Title: Fruit Attraction, Madrid Annual Trade Show for the Fruit and Vegetable Sector
https://www.ifema.es/en/fruit-attraction

Date of Travel: 08.10.2024–10.10.2024
Name of GCRI Travel Grant Recipient: Freya Spafford, Supplier Technical Manager, Barfoots of Botley

Headline bullet point*:*

- Food loss and waste contributes to up to 10% of greenhouse gas (GHG)emissions and there is technology and innovation to reduce this that could be adopted In the UK horticultural sector.

Background:
There were 2,000 exhibitors from 56 countries at this year's Fruit Attraction which spanned across 10 exhibition halls. It was hosted at the IFEMA centre in Madrid, with a hall for each continent and their producers, a hall for innovation and halls for press and buyers. The scope of stand sizes and displays was impressive and it was obvious suppliers took great pride in showcasing their companies and produce. The team from Barfoots of Botley included members of the technical, commercial and procurement departments, who were meeting with long-standing suppliers as well as creating new relationships to improve our supply chain resilience. The procurement managers had back-to-back meetings with suppliers on the two main days of the conference, showing how the conference brings people from this sector together from all around the globe. It also puts into perspective the size of this industry and how many people the fresh produce industry employs as well as how many people it takes to support the global supply chain with over 100,000 trade visitors from 145 countries. The exhibitors and visitors ranged from suppliers of produce, farmers, shipping companies, innovation companies, academic journals and press all associated specifically with fruit and vegetables.

Figure 1. Pink Lady stand boasting colour

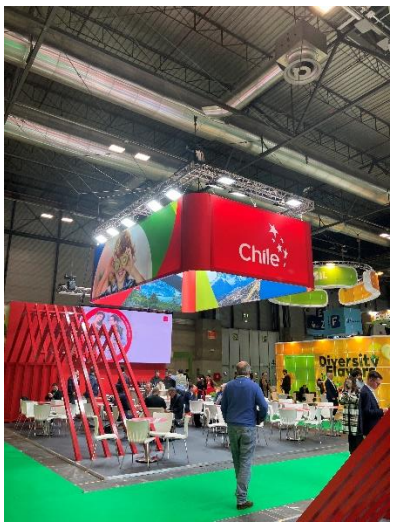

Figure 2. Area for Chilean suppliers.

Figure 3. Eurosemillas, plant innovators, stand.

Travel Findings:

Given the presence of the globalised food supply chain's stakeholders at the conference, it only emphasised how reliant the UK is on imported food. This was further reinforced as I spoke with our suppliers. I am also aware of the issue of food waste and the link between this and climate change, and the fragility of the supply chain that can be directly related to climatic change to shipping channels as well as growing sites themselves. Food loss and waste are recorded to generate eight to 10 % of all GHGs, as well as being a methane hotspot (IPPC, 2019). The Inova and Tech area was new for this year's conference and focussed on Smart Agro, products that supply IT to the sector; and Biotech, for research and technological development in plant biology.

An exhibitor and company that were at the conference were 'Stix Fresh' by Ryp Labs a sticker that is applied directly to the fruit or the packaging that can extend shelf life by mimicking the plant's natural defence mechanism to protect the fruit. This sticker can be applied during any part of the supply chain from large distributor to small scale farmer, the examples at the show were for berries and mango but the company has made the product not only food grade but broadly applicable to all fruit and vegetables. This development could lead to longer lasting food, reducing food waste and allowing produce to be picked at its ripest and kept fresh as well as saving money for consumers and producers in the form of less waste. The stickers can be applied directly to the skin of the fruit or to the packaging with the same efficacy as shown in the photos below. This technology could be adopted by the UK horticultural industry or made available to the consumer at a retailer level to improve in-home food waste. Supplier and grower level application of the sticker would prevent waste as the spoilage of fruit is often accelerated by changes to temperature and humidity which can often occur in transport to depot and stores.

Figure 4. Mangoes with Stix Fresh label technology.

Figure 5. In-vitro test with Stix Fresh label technology.

Figure 6. Stix Fresh label technology on packaging for berries and mangoes.

Another company who are working to reduce waste in the growing of produce is Compopac who produce biodegradable netting for packaging and strings for glasshouses made from cellulose. These products are also food safe and can be used for a wide variety of products. Currently, these products are used widely in France, Germany and Switzerland and have had a high uptake by organic growers. The company sees a big opportunity in countries where plastic pollution is high such as areas of South America but recognise cost might be

a barrier here due to the material being about three times the price of conventional plastic. Their mission is to continue developing this material and hope that it can be used for clothing and other packaging in more industries to reduce the need for plastic which is so energy intensive to create and takes a long time to degrade. Many glasshouses use these types of strings to support tomato, chilli and other fruit growth, and this could be introduced more widely in the UK industry to help meet plastic reduction targets.

Figure 7. Compopac reel of string in green.

Figure 8. Compopac strings in situ supporting plant.

Figure 9. M.T. Reti signposting.

An alternative company doing something similar to this is M.T.Reti who make packaging from fibre obtained from wood, this makes it degradable within eight weeks and more sustainable than plastic. This company was founded in Sicily where citrus production is high and designed for packaging of these fruits but they also export products to other parts of Europe such as Austria, Germany and Spain. The long-term issue with this type of product is storage and deploying the product at the right time so that it does not degrade in stock or on shelves.

As many glasshouses introduce beneficiary insects such as pollinators, I visited the Agrobío stand, a beneficiary insect stand based in Almeria, Spain, where Barfoots have a hub farm. Almeria has very intensive greenhouse and glasshouse horticulture and so Agrobío have researched not only bumblebees as pollinators but also other insects which can help to eliminate chemicals in glasshouse production. They replicate insects' life cycles in well-controlled environments to produce insects on a mass scale for specific purposes and currently supply 70% of the greenhouses in the region. One of the research and development team's discoveries was the treatment of the *Tuta Absoluta*, which used to be the most dangerous pest for tomato growers in Europe and Morocco. It was solved by introducing its main natural predator the *Trichogramma* sp. in large quantities and introducing this to tomato production sites, and this was implemented in under two years. The UK horticultural industry should take learnings from companies like Agrobío and others that aim to reduce reliance on chemicals as they become more restricted and less effective and to improve environmental status by enhancing their integrated pest management.

Other than speaking with exhibitors, I attended three meetings alongside our supply chain team and a technical manager from one of our UK retail customers. These were engaging meetings and many questions were asked of the supplier, mainly associated with labour struggles and barriers to accreditations required by UK retailers. In a time where there is demand and focus for British food, there is a huge opportunity for those growers who are prepared to innovate to lead the way in food security and resilience against changing climates.

This visit showed some great opportunities that the UK horticulture industry could implement and how technology and innovation can allow growers to be more resilient to change and ensure the industry is well equipped to provide for future generations.

Personal Statement:
The visit to Fruit Attraction was an eye-opener for me as it put into perspective the amount of countries that are involved in the produce industry and the volume of people involved in ensuring UK shelves stay well stocked with food. It was invaluable time for me as I met colleagues from the industry that I would not have otherwise been able to. The discussion points raised with suppliers were mainly associated with challenges such as labour provision, climate change and accreditation. However, there seems to be lots of innovation to help make the industry more efficient and secure now and in the future.

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Acknowledgements:
I would like to thank the GCRI for funding this trip and allowing me to meet with suppliers from across the globe as well as learn about innovation in the industry, this has added to my knowledge of sustainable food production and facilitated invaluable networking opportunities to pass on to other suppliers, and drive innovation in the UK horticultural sector