

# Food Price Index: June 2014

Embargoed until 10:45am – 11 July 2014

## Key facts

### Monthly change

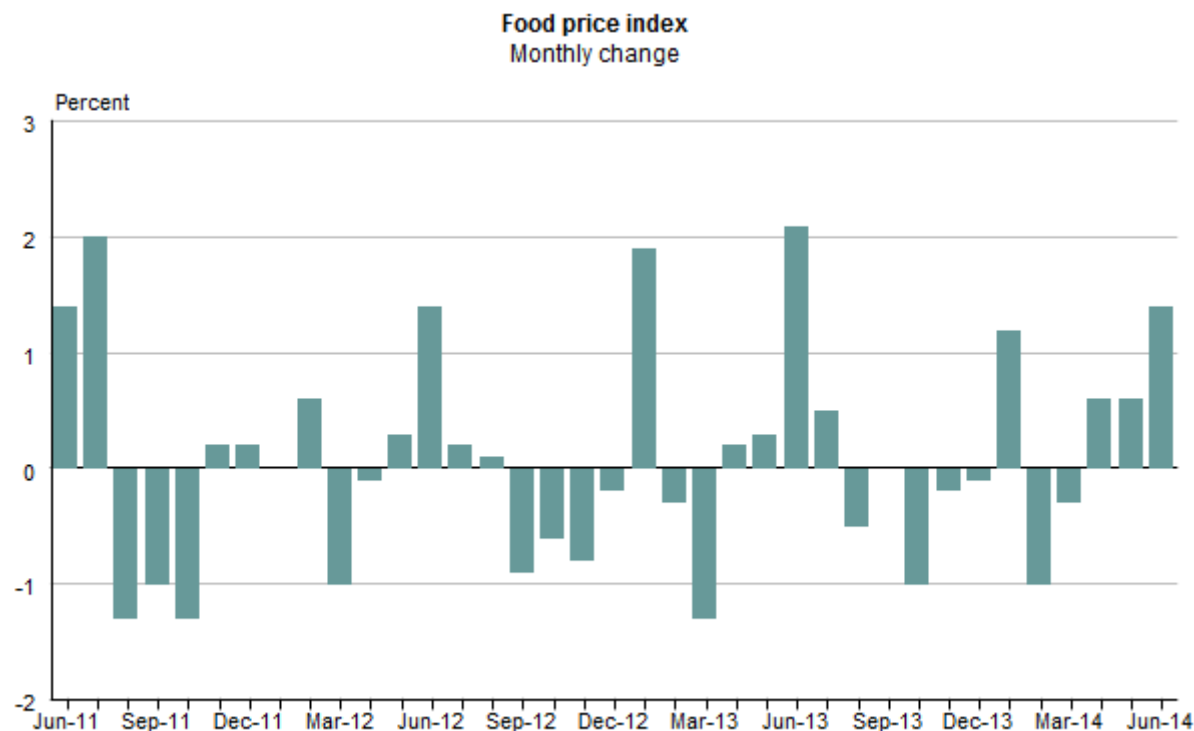
In June 2014 compared with May 2014:

- Food prices **rose** 1.4 percent.
- Fruit and vegetable prices **rose** 5.0 percent.
- Meat, poultry, and fish prices **rose** 3.6 percent.
- Grocery food prices **rose** 0.5 percent.
- Non-alcoholic beverage prices **fell** 1.0 percent.
- Restaurant meals and ready-to-eat food prices **rose** 0.2 percent.

### Annual change

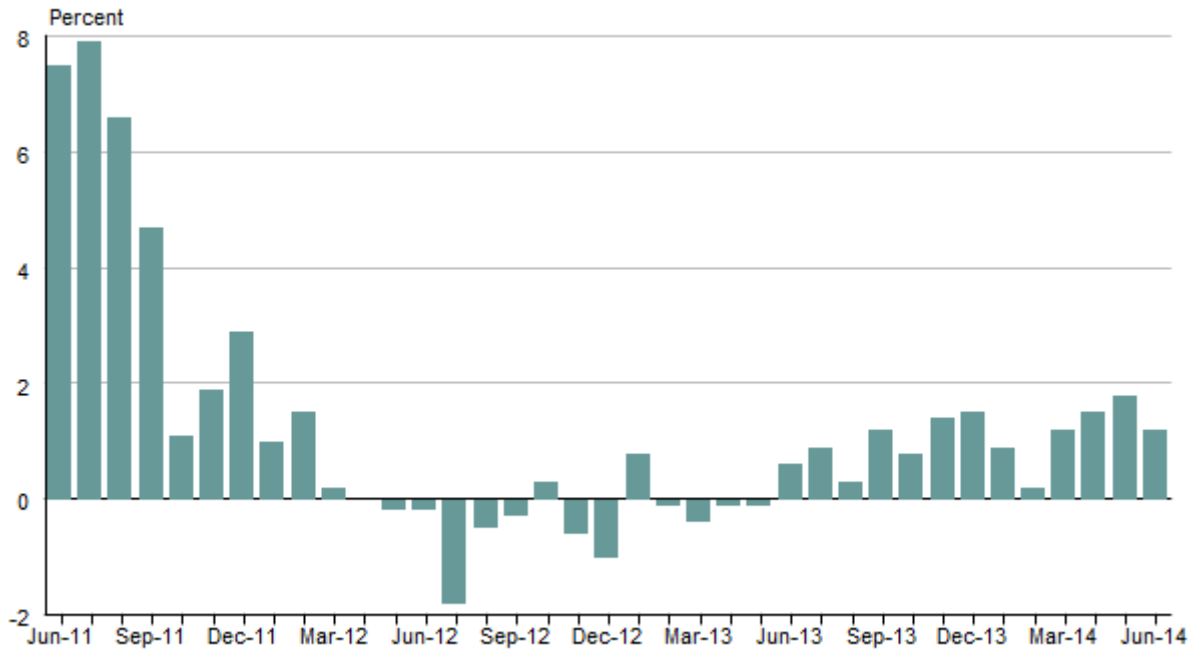
From June 2013 to June 2014:

- Food prices **increased** 1.2 percent.
- Fruit and vegetable prices **decreased** 2.3 percent.
- Meat, poultry, and fish prices **increased** 2.8 percent.
- Grocery food prices **increased** 1.3 percent.
- Non-alcoholic beverage prices **increased** 0.5 percent.
- Restaurant meals and ready-to-eat food prices **increased** 2.0 percent.



Source: Statistics New Zealand

**Food price index**  
Annual change



Source: Statistics New Zealand

Liz MacPherson, Government Statistician  
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## Commentary

- Monthly food prices rise 1.4 percent, influenced by vegetable prices
- Annual food prices increase 1.2 percent, influenced by dairy products
- Longer-term retail picture for dairy, meat, and grain prices
- Updated food price index for July 2014

### Monthly food prices rise 1.4 percent, influenced by vegetable prices

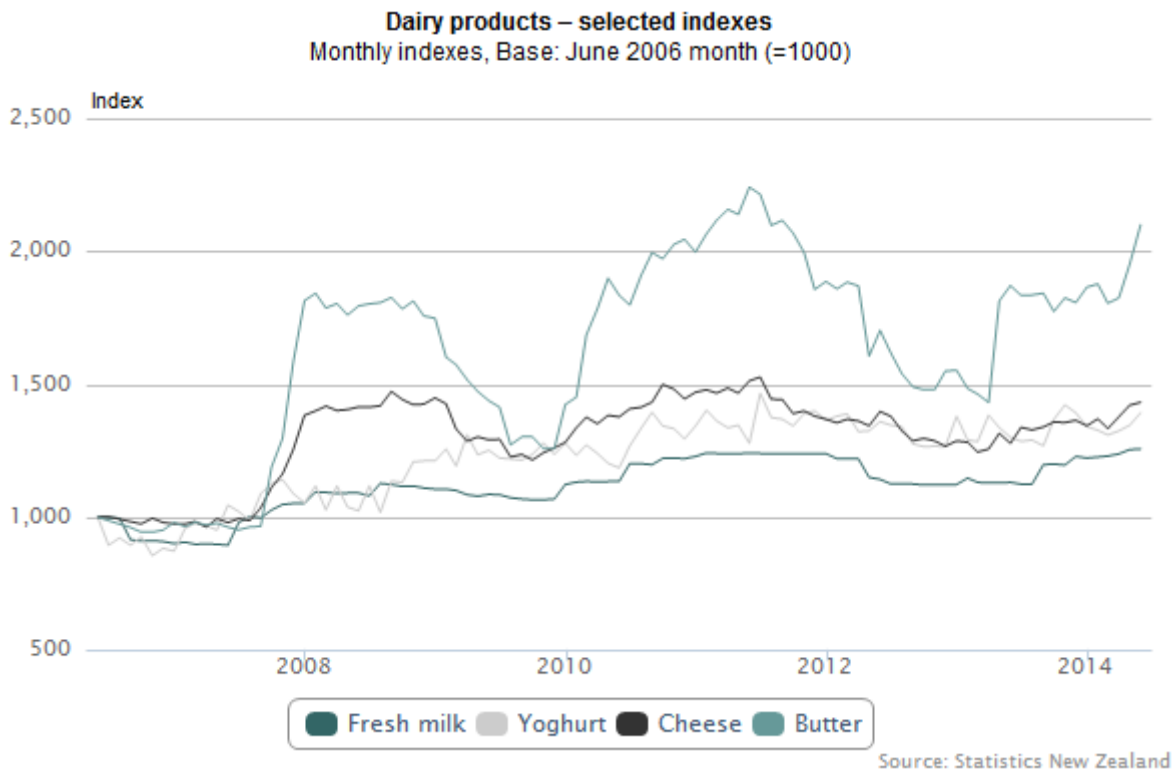
Food prices rose 1.4 percent in June 2014, following a 0.6 percent rise in May and a 0.6 percent rise in April. This is the largest monthly rise since a 2.1 percent rise in June 2013.

Vegetable prices were up 8.9 percent in June, influenced by seasonally higher prices for tomatoes, lettuce, and cucumber. This rise follows a 16 percent rise in vegetable prices last month. The average tomato price of \$9.25 per kilo in June 2014 compares with \$8.97 in June 2013 and \$10.17 in June 2012. Vegetable prices usually rise in winter months and are 0.3 percent cheaper than in June last year.

Meat, poultry, and fish prices rose 3.6 percent, reflecting higher prices for chicken (up 9.9 percent) and beef (up 5.0 percent) – both influenced by less discounting. This is the largest monthly rise in meat, poultry, and fish prices since a 3.7 percent rise in July 2011.

Grocery food prices rose 0.5 percent, influenced by higher prices for dairy products. Prices rose for butter (up 7.7 percent), yoghurt (up 3.6 percent), cheese (up 0.8 percent), and fresh milk (up 0.2 percent). Butter prices are now 6.3 percent below their peak in June 2011.

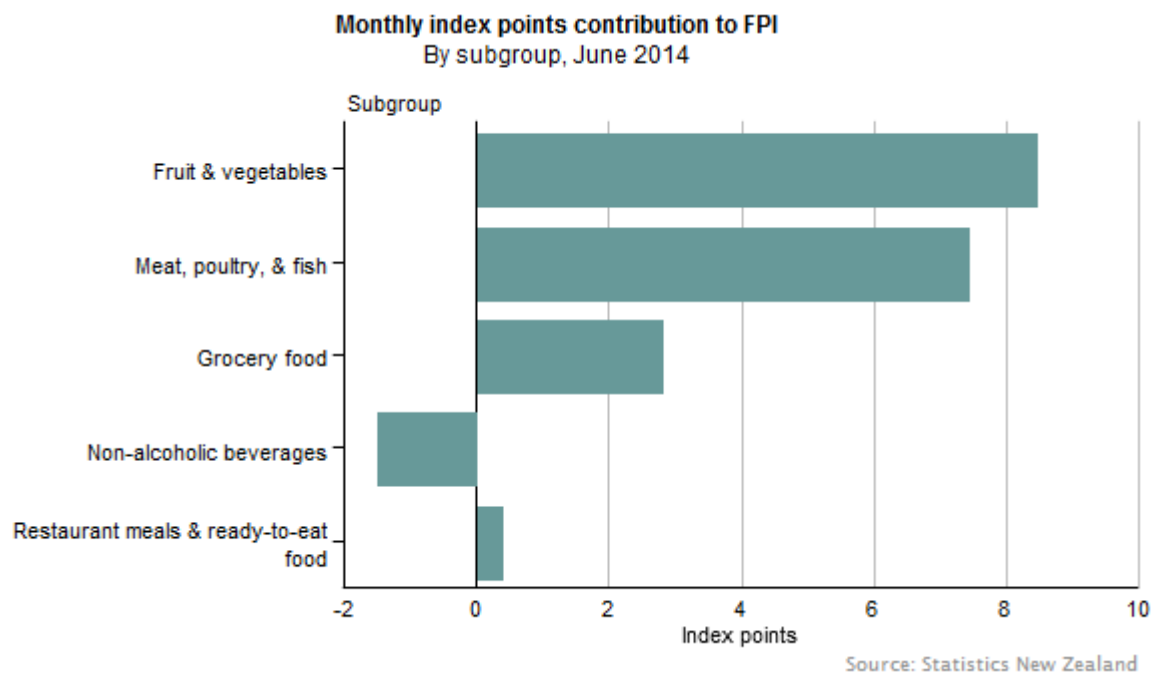
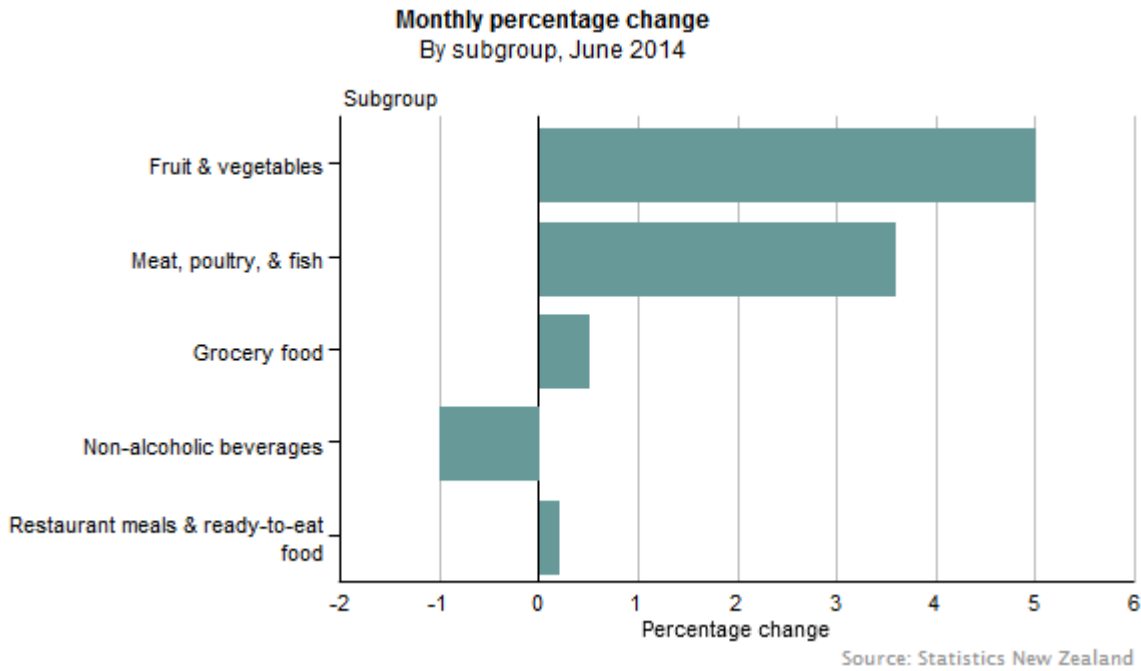
These rises were partly offset by lower prices for bread and cereals (down 0.3 percent), influenced by lower prices for bread, and for cakes and biscuits.



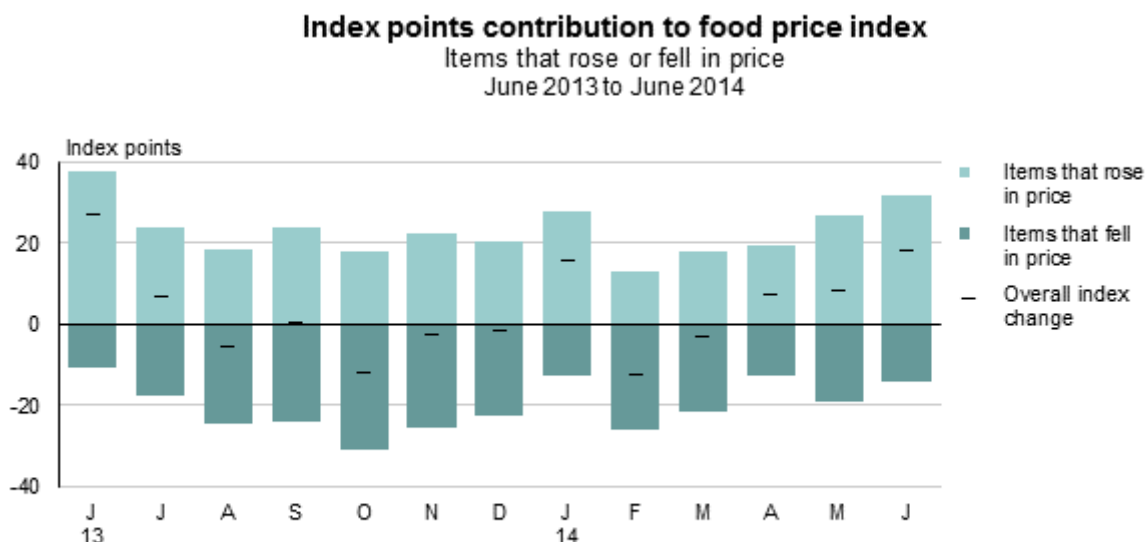
Fruit prices fell 0.5 percent, influenced by lower prices for mandarins and oranges. Mandarin prices usually fall in June months. Banana prices also fell (down 3.7 percent) following a 14 percent fall in May. Banana prices are now at their lowest level since August 2011, influenced by more discounting. The average price of bananas is now \$2.24 per kilo.

These falls were partly offset by seasonally higher prices for nectarines. Nectarine prices usually rise when the first imported stock arrives in winter, as their prices are compared with prices for the March end-of-season locally produced stock.

The graphs below are interactive. Hover over data points to see exact values.



The following graph shows the index points contribution to the food price index (FPI) of items that rose or fell in price for the month.



Source: Statistics New Zealand

## Annual food prices increase 1.2 percent, influenced by dairy products

In the year to June 2014, food prices increased 1.2 percent, following an increase of 1.8 percent in the year to May 2014. Food prices are now at their highest level since they peaked in July 2011.

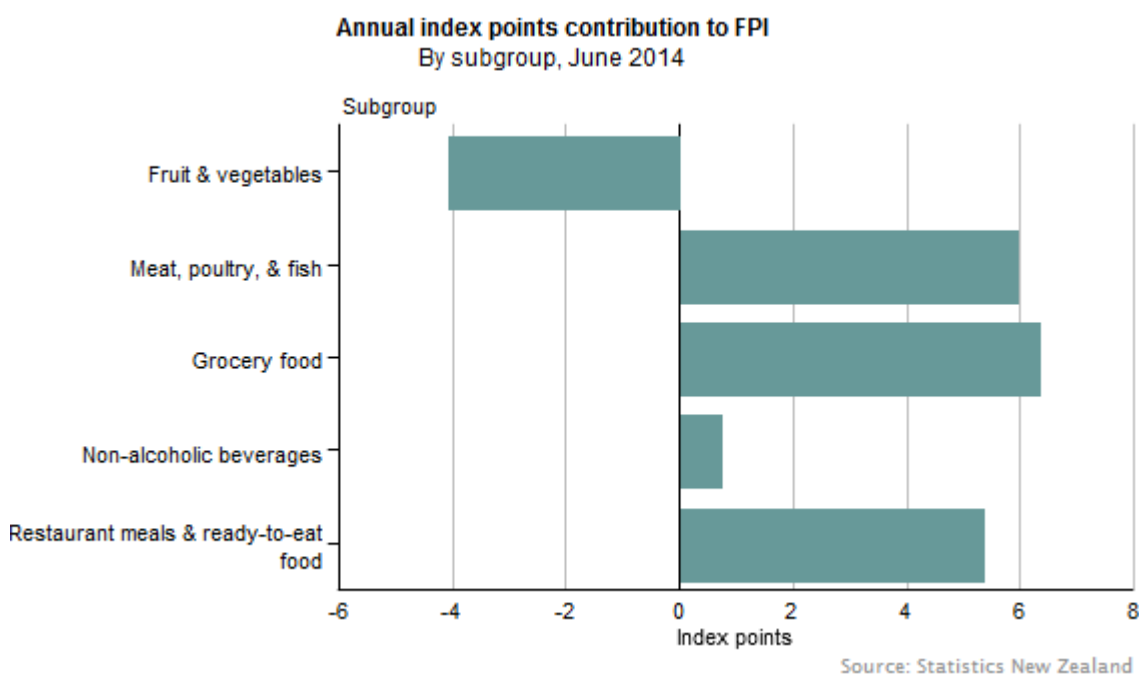
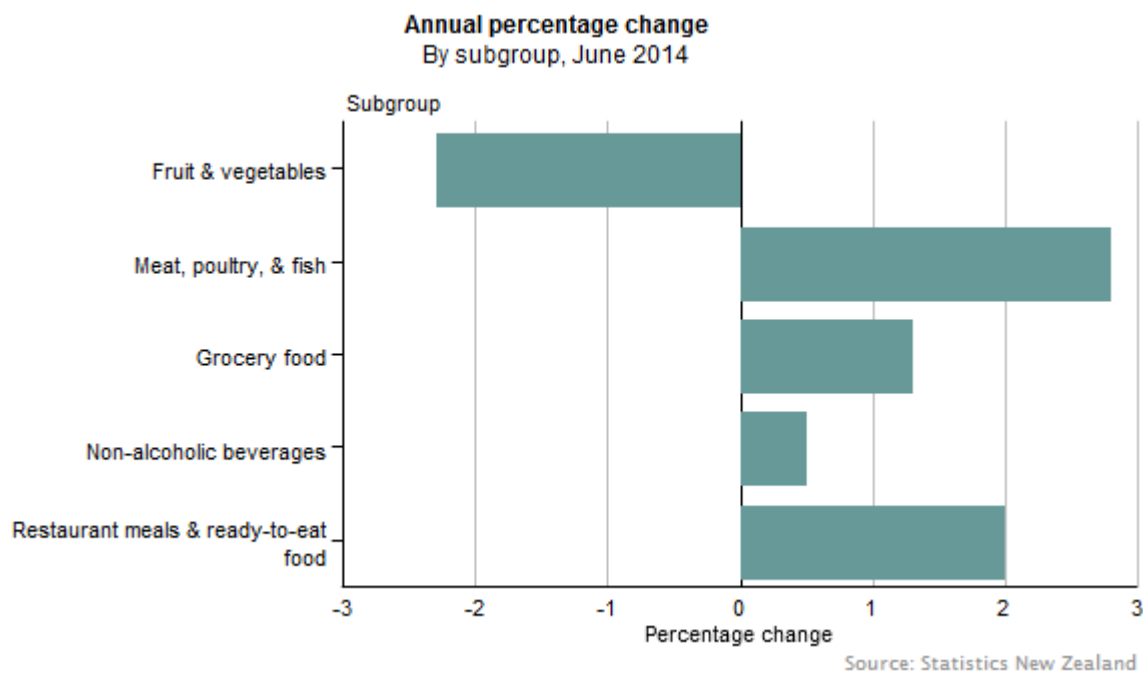
Higher prices were recorded for a range of dairy products. Fresh milk prices increased 11 percent in the year to their highest-ever level. The average retail price for the cheapest available 2-litre standard milk at \$3.62 in June 2014 compares with \$3.19 in June 2013. Other dairy products including cheese (up 12 percent), yoghurt (up 7.2 percent), and butter (up 12 percent) also increased.

Meat, poultry, and fish prices increased 2.8 percent, influenced by higher prices across most of the subgroup – including beef (up 6.9 percent), lamb (up 20 percent), and chicken (up 2.4 percent). Meat, poultry, and fish prices are now at their highest level, 1.5 percent above their previous peak in October 2013.

The only subgroup to show an annual price decrease was fruit and vegetables (down 2.3 percent). Fruit prices decreased 5.1 percent, influenced by lower prices for avocados and bananas. Avocado prices are now 21 percent lower than their June 2013 level, but 26 percent above their June 2012 level.

Other decreases came from confectionery, nuts, and snacks (down 2.7 percent), influenced by lower chocolate prices. Bread and cereals decreased 1.6 percent, influenced by lower prices for bread.

The graphs below are interactive. Hover over data points to see exact values.

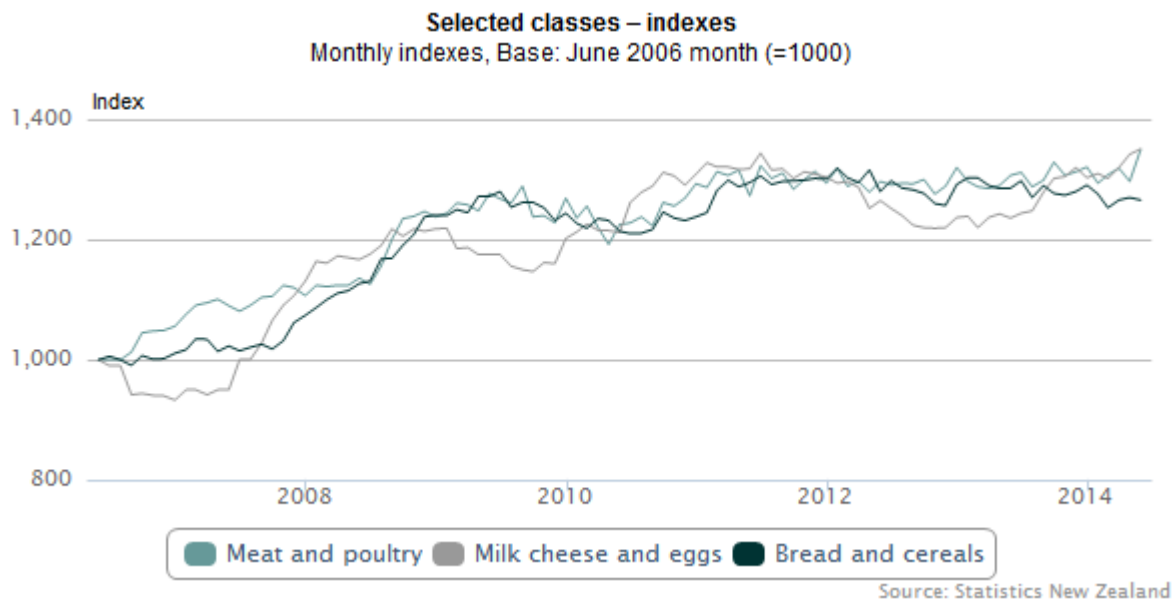


## Longer-term retail picture for dairy, meat, and grain prices

Milk, cheese, and egg prices increased 9.3 percent in the year to June 2014 to their highest level, 0.5 percent above their previous peak in July 2011. This is the largest annual increase in milk, cheese, and eggs since a 9.5 percent increase in the year to February 2011.

Meat and poultry prices are now at their highest level, 1.6 percent above their previous peak in October 2013. Beef prices are also at their highest level, 3.1 percent above their previous peak in April 2014. Lamb prices are 14 percent below their peak in August 2011.

Bread and cereal prices are now 4.0 percent below their peak in February 2012, with bread prices at their lowest level since February 2011.



For more detailed data from the FPI, see the Excel tables in the 'Downloads' box.

## Updated food price index for July 2014

The release of the July 2014 FPI will be later than usual, as we are implementing a review of the index. FPI reviews happen every three years, and help ensure the index remains relevant.

The reviewed index will incorporate:

- an updated basket of goods and services
- an updated expenditure weighting pattern
- a move to regional expenditure weights (as recommended by the [2013 CPI Advisory Committee](#)).

*Food Price Index: July 2014* will be released on 27 August 2014. Subsequent FPI releases will be published at the usual times.

Please see our [online release calendar](#) for information on release dates.

## Definitions

### About the food price index

The food price index (FPI) measures the rate of price change of a fixed basket of food goods and services purchased by households. The FPI aims to measure price changes of the same items (brand and relevant details) at each outlet over time. When there is a change in the size or quality of any of the goods or services in the basket, we make an adjustment to ensure the price change shown in the FPI is not affected by the change in size or quality.

The FPI represents \$16.9 billion spent on food by New Zealand households each year (at June 2011 prices). This is based on information from the 2009/10 Household Economic Survey and other sources, and is equivalent to each household spending about \$199 a week on food.

See [Food price index review: 2011](#) (tables 3 and 4) for a list of the representative food items monitored in the FPI.

Food prices are also included in the consumers price index (CPI). The food group is the only group of the CPI for which an index is prepared each month. The all groups CPI is prepared quarterly.

[Food prices in the consumers price index and food price index](#) explains the sources and methods used to compile food prices.

### More definitions

A **price index** measures the change in price between time periods for a given set of goods and services. It summarises a set of prices, collected from many outlets, for this set of goods and services.

**Grocery food specials:** For items that are 'on special' or come 'off special', we use the price at the time of collection. We often give an analysis of these items for the subgroups meat, poultry, and fish; grocery food; and non-alcoholic beverages in the 'Commentary' and 'Data quality' sections of this release. To be included in this analysis, the item will have been on special last month, this month, or in both months.

**Upward/downward contributions:** Items mentioned in this release are usually those that made a large contribution to the overall movement in the FPI. An item's contribution is a combination of its weight in the index (ie its relative importance, based on its share of household spending on food) and the magnitude of price movement. For example, for two items recording the same percentage rise in price, the item with the larger weight in the FPI will have a larger contribution to the overall movement. This contribution is also referred to as points (or index points) contribution.



## **Related links**

### **Upcoming releases**

*Food Price Index: July 2014* will be released on 27 August 2014.

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[The release calendar](#) lists all our upcoming information releases by date of release.

### **Past releases**

[Food Price Index](#) has links to past releases.

### **Related information**

[Consumers price index \(CPI\)](#) measures price change of goods and services purchased by New Zealand households.

[Food prices in the consumers price index and food price index](#) gives an explanation of the sources and methods used to compile food prices.

[Electronic card transactions](#) measure the number and value of electronic card transactions with New Zealand-based merchants.

[Retail Trade Survey](#) measures sales of a range of household and personal goods and services.

## Data quality

### Period-specific information

This section contains information about data that has changed since the last release.

- [Reference period](#)
- [Sample size](#)
- [Imputation](#)

### General information

This section contains information that does not change between releases.

- [Reference population](#)
- [Expenditure weights](#)
- [Collection methods](#)
- [Sample design](#)
- [Accuracy of the data](#)
- [Consistency with other periods or datasets](#)
- [Interpreting the data](#)
- [More information](#)

## Period-specific information

### Reference period

Prices for the food price index (FPI) were collected during the period 9–16 June 2014, with the exception of fresh fruit and vegetable prices. Fresh fruit and vegetable prices were collected each Friday in most urban areas, and each Thursday in remaining urban areas.

### Sample size

About 22,000 prices were collected from 650 retail outlets.

### Imputation

Due to being unavailable at the time of price collection, on average 0.7 percent of prices (not including seasonal fresh fruit and vegetables) are imputed each month – by carrying forward the previous month's price.

## General information

### Reference population

The reference population of the FPI covers approximately 98 percent of the usually-resident New Zealand population living in permanent dwellings. There are no exclusions based on income source or geographic location.

## **Expenditure weights**

Expenditure weights give the relative importance of the food goods and services in the FPI basket.

The FPI represents about \$16.9 billion spent on food goods and services by New Zealand households each year (at June 2011 month prices). This is based on information from the 2009/10 Household Economic Survey and other sources.

New Zealand households spent \$15.7 billion on food goods and services in the year to June 2010 (which is the latest period available). Once the effect of price change between the year to June 2010 and the year to June 2011 is taken into account (called 'price updating'), spending on food rises to \$16.9 billion.

The relative importance of the FPI subgroups shows that about \$38 of every \$100 households spend on food is spent on grocery food. About \$21 is spent on eating out or takeaways, and about \$16 is spent on meat, poultry, and fish. Fruit and vegetables account for \$14, and the remaining \$11 is spent on non-alcoholic beverages, such as packaged coffee, soft drinks, and juices.

More information on the relative importance of FPI subgroups, classes, and selected sections is in table 6 of this release.

## **Collection methods**

Prices are surveyed by visiting retail outlets in 15 urban areas: Whangarei, Auckland, Hamilton, Tauranga, Rotorua, Napier-Hastings, New Plymouth, Wanganui, Palmerston North, Wellington, Nelson, Christchurch, Timaru, Dunedin, and Invercargill.

Fresh fruit and vegetable prices are surveyed weekly, and the remaining food prices are generally surveyed between the 8th and 16th day of the month, although sometimes surveying starts and finishes earlier or later.

## **Sample design**

Food prices are collected from about 650 outlets in the 15 surveyed urban areas. Of these, about 70 are supermarkets, 30 greengrocers, 30 fish shops, 30 butchers, 50 convenience stores (with half being service stations and the other half being dairies, grocery stores, and superettes), 120 restaurants (for evening meals), and more than 300 other suitable outlets (for breakfast, lunch, and takeaway food).

Statistics NZ collects prices from a sample of supermarkets in each of the 15 FPI pricing regions. This sample is designed to be representative of household purchases in each region. It was last reviewed in 2011. The sample of other stores was last reviewed in 2013 as part of the rolling review of outlets.

See [CPI rolling review of retail outlets](#) for more information.

## **Accuracy of the data**

### **Review of the food price index**

Reviews of the FPI are undertaken every three years, as part of wider reviews of the consumers price index (CPI). The latest review was implemented with the publication of the July 2011 FPI. The review involved reselecting the basket of representative food goods and services, calculating new national expenditure weights, and updating regional population weights.

The previous product sample's final price collection period was June 2011. The updated FPI sample of products also had prices collected in June 2011. An overlapping price collection is necessary when changing a price index, to ensure changes in basket composition (eg basket additions, different outlets) are not reflected as price changes.

[See food price index review: 2011](#) for more information.

### **Population weights**

Population weights are used to allocate the national expenditure weights of goods and services to the FPI pricing centres. For example, the population weights ensure that a price change in Auckland (which has 33.43 percent of the population weight) would have about three times the effect on the national FPI than the same price change in Wellington (which has 11.07 percent of the population weight).

The latest subnational population estimates, which are published annually, are used to calculate the population weights at each FPI review. Estimates at 30 June 2010 were the latest figures available at the time of the 2011 FPI review. This means that any potential population movements following the Christchurch earthquakes in 2010/11 are not reflected in these weights. Population weights will be monitored, and if considered necessary, updated to maintain the accuracy of the FPI.

Statistics NZ publishes food and consumers price indexes for five broad regions based on regional council area boundaries. These indexes are available from Infoshare. These regions are Auckland, Wellington, rest of North Island, Canterbury, and rest of South Island.

For the population weights of each region in the FPI, see table 7 of this release.

### **Outlet weights**

Outlets are given appropriate weights to reflect their relative importance in terms of household spending.

### **Elementary aggregate formulae**

Regional elementary aggregates are calculated for each of the 15 pricing centres from all prices collected for an item within that region. Regional elementary aggregates are calculated using a 'geometric mean of price relatives', or Jevons formula.

The Jevons formula is used to calculate average prices for all food goods and services in the basket, except fresh fruit and fresh vegetables. The Jevons formula assumes that households spend the same amount at each surveyed outlet in each period. This implies that increased quantities are purchased from outlets showing lower-than-average relative price change and

decreased quantities from outlets showing higher-than-average price change. The calculation of fresh fruit and vegetable average prices uses the Dutot formula.

Information about the Food Price Index gives more information on the Jevons and Dutot formulae (see elementary aggregate formulae).

### **'On special' prices**

Items that are 'on special' are included in the FPI at the price levels observed at the time of price collection. Quantity specials (for example, three loaves of bread for \$5.00) are also taken into account (as the price per loaf for the special is usually lower than the price of a single loaf). Where discounted prices are available only to customers who belong to discount schemes, this is represented in the FPI by collecting these prices at some outlets within a region, but not others.

### **Consistency with other periods or datasets**

#### **Impact of the Christchurch earthquakes on price collection**

Following the Christchurch earthquake on 22 February 2011 price movements for the rest of New Zealand were used to calculate price movements in Christchurch for the March 2011 FPI. About half the prices used to calculate the June 2011 FPI had been collected before the 13 June earthquakes; collection was completed on 20 and 21 June, two working days later than other regions where we collect prices for the FPI.

### **Index base**

The FPI has an index reference period of the June 2006 month (=1000). This is the benchmark to which prices in other periods are compared (eg if the index number in a later period is 1150, prices have increased by 15.0 percent since the index reference period). Prices for later periods can also be compared in the same fashion.

### **Seasonal adjustment of prices – fresh fruit and vegetables**

Until the June 2006 month, fresh fruit and vegetable items that exhibited a seasonal pattern were adjusted to remove the effect of normal seasonal change. From the July 2006 month onwards, the FPI incorporates seasonally unadjusted prices for fresh fruit and vegetables. This change is in line with a recommendation made by the 2004 CPI Revision Advisory Committee.

The ongoing, fully unadjusted FPI is linked at the June 2006 month to the previously published FPI, which is partly seasonally adjusted. As such, care is required when comparing annual movements over this transition period. Annual movements calculated over the annual period encompassing the June 2006 month were based on fully unadjusted index numbers for the latest month, compared with adjusted index numbers for fresh fruit and vegetables for the same month of the previous year.

### **Reconciling the FPI and food group of the CPI**

When comparing the FPI and the food group of the CPI, strictly speaking, the quarterly food group index number is not the average of the relevant three monthly FPI numbers. There are some technical differences between the monthly FPI indexes and quarterly indexes.

See Food prices in the consumers price index and food price index for more information.

## Interpreting the data

### Seasonal availability of fruit and vegetables

Fruit and vegetable prices are reflected in the FPI when there is enough produce available to estimate representative average prices. For example, prices for nectarines are historically not included in the April and May FPI. Similarly, prices for strawberries are not included in the May and June FPI. This is because not enough prices can be collected from stores during these months. No price change is shown in the FPI for these items during these months. When produce returns to sufficient levels, the prices are again reflected in the FPI. Price movements then reflect the price change from the month that the item was last included to the current month.

### Weighted average retail prices of selected food items

Table 3 contains a selection of weighted average retail prices for the current and previous months. These weighted average retail prices were calculated from prices collected in the June 2006 month. Subsequent months' weighted average prices are then calculated by applying price index movements for the relevant items. These are not statistically accurate measures of average transaction price levels, but are reliable indicators of percentage changes in prices.

### More information

See [information about the Food Price Index](#).

Statistics in this release have been produced in accordance with the [Official Statistics System principles and protocols for producers of Tier 1 statistics for quality](#). They conform to the [Statistics NZ Methodological Standard for Reporting of Data Quality](#).

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## Contacts

**For media enquiries contact:**

Chris Pike

Wellington 04 931 4600

**Email:** [info@stats.govt.nz](mailto:info@stats.govt.nz)

**For technical information contact:**

Mirjam Morris or Sarah Williams

Wellington 04 931 4600

**Email:** [info@stats.govt.nz](mailto:info@stats.govt.nz)

**For general enquiries contact our Information Centre:**

Phone: 0508 525 525 (toll-free in New Zealand)

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## Tables

The following tables are available in Excel format from the 'Downloads' box. If you have problems viewing the files, see [opening files and PDFs](#).

1. Food price index, subgroups
  - 2.01 Food price index, subgroups, classes, and selected sections – index numbers
  - 2.02 Food price index, subgroups, classes, and selected sections, percentage change from previous month
  - 2.03 Food price index, subgroups, classes, and selected sections, percentage change from same month of previous year
3. Weighted average retail prices of selected food items
4. Contributions to food price index and percentage changes, by subgroup, class, or selected section
5. Distribution of national item-level index movements from previous month
6. Food expenditure weights, by subgroup, class, or selected section
7. Population weights, by region/pricing centre

## Supplementary tables

The following tables are available in Excel format from the 'Downloads' box. These tables provide longer time-series information than the tables above. Given the long time-series nature of the tables, they are not suitable for printing.

1. Food price index, subgroups
  - 2.01 Food price index, subgroups, classes, and selected sections – index numbers
  - 2.02 Food price index, subgroups, classes, and selected sections, percentage change from previous month
  - 2.03 Food price index, subgroups, classes, and selected sections, percentage change from same month of previous year

## Access more data on Infoshare

Infoshare allows you to access time-series data and organise it in the way that best meets your needs.

### Use Infoshare

For this release, select the following categories from the Infoshare homepage:

Subject category: **Economic indicators**

Group: **Consumers Price Index**

The FPI series are listed immediately after the CPI series. Additional information includes:

- index series for the FPI and its subgroups, classes, and selected sections
- the FPI for the 15 pricing centres and five broad regions
- non-standard aggregations of indexes (eg fresh fruit and vegetables)
- historical seasonally unadjusted index series
- average prices for a selection of items in the FPI basket.



The time series can be downloaded in Excel or comma delimited format. Percentage movements can be calculated using the following formula:

((Index number for later period minus index number for earlier period) divided by index number for earlier period) multiplied by 100.

[See more information about Infoshare.](#)