

Horticulture U.K., Adapting to a Changing and Challenging Marketplace®

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INTRODUCTION

The fact is that the United Kingdom (U.K.) and European Union (E.U.) are entering very new territories which are in a rapidly changing market. The £ (Pound) and € (Euro) are becoming elusive, along with spiralling costs and no increase, only decrease, in product value. Many factors have come about to create the situation that horticulture U.K. is now facing, some of which I will try to outline.

THE MEDIA

Television. Ten years ago we were bombarded with media coverage. Television would have programmes relating to gardening on for at least 1 h per night. A show called "BBC Ground Force" was criticized by the trade for encouraging the covering of gardens in decking and just painting timber fences. However, the reality was that people were being encouraged to get out into their gardens. We had Tim Smit with the Lost Gardens of Heligan and its restoration, then the Eden Project (which incidentally is still strong in its public presence but supplements its income with rock concerts and winter ice rinks to keep the profits coming in). All of these plus regular features kept gardening "sexy."

Now, in the last 5 years we have seen a transition into fashion, house make-overs, and buying property for investments. Gardening now is lucky to get 2 h per week. Add to this the abundance of cheap flights within the E.U., and it is now a challenge to get a slice of the "leisure pound."

We still get great coverage of Royal Horticulture Society shows, especially Chelsea, but unfortunately it often coincides with poor weather.

Written Press. We still have a huge range of magazines being produced, but the articles often are either recycled from the previous year or feature products that are not supported by the industry.

Who is to blame for this? How many companies actually keep the press informed on trends, availability, and new products? It's too easy to blame; we all need to work together to ensure the public is kept up to date.

WATER AND ITS USE

Our climate is changing rapidly. For the last 5 years, we have seen drier, hotter summers, and for the last 3 years, the south and south east of England have had drought orders from April, and hose pipe bans have been enforced in the south counties. The Press, however, just got behind the fact that gardeners will not be able to water their gardens with hoses. Unfortunately, the industry just does not get working as one voice and offer help and constructive advice.

On visiting 30 garden centres this year, only three actually had displays of drought-tolerant plants and advice on how to conserve water. The rest just said, "Here's a water butt and here's a watering can, work it out for yourself!"

Growers are suffering from seasonal changes as well. Water usage is now under scrutiny, but no real action is being taken apart from the cost of water rising. What is needed is legislation on the usage of water and its efficiency. Growers know how to save water but are reluctant to invest in change.

Twenty-five years ago, HRI Efford and Margaret Scott set out the design of the true Efford sand bed, an automatic watering system that relied on nothing more than a toilet ballcock. The efficiency of these structures is superb, using less than 10% of the water of an overhead system.

Of course, initial costs are high, but the long-term payback easily outweighs this cost. Beds built 25 years ago are still working 100% with no labour input for watering and only a one-time seasonal cleaning; they never go wrong. Can this be said of the overhead sprinkler systems?

MARKETS

Our marketplace is changing rapidly. Recent surveys on behalf of the Horticultural Trade Association (HTA) have shown the public is split into three categories when it comes to buying plants:

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| 1) Very/quite keen gardeners | 34% |
| 2) Marginal gardeners | 30% |
| 3) Hostile/not keen gardeners | 36% |

In 2005, the Garden Industry Monitor surveyed the public on what its perception of plants was. Some striking evidence came out; examples of findings are:

- "Most plants are from Holland." They see the huge Dutch lorries on the roads and parked at nurseries/garden centres and just assume that's from where they all come.
- Garden Centres attract keener gardeners, but marginal gardeners tend not to use nurseries. Some felt garden centres had lost their way.
- Loyalty was evident, but few respondents were driven by price.
- Spending was mainly driven by impulse.
- "Plants are cheap on average."
- When asked to value plants, they all put a higher price on the product than actually was being asked.

At this point I guess you think, "Well, why don't they brand the U.K. produce and just charge more for it?" I agree, just why don't we? However, research has shown there is no added value perceived by the plant grown on a U.K. nursery.

Nationally, we have "Plant for Life," which is an initiative spearheaded by the HTA aimed at raising the awareness of plants and the roles they can play in enhancing people's quality of life. It has linked the public to retail outlets and has provided a point to give inspiration to gardening. It provides topical updates, hints and tips, and how plants can benefit and enhance life.

If you survey a range of garden centres in Britain, whilst they all differ in their style and appearance, one thing that is quite evident is the globalization of their products. Key suppliers have been branding their products for so long and have such a stronghold on the marketplace, that when you visit a garden centre you will inevitably find the same plants, same labels, and — a fair chance — the same price. However, this is changing rapidly.

We are aware that the public browse garden centres — actually what they do is sample the coffee shop, for a garden centre is not a garden centre without a coffee shop! In many instances the coffee shop is the lifeblood of the place and certainly the most profitable, often returning a profit of around 30%.

We recently have had one garden centre get its food outlet in the Good Food Guide and mentioned in “The Sunday Times” as the “Best place to go and eat Sunday lunch,” along with Time Out Award and Tatler’s Award for most original restaurant. These gastro-gardeners have their coffee and cake, then browse the plant areas, they recognise the products centre to centre.

Nurseries are feeling the pinch with their product range. We have seen key nurseries dropping their propagation units because they are not cost effective. They cannot change fast enough if they are reliant on stock plants, cuttings, and liners; by the time they have changed so has the market yet again. This has often led to rationalisation of the product range due to the availability of free stock from young plant producers. Growers must create demand, not follow it.

Growers are having to study costings. Fifteen years ago we were in a situation where demand was outstripping supply. To keep up with demand growers produced more and more plants, often dropping slow-selling, low-volume lines. This has meant that 10 years later there has been an over-supply of key products. This has led to plants not selling from nurseries and to high wastage. The HTA have reported these figures as high as 30% of turnover on some sites in waste.

The DIY stores/supermarkets are pushing hard into the traditional market place. Their percentages of the market between 2001 and 2005 were 16%, 18%, 19%, 19%, and 18%, respectively. This is high volume/low price, and many growers have been in this supply chain and suffered bitter consequences in doing so. With the rapidly changing market these sheds have found they just cannot shift the proposed high volume they were expecting, and this has been dumped back at the growers. This contributes to such high wastage the market place just cannot swallow these units up anywhere whatever the price.

Garden centres have always looked upon the sheds as their biggest threat. They do sell the plants cheaper, sometimes, but the range is poor or limited. In addition, the product is often decaying because these outlets just cannot maintain quality; they do not have the systems or trained staff for advice and maintenance. The stock on offer is poor in comparison with a garden centre.

But how long will this last? The superstores can recruit and train staff if they want to, they can have enough clout in the supply chain to demand just-in-time delivery, and they can change and will. Just look at their websites to see how they tie gardening into other services.

LABOR COSTS

With nurseries and garden centres struggling to make profits they look at wages to reduce their overheads. Their first move was to reduce the volume of labour. Labour costs vary across the industry, but the range is 22%–46% of turnover. To reduce this percentage many nurseries have taken on agency labour just for the time required (this may be just 6 months or just a few weeks). Most of the labour is unskilled, but these people want to work and can often be found working 6 or 7 days per week in 12-h shifts. Recruiting British staff is nearly impossible and finding employees with critical skills such as propagation and growing, is extremely rare. This, in turn,

makes the decision whether to propagate or not mainly based on whether labour can be found. Our horticultural colleges are failing to get applicants; most courses now only have 6–10 students in commercial courses. Again, who is to blame for this? Is horticulture actually getting involved with schools and colleges? Are we really showing ourselves off to our best?

LEAN MANUFACTURING

Three years ago Manufactory Advisory Services (MAS) ran a pilot scheme with four wholesale nurseries to look at lean manufacturing.

The principles of lean manufacturing have been based on the manufacturing industry, originating from the 1950 Japanese car industry. It is a management philosophy focusing on the reduction of the seven wastes: (1) over-production, (2) waiting time, (3) transportation, (4) processing, (5) inventory, (6) motion, and (7) scrap in manufactured production.

This approach looked at all aspects of waste in the flow of decision making, planning, and production in a nursery. In the first year the average saving made by the introduction of the lean manufacturing approach into growing was £60K per annum, per site. This was made by eliminating stages in the production cycle that did not add value to the product

Examples:

- Distance travelled.
- Handling product unnecessarily.
- Not able to find tools when required.
- Paper flow in offices etc.

Now this lean manufacturing process has been implemented in excess of 100 nurseries and is now starting to be completed in garden centres. It has highlighted how massive savings can be made if the two sides of the industry would work together. Ideas about to be piloted include:

- Delivery on trust.
- Bar-coding of crates to show product at packaging to delivery.
- Automated stock control of key lines.
- Automated delivery information on e-mail.
- Product quality images via web/e-mail prior to shipment (great if the product looks excellent then maybe more can be charged for it!).

USE OF CHEMICALS

The use of chemicals on nurseries is a very emotional subject. Many growers still swear blind by a strict chemical control programme, "It's week 10 and we must spray 'X' immediately." However, with rising costs of chemicals and reduction in range this will have to change. In the U.K. an agreement with the EU was formed for the "Long-Term Arrangements for Extension of Use" (LTAEU) of chemicals. It was introduced in 1990 to overcome the problem of minor crop approvals. At that time 468 products were submitted to Pesticides Safety Directorate for inclusion. The registration of the products was free and two opportunities were given for submission. No other E.U. country developed a scheme like it.

We're going to lose the extension in 2007 and will need around 250 SOLAs (Specific Off Label Applications) to replace it! Therefore, we can say goodbye to many of our current chemicals.

Many growers are now working toward a more holistic approach to growing. Biological control is now forming the backbone of control. Identification and staff awareness has meant that careful use of predators has kept pests under control. It cannot work in total isolation, there may be a time when chemicals need to be used but using a friendly chemical to the predator is not upsetting the balance but reducing infection. Even treating perimeters such as hedgerows with lace wing larvae to control aphids is being tried. The nurseries that have been working toward these now are finding very low levels of pests, but more importantly, a significant reduction in chemicals used, in many cases up to 90%.

Compost Teas. The other big trend is the use of “compost teas.” There are now in excess of 100 “tea pots” working in the U.K. These growers have seen huge reductions in the number of incidences of *Pythium*, *Botrytis*, *Diplocarpon rosae* (black-spot), and *Phytophthora*. They have seen an increase in the efficiency of their biological control and there are other spin-offs: an increase in growth/vigor, stronger rooting, and quicker establishment in containers. Many growers have now started to reduce the control-release fertilizers in their mixes up to 1.5 kg·m⁻³ with no reduction in growth or quality.

So what are these teas and how are they used? Compost tea provides:

Direct Nutrition. A source of foliar and soil organic nutrients. Chelated micronutrients for easy plant absorption. Nutrients in a biologically available form for both plant and microbial uptake.

Microbial Functions. Compete with disease causing microbes. Degrade toxic pesticides and other chemicals. Produce plant growth hormones. Mineralize plant-available nutrients. Fix nitrogen. Plant surfaces are occupied by beneficial microbes leaving no room for pathogens to infect the plant.

Compost tea will help to create a balanced soil food web, which will;

- Suppress disease-causing and pest organisms.
- Improve the nutritional quality of the plant.
- Produce good soil structure — improving water infiltration, oxygen diffusion, and water-holding capacity.
- Retain nitrogen and other nutrients such as calcium, iron, potassium, phosphorus, etc. Make nutrients available for plant growth at the times plants require at the rates plants require.
- Decompose plant residues rapidly.
- Reduce worker exposure to potentially harmful chemicals.
- Produce hormones that help plants grow.

The normal application is to apply every 2 weeks with the overhead spray lines or via dilution with a hose. Either way the cost benefits are enormous, £40/5 ha for teas plus 4–6 h for application. The saving on this is that nonqualified staff can apply it and work does not have to stop during application.

This is all beginning the “holistic” way of growing: understanding what the plant needs and adjusting the environment and conditions to suit it, to minimizing stress and pressure in the plant. We are now going back to the roots of growing by trying to actually grow the plants rather than boost them unnaturally with fertilizers. We are reverting to growers again!

AUTOMATION

Automation is only just beginning. With the demise of a cheap labour pool growers are finally looking at machines instead of people. We have finally gotten efficient potting systems with bale lifters, potting machines, transplanter, and motorized conveyers. The Dutch have gone one stage further with robots and full automation. One Dutch grower is turning out 4 million plants per annum, with just two growers and six on dispatch; the rest are robots. The plants arrive from another nursery; they are selected, transplanted, and graded by machine. Then, the plants are carted around the nursery by robot-driven tractors; stood down by robot arms; watered by computer-controlled gantries; lifted, pruned, and spaced as required, again by robots. When ready for sale, they are lifted at night by a robot, put on tables, brought into the packing shed, off-loaded onto conveyers, labeled and packed, then finally the human involvement, loaded onto trolleys and lorries and sent off to the customer. So where do we go from here?

THE WARNINGS

First, we are seeing increased incidence of new pests and diseases including *Phytophthora kernovii* along with *Phytophthora ramorum*. This has destroyed huge numbers of nursery stock both in the U.K. and the rest of the world. The only cure is the cut and burn policy. New pests are becoming a problem. Scale is now a major problem in the U.K., along with citrus beetles. Source plants from the Mediterranean, with the easy transport of material across international boundaries, and problems occur. No matter how strict we put border control and tests in place, it is down to the speed of action. Can we afford to wait 4 days with the plants on site before action has to be taken — how tight are our controls as growers?

PEAT AND ITS USES

In the U.K. the anti-peat lobby has been running fast and slow. Every so often they will get huge political and public support and become a threat then it dies away. We as growers are now only just learning how to use our composts with peat to grow a reasonable plant. We know we need to reduce our reliance on these substrates, but let's focus on one or two key alternatives. In the U.K. we are currently trialing: (1) Garden waste from rubbish collection, (2) bark, (3) wood chips, (4) wool waste, (5) paper, (6) carpet waste, (7) wood fibre, and (8) polystyrene.

Let's pick out the two key items and focus fully on those and develop a successful alternative together; let's not dilute our skills and research.

GLOBAL WARNING/CLIMATE CHANGE

Is it here, is it going to have an effect? Certainly in the last 10 years we have seen a change in our climate. We are getting hotter, dryer summers, not necessarily colder winters, but certainly lower light levels in the early spring. How will this affect our growing? Can we produce plants more cheaply by using outside growing space during the spring and summer? However, for this to work must we push for more plant sales in the autumn? Will the market change to the point where we have to provide plants for specific conditions and an even narrower selling window?

So, where do we see our nurseries of the future? There will always be the "back yard" nurseryman with his great range of plants, in small volumes — not always totally professional, but giving the genuine plant hunter the challenge of finding

him with that rare plant. They have their own outlets at farmer markets, gate sales, and the Internet.

The specialist propagator — where are they to go? Certainly, there will be a much greater pressure in this sector. They need to be able to react fast to changing demand whether this is utilizing micropropagated mother plants and stock or greater manipulation of mother plants to provide the volume of material required at short notice or utilizing off-shore propagation from areas such as Costa Rica or Africa or the new source of China and Japan. One thing is for sure, it has to be clean stock, free from pests and diseases, such as viruses. Co-operation is paramount; the supply chain must be secure both up and down. There has to be great communication with suppliers and customers. Growers have to innovate and create demand. We have seen great success in the past, but now it has to be focused on what the consumer needs. Waste has to be eliminated; this is just cost and eating into the bottom line profit. Growers need to be aware of what is going on around them, the focus of legislation, and environmental awareness.

We all need to be working with the environment and raising the profile of horticulture. We are great at what we do and the public should be made aware of the impact we can have on their lives to make it richer. At the end of the day we need a realistic price for our product. We need profit to develop, we need cash for security, we need skilled staff but above all what we need is a public that wants our product!

Wake up and smell the coffee!