

# East Anglian fruit growing business has winning formula

Richard Shepherd-Barron reports

**F**arming at Hill Farm, Boxford, on the Suffolk/Essex border near Colchester, was started in 1938 by the late Devora Peake, FRAg.S MBE and involved many different agricultural enterprises - arable crops, organic farming, fruit production and rearing livestock - but developed, expanded and diversified over the years into top and soft fruit growing and packing, and the well-known Copella Fruit Juices (owned by PepsiCo since 1999) and the Stoke-by-Nayland Hotel and Golf Club with its two 18-hole championship golf courses and associated leisure activities.

A recent addition has been the purchase of 3.5ha of glasshouses for growing soft fruit, 12 miles away near Ardleigh. Today, the total estate is over 380ha and includes 108ha of apples, 40ha of soft fruit, 92ha of arable cropping, woodland and environmental options, and 140ha of golf courses.



An orchard of Gala apples in full bloom.



Gala apples ready for picking.



Carmella Meyer, Robert Rendall, Susanna Rendall and Robert England.

This is still very much a family-run business, now in its third generation with four of Devora's children - Jonathan, Susanna, Tamara and Carmella - plus one grandchild, Robert Rendall, all actively involved in running the business. The Farms Director is Robert England, who has been with Boxford for 10 years.

Previously he was a grower for Waitrose and Tesco, winning the latter's 'Small Grower of the Year' title at one stage. Boxford Farms won the Top Fruit Grower of the Year award in February this year - their first time in the competition. Group Director, Robert Rendall, told the East Anglian Daily Times: "As a team we challenge ourselves to be the best growers that we can be, in a worldwide marketplace. Our Farms Director, Robert England, and our highly motivated and capable team have delivered this and more with their energy, enthusiasm and dedication."

The 200ha farm at Boxford is unique as it grows over 40 different varieties of apples with a balance of

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Young Bibaum apple trees.

modern and traditional orchards - all fitting in with the local environment. Cherries, blueberries, asparagus, strawberries and raspberries are grown in substantial quantities with a sizeable acreage of maize as a rotation crop. The latter is destined for use as feedstock in the new anaerobic digester that has been commissioned recently. Naturally, a small proportion of the farm's apple crop goes to Copella for pressing into juice. The nearby Peake Fruit packhouse deals with the remainder for various major retailers, as well as serving as a contract packer for other growers.

Since 2011, Boxford Farms has planted 50,000 trees using the Bi-baum™ twin-stem system. This is the largest planting in the UK, with 8000 of the trees being traditional varieties such as Cox, Worcester, Discovery, Spartan, Charles Ross and Laxton Superb. The trees are grown on an intensive trellis system to produce heavier, more reliable and cost-effective cropping characteristics, due to the effects of a twin bud graft on the physiology of the tree. This has led to improved planning, quality and yields with reduced inputs and costs. Intensive orchard plantings have also reduced the costs related to labour-intensive operations such as pruning and thinning. One of the key benefits of Bi-baum trees is the even ripening of fruit plus much better light interception, which improves quality both at picking and following storage. A future development planned by Boxford Farms is automated crop prediction and quality monitoring. In 2013 yields for the new trellis orchards reached an average of 50 tonnes/ha, a great improvement on the usual 19 tonnes/ha with the traditional plantings.

Another interesting development at Boxford Farms is the use of BioAg Soil & Seed® biologically-active solid and liquid nutrients across all drip-fed apple crops, with the intention of creating a living, healthy and balanced soil to improve crop health and soil structure. BioAg are market-leaders in Australia for biological farming in agriculture and horticulture and Boxford Farms has worked on this project with BioAg's UK agents Thomson and Joseph Ltd. There have been quantifiable increases in both fungal and bacterial micro-organisms in the soil around the root-zone of the drip-irrigated trees. This has led to less waterlogging, a greatly improved soil structure and the breakdown of elemental minerals into readily available forms, leading to better yields, improved tree health



Above and below: Braeburn apples ready for picking.



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**Wild flowers provide habitats for bees and other pollinating insects.**

and reduced nutrient and agrochemical inputs.

The Autoagronom™ irrigation system from SAP Ltd is used at Boxford Farms. It is claimed that the system gives a 50% saving in water-use, as it automatically controls, measures and takes decisions concerning the exact timing and amount of water and fertigation applied to the crop. Measurements, which include soil conditions, dissolved oxygen and fertiliser concentrations in the irrigation water and the atmosphere, are taken both outside and within the root-zone, with the fertigation then being applied via non-drain, pressure-

compensated irrigation pipes fed by a variable speed pump and highly accurate feeding mechanism. This is all monitored and controlled by a complex software program that 'learns' for the future when given the feedback of the results of these multiple variables. Boxford Farms has already achieved savings of more than 40% in water and fertiliser consumption and has started using waste water from the adjacent Copella factory to irrigate, a virtually unlimited supply of water from an otherwise unused source. Other water supplies on the farm, totalling 180 million litres, are contained in six reservoirs.

Robert England said that Boxford Farms has a policy of looking closely at soil structure and quality and employs mulching with composted prunings and leaf litter. Spent coir from neighbouring farms is used both for mulching and as a growing medium, and manure is brought in to improve soil structure when preparing new orchards. Now that the new anaerobic digester is running, the farm has a ready supply of its own digestate for use as fertiliser. The farm is in the HLS/ELS schemes and there are bee habitat strips along fence lines. The company has fully adopted integrated pest management (IPM) which includes spray programmes friendly to beneficial insects and the use of beneficial biological pest controls such as Exosex, Phytoseulius, Orius and Bacillus. Robert is very proud that the farm manages to reuse or



**The recently completed anaerobic digester.**

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**Hail nets covering an orchard of Gala apples.**

recycle 70% of their waste products - even pallets go to feed the biomass boiler in the packhouse.

The anaerobic digester and its associated CHP unit currently produce 499kw (see *The Fruit Grower* April 2015) using the pomace from the Copella juicing plant mixed with the farm's own and other locally-grown maize as a feedstock (around 12,775 tonnes/annum). This £2.2million investment is a major development for Boxford Farms and they are looking at payback in six or seven years. As well as having their own electricity supply and selling surplus electricity to the National Grid, an added bonus is that the excess heat from the CHP plant is used to dry wood for woodchips to be burned in the new biomass boilers being installed at the newly purchased greenhouses at Ardleigh.

In recent years, the business has standardised its fruit handling with the use of Dolav plastic fruit bins. This investment was with the help of EU funding via the Plantsman producer organisation. Although more expensive, but lighter than the traditional wooden bins, Boxford Farms is looking at a life expectancy of 30-40 years with these plastic products. They have found benefits from improved hygiene, reducing fruit waste through less disease and fruit rotting, as well as reduced moisture loss in their controlled atmosphere storage, all helping to improve quality and margins. Although the area is not specifically known for hail storms, Boxford Farms is using hail netting as one really heavy storm at the wrong time can wreck a large part of the crop.

There is a core staff of 16 employees on the farm; it is a young team of 50% British and 50% East European. This is bolstered by a student from the MDS programme each year and in recent years students from the Netherlands and Austria have completed industry placements at the farm. Seasonal workers via Hops Labour Solutions and AG Recruitment are mainly from Bulgaria and Romania, with Boxford Farms aiming to have about 30% returning each year. Robert said that they are looking at the current apprenticeship arrangements and are in discussion with the Suffolk/Norfolk EDGE scheme.

Boxford (Suffolk) Farms is a progressive and innovative fruit



**Picking Gala apples.**

grower that makes the most of new technology and is at the forefront of new growing techniques and environmental conservation. Robert England is reluctant to be quoted about 'winning' but it is obvious that the farm ticks many 'winning' boxes, with investment in very many different aspects of modern fruit growing, including fertigation and anaerobic digestion, beneficial insects and plastic bins, waste recycling and water conservation, planting technology, employing and training young people, and winning competitions. 'Success and winning' is very much the Boxford formula. ◆

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