

# The Challenges of growing one of our most nutritious crops

Despite operating in a tough climate, horticulture has always been fortunate, because the crops the industry is producing have numerous health benefits for the people that buy them. This alone is enough to lay a decent platform for sales for any business in the sector. Watercress is no exception and is among the most nutritious crops produced in the UK.

In Hampshire and Dorset, **The Watercress Company** has been producing watercress since the 1850's and more recently other salad crops. But as well as being steeped in history, the company has successfully married the philosophy of traditional standards of quality and value and the importance of farming in harmony with the environment.

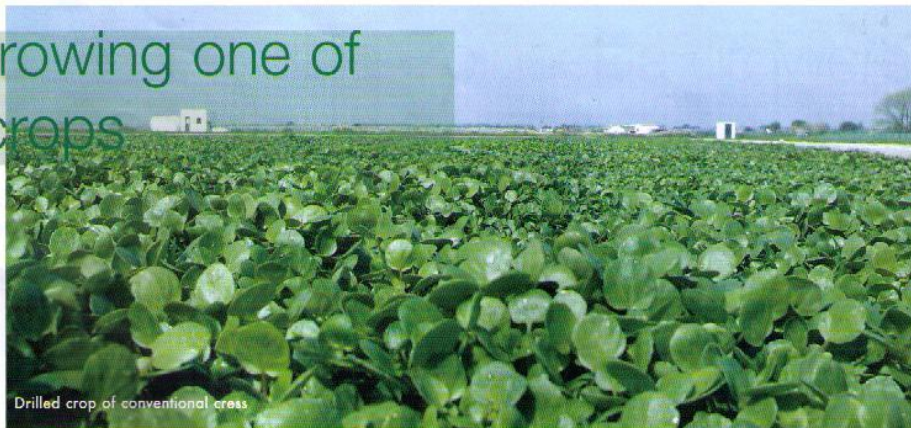
The Watercress Company's impressive heritage of production has led to the supply base being developed across 14 farms in the two counties and also sites in Spain and the US. It now grows traditional and red watercress, as well as a number of baby leaf crops including: Rocket, Chinese brassicas, Spinach, red chard, lettuce and pea shoots. Organic watercress is produced on nine hectares split between the UK and Spain.

The company's managing director, **Tom Amery**, says getting the 'offer' right to the consumer is more important than ever. "With customers concerned about what they are spending, it is up to us to communicate and deliver the quality and benefits of our

crops to ensure they are aware of the value for money. For example, even though we sell a salad product generally associated with the summer, because of its health benefits, watercress has always done very well at the beginning of the year as people think about diets and fitness," he tells *The Commercial Greenhouse Grower*.

"Interestingly in the last year or so the darker leaf products have done well and the lighter leafed ones have taken a hit." A presence on television this year including on *BBC's Countryfile* has had a 'huge effect' on sales-boosting them by 30%, says Mr Amery. "It is also down to the weather; this always challenges the way we sell," he adds. "A bad July and August like we had this year, means the retailers don't have the confidence to fill up the store and product runs short and people get put off, but April and May were good for us and it was a good start to the year," he adds.

In the field, consistent quality is important. Challenges this year have included an increase in certain pests. "We have been working with various organisations to work



Drilled crop of conventional cress

## Selling the health benefits

The secret to success in fresh produce is making the most of its health benefits. With watercress among the healthiest of salad products on the market, *The Watercress Company* has done just that. Research at **Ulster University** has revealed the following:

- Watercress is a cruciferous vegetable and population studies associate an increased intake of cruciferous vegetables with reduced risk of cancers at several sites.
- Daily consumption of watercress resulted in a significant decrease in lymphocyte (white blood cell) DNA damage. DNA damage is an important event in cancer development.
- Watercress is a rich source of the glucosinolate derivatives phenylethyl isothiocyanate (PEITC) and methylsulphonylmethyl isothiocyanates (MEITCs), which show a range of anti-cancer activities.
- Beneficial effects on the three key stages of carcinogenesis (initiation, proliferation and metastasis) were observed in a study involving watercress extract and colon cancer cells.
- When smokers ate watercress with each meal for 3 days, the activation of a key carcinogen (cancer causing agent) in tobacco was inhibited.
- An in vitro study involving breast cancer cells found that the addition of a watercress extract inhibited their invasive potential.
- A study investigating the effects of a diet supplemented with PEITC in mice grafted with human prostate tumours resulted in a 50% reduction in tumour weight.
- Watercress is a good source of key nutrients and carotenoids, such as lutein and beta-carotene, associated with the maintenance of eye and skin health. Daily consumption of watercress increased plasma lutein levels by 100% and beta-carotene levels by 33%.
- Daily watercress consumption has been shown to decrease plasma triglyceride levels by about 10%.

out the best way of minimising damage to the crop. It's a particular challenge; because of our close relationship with spring water we are restricted in what we can use on the crop. Sometimes the best way is to work with natural solutions and often thinking differently works just as well when tackling these types of problems." Recently, the company has installed several bat boxes on site to encourage these nocturnal insect predators to eat the pests that can cause damage and contamination at harvest. It has also hired a falconer to fly birds across the watercress beds to scare away the pigeons who damage the crop.

But *The Watercress Company* still has to deal with the same challenges as every other horticultural business. "Rising input costs have of course been a concern," says Mr Amery. "In my mind there are two ways of dealing with them; negotiate harder and deliver savings through efficiency and working together with other growers and businesses to cut costs." He adds: "Combining purchasing

power and sharing the resource cost with other companies can mean the burden is spread. With suppliers it's about how you buy. Buying fuel, for example, from a company that buys on a daily basis can be cheaper on a falling market than one that buys larger quantities on



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Rolling watercress, no one bed is the same so automation is quite difficult

a less regular basis. Upgrading equipment and just checking its efficiency rating can all save money," says Mr Amery.

Automation is also on the agenda, although this is quite difficult to implement with the traditional watercress beds. "These are quite irregular in size; no one bed is the same so automation is quite difficult. But as a company we have found it beneficial and we have invested for the baby leaf part of the business," says Mr Amery.

What has been surprising in 2011 is the continual increase in organic sales. "Given the fact that organics has been having a rough ride of it in the last few years with people cutting back on their

shopping budgets, organic watercress sales have continued to rise. I think this comes down to the fact it is a very stable product," says Tom Amery.

### The Farms

The company's 14 farms are spread across the Hampshire region. Drayton is one of its largest UK farms situated on a 28 acre site, 2 miles north east of New Alresford, Hampshire. The farm is split into 9 tier sections and has a total of 32 beds. At the height of summer it can produce over 32 tonnes of watercress in one production cycle. This site is important for the company as it is from here that it is able to pack and deliver the watercress within

an hour of harvesting, ensuring maximum freshness.

In Dorset, Waddock Cross Farm is the biggest. This 12 acre farm situated 7 miles downstream from Dorchester on a tributary of the River Frome is used in the UK season as the company's distribution centre. The farm is home to a unique artesian spring pond. The springs can be seen through the crystal clear water as hypnotic waves in the sand at the bottom of the pond.

In the US, the company's farm is situated inland from the Gulf Coast of Florida. Myakka City has a perfect environment for growing watercress. Its cooling coastal winds guarantee that temperatures are kept low

suited the growth of this aquatic plant. The farm totals 450 acres including 50 acres of nature reserve and a total of 42 acres of watercress beds. The farm is fed by pure borehole water ensuring that the water supply quality is regulated and assured.

Finca Ful farm in Spain was built near Jerez by B&M in the mid 1980's and was purchased by The Watercress Company at its founding in 1994. Starting as an experimental farm, this area of Spain is geographically ideal for watercress production and is well known as a sherry growing area. Situated near the coast, this 18 acre farm has cool Atlantic winds providing a micro climate perfect for watercress production. Finca Fui also houses the distribution centre for all our Spanish produce. There are also two other farms in Spain.

### Environmental control

As part of ITYS farm management policies both in the UK and overseas the Watercress Company complies with many different production standards and schemes, including Tesco Nurture, Marks and Spencer Field to Fork, Leaf Marque, Assured Produce Scheme, and Globalgap. They are also members of SEDEX which allows the company to share ethical data with its supply chain.

The Watercress Company is always striving to improve and develop its management practices in conjunction with the schemes including such things as:

- Reductions in fertiliser and pesticide usage, IPM
- Shaker belts on harvesters to reduce insect contaminants.
- Efficiencies in energy and water usage and the enhancement of wildlife habitats.