

## Climate change series

### Focus on energy management

Name: **John Baarda Ltd**

Region: **East Yorkshire**      Grows: **Tomatoes**

Size: **42 acres of glass houses**

Number of staff: **200**

#### Background

A fourth generation grower.

#### How long have you been growing tomatoes?

John Baarda Ltd. has been growing tomatoes in East Yorkshire for 60 years. We've been supplying Sainsbury's since the mid seventies, and have been supplying Somerfield since 2003.



#### Why did you decide to make the change?

We decided to join forces with Terra Nitrogen in 2004 to tackle our rising energy costs. Terra Nitrogen produces carbon dioxide and steam as by-products of nitrogen fertiliser production. By partnering up with Terra we are able to recycle the carbon dioxide and steam to heat and grow our crop. Tomato growth is boosted significantly by increasing the concentration of carbon dioxide fed to the plants.

#### How did you make the change?

The decision to look for another site gave us the freedom to consider all options and resulted in a spectacular project that created 100 new jobs, all-year-round tomato production and impressive environmental benefits. John Baarda will use approx 12,600 tonnes of carbon dioxide annually which is supplied directly to the greenhouses. The steam is converted to hot water via heat exchangers and the hot water in turn is used to heat the glasshouses.

#### How much did it cost?

We worked closely with Tees Valley Regeneration and HSBC to make the change to our new site. The total capital cost of the new facility was c. £14m.

#### Do you think climate change will make a difference?

Climate change will affect many of the ways we live and work, and not all changes will be positive, however we knew we had to search for future opportunities. We increasingly realised that this was a blessing in disguise as sooner or later carbon constraints and emissions trading legislation will mean we're ahead of the game in terms of managing our green house gas emissions.



We see this investment in new infrastructure (which is actually saving us money!) as a competitive advantage, enabling us to grow tomatoes all year round. As climate change bites, we expect to reduce our energy costs further as we'll need less heating in our glasshouses. It also means we hugely reduce the food miles of the product, which previously had to be imported from Spain and Israel in the winter. Climate change, in addition to more resource efficiency and sharing of knowledge means we're able to take advantage of the opportunity to produce a year-round home grown crop.

### **What have been your biggest challenges?**

Our biggest challenges have been in the doubling of our existing business and the need for understanding of industrial processes to enable symbiotic balances to be achieved.

### **What opportunities does climate change present to you?**

We believe that climate change will enable us to save even more of our energy and emissions costs

Increasing our glasshouse facilities to this extent has had a massive impact on our business. Not only does it provide our supermarket customers with English tomatoes all year round, it also streamlines our business, increases yields and drives better financial efficiency.

### **Where do you see yourself going from here?**

We're quite pleased with our success so far but we're definitely keen to expand and replicate this model. We've worked as part of the Freshlink Marketing initiative for three years, and in that time we've managed to double the volume of tomatoes we supply to Sainsbury's.

### **What advice would you give to those considering change?**

It is going to be increasingly important to have energy costs, consumption and availability under your own control and not at the vagaries of the any world political issues. In a world looking to change attitudes and practices relating to energy consumption, opportunities for such symbiosis as this project delivers must exist elsewhere and the glasshouse industry is well placed to assist in further utilising what industry considers low grade heat. Inevitably this can only be achieved by considering change of location and this in turn presents its own business challenges. Political pressure to deliver positive influences on climate change is only ever going to increase and all energy users need to consider their game plan for minimising the impact on climate change.



For news, events, and links to stories about how other farmers are managing climate change on their farms, please visit: [www.farmingfutures.org.uk](http://www.farmingfutures.org.uk)

With thanks to: ARF, BBRO, BPC, BPEX, Carbon Trust, CLA, Defra, EBLEX, Forum for the Future, HDC, HGCA, MDC, NFU, PGRO and UKCIP