85th Annual Conference of the Agricultural Economics Society
Warwick University

18 - 20 April 2011

How Local and Seasonal is the Consumption of Soft Fruit in Scotland?

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Abstract

The main implication of the food miles indicator is that in order to protect the environment consumers should purchase food locally and seasonal. However, something that it is missing in all discussions is the evidence about how bad or good - in terms of locality and seasonality- is the actual consumption of food. This is probably due to the fact that food consumption statistics are available as aggregated annual data. In this paper we analyse the purchases of food, in particular the purchases of soft fruits in Scotland, which not only have marked production seasonality but also are imported from the rest of the UK and from abroad. For the analysis we use the Kantar Worldpanel dataset for the period 2006 until 2009. The results indicate that Scottish soft fruit covers a relatively small segment of the market and therefore eat locally would imply reduce significantly the consumption of soft fruit, even during the Scottish produce season. As regards the consumption seasonality, the purchases of soft fruit, particularly strawberry, seem to be seasonal despite the possibility of getting out-of-season imported soft fruit.

Keywords: Scotland agriculture, soft fruits, agricultural marketing.
JEL codes: Q13

How Local and Seasonal is the Consumption of Soft Fruit in Scotland?[1]

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I. Introduction

As pointed out by the Defra's report "The Validity of Food Miles as an Indicator of Sustainable Development" (Defra, 2005), over the last fifty years there have been dramatic changes in food production and supply chains in the UK. These changes included:

- Globalisation of the food industry, with an increase in food trade (imports and exports) and wider sourcing of food within the UK and overseas;
- Concentration of the food supply base into fewer, larger suppliers, partly to meet the demand for bulk year-round supply of uniform produce;
- Major changes in delivery patterns, with most goods now routed through supermarket regional distribution centres, and a trend towards the use of larger Heavy Goods Vehicles (HGVs);
- Centralisation and concentration of sales in supermarkets, with a switch from frequent food shopping (on foot) at small local shops to weekly shopping by car at large out of town supermarkets.

These trends have led to a large increase in the distance food travels from the farm to consumer, known as "food miles". Whilst as recognised by the aforementioned Defra report (2005), food miles alone are an inadequate indicator of sustainability, it has become part of the discussions regarding climate change and greenhouse gases.

The main implication of the food miles indicator, communicated broadly by mass media to the public, is that in order to protect the environment consumers should purchase food locally (e.g., Channel 4, 2007). However, there is also the requirement for the food to be purchased when in season, as out of the season produce requires higher quantities of inputs and commands higher logistic costs, which may more than compensate the environmental gains from reducing the food miles. This is reflected in the recommendations for best practices in sustainable public-sector food procurement (Michaels, 2006).

Something that it is missing in all discussions is the evidence about how bad or good - in terms of locality and seasonality- is the consumption of food. This is probably due to the fact that food consumption statistics (e.g., from the Expenditure and Food Survey) are average aggregated annual data. Furthermore, in the case of Scotland the available information cannot be disaggregated by regions or socioeconomic groups as to allow identifying the behaviour of socioeconomic groups or regions.

The purpose of this paper is to provide an analysis about how local and seasonal is the consumption of food using the Kantar Worldpanel survey data. As a study considering all possible food categories is beyond the scope of this paper, it concentrates on the consumption of soft fruits. The main reasons for this are:

[1] We would like to acknowledge support from the Scottish Government to produce this paper through an AA211 Special Study.

- Despite their high nutritional and health value, there is little information about the Scottish demand for soft fruits.
- At the UK level about 80 per cent of fresh vegetables and fruits are imported from elsewhere. Therefore, soft fruit provides a unique and informative case to see how dependent Scottish consumption of soft fruit is on imports and out of season supply.

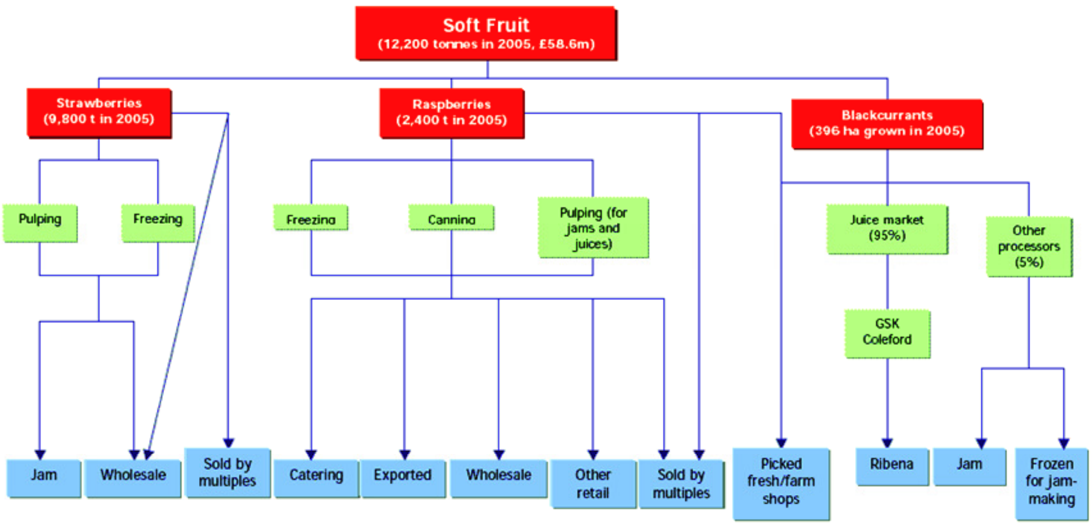
The structure of the paper is as follows: the paper starts with a brief overview of the marketing of soft fruit in Scotland, which provides an idea how Scottish produce interact with produce from other provenance (i.e., rest of UK and from abroad). This is followed by the empirical part of the paper, which comprises a presentation of the data used, the degree of locality in the purchases of soft fruit and an analysis of the seasonality. Finally, conclusions are presented.

II. Brief overview of the marketing of soft fruit in Scotland

The purpose of this section is to provide an overview of the marketing of soft fruit in Scotland. It is important to note from the outset that the information about the marketing of soft fruit is limited and important part of it corresponds to anecdotal evidence (exceptions are the studies by DTZ on raspberries (DTZ, 2001) and on the proportion of Scottish produce that is processed in Scotland (DTZ, 2007)), hence the qualitative character of the section.

Based on information that it is detailed below the soft fruit sector (with strawberry, raspberry and blackcurrant in mind) can be thought as three differentiated marketing channels (although with some degree of overlapping). The first marketing channel corresponds to the fresh soft fruit that goes to multiple retailers. This is in the hands of major Scottish growers and a UK fruit marketing cooperative. The second marketing channel is the local food market, which is supplied by a number of small growers and the third marketing channel is the contractual market with the soft drink industry. A more complete representation of the marketing channel is provided by figure 1.

Figure 1: Soft fruit supply chain (strawberry, raspberry and blackcurrant)



Source: DTZ (2007)

Large growers supplying to multiple retailers

SAC information indicates that the sector in Scotland is structured into a few major growers (around 5) supplying the major multiple retailers.[2] Additional information about the sale of soft fruit in Scotland to multiple retailers is provided by DTZ Pieta (2007), which considers sectoral information about strawberries, raspberries and blackcurrant.

As regards strawberries, around 80 per cent of Scottish strawberries are bought by the multiple retailers for sale as fresh fruit. Growing in polythene tunnels has extended the season and improved quality. However, it should be noted that the extension of the season has come through a sacrifice in terms of taste.

The main producers in Scotland are Angus Soft Fruits, Stewarts of Tayside, and David Leslie. In addition, one of the largest producers in the UK is the growers co-operative Berry Gardens, which although based in Kent, has a number of growers based in Scotland – the biggest being Ross Mitchell at Castleton near Lawrencekirk.

In contrast with the strawberry situation, the raspberry acreage in Scotland has declined in recent years but Berry Scotland,[3] anticipates an increased market for fresh raspberries to reverse this trend in the coming years. Recent years have also seen increasing Class 1 fresh sales to supermarkets at the expense of Class 2, which has traditionally gone towards jam processing. The drop in Class 2 availability threatens jam processors who wish to brand their product as Scottish. With strong price competition from imported varieties, Scottish production is increasingly focused towards the fresh market.

In order to get a glimpse of the sort of market competition behind the sector, it is useful to present a profile of the main companies selling fresh fruit to multiple retailers in Scotland namely Angus Soft Fruit Ltd, Stewarts of Tayside Ltd., and Berry Growers.

Angus Soft Fruit Ltd[4]

This company is one of the leading suppliers of strawberries, raspberries, blueberries and blackberries to UK multiple retailers. The business was established in 1994 by three soft fruit growers, Lochy Porter, his father Willie Porter and cousin James Gray, with the aim of benefiting both customers and growers through direct contact between the two.

An interesting feature of the company is that it not only includes producers in Scotland but also like-minded growers in Holland, Spain, Morocco, the Middle East and South

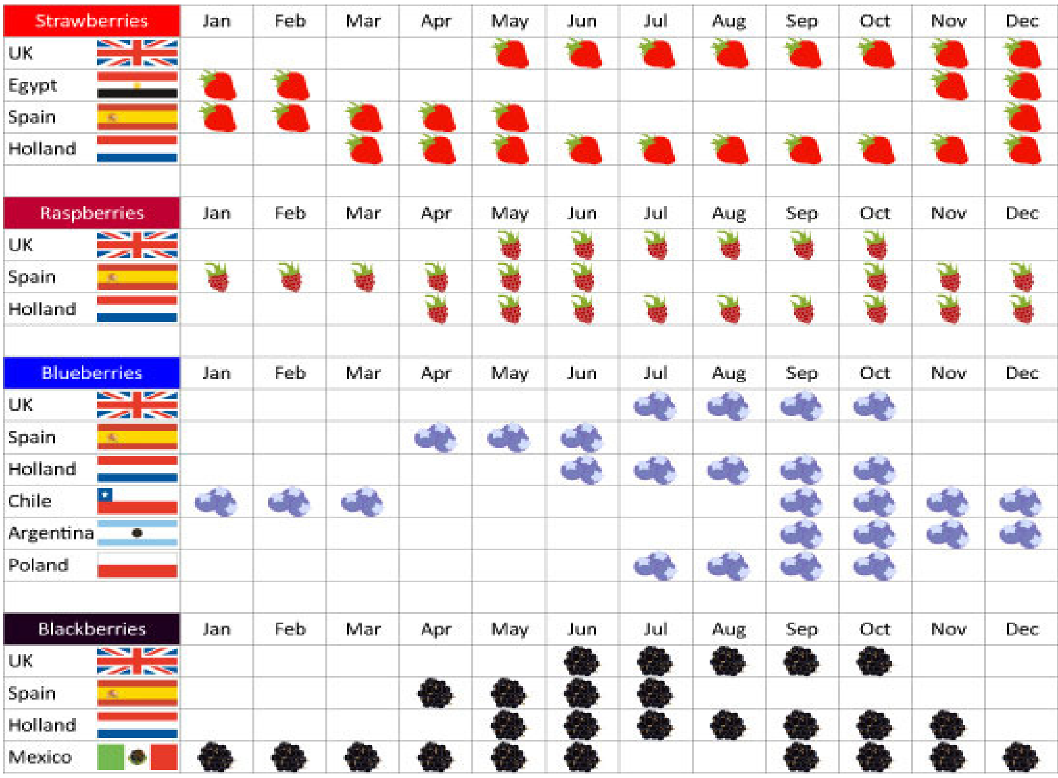
[2] Personal communication with SAC Programme Leader Iain McGregor (2010).

[3] Berry Scotland is a programme that aims to increase the consumption of Scottish soft fruit in Scotland for the benefits of population health and the Scottish berry industry. Achievement of the programme's aims is overseen by the Berry Scotland Board, a multi-sectoral group of experts from health, agriculture, land use, variety development, product development and marketing.

[4] Information from Angus Soft Fruit website, accessed (2010).

America, which allows the business supplies the best quality soft fruit to multiple retailers 12 months of the year and complements the UK soft fruit season which runs from May until October. Figure 1 provides the seasonality of their soft fruit sales by origin.

Figure 1: Soft fruit seasonality in the UK and abroad



Source: Angus Soft Fruit website

Stewarts of Tayside Ltd [5]

Stewarts of Tayside Ltd. was established in 1975 and is still owned and managed by the Stewart family. The company has steadily expanded and today we are now one of the largest swede growers and packers in Britain and one of the largest independent soft fruit growers in Scotland.

Originally, the company grew a range of crops including swede, potatoes, sprouts, calabrese and soft fruit. However, in the early 1990s, due to increased competitiveness within the industry, a decision was made to specialise in those crops that were best suited to the geographical location of the farms (Tayside) – these were swede, strawberries and raspberries. After deciding to specialise, a huge financial investment followed, which included a new vegetable pack house, a new fruit pack house, an 8,000 tonne cold storage facility, a new transport division and a significant investment in people.

[5] Information from Stewarts of Tayside Ltd website, accessed (2010).

The business is fully integrated and has four key areas: growing crops and husbandry; production and packing; sales and marketing and transport. By taking control of all the stages from sowing to harvest, and packing to delivery they offer their customers excellent quality, service, and very competitive price.

Stewarts of Tayside supply fresh home grown Scottish strawberries from April to October. All strawberries are handpicked and packed on site. Their strawberries are packed into punnets normally 227g or 454g and supplied in either plastic returnable trays or cardboard trays. Labels can be either supermarket own brand or Stewarts of Tayside.

The company also supply fresh home grown Scottish raspberries from July to September. All raspberries are handpicked and packed on site and packed into punnets normally 170g and like strawberries they are supplied in either plastic returnable trays or cardboard trays. Also as in the strawberry case labels can be either supermarket own brand or Stewarts of Tayside.

Berry Gardens[6]

Founded over 35 years ago, Berry Gardens is the UK's leading berry and stone fruit (cherries and plums) production and marketing group with sales in 2009 of £183 million, a market share in excess of 40 per cent during the UK season and a year round business supplying all of Britain's leading retailers. The cooperative is wholly owned by UK growers.

The company supplies multiple retailers (Asda, the Cooperative food, M&S, Morrison's, Sainsbury's, Tesco, Waitrose) all over the year due to their geographic spread in the UK and its strong links with overseas partners meaning that they can deliver quality and known provenance year round.

Small growers supplying to local retailers

Soft fruit are a highly seasonal product giving origin to a diversified network of marketing channels for growers. Some of these marketing channels comprise smaller growers supply local shops, farm shops/ farm gate, frozen fruit sales, pick your own, farmers markets among others.[7]

Growers supplying processors under contracts

As regards soft fruit sold under contracts, the most remarkable case corresponds to blackcurrant, in which case virtually the entire Scottish blackcurrant crop (95 per cent) is grown on contract to be used for the production of blackcurrant drinks (anecdotal information indicates that contracts have a duration of six years).[8] These are produced in England to be processed into Ribena. The remaining 5 per cent of Scottish blackcurrants stay in Scotland for pulping and jam production.

[6] Information from Berry Gardens, accessed (2011).
[7] For list of small producers supplying local markets see Berry Scotland website.
[8] Personal communication with Julian Bell, SAC senior rural business consultant.

Overall, the marketing of soft fruit in Scotland seems to indicate that consumption of soft fruit occurs not only during the Scottish or rest of UK season but also during the rest of the year based on imports. How important is the seasonality and the purchases of local produce is something that it is explored in the next section.

III. Empirical analysis

This sections starts with a description of the data used, followed by a brief presentation of the methodology and definitions of the categories in the analysis and ends with the presentation of the results.

III.1 Data

The Kantar Worldpanel dataset for Scotland is a survey that contains weekly acquisition data of food and drink purchases for consumption at home for 3,003 households covering the period October 2006 to October 2009. It is part of the UK Worldpanel, which also includes information for England and Wales (Northern Ireland is not sampled). It is important to note that the data do not include consumption out of the household; therefore the data cannot give a full overview of the Scottish consumption.

All participating households (i.e., panellists) register grocery purchases through the use of bar codes and scanners. However, they do not record non bar-coded items as Kantar seeks to make the task as simple as possible for them and to improve compliance. These are collected by means of a combination of a further research in the form of internet-based questionnaires and by the panellist sending their receipts which are matched to their purchases.

For each purchase the available information includes: name of the retailer, total spent in the shop, shop address details, price details by product, promotions and product information. Each product is assigned a number of attributes that describe it such as brand, whether it is a private label, the manufacturer, the flavour, the pack type and size amongst others. In addition, each purchase is accompanied by a weight number that allows it to represent the population.

In addition product and shop information, the dataset also includes household neighbourhood information (e.g., rural/urban, local authority) and socio-demographic characteristics for all the households. The three year period could also allow for identification of any changes in purchase trends of soft fruit on year to year basis, i.e. allowing estimating if consumption of this product category changed in terms of its sustainability in Scotland.

It should be noted that not all the households in the sample (i.e., the 3003 households) are observed during the entire available period as they are selected by stratification according to several socioeconomic variables, and remain in the survey for a maximum period of three years (i.e., 156 weeks). In the available sample, the households are observed on average 81 weeks with a standard deviation of 51 weeks. On average the number of households that is available per week is 1,567 households with a standard deviation of 73 households.

III.2 Methods

As regards the methods used in this paper, they consisted to use plots and cross tabulations in order to study whether it was possible to distinguish any seasonal pattern in the purchasing data and how important the purchases of local soft fruit was.

As regards the purchases of local food in order to provide further information about the purchases of Scottish soft fruit, cross tabulation with respect to three main grouping variables was done: (1) geographical areas (i.e., large urban areas, other urban areas, accessible small towns, remote small towns, accessible rural areas and remote rural areas[9]), which are based on the classifications provided by the Scottish Neighbourhood Statistics (2) socioeconomic group (i.e., A, B, C1, C2, D and E, these groups are provided by Kantar [10]) and (3) by retailers (i.e., Tesco, Asda, Sainsbury's Morrison's and others).

III.3 Results and discussion

The purpose of this section is to answer two issues: first, how local the purchase of soft fruit in Scotland is and second, how seasonal these purchases are.

How local are soft fruit purchases?

Table 1 presents the purchases of selected soft fruits according to provenance. Only Scottish strawberries and raspberries were identified in the sampled purchases. As shown in the Table, in the case of purchases of blackberries, these appear to have come from rest of the UK and from abroad, whilst the provenance of the blueberries identified in the sample was only from abroad. Due to this we concentrate the analysis on strawberries and raspberries (for completeness sake the tables for blackberries and blueberries are presented in the annex).

[9] The Scottish Executive Urban Rural Classification (previously called the Scottish Household Survey Urban Rural Classification) was first released in 2000 and is consistent with the Executives core definition of rurality which defines settlements of 3,000 or less people to be rural. It also classifies areas as remote based on drive times from settlements of 10,000 or more people. The Scottish Executives Partnership Agreement sets out that the Scottish Executive will ensure that rural and remote communities have their distinct needs reflected across the range of government policy and initiatives. This classification distinguishes between urban, rural and remote areas within Scotland (Scottish Neighbourhood Statistics, 2011).

[10] The British socio-economic groups are: A (approximately 3 per cent of the population): upper middle class: senior managers, administrators, civil servants and professional people; B (approximately 20 per cent of the population): middle class: middle-ranking managers, administrators, civil servants and professional people; C1 (approximately 28 per cent of the population): lower middle class: junior managers and clerical staff; C2 (approximately 21 per cent of the population): skilled workers: workers with special skills and qualifications; D (approximately 18 per cent of the population): working class: unskilled workers and manual workers and E (approximately 10 per cent of the population): subsistence level: pensioners, the unemployed and casual manual workers (The Market Research Society, 2006).

Excluding the information from 2006 and 2009, which are incomplete years, Scottish strawberries represented approximately between 8 to 9 per cent of the Scottish purchases of fresh strawberries. That percentage is more significant in the case of raspberries, which represented over 50 percent of the total purchases (69 per cent in 2007 and 57 per cent in 2008).

As regards the importance of other provenances, in the case of strawberries, most of the purchases come from the rest of the UK or from abroad, with the latter being slightly higher both in 2007 and 2008. For raspberries, the most important competition are imported raspberries.

Table 1: Purchases of selected soft fruits according to provenance (Kg)

	2006 45-52 week	%	2007	%	2008	%	2009 1-44 week	%
Strawberries								
Scottish origin	44,054	14.3	630,445	7.8	658,317	8.9	999,217	12.9
Rest of UK origin	105,821	34.4	3,495,375	43.1	3,293,038	44.4	3,762,786	48.7
Foreign origin	158,115	51.3	3,940,398	48.6	3,464,371	46.7	2,952,405	38.2
Unknown origin	0	0.0	40,691	0.5	4,614	0.1	8,747	0.1
Raspberries								
Scottish origin	1,379	40.9	32,732	68.9	28,684	57.4	294	0.9
Rest of UK origin	0	0.0	1,787	3.8	3,321	6.6	17,106	53.2
Foreign origin	1,992	59.1	12,979	27.3	17,954	35.9	13,588	42.3
Unknown origin	0	0.0	0	0.0	0	0.0	1,151	3.6
Blackberries								
Scottish origin	0	0.0	0	0.0	0	0.0	0	0.0
Rest of UK origin	1,505	55.7	11,215	41.1	9,699	42.1	10,775	50.3
Foreign origin	1,195	44.3	16,085	58.9	12,008	52.1	10,646	49.7
Unknown origin	0	0.0	0	0.0	1,332	5.8	0	0.0
Blueberries								
Scottish origin	0	0.0	0	0.0	0	0.0	0	0.0
Rest of UK origin	0	0.0	0	0.0	0	0.0	0	0.0
Foreign origin	6,179	100.0	30,225	100.0	28,150	100.0	31,768	100.0
Unknown origin	0	0.0	0	0.0	0	0.0	0	0.0

Source: Based on Kantar Worldpanel data.

Purchases by geographical area

Tables 2 and 3 provide the purchases of strawberries and raspberries broken down by provenance and geographical area.

In the case of strawberries, focusing on the years 2007 and 2008, where the information for both years is available, it is clear that there are no major differences between the different regions. In fact, in almost all the regions, above 90 per cent of the purchases corresponds to a combination of strawberries from the rest of the UK and from foreign origin.

Most of the Scottish strawberries are sold in urban areas, large and other urban areas, (about 80 per cent of the total purchases of Scottish strawberries in 2007 and in 2008). This can be explained as due to two main reasons: first, the producer areas of soft fruit in Scotland are not far from the Scottish Central Belt, where most of the large urban population are. Second, it might be associated to the fact that strawberries for eating outside home are not included on the data or problems capturing the purchases from small retailers.

The penetration of Scottish raspberries in the Scottish markets is greater than in the case of strawberries. Furthermore, in contrast with strawberries, a sizable part of the sales of Scottish raspberries occurs in rural areas (accessible and remote) (36 per cent in 2007 and 46 per cent in 2008).

As regards the consumption of local raspberries, this is more marked than in the case of strawberries but the percentages change by geographical area and year without any pattern. For instance, in 2007, 72 per cent of the purchases of raspberries from large cities were Scottish raspberries whilst in 2008 that percentage dropped to 14 per cent. Nevertheless, in rural areas the percentage of purchases from Scottish origin remained high in 2007 (75 per cent in accessible rural areas and 83 per cent in remote rural areas) and 2008 (67 per cent in accessible rural areas and 86 per cent in remote rural areas).

In summary, there seem not to be a tendency to consume only local (neither in the case of strawberries or raspberries) in any of the geographical areas.

Purchases by socioeconomic group

Tables 4 and 5 present the purchases of strawberries and raspberries broken down by provenance and socioeconomic group area.

It is clear from Table 4 (years 2007 and 2008) that the distribution of the purchases of strawberries does not change by socioeconomic group. The shares of the purchases of strawberries from Scottish provenance fluctuate between 7 and 11 per cent.

Table 5 shows that the purchases of raspberries by socioeconomic group differ by group and by year, no indicating any pattern. In fact, the only case where only Scottish raspberries are purchased happened in 2007 and for the socioeconomic class E; however, this changed in 2008 as that class purchased raspberries from Scottish origin and from foreign origin.

Purchases by retailer

Tables 6 and 7 show the purchases of strawberries and raspberries broken down by provenance and geographical area.

From Table 6 it is evident that none of the retailers is fully committed to sell Scottish strawberries, which is a logical behaviour as the demand clearly exceeds the local supply. From all the major retailers Asda is the one with the highest proportion of purchases of strawberries from Scottish origin (44.5 per cent in 2007 and 54.1 per cent in 2008).

The situation with respect to raspberries is similar to strawberries, in the sense that there is a high variation by retailer and year. However, within this variation Tesco appears selling almost all the Scottish raspberries (98 per cent in 2007 and 85 per cent in 2008).

Table 2: Purchases of strawberries by geographical area and origin (Kg)

	Geographic area					
	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
2006 (45 - 52 week)						
Purchases	127,104.1	105,377.7	37,816.3	3,042.4	24,795.7	9,854.1
Scottish origin	17,159.1	12,872.7	10,947.0	0.0	1,862.3	1,212.9
Rest of UK origin	44,972.5	33,167.4	10,681.3	1,840.8	11,930.8	3,228.4
Foreign origin	64,972.4	59,337.6	16,188.1	1,201.6	11,002.7	5,412.7
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	13.5	12.2	28.9	0.0	7.5	12.3
Rest of UK origin	35.4	31.5	28.2	60.5	48.1	32.8
Foreign origin	51.1	56.3	42.8	39.5	44.4	54.9
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2007						
Purchases	2,796,424.6	2,923,151.6	888,749.6	260,516.0	839,210.3	398,856.6
Scottish origin	315,457.2	191,487.5	46,539.8	3,321.2	67,064.8	6,574.6
Rest of UK origin	1,043,286.0	1,206,361.0	448,967.3	142,738.4	406,571.2	247,451.1
Foreign origin	1,417,542.5	1,508,071.1	389,922.4	114,456.5	365,574.3	144,830.9
Unknown origin	20,138.9	17,232.0	3,320.2	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	11.3	6.6	5.2	1.3	8.0	1.6
Rest of UK origin	37.3	41.3	50.5	54.8	48.4	62.0
Foreign origin	50.7	51.6	43.9	43.9	43.6	36.3
Unknown origin	0.7	0.6	0.4	0.0	0.0	0.0

	Geographic area					
	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
2008						
Purchases	2,644,330.2	2,312,102.8	753,412.2	315,738.8	950,842.2	443,913.4
Scottish origin	323,180.2	204,795.2	51,879.8	6,225.2	67,294.1	4,942.4
Rest of UK origin	972,913.3	958,680.8	359,356.9	154,029.0	536,740.0	311,318.2
Foreign origin	1,348,236.7	1,148,626.8	338,761.0	155,484.7	345,608.6	127,652.9
Unknown origin	0.0	0.0	3,414.4	0.0	1,199.5	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	12.2	8.9	6.9	2.0	7.1	1.1
Rest of UK origin	36.8	41.5	47.7	48.8	56.4	70.1
Foreign origin	51.0	49.7	45.0	49.2	36.3	28.8
Unknown origin	0.0	0.0	0.5	0.0	0.1	0.0
2009 (1 - 44 week)						
Purchases	2,830,455.1	2,591,002.7	704,093.5	305,175.4	882,176.5	410,251.5
Scottish origin	440,856.1	328,399.1	79,071.5	8,557.2	120,508.2	21,824.9
Rest of UK origin	1,159,533.8	1,257,688.5	387,615.5	201,093.7	449,086.5	307,767.7
Foreign origin	1,228,946.7	1,003,494.7	234,647.3	95,524.6	309,132.4	80,659.0
Unknown origin	1,118.5	1,420.4	2,759.2	0.0	3,449.4	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	15.6	12.7	11.2	2.8	13.7	5.3
Rest of UK origin	41.0	48.5	55.1	65.9	50.9	75.0
Foreign origin	43.4	38.7	33.3	31.3	35.0	19.7
Unknown origin	0.0	0.1	0.4	0.0	0.4	0.0

Source: Based on Kantar Worldpanel data.

Table 3: Purchases of raspberries by geographical area and origin (Kg)

	Geographic area					
	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
2006 (45 - 52 week)						
Purchases	583.1	0.0	1,408.8	0.0	514.7	863.9
Scottish origin	0.0	0.0	0.0	0.0	514.7	863.9
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	583.1	0.0	1,408.8	0.0	0.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	0.0	100.0	0.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	100.0	100.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	0.0	100.0	0.0	0.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2007						
Purchases	10,028.4	16,846.0	5,329.5	547.9	4,717.4	10,029.7
Scottish origin	7,230.5	12,603.4	1,010.2	0.0	3,545.9	8,342.4
Rest of UK origin	241.1	374.8	0.0	0.0	1,171.5	0.0
Foreign origin	2,556.8	3,867.8	4,319.3	547.9	0.0	1,687.2
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	72.1	74.8	19.0	0.0	75.2	83.2
Rest of UK origin	2.4	2.2	0.0	0.0	24.8	0.0
Foreign origin	25.5	23.0	81.0	100.0	0.0	16.8
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0

	Geographic area					
	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
2008						
Purchases	7,225.0	16,943.8	6,720.1	878.5	12,888.4	5,303.5
Scottish origin	1,034.1	11,860.9	2,381.4	191.0	8,645.0	4,572.0
Rest of UK origin	2,889.4	432.0	0.0	0.0	0.0	0.0
Foreign origin	3,301.5	4,650.9	4,338.7	687.5	4,243.4	731.5
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	14.3	70.0	35.4	21.7	67.1	86.2
Rest of UK origin	40.0	2.5	0.0	0.0	0.0	0.0
Foreign origin	45.7	27.4	64.6	78.3	32.9	13.8
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2009 (1 - 44 week)						
Purchases	20,479.0	7,484.3	1,728.8	0.0	2,446.8	0.0
Scottish origin	293.8	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	11,454.0	2,087.7	1,117.4	0.0	2,446.8	0.0
Foreign origin	8,281.7	4,694.9	611.4	0.0	0.0	0.0
Unknown origin	449.5	701.7	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0	0.0
Scottish origin	1.4	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	55.9	27.9	64.6	0.0	100.0	0.0
Foreign origin	40.4	62.7	35.4	0.0	0.0	0.0
Unknown origin	2.2	9.4	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.

Table 4: Purchases of strawberries by socioeconomic group and origin (Kg)

	Socioeconomic group						Socioeconomic group				
	A-B	C1	C2	D	E		A-B	C1	C2	D	E
2006 (45 - 52 week)						**2008**					
Purchases	74,509.2	103,577.6	44,684.0	26,481.8	58,737.7	**Purchases**	1,785,197.4	2,072,215.9	1,485,237.2	1,042,873.2	1,034,816.0
Scottish origin	12,124.9	16,377.9	7,609.7	1,301.4	6,640.0	Scottish origin	158,088.1	189,678.0	126,023.6	112,651.9	71,875.2
Rest of UK origin	23,454.0	21,398.7	18,670.3	14,994.4	27,303.8	Rest of UK origin	832,921.5	868,520.7	667,964.3	451,418.7	472,213.1
Foreign origin	38,930.3	65,801.0	18,404.0	10,186.1	24,793.9	Foreign origin	794,187.9	1,013,391.9	687,260.7	478,802.6	490,727.6
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	625.3	3,988.6	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	16.3	15.8	17.0	4.9	11.3	Scottish origin	8.9	9.2	8.5	10.8	6.9
Rest of UK origin	31.5	20.7	41.8	56.6	46.5	Rest of UK origin	46.7	41.9	45.0	43.3	45.6
Foreign origin	52.2	63.5	41.2	38.5	42.2	Foreign origin	44.5	48.9	46.3	45.9	47.4
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.3	0.0	0.0
2007						**2009 (1 - 44 week)**					
Purchases	2,023,665.2	2,504,087.3	1,488,409.9	1,098,773.7	991,972.6	**Purchases**	1,983,783.0	2,196,292.3	1,519,900.3	1,123,057.0	900,122.1
Scottish origin	172,448.9	170,645.7	107,119.8	90,663.0	89,567.7	Scottish origin	271,450.2	301,978.1	165,117.8	124,750.2	135,920.6
Rest of UK origin	922,964.2	1,023,023.2	681,606.4	454,136.5	413,644.6	Rest of UK origin	986,968.8	1,054,397.4	768,913.0	526,480.4	426,026.1
Foreign origin	923,279.8	1,302,414.8	694,893.2	544,350.8	475,459.0	Foreign origin	725,364.0	837,378.8	580,778.7	470,707.9	338,175.4
Unknown origin	4,972.3	8,003.5	4,790.5	9,623.4	13,301.3	Unknown origin	0.0	2,538.1	5,090.8	1,118.5	0.0
Shares	100.0	100.0	100.0	100.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	8.5	6.8	7.2	8.3	9.0	Scottish origin	13.7	13.7	10.9	11.1	15.1
Rest of UK origin	45.6	40.9	45.8	41.3	41.7	Rest of UK origin	49.8	48.0	50.6	46.9	47.3
Foreign origin	45.6	52.0	46.7	49.5	47.9	Foreign origin	36.6	38.1	38.2	41.9	37.6
Unknown origin	0.2	0.3	0.3	0.9	1.3	Unknown origin	0.0	0.1	0.3	0.1	0.0

Source: Based on Kantar Worldpanel data.

Table 5: Purchases of raspberries by socioeconomic group and origin (Kg)

	Socioeconomic group						Socioeconomic group				
	A-B	C1	C2	D	E		A-B	C1	C2	D	E
2006 (45 - 52 week)						**2008**					
Purchases	583.1	601.0	807.8	514.7	863.9	**Purchases**	12,595.4	10,871.3	7,218.6	12,766.8	6,507.3
Scottish origin	0.0	0.0	0.0	514.7	863.9	Scottish origin	4,185.4	6,145.3	4,196.8	9,584.9	4,572.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	2,629.6	259.7	432.0	0.0	0.0
Foreign origin	583.1	601.0	807.8	0.0	0.0	Foreign origin	5,780.4	4,466.3	2,589.8	3,181.8	1,935.3
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	100.0	100.0	Scottish origin	33.2	56.5	58.1	75.1	70.3
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	20.9	2.4	6.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	0.0	0.0	Foreign origin	45.9	41.1	35.9	24.9	29.7
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
2007						**2009 (1 - 44 week)**					
Purchases	13,146.8	14,032.3	7,015.2	3,673.8	9,630.7	**Purchases**	10,452.3	8,239.7	2,991.6	5,019.0	5,436.3
Scottish origin	9,496.8	7,705.0	3,397.5	2,502.3	9,630.7	Scottish origin	0.0	0.0	113.3	0.0	180.5
Rest of UK origin	374.8	0.0	241.1	1,171.5	0.0	Rest of UK origin	5,576.7	5,348.2	1,343.0	1,645.7	3,192.2
Foreign origin	3,275.1	6,327.3	3,376.6	0.0	0.0	Foreign origin	4,875.6	2,891.4	1,535.2	2,671.6	1,614.2
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	701.7	449.5
Shares	100.0	100.0	100.0	100.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	72.2	54.9	48.4	68.1	100.0	Scottish origin	0.0	0.0	3.8	0.0	3.3
Rest of UK origin	2.9	0.0	3.4	31.9	0.0	Rest of UK origin	53.4	64.9	44.9	32.8	58.7
Foreign origin	24.9	45.1	48.1	0.0	0.0	Foreign origin	46.6	35.1	51.3	53.2	29.7
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	14.0	8.3

Source: Based on Kantar Worldpanel data.

Table 6: Purchases of strawberries by retailer and origin (Kg)

	Retailer				
	Tesco	Asda	Sainsbury's	Morrison's	Others
2006 (45 - 52 week)					
Purchases	68,077.4	61,523.4	36,304.8	60,118.0	81,966.6
Scottish origin	0.0	43,262.8	0.0	0.0	791.1
Rest of UK origin	635.3	12,455.5	9,995.8	29,248.0	53,486.6
Foreign origin	67,442.0	5,805.1	26,309.1	30,870.1	27,688.9
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	70.3	0.0	0.0	1.0
Rest of UK origin	0.9	20.2	27.5	48.7	65.3
Foreign origin	99.1	9.4	72.5	51.3	33.8
Unknown origin	0.0	0.0	0.0	0.0	0.0
2007					
Purchases	2,653,178.7	1,071,670.6	648,752.0	955,245.2	2,778,062.3
Scottish origin	3,553.9	476,768.8	30,607.2	328.0	119,187.1
Rest of UK origin	1,955,462.0	111,138.5	60,618.1	196,964.8	1,171,191.6
Foreign origin	693,241.0	482,586.3	555,514.4	757,952.4	1,451,103.6
Unknown origin	921.7	1,177.0	2,012.4	0.0	36,580.0
Shares	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.1	44.5	4.7	0.0	4.3
Rest of UK origin	73.7	10.4	9.3	20.6	42.2
Foreign origin	26.1	45.0	85.6	79.3	52.2
Unknown origin	0.0	0.1	0.3	0.0	1.3

	Retailer				
	Tesco	Asda	Sainsbury's	Morrison's	Others
2008					
Purchases	2,612,743.1	1,014,607.6	623,294.6	804,375.7	2,365,318.7
Scottish origin	0.0	549,173.6	49,706.7	0.0	59,436.5
Rest of UK origin	1,906,882.5	58,334.7	101,894.8	157,867.7	1,068,058.6
Foreign origin	705,860.6	403,684.9	471,693.2	646,507.9	1,236,624.1
Unknown origin	0.0	3,414.4	0.0	0.0	1,199.5
Shares	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	54.1	8.0	0.0	2.5
Rest of UK origin	73.0	5.7	16.3	19.6	45.2
Foreign origin	27.0	39.8	75.7	80.4	52.3
Unknown origin	0.0	0.3	0.0	0.0	0.1
2009 (1 - 44 week)					
Purchases	2,531,653.2	1,161,068.7	582,578.5	1,303,222.4	2,144,632.0
Scottish origin	0.0	812,636.1	81,825.6	6,945.8	97,809.5
Rest of UK origin	2,250,080.1	86,634.4	24,897.7	288,568.9	1,112,604.6
Foreign origin	281,573.1	261,798.2	471,977.5	1,007,707.7	929,348.1
Unknown origin	0.0	0.0	3,877.7	0.0	4,869.7
Shares	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	70.0	14.0	0.5	4.6
Rest of UK origin	88.9	7.5	4.3	22.1	51.9
Foreign origin	11.1	22.5	81.0	77.3	43.3
Unknown origin	0.0	0.0	0.7	0.0	0.2

Source: Based on Kantar Worldpanel data.

Table 7: Purchases of raspberries by retailer and origin (Kg)

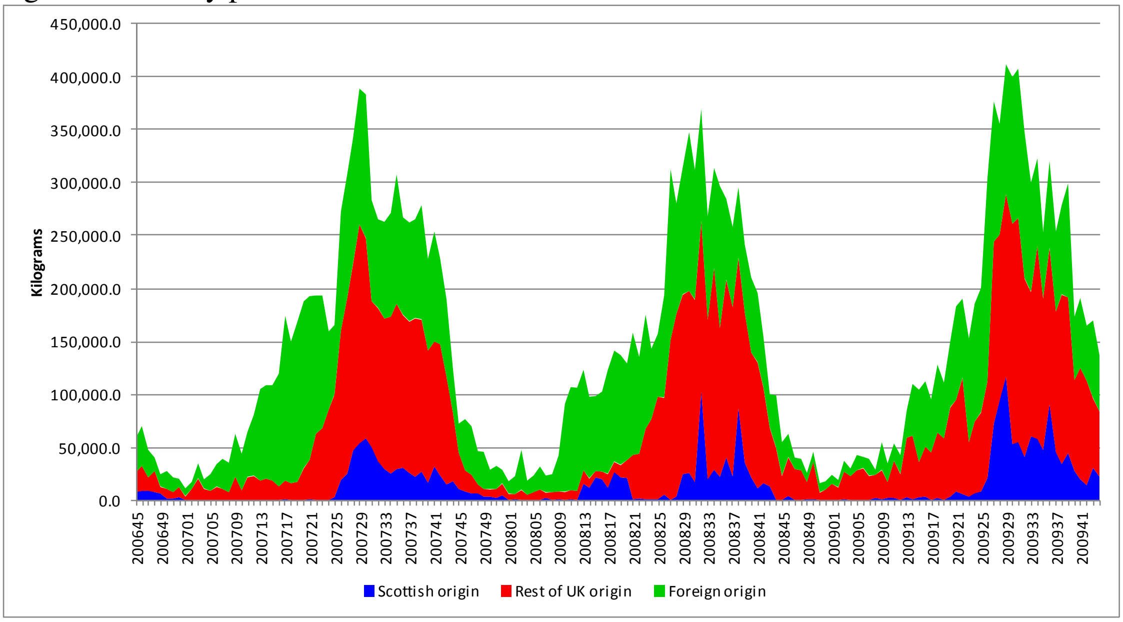
	Retailer						Retailer				
	Tesco	Asda	Sainsbury's	Morrison's	Others		Tesco	Asda	Sainsbury's	Morrison's	Others
			2006 (45 - 52 week)						**2008**		
Purchases	1,378.6	1,991.9	0.0	0.0	0.0	**Purchases**	33,883.8	0.0	964.2	432.0	14,679.3
Scottish origin	1,378.6	0.0	0.0	0.0	0.0	Scottish origin	28,684.5	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	0.0	0.0	0.0	432.0	2,889.4
Foreign origin	0.0	1,991.9	0.0	0.0	0.0	Foreign origin	5,199.3	0.0	964.2	0.0	11,789.9
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	0.0	0.0	0.0	**Shares**	100.0	0.0	100.0	100.0	100.0
Scottish origin	100.0	0.0	0.0	0.0	0.0	Scottish origin	84.7	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	0.0	0.0	0.0	100.0	19.7
Foreign origin	0.0	100.0	0.0	0.0	0.0	Foreign origin	15.3	0.0	100.0	0.0	80.3
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
			2007						**2009 (1 - 44 week)**		
Purchases	31,879.5	4,098.4	4,912.1	0.0	6,608.8	**Purchases**	5,033.7	3,765.1	7,621.7	6,059.7	9,658.6
Scottish origin	31,136.9	0.0	1,595.4	0.0	0.0	Scottish origin	0.0	293.8	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	1,787.4	0.0	0.0	Rest of UK origin	3,736.6	0.0	4,668.3	5,610.2	3,090.9
Foreign origin	742.5	4,098.4	1,529.3	0.0	6,608.8	Foreign origin	1,297.2	3,471.3	2,953.4	0.0	5,866.1
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	449.5	701.7
Shares	100.0	100.0	100.0	0.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	97.7	0.0	32.5	0.0	0.0	Scottish origin	0.0	7.8	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	36.4	0.0	0.0	Rest of UK origin	74.2	0.0	61.3	92.6	32.0
Foreign origin	2.3	100.0	31.1	0.0	100.0	Foreign origin	25.8	92.2	38.7	0.0	60.7
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	7.4	7.3

Source: Based on Kantar Worldpanel data.

How seasonal are the purchases?

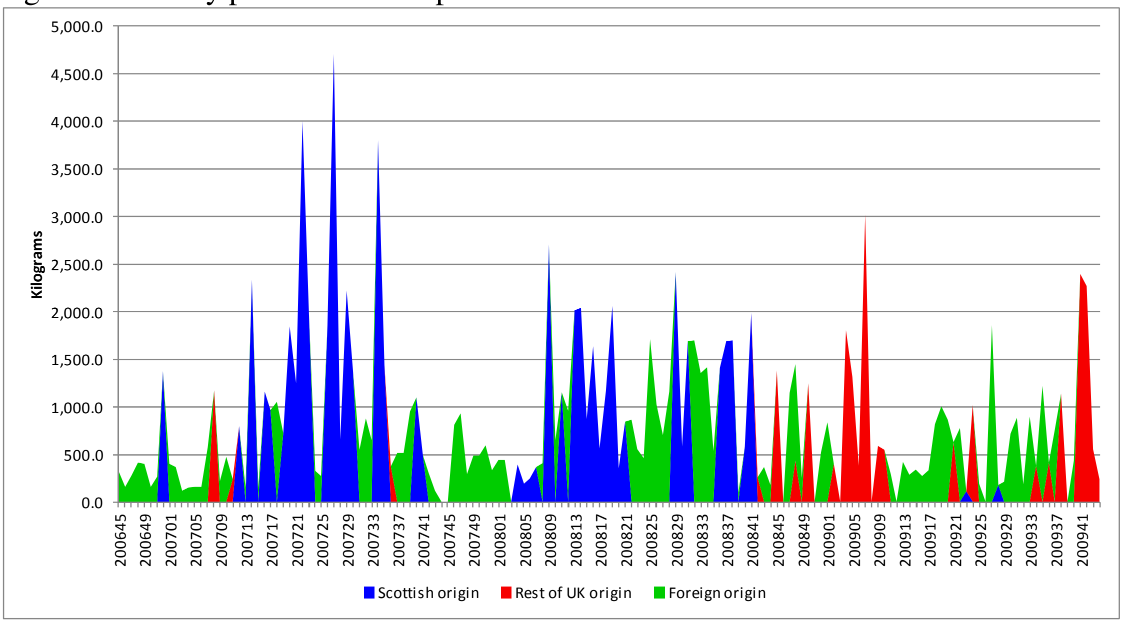
Figures 2 and 3 present the weekly purchases of fresh strawberries and raspberries in Scotland (including also the provenance). In the case of the strawberries, the seasonality is very clear with the purchases peaking during the summer period. The seasonality in the case of raspberries is not as clear as in the case of strawberries (mostly due to the limited number of observations).

Figure 2: Weekly purchases of fresh strawberries in Scotland 2006-2009



Source: Kantar Worldpanel

Figure 3: Weekly purchases of raspberries in Scotland 2006-2009

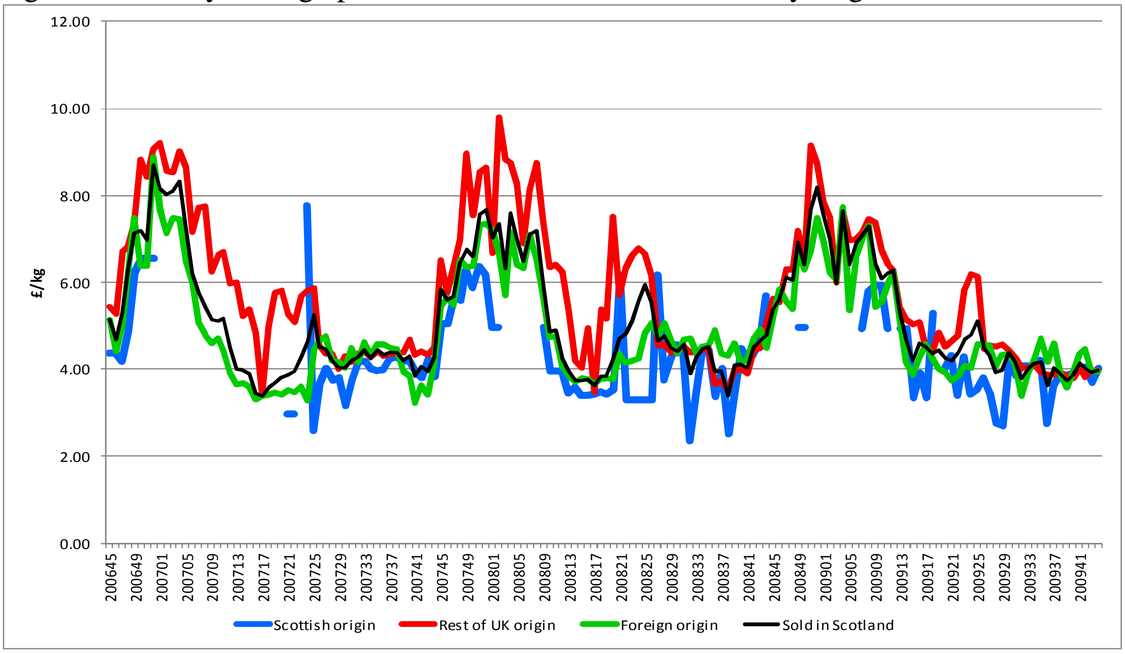


Source: Kantar Worldpanel.

Figures 4 and 5 present the prices for strawberries and raspberries from different provenances. Whilst the few observations in the case of raspberries do not allow to say anything about the seasonality in prices, for strawberries one can note that prices from rest of the UK normally the highest (red line), followed by the prices of strawberries from abroad (green) and by the Scottish strawberries (blue).

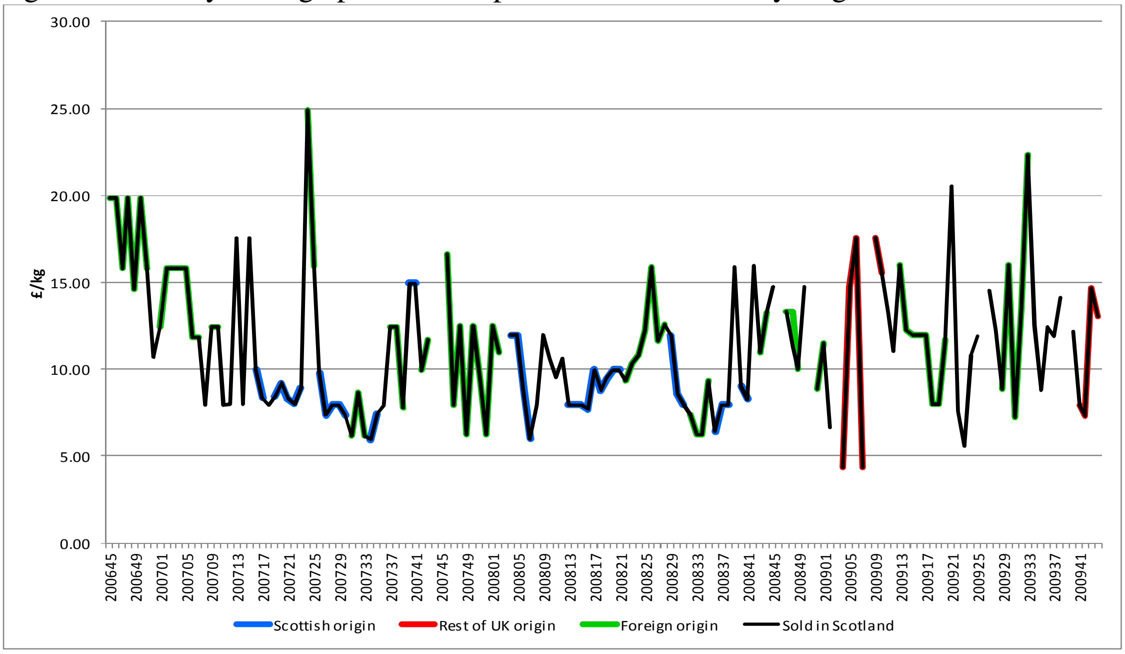
In addition, all the prices seem to follow the UK seasonality (i.e., lower during the high demand period, summer, and higher during the low demand season).

Figure 4: Weekly average prices of strawberries in Scotland by origin 2006-2009



Source: Kantar Worldpanel.

Figure 5: Weekly average prices of raspberries in Scotland by origin 2006-2009



Source: Kantar Worldpanel.

IV. Conclusions

The purpose of this paper has been to explore the locality and seasonality of the purchases of soft fruit in Scotland.

The main conclusion is that the purchases speak of a demand that it is very seasonal (peaking during summer and decreasing significantly during winter). Furthermore, the seasonality is so marked that it is possible to identify it despite the short span of the time series used in the paper. It should be noted that the seasonality can be identified as a feature of the demand as it is possible serve the demand with soft fruit of foreign origin with seasonalities that complement the UK seasonality (e.g., Spain, Holland, Egypt).

As regards the locality of the purchases of purchases, it is clear that the Scottish provenance represent a relatively small proportion of the purchases of soft fruit in Scotland. The Scottish demand is satisfied with soft fruit from the rest of the UK and from abroad. Furthermore, only in the case of strawberries and raspberries it was found Scottish purchases; for blackberries and blueberries only produce from the of UK and from abroad was found in the sample (this might be either a deficiency from sample or an indication that the Scottish share on the market of these two fruits is very small or they are marketed for consumption out of the household).

The aforementioned analysis of locality was deepened by considering three main control variables: (1) socioeconomic group, (2) geographical area and (3) retailer. The results indicated that there were not significant differences in the purchases by socioeconomic group.

With respect to the purchases by geographic area, all of them seem to have a similar composition in terms of soft fruit from Scottish, Rest of UK and Foreign origin at least in the case of strawberries, where most of the Scottish produce is consumed in urban areas around the Central Belt as they are closest to the production areas. The data patterns in the case of raspberries are less clear due to fact that the available information was limited.

Retailers show marked differences in terms of the provenance of the soft fruit they sell. Thus, whilst Asda sells a high proportion of the Scottish strawberries, Tesco does the same with respect to raspberry. The remaining retailers have different combinations of soft fruit from foreign origin and from the Rest of the UK.

Overall, the recommendation of buying local and seasonal may operate when one considers a combination of different seasonal fruits (though this is something that needs to be tested) but not if one has in mind only soft fruit as the Scottish supply does not cover the demand. In this sense, imports of soft fruit either from the rest of the UK or from foreign origin have the purpose of covering the demand surplus for soft fruit in Scotland and may maintain the prices of healthy food at affordable levels.

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VI. Annex

Table A.1: Purchases of blackberries by geographical area and origin (Kg)

	Geographic area					
	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
2006 (45 - 52 week)						
Purchases	617.3	1,119.3	963.4	0.0	0.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	385.4	1,119.3	0.0	0.0	0.0	0.0
Foreign origin	231.9	0.0	963.4	0.0	0.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	0.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	62.4	100.0	0.0	0.0	0.0	0.0
Foreign origin	37.6	0.0	100.0	0.0	0.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2007						
Purchases	8,450.2	11,271.0	6,144.3	0.0	1,433.8	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	7,544.7	3,020.3	0.0	0.0	649.5	0.0
Foreign origin	905.5	8,250.7	6,144.3	0.0	784.3	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0	55.6
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	89.3	26.8	0.0	0.0	45.3	44.4
Foreign origin	10.7	73.2	100.0	0.0	54.7	11.1
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2008						
Purchases	5,868.5	10,976.8	4,936.4	0.0	729.9	526.8
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	5,231.6	3,841.0	0.0	0.0	244.6	381.3
Foreign origin	636.8	5,804.3	4,936.4	0.0	485.3	145.5
Unknown origin	0.0	1,331.5	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	89.1	35.0	0.0	0.0	33.5	72.4
Foreign origin	10.9	52.9	100.0	0.0	66.5	27.6
Unknown origin	0.0	12.1	0.0	0.0	0.0	0.0
2009 (1 - 44 week)						
Purchases	8,343.5	7,548.7	2,445.6	0.0	1,698.5	1,384.9
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	4,154.3	4,203.1	260.9	0.0	772.1	1,384.9
Foreign origin	4,189.2	3,345.7	2,184.7	0.0	926.4	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	49.8	55.7	10.7	0.0	45.5	100.0
Foreign origin	50.2	44.3	89.3	0.0	54.5	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.

Table A.2: Purchases of blueberries by geographical area and origin (Kg)

	Geographic area					
	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
2006 (45 - 52 week)						
Purchases	337.7	2,113.3	223.6	0.0	0.0	3,504.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	337.7	2,113.3	223.6	0.0	0.0	3,504.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	0.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	0.0	0.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2007						
Purchases	8,158.4	7,926.2	3,159.8	129.4	2,950.2	7,901.5
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	8,158.4	7,926.2	3,159.8	129.4	2,950.2	7,901.5
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2008						
Purchases	9,228.7	8,454.2	8,966.6	164.3	1,336.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	9,228.7	8,454.2	8,966.6	164.3	1,336.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
2009 (1 - 44 week)						
Purchases	11,546.0	9,999.7	2,900.0	3,349.2	2,878.0	1,094.7
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	11,546.0	9,999.7	2,900.0	3,349.2	2,878.0	1,094.7
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.

Table A.3: Purchases of blackberries by socioeconomic group and origin (Kg)

	Socioeconomic group				
	A-B	C1	C2	D	E
2006 (45 - 52 week)					
Purchases	0.0	0.0	2,700.1	0.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	1,504.7	0.0	0.0
Foreign origin	0.0	0.0	1,195.3	0.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	0.0	0.0	100.0	0.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	55.7	0.0	0.0
Foreign origin	0.0	0.0	44.3	0.0	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0
2007					
Purchases	3,809.5	13,570.5	6,472.9	3,446.3	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	3,023.7	6,034.3	1,206.7	949.9	0.0
Foreign origin	785.8	7,536.2	5,266.2	2,496.5	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	79.4	44.5	18.6	27.6	0.0
Foreign origin	20.6	55.5	81.4	72.4	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0

	Socioeconomic group				
	A-B	C1	C2	D	E
2008					
Purchases	3,785.6	16,377.1	2,601.0	274.6	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	2,855.6	4,762.1	2,080.8	0.0	0.0
Foreign origin	930.0	10,283.5	520.2	274.6	0.0
Unknown origin	0.0	1,331.5	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	75.4	29.1	80.0	0.0	33.3
Foreign origin	24.6	62.8	20.0	100.0	66.7
Unknown origin	0.0	8.1	0.0	0.0	0.0
2009 (1 - 44 week)					
Purchases	3,119.2	11,915.1	4,147.2	2,239.7	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	666.2	7,403.1	1,645.8	1,060.1	0.0
Foreign origin	2,453.0	4,512.0	2,501.4	1,179.6	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	0.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	21.4	62.1	39.7	47.3	0.0
Foreign origin	78.6	37.9	60.3	52.7	0.0
Unknown origin	0.0	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.

Table A.4: Purchases of blueberries by socioeconomic group and origin (Kg)

	Socioeconomic group						Socioeconomic group				
	A-B	C1	C2	D	E		A-B	C1	C2	D	E
	2006 (45 - 52 week)						**2008**				
Purchases	1,773.8	555.4	345.4	0.0	3,504.0	**Purchases**	5,102.6	14,127.5	3,883.8	1,844.7	3,191.2
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	1,773.8	555.4	345.4	0.0	3,504.0	Foreign origin	5,102.6	14,127.5	3,883.8	1,844.7	3,191.2
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	0.0	100.0	Foreign origin	100.0	100.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
	2007						**2009 (1 - 44 week)**				
Purchases	8,764.4	9,104.6	3,573.7	2,330.3	6,452.5	**Purchases**	6,510.6	12,171.3	5,292.0	2,399.2	5,394.5
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	8,764.4	9,104.6	3,573.7	2,330.3	6,452.5	Foreign origin	6,510.6	12,171.3	5,292.0	2,399.2	5,394.5
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0	Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	100.0	100.0	Foreign origin	100.0	100.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.

Table A.5: Purchases of blackberries by retailer and origin (Kg)

	Retailer						Retailer				
	Tesco	Asda	Sainsbury's	Morrison's	Others		Tesco	Asda	Sainsbury's	Morrison's	Others
			2006 (45 - 52 week)						**2008**		
Purchases	231.9	963.4	385.4	1,119.3	0.0	**Purchases**	1,701.0	3,770.1	2,190.0	6,376.5	9,000.8
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	385.4	1,119.3	0.0	Rest of UK origin	0.0	0.0	2,190.0	6,376.5	1,132.0
Foreign origin	231.9	963.4	0.0	0.0	0.0	Foreign origin	1,701.0	3,770.1	0.0	0.0	6,537.2
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	1,331.5
Shares	100.0	100.0	100.0	100.0	0.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	100.0	100.0	0.0	Rest of UK origin	0.0	0.0	100.0	100.0	12.6
Foreign origin	100.0	100.0	0.0	0.0	0.0	Foreign origin	100.0	100.0	0.0	0.0	72.6
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	14.8
			2007						**2009 (1 - 44 week)**		
Purchases	1,927.5	8,675.2	3,084.2	7,796.9	5,815.5	**Purchases**	5,564.5	5,056.5	5,550.4	1,838.7	3,411.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	134.7	0.0	1,696.5	7,796.9	1,586.5	Rest of UK origin	3,386.1	0.0	5,550.4	1,838.7	0.0
Foreign origin	1,792.8	8,675.2	1,387.7	0.0	4,229.0	Foreign origin	2,178.4	5,056.5	0.0	0.0	3,411.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0	**Shares**	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0	Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	7.0	0.0	55.0	100.0	27.3	Rest of UK origin	60.9	0.0	100.0	100.0	0.0
Foreign origin	93.0	100.0	45.0	0.0	72.7	Foreign origin	39.1	100.0	0.0	0.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0	Unknown origin	0.0	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.

Table A.6: Purchases of blueberries by retailer and origin (Kg)

	Retailer				
	Tesco	Asda	Sainsbury's	Morrison's	Others
2006 (45 - 52 week)					
Purchases	4,811.7	0.0	339.5	811.4	215.9
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	4,811.7	0.0	339.5	811.4	215.9
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	0.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	0.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0
2007					
Purchases	11,466.5	2,385.3	6,701.8	4,420.1	5,251.8
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	11,466.5	2,385.3	6,701.8	4,420.1	5,251.8
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	100.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	100.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0

	Retailer				
	Tesco	Asda	Sainsbury's	Morrison's	Others
2008					
Purchases	7,181.1	3,889.7	4,660.6	0.0	12,418.5
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	7,181.1	3,889.7	4,660.6	0.0	12,418.5
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	0.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0
2009 (1 - 44 week)					
Purchases	18,267.4	7,321.5	5,785.6	0.0	393.1
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	18,267.4	7,321.5	5,785.6	0.0	393.1
Unknown origin	0.0	0.0	0.0	0.0	0.0
Shares	100.0	100.0	100.0	0.0	100.0
Scottish origin	0.0	0.0	0.0	0.0	0.0
Rest of UK origin	0.0	0.0	0.0	0.0	0.0
Foreign origin	100.0	100.0	100.0	0.0	100.0
Unknown origin	0.0	0.0	0.0	0.0	0.0

Source: Based on Kantar Worldpanel data.