## Centre for Food Innovation

a fresh perspective on food



# British Frozen Food Federation REPORT

The price of consumer favourites

Fresh versus Frozen

Commissioned by
Sheffield Hallam University

CJ Harden & LL Bell, Centre for Food Innovation



#### **FOREWORD**

This report has been commissioned by the British Frozen Food Federation (BFFF).

The BFFF is the trade association of the frozen food industry. Its' mission statement is 'to promote and protect the interests of the frozen food industry'.

The report was managed and written by Charlotte Harden and Lorna Bell on behalf of the Centre for Food Innovation at Sheffield Hallam University.

#### **EXECUTIVE SUMMARY**

The BFFF commissioned an investigation to examine price differences between fresh and frozen food available in supermarkets. A month's worth of till receipts was obtained from regular supermarket shoppers and the top ten most commonly consumed items (that were regularly available in both a fresh and frozen form) were identified. The cost of these items was determined by obtaining all available prices from four national supermarket online shopping websites.

The results of this investigation show that every product examined (pizza, broccoli, carrots, garlic bread, chicken prawns, salmon, sausages, spinach and parsnips) in every product category (value, regular, organic and premium) was, on average, less expensive in a frozen compared to fresh form. The results suggest consumers could expect to save up to 26p per 100g on frozen compared to fresh value ranges, 50p per 100g on frozen compared to fresh regular ranges, 48p per 100g on frozen compared to fresh organic food and 50p per 100g on frozen compared to fresh premium ranges.

In terms of translating these prices to potential household savings, this research has shown that it would cost £23.25 to feed an average family of four a fresh portion of the identified top ten foods compared to £15.45 for frozen equivalents. This would be a shopping basket saving of £7.80 or 34%.

In times of financial uncertainty easy ways of spending less are welcomed; switching to frozen could translate to significant monetary savings. In this investigation shoppers would have had the opportunity to swap from fresh to frozen on over six hundred items. There are numerous other advantages of buying frozen food. Frozen food has improved price stability, can reduce food waste, allows convenient, year round availability of family favourites and has been shown to be an effective way of providing adequately nutritious family meals.

CONTENTS	Page number
1.0 INTRODUCTION	5
2.0 METHODS	6 - 7
3.0 RESULTS	8 - 29
4.0 DISCUSSION	30

#### 1.0 INTRODUCTION

2012 begins with a backdrop of widespread financial uncertainty sweeping the UK. Austerity measures will be implemented by most, but there may also be easy, less drastic ways to save money in the New Year. Frozen food is synonymous with convenience and value for money but the saving potential of switching from fresh to frozen has not recently been examined in the modern marketplace.

In December 2011 - January 2012, The British Frozen Food Federation (BFFF) commissioned a timely investigation into the price difference between fresh and frozen food. Twenty people, who were the main household shopper of a family of four and who shopped weekly at a national supermarket chain, provided a month's worth of till receipts. These receipts were analysed to examine the types of food purchased, to identify the top ten most commonly consumed foods (available in a fresh and frozen form) and to examine the price differences of purchasing these foods in a fresh compared to frozen form. The results of the investigation follow.

#### 2.0 METHOD

#### 2.1 Participants

Twenty people were recruited by email advertisement through Sheffield Hallam University. Eligible participants were the main household shopper of a family of four (consisting of two adults and two children), shopped weekly at a national supermarket chain and provided a month's worth of till receipts.

#### 2.2 Identifying purchase type

An initial point of analysis was to categorise each purchase according to its provision type:

- 1. **Fresh**. This included all items sold at ambient temperature (such as fruit and vegetables, bread and bakery products) and refrigerated chilled products (such as meat and fish, ready meals, yoghurts and desserts).
- 2. Frozen. This included all items sold in a frozen form.
- 3. **Dried.** This included all items sold in a dried form, such as dried fruit, flour, biscuits and breakfast cereals.
- 4. **Tinned/jarred.** This included all items sold in a tin or jar, such as baked beans, tinned fruit, sauces and condiments.
- 5. **Beverages.** This included items such as milk, juices, alcohol, fizzy drinks, tea and coffee.
- 6. **Non-food.** This included items such as household goods, clothes, toiletries and cleaning materials.

#### 2.3 Identifying freezing potential

The freezing potential of each purchase was examined. Non-food items and dried products such as flour and breakfast cereal were excluded from further analysis but products that were readily available in both a fresh and frozen form (such as peas and chicken) were identified.

#### 2.4 Selecting items for cost analysis

The frequency of purchase of all items readily available in a fresh and frozen form was documented and the ten most commonly purchased items were identified and selected for subsequent cost analysis.

#### 2.5 Identifying product costs

The cost for each item in its fresh and frozen form was identified through the use of four national supermarket online shopping websites. Each item was searched and all products meeting the criteria (for example, whole chicken) were included in analysis.

#### 2.6 Categorising items

Each available item was categorised in terms of the supermarket where the price was obtained (1-4), its provision type (fresh or frozen) and product category (value, regular, organic and premium).

#### 2.7 Data analysis

The price of each item was converted to a cost per 100g; comparisons were made by supermarket, provision type and product category. Data is presented as mean  $\pm$  standard deviation and range (min – max).

#### 3.0 RESULTS

In total, participants purchased 3,534 items, of which, 1,703 were fresh, 64 were frozen, 621 were dried, 333 were tinned/jarred, 493 were drinks and 337 were non-food items (**TABLE 1**). Of the 3,534 items purchased, 607 (17.2%) were readily available in a fresh or frozen form.

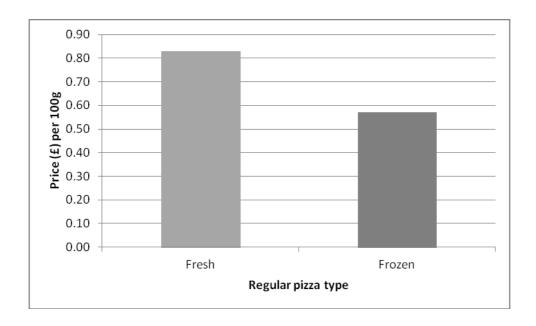
**TABLE 1:** Items purchased by category

Purchasing category	items purchased
	(%)
Fresh	48.2
Frozen	1.8
Dried	17.6
Tinned/jarred	9.4
Drinks	14.0
Non-food	9.5

The ten most commonly purchased items were; pizza, broccoli, carrots, garlic bread, chicken (whole), prawns, salmon, sausages (excluding vegetarian), spinach and parsnips. Searches for these ten products using national supermarket online shopping websites revealed a total of 739 fresh food items (41 value range, 506 regular range, 53 organic and 139 premium range) and 238 comparable frozen food items (11 value range, 222 regular range, 4 organic and 1 premium range).

#### 3.1 Pizza

**FIGURE 1**: Summary of the price comparison for the regular range of pizzas showing that frozen were, on average, 26p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S1-2.

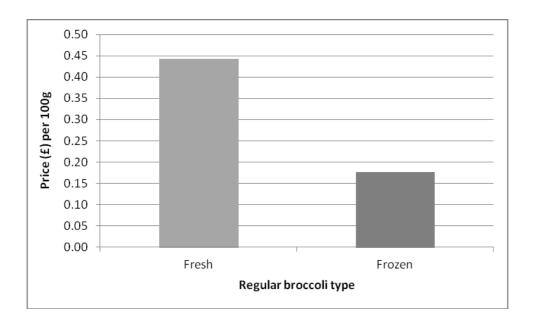
In the regular category range, frozen pizzas were, on average, 26p less expensive per 100 grams than fresh pizzas. When the price of pizza from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen pizzas were typically less expensive than fresh by an average of 14p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £5.71 to feed an average family of four\* a fresh regular category pizza compared to £3.92 for a frozen regular category pizza. This would be a saving of £1.79 or 31%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.2 Broccoli

**FIGURE 2**: Summary of the price comparison for the regular range of broccoli showing that frozen were, on average, 27p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S3-4.

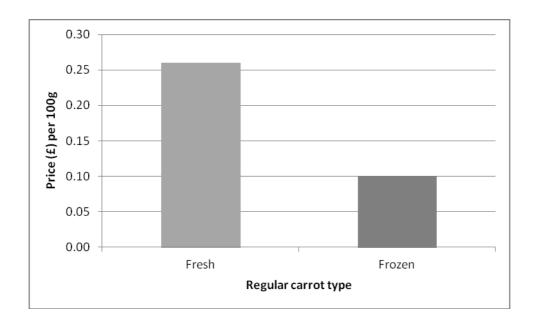
In the regular category range, frozen broccoli was, on average, 27p less expensive per 100 grams than fresh broccoli. When the price of broccoli from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen broccoli was typically less expensive than fresh by an average of 38p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £1.27 to feed an average family of four\* a fresh portion of regular category broccoli compared to £0.51 for a frozen portion of regular category broccoli. This would be a saving of £0.76 or 60%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.3 Carrots

**FIGURE 3**: Summary of the price comparison for the regular range of carrots showing that frozen were, on average, 16p less expensive per 100 grams than fresh



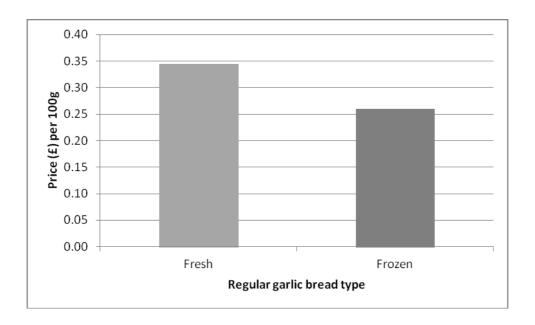
A full breakdown of analysis is presented in S5-6.

In the regular category range, frozen carrots were, on average, 16p less expensive per 100 grams than fresh carrots. When the price of carrots from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen carrots were typically less expensive than fresh by an average of 14p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £0.56 to feed an average family of four\* a fresh portion of regular category carrots compared to £0.22 for a frozen portion of regular category carrots. This would be a saving of £0.34 or 62%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

**FIGURE 4**: Summary of the price comparison for the regular range of garlic bread showing that frozen were, on average, 9p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S7-8.

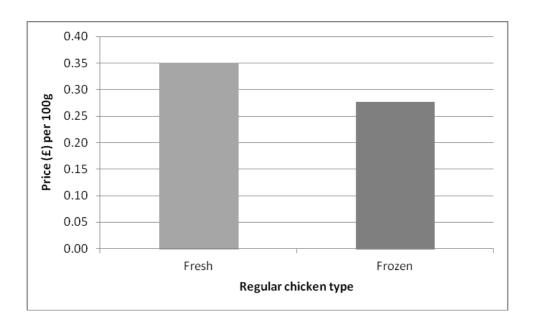
In the regular category range, frozen garlic bread was, on average, 9p less expensive per 100 grams than fresh garlic bread. When the price of from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen garlic bread was typically less expensive than fresh by an average of 6p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £0.92 to feed an average family of four\* a fresh portion of regular category garlic bread compared to £0.70 for a frozen portion of regular category garlic bread. This would be a saving of £0.22 or 25%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.5 Chicken

**FIGURE 5**: Summary of the price comparison for the regular range of chicken showing that frozen were, on average, 7p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S9-10.

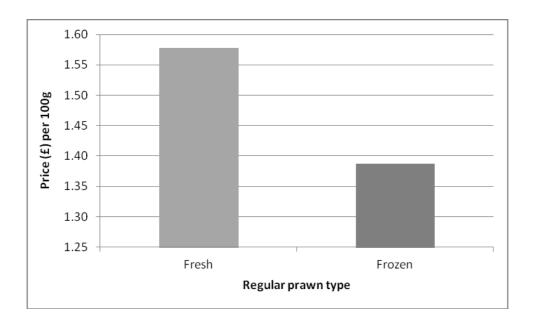
In the regular category range, frozen chicken was, on average, 7p less expensive per 100 grams than fresh chicken. When the price of chicken from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen chicken was typically less expensive than fresh by an average of 15p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £1.26 to feed an average family of four\* a fresh portion of regular category chicken compared to £1.00 for a frozen portion of regular category chicken. This would be a saving of £0.26 or 21%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.6 Prawns

**FIGURE 6**: Summary of the price comparison for the regular range of prawns showing that frozen were, on average, 19p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S11-12.

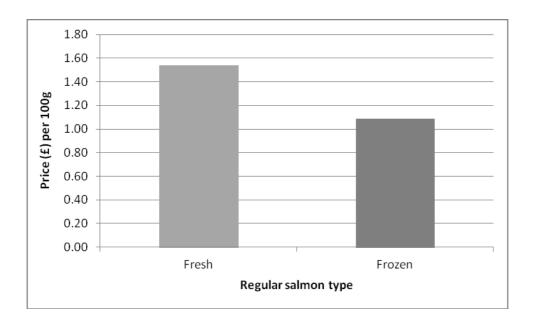
In the regular category range, frozen prawns were, on average, 19p less expensive per 100 grams than fresh prawns. When the price of prawns from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen prawns were typically less expensive than fresh by an average of 20p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £2.78 to feed an average family of four\* a fresh portion of regular category prawns compared to £2.44 for a frozen portion of regular category prawns. This would be a saving of £0.34 or 12%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.7 Salmon

**FIGURE 7**: Summary of the price comparison for the regular range of salmon showing that frozen were, on average, 45p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S13-14.

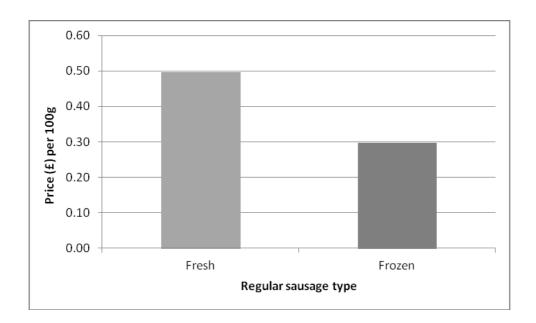
In the regular category range, frozen salmon was, on average, 45p less expensive per 100 grams than fresh salmon. When the price of salmon from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen salmon was typically less expensive than fresh by an average of 52p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £7.38 to feed an average family of four\* a fresh portion of regular category salmon compared to £5.21 for a frozen portion of regular category salmon. This would be a saving of £2.17 or 29%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.8 Sausages

**FIGURE 8**: Summary of the price comparison for the regular range of sausages showing that frozen were, on average, 20p less expensive per 100 grams than fresh



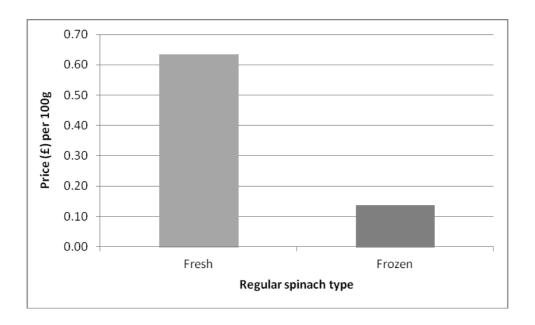
A full breakdown of analysis is presented in S15-16.

In the regular category range, frozen sausages were, on average, 20p less expensive per 100 grams than fresh sausages. When the price of sausages from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen sausages were typically less expensive than fresh by an average of 30p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £1.43 to feed an average family of four\* a fresh portion of regular category sausages compared to £0.85 for a frozen portion of regular category sausages. This would be a saving of £0.58 or 40%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

**FIGURE 9**: Summary of the price comparison for the regular range of spinach showing that frozen were, on average, 50p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S17-18.

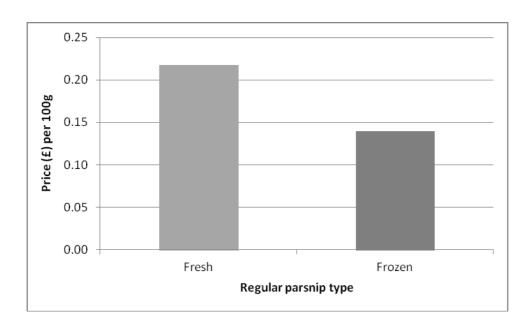
In the regular category range, frozen spinach was, on average, 50p less expensive per 100 grams than fresh spinach. When the price of spinach from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen spinach was typically less expensive than fresh by an average of 53p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £1.50 to feed an average family of four\* a fresh portion of regular category spinach compared to £0.32 for a frozen portion of regular category spinach. This would be a saving of £1.18 or 78%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

#### 3.10 Parsnips

**FIGURE 10**: Summary of the price comparison for the regular range of parsnips showing that frozen were, on average, 8p less expensive per 100 grams than fresh



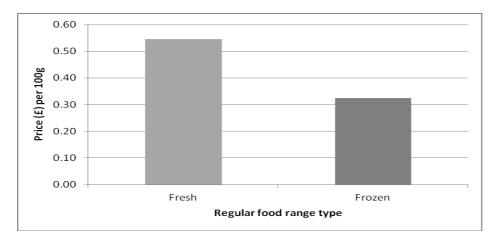
A full breakdown of analysis is presented in S19-20.

In the regular category range, frozen parsnips were, on average, 8p less expensive per 100 grams than fresh parsnips. When the price of parsnips from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen parsnips were typically less expensive than fresh by an average of 13p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £0.44 to feed an average family of four\* a fresh portion of regular category parsnips compared to £0.28 for a frozen portion of regular category parsnips. This would be a saving of £0.16 or 36%.

<sup>\*</sup>based on Food Standard Agency average portion sizes

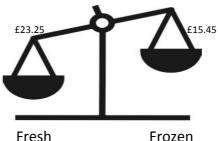
**FIGURE 11**: Summary of the price comparison for all regular range foods showing that frozen were, on average, 22p less expensive per 100 grams than fresh



A full breakdown of analysis is presented in S21-22.

In the regular category range, frozen food was, on average, 22p less expensive per 100 grams than fresh food. When the price of all ten foods from all four supermarkets and all product ranges (i.e. value, regular, premium and organic) were totalled, frozen food was typically less expensive than fresh by an average of 26p per 100 grams.

In terms of translating these prices to potential household savings, it would cost £23.25 to feed an average family of four\* a fresh portion of all the top ten foods compared to £15.45 for frozen equivalents. This would be a shopping basket saving of £7.80 or 34%.



<sup>\*</sup>based on Food Standard Agency average portion sizes

#### **DISCUSSION**

This is the first large scale report to present up-to date evidence showing how switching to frozen food can translate to significant financial savings. The results of this investigation show that every product examined in every product category was, on average, less expensive when frozen compared to fresh. Consumers could expect to save up to 26p per 100g on frozen compared to fresh value ranges, 50p per 100g on frozen compared to fresh value ranges, 50p per 100g on frozen compared to fresh organic food and 50p per 100g on frozen compared to fresh premium ranges.

In terms of translating these prices to potential household savings, this research has shown that it would cost £23.25 to feed an average family of four a fresh portion of the identified top ten foods compared to £15.45 for frozen equivalents. This would be a shopping basket saving of £7.80 or 34%.

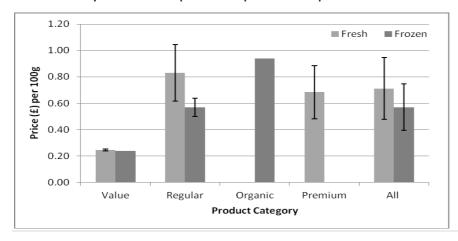
In times of financial uncertainty easy ways of spending less are welcomed; switching to frozen could translate to significant monetary savings. In this investigation shoppers would have had the opportunity to swap from fresh to frozen on over six hundred items. There are numerous other advantages of using frozen food in the home. Frozen food has improved price stability, can reduce food waste, allows convenient, year round availability of family favourites and has been shown to be an effective way of providing adequately nutritious family meals.

### **APPENDIX**

**S1**: Results of the price comparison for pizza

							Tyl	ре						
				Fresh							Frozen			
Supermarket				Price(£)	per 100 <sub>{</sub>	g				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(min	- max)	Total	М	ean ±	SD	Range	(mir	n-max)
Supermarket 1														
Value	1	0.24	±	0.00	0.24	-	0.24	0						
Regular	30	0.95	±	0.37	0.23	-	1.63	39	0.56	±	0.13	0.38	-	0.79
Organic	0							0						
Premium	5	0.61	±	0.05	0.62	-	0.75	0						
Total	36	0.60	±	0.36	0.23	-	1.63	39	0.56	±	0.13	0.38	-	0.79
Supermarket 2														
Value	0							1	0.24	±	0.00	0.24	-	0.24
Regular	99	0.58	±	0.16	0.31	-	1.00	40	0.52	±	0.19	0.25	-	0.90
Organic	0		±			-		0						
Premium	4	0.53	±	0.09	0.44	-	0.61	0						
Total	103	0.56	±	0.04	0.31	-	0.61	41	0.38	±	0.20	0.24	-	0.90
Supermarket 3														
Value	2	0.25	±	0.06	0.21	-	0.29	0						
Regular	49	0.73	±	0.26	0.41	-	1.23	43	0.53	±	0.24	0.15	-	1.33
Organic	0							0						
Premium	9	0.91	±	0.15	0.77	-	1.13	0						
Total	60	0.63	±	0.34	0.21	-	1.23	43	0.53	±	0.24	0.15	-	1.33
Supermarket 4														
Value	0							0						
Regular	39	1.06	±	0.27	0.70	-	1.63	18	0.67	±	0.13	0.49	-	0.85
Organic	0							1	0.94	±	0.00	0.94	-	0.94
Premium	0							0						
Total	39	1.06	±	0.00	0.70	-	1.63	19	0.81	±	0.19	0.49	-	0.94
All Supermarkets														
Value	3	0.25	±	0.01	0.21	-	0.29	1	0.24	±	0.00	0.24	-	0.24
Regular	217	0.83	±	0.22	0.23	-	1.63	140	0.57	±	0.07	0.15	-	1.33
Organic	0							1	0.94	±	0.00	0.94	-	0.94
Premium	18	0.68	±	0.20	0.44	-	1.13	0						
Total	238	0.71	±	0.23	0.21	-	1.63	142	0.57	±	0.18	0.15	-	1.33

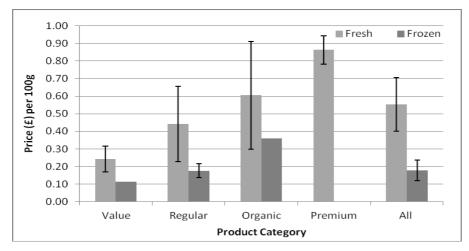
## **S2**: Summary of the total price comparison for pizza



**S3**: Results of the price comparison for broccoli

							Tyl	pe						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	g				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(min	- max)	Total	М	ean ±	:SD	Range	(mir	n-max)
Supermarket 1														
Value	1	0.27	±	0.00	0.27	-	0.27	0						
Regular	4	0.48	±	0.25	0.20	-	0.75	2	0.20	±	0.10	0.10	-	0.27
Organic	2	0.69	±	0.44	0.38	-	1.00	0						
Premium	2	0.88	±	0.18	0.75	-	1.00	0						
Total	9	0.58	±	0.26	0.20	-	1.00	2	0.20	±	0.00	0.10	-	0.27
Supermarket 2														
Value	0							1	0.10	±	0.00	0.10	-	0.10
Regular	3	0.30	±	0.10	0.20	-	0.40	2	0.20	±	0.09	0.13	-	0.26
Organic	1	0.40	±	0.00	0.40	-	0.40	0						
Premium	2	0.80	±	0.00	0.80	-	0.80	0						
Total	6	0.50	±	0.26	0.20	-	0.80	3	0.15	±	0.07	0.10	-	0.26
Supermarket 3														
Value	1	0.16	±	0.00	0.16	-	0.16	1	0.10	±	0.00	0.10	-	0.10
Regular	3	0.26	±	0.05	0.20	-	0.29	1	0.13	±	0.00	0.13	-	0.13
Organic	1	0.33	±	0.00	0.33	-	0.33	0						
Premium	2	0.80	±	0.07	0.75	-	0.85	0						
Total	7	0.39	±	0.28	0.16	-	0.85	2	0.12	±	0.02	0.10	-	0.13
Supermarket 4														
Value	2	0.30	±	0.14	0.20	-	0.40	1	0.14	±	0.00	0.14	-	0.14
Regular	4	0.73	±	0.37	0.34	-	1.19	0						
Organic	1	1.00	±	0.00	1.00	-	1.00	1	0.36	±	0.00	0.36	-	0.36
Premium	3	0.97	±	0.17	0.78	-	1.12	0						
Total	10	0.75	±	0.32	0.20	-	1.19	2	0.25	±	0.16	0.14	-	0.36
All Supermarkets														
Value	4	0.24	±	0.07	0.16	-	0.40	3	0.11	±	0.00	0.24	-	0.24
Regular	14	0.44	±	0.21	0.20	-	1.19	5	0.18	±	0.04	0.15	-	1.33
Organic	5	0.61	±	0.31	0.33	-	1.00	1	0.36	±	0.00	0.36	-	0.36
Premium	9	0.86	±	0.08	0.20	-	1.12	0						
Total	32	0.55	±	0.15	0.16	_	1.19	9	0.18	±	0.06	0.15	-	1.33

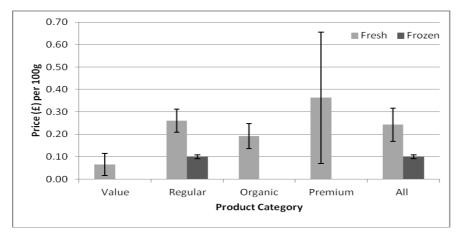
## **S4**: Summary of the total price comparison for broccoli



**S5**: Results of the price comparison for carrots

							Ту	ре						
				Fresh							Frozen			
Supermarket				Price(£)	per 100 <sub>{</sub>	g				Price	e(£) per î	100g		
	Total	Me	ean ±	SD	Range	(mir	ı - max)	Total	М	ean ±	:SD	Range	e (mir	n-max)
Supermarket 1														
Value	0							0						
Regular	4	0.24	±	0.14	0.09	-	0.42	1	0.10	±	0.00	0.10	-	0.10
Organic	2	0.26	±	0.16	0.15	-	0.38	0						
Premium	1	0.22	±	0.00	0.22	-	0.22	0						
Total	7	0.24	±	0.02	0.09	-	0.42	1	0.10	±	0.00	0.10	-	0.10
Supermarket 2														
Value	2	0.03	±	0.02	0.02	-	0.04	0						
Regular	7	0.26	±	0.24	0.11	-	0.80	1	0.10	±	0.00	0.10	-	0.10
Organic	1	0.13	±	0.00	0.13	-	0.13	0						
Premium	1	0.18	±	0.00	0.18	-	0.18	0						
Total	11	0.15	±	0.10	0.02	-	0.80	1	0.10	±	0.00	0.10	-	0.10
Supermarket 3														
Value	2	0.10	±	0.08	0.05	-	0.16	0						
Regular	5	0.21	±	0.17	0.08	-	0.50	2	0.09	±	0.01	0.08	-	0.10
Organic	3	0.21	±	0.15	0.12	-	0.38	0						
Premium	2	0.80	±	0.75	0.27	-	1.33	0						
Total	12	0.33	±	0.32	0.05	-	1.33	2	0.09	±	0.00	0.08	-	0.10
Supermarket 4														
Value	0							0						
Regular	6	0.33	±	0.43	0.09	-	1.19	1	0.11	±	0.00	0.11	-	0.11
Organic	2	0.17	±	0.01	0.17	-	0.18	0						
Premium	1	0.25	±	0.00	0.25		0.25	0						
Total	9	0.25	±	0.08	0.09	-	1.19	1	0.11	±	0.00	0.11	-	0.11
All														
Supermarkets														
Value	4	0.07	±	0.05	0.05	-	0.80	0						
Regular	22	0.26	±	0.05	0.08	-	1.19	5	0.10	±	0.01	0.15	-	0.11
Organic	8	0.19	±	0.06	0.12	-	0.38	0						
Premium	5	0.36	±	0.29	0.02	-	1.33	0						
Total	39	0.24	±	0.07	0.05	-	1.33	5	0.10	±	0.01	0.15		0.11

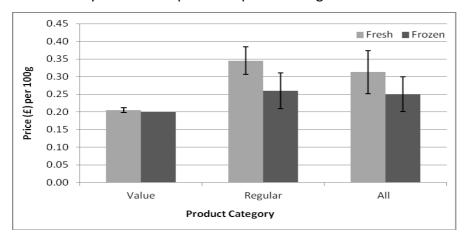
## **S6**: Summary of the total price comparison for carrots



**S7**: Results of the price comparison for garlic bread

							Ту	pe						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	g				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(mir	n - max)	Total	М	ean ±	SD	Range	e (mir	n-max)
Supermarket 1														
Value	0							0						
Regular	1	0.31	±	0.00	0.31	-	0.31	4	0.31	±	0.07	0.22	-	0.39
Organic	0							0						
Premium	0							0						
Total	1	0.31	±	0.00	0.31	-	0.31	4	0.31	±	0.00	0.22	-	0.39
Supermarket 2														
Value	1	0.20	±	0.00	0.20	-	0.20	1	0.20	±	0.00	0.20	-	0.20
Regular	4	0.33	±	0.06	0.24	-	0.39	3	0.28	±	0.11	0.17	-	0.39
Organic	0							0						
Premium	0							0						
Total	5	0.27	±	0.09	0.20	-	0.39	4	0.24	±	0.06	0.17	-	0.39
Supermarket 3														
Value	2	0.21	±	0.01	0.20	-	0.22	0						
Regular	3	0.34	±	0.05	0.31	-	0.41	1	0.19	±	0.00	0.19	-	0.19
Organic	0							0						
Premium	0							0						
Total	5	0.28	±	0.09	0.20	-	0.41	1	0.19	±	0.00	0.19	-	0.19
Supermarket 4														
Value	0							0						
Regular	4	0.4	±	0.05	0.36	-	0.40	1	0.26	±	0.00	0.26	-	0.26
Organic	0							0						
Premium	0							0						
Total	4	0.40	±	0.00	0.36	-	0.40	1	0.26	±	0.00	0.26	-	0.26
All Supermarkets														
Value	3	0.21	±	0.01	0.20	-	0.39	1	0.20	±	0.00	0.20	-	0.20
Regular	12	0.35	±	0.04	0.31	-	0.41	9	0.26	±	0.05	0.17	-	0.39
Organic	0							0						
Premium	0							0						
Total	15	0.31	±	0.06	0.20	-	0.41	10	0.25	±	0.05	0.17	-	0.39

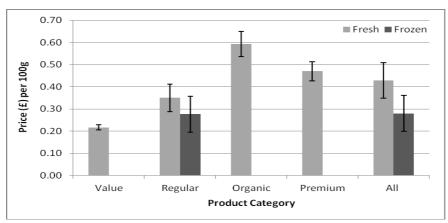
## **S8**: Summary of the total price comparison for garlic bread



**S9**: Results of the price comparison for chicken

							Ty	pe						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	g				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(mir	ı - max)	Total	М	ean ±	:SD	Range	e (mir	n-max)
Supermarket 1														
Value	1	0.23	±	0.00	0.23	-	0.23	0						
Regular	6	0.31	±	0.03	0.28	-	0.36	2	0.22	±	0.01	0.22	-	0.23
Organic	1	0.6	±	0.00	0.60	-	0.60	0						
Premium	1	0.46	±	0.00	0.46	-	0.46	0						
Total	9	0.40	±	0.16	0.23	-	0.60	2	0.22	±	0.00	0.22	-	0.23
Supermarket 2														
Value	1	0.21	±	0.00	0.21	-	0.21	0						
Regular	3	0.34	±	0.12	0.25	-	0.48	1	0.37	±	0.00	0.37	-	0.37
Organic	1	0.55	±	0.00	0.55	-	0.55	0						
Premium	2	0.46	±	0.00	0.46	-	0.46	0						
Total	7	0.39	±	0.15	0.21	_	0.55	1	0.37	±	0.00	0.37	-	0.37
Supermarket 3														
Value	1	0.21	±	0.00	0.21	-	0.21	0						
Regular	7	0.31	±	0.05	0.25	_	0.37	1	0.24	±	0.00	0.24	-	0.24
Organic	1	0.55	±	0.00	0.55	-	0.55	0						
Premium	3	0.43	±	0.02	0.42	-	0.46	0						
Total	12	0.38	±	0.15	0.21	-	0.55	1	0.24	±	0.00	0.24	-	0.24
Supermarket 4														
Value	0							0						
Regular	6	0.44	±	0.18	0.31	-	0.71	0						
Organic	2	0.67	±	0.00	0.67	-	0.67	0						
Premium	4	0.53	±	0.02	0.51	_	0.55	0						
Total	12	0.55	±	0.12	0.31	_	0.71	0						
All Supermarkets														
Value	3	0.22	±	0.01	0.21	_	0.48	0						
Regular	22	0.35	±	0.06	0.25	_	0.71	4	0.28	±	0.08	0.15	-	1.33
Organic	5	0.59	±	0.06	0.46	_	0.67	0						
Premium	10	0.47	±	0.04	0.21	_	0.55	0						
Total	40	0.43	±	0.08	0.21	_	0.71	4	0.28	±	0.08	0.15	_	1.33

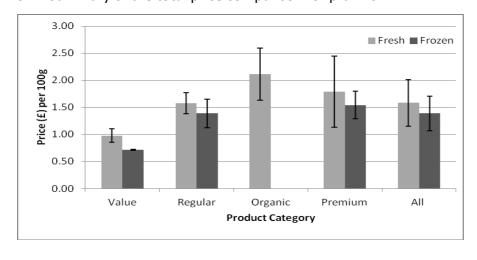
## **\$10**: Summary of the total price comparison for chicken



**\$11**: Results of the price comparison for prawns

							Ту	ре						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	g				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	e (mir	ı - max)	Total	М	ean ±	:SD	Range	e (mir	n-max)
Supermarket 1														
Value	1	0.92	±	0.00	0.92	-	0.92	1	0.71	±	0.00	0.71	-	0.71
Regular	3	1.72	±	0.19	1.50	-	1.83	3	1.27	±	0.06	1.20	-	1.32
Organic	1	2.45	±	0.00	2.45	-	2.45	0						
Premium	2	1.69	±	0.21	1.54	-	1.83	2	1.67	±	0.79	1.11	-	2.22
Total	7	1.70	±	0.62	0.92	-	2.45	6	1.22	±	0.00	0.71	-	2.22
Supermarket 2														
Value	1	0.89	±	0.00	0.89	-	0.89	1	0.72	±	0.00	0.72	-	0.72
Regular	5	1.38	±	0.27	1.10	-	1.77	5	1.16	±	0.13	1.00	-	1.32
Organic	0							0						
Premium	0							1	1.25	±	0.00	1.25	-	1.25
Total	6	1.14	±	0.35	0.89	-	1.77	7	1.04	±	0.00	0.72	-	1.32
Supermarket 3														
Value	2	1.12	±	0.28	0.92	-	1.31	0						
Regular	6	1.44	±	0.22	1.23	-	1.82	5	1.36	±	0.27	1.17	-	1.82
Organic	1	1.77	±	0.00	1.77	-	1.77	0						
Premium	1	1.19	±	0.00	1.19	-	1.19	3	1.71	±	0.51	1.12		2.00
Total	10	1.38	±	0.29	0.92	-	1.82	8	1.54	±	0.00	1.12	-	2.00
Supermarket 4														
Value	0							0						
Regular	7	1.77	±	0.31	1.17	-	2.00	10	1.76	±	0.40	1.22	-	1.76
Organic	0							0						
Premium	1	2.49	±	0.00	2.49	-	2.49	0						
Total	8	2.13	±	0.51	1.17	-	2.49	10	1.76	±	0.00	1.22	-	1.76
All Supermarkets														
Value	4	0.98	±	0.13	0.92	-	1.77	2	0.72	±	0.01	0.71	-	0.72
Regular	21	1.58	±	0.20	1.17	-	2.00	23	1.39	±	0.26	1.00	-	1.32
Organic	2	2.11	±	0.48	1.77	-	2.45	0						
Premium	4	1.79	±	0.66	0.89	-	2.49	6	1.54	±	0.25	1.11	-	2.22
Total	31	1.59	±	0.43	0.92	_	2.49	31	1.39	±	0.32	0.71	-	2.22

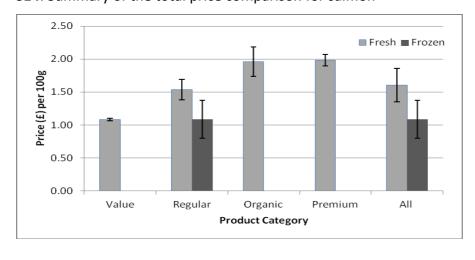
## **\$12**: Summary of the total price comparison for prawns



**\$13**: Results of the price comparison for salmon

							Ту	ре						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	3				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(mir	ı - max)	Total	M	ean ±	:SD	Range	e (mir	n-max)
Supermarket 1														
Value	1	1.09	±	0.00	1.09	-	1.09	0						
Regular	4	1.50	±	0.20	1.30	-	1.67	1	1.00	±	0.00	1.00	-	1.00
Organic	0							0						
Premium	2	1.89	±	0.21	1.74	-	2.04	0						
Total	7	1.49	±	0.40	1.09	-	2.04	1	1.00	±	0.00	1.00	-	1.00
Supermarket 2														
Value	2	1.06	±	0.05	1.03	-	1.10	0						
Regular	3	1.50	±	0.11	1.43	-	1.63	4	0.92	±	0.21	0.74	-	1.11
Organic	0							0						
Premium	1	2.00	±	0.00	2.00	-	2.00	0						
Total	6	1.52	±	0.47	1.03	_	2.00	4	0.92	±	0.00	0.74	_	1.11
Supermarket 3														
Value	1	1.10	±	0.00	1.10	_	1.10	0						
Regular	2	1.39	±	0.20	1.25	_	1.54	2	0.91	±	0.01	0.90	_	0.92
Organic	1	1.80	±	0.00	1.80	-	1.80	0						
Premium	0							0						
Total	4	1.43	±	0.35	1.10	_	1.80	2	0.91	±	0.00	0.90	_	0.92
Supermarket 4														
Value	0							0						
Regular	3	1.76	±	0.30	1.41	_	1.96	2	1.51	±	0.08	1.46	_	1.56
Organic	5	2.12	±	0.18	1.86	_	2.27	0						
Premium	3	2.06	±	0.91	1.25	_	3.04	0						
Total	11	1.98	±	0.19	1.25	_	3.04	2	1.51	±	0.00	1.46	_	1.56
All Supermarkets														
Value	4	1.08	±	0.02	1.09	_	1.63	0						
Regular	12	1.54	±	0.16	1.25	_	1.96	9	1.09	±	0.29	0.74	_	1.56
Organic	6	1.96	±	0.23	1.80	_	2.27	0		_				
Premium	6	1.98	_ ±	0.09	1.03	_	3.04	0						
Total	28	1.61	±	0.25	1.09	_	3.04	9	1.09	±	0.29	0.74	_	1.56

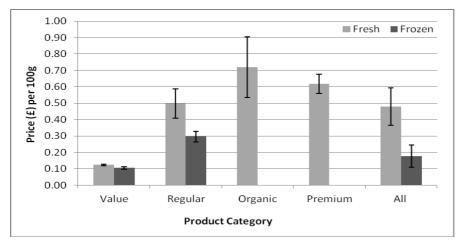
**\$14**: Summary of the total price comparison for salmon



**\$15**: Results of the price comparison for sausages

							Ту	pe						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	3				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(mir	ı - max)	Total	М	ean ±	SD	Range	e (mir	n-max)
Supermarket 1														
Value	1	0.12	±	0.00	0.12	-	0.12	1	0.11	±	0.00	0.11	-	0.11
Regular	21	0.46	±	0.13	0.20	-	0.76	6	0.32	±	0.07	0.23	-	0.37
Organic	1	0.85	±	0.00	0.85	-	0.85	0						
Premium	15	0.66	±	0.04	0.58	-	0.74	0						
Total	38	0.52	±	0.31	0.12	-	0.85	7	0.22	±	0.00	0.11	-	0.37
Supermarket 2														
Value	1	0.13	±	0.00	0.13	-	0.13	1	0.10	±	0.00	0.10	-	0.10
Regular	28	0.46	±	0.16	0.22	-	0.92	5	0.26	±	0.08	0.17	-	0.33
Organic	0							0						
Premium	19	0.53	±	0.14	0.44	-	1.03	0						
Total	48	0.37	±	0.21	0.13	-	1.03	6	0.18	±	0.00	0.10	-	0.33
Supermarket 3														
Value	1	0.12	±	0.00	0.12	-	0.12	0						
Regular	29	0.44	±	0.15	0.20	-	0.83	7	0.31	±	0.09	0.17	-	0.37
Organic	0							0						
Premium	21	0.64	±	0.08	0.50	-	0.83	0						
Total	51	0.40	±	0.26	0.12	-	0.83	7	0.31	±	0.00	0.17	-	0.37
Supermarket 4														
Value	0							0						
Regular	37	0.63	±	0.13	0.22	-	0.77	0						
Organic	2	0.59	±	0.22	0.44	-	0.75	0						
Premium	9	0.64	±	0.11	0.44	-	0.75	0						
Total	48	0.62	±	0.03	0.22	-	0.77	0						
All Supermarkets														
Value	3	0.12	±	0.01	0.12	-	0.92	2	0.11		0.01	0.10		0.11
Regular	115	0.50	±	0.09	0.20	-	0.83	18	0.30	±	0.03	0.17	-	0.37
Organic	3	0.72	±	0.18	0.44	-	1.03	0						
Premium	64	0.62	±	0.06	0.13	-	1.03	0						
Total	185	0.48	±	0.11	0.12	-	0.85	20	0.18	±	0.07	0.10	-	0.37

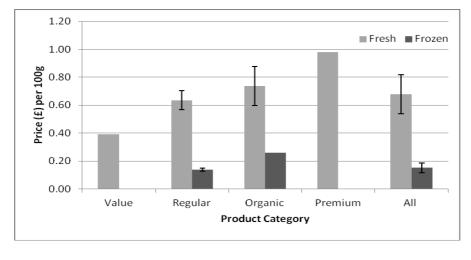
**\$16**: Summary of the total price comparison for sausages



**\$17**: Results of the price comparison for spinach

							Ту	pe						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	3				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(mir	n - max)	Total	М	ean ±	SD	Range	(mir	n-max)
Supermarket 1														
Value	0							0						
Regular	2	0.66	±	0.12	0.58	-	0.75	2	0.14	±	0.01	0.13	-	0.15
Organic	1	0.75	±	0.00	0.75	-	0.75	0						
Premium	0							0						
Total	3	0.71	±	0.06	0.58	-	0.75	2	0.14	±	0.00	0.13	-	0.15
Supermarket 2														
Value	0							0						
Regular	3	0.58	±	0.18	0.39	-	0.74	2	0.13	±	0.05	0.10	-	0.17
Organic	1	0.56	±	0.00	0.56	-	0.56	0						
Premium	0							0						
Total	4	0.57	±	0.01	0.39	-	0.74	2	0.13	±	0.00	0.10	-	0.17
Supermarket 3														
Value	1	0.39	±	0.00	0.39	-	0.39	0						
Regular	2	0.58	±	0.08	0.52	-	0.63	1	0.13	±	0.00	0.13	-	0.13
Organic	1	0.74	±	0.00	0.74	-	0.74	0						
Premium	0							0						
Total	4	0.57	±	0.18	0.39	-	0.74	1	0.13	±	0.00	0.13	-	0.13
Supermarket 4														
Value	0							0						
Regular	3	0.72	±	0.42	0.38	-	1.19	2	0.15	±	0.01	0.14	-	0.16
Organic	1	0.90	±	0.00	0.90	-	0.90	1	0.26	±	0.00	0.26	-	0.26
Premium	2	0.98	±	0.37	0.72	-	1.24	0						
Total	6	0.87	±	0.13	0.38	_	1.24	3	0.21		0.08	0.14		0.26
All Supermarkets														
Value	1	0.39	±	0.00	0.39	-	0.74	0						
Regular	10	0.64	±	0.07	0.38	-	1.19	7	0.14	±	0.01	0.10	-	0.17
Organic	4	0.74	±	0.14	0.74	_	0.90	1	0.26	±	0.00	0.26	-	0.26
Premium	2	0.98	±	0.00	0.39	-	1.24	0						
Total	17	0.68	±	0.14	0.38	-	1.24	8	0.15	±	0.04	0.10	-	0.26

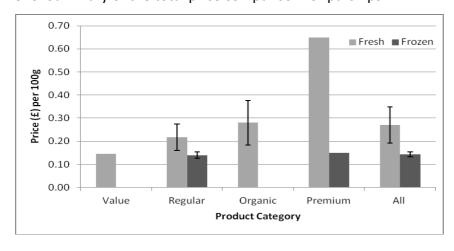
**\$18**: Summary of the total price comparison for spinach



**\$19**: Results of the price comparison for parsnips

							Ту	pe						
				Fresh							Frozen			
Supermarket				Price(£)	per 100	3				Price	e(£) per :	100g		
	Total	Me	ean ±	SD	Range	(mir	ı - max)	Total	М	ean ±	SD	Range	(mir	n-max)
Supermarket 1														
Value	0							0						
Regular	2	0.14	±	0.02	0.13	-	0.16	1	0.13	±	0.00	0.13	-	0.13
Organic	1	0.30	±	0.00	0.30	-	0.30	0						
Premium	1	0.65	±	0.00	0.65	-	0.65	0						
Total	4	0.36	±	0.26	0.13	-	0.65	1	0.13	±	0.00	0.13	-	0.13
Supermarket 2														
Value	1	0.11	±	0.00	0.11	-	0.11	0						
Regular	3	0.25	±	0.20	0.13	-	0.48	1	0.15	±	0.00	0.15		0.15
Organic	1	0.25	±	0.00	0.25	-	0.25	0						
Premium	0							0						
Total	5	0.20	±	0.08	0.11	-	0.48	1	0.15	±	0.00	0.15	-	0.15
Supermarket 3														
Value	1	0.18	±	0.00	0.18	-	0.18	0						
Regular	3	0.27	±	0.15	0.16	-	0.44	0						
Organic	1	0.17	±	0.00	0.17	-	0.17	0						
Premium	0							1	0.15	±	0.00	0.15		0.15
Total	5	0.21	±	0.06	0.16	-	0.44	1	0.15	±	0.00	0.15	-	0.15
Supermarket 4														
Value	0							0						
Regular	4	0.21	±	0.06	0.16	-	0.30	0						
Organic	1	0.40	±	0.00	0.40	-	0.40	0						
Premium	0							0						
Total	5	0.31	±	0.13	0.16	-	0.40	0						
All Supermarkets		-		-	-		-	-						
Value	2	0.15	±	0.00	0.13	_	0.48	0						
Regular	12	0.22	±	0.06	0.13	_	0.44	2	0.14	±	0.01	0.13	_	0.15
Organic	4	0.28	±	0.10	0.17	-	0.40	0						
Premium	1	0.65	±	0.00	0.11	_	0.65	1	0.15	±	0.00	0.15		0.15
Total	19	0.27	±	0.08	0.13	-	0.65	3	0.14	±	0.01	0.13	-	0.15

## **\$20**: Summary of the total price comparison for parsnips



**S21**: Results of the price comparison for all food

	Туре													
	Fresh							Frozen						
All	Price(£) per 100g							Price(£) per 100g						
Supermarkets														
	Total	Mean ± SD			Range (min - max)			Total	Mean ±SD			Range (min-max)		
Value	41	0.29	±	0.29	0.05	-	1.63	11	0.14	±	0.07	0.10	-	0.24
Regular	506	0.55	±	0.39	0.08	-	1.96	222	0.32	±	0.30	0.10	-	1.56
Organic	53	0.67	±	0.56	0.02	-	2.27	4	0.52	±	0.37	0.26	-	0.94
Premium	139	0.78	±	0.49	0.02	-	3.04	1	0.15	±	0.00	0.15	-	0.15
Total	739	0.57	±	0.40	0.02	-	3.04	238	0.31	±	0.30	0.10	-	1.56

**S22**: Summary of the total price comparison for all food

