swift Lift range of conveyors and elevators.

# General Manager for protein extraction facility

NATIONAL potato supplier Branston has appointed a new General Manager for its protein extraction facility, in preparation for full scale production and commercialisation of potato protein in early 2024.

Bringing with him several years' experience in the food industry, Tom Seagrief has returned to Branston, having joined the team on its graduate programme over a decade ago. After placements in technical and finance, Tom gained experience in operations before being promoted to managerial roles within Branston's site services and raw materials departments.

He has also worked as a space planning officer at the University of Lincoln and in further managerial roles in production and operations at wholegrain food brand, Jordans Dorset Ryvita.

Tom said: "I'm excited to be re-joining Branston to take on the challenge of leading the new Protein extraction facility and bringing our UK grown and processed potato protein to market. I'm hungry to keep developing and progressing in my career, and Branston has enabled me to do that through its aspirational culture and mission to continually innovate."

The appointment follows Branston's multi million investment into its protein factory, which is the first-of-its-kind in the UK, in partnership with RootExtracts Ltd. The team began working on the most effective way to extract protein from potatoes in 2013, starting

from a lab-based level and gradually scaling up to a commercially-viable operation.

Tom will be working with a skilled team to optimise technologies within the factory, convert large volumes of the low value byproduct into a functional protein.

Branston's Managing Director Jim Windle said: "We're delighted to welcome Tom back to Branston to head up our protein factory at this exciting time. His production knowledge and experience with high care food factory environments will be invaluable. Tom has already fully embraced our ongoing mission to utilise all of the crops we handle, and to get the best quality, and most sustainable return for the end to end supply chain from every single tuber."

The potato protein product is set to offer a highly nutritious and natural ingredient for the food manufacturing industry, with technical applications stemming from binding, gelatinisation and emulsification properties at its core. It can be used across a number of food types including baking products, plant-based meat alternatives, the deli sector and much more

Tom added: "With the official factory opening due in early 2024, we're focusing on recruitment to expand our highly skilled team. We're also testing and optimising the final product, now in its pre-production phase, and working closely with potential customers to ensure we're ready to gear up for full production."









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