

fresh produce

Fresh ideas for produce adds value to the sector

European organisation Freshfel is trying to combat public opinion that fresh produce is too expensive while machinery suppliers are doing their best to reduce packing costs. *Machinery Update* looks at some of the latest developments

Freshfel Europe, the European Fresh Fruit and Vegetables Association says the fruit and vegetables sector in Europe handles more than 100 million tonnes on a yearly basis with a total production value worth more than 50 billion euros. But, it says, it is important for the sector to increase its visibility as well as communicate the benefits that fresh fruit and vegetables provide to consumers.

Freshfel has just launched a campaign which includes putting the record straight about fresh produce and its perception by consumers. Indeed, several consumer surveys reveal that fruit and vegetables are considered by many consumers as too expensive. And consumption is at best stagnating at levels well below the World Health Organisation recommendation of 400g per day in many Member States.

In the UK, the Fresh Produce Consortium (FPC) says increased consumption of fresh produce and its sustainable production are vital to meet the challenges of global food security. Indeed, FPC was involved in the Government's fruit and vegetable task force which identified last year a strategy to increase consumption and UK production of fresh produce.

In a tough economy where consumers are being squeezed by price increases across the board, it is important that cost savings are realised by fresh produce packers installing any new equipment.



The LVA system handles random length products such as leeks and celery

One company that is saving packaging materials for customers, and therefore costs, for its customers is PFM Packaging Machinery (www.pfmuk.com). An infeed system that allows tomatoes and other round fruit or vegetables to be packed without a supporting base tray – saving up to half the weight of packaging material – has been developed for the established Falcon flow wrapper.

Capable of speeds up to 80 packs a minute, the Falcon can be changed over quickly between a variety of formats, from single items to 2 x 3 collations. Using a brush conveyor is a key element in providing positive handling for product that is fragile and may differ in height.

Further infeeds include the LVA system fitted to the company's Shamal inverted flow wrapper to handle random length product such as leeks and celery by automatically adjusting pack length to suit the product.

At salad processor Kanes Foods, the ready to eat salads business is joined by stir fry vegetables, beansprouts, coleslaw and fresh noodles. It was for the fresh noodles that a second multihead weigher from Multipond (www.multipond.com) was purchased to replace a competitor's weighing system to optimise the noodle packaging process. The 20-head weigher is the MP 20-3800/2500-H, and, "the weighers are one of the most reliable machines according to our records in the factory," says Mark Harris, general manager at Kanes.



BerryWorld has selected Proseal as its supplier of choice for heat sealing equipment

A programme of investment at the site has seen all multihead weighers in the existing salad packing operation be replaced with Multipond units with the most recent incorporating two of the MP 20 units. Caesar Salad is packed with dressing and the cheese and crouton bags added into dedicated heads on the weigher ensuring the correct number of sachets are in each pack with zero complaints.

Soft fruit marketing company BerryWorld has, to date, installed twelve Proseal (www.prosealuk.com) GT1 and GT2 machines across its grower base throughout the UK. Heat sealing fruit punnets, as



The PFM Falcon flow wrapper can pack tomatoes without a base tray, thus saving materials

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opposed to clip on lids, is helping growers reduce packaging weight by 30%.

“The simplicity of the machines is their greatest strength,” says BerryWorld’s supply chain manager Wickus Olivier. “They are robust and reliable, easy to operate and deliver the high speeds that we require, averaging 70 punnets a minute while the GT2 is capable of achieving up to 95 or 100 when necessary.

“Equally important, both the GT1 and GT2 have the smallest footprint of all the models we tested and this is a critical benefit for many of our growers, whose pack houses were not designed for large pieces of equipment,” he says.

UPM Conveyors (www.upmconveyors.co.uk) has automated the transfer of cherry tomatoes from an Ilapak Vegatronic 500 bagger to the checkweigher/labeller/packing area at a rate of 70 packs a minute at Thanet Earth. The company boasts the largest greenhouse complex in the UK with enough glass to cover 80 football pitches for growing tomatoes, peppers and cucumbers. Also, UPM has improved the



Multipond has installed multihead weighers at salad processors Kanes Foods

efficiency of the potato handling system at the Tamworth site of The Cooperative Farms. Existing conveyors have been modified to incorporate two 180deg bends supplied by UPM.

Other developments in the sector include industrial inverter drives from Mitsubishi Electric (www.mitsubishi-automation.co.uk) helping to bring cold-stored fresh produce gently back to ambient temperature to ensure perfect condition for sale. The basic concept Crop Systems has developed is a 14-bay batch warming facility. Potatoes are

transferred from storage to a bay, where a controller is set to provide gradual warming to a set point temperature over a specified period of time. The target temperature varies between 4deg C and 10.5deg C, and the time is typically 3-5 days.

Another system developed recently is from Cama (www.camagroup.com), where cups containing sweet corn are sleeved in a single or double layer, collated into a pocket conveyor, picked up by a 2-axis robot and loaded into a wraparound case at up to 200 packs a minute.

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GAP is recognised in produce safety

The Chilled Food Association's (CFA) Micro Guidance for Growers stresses the importance of Good Agricultural Practice (GAP) as a key element to ensure produce safety and this principle has recently been recognised in Europe.

Aimed at suppliers and growers of fresh, frozen and dehydrated produce, both organic and conventional, the primary aim of the Guidance is to help minimise food safety risks through hygienic growing, handling and preparation conditions. By focusing on risk assessment and HACCP in the field, the document provides clear guidance, particularly in relation to produce that is to be minimally processed and eaten without being cooked.

The European Food Safety Authority (EFSA) and the European Centre for Disease Prevention & Control (ECDC) published its annual compilation of data on zoonoses and foodborne outbreaks for 2008.

The report recognises the importance of GAP in ensuring produce safety.

All year round veg

Sutton Bridge Crop Storage Research Centre is set to become the leading European facility of its kind following the opening of six controlled environment stores based on technology more often found in high tech manufacturing and production plants.

Built in just 20 weeks at a cost of £600,000 by specialist company Crop Systems in nearby North Walsham, Norfolk, the stores use Mitsubishi electric controllers and fan drives to control the temperature, humidity and CO2 content in each store.

01707 276100

www.mitsubishielectric.co.uk

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Robotic onion packers reduce labour needs

G's Fresh Vegetables has reduced labour requirements by half and increased safety for its operators by implementing robotic systems into its Ramsey, Peterborough facility.

With Lean principles firmly in place, G's has integrated six Abar robot packing systems at this site which stores, grades, packs and dispatches root crops, primarily onions and garlic, for the G's Growers co-operative. It is a contract pack operation for G's Growers and in a seven day operating week, it grades and packs in excess of 1,000 tonnes of onions.

The company has reviewed its operations in the last four years which has seen it adopt Lean principles and understanding employee engagement to increase efficiency and improve quality. Investment in robot automation began in 2009 with an end of line packing system for loose onions.

Supplied by Abar, the system comprises a de-stacker to place crates onto a conveyor, automated placement of a liner to the crate, conveyors to transport crates to the weigh



End of line packing system for loose onions at G's



Palletising crates of bagged onions at G's

heads and after a re-converging, the crates are checkweighed then baling arms closed and held in a pick up area for collection by a Fanuc Robotics R2000iB. Crates are collected and stacked into piles of three before being palletised.

Phase 2 was installed last year and packs bags of onions into crates and palletises them. Comprising three Abar LR-80B pick and place robot cells and two Fanuc Robotics M-710iC robots, bags of onions enter the LR80B robot cell where they are picked and placed into a crate which, when full, moves to a quality check area. Here, an operator checks the packs are flat in the crates and closes the bale arms before sending the crate off to the Fanuc unit for palletising.

To further help the systems to achieve expectations has been the implementation of Overall Equipment Efficiency as a key measure of Lean. Data is collected from key parts of the production operation as a measure and cause of downtime and the masses of data produced, then helps to identify where improvements can be made to the process.

02476 639669

www.fanucrobotics.co.uk

Meeting fast changeover needs with ease

3663 needed an automated solution to wrap single portions of mainly fruit to a number of its customers including Bupa and other hospitals where the product range and portion size changed on a daily basis making flexibility paramount.

Yorkshire Packaging Systems supplied an SLAU 5050 fully automatic full specification

L sealer coupled with the TR 4590 shrink tunnel along with a powered infeed conveyor to make loading the machine easier. Up to 25 packs a minute can be wrapped with no change parts while changeover settings take only seconds.

01924 441355

www.yps.co.uk

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Potato packing gets automated

An automated bagging line designed and installed by Pacepacker has improved pack presentation, increased throughput and reduced staff required at Baxters High Brow Produce.

The automated line at chip shop potato grower Baxters places, weighs, forms, stitches and palletises up to 4,000 tonnes of potatoes into 25kg sacks in one season. It consists of a C21 sack placer capable of presenting up to 10 open mouth bags a minute to the Total Bag Control (TBC) sack closing system which overcomes the common problems associated with handling notoriously unstable, irregular shape and sized products. "The system consistently creates a perfectly presented pack, which in turn eliminates sack and product waste, and has increased potato throughput by 3 tonnes per hour at the Baxter plant," explains Ian Merchant, sales manager at Pacepacker.



The pre-owned Blu-Robot provides an affordable option for seasonal packers

Completing Baxter's packing line is a Pacepacker pre-owned Blu-Robot. "Manufacturers understand the benefits a palletising robot can provide in terms of fast and accurate stacking," says Merchant, "but new systems are not always economically viable for low production or seasonal companies, hence why we offer a pre-owned solution.

The Blu-Robot is supplied fully checked, tested and repainted, with a 12 month parts warranty together with readily available service and spares back up."

"Pacepacker's pre-owned Blu-Robot

provided us with an affordable robotic palletising solution, which neatly and efficiently stacks the sacks without fault to within 0.5mm of the target point regardless of the height of the stack," says David

Baxter, managing director of Baxters. "We hope to see a return on investment after our third crop of potatoes."

01371 811544

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