



## E Oldroyd and Sons Ltd

**This case study considers the added value of growing forced rhubarb, focusing on the expertise of E Oldroyd and Sons Ltd, a company based on the outskirts of Leeds that has been producing the crop for five generations.**

### *Background / Overview*

First developed in the early 1800s, forced rhubarb is a crop that is grown indoors and is harvested from January until March, which is approximately three months earlier than rhubarb grown outdoors. The forced rhubarb plant spends two years out in the fields without being harvested, during which time the fields are fertilized with 'shoddy', a waste product from the woollen industry. The rhubarb plant stores energy from the sun in its roots as carbohydrates, and the roots are subjected to frost before the plant is transferred into heated sheds in November, where it is kept in complete darkness. In the sheds, the plants begin to grow in the warmth, while the stored carbohydrate in the roots is transformed into glucose, resulting in forced rhubarb's bittersweet flavour.

Indoor forced rhubarb is quite different to the green outdoor variety. Without daylight, the leaves are an anaemic green-yellow, while the stalks are smooth and crimson. When cooked, indoor rhubarb is very tender and the flavour is said to be more delicate and less acidic.



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E Oldroyd and Sons Ltd produces both outdoor and forced rhubarb. It is one of the growers that make up the renowned 'Yorkshire Rhubarb Triangle', roughly nine square miles in West Yorkshire located between Wakefield, Morley and Rothwell synonymous for producing early forced rhubarb due to its combination of perfect soils and weather conditions. At one time, the 'Triangle' incorporated 200 producers covering 30 square miles and was responsible for producing 90% of the world's winter forced rhubarb. Now it comprises 12 producers, although it should be noted that all businesses act independently and there is no co-operation in areas such as marketing or transport.

In 2011, E Oldroyd and Sons Ltd achieved an annual turnover of £1million from rhubarb sales, more than a third of this (35%) attributed to forced rhubarb. The vast majority (70%) of its forced rhubarb was sold to supermarkets, either through Berry World – at a cost of 8% commission – or through a Producer Organisation called Mockbeggar Ltd. The remainder was sold to the wholesale market and via online mail order.

The demand for forced rhubarb is determined by several issues, but the predominant factor is availability. Forced rhubarb is only available after Christmas from January to March – due to the increased costs of production compared to the outdoor crop, it would not be cost-effective to supply forced rhubarb for less than three months.

The forced rhubarb market is very volatile and prices can fluctuate greatly both seasonally and on an annual basis due to general economic circumstances, supermarket pricing strategies, and unpredictable weather patterns. Another factor is the competition from Dutch producers, who at the end of their growing season have a tendency clear out their forcing sheds and dump their crop into the UK market, significantly reducing the overall price.

One of the ways the Yorkshire Rhubarb Triangle attempted to overcome this market volatility was by obtaining Protected Food Name status from the European Union. In February 2010, Yorkshire Forced Rhubarb was granted Protected Designation of Origin (PDO) status, which stipulates a product is produced, processed, and prepared in a particular area. Having the PDO has helped when selling to certain customers, for instance some supermarkets will only sell proven British-grown rhubarb – in the year after obtaining PDO status, sales increased by 20%, although it should be noted that this growth has not been sustained at the same rate in subsequent years.

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Forced rhubarb can cost two or three times as much to produce as traditional outdoor rhubarb – in addition to the cost of root stock, there are a range of overheads to factor in, such as:

- **Fertiliser** – while there is no actual cost for the shoddy used in forced rhubarb production, as it is a waste by-product, producers do need to pay £1,000 a year waste license, while the cost of spreading need to be considered. There is also outlay required on nitrogen fertiliser, however this is actually less than when growing outdoor rhubarb.
- **Labour** – several stages of the forced rhubarb production process incur labour costs i.e. propagating the roots, taking roots into forcing sheds, plus harvesting, grading and packing. In addition, all forced rhubarb sold to supermarkets is retailed topped, trimmed, and pre-packed, which requires additional work.
- **Building and Heating** – the forcing sheds required for forced rhubarb production are purpose-built, therefore they often remain unused for the other nine months of the year. One of the sheds at E Oldroyd and Sons Ltd was recently re-roofed at a cost of £40,000. In addition, one of the main expenses during rhubarb production is heating the sheds from January through to March, the cost of which can obviously fluctuate depending on the energy market. It is worth noting that many supermarkets are starting to request suppliers utilise ‘greener’ methods of production, so some of the Triangle are exploring the possibility of using renewable energy.
- **Packaging** – to meet the needs of supermarkets in particular, producers need access to their own packing facilities. E Oldroyd and Sons Ltd has its own flow-wrap machine that weighs, wraps, and labels its crop (complete with the relevant supermarket’s own bar code), so that the rhubarb is shelf-ready once delivered. Such a machine costs around £50,000, flow wrap around £60 per reel and labels costing as much as £15 per thousand. As well as being flow-wrapped, many supermarkets also require the rhubarb to be put into perforated bags that are placed in plastic trays hired at 30-45p per tray, before being transported on pallets which are hired from the supermarket at £2 per pallet. Rhubarb sold via mail order tends to be delivered in cardboard boxes.

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## Lessons To Be Learned

### Product Choice

Forced rhubarb increases the seasonal availability of British rhubarb by two to three months, which allows producers such as E Oldroyd & Sons Ltd to maintain a position on the supermarket shelf for a longer period of time.

Forced rhubarb is a specialist product that has historically developed in a particular location because of favourable soil and weather conditions, plus ample availability of resources such as shoddy. Due to these factors, it may not be a viable crop to consider growing in other areas, but adopting a similar principle – growing something that is particularly suited to the geographic location – can certainly prove beneficial.

Due to the additional costs incurred compared to traditional outdoor rhubarb production, it is not cost-effective to supply forced rhubarb for less than three months a year. And it is worth noting that producers operating in the Yorkshire Rhubarb Triangle have incurred significant financial investment on building the necessary forcing sheds, costs that would in all honesty not be justified by the current margins.



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## Supply Chain Issues

The vast majority of forced rhubarb is sold to supermarkets, therefore producers are often required to meet stringent production and delivery standards, as well as minimum orders. In many cases, the producer has to use the supermarket's own nominated transport system, and is charged depending on distance to depot and size of order.

Providing forced rhubarb does enable British-grown rhubarb to be available at least three months before outdoor rhubarb is available, elongating the growing season and enabling producers to compete for market share against competitors from the Netherlands.

## Costs And Value-Added Within The Supply Chain

Recent economic conditions and ongoing unpredictability regarding the weather are making it extremely challenging for even established forced rhubarb producers such as E Oldroyd and Sons Ltd. The cost of producing forced rhubarb is up to three times the costs of producing outdoor rhubarb, although the granting of Protected Designation of Origin (PDO) status has helped add value and a certain status or profile to the crop that, initially at least, led to an increase in sales.

It should be noted that there are certain costs associated with PDO and other EU Protected Food Name statuses i.e. approximately £500 per year for auditing, although with consumer concerns over provenance growing, it is certainly worth Welsh producers investigating the viability of obtaining these standards for their products.

## Supply Chain Improvement In Wales

Forced rhubarb is a specialist crop which is unlikely to be a commercially viable proposition in Wales, as it is strongly linked to a particular geographical area with the requisite climate, soils, natural resources and skill base.

However, producers in Wales can learn lessons from the Yorkshire Rhubarb Triangle, namely the opportunities for obtaining Protected Food Name status for their products, as it may lead to increased sales and marketing opportunities. It is also worth noting that while in certain cases it may not seem cost-effective to grow a particular crop, it can still be grown for other reasons such as to increase market share or to compete against overseas competition.

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