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AUTHENTICATION

We declare that this work was done under our supervision according to the procedures described herein and that the report represents a true and accurate record of the results obtained.

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GROWER SUMMARY

Headline

UK ornamentals production value totalled just under £1 billion in the year 2012-13. This compared with import values of £324m of ornamental plants and bulbs, and £598m of cut flowers. Potential therefore exists for UK to substitute these imports with home-grown product and thereby increase sales. Sales growth potential also exists in emerging eastern European countries where spend is currently low but growing rapidly. In some Nordic and alpine countries there is both high spend on, and growing imports of ornamentals which may also hold export opportunities.

Background

In the context of one of the worst economic downturns since the Wall Street Crash, government policy is increasingly likely to be guided by evidence of potential benefits to the UK economy. This presents challenges insofar as relatively little data exists on the value of UK ornamentals production. Certainly detailed information such as the value of different crops and different sectors supplied by growers was lacking at the start of this project. This has created challenges in demonstrating the economic value and potential of ornamentals production to policy makers.

This lack of data is also a handicap in terms of investigating specific opportunities for UK growers to develop and deliver sales and economic growth. Two of these revolve around international trade flows. Firstly, the scale of the opportunity for UK growers to win share from overseas growers supplying ornamentals to the UK was unknown. A second unknown was the extent of opportunities for exporting ornamentals. Furthermore, data on the potential size and potential attractiveness of overseas markets was not easily accessible for UK growers.

To address these issues, the HDC commissioned the Horticultural Trades Association (HTA) to run a pilot research project to fill some of these information gaps, and to provide a detailed analysis of the opportunity for UK growers to increase sales and substitute imports in the specialist garden retailer sector (e.g. among specialist garden centres and retail nurseries). The objectives of the research were:

- To estimate the value of imported ornamental plants to the UK
- To estimate the value of imported ornamental plants as a proportion of UK plant sales

- To provide a breakdown of the channels into which UK growers supply different crops
- To assess and rank the attractiveness of different export markets for UK ornamentals growers
- To identify UK ornamentals growers' perceived barriers to exploiting export markets.

The research comprised a survey of specialist garden retailers, a survey of UK ornamentals growers and desk research into trade flow and other market statistics on European countries.

Summary

The research findings show that ornamentals production by UK growers was slightly less than £1 billion (excluding VAT) in the year August 2012 to July 2013. The following table and notes show how this breaks down by supply of ornamentals plants to different sectors. It is based on a survey of growers with a sample size of 80 from a population of around 650 growers. As such the estimates are subject to statistical margins of error (particularly in sectors and crops with small reported values) but are likely to represent broadly accurate estimates of UK ornamentals production as a whole.

Table 1. Estimated value (ex VAT) of UK grower production by crop and sector (July 2012 to July 2013) as derived from the survey of growers (sample size = 80 respondents).

	Consumers direct	Specialist garden retailers	DIY stores	Other retailers	Amenity customers	Forestry	UK pack houses	Export*	Other	Total
Bedding plants	£4.3m	£74.4m	£94.9m	£52.4m	£9.4m	£0.0m	£0.0m	£3.9m	£3.2m	£242.4m
Hardy Nursery Stock	£56.4m	£185.5m	£36.5m	£27.5m	£158.5m	£1.1m	£0.0m	£63.3m	£20.8m	£549.5m
Herbaceous Perennials	£3.2m	£62.9m	£2.2m	£2.6m	£23.9m	£0.0m	£0.0m	£1.3m	£1.0m	£97.1m
Edible ornamentals	£1.0m	£17.0m	£0.7m	£3.0m	£0.5m	£0.0m	£0.0m	£0.4m	£0.3m	£22.9m
House plants	£0.1m	£7.0m	£0.0m	£8.7m	£0.0m	£0.0m	£0.0m	£0.0m	£0.1m	£15.8m
Dry bulbs ♦	£0.0m	£0.2m	£0.1m	£0.8m	£0.4m	£0.0m	£0.0m	£1.1m	£0.0m	£2.6m ♦
Other garden plants	£0.2m	£1.8m	£0.0m	£0.4m	£0.0m	£0.0m	£0.0m	£0.3m	£0.0m	£2.7m
Cut flowers ♦	£2.2m	£0.0m	£0.0m	£2.7m	£0.0m	£0.0m	£2.3m	£7.8m	£3.0m	£17.9m ♦
Total	£67.4m	£348.8m	£134.3m	£98.1m	£192.7m	£1.1m	£2.3m	£77.9m*	£28.4m	£950.9m

Caveats and notes on estimates:

♦ The grower survey did not achieve adequate responses for robust estimates of dry bulbs and cut flowers to be generated. The total estimated production value for dry bulbs is in the region of £30m based on known turnover of major UK bulb producers, taking overall production values to around £980m. Cut flowers production values are estimated at between £18 and £32 million (see appendix for method for achieving this estimate).

* The value of exports is skewed by a small number of responses with atypically big export businesses in the survey sample. International Trade Centre data for 2012 (calendar year) estimates the value of UK exports of these crops to be in the region of £47m (using a £ to Euro conversion rate of 1:1.24)

Set against this data, analysis of trade flow data sourced from The International Trade Centre (<http://www.intracen.org/>) shows that the UK imported around £324 million of ornamental live plants and bulbs, and £598 million of cut flowers in 2012 (the most recent data available at the time of the research).

These imports end up in a range of different sectors, and the scope of this research is to look at the potential opportunity for UK growers to substitute imports in the specialist garden retailer sector (e.g. among garden centres and retail nurseries). A survey of these retailers conducted as part of this project achieved responses from 77 businesses representing 100 garden centre/retail nursery outlets. It showed that around 15% of their plant sales by value were accounted for by imports, which represents an import substitution opportunity for UK growers of around £69 million, largely achievable by substituting imported hardy nursery stock crops and house plants, the latter of which are produced in relatively small values by UK growers (£15.8 million compared with hardy nursery stock production of £550m). Based on the finding from the HTA's *Survey of Wages and Labour Costs* report which shows that staff costs in ornamental growers are on average 29% of turnover, and that a general nursery worker is paid on average £16,000 per year, this £69m roughly equates to a potential addition of 1,000 general nursery worker jobs to the economy.

There is something of a mismatch between growers' perceptions and retailers' opinions on what UK growers need to do to win share from overseas growers. Growers were most likely to cite barriers relating to price competitiveness. By contrast, although price is clearly important to retailers, the most frequently mentioned areas in which they want UK growers to improve relate to distribution and supply chain efficiency and effectiveness. The following tables show the most frequently reported views on this topic from growers and retailers.

Table 2. Barriers to competing in the UK for business won by overseas growers, as reported by UK growers

	All growers	Hardy nursery stock growers
Price (including exchange rate variations and competing with product dumping)	41%	47%
Not having the same ranges offered by overseas growers, including crops that don't grow well in the UK or being a specialist in certain types of crop	13%	16%
Transport costs or difficulty delivering to buyers' time and volume needs	13%	20%
Being too small or unable to operate as a one stop shop	13%	13%
Buyers preferring overseas growers or stock or being apathetic about UK growers	10%	11%
No barriers	6%	9%
Lack of information (e.g. about demand)	6%	4%
Marketing costs	3%	4%
Other reasons	28%	27%

Sample size: 68 respondents (45 HNS growers). Percentages exceed 100% as some respondents list more than one barrier.

Table 3. Specialist garden retailers' suggestions for improvements UK growers could make to win business currently going to overseas growers

	The 15 respondents who import most plants (note the small sample size)	All respondents
Improve the delivery service	38%	42%
Improve the quality of plant information available when ordering	38%	15%
Be more competitive on price	31%	22%
Better plant labels, POS, and marketing materials or promotions ¹	23%	13%
Have a wider range of forms and varieties available	23%	20%
Improve the quality of plants produced	8%	13%
Improve service (generally)	8%	5%
Stress the UK provenance of plants	0%	5%
Other	8%	24%

Sample size: 55 respondents (15 retailers accounting for around 80% of the value of imports across the sample show separately). Percentages exceed 100% as some respondents list more than one barrier.

¹ NB – respondents were not necessarily saying overseas growers' POS is better than that of UK growers, but more simply that improving this would help UK growers compete more effectively.

Table 4. Specialist garden retailers' suggestions for improvements UK growers could make to win business currently going to overseas growers

	The 15 respondents who import most plants	All respondents
Improve the delivery service of which . . .	38%	42%
Improve the cost of delivery	0%	2%
Get better at delivering small volumes	0%	15%
Improve the speed and flexibility of delivery	31%	15%
Generally work with other growers to improve delivery	8%	11%
Improve the quality of plant information available when ordering of which . . .	38%	15%
Better information on availability of plants	23%	9%
Better information on plants, including images of the plant	15%	5%

Sample size: 55 respondents (15 retailers accounting for around 80% of the value of imports across the sample show separately). Percentages exceed 100% as some respondents list more than one barrier.

The following quotes are taken verbatim from the responses retailers gave on this topic. They provide a flavour of the types of suggestions being made relating to these themes:

"Offer larger volumes and offer more flexible delivery schedules often its quicker to get a delivery from Boskoop than the UK"

"Quicker delivery turn around. Better promotions. Better ordering facilities, like online ordering WITH PICTURES." [respondent's capitalisation]

"They need to collaborate more for shared transport as meeting minimum orders from five different growers for example is difficult and time consuming. Perhaps they should consider some type of cooperative marketplace with stock from different growers going onto one delivery".

"Get a website going that we as retailers can look at with pictures of the actual plant, size, Price per plant, Price per shelf, Price per Trolley delivered. We as retailers can pick and choose all our plants the growers can pick and deliver to one hub, the people at that hub sort out deliveries to each retailer pre pricing and barcoding as they go then we get less lorries delivering one or two trolleys a week when we could have ten or twenty trolleys in one go all pre priced and barcoded ready to sell. I know it's the Dutch system but it works I can order on Monday and get my order in Thurs/Friday"

Overall, specialist garden retailers rated the quality of UK growers' plants more highly than those of overseas growers. However this preference was much less pronounced among the retailers which accounted for the bulk of importing reported in the survey sample, as is

shown in the following two charts which show how specialist garden retailers rated UK ornamentals growers across several dimensions in comparison with overseas growers. It is important to note though that this latter comparison is qualitative in nature, based as it is on just 15 responses.

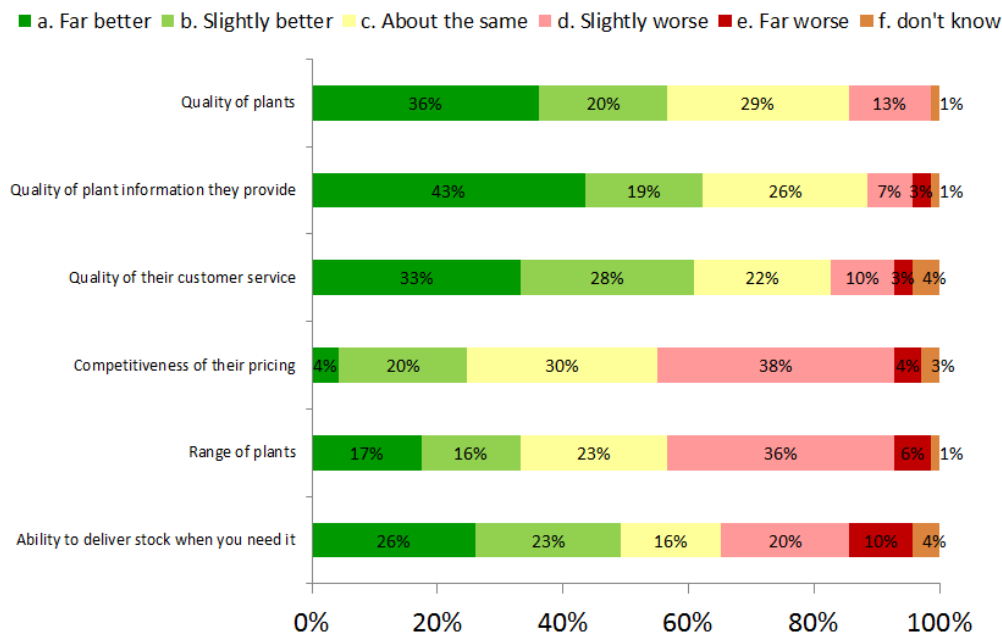


Figure 1: Specialist garden retailers' ratings of UK growers in comparison with overseas growers. Sample size = 69 specialist garden retailers who import plants.

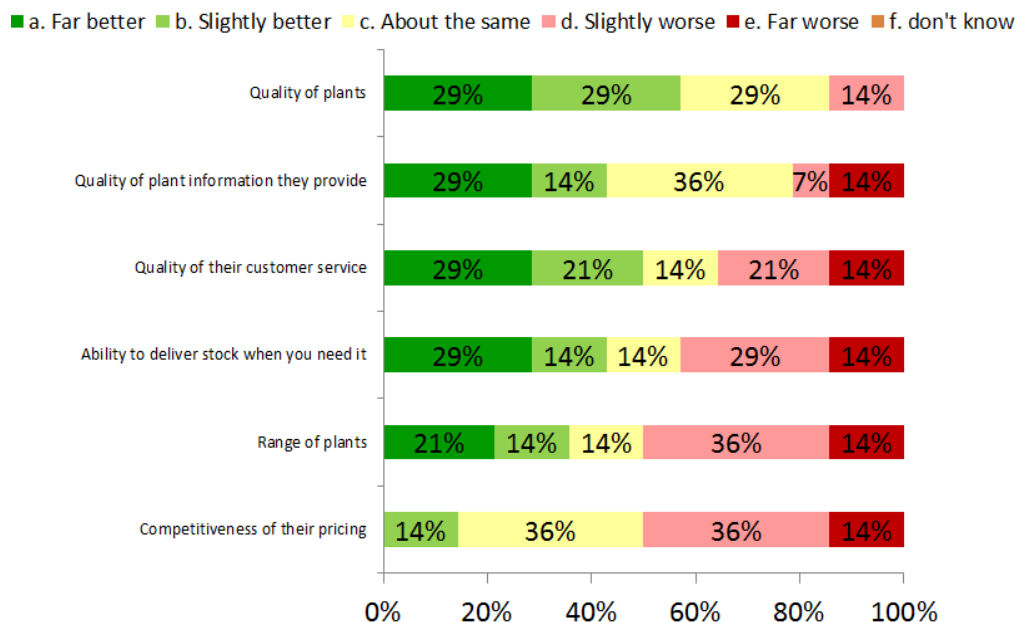


Figure 2: Specialist garden retailers' ratings of UK growers in comparison with overseas growers. Sample size = 15 specialist garden retailers who account for over 75% of reported sales of imported plants in the survey sample.

Exporting is relatively undeveloped as an opportunity by UK ornamentals growers, with around 5% of UK growers' sales by value being made up of exports. However six of the 80 businesses which provided full sales figures in the survey sample reported six-figure export sales per annum. The following chart shows the proportion of UK growers who at different stages of 'export readiness', ranging from businesses which currently export through to those who currently express no interest in exporting.

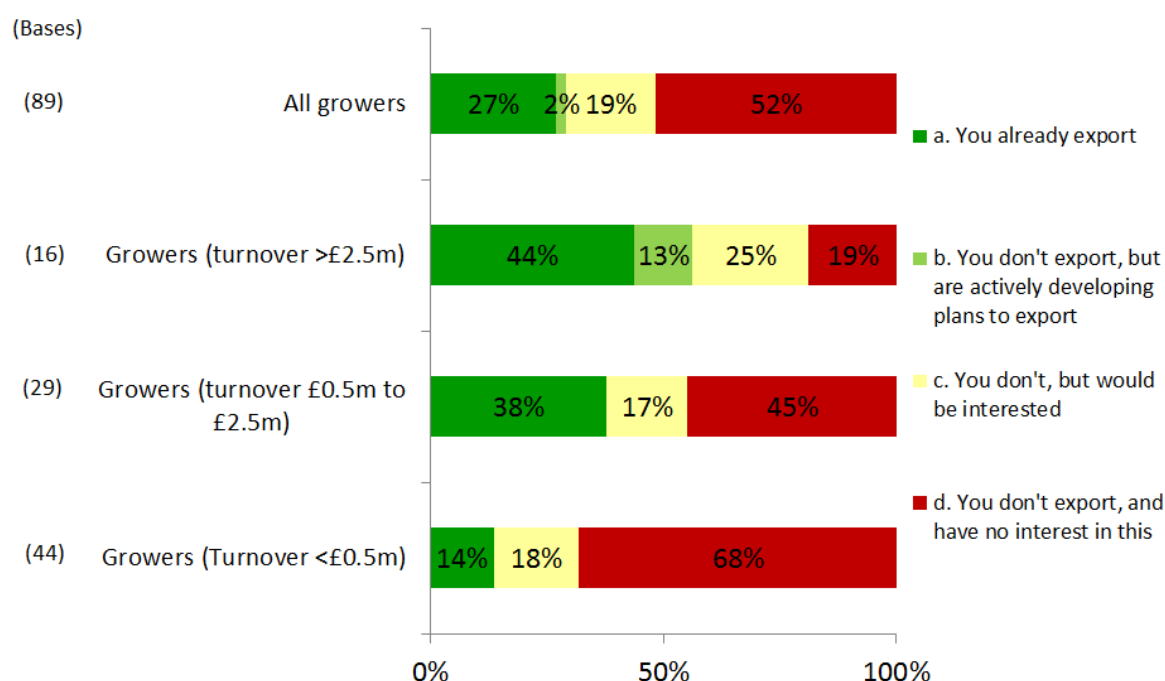


Figure 3: Proportion of UK growers exporting, interested in or considering exporting. Note the small sample size for growers with a turnover of more than £2.5m

The chart shows a clear correlation between business size and willingness to consider exporting. Among businesses turning over more than £2.5m per annum 81% are either already exporting or showing some level of interest. This suggests potential value for UK growers (particularly among larger hardy nursery stock producers) in developing export outlets.

Such support would need to address the key perceived barriers to starting exporting or developing existing export sales reported by UK growers. The following tables are based on growers' open-ended responses to the barriers they feel exist for their businesses in starting or developing exports.

Table 5. Growers' perceived barriers to beginning exporting

	Percentage of respondents mentioning
Price/cost competition	21%
Finding appropriate countries, customers or varieties to export	16%
Being paid by customers	11%
Transport/distribution logistics and costs	11%
It's not a priority compared with the domestic market	11%
Perceived lack of interest in UK plants or lack of a unique selling point	11%
Language barriers	5%
Exchange rate risks	5%
Others	32%

Sample size: 19 growers which do not currently export, but would be interested.

We can see that growers' main concerns (as with supplying the UK market) run immediately to price competition, followed by a lack of information on possible export markets or customers. Credit control across national borders is also a concern, as is the cost effective shipment and distribution of product overseas.

The following table shows the same information but based on grower businesses which are already exporting.

Table 6. Growers' perceived barriers to developing existing export business

	Percentage of respondents mentioning
Transport/distribution logistics and costs	33%
Perception that supply exceeds demand in EU markets	19%
Price/cost competition	10%
Being paid by customers	10%
Finding appropriate countries, customers or varieties to export	10%
Exchange rate risks	10%
Trade barriers or phytosanitary regulations	10%
Perceived lack of interest in UK plants or lack of a unique selling point	5%
Paperwork or bureaucracy	5%
It's not a priority compared with the domestic market	5%
Others	33%

Base: 21 growers which currently export.

In terms of addressing the barrier relating to lack of information on overseas markets, this project should provide a starting point for UK growers. The 'Overseas Markets Toolkit' spread sheet that accompanies this report provides data on ornamentals market size and growth rates on most EU and some other countries. Grouping countries together based on their per-capita spend on ornamental products and market growth rates identifies four broad categories of countries, two of which in particular may hold growth potential for UK growers.

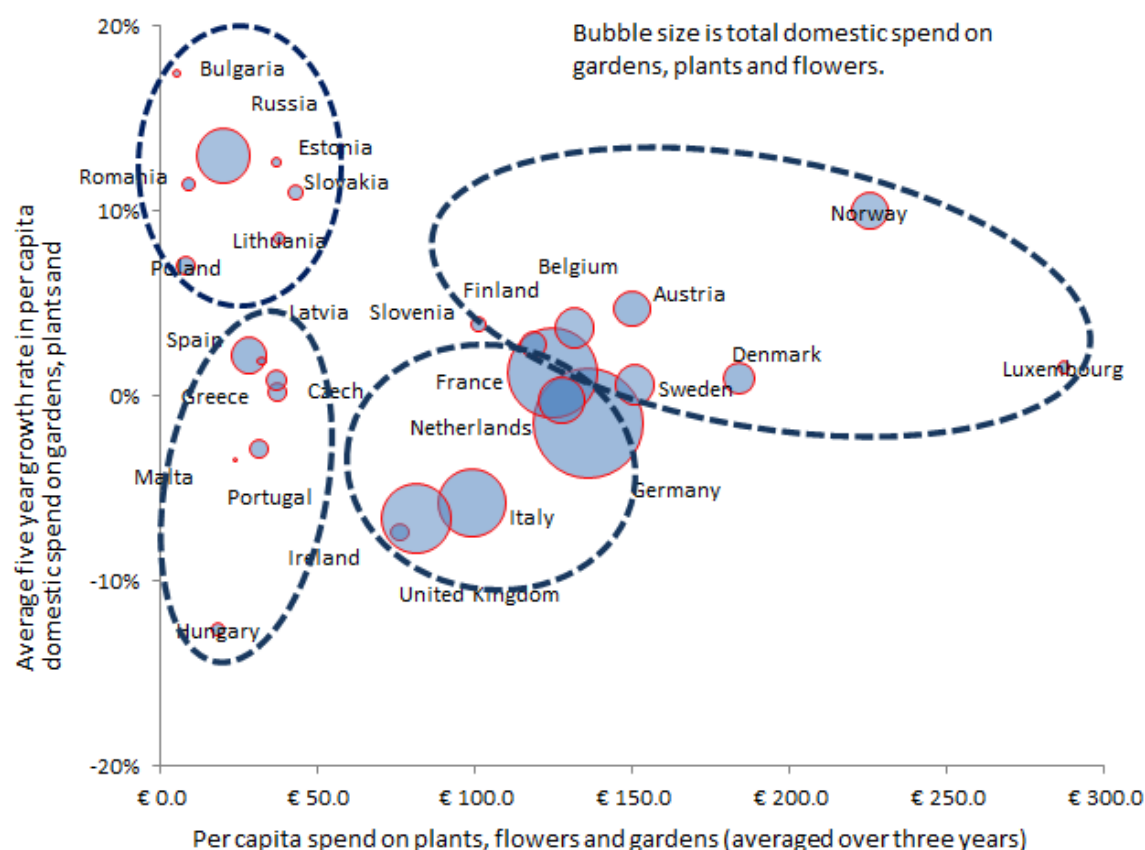


Figure 3: Four segments showing potential export markets' relative attractiveness

The Emerging East (top left) is made up mainly of former eastern bloc countries several of which have recently ascended to the EU. Spend on ornamentals is low in absolute and per capita terms, but growing rapidly. In most cases this growth is also seeing import growth.

Northern and Alpine Affluence (top right) is made up mainly of Nordic and alpine countries with high standards of living and high per capita spend on ornamentals. Access to detached housing (and presumably relatively large gardens) is also high in this segment. Growth rates are more modest than in the Emerging East segment, but still considerable and in many cases fuelled by import growth.

The **Squeezed South** (bottom left) segment is potentially less attractive and is characterised by low and falling per capita spend on ornamentals and gardens.

The **Mature Mainstay** represents mature markets where domestic production is often substantial and competition for UK exporters would likely be fierce.

Whilst the data provided cannot determine whether or not a country is more or less attractive than another (factors such as potential customer analysis and political stability are not reported for instance), this does suggest that there are several countries which may represent potentially attractive opportunities for UK growers in markets which have not yet matured.

Financial Benefits

This research has identified a potential opportunity of roughly £70m per year in import substitution sales opportunities for UK growers supplying to specialist garden retailers. It has also provided – in a single place – basic market metrics on over 25 potential European export markets. Working on a conservative assumption that gathering, collating and analysing this data from scratch would take 30 man hours, and that the data will be used by 50-100 growers either currently exporting or planning to export, this research project has delivered efficiencies for UK growers of 1,500 to 3,000 hours.

Action Points

There are several potential actions from this research. Data on the value of the sector should be used by bodies such as (but not limited to) the HDC and HTA when representing the interests of growers to stakeholders such as policy makers and the media. There may be benefits in UK growers (perhaps through their representative bodies and in partnership with specialist garden retailers) exploring and further defining opportunities to increase efficiency in the UK supply chain for ornamentals into the retail sector through improved systems, information and distribution processes. Although outside of the scope of this project, retailers of plants such as supermarkets and DIY multiples should be engaged in any such work. As well as increasing the prospect of import substitution in the sector, this has the potential to increase value in the supply chain of existing sales of UK ornamentals into retail.

The data on overseas markets, along with this report, will be made available to HDC levy payers. Gardenex and the Commercial Horticulture Association should also be briefed on the findings and engaged in reviewing ways in which it can be used to support UK growers in developing export businesses.

There are also potential opportunities for import substitution not explored in detail in this project (for instance in amenity supply). Further research could be conducted among amenity customers to assess levels of reliance on imports, and identify action points for UK amenity suppliers to develop business from import substitution.

SCIENCE SECTION

Introduction

In the context of one of the worst economic downturns since the Wall Street Crash, government policy is increasingly likely to be guided by evidence of potential benefits to the UK economy. This presents challenges insofar as relatively little data exists on the value of UK ornamentals production. Certainly detailed information such as the value of different crops and different sectors supplied by growers was lacking at the start of this project. This has created challenges in demonstrating the economic value and potential of ornamentals production to policy makers.

This lack of data is also a handicap in terms of investigating specific opportunities for UK growers to develop and deliver sales and economic growth. Two of these revolve around international trade flows. Firstly, the scale of the opportunity for UK growers to win share from overseas growers supplying ornamentals to the UK was unknown. A second unknown was the extent of opportunities for exporting ornamentals. Furthermore, data on the potential size and potential attractiveness of overseas markets was not easily accessible for UK growers.

To address these issues, the HDC commissioned the Horticultural Trades Association (HTA) to run a pilot research project to fill some of these information gaps, and to provide a detailed analysis of the opportunity for UK growers to increase sales and substitute imports in the specialist garden retailer sector (e.g. among specialist garden centres and retail nurseries). The objectives of the research were:

- To estimate the value of imported ornamental plants to the UK
- To estimate the value of imported ornamental plants as a proportion of UK plant sales
- To provide a breakdown of the channels into which UK growers supply different crops
- To assess and rank the attractiveness of different export markets for UK ornamentals growers
- To identify UK ornamentals growers' perceived barriers to exploiting export markets.

Materials and methods

The research methodology comprised three broad workstreams. These were:

- Desk research examining, collating and interpreting published market data
 - e.g. published trade flow data and UK market size data
- An online survey of UK ornamental growers
 - Looking at sales figures and perceptions of barriers to sales growth through import substitution and exporting
- An online survey of UK specialist garden retailers (e.g. specialist garden centres and retail nurseries)
 - Into sales of different ornamentals crops, views on the strengths and weaknesses of UK ornamentals growers, and ratings of UK ornamentals growers

Desk research

The project made use of published trade and other economic data to estimate the size and characteristics of different European markets for ornamental horticulture. The main sources of this data were Eurostat and the International Trade Centre.

Eurostat was used to derive time series data for the following characteristics of different European countries:

- Adult population
- GDP growth rates
- Types and numbers of housing available (as a proxy for the likely availability of gardens – e.g. because flats are less likely to have a garden than a detached house)
- Absolute and per capita household spend on gardens, plants and flowers
 - This definition is largely floricultural and excludes spend on ‘hard’ garden products such as tools and garden furniture

Data from the International Trade Centre was mined on the value of plant, bulb and cut flower imports into different countries over time.

The data from the two sources is used to group different countries into clusters or segments based on their total market value and growth rates, and the extent to which any market growth is met by imports. The detailed information on each country is collated into a single

spreadsheet workbook enabling growers to pick specific countries of interest and very quickly get a feel for any relevant metrics. This spreadsheet also contains guidance for growers on how the different metrics are relevant for selecting potentially attractive export markets for further investigation or research.

The same data source is used to collate a headline value of plant imports into the UK (split into bulbs, live plants, and cut flowers), which is cross referenced with the value estimates of UK grower production generated from the survey of growers in this project (see below), giving a comparison between UK production estimates and imports.

Finally the HTA's *Survey of Wages and Labour costs in Ornamental Horticulture 2013* is referenced to provide estimates of the number of jobs which may be generated for the UK economy from different levels of import substitution. This survey measures average salaries for different roles in ornamentals grower businesses, and measures the ratio of staff costs to turnover in these businesses. In 2013 the figure was 29%. This allows a value estimate for import substitution to be 'translated' into a notional number of jobs which could be provided to the UK economy from a given level of sales increase. For instance:

£1m of plant imports substituted:

- 29% of grower turnover goes to staff costs = £290,000
- Average salary of general nursery worker = £15,500
- Estimated cost of general nursery worker = £20,000
 - e.g. salary + pensions, NI, and on-costs
- $£290,000 \div £20,000 = 14.5$ full time equivalent general nursery worker jobs per £1m of plant imports substituted

Online survey of growers

In November and December 2013, HTA ran a survey of ornamentals UK growers asking about the value of their sales broken down by crop and customer sector.

A working assumption going into the project was that the greatest opportunity for import substitution for UK growers was likely be in winning a share of plants imported by garden centres and retail nurseries for sale to the general public. This was based on the assumption that the UK retail market for ornamentals is the biggest customer for UK growers, and that within this specialist garden centres and retail nurseries account for the

greatest share (as opposed to DIY stores or other retailers such as supermarkets). Put simply, the opportunity here is akin to increasing sales of existing products to existing customers. The survey of growers was designed to test and quantify this both as an end in itself, but also to inform and prioritise any potential future work or research into import substitution opportunities. For instance the survey is designed to show whether ornamentals sales to amenity customers in specific crops are more or less valuable than sales (for instance) to DIY stores.

Businesses were contacted via HDC regular communications to ornamentals growers and through the HTA's database of 341 businesses (which is not restricted to HTA members). To encourage response and to ensure as representative as possible a sample (by minimising self-selection bias), the survey was incentivized by the donation of £2 per completed response to charity and entry for the respondent into a prize draw. In this way respondents will be as likely to be motivated to respond by the incentive rather than the subject matter of the survey. Additionally businesses which did not respond to the initial email invitation to the survey were telephoned to ensure receipt of the survey and to reassure the company about the purpose and aims of the research. The option to print out and return the questionnaire was also given.

Overall 138 partial responses were received, although after data cleaning and validation a total of 80 full responses were achieved (12.3% of the approximate population of 650 ornamentals growers). Little information exists on the profile of the population of ornamentals growers in terms of what crops are grown, what the size of the business is and so forth. However validation of the representativeness of the results from the achieved sample is possible by comparing the data generated from this survey with that generated from the retailer survey. Of course, as this survey in itself is based on a similarly low number of respondents we need realistically to expect some variance between the two surveys, however broadly similar results between the two would suggest a level of validity in the results. Similarly comparing the total market value estimates of production from this survey with existing published estimates of sector and market size was conducted. As far as it is possible to tell, the survey of growers appears to be generating broadly representative market and channel size estimates (except for some exceptions flagged in the text). Although a sample size of 80 needs to be treated with some caution, cross referencing in this way suggests that the results generated from the survey of growers are broadly sound.

Online survey of specialist garden retailers

As noted, at the project outset it was felt that specialist garden centres and retail nurseries represented one of the most attractive opportunities for import substitution for UK growers. This is on the assumption that a majority of UK growers supply garden centres to some extent, and therefore not only produce the crops that garden centres are importing, but also have existing trading relationships which they can develop, on the grounds that is generally easier to increase sales of existing products to existing customers than targeting completely new customers or sectors.

An email invitation to an online survey was sent in November with reminders through December 2013 to all specialist garden retailers for whom the HTA had a valid email address and contact on the HTA's database. This was a total of 1,176 businesses (NB – the sampling unit for the survey was a business, not individual outlets). As with the survey of growers, response was incentivised by a prize draw and a donation of £2 to charity for every completed response. This generated 126 partial responses, and 79 fully completed responses after validation checks and data cleaning. This level of drop out is fairly typical given the subject matter of the survey, which asks about sensitive data such as breakdowns of sales figures. Two of these responses were from fully online/distance retailers, and their responses are quite atypical of store-based garden centres in terms of sales value and mix. As such their responses have generally been discounted from analyses of specialist garden centres and retail nurseries except where noted. The 77 businesses responding account for 100 retail outlets and are broadly representative of the HTA membership in terms of business turnover which accounts for a large majority of garden centres and retail nurseries by turnover. The following chart shows the proportion of HTA retail members whose turnover falls into a given band compared with the businesses responding to the achieved sample. It shows that the achieved sample is broadly representative of the sector, and that results are therefore likely to be representative of the population of garden centres and retail nurseries.

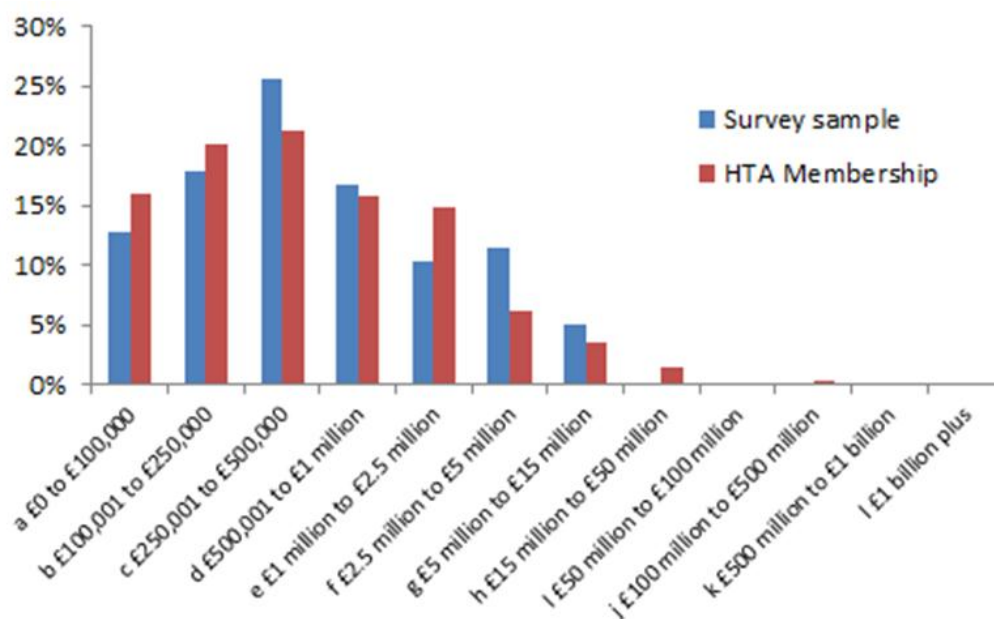


Figure 4: comparison of the annual turnover of respondents in the retailer survey sample and the specialist garden retailer population (HTA list of specialist garden retailers) to assess survey sample representativeness.

The survey asks respondents about their total sales of different crops (mirroring the survey of growers), and of these crops the proportion of their sales accounted for by imports. This allows estimates to be created of the import substitution opportunities for UK growers in different crops in this sector. It also helps to validate the results of the grower survey (e.g. if the pattern of sales of different crops is broadly similar in each survey we can have increased confidence in the findings).

The survey also asks respondents to rate different aspects of the products and service UK growers provide, and asks about what they would like to see UK growers do in order to attract spending they currently make with overseas growers. The responses to this question are contrasted with responses to a similar question in the grower survey. This allows a gap analysis to be conducted between what growers see as the barriers to competing in the UK with overseas growers, and what specialist garden retailers see as the issues.

General point on the methodology

The survey research was conducted according to the code of conduct of the Market Research Society. In particular the surveys were conducted on a confidential basis. The specific named responses of individual businesses responding to the survey are not published or available as part of this report or any supporting appendices.

Results

The results of the project are reported in two sections. The first covers the findings relating to research objectives around measuring and understanding import substitution opportunities for UK growers and their potential impact on the UK economy. The second section covers findings and information relating to measuring and understanding export opportunities for UK growers. This second section references an 'Overseas Markets Tool Kit' which contains key market metrics on different potential export markets for UK growers. This is published in an Excel spread sheet format separate from this report for ease of use by levy payers.

Results and findings on import substitution opportunities

Main findings from the grower survey and trade data on production & import values

UK growers supply different ornamental crops to different sectors. Within each crop and each sector there are different levels of opportunity for UK growers to win market share currently held by overseas growers supplying into that sector. As noted in the method section, the scope of this study is to provide an overall assessment of import values relative to UK production values across agreed sectors and crops. We then examine in more detail the specific opportunity for import substitution within the specialist garden centre and retail nursery section, which is the particular focus of this study.

The following table outlines the different crops and sectors for which data was collected from growers about the value of their sales of different crops to these different sectors. Detailed crop definitions helping respondents clarify what types of plant should be counted in which category were provided in the questionnaires and are provided as an appendix to this report. Sales to 'other growers' were collected so as to be able to eliminate 'double counting' in any production/grower output value estimates.

Table 7. Illustration of the structure of channel and crop data collected from growers (data intentionally blank).

	Other UK growers	Consumers direct	Specialist garden retailers	DIY stores	Other retailers	Amenity customers	Forestry	UK pack houses	Export	Other
Bedding plants										
Hardy Nursery Stock										
Herbaceous Perennials										
Edible ornamentals										
House plants										
Dry bulbs										
Other garden plants										
Cut flowers										

The survey responses captured grower sales (excluding VAT) of £133 million, falling to £117 million taking account of the value of reported sales to other UK producers for growing on. Extrapolating these figures up to the estimated population of UK growers provides an output estimate of £951 million for UK producers. Two limits to the data were the level of response and reported sales for cut flowers and dry bulbs which makes the reported values for these crops potentially unreliable.

For dry bulbs few responses to the survey were received from dry bulb specialists. This has resulted in a survey estimate of just £2.6 million (far below the known turnover of both of the known major UK bulb producers). For this reason although the survey results for bulbs are reported, they are annotated to highlight the lack of reliable market size data. Based on known or estimated sales reported by major UK bulb producers, the real value of UK bulb production is likely to be in the low tens of millions of pounds per year (a qualitative estimate is around £30 million). The effect on the overall value estimate for UK ornamentals production is therefore to take the overall estimate value to very slightly less than £1 billion in the year August 2012 to July 2013.

For cut flowers the grower survey showed very few growers selling this crop. The survey of specialist garden retailers showed cut flowers accounting for a very small proportion of garden centres' retail sales of ornamentals. For this reason analysis of cut flowers and import substitution is provided as an appendix to the main data.

Finally the reported value of exports from the survey (£77.9m or 8% of the total) is skewed by a small number of respondents having atypically large export businesses. International Trade Centre data puts the value of the UK's exports of ornamental plants, bulbs and cut flowers at around £46 million for the calendar year 2012). We therefore estimate that around 5% of UK grower production is going to export as opposed to the 8% implied by the survey results. The current levels of exports of different ornamentals crops in the grower survey should therefore be treated and interpreted with this potential margin of error in mind, as should any estimates for particularly small 'cells' in the data where estimates are based on small sample sizes.

Table 8. Estimated value (ex VAT) of UK grower production by crop and sector (August 2012 to July 2013) as derived from the survey of growers (base = 80 respondents).

	Consumers direct	Specialist garden retailers	DIY stores	Other retailers	Amenity customers	Forestry	UK pack houses	Export*	Other	Total
Bedding plants	£4.3m	£74.4m	£94.9m	£52.4m	£9.4m	£0.0m	£0.0m	£3.9m	£3.2m	£242.4m
Hardy Nursery Stock	£56.4m	£185.5m	£36.5m	£27.5m	£158.5m	£1.1m	£0.0m	£63.3m	£20.8m	£549.5m
Herbaceous Perennials	£3.2m	£62.9m	£2.2m	£2.6m	£23.9m	£0.0m	£0.0m	£1.3m	£1.0m	£97.1m
Edible ornamentals	£1.0m	£17.0m	£0.7m	£3.0m	£0.5m	£0.0m	£0.0m	£0.4m	£0.3m	£22.9m
House plants	£0.1m	£7.0m	£0.0m	£8.7m	£0.0m	£0.0m	£0.0m	£0.0m	£0.1m	£15.8m
Dry bulbs ♦	£0.0m	£0.2m	£0.1m	£0.8m	£0.4m	£0.0m	£0.0m	£1.1m	£0.0m	£2.6m♦
Other garden plants	£0.2m	£1.8m	£0.0m	£0.4m	£0.0m	£0.0m	£0.0m	£0.3m	£0.0m	£2.7m
Cut flowers♦	£2.2m	£0.0m	£0.0m	£2.7m	£0.0m	£0.0m	£2.3m	£7.8m	£3.0m	£17.9m♦
Total	£67.4m	£348.8m	£134.3m	£98.1m	£192.7m	£1.1m	£2.3m	£77.9m*	£28.4m	£950.9m

Caveats and notes on estimates:

♦ The grower survey did not achieve adequate responses for robust estimates of dry bulbs and cut flowers to be generated. The total estimated production value for dry bulbs is in the region of £30m based on known turnover of major UK bulb producers, taking overall production values to around £980m. Cut flowers production values are estimated at between £18 and £32 million (see appendix for method for achieving this estimate).

* The value of exports is skewed by a small number of responses with atypically big export businesses in the survey sample. International Trade Centre data for 2012 (calendar year) estimates the value of UK exports of these crops to be in the region of £47m (using a £ to Euro conversion rate of 1:1.24)

This result tends to confirm the working assumption made at the start of the project that UK specialist garden retailers are the biggest sector in terms of buying ornamentals from UK growers. It also provides a headline figure against which the value of imported ornamentals can be assessed to generate an overall measure of total import substitution opportunity for UK growers.

Because of the complexity of the supply chain and the lack of clear definition of what constitutes a UK produced plant (e.g. does a petunia grown on a UK nursery from Dutch reproductive plant material and supplied to a UK garden centre count as a UK plant?) such estimates are necessarily crude – in the absence of detailed trade data tracking plant material through the supply chain truly accurate estimates are impossible or at best impractical to achieve. However the approach used does provide a credible headline economic measure on which to base an understanding of the potential economic benefits of import substitution across all sectors and crops. The following table shows the 2012 calendar year data of imports of ornamental plants into the UK sourced from the International Trade Centre:

Table 9. Value of imports of different crops into the UK 2012.

	Bulbs and live plants	Cut flowers	Total
Value (Euro)	€ 402m	€ 742m	€ 1,144m
Value (£ sterling)	£324m	£598m	£922m

Although the time frames for the grower survey and the ITC data do not exactly overlap, this nevertheless allows an approximate comparison to be made.

Table 10. Value of imports of different crops into the UK 2012².

	Bulbs and live plants	Cut flowers	Total
Import value	£324m	£598m	£922m
UK production value	£960m ³	£18m	£978m
Total 'output' value of ornamentals⁴	£1,284m	£616m	£1,900m
Percentage accounted for by imports	25%	97%	49%

² These prices should be taken as 'farm gate' prices – e.g. they will not include mark ups added by retailers.

³ This figure is derived by taking the data from the grower survey, but substituting an estimated £30m of bulb sales for the survey under-estimate of £2.6m

⁴ E.g. the value of ornamentals supplied to retailers or end users of ornamentals such amenity, forestry, retail buyers. There is some potential for double counting insofar as some imports may be going to UK growers for growing on, however within the practical limits of the research methodology, as noted we are unable to account precisely.

We can see that cut flowers as a crop follows a very different pattern from other crops, with imports vastly exceeding UK production. For crops that are more easily categorised as live garden or house plants the ratio is different. For this reason subsequent discussion of import substitution opportunities focuses on crops other than cut flowers which are discussed in an appendix of their own.

In practical terms it would be impossible for UK growers to substitute 100% of imported products. Imports are always likely to be needed for exotic plants or others which do not grow well in our climate. However using the formula outlined in the method section of this report showing how many notional general nursery worker jobs could be provided by different levels of import substitution, the £324m of imported bulbs and live plants represents the potential for UK growers to create the notional equivalent of 4,700 general nursery worker jobs.

As noted, the grower survey shows that UK growers collectively sell most product (by value) to specialist garden retailers (e.g. garden centres and retail nurseries). Sales to this sector are estimated at £348.8m (c. 37% of UK ornamentals grower sales). The following chart shows the relative scale of UK growers' sales of ornamentals (excluding cut flowers) to different sectors. Sales to retail account for around two thirds of the total, with garden centres and retail nurseries predominating.

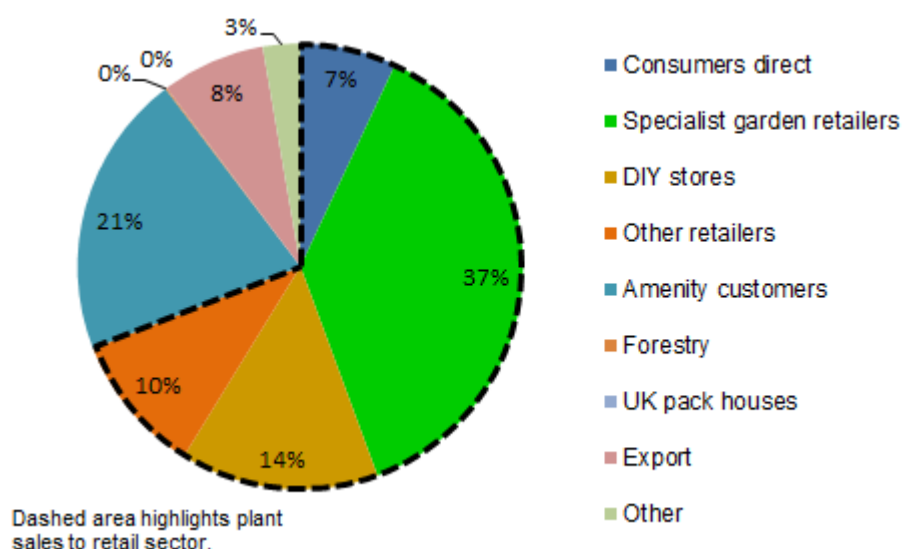


Figure 5: breakdown of UK growers' sales to different sectors base on the grower survey results. (NB – as noted previously this survey result may slightly over-estimate exports)

The survey of retailers conducted in this project provides a detailed breakdown about the extent to which there is an opportunity for import substitution for UK growers among the garden centres and retail nurseries who account for 37% of growers' sales, and around 54% of sales to retail purchasers. Before progressing to a detailed analysis of the retailer survey results however, it is worth validating these figures and their relation to total market value estimates of the retail market for live plants.

The HTA, as part of its analysis of the garden retail market, tracks the value of consumer spending on garden plants, seeds and bulbs. This is based on Kantar Media's TGI survey, which asks 24,000 British adults aged 15+ each year about a variety of topics, including their spend on garden products. This is not a precise match in terms of the categories covered in the surveys designed for this project. Specifically, house plants are excluded from the TGI survey measure but included in the surveys for this project. The reverse is true for seeds, however broadly speaking they cover similar product types. The latest market estimate available to HTA from this data puts the value of consumer spend at £1,438m as of 2012, falling from spend of £1,625 in 2011.

It is also possible to derive an estimate of spend on gardens and plants and flowers from Eurostat data. This shows household spend on these products as worth €4,062m (£3,276m). Mintel provide an estimate from 2008 of consumer spend on house plants and cut flowers of £2.2 billion. British Cut Flowers provides a market estimate (unsourced) of £1.5 billion per annum. Taking a mid-point from these two estimates of £1.85 billion and subtracting it from the £3,276m figure derived from Eurostat data gives an estimate of retail sales on garden and live plants of £1,426 million. Given the poor weather and trading conditions for garden retailers in 2012, and the similarly poor weather conditions reported through much of the key plant selling season in 2013 (with record cold temperatures through March and early April), we might reasonably assume similar levels of retail sales for 2013 as in 2012.

Table 11. Estimated retail market value (incl. VAT) of garden plants.

	HTA/TGI estimate 2012	Eurostat derived estimate
Import value	£1,438m	£1,426m

Findings on specialist garden retailers' sales of ornamentals plants

The survey of specialist garden retailers asked respondents to report the total value of their sales (ex. VAT) and to indicate the proportion of total sales plants accounted for. Across 76⁵ responding businesses (who account for 95 outlets) plant sales (excluding cut flowers) accounted for 32.3% of total store sales.

Across the 77 responding businesses which account for 100 outlets, the average total sales of ornamental plants (excluding cut flowers) was £389,590 per business (e.g. £299,984 per store).

This allows us to estimate the 'market share' of the retail plant market held by the specialist garden retailer sector (e.g. garden centres and retail nurseries). Applying VAT to and multiplying £299,984 by the estimated 2,400 specialist garden retail outlets in the UK gives a figure of £864m of plant sales by UK garden centres and retail nurseries. Running the calculation another way, among the 76 businesses accounting for 95 stores for whom we can derive turnover estimates, their average turnover per store comes to £1.006m (incl. VAT). Multiplying this by the 2,400 specialist garden retail outlets in the UK and multiplying the resulting figure by 32.3% gives a garden centre/retail nursery total sales estimate of £780m

That equates to a 'market share' by garden centres and retail nurseries of around 55-60%, although this figure should be treated as an indicative rather than definitive figure given the different market definitions used by Eurostat, the TGI survey, and the relatively small sample sizes involved in our survey of retailers (n=77). This proportion however is broadly in line with the proportion of growers' sales accounted for by this type of retailer within their total retail sales (see figure 5).

As well as helping to validate the survey findings, this tends to confirm the working assumption made at the start of this project that garden centres and retail nurseries are potentially one of the most promising opportunities for import substitution for UK growers insofar as existing trading relationships exist and substituting imports in the specialist garden retail sector amounts to winning more spend from existing customers for UK growers.

⁵ One respondent provided sales for plants but not a response to the question relating to the proportion of turnover accounted for by plants. Therefore the base for this calculation is 76, not the usual 77.

The survey of retailers asks retailers to record what proportion of their sales for each ornamental crop covered by the study are accounted for by imported stocks. This enables us to calculate the potential opportunity for substituting these products for UK growers, but also provides information on which crops represent the biggest opportunities for import substitution within the specialist garden retailer sector.

The following table shows the relative value of sales of different ornamental crops in the specialist garden retailer channel. Broadly speaking and allowing for margins of error due to the small sample sizes in each survey the profile is broadly similar to that reported by growers in the grower survey (see Table 8) which shows hardy nursery stocks as the highest value category followed by bedding and then herbaceous perennials.

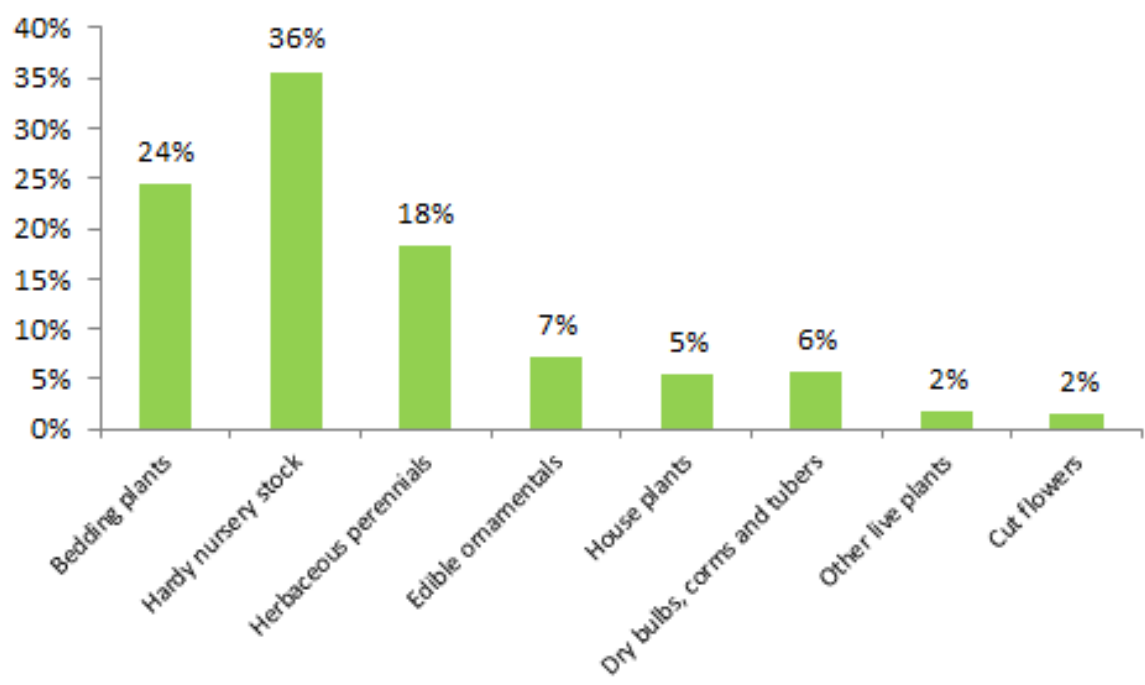


Figure 6: Proportion of specialist garden retailers’ plant sales accounted for by each crop.
Sample size = 77 specialist garden retailers

The survey of retailers asked for the proportion of these sales that are accounted for by imports. The following chart shows the proportion of sales in each ornamental category that were accounted for by imports.

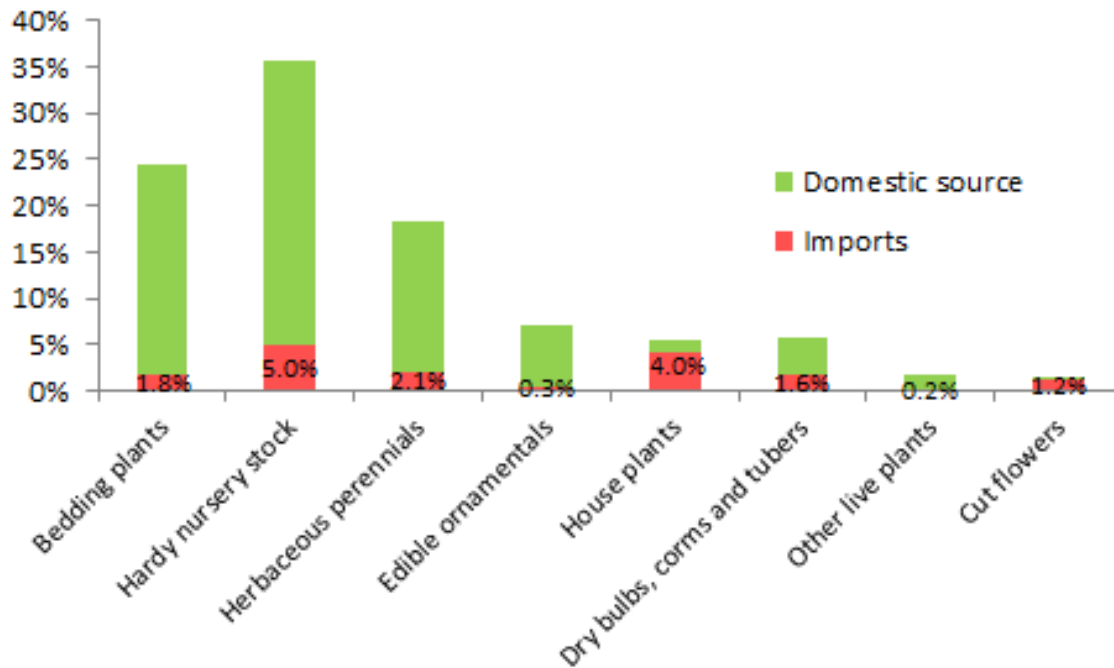


Figure 7: Proportion of specialist garden retailers' plant sales accounted for by imports shown for each crop. Sample size = 77 specialist garden retailers.

We can see that use of imports is most pronounced in specialist garden retailers in hardy nursery stock and house plants. Indeed although house plants account for a small proportion of plant sales, the majority of house plants are imported. Within the hardy nursery stock category 13.9% of sales by value are accounted for by imports, which accounts for 5% of total plant sales. Across all plant categories the proportion of plant sales accounted for by imports is 16.2% (15.2% excluding cut flowers).

Using the estimates of total plant sales in the specialist garden retailer sector we are able (very broadly) to 'work backwards' through the supply chain taking into account notional retailers' margins and estimate the potential value of import substitution to UK growers. Taking an estimate of total garden centre sales of live plants of £822m (the mid-point of the two estimates derived from the survey of retailers), we can remove VAT (£685m) and remove an assumed retailer markup of 50%. This leaves a figure of £457m spent by specialist garden retailers buying in plants. Applying 15.2% (the percentage of sales accounted for by imports) to this gives an estimate of £69m of potential sales to specialist garden retailers that could be won by UK growers were all imports in the sector to be substituted. We can validate/triangulate this estimate by comparing it with our estimate from the grower survey of total sales UK growers make to specialist garden centres. 37% of

growers' total sales of around £980 million⁶ were to specialist garden retailers (£363m). Adding the estimated £69m of plant buying which specialist garden retailers spend with overseas growers gives a figure of £432m of plant buying by UK specialist garden retailers, which is reasonably close to the £457m estimate of plant buying by UK specialist garden centres we achieve by working backwards from the results of the survey of retailers.

This suggests that the estimate of £69m (excluding VAT and at producer prices) of ornamentals being imported by UK specialist garden retailers is reasonably robust and certainly credible. This £69m accounts for around a fifth of the total imports of £324m of ornamentals (excluding cut flowers) into the UK. The remainder will be accounted for by imports brought into the UK by sectors not covered in this study such as amenity customers, general retailers such as DIY stores and supermarkets, and UK growers and breeders importing plants and plant reproductive materials. In terms of economic impact, this £69m has the potential to add a notional extra 1,000 general nursery workers⁷ full time equivalent jobs to the UK economy.

Ways for UK growers to win sales through import substitution

Having established a reasonable estimate of the 'size of the prize' and the crops in which the opportunity is likely to be biggest, the remainder of this section will focus on how UK growers could, individually or collectively increase their sales.

Both the survey of growers and the survey of retailers contained open ended questions relating to this. Growers were asked about the barriers they felt exist to winning more sales that are currently going to overseas growers. Retailers were asked a similar question relating to what they felt growers needed to do in order to win spend currently going to overseas growers. The answers have been grouped into themes and compared to identify any gaps in perceptions between what UK growers feel they need to do to compete more effectively, and what specialist garden retailers want them to do in order to be more competitive.

The following table summarises the responses growers gave to the question about barriers to competing with overseas producers.

⁶ The total £951m estimate from the grower survey plus £30m of bulb sales that looks to be under-reported in the survey of growers.

⁷ See 'Method' section and the section 'Desk research' for details of how this estimate is generated.

Table 12. Barriers to competing in the UK for business won by overseas growers

	All growers	Hardy nursery stock growers
Price (including exchange rate variations and competing with product dumping)	41%	47%
Not having the same ranges offered by overseas growers, including crops that don't grow well in the UK or being a specialist in certain types of crop	13%	16%
Transport costs or difficulty delivering to buyers' time and volume needs	13%	20%
Being too small or unable to operate as a one stop shop	13%	13%
Buyers preferring overseas growers or stock or being apathetic about UK growers	10%	11%
No barriers	6%	9%
Lack of information (e.g. about demand)	6%	4%
Marketing costs	3%	4%
Other reasons	28%	27%

Base: 68 respondents (45 HNS growers). Percentages exceed 100% as some respondents list more than one barrier.

Overwhelmingly growers list price competitiveness as the main barrier to displacing imports, as well as 'natural' barriers such as an amenable climate for growing certain varieties. The other (albeit slightly less pronounced) barrier listed relates to being able to meet customers' demands for delivery of different size orders to the required deadlines.

By contrast, the specialist garden retailers put a much greater emphasis on UK growers needing to be able to deliver quickly and flexibly. Also they listed improvements in the ease of ordering plants, citing things such as a desire for imagery of what plants look like when they're being ordered, materials for use in marketing the plants in store, and improved information at the point of order about stock availability and delivery times. Price was listed as an important consideration, but not to the same extent as growers perceive it to be. The following table shows the most frequently mentioned suggestion areas by retailers. A separate column shows the suggestion areas given by 15 respondents who account for over 75% of import values recorded across the sample for the retailers. On a sample size of 15 respondents, these figures are indicative rather than statistically robust. This provides qualitative information on what retailers whose sales rely most on plant imports see as the key areas in which UK ornamentals growers need to improve in order to displace imports.

Table 13. Specialist garden retailers' suggestions for improvements UK growers could make to win business currently going to overseas growers

	The 15 respondents who import most plants	All respondents
Improve the delivery service	38%	42%
Improve the quality of plant information available when ordering	38%	15%
Be more competitive on price	31%	22%
Better plant labels , POS, and marketing materials or promotions	23%	13%
Have a wider range of forms and varieties available	23%	20%
Improve the quality of plants produced	8%	13%
Improve service (generally)	8%	5%
Stress the UK provenance of plants	0%	5%
Other	8%	24%

Sample size: 55 respondents (15 retailers accounting for around 80% of the value of imports across the sample show separately). Percentages exceed 100% as some respondents list more than one barrier.

The following table provides a further breakdown of the types of issues mentioned by respondents within the top two potential improvement areas:

Table 14. Specialist garden retailers' suggestions for improvements UK growers could make to win business currently going to overseas growers

	The 15 respondents who import most plants	All respondents
Improve the delivery service of which . . .	38%	42%
Improve the cost of delivery	0%	2%
Get better at delivering small volumes	0%	15%
Improve the speed and flexibility of delivery	31%	15%
Generally work with other growers to improve delivery	8%	11%
Improve the quality of plant information available when ordering of which . . .	38%	15%
Better information on availability of plants	23%	9%
Better information on plants, including images of the plant	15%	5%

The following quotes are taken verbatim from the responses retailers gave to provide a flavour of the types of suggestions being made:

“Offer larger volumes and offer more flexible delivery schedules often its quicker to get a delivery from Boskoop than the UK”

“Quicker delivery turn around. Better promotions. Better ordering facilities, like online ordering WITH PICTURES.” [respondent’s capitalisation]

“They need to collaborate more for shared transport as meeting minimum orders from five different growers for example is difficult and time consuming. Perhaps they should consider some type of cooperative marketplace with stock from different growers going onto one delivery”.

“Get a website going that we as retailers can look at with pictures of the actual plant, size, Price per plant, Price per shelf, Price per Trolley delivered. We as retailers can pick and choose all our plants the growers can pick and deliver to one hub, the people at that hub sort out deliveries to each retailer pre pricing and barcoding as they go then we get less lorries delivering one or two trolleys a week when we could have ten or twenty trolleys in one go all pre priced and barcoded ready to sell. I know it’s the Dutch system but it works I can order on Monday and get my order in Thurs/Friday”

This suggests that whilst growers are more focused on price, it shows that retailers, especially those who import most at present, are also focused on cost effective and timely fulfilment of orders to the garden centres. There is a correlation between the size of the top 15 importers in the retailer survey sample and overall business size. The average turnover of these retailer businesses was roughly three times as great as is the case for the sample as a whole. It may therefore follow (but cannot be proven from this study) that supply chain efficiency and effectiveness would also open up opportunities for import substitution in other types of larger retailers which sell plants, for instance in supermarkets or DIY chains. Such a hypothesis however would need further development and testing among buying teams in these businesses.

To quantify some of these themes, the survey of retailers asked respondents to rate UK growers in comparison with overseas growers on several dimensions. The following chart shows the ratings given by UK retailers to UK growers across several aspects of ornamentals plant supply.

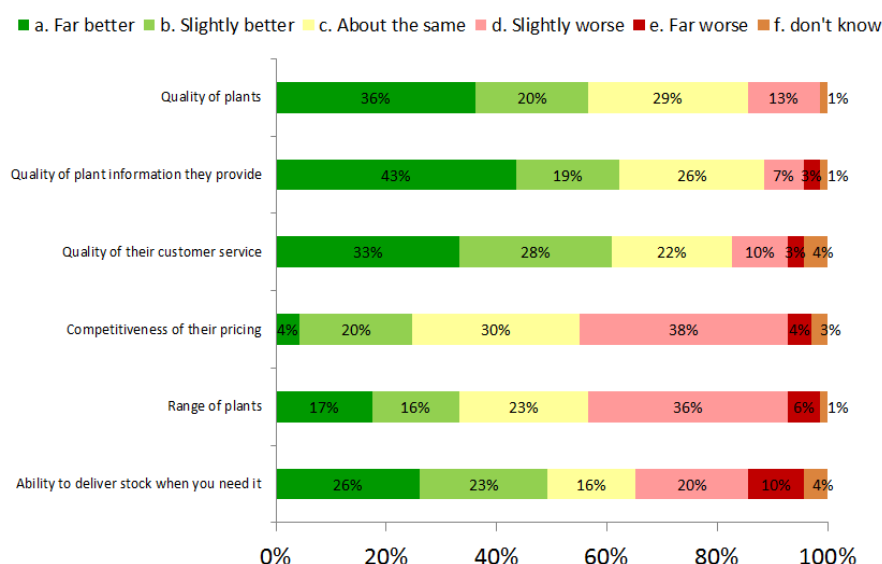


Figure 8: Specialist garden retailers' ratings of UK growers in comparison with overseas growers. Sample size = 69 specialist garden retailers who import plants.

Across all garden retailers who reported importing plants, UK growers generally scored well in terms of plant quality, customer service and product information. They scored less well compared with overseas growers in terms of their ability to deliver stock when needed, the ability to supply a wide range of stock, and on price. The following chart shows the same data, but based on the 15 retailers in the survey sample who account for over 75% of the value of imported plants sold by specialist garden retailers.

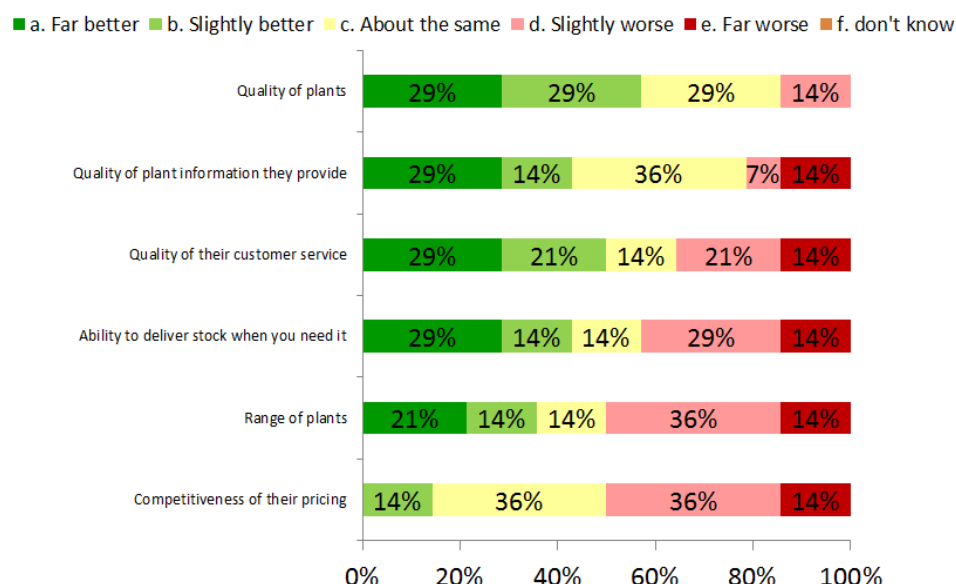


Figure 9: Specialist garden retailers' ratings of UK growers in comparison with overseas growers. Sample size = 15 specialist garden retailers who account for over 75% of reported sales of imported plants.

Overall the ratings are worse among relatively heavy importers compared with all importers. Plant quality and customer service still score very highly, however poor comparisons around stock delivery and price are more pronounced.

Results and findings on export opportunities for UK growers

As noted in the section on import substitution, our grower survey suggested that 8% of UK growers sales are accounted for by export sales, although analysis of International Trade Centre data suggests that the figure is nearer to 5%. This suggests that the UK market is the overwhelming focus of the majority of UK ornamentals growers, and that exporting is relatively undeveloped. Table 8 shows that 81% of UK growers' export sales by value were accounted for by hardy nursery stocks. This is consistent with this crop also accounting for the bulk of imports into specialist garden retailers, with the crop type being comparatively easy to transport compared with more fragile crops.

The survey of growers run as part of this project confirms this view, showing that a small minority of UK growers are currently exporting. The following chart shows the proportion of UK growers which are at different stages of 'export readiness', ranging from businesses which currently export through to those who currently express no interest in exporting.

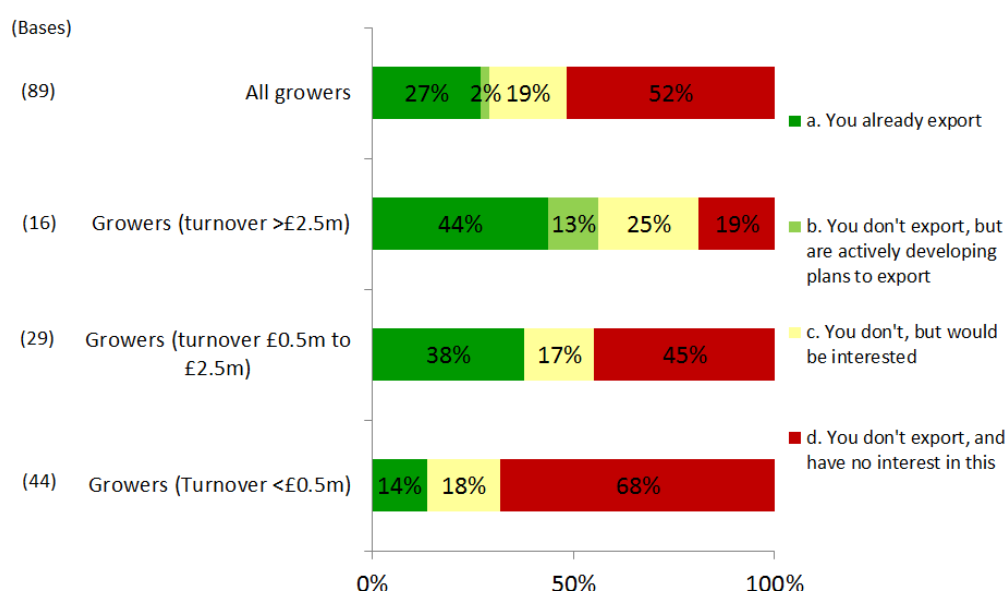


Figure 10: Proportion of UK growers exporting or considering exporting

The chart shows a clear correlation between business size and readiness to consider exporting. Among businesses turning over more than £2.5m per annum 81% are either already exporting or showing some level of interest. However among growers turning over less than £0.5m interest in exporting is relatively low.

Given the apparent potential for hardy nursery stocks as an export crop, the following chart shows the same information but is based on current growers of hardy nursery stocks. As might be expected it shows higher levels of current exporting and willingness to consider exporting in future.

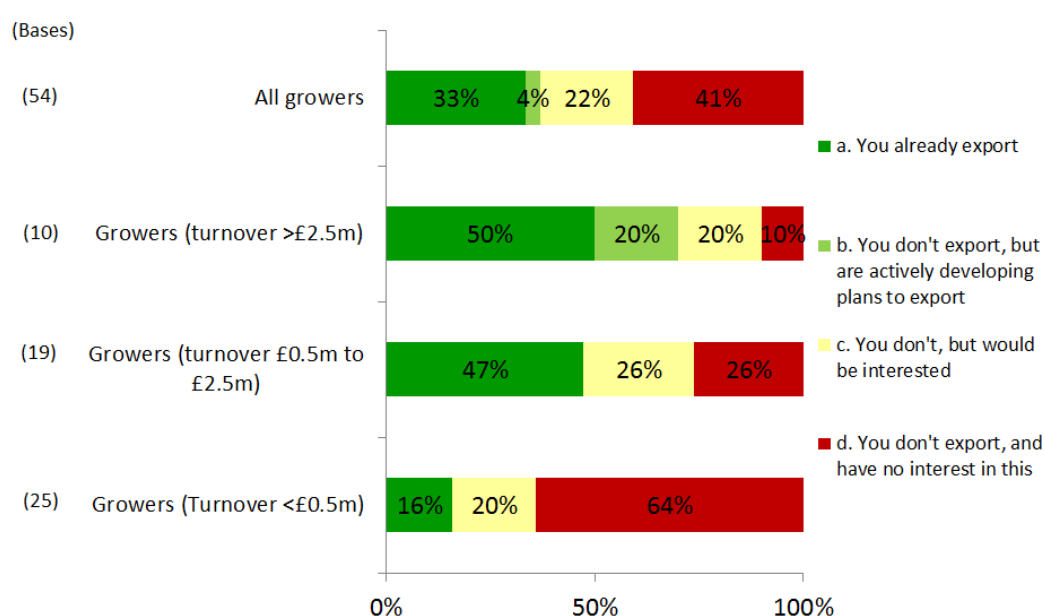


Figure 11: Proportion of UK hardy nursery stock growers exporting or considering exporting

Given an estimated population of 650 ornamentals growers, these figures suggest around 135 businesses which are potentially interested in starting exporting, and a further 175 which are currently exporting and which may value support in developing their export businesses. With this in mind, the survey of growers asked an open-ended question about what the respondents feel the main barriers are to starting exporting or developing their existing export businesses.

The following table shows what the perceived barriers to starting exporting are among businesses which are not currently exporting, but which would be interested in future.

Table 15. Growers' perceived barriers to starting exporting

	Percentage of respondents mentioning
Price/cost competition	21%
Finding appropriate countries, customers or varieties to export	16%
Being paid by customers	11%
Transport/distribution logistics and costs	11%
It's not a priority compared with the domestic market	11%
Perceived lack of interest in UK plants or lack of a unique selling point	11%
Language barriers	5%
Exchange rate risks	5%
Others	32%

Sample size: 19 growers which do not currently export, but would be interested.

We can see that growers' main concerns (as with supplying the UK market) run immediately to price competition, followed by a lack of information on possible export markets or customers. Credit control across national borders is also a concern, as is the cost effective shipment and distribution of product overseas.

The following table shows the same information but based on grower businesses which are already exporting.

Table 16. Growers' perceived barriers to developing existing export business

	Percentage of respondents mentioning
Transport/distribution logistics and costs	33%
Perception that supply exceeds demand in EU markets	19%
Price/cost competition	10%
Being paid by customers	10%
Finding appropriate countries, customers or varieties to export	10%
Exchange rate risks	10%
Trade barriers or phytosanitary regulations	10%
Perceived lack of interest in UK plants or lack of a unique selling point	5%
Paperwork or bureaucracy	5%
It's not a priority compared with the domestic market	5%
Others	33%

Sample size: 21 growers which do not currently export, but would be interested.

We can see that the importance of distribution logistics as a barrier is (qualitatively) higher among businesses with experience of exporting. Price and other competition also feature highly, as does a lack of market information on countries, varieties and customers to target for export development.

To begin to satisfy this need, the Overseas Markets Tool Kit (available as a spread sheet as part of this project's reporting provides market data on individual countries as potential export markets. Data provided includes:

- Adult population size
- Value of imports of
 - Bulbs, corms and tubers (non-edible)
 - Live ornamental plants
 - Cut flowers
- Total and estimated spend on gardens, plants and flowers over the past 10 years
- Details of the housing stock
 - % of housing which is flats, detached and semi-detached housing
 - To act as a proxy for the likely access to domestic gardens in the country
- An overview of the climate
- Recent trends in GDP growth

The tool kit is presented as a standalone tool for levy payers, and includes guidance for how the information can be used to identify markets for possible further research. To avoid duplication this detailed information is not listed in this report document.

However, as part of the report a segmentation of the countries for which data is reported has been provided. Its purpose is to provide a context for UK growers in understanding groups of potential countries which show some basic similarities in terms of market size and growth. The level of analysis and data in this report is not intended to provide comprehensive assessments and recommendations on entry into specific overseas markets. Such recommendations would need to be based on other information such as individual growers' strengths and weaknesses, and market factors such as political stability, customer and consumer needs, analysis of market structure, and so forth which are beyond the scope of this research. However this segmentation does provide a useful tool for UK growers to narrow down potential markets for further research.

Segmentation analysis of European countries

The following chart plots different European countries according to three criteria:

- Estimated adult per capita household spend on gardens plants and flowers⁸ (x axis)
 - Averaged over 3 years to smooth any weather or statistical variances
- Average five year percentage growth rate in per capita household spend on gardens, plants and flowers (y axis)
 - To give a feel for trends in market growth
- Total household spend (market value) on gardens, plants and flowers (bubble size)
 - To show the relative sizes of different markets

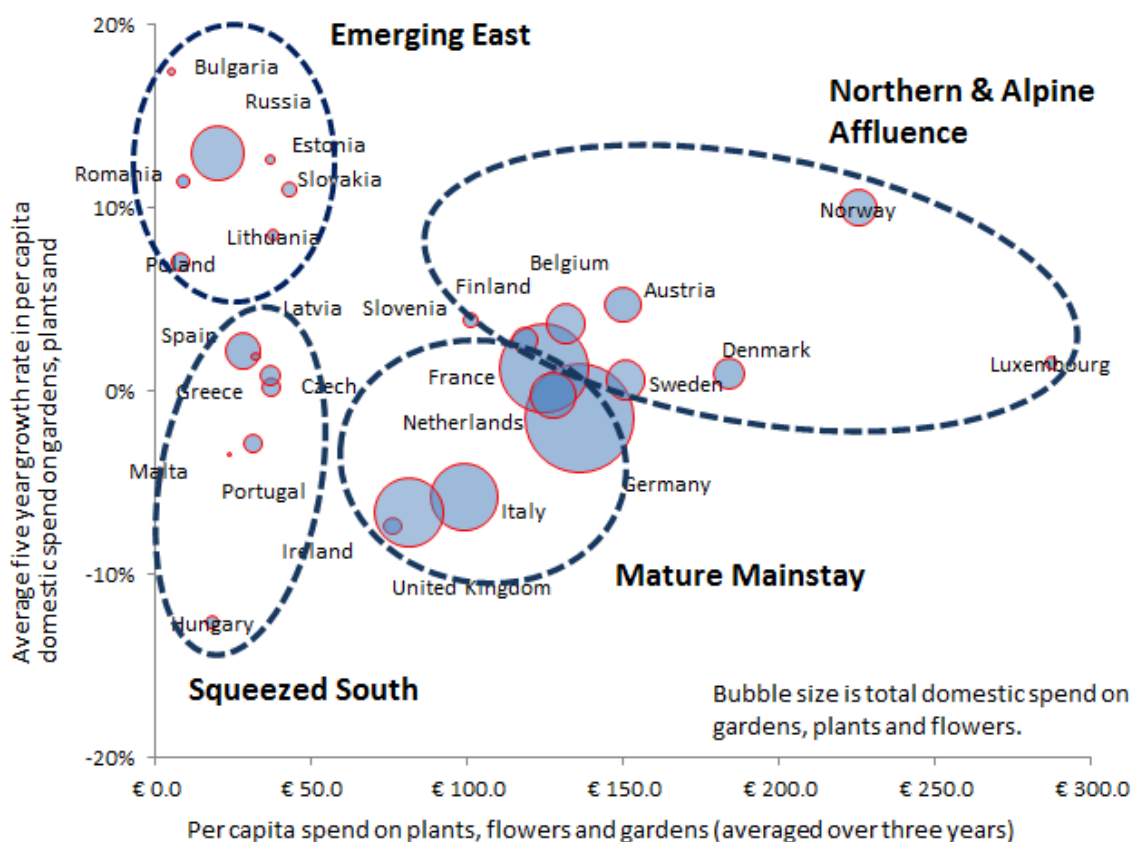


Figure 12: Four segments of potential European export markets for ornamentals growers

Four clusters of countries emerge from the analysis which are further refined by taking into account trends in their import levels of garden plants and bulbs (as opposed to cut flowers). The following chart shows the same data, except that the x axis is replaced by the average annual change in import values of ornamentals (excluding cut flowers).

⁸ The Eurostat data on which the chart is based does not enable cut flowers to be split out of the total figures.

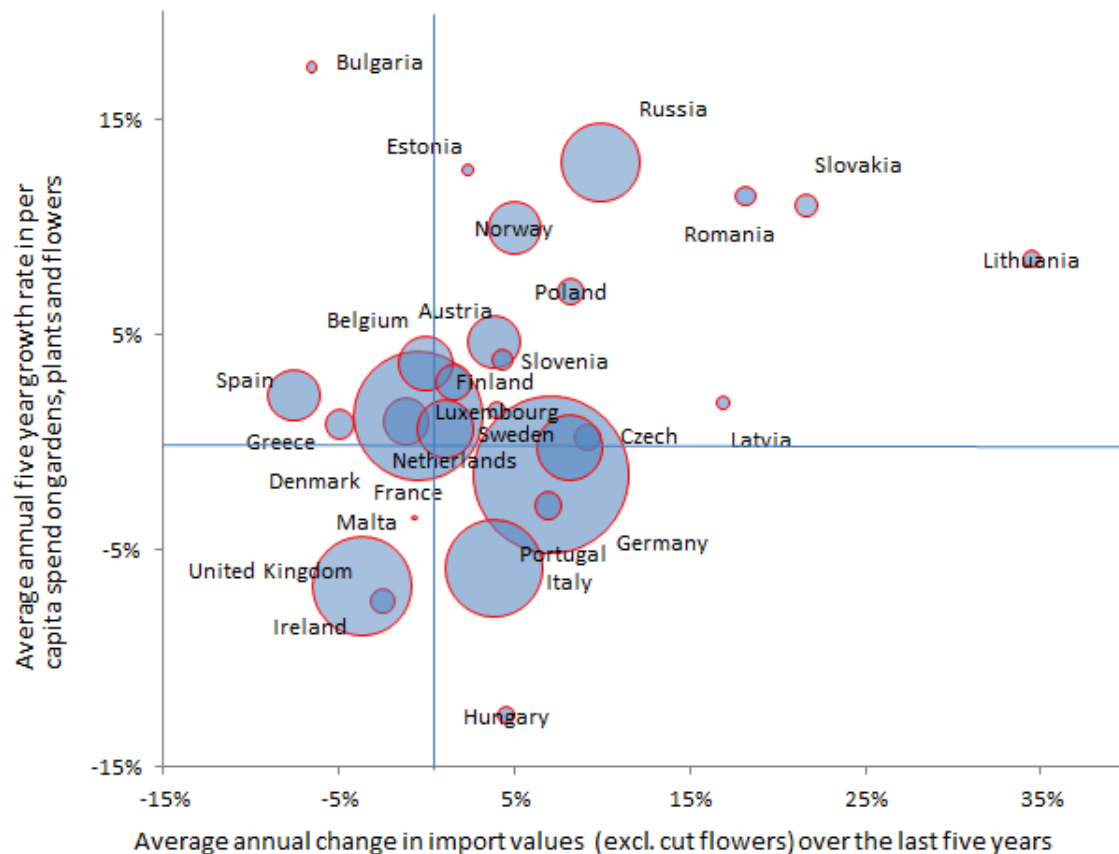


Figure 13: European export markets plotted according to domestic ornamentals market growth rates, size by value, and trends in import growth for ornamentals (excluding cut flowers)

The first chart identifies four broad clusters or segments of countries, whilst the second chart factors in those where high per capita growth in spending seems to be matched by import growth of ornamentals (excluding cut flowers). For instance whilst in the first chart Bulgaria is showing high annual growth rates in spending on gardens, plants and flowers, its imports of ornamentals (excluding cut flowers) appear to be falling. This suggests that demand may be being satisfied by domestic production or that other factors are mitigating against growers looking to export to Bulgaria.

From the two charts and analysis of supplemental data, we feel that four broad clusters or segments emerge with different levels of potential as export markets for UK growers.

The Emerging East (Low per capita spend, but high growth rates matched by import growth)

Countries in this segment can be seen as emerging markets, largely in eastern Europe where increasing per capita spend is being supplied by increasing per capita imports. There's a low per capita spend on gardens, reflecting factors such as a lower cost of living and perhaps a relatively recent growth in disposable income and wealth available to be spent on the home and garden. The high proportion of flats in the housing mix of many of these countries is a potential constraint on growth and per capita spending on gardens. Countries in the segment include Russia, Slovakia, Lithuania, Romania, Estonia, Poland and to a lesser extent Czech republic and Latvia. As noted the data suggests that Bulgaria's market growth may be supplied by increased home production)

Northern and Alpine Affluence (High spending levels, modest growth, with stable or slightly growing import levels of ornamentals)

Countries in this segment show high levels of spend on gardens, plants and flowers, and in some cases high levels of growth. This is likely to reflect their relative economic prosperity, high costs of living generally, and potentially the relatively high costs of plant and flower production related to heating and transport. Countries in the segment tend to have high proportions of detached houses in their housing stock, suggesting relatively high levels of access to domestic gardens or outdoor space around the home. The countries in the segment include countries like Austria, Slovenia, Norway, Denmark, Sweden, Luxemburg, Belgium, Finland.

Indeed Slovenia is an interesting 'Bellwether', and perhaps shows where the future of some countries in the 'Emerging East' has the potential to lie. Having been one of the most prosperous areas of the former Yugoslavia, Slovenia acceded to the EU in 2004 ahead of most former eastern bloc countries. It has a high proportion of detached houses (66% compared with 34% in the UK) and gardening appears to be a popular (or at least necessary) pursuit among its citizens (according to a 2000 Harmonised European Time Use study Slovenes spent on average 28 minutes a week gardening compared with 10 minutes for UK citizens). A more detailed analysis of Slovenia as a market is provided for illustrative purposes in the Overseas Market Tool Kit, showing how the overseas market data in the tool kit can be used and applied.

The Squeezed South – (Low per capita spend on gardens, plants and flowers which is flat or falling along in many cases with imports of ornamentals)

Countries in this segment tend to be found mainly southern or south eastern Europe. They have on the whole been heavily affected by the 2007-onwards economic and European debt crises. They tend to have low or negative GDP growth rates, and tend not to spend heavily on domestic gardens plants and flowers, either on an absolute or per capita basis. At a macro level these markets are less likely than the Emerging East and Northern and Alpine Affluence segments to present long term growth opportunities for UK ornamentals growers. Countries in the segment include Spain, Portugal, Hungary, Malta, the Czech republic and Greece.

The Mature Mainstay (Moderate to high spend, with low growth and stable import levels)

Countries in this segment tend to be north-western European countries, often with established and substantial ornamental production industries. Market growth levels are low and market size (in per capita spend and absolute terms) tends to be high. These are mature markets and economies and it is likely that competition for UK growers looking to enter these markets would be high, either from the country's domestic growers or from growers currently exporting to these mature markets and with established trading relationships. Countries in the segment include France, Germany, the Netherlands, Italy, the UK, and Ireland. Within the segment the UK, Ireland and Italy sit slightly aside from the others and somewhat closer to the 'Squeezed South' segment. This is consistent with the exposure of Ireland and Italy to the Eurozone economic crisis, and in the slight but sustained fall in the value of the garden retail market value in the UK due to a succession of seasons affected by poor weather conditions and a weak economy⁹.

It is important to note that these segmentations are based on macro data that does not provide an adequate basis for a final decision on whether or not to enter a market. Factors such as levels of geo-political stability, channels to market within the country, more specific trends and customer needs in the country are not taken into account in the segmentation. However the segmentation along with the supporting data in the Overseas Markets Tool Kit should provide UK growers with more basic information in one place than is currently available to narrow down potential opportunities.

⁹ Source: The HTA Garden Retail Market Analysis 2013

Discussion

The results of the different strands of work in this project suggest that there is a substantial opportunity for UK growers to win business from import substitution. Within supply of ornamentals to the specialist garden retailer segment there is an opportunity mainly around hardy nursery stock and houseplants to win an extra £69 million of sales (excluding VAT and at grower sales prices). This is, very roughly, the equivalent of adding up to a notional 1,000 general nursery worker jobs to the UK workforce. This does not include the economic potential from import substitution in other sectors such as plants supplied to amenity customers or non-specialist garden retailers such as supermarkets and DIY multiples.

The opportunity to win a share of this £69m for UK growers appears by no means wholly dependent on price. Undoubtedly price is important. However other major barriers to UK growers winning share held by overseas growers relate to a less efficient and effective distribution chain compared with overseas growers (which is potentially a driver of uncompetitive pricing compared with overseas growers). More specifically the larger retailers responding to the survey tended to highlight the difficulty they face in getting timely delivery of ornamentals orders to their outlets to the required volumes.

Several retailers highlighted a need for growers to collaborate more in areas such as shared delivery in order to compete more effectively. Also a lack of information about stock availability, price and product information (including plant images) at the point of ordering was cited as a barrier to purchase by retailers. These unfavourable comparisons seem more pronounced among larger retailers with more experience of buying plants from overseas. Indeed we might speculate whether the issue is even more pronounced in other retail sectors such as supermarkets and DIY stores where individual buyers are more likely to be dealing with large orders for faster moving stocks with more complex delivery requirements. Also buyers in these types of customers may have less specialist plant variety knowledge than buyers in specialist garden retailers and may value more information on plants such as imagery in order to make buying decisions. Without further research however this remains speculative.

More generally the research confirms the dominant position of the specialist garden retailer channel in terms of its share of live plant sales. The exceptions highlighted in the study are for cut flowers, and bedding plants. Cut flowers are a minute proportion of garden centres' and retail nurseries' sales, and indeed their sales are a minute proportion of the estimated £1.8 billion pound retail market for cut flowers. These numbers suggest that the market,

intermediaries and consumer needs for live plants compared with cut flowers are vastly different and should be treated as such in future research.

For bedding plants, the grower survey reports that sales to DIY stores exceed sales to specialist garden centres (although the small sample size and potential margin of error should be born in mind in this comparison). Sales to other retailers including supermarkets in the bedding category are also significant. Although based on small sample sizes, this finding is broadly consistent with the operational strengths and weaknesses of retailers in these different channels. Compared with retail nurseries and garden centres, supermarkets and DIY stores are less likely to have the skills or facilities to maintain higher item price plants such as large volumes and wide ranges of hardy nursery stocks in store for long. Bedding on the other hand with its relatively low pricing and high impulse purchase potential lends itself well to a retail environment such as a supermarket where rapid stock turnover is critical, and the ability to feed and water the plants whilst in stock is therefore low. Rapid and responsive replenishment of such stock is also likely to be a key requirement of buyers in these sectors.

The data shows that the grow your own trend still remains significant both for UK growers and specialist garden retailers, with around 7% of ornamentals plants sales by value coming from these crops.

In an international context the research provides signs that there are emerging export opportunities for UK growers in eastern Europe, and potentially in high growth high spend markets such as Norway, Sweden, Denmark and alpine countries such as Austria. The position of the UK domestic market is also interesting insofar as it paints a picture of how attractive a market the UK (consumer) market for garden plants may be to overseas producers relative to other countries. Several poor seasons in recent years position the UK as a market which has seen both falling domestic spend on garden plants and flowers in recent years and falling domestic spend on gardens. This potentially makes other markets than the UK more attractive to European growers looking to achieve sales growth through exporting.

However one of the main challenges listed by grower respondents to the research is the difficulty in distributing product as effectively and efficiently as specialist garden retailers would like. Ironically this is a similar barrier to that faced by growers in substituting imports in the UK market. From this research it would seem that a significant proportion of levy payers would value support and information (beyond that provided in this project and report)

in understanding how to go about developing an export business. Data in the survey suggests that several UK growers have very well developed export operations accounting for a significant proportion of overall sales (six of the respondents to the grower survey report export sales in six figures) which suggests that given the right level and types of support exporting, particularly in the hardy nursery stock sector is a realistic and achievable opportunity for UK growers.

Conclusions

The key conclusions from the project are:

1. There is a significant opportunity for UK growers, especially of hardy nursery stock to increase ornamental plant sales to specialist garden retailers substituting business won by overseas growers. Although total substitution of the £69m potential opportunity is clearly impractical due to constraints on the varieties of plants which can be grown in the UK and allowing for margins of error around this figure, it appears that an opportunity worth several tens of millions of pounds annually exists in this sector for UK growers.
2. A key success requirement for UK growers in realising this opportunity is developing more efficient and cost effective supply chain and distribution management systems and processes. A key requirement listed by specialist garden retailers was for growers to be able to deliver stock cost effectively to the retail outlets or distribution centres where it is needed and in the required volumes. Other growers mention opportunities for growers to collaborate further on things such as shared delivery.
3. Providing improved product information for specialist garden retailers also appears to be important in winning share from overseas growers. Retailers listed as a requirement improved information on the stocks they are buying such as online information on stock availability, delivery times, pricing and plant information including imagery of the plant.
4. Although this research did not explore the extent of importing and potential import substitution in retail channels such as DIY stores and supermarkets, it would be reasonable to hypothesise that plant buyers in these sectors are more likely to demand efficient distribution and supply chain management and the cost efficiencies that this would be likely to drive. Equally non-horticulturally expert buyers in these

types of business are also likely to benefit from improved plant information such as imagery. Understanding the views of plant buyers on import substitution potential and any similarities with the views of the specialist garden retailer sector could identify further opportunities for UK growers around import substitution.

5. Overall, the quality of plants produced by UK growers is perceived by UK specialist garden retailers to be superior to those produced by overseas growers. Therefore addressing customer requirements for improved distribution systems and processes is likely (all other external factors such as exchange rates being equal) to help UK growers compete more effectively with overseas ornamentals growers in this sector of the retail market.
6. UK production of cut flowers is very low relative to overall market size and imports. The consumer need and market dynamics for cut flowers is likely to be substantially different from that of garden plants. In terms of pure numbers, the import substitution opportunity looks high. However UK growers' main existing customers (specialist garden centres and DIY stores) buy very little from UK producers meaning that UK growers would need to persuade different buyers in different sectors to consider buying cut flowers from UK producers. Their requirements are unknown and would need to be explored. For instance we might speculate that a substantial amount of demand is driven by the need to fulfil key gifting occasions like Mothers' Day or Valentine's Day. This being the case the ability to provide stock to very precise time and quality requirements, potentially based on daily fluctuations in sales leading up to the occasion, is likely to be crucial to import substitution. Until this is understood we cannot definitively draw conclusions about the opportunity for UK growers to substitute imports in the cut flower market. However from the anecdotal evidence gathered from this project it is reasonable to conclude that the opportunity to substitute imports of cut flowers is very different and likely to be much more difficult for UK ornamentals growers to exploit than in substitution of garden and live plants.
7. Export sales by UK growers account for a very small proportion of overall sales, however there are UK growers for whom exports represent a significant proportion of their overall sales. This suggests that barriers listed by growers to exporting such as market intelligence, distribution challenges, credit control can and have been overcome. There is also significant interest in starting to export or developing existing export business, particularly among hardy nursery stock producers with larger turnovers (>£1m per annum). Support for UK growers on how to develop

export businesses would be valued and could be used to increase sales. Further work to understand the detailed requirement for such support would be needed, ideally with the involvement in such work of existing bodies such as the NFU, UK Trade and Industry, GardenEx, and potentially other organisations.

8. Four broad segments of countries emerged from analysis of the data gathered on market size, growth and characteristics; of these, two contain countries that appear to represent growth opportunities. Countries in *The Emerging East* segment such as Russia, Poland and other eastern European countries have low per-capita spending on gardens, but high growth rates fuelled to some extent by increasing imports. In these less mature markets there may be opportunities for UK growers to establish a presence as the markets mature and grow. Countries in the *Northern and Alpine Affluence* segment such as Norway, Denmark, and Austria appear to be high spending markets that still show growth. Factors such as high levels of detached housing suggest ample garden space, but perhaps with limited domestic ornamentals production capacity due to geography and climate constraints. Such considerations are also likely to play a major part in driving detailed customer requirements for ornamentals in terms of the timing of the garden season, appropriate varieties for the market, and so forth. These markets are more likely to be mature than countries in the Emerging East segment, but may hold opportunities for UK growers due to increasing spending and import levels.

Knowledge and Technology Transfer

This report and supporting appendices will be made available by the HDC via email. HTA will support this by press releasing (in consultation with HDC) the key findings to the trade media. HTA will also write a summary of the findings and prepare this for publication in the HTA's monthly magazine HTA News.

In consultation with HDC, HTA also proposes exploring the following possible knowledge transfer activities based on the research: development of support for growers looking to achieve sales growth through exporting; building the findings of the research which relate to the economic contribution ornamentals production makes to the UK economy into lobbying and parliamentary activity such as the annual meeting of the All Party Parliamentary Group on Horticulture.

HTA will also use the evidence in this report to further explore opportunities to improve the efficiency and effectiveness of the plant supply chain with its members and other organisations.

Appendices

1. Overseas Markets Tool Kit. This spread sheet contains all the market data gathered on different overseas markets for UK growers. It comes with notes on how to use the data, and a list of potential extra sources of information such as links to the source data from the International Trade Centre, and market reports on European garden markets from commercial providers, and tips on desk research such as the use of Google Earth to get qualitative information on the size, types and distribution of gardens in different overseas markets.
2. Summary analysis of the cut flowers market. This supplement covers the estimated market size of the UK cut flowers market and UK production in this context. It collates some published data on the structure and drivers of this market and contrasts this with the garden/live plant market.
3. Definitions of the categories of ornamentals. The grower and retailer questionnaires used the same definitions of ornamentals crops. These are listed in this appendix and should be used to determine what types of plant are likely to be 'counted' in which category.