

INQUIRIES

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**APPARENT CONSUMPTION OF FOODSTUFFS AND NUTRIENTS : AUSTRALIA
1974-75**

EXPLANATORY NOTES

In general, the method employed in this bulletin in estimating consumption in Australia of each of the various foodstuffs is as follows :

Apparent consumption = (Commercial production + Estimated home production + Imports + Opening stocks) minus (Exports + Ships' stores + Usage for processed food + Non-food usage + Wastage + Closing stocks).

Consumption per head = Apparent consumption divided by the mean population for that period.

The following mean population figures (year ended 30 June basis) have been used in this publication.

Average 3 years ended -				
1938-39	1948-49	1958-59	1968-69	
6,870,261	7,651,558	9,741,073	11,919,046	
Individual years -				
1970-71	1971-72	1972-73	1973-74	1974-75
12,657,497	12,896,273	13,083,097	13,268,600	13,468,800

The population figures for the period 1971-72 to 1974-75 will be revised in light of results obtained from the Population Census of 1976.

There are four significant factors which should be noted in regard to the calculations above :

1. **Commercial production and estimated home production.** Available production statistics are confined mainly to commercial production and are deficient for the purposes of the calculation to the extent of production by householders for their own use. This applies particularly in the case of vegetables, fruit, eggs, poultry and fish. In all these cases, however, estimates of non-commercial production have been included, based on somewhat inadequate information obtained from a household expenditure survey conducted in 1944 and other investigations conducted by government departments during the 1939-45 War.

2. **Stocks.** Statistics of stocks refer to in-store (i.e. those held by marketing authorities) and factory stocks. With minor exceptions no details are available of wholesalers', retailers' or householders' stocks. For perishable commodities this point is of little importance since the very nature of the commodity precludes the accumulation of stocks. This is not the case, however, with non-perishable foods, and estimates derived for consumption of such foodstuffs for individual years may not state the position correctly with regard to consumption as ordinarily understood, i.e. foodstuffs consumed by the individual. This difficulty is apparent

particularly in the case of canned foodstuffs, where in some years it has been necessary to initiate special enquiries from the trade and other informed sources in an endeavour to take better account of these deficiencies.

3. **Wastage.** In many cases, allowance is not made for wastage before the foodstuffs are consumed. The importance of this factor is difficult to estimate, but in some seasons gluts cause considerable destruction of perishable foodstuffs, and it should therefore be taken into account when using these statistics. The effect of ignoring wastage is ultimately to overstate the consumption figures. In recent years, however, it is likely that there has been less wastage of foodstuffs than previously, because of more efficient methods of distribution and storage (including refrigerated transport, air freight and household refrigeration).

4. **Processed food.** Little up-to-date information is available on the quantities of foodstuffs preserved by householders for their own use. Estimates have been made on the basis of investigations conducted by government departments during the 1939-45 War.

Additional information related to some of the individual food groups in Tables 1 and 2 are set out below.

Pulse and nuts. Due to inadequate information being available, estimates of consumption of dried pulse and cocoa have not been calculated in the past few years.

Vegetables. In the following tables, all vegetables are shown in terms of fresh or fresh equivalent, that is, the statistics in effect relate to the pre-processing stage. For example, the consumption of tomatoes includes fresh tomatoes consumed plus the fresh equivalent of tomatoes consumed as tomato products (canned tomatoes, tomato juice, etc.). Stocks, imports, and exports, of processed tomatoes are converted to fresh equivalent for this purpose.

Meat. Owing to diverse cutting practices by butchers in Australia and because of the difficulty of clearly defining the term "retail weight of meat", it is considered impracticable to derive a satisfactory factor for the purpose of expressing estimated meat consumption in terms of retail weight. Depending on cutting practices employed and whether or not bones, etc., sold to customers are included in retail weight of meat, the retail weight as a proportion of carcass weight ranges from about 60 per cent to 75 per cent for beef, from 80 per cent to 95 per cent for mutton and lamb and from 90 per cent to 95 per cent for pork. However, estimates of the edible weight of meat consumed have been used for the purpose of calculating nutrient intake.

Eggs and egg products. The production of eggs shown in Table 2 is based on Egg Boards' records of output from areas under their control, plus estimates of production for uncontrolled areas and for "back-yard" poultry keepers based on information obtained from other sources. Because the inadequacy of data covering the volume of uncontrolled production, the figures should be used with some reserve.

Advances in poultry technology have resulted in a gradual increase in the average weight of eggs produced. For statistical purposes, the average weight of an egg was increased in 1960-61 from 49.6g to 56.7g. Although the increase in average weight actually occurred over a period of years, no adjustment has been made to 1959-60 and earlier years.

It is estimated that the level of total egg production in 1974-75 was about 291 million dozen compared with 277 million dozen in 1973-74.

Fish. For the purpose of estimating supplies of fish available for consumption, in this bulletin, an allowance of 10 per cent of commercial production has been made for the non-commercial catch of fish. No such allowances have been made for crustaceans or molluscs as it is considered that the non-commercial take is not significant.

Oils and fats (including butter). In assessing consumption of all oils and fats no allowance is made for fats consumed in association with carcass meat. The quantities of carcass meat shown in Table 2 include fats which remain in the carcass after slaughtering and which may or may not be subsequently removed for boiling down, etc., prior to retailing of the meat. No duplication occurs for fats removed from the carcass at the slaughtering stage.

Because of the qualifications in respect of stocks and wastage, the term "consumption" is used in a specialised sense, since the quantities actually measured are broadly the quantities available for consumption at a particular level in the process of distribution, i.e. ex-markets, ex-store or ex-factory, depending on the method of marketing and/or processing. It is considered that in most cases these foodstuffs will find their way to the ultimate individual consumers with a minimum time lag. The figures therefore represent fairly accurately total consumption in the year to which they relate.

Factors affecting consumption estimates :

- (a) The effect of changes in the composition of the population should be borne in mind when comparing estimates of consumption (and particularly estimates of consumption per head

of population) over a number of years. The most significant change since 1945, which has almost certainly had some effect on the consumption pattern, is the increasing proportion of the population born overseas and resident for only a comparatively short period in Australia (e.g. the proportion of the population born overseas was 9.8 per cent in 1947, 14.3 per cent in 1954, 16.9 per cent in 1961, 18.4 per cent in 1966, and 20.2 per cent in 1971).

(b) Another similar factor is the age distribution of the population which may also affect data relating to consumption per head. For example, while consumption per head of infants' and invalids' food has been calculated on the basis of the mean Australian population for the years concerned, these commodities are clearly consumed by a relatively small proportion of people. The effective consumption per head by these consumers would therefore be considerably higher than the figures shown in the relevant table.

(c) In general, the statistics in the bulletin are for financial years. However, where there is a marked seasonal pattern in the production or marketing of certain crops, the statistics in practice refer to crop years. For example, statistics relating to commercial production of citrus fruit are on the basis of the year ending in March.

Part II of this bulletin, which deals primarily with the level of nutrient intake in Australia, has been compiled for the most part by officers of the Nutrition Section of the Commonwealth Department of Health, to whom thanks are extended. In addition to Australian data, a comparison is given, in Table 7, with nutrient intakes for the latest available year for the United Kingdom, New Zealand and the United States of America.

The estimates of nutrient intake in Australia, which are calculated annually to provide a continuing review of the dietary status of the population, are based on the quantities of foodstuffs consumed as calculated by this Bureau. While these estimates are in terms of Australian averages, and do not, therefore, provide

information regarding the dietary status of individuals or of specific groups within the population, they supply a valuable indication of overall trends and enable comparisons with other data (e.g. special surveys) within Australia and with data for other countries. Studies are made from time to time by the Nutrition Committee of the National Health and Medical Research Council and by various other health authorities in Australia to determine the adequacy of nutrients in the diet of the population as a whole or of various sections of the population.

Related publications

Users may also wish to refer to the following major publications which are produced by the Australian Bureau of Statistics.

<i>Ref. No.</i>	<i>Title</i>	<i>Frequency of issue</i>
8.11	<i>Overseas Trade, Part 1 : Exports and Imports</i>	annually
10.5	<i>Dairying and Dairy Products</i>	annually
10.11	<i>Fruit Growing Industry</i>	annually
10.54	<i>Meat Statistics</i>	annually
10.58	<i>Crop Statistics</i>	annually
12.26	<i>Manufacturing Commodities, Principal Articles Produced</i>	annually

All publications produced by ABS are listed in *Publications of the Australian Bureau of Statistics* (Reference No. 1.8) which is available from any ABS office.

Symbols and Other Usages

n.a. — not available.

p — preliminary — subject to revision.

.. — nil or less than half the final digit shown.

Any discrepancies between totals and sums of components in tables are due to rounding.

I. SUPPLY AND UTILISATION OF FOODSTUFFS

TABLE 1. APPARENT CONSUMPTION OF CERTAIN FOODSTUFFS : AUSTRALIA
(kg per head per year)

	Average 3 years ended -									
	1938-39	1948-49	1958-59	1968-69	1970-71	1971-72	1972-73	1973-74	1974-75 p	
1. GRAIN PRODUCTS										
Flour (a)	84.9	91.6	82.3	77.4	79.7	77.6	74.9	78.1	76.1	
Rice, Whole milled	1.8	0.4	n.a.	1.9	1.9	1.8	2.2	2.1	2.4	
Breakfast foods	4.8	6.1	6.2	6.8	6.0	6.2	6.8	6.8	(b)6.8	
Pearl barley	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	
Sago and tapioca	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.1	..	
Total	92.5	98.6	n.a.	86.8	87.6	85.5	84.2	87.2	85.4	
2. SUGAR										
As refined sugar	32.0	31.2	27.0	21.0	20.0	20.4	20.8	18.3	16.9	
In manufactured products	16.3	23.1	23.6	27.7	30.3	29.8	30.0	31.9	32.1	
Total (c)	50.8	56.8	53.0	51.9	n.a.	n.a.	n.a.	55.3	53.7	
3. PULSE AND NUTS										
Dried pulse	0.7	1.0	1.2	1.1	n.a.	0.6	0.4	n.a.	n.a.	
Peanuts (kernel equivalent)	0.4	1.1	0.8	1.2	n.a.	n.a.	1.2	1.0	1.2	
Tree nuts (kernel equivalent)	0.4	0.6	0.7	0.9	1.0	1.0	1.0	1.1	1.1	
Cocoa (raw bean equivalent)	1.0	1.5	1.3	1.6	n.a.	n.a.	n.a.	n.a.	n.a.	
Total (edible weight)	2.4	4.2	3.9	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	
4. VEGETABLES										
Potatoes, white	47.1	56.3	51.7	53.7	54.3	58.8	48.6	46.3	52.5	
Other root and bulb vegetables (d)	n.a.	19.1	15.9	17.1	18.2	17.8	17.4	18.2	18.5	
Tomatoes	7.1	11.5	13.0	14.2	16.3	15.0	17.2	15.1	10.2	
Leafy and green vegetables	n.a.	20.5	17.9	21.3	20.6	21.7	20.3	21.3	22.0	
Other vegetables (e)	n.a.	21.6	18.6	18.1	17.5	17.7	15.1	15.2	15.6	
Total (fresh equivalent weight)	n.a.	129.0	117.1	124.3	127.1	131.0	118.6	116.1	118.8	
5. FRUIT AND FRUIT PRODUCTS										
Citrus fruit (f)	14.5	16.9	16.1	22.5	30.3	27.7	30.6	31.8	37.4	
Fresh fruit (excl. citrus)	42.6	39.5	35.6	40.8	45.7	42.4	36.3	34.1	33.2	
Jams, conserves, etc.	5.2	5.6	3.9	3.3	2.9	2.9	2.5	2.2	2.6	
Dried fruit	3.8	3.9	2.8	2.5	2.4	2.9	2.3	2.4	1.8	
Canned fruit	3.5	3.4	6.0	9.9	10.3	9.5	10.5	10.3	10.2	
Total (converted to fresh fruit equivalent)	78.7	80.9	72.2	86.5	101.1	93.5	91.5	90.9	92.8	
6. MEAT										
Carcass meat -										
Beef and veal	63.6	49.5	56.2	40.0	39.7	39.7	40.1	41.6	65.4	
Mutton	27.2	20.5	23.1	18.8	19.7	20.4	15.9	9.0	9.1	
Lamb	6.8	11.4	13.3	20.5	23.8	24.4	18.7	15.9	18.0	
Pigmeat	3.9	3.2	4.6	6.7	6.9	6.9	7.9	6.8	5.2	
Total carcass meat	101.5	84.6	97.2	85.9	90.2	91.3	82.5	73.3	97.8	
Offal	3.8	4.0	5.2	5.1	5.2	6.0	5.8	4.5	5.3	
Canned meat (canned weight)	1.0	1.2	1.9	2.2	2.6	2.6	2.6	2.4	2.2	
Bacon and ham (cured carcass weight)	4.6	5.3	3.2	3.6	4.6	5.0	5.5	5.5	5.0	
Total (converted to carcass equivalent weight)	118.5	103.0	112.4	98.8	105.1	107.2	99.2	88.4	112.7	
Poultry (dressed weight)	n.a.	n.a.	n.a.	8.3	11.4	12.5	13.3	13.9	13.9	

(a) Includes flour for bread-making. (b) Includes an estimate for oatmeal and rolled oats. (c) Includes the sugar content of syrups, honey and glucose. (d) Includes sweet potato after 1968-69. (e) Excludes sweet potato after 1968-69. (f) Includes fresh equivalent of manufactured products.

TABLE 1. APPARENT CONSUMPTION OF CERTAIN FOODSTUFFS : AUSTRALIA - continued
(kg per head per year) (a)

	Average 3 years ended -								
	1938-39	1948-49	1958-59	1968-69	1970-71	1971-72	1972-73	1973-74	1974-75 p
7. EGGS AND EGG PRODUCTS									
Eggs in shell	11.7	11.5	9.6	11.7	11.7	11.7	11.7	11.7	11.7
Number of eggs	235	232	194	206	206	206	206	206	206
Egg pulp (Average weight 5.7g)	0.4	1.1	0.6	0.9	0.7	0.6	0.6	0.7	0.7
Equivalent number of eggs	8	23	12	15	13	11	11	11	11
Egg powder	..	..	..	0.1	0.1	0.1	0.1	0.1	0.1
Equivalent number of eggs	..	..	..	1.0	1.2	1.2	1.2	1.5	1.5
Total eggs and egg products	12.1	12.7	10.2	12.6	12.5	12.3	12.4	12.4	12.4
Equivalent number of eggs	243	255	206	222	220	218	218	219	219
8. SEAFOOD									
Fresh and frozen (edible weight) -									
Fish -									
Australian			1.5	1.4	1.6	1.7	1.7	2.0	1.2
Imported		(b)2.4	1.0	1.6	2.1	1.5	1.5	1.8	1.6
Crustaceans and molluscs		0.3	0.4	0.8	1.0	1.0	0.9	1.2	0.6
Canned (canned weight) -									
Australian		1.4	0.4	0.4	0.5	0.5	0.3	0.4	0.7
Imported		(d)	0.8	1.0	0.9	0.9	0.9	1.3	1.1
Cured (cured (c) weight)		(d)	0.4	0.3	0.5	0.3	0.3	(e)1.1	(e)0.9
Total seafood	4.9	4.1	4.5	5.6	6.5	5.9	5.5	7.8	6.1
9. MILK AND MILK PRODUCTS									
Fluid whole milk (litres per head per year)	106.4	138.7	128.7	128.1	127.3	121.4	122.8	120.0	108.9
Condensed, concentrated and evaporated milk -									
Full cream -									
sweetened		1.6	1.2	1.1	0.9	0.9	0.9	0.8	0.9
unsweetened (incl. ice cream mix)	2.0	1.8	2.9	3.4	4.7	3.5	2.7	2.4	2.5
Skim	n.a.	n.a.	0.6	0.7	1.2	0.9	0.9	0.9	0.8
Powdered milk -									
Full cream	1.2	1.5	1.1	0.8	0.8	1.0	1.3	1.2	1.2
Skim (incl. buttermilk and mixed skim and buttermilk)	..	0.3	1.1	4.3	4.0	4.3	4.7	3.8	4.2
Infants' and invalids' food	0.5	0.6	1.0	1.5	1.0	1.7	1.4	1.5	2.2
Cheese	2.0	2.5	2.6	3.5	3.9	4.4	5.1	5.3	5.2
Total (converted to milk solids, fat and non-fat) (f)	17.8	22.3	22.1	25.4	26.0	26.9	27.0	25.3	(g)24.9
10. OILS AND FATS									
Butter	14.9	11.2	12.3	9.8	9.3	8.7	8.3	7.9	7.3
Margarine -									
Table	0.4	0.4	n.a.	1.5	1.3	1.4	1.6	1.8	2.2
Other	1.8	2.4	2.2	3.4	3.8	4.0	4.1	4.1	3.9
Total (fat content) (h)	17.1	14.0	n.a.	14.3	14.1	13.8	13.8	13.6	13.3
11. BEVERAGES									
Tea	3.1	2.9	2.7	2.3	2.2	2.1	2.1	2.0	2.0
Coffee (i)	0.3	0.5	0.6	1.2	1.3	1.5	1.3	1.4	1.2
Aerated and Carbonated waters (litres)	n.a.	n.a.	n.a.	47.3	56.4	59.1	65.7	64.4	60.6
Beer (litres)	53.2	76.8	103.2	116.8	126.7	127.5	131.5	141.3	142.7
Wine (litres)	2.7	5.9	5.0	7.5	8.7	9.0	9.9	11.2	12.5
Spirits (litres alcohol)	0.5	0.8	0.8	0.9	1.0	1.1	1.3	1.3	1.2

(a) Unless otherwise indicated. (b) Includes salted, dried and smoked. (c) Includes with 'Fresh and frozen'. (d) Included with 'Fresh and frozen'. (e) Includes seafood not elsewhere included (f) Includes an allowance for estimated cream consumption. (g) Of this, 14.3kg per head was derived from fluid milk consumed, 3.4kg from cheese, 4.0kg from powdered skim milk, 0.7kg from unsweetened condensed concentrated and evaporated full cream milk, 1.1kg from powdered full cream milk and 1.3kg from other milk products. (h) Includes an estimated allowance for vegetable oils and other fats. (i) Coffee and coffee products in terms of processed whole or ground pure coffee.

TABLE 2. ESTIMATED SUPPLY AND UTILISATION OF FOODSTUFFS : AUSTRALIA, 1974-75 P

	Supply				Utilisation				Per head per year	
	Net change in stocks	Production		Imports	Total supply	Exports (incl. ships' stores)	Non-food use waste seed, etc.	For processed food		Total
		Commercial	Estimated home								Apparent consumption in Australia as human food
-- tonnes --										
1. GRAIN PRODUCTS										
Flour (incl. wheatmeal for baking and sharps) (a)	(b)(-)	1,263,115	..	10	1,265,035	239,781	..	20,403	1,025,254	76.1
Rice, whole milled	n.a.	..	..	527	170,761	118,158	..	..	32,200	2.4
Breakfast foods -										
Oatmeal and rolled oats	(-)	14,092	..	..	14,875	n.a.	..	..	n.a.	n.a.
Other (from grain)	(+)	95,420	..	283	95,396	6,839	..	..	88,557	6.6
Pearl barley	(+)	1,779	..	..	1,670	917	..	..	753	0.1
Sago and tapioca	n.a.	..	..	626	626	..	..	..	626	..
2. SUGAR										
Sugar	n.a.	2,691,982	..	(c)14,603	..	(d)2,027,865	n.a.	n.a.	(e)660,943	49.1
3. PULSE AND NUTS										
Dried pulse	n.a.	n.a.	n.a.	14,088	n.a.	3,406	579	..	n.a.	n.a.
Peanuts (in shell)	(+)	30,233	..	533	27,561	3,056	..	n.a.	24,505	1.8
Tree nuts (in shell)	n.a.	1,284	..	41,881	43,165	157	..	..	43,008	(f)3.2
4. VEGETABLES										
(Fresh equivalent weight)										
Potatoes -										
White	n.a.	741,946	25,400	25,611	792,957	12,850	72,433	..	707,674	52.5
Sweet	n.a.	8,082	..	..	8,082	..	..	..	8,082	0.6
Other root and bulb -										
Beetroot	(h)(+)	691	1,371	..	28,097	176	548	..	27,373	2.0
Carrots	(h)(+)	960	4,878	..	101,469	2,787	2,927	..	95,755	7.1
Onions	(h)(+)	4,284	5,405	641	109,864	6,842	3,243	..	99,779	7.4
Parsnips	n.a.	8,739	437	..	9,176	87	175	..	8,914	0.7
Turnips, white and swede	n.a.	9,252	278	..	9,530	506	185	..	8,839	0.7
Total other root and bulb vegetables	(h)(+)	5,935	12,369	641	258,136	10,398	7,078	..	240,660	17.9
Tomatoes	(h)(+)	53,219	16,893	17,858	150,465	4,375	8,447	..	137,643	10.2
Leafy and green (incl. legumes) -										
Cabbage and other greens	(h)(+)	193	4,355	..	91,253	1,505	4,355	..	85,393	6.3
Celery	n.a.	21,599	1,080	..	22,679	67	1,080	..	21,532	1.6
Lettuce	n.a.	32,555	3,256	..	35,811	442	2,279	..	33,090	2.5
Peas, fresh and frozen	(i)(+)	11,258	121,579	1,922	130,480	914	9,726	..	119,840	8.9
Beans, fresh and frozen	(i)(+)	10,446	40,862	2,964	39,509	923	2,043	..	36,543	2.7
Total leafy and green vegetables	(i)(+)	21,897	303,686	4,886	319,732	3,851	19,483	..	296,398	22.0

For footnotes see end of Table 2 page 9.

TABLE 2. ESTIMATED SUPPLY AND UTILISATION OF FOODSTUFFS : AUSTRALIA, 1974-75 p - continued

	Supply				Utilisation				Per head per year	
	Net change in stocks	Production		Imports	Total supply	Exports (incl. ships' stores)	Non-food use waste seed, etc.	For processed food		Total
		Commercial	Estimated home production								Apparent consumption in Australia as human food
4. VEGETABLES - continued										
Other vegetables -										
Cauliflowers	..	71,901	3,595	..	75,496	1,376	5,033	..	69,087	5.1
Cucumbers (incl. gherkins)	(h)(+)	11,452	573	313	11,646	67	344	..	11,235	0.8
Marrows and squashes	..	3,013	151	..	3,164	67	..	..	3,097	0.2
Pumpkins	..	67,596	3,380	..	70,976	67	..	..	70,909	5.3
Sweet corn	(h)(+)	27,910	1,396	..	26,702	226	..	..	26,476	2.0
Asparagus	(h)(+)	4,626	..	736	5,251	329	..	..	4,922	0.4
Other	(+)	..	..	32,544	24,175	..	..	..	24,175	1.8
Total other vegetables	(+)	186,498	9,095	33,593	217,410	2,132	5,377	..	209,901	15.6
Total all vegetables	(+)	1,660,206	96,814	82,589	1,746,782	33,606	112,818	..	1,600,358	118.8
5. FRUIT AND FRUIT PRODUCTS										
Oranges (j)	n.a.	340,810	17,041	83,624	441,475	13,400	6,816	..	421,259	31.3
Other citrus fruit (i)	n.a.	78,865	3,943	5,873	88,681	6,636	..	..	82,045	6.1
Fresh fruit (excl. citrus)	(k)(+)	20,091	948,542	15,991	959,442	158,235	..	(l)353,387	447,820	33.2
Jams, conserves, etc.	(m)(-)	4,193	30,285	2,196	37,674	2,875	..	..	34,799	2.6
Dried vine fruit -										
Sultanas	(-)	3,179	40,555	23	43,757	31,398	..	..	(n)12,359	0.9
Raisins	(+)	543	3,246	5	2,708	135	..	..	(n)2,573	0.2
Currants	(+)	398	3,615	6	3,223	194	..	..	(n)3,029	0.2
Dried tree fruit -										
Apricots	(o)(+)	68	(o)683	341	956	558	..	..	398	..
Prunes	(o)(+)	627	(o)2,762	494	2,629	177	..	..	2,452	0.2
Other	(o)(+)	294	(o)395	4,194	4,295	176	..	..	4,119	0.3
Canned fruit -										
Apricots	(m)(-)	32	14,845	..	15,027	3,593	..	..	11,434	0.8
Peaches	(m)(+)	14,035	72,094	..	58,209	25,813	..	..	32,396	2.4
Pears	(m)(+)	11,693	53,342	..	41,749	32,881	..	..	8,868	0.7
Pineapples	(m)(-)	2,034	31,344	..	33,478	3,042	..	..	30,436	2.3
Fruit Salad	(m)(+)	5,462	42,228	..	36,766	20,596	..	..	16,170	1.2
Apples	(m)(+)	4,427	20,490	..	16,063	613	..	..	15,450	1.1
Other	(m)(+)	779	6,402	18,103	23,726	578	..	..	23,148	1.7

For footnotes see end of Table 2 page 9.

TABLE 2. ESTIMATED SUPPLY AND UTILISATION OF FOODSTUFFS : AUSTRALIA, 1974-75 p - continued

	Supply				Utilisation				Per head per year	
	Production		Imports	Total supply	Exports (incl. ships' stores)	Non-food use waste etc.	For processed food	Total		
	Net change in stocks	Commercial								Estimated home	Apparent consumption in Australia as human food
									kg	
- tonnes -										
6. MEAT										
Carcass meat -										
Beef and veal	(p)(+)10,596	1,546,967	..	210	1,536,581	(q)611,451	..	43,878	881,252	65.4
Mutton	(p)(+)3,427	257,822	..	..	254,395	(q)121,024	..	10,597	122,774	9.1
Lamb	(p)(+)1,850	269,328	..	34	267,512	(q)24,649	..	..	242,863	18.0
Pigmeat	(p)(-)1162	175,072	..	1	175,235	1,127	..	104,005	70,103	5.2
Total carcass meat	(+)15,711	2,249,189	..	245	2,233,723	758,251	..	158,480	1,316,992	97.8
Offal	(r)(+)2,866	114,807	..	90	112,031	37,798	3,000	..	71,233	5.3
Canned meat (canned weight)	(m)(-)396	42,951	..	2,127	45,474	15,293	..	..	30,181	2.2
Bacon and ham (cured carcass weight)	(p)(+)476	75,099	..	..	74,623	438	..	6,918	67,267	5.0
Total meat (carcass equivalent weight)	(+)19,592	2,363,996	..	4,599	2,349,003	828,429	3,000	..	1,517,573	112.7
Poultry (dressed weight)	(+)942	189,440	3,054	440	191,992	5,106	..	..	186,886	13.9
7. EGGS AND EGG PRODUCTS										
(eggs in shell weight)										
In shell	(s)(-)44	135,754	61,920	..	197,718	2,006	858	37,523	157,331	11.7
Pulp	(s)(+)8,035	37,523	..	203	29,691	19,704	..	1,068	8,919	0.7
Powder	(s)(-)205	1,068	..	..	1,273	109	..	..	1,164	0.1
8. SEAFOOD										
Fresh and frozen (live weight) -										
Fish -										
Australian	n.a.	57,423	5,742	..	63,165	5,204	..	13,021	(t)16,400	1.2
Imported	n.a.	..	..	44,045	44,045	94	..	..	(t)21,975	1.6
Crustacean and molluscs	n.a.	49,450	..	1,187	50,637	20,786	..	1,056	(t)8,738	0.6
Canned (canned weight) -										
Australian	(m)(+)2,489	13,539	..	..	11,050	1,582	..	..	9,468	0.7
Imported	n.a.	..	..	15,029	15,029	156	..	..	14,874	1.1
Cured (cured weight) (u)	(m)(-)1	97	..	9,379	9,477	40	..	..	9,438	0.7

For footnotes see end of Table 2 page 9.

TABLE 2. ESTIMATED SUPPLY AND UTILISATION OF FOODSTUFFS : AUSTRALIA, 1974-75 p - continued

	Supply				Utilisation			Apparent consumption in Australia as human food		
	Net change in stocks	Production		Imports	Total supply	Exports (incl. ships' stores)	Non-food use waste etc.		For processed food	
		Commercial	Estimated home production							Total
9. MILK AND MILK PRODUCTS										
Fluid whole milk	..	6,497	..	..	6,497	..	..	5,030	1,466	108.9
										kg
Cream	..	12,018	..	..	12,018	..	..	..	..	0.9
Condensed, concentrated and evaporated milk -										
Full cream -										
Sweetened	(m)(-)663	14,428	..	65	15,156	2,558	..	..	..	0.9
Unsweetened (incl. ice cream mix)	(m)(-)1,832	34,849	..	..	36,681	3,550	..	..	..	2.5
Skim	n.a.	11,033	..	..	11,033	..	..	..	..	0.8
Powdered milk -										
Full cream	(m)(+)2,566	44,447	..	1,468	43,349	27,263	..	..	..	1.2
Skim (incl. buttermilk and mixed skim and buttermilk)	(m)(+)34,686	169,254	..	..	134,568	77,453	..	..	..	4.2
Infants' and invalids' food	(m)(+)331	33,489	..	5,045	38,203	8,879	..	..	..	2.2
Cheese	(v)(+)5,737	(w)98,789	2,743	8,017	103,812	34,260	..	..	..	5.2
10. OILS AND FATS										
Butter	(x)(+)27,547	161,274	..	..	133,727	(y)35,247	..	..	..	(z)98,480
Margarine - Table	(m)(+)586	31,582	..	..	30,996	693	..	..	..	30,303
Other	(m)(+)707	55,377	..	60	54,730	2,249	..	..	..	52,481
11. BEVERAGES										
Tea	(aa)(+)219	..	..	(bb)28,076	27,858	1,003	..	..	..	26,855
Coffee	(aa)(+)4,299	..	..	(bb)22,623	18,324	2,613	..	..	..	15,711
										litre
Aerated and carbonated waters	n.a.	830,026	..	182	830,208	14,016	..	..	..	816,192
Beer	n.a.	1,957,254	..	1,385	1,958,639	23,904	13,102	..	(cc)1,921,633	142.7
Wine	(dd)(+)71,207	240,513	..	5,294	174,600	6,583	..	..	..	168,017
										l. alcohol
Spirits	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16,284

(a) Includes flour for bread-making. In 1974-75 the estimated total of bread consumed amounted to the equivalent of 740.9 million 900g loaves, and consumption per head amounted to the equivalent of 55.0 900g loaves. For 1973-74 the estimated consumption amounted to the equivalent of 757.6 million 900g loaves or 57.1 900g loaves per head. (b) Mill stocks only. (c) Estimated sugar content of imported foodstuffs. (d) Includes estimated quantity of sugar in products (e) In terms of refined sugar; includes sugar content of manufactured products consumed. (f) Receipts by Peanut Marketing Board. (g) Kernel equivalent, 1.1 kg. (h) Stocks of manufactured products held by factories at fresh equivalent weight. (i) Factory stocks of canned and frozen products at fresh equivalent weight. (j) Includes fresh equivalent of manufactured products. (k) Cold store stocks of apples and pears. (l) For manufacture of jams, canned fruit and dried tree fruit. (m) Factory stocks only. (n) Australian deliveries, year ended 30 June as recorded by Australian Dried Fruits Association. (o) Source : Australian Dried Fruits Association. (p) Stocks of frozen meat held by the Australian Meat Board. (q) Includes carcass equivalent of boneless meat exported. (r) Stocks of frozen offal held by the Australian Meat Board and factory stocks of canned offal. (s) Stocks held by Egg Board. (t) Edible weight. (u) Includes salted, dried, smoked and otherwise prepared. (v) Stocks held within equalisation scheme. Source : Australian Dairy Corporation. (w) As recorded by Commonwealth Dairy Produce Equalisation Committee Limited, plus production by manufacturers outside equalisation scheme. (x) Balance figure. (y) Includes dry butter fat, ghee and tropical spread expressed as butter. (z) Sales for consumption within Australia as recorded by Commonwealth Dairy Produce Equalisation Committee Limited; includes butter oil for manufacturing purposes. (aa) Stocks held by merchant importers. (bb) Imports cleared for home consumption. (cc) Quantity of beer removed (duty paid and duty free) for consumption in Australia, and imports cleared. (dd) Movement in stocks held by winemakers, importers and wholesalers.

II. LEVEL OF NUTRIENT INTAKE, 1974-75

General Notes. In order to determine whether the quantities of the various foodstuffs passing into consumption are likely to be sufficient for adequate nutrition, it is necessary to calculate the amount of nutrients the foods provide.

The analysis in this section is based on the statistics collected by the Australian Statistician as set out elsewhere in this bulletin and is therefore subject to the same qualification. See the Explanatory Notes for a statement of these qualifications.

The basis for the calculations of estimated supplies of nutrients passing into consumption in Australia was changed after Bulletin No. 23 (1967-68) and is now based on conversion factors calculated from "Tables of Composition of Australian Foods" (Sucy Thomas and Margaret Corden, Canberra, 1970). The previously used Tables, compiled by Anita Osmond and Winifred Wilson, 1954, have been revised and considerably enlarged and nutrient values for almost all food items altered in the light of improved analysis techniques. Whilst comparison with figures published for previous years is no longer entirely valid, the differences in conversion factors are not so great as to negate the value of all such comparisons.

Following a recommendation of the joint FAO-WHO Expert Group which reported on the "Requirements of Vitamin A, Thiamine, Riboflavine and Niacin" (FAO Rome 1967) the total vitamin A of the diet is now stated as micrograms of retinol (vitamin A alcohol) activity. Strict comparisons between retinol activity values published since then cannot be made with vitamin A activity values of years prior to 1968-69, since the values given for individual food items vary considerably in the reference food composition tables (1970 and 1954).

Nutrients available for consumption. Details of the estimated supplies of nutrients passing into consumption during the year 1974-75 are shown in Table 4, page 13. Data for previous years and for other countries are given in Tables 6 and 7 respectively, pages 13 and 14.

Losses due to processing have been allowed for in Tables 4, 6 and 7 by way of an adjustment to the conversion factors used for processed and preserved foods. No allowances have been made for losses of nutrients due to the effect of storage and cooking; losses of vitamins are referred to in the following paragraphs.

Loss of vitamins in cooking. As a result of storage and cooking, certain foods, particularly fruit and vegetables, lose some of their nutritive value. Estimates of possible loss of vitamin C (ascorbic acid) in cooking are set out below. Losses in cooking of other nutrients do occur but (except for thiamin) not in amounts likely to be significant. Losses due to storage have not been estimated.

There is a significant loss of thiamin in the cooking of meat and vegetables, the amount of loss depending on the method and duration of cooking. In a normal mixed diet it is accurate enough to allow 15 per cent deduction from the total thiamin available and such an allowance has been made in Table 3. Allowance has also been made in this table for vitamin C losses. Losses of vitamin C cover a wide range, from almost nil to 100 per cent. The following estimates are applicable to average conditions and methods, but losses could be reduced to less than these figures by careful cooking. Losses from tomatoes, citrus fruit and other uncooked fruits and vegetables are assumed to be negligible, while losses in canning and drying of fruit and vegetables have been accounted for in the calculations made for the figures in Table 4.

AVERAGE LOSS OF VITAMIN C IN COOKING

	<u>Leafy green vegetables</u>	<u>Potatoes</u>	<u>Other vegetables</u>	<u>Stewed fruit</u>
Estimated loss	60%	50%(a)	50%	50%

(a) When cooked in skins, the loss is negligible; when boiled and mashed, the loss is 50% or more.

**ESTIMATED VITAMIN C AVAILABLE AFTER ALLOWANCE FOR COOKING LOSSES,
1974-75
(Milligrams per head per day)**

<i>Food</i>	<i>Calculated value (See Table 4)</i>	<i>Amount available</i>	<i>Food</i>	<i>Calculated value (See Table 4)</i>	<i>Amount available</i>
Milk	3.5	(a)	Vegetables —		
Meat	2.5	(a)	Tomatoes	5.8	5.8
Fruit and fruit products —			Lettuce	0.7	0.7
Fresh and canned	11.0	11.0	Canned vegetables	1.0	1.0
Cooked	1.9	0.9	Potatoes and other vegetables	43.9	22.0
Citrus	30.2	36.2	Total		77.6

(a) Little vitamin C would be retained in these foods.

Dietary allowances. The nutritive value of the food passing into consumption may be compared with some arbitrary standard such as the *Dietary Allowances for use in Australia (1970 Revision)*, formulated by the Nutrition Committee of the National Health and Medical Research Council. This comparison has been made in Table 3 where the quantity of nutrients available for consumption in the Australian diet in 1974-75 (as shown in Table 4), less estimated cooking losses, is compared with desirable quantities recommended by the Council. The allowances shown in Table 3 are averages weighted according to the various age groups in the population. The allowance data are based on information from the publication *Estimated Age Distribution of the Population, States and Territories, 30 June 1973*, (Reference No. 4.15). When using Table 3, note should be taken of the reservations set out below.

The fall in the percentage of nutrients in excess of dietary allowances in 1973-74 is due to two major factors. Firstly, the age distribution has changed since the last weighted dietary allowances were calculated on the basis of population as at 30 June 1968. Secondly, the relatively large drop in apparent consumption of lamb and offal reveals a fall in the quantity of nutrients apparently available which is probably more academic than real.

Comparison such as that set out in the Table is useful as an indication of trends in food consumption, although it must be emphasised that these allowances do not necessarily represent nutrient requirement, rather they were devised for the planning of practical diets within the average Australian food pattern. Precise information concerning human requirements of certain nutrients is far from complete, and no conclusion regarding the nutritional status of the community should be drawn from comparison with these allowances. A deviation from the allowances of the order of 10–15 per cent is not regarded as a serious deficiency. Even if the nutrient intake is more than 15 per cent below the allowance, a nutritional deficiency cannot be assumed without clinical verification.

The calculated figures, being averages, give no information regarding the food consumption of individuals or of specific groups within the population. Also the figures represent food available for consumption, which is not the same as foods consumed. The Food and Agriculture Organisation of the United Nations estimates that in communities with a plentiful food supply, up to 15 per cent of the food available may be wasted.

TABLE 3. NUTRIENTS AVAILABLE FOR CONSUMPTION IN AUSTRALIA, COMPARED WITH DIETARY ALLOWANCES, 1972-73 TO 1974-75

<i>Nutrient</i>	<i>Unit</i>	<i>Nutrients expressed as percentages in excess of dietary allowances (%)</i>			<i>Dietary allowance (a)</i>	<i>Nutrients available (b)</i>
		<i>1972-73</i>	<i>1973-74</i>	<i>1974-75</i>	<i>(per head per day)</i>	<i>(per head per day)</i>
Protein	g	81.7	62.7	78.2	57.50	102.49
Calcium	mg	125.4	113.8	116.8	450.20	975.96
Vitamin A retinol equivalents(c)	µg	137.6	80.1	122.6	669.35	1,556.62
Thiamin	mg	60.2	65.1	66.3	0.83	1.38
Riboflavin	mg	165.1	114.0	139.0	1.36	3.25
Niacin equivalents (d)	mg	163.4	142.7	174.1	14.00	38.38
Vitamin C (Ascorbic acid)	mg	106.6	100.6	137.7	32.65	77.60
Iron	mg	27.8	30.0	50.3	10.29	15.47
Energy value —	kcal	50.7	51.8	53.6	2,125.80	3,264.19
	kJ	50.7	51.8	53.6	8,898.60	13,663.95

(a) Source : National Health and Medical Research Council, May 1970. (b) Excludes losses in cooking. Losses have been estimated for thiamin and vitamin C only; losses of other nutrients are not likely to be significant. (c) The total vitamin A is the sum of the retinol content and one-sixth of the carotene equivalent value. (d) The niacin equivalent of a diet is computed from dietary niacin plus 0.16 times the dietary protein in grams, expressed in milligrams.

The apparent consumption of citrus fruit continues to increase and this plus an increase in the apparent consumption of potatoes during the year could account for the apparent increase in available vitamin C during 1974-75. The increased use of oranges would also account for most of the apparent increase in retinol activity.

There was a considerable increase in the apparent consumption of beef during the year which would account, almost entirely, for the apparent increase in available energy, protein, fat, iron, thiamin, riboflavin and niacin.

SOURCE OF ENERGY IN THE AUSTRALIAN DIET, 1974-75

Kilocalories : 3,264.2

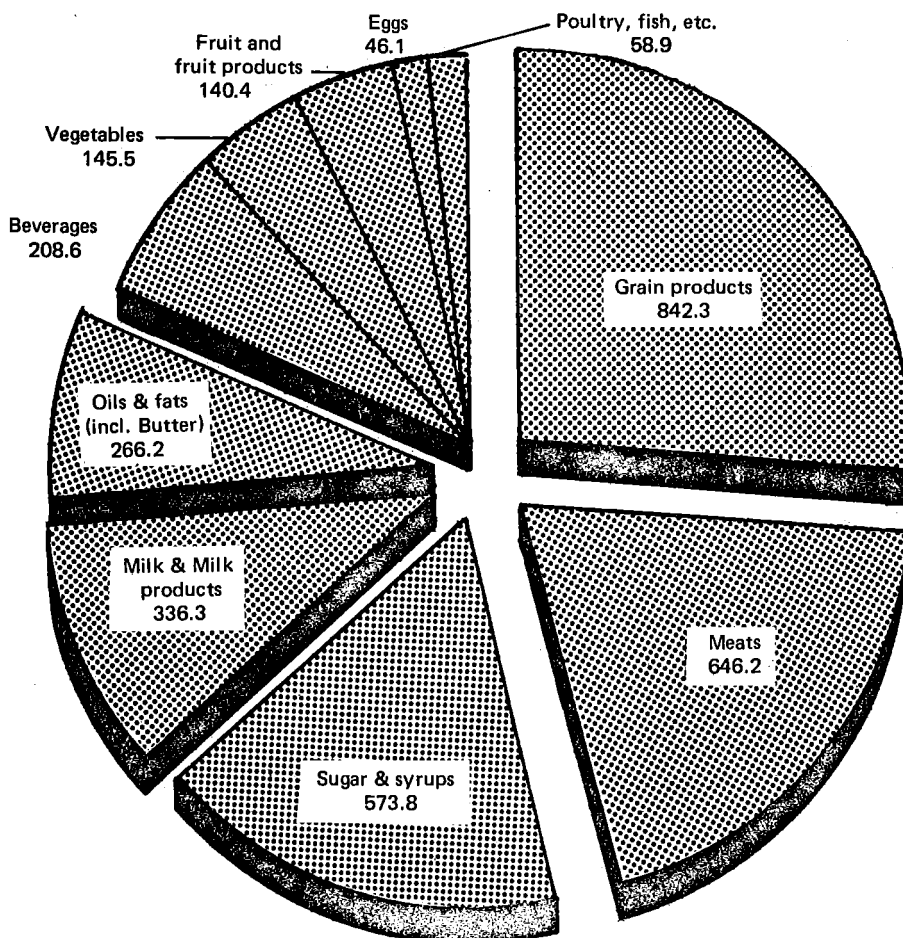


TABLE 4. ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION : AUSTRALIA, 1974-75
(Per head per day)

Commodity group	Protein	Fat	Carbo- hydrate	Calcium	Iron	Vitamin A (a)	Vitamin C	Thia- min	Ribo- flavin	Niacin	Energy	
	g	g	g	mg	mg	µg	mg	mg	mg	mg	kcal	kJ
Milk and milk products (b)	21.84	20.66	25.43	748.20	0.53	231.73	3.52	0.14	0.99	0.52	336.29	1,407.71
Meat (c)	36.08	53.37	0.36	23.26	5.68	473.26	2.52	0.26	0.60	9.11	646.20	2,705.00
Poultry	5.45	2.13	..	3.97	0.51	16.62	..	0.02	0.04	2.03	42.56	178.16
Fish	2.64	0.56	0.03	8.13	0.19	2.80	..	0.01	0.02	0.64	16.35	68.45
Eggs and egg products	3.60	3.35	0.21	15.56	0.69	81.60	..	0.03	0.09	0.03	46.08	192.89
Oils and fats (d)	0.24	29.81	0.27	6.53	0.02	299.14	..	0.01	0.01	..	266.15	1,114.11
Sugar and syrups	..	..	146.98	2.95	0.15	..	..	..	..	..	573.78	2,401.85
Vegetables	4.71	0.53	33.59	52.47	1.86	366.05	44.93	0.24	0.15	2.31	145.50	609.07
Fruit and fruit products	1.85	0.66	35.84	49.26	1.19	82.70	54.83	0.14	0.11	1.02	140.36	587.55
Grain products	25.00	3.80	175.16	48.76	4.59	2.72	..	0.76	0.53	5.73	842.34	3,526.04
Beverages (e)	1.08	..	11.18	16.87	0.07	..	..	0.02	0.71	0.59	208.58	873.12
Total	102.49	114.87	429.05	975.96	15.47	1,556.62	105.80	1.63	3.25	21.98	3,264.19	13,663.95

(a) The total "retinol activity" is the sum of the retinol content and one-sixth of the β carotene equivalent value. (b) Excludes butter. (c) Includes canned and cured meat and edible offal. (d) Includes butter. (e) Comprises tea, coffee, beer, wine and spirits.

NOTE. The nutrient content of pulse and nuts is not available.

TABLE 5. PERCENTAGE OF TOTAL ENERGY SUPPLY DERIVED FROM EACH COMMODITY GROUP : AUSTRALIA

Commodity group	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
Milk and milk products	12.4	12.0	12.4	12.5	12.1	10.3
Meat	18.1	18.8	19.0	17.0	16.2	19.8
Poultry and fish	1.7	1.7	1.7	1.9	1.8	1.8
Eggs and egg products	1.5	1.5	1.4	1.5	1.4	1.4
Oils and fats	10.5	10.1	9.9	10.1	10.0	8.2
Sugar and syrups	16.5	16.3	16.3	16.9	18.3	17.6
Vegetables	5.1	4.8	5.2	5.0	4.3	4.4
Fruit and fruit products	2.6	3.2	3.1	2.9	2.7	4.3
Grain products	26.6	26.5	26.0	26.2	26.8	25.8
Beverages	5.0	4.9	5.0	6.0	6.4	6.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 6. ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION : AUSTRALIA (a)
(Per head per day)

Nutrient	Unit	Average 3 years ended -						
		1938-39	1948-49	1958-59	1968-69	1972-73	1973-74	1974-75
Protein - Animal	g	58.7	57.4	59.6	61.5	65.3	60.5	69.6
Vegetable	g	30.9	35.3	32.3	40.3	32.8	33.0	32.9
Total	g	89.6	92.7	91.9	101.8	98.1	93.5	102.5
Fat (from all sources)	g	133.5	121.7	131.7	125.4	115.1	113.0	114.9
Carbohydrate	g	377.4	424.8	416.7	419.2	402.0	423.4	429.1
Calcium	mg	642	785	817	985	1,003.0	962.7	976.0
Iron	mg	15.4	15.1	14.0	15.1	14.0	13.4	15.8
Vitamin A (Retinol Activity)	i.u.	4,905	4,630	4,568	5,189	(b)1,563	(b)1,205.6	(b)1,556.6
Vitamin C (Ascorbic acid)	mg	86	96	89	98	97.0	89.4	105.8
Thiamin	mg	1.4	1.5	1.3	1.7	1.6	1.6	1.6
Riboflavin	mg	1.7	1.9	1.8	2.8	2.8	2.9	3.2
Niacin	mg	18.7	17.6	18.6	20.9	19.6	19.0	22.0
Energy value	kcal	3,117	3,245	3,297	3,364	3,176	3,223	3,264

(a) Not comparable with years prior to 1968-69. Figures are based on conversion factors calculated from the revised and enlarged edition of "Tables of Composition of Australian foods". See explanatory notes, paragraph 3, page 11. (b) Micrograms (µg).

NOTE. One international unit (i.u.) of vitamin A is equivalent to 0.3 micrograms of retinol.

TABLE 7. INTERNATIONAL COMPARISON OF ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION
(Per head per day)

NOTE. Owing to differences in the bases of calculating consumption and the use of different nutrient conversion factors, figures for the countries shown are not strictly comparable. The United Kingdom data for 1975 relates to nutrient intakes and not the supply of nutrients available for consumption.

Nutrient	Unit	Australia (a)				United Kingdom (b)			
		Average -				Average -			
		1936-37 to 1938-39	1946-47 to 1948-49	1956-57 to 1958-59	1974-75	1936-37 to 1938-39	1946-47 to 1948-49	1956-57 to 1958-59	1975 (c)
Protein -									
Animal	g	58.7	57.4	59.6	69.6	43.5	43.5	49.9	n.a.
Vegetable	g	30.9	35.3	32.3	32.9	36.8	45.8	34.4	n.a.
Total	g	89.6	92.7	91.9	102.5	30.3	89.3	84.3	71.9
Fat from all sources	g	133.5	121.7	131.7	114.9	130.0	112.6	140.0	107.0
Carbohydrate	g	377.4	424.8	416.7	429.1	377.5	395.8	388.6	275.0
Calcium	mg	642	785	817	926	688	1,152	1,130	1,010
Iron	mg	15.4	15.1	14.0	15.8	13.2	15.4	15.7	11.6
Vitamin A	i.u.	4,905	4,630	4,568	5,189	3,699	3,993	4,584	4,567
Vitamin C	mg	86	96	89	105.8	93	110	95	51
Thiamin	mg	1.4	1.5	1.3	1.6	1.3	1.7	1.8	1.2
Riboflavin	mg	1.7	1.9	1.8	3.2	1.6	1.9	1.8	1.8
Niacin	mg	18.7	17.6	18.6	22.0	13.1	15.9	16.2	28.9
Energy value	kcal	3,117	3,245	3,297	3,264	3,000	2,953	3,147	2,290
Nutrient	Unit	New Zealand (d)				United States of America (e)			
		Average -				Average -			
		1937 to 1940	1944 to 1948	1957 to 1959	1975 p	1935 to 1939	1947 to 1949	1957 to 1959	1975 p
Protein -									
Animal	g	69.6	66.7	72.4	76.0	n.a.	n.a.	n.a.	n.a.
Vegetable	g	34.8	37.2	33.8	29.0	n.a.	n.a.	n.a.	n.a.
Total	g	104.4	103.9	106.2	105.0	89.0	95.0	95.0	99.0
Fat from all sources	g	147.3	143.2	153.9	137.0	133.0	141.0	143.0	147.0
Carbohydrate	g	}	}	}	}	444.0	403.0	374.0	369.0
Calcium	mg					910	990	980	910
Iron	mg					14.5	16.7	16.3	18.3
Vitamin A	i.u.					8,200	8,700	8,100	8,200
Vitamin C	mg					118	113	105	122
Thiamin	mg					1.5	1.9	1.9	1.9
Riboflavin	mg					1.9	2.3	2.3	2.3
Niacin	mg					15.9	21.0	21.1	23.3
Energy value	kcal	n.a.	n.a.	3,434	3,290	3,300	3,230	3,130	3,160

(a) Not comparable with years prior to 1968-69. Figures are based on conversion factors calculated from the revised and enlarged edition "Tables of Composition of Australian Foods". (b) Source : British Ministry of Agriculture, Fisheries and Food, published in "Trade and Industry" and the former "Board of Trade Journal". (c) Source : British Ministry of Agriculture, Fisheries and Food, published in Monthly Digest of Statistics. (d) Source : New Zealand Department of Statistics in co-operation with the Ministry of Agriculture and Fisheries, published in "Food Balance Sheet". (e) Source : U.S. Agricultural Research Service (Dept. of Agriculture), published in "National Food Situation".

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