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Levies and organic agriculture in Australia: 2010-11 and 2015-16

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1 Agricultural levies

Agricultural levies are taxes on production. For most agricultural products in Australia producers are obliged to pay a fee to fund specific services provided by government and non-government organisations, that is – they pay levies. These include levies for the purpose of:

- Emergency Plant Pest Response
- Emergency Animal Pest Response
- Animal Health Australia
- Plant Health Australia
- National Residue Testing
- Marketing
- Research and Development

These levies are intended to cover the costs of the different services. They are collected and distributed amongst appropriate organisations that determine the kind of activities to be prioritised and carried out in a particular year.

The Commonwealth Department of Agriculture collects, administers and disburses agricultural levies and charges on behalf of Australia's primary industries. The levies are set by Ministerial Order, and often collected at point of sale, based on different criteria, mostly a percentage of total sales or per quantity sold; but sometimes also on inputs. The rate for wheat, for example, is 1.02 per cent of the sale value, whereas cattle transactions are \$5 per head. For details see:

<http://www.agriculture.gov.au/ag-farm-food/levies/>.

The Department does not keep a record of the levies paid by organic producers.

1.1 Levies and organic agriculture

For a long time now, many organic producers have queried the justice in levies being paid by them, while it isn't clear what benefit they receive from the research actually carried out and of benefit to their sector.

Almost 20 years ago, an attempt was made to quantify the amount paid by organic farmers (Wynen 2003). This report concluded that the total levies paid by organic farmers in 2000-2001 was \$736 thousand, of which more than half - \$391 thousand - was paid for Research and Development (R&D), and around one third - \$240 thousand – in marketing levies. Since that time organic production has grown considerably, and questions of payments for those services have been raised again.

1.2 Aim of the report

Over the last few years the organic industry has expressed more and more interest in how much is actually paid for the services for which many feel they do not get a great deal in return. To that end, a report was commissioned by NASAA Organic to estimate levies paid by farmers in recent years for the main production areas.

The emphasis of this report is the levies paid for R&D, but levies also for other services, such as marketing and animal and plant health issues are considered. Only the major crops and livestock categories are included.

1.3 Methodology

Organic producers pay levies at the same rate as other producers. These rates are readily available. Thus, calculating the total levy revenue is a matter of multiplying the specific levy rate for each commodity by inputs (for example, eggs), production (for example, beef) or receipts (for example, grains). In this report, levies have been estimated using ABS census data on organic production and the value of agricultural commodities production (VACP - see Wynen (2019) for an analysis of those data). The latest ABS data on organic agriculture are for 2015-16. Estimated levies for 2010-11 are also included for the purpose of providing some insight into the growth of these levies over time. The same levy rates are used for both years, so the levy revenue depends on inputs, production or receipts

For several reasons (including percentage of property under organic management, and calculation of the value of production with conventional prices) ABS data may not accurately reflect the real situation for organic farming. In such cases assumptions need to be made to reach an estimate of the quantity and value of organic production. This is the case especially for some industries, such as for the chicken industry – both for eggs and meat – and for grapes-for-wine. The reason is that it is reasonably easy to grow both conventional and organic produce on the one property, which makes it more difficult to determine the extent of the organic production. For example, ABS figures for 2015-16 show that more than half of the total grapes-for-wine were produced on properties with less than 50 per cent of the area under organic management, where two thirds (65 per cent) of all grapes-for-wine were produced. Industry sources mention that it is not uncommon that some large properties that grow grapes-for-wine also have a small area in organic grapes, but figures to quantify this are not available.

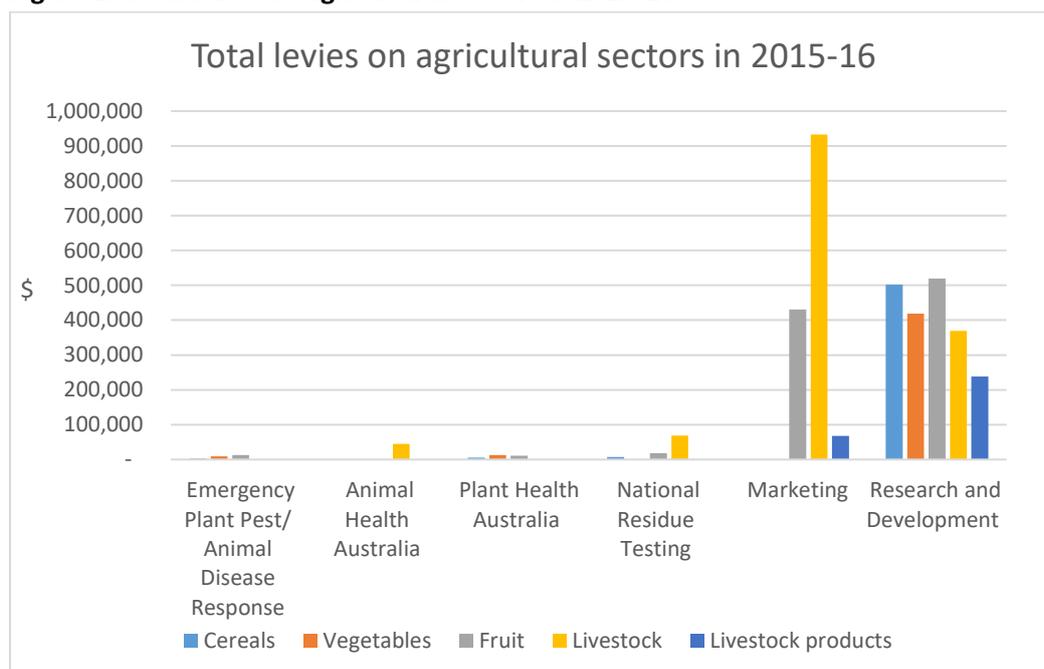
In such cases, and without more specific information, estimates need to be made about the share of the total being produced as organic, which undoubtedly leads to less accuracy than desirable. Results of especially those three commodities – more so than others - need therefore to be used with caution.

2 Levies paid by organic farmers

2.1 Overview of all levies

Levies on organic production amounted to an estimated \$3.7 million in 2015-16. Most of this is allocated to R&D and marketing (Figure 1). Emergencies, animal and plant health, and national residue testing account for a small share. The livestock sector contributes most to the total levies with \$1.4 million, with the fruit sector in second place at \$1 million.

Figure 1: Total levies on agricultural sectors in 2015-16



Source: author's estimates derived from ABS (2016) and ABS (2018).

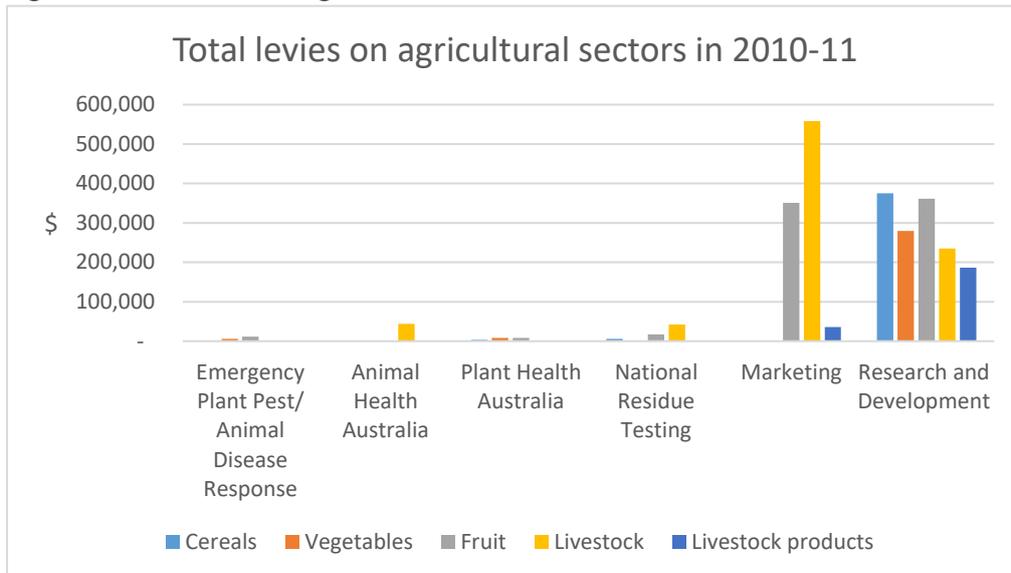
Of the total of the marketing levies, almost two thirds (65 per cent) is contributed by the livestock sector and almost all of the rest (30 per cent) by the fruit sector (fruit includes nuts and grapes for wine). In contrast, levies for cereals, vegetables and livestock products are charged mainly for R&D - see below.

Historically, the 2015-16 estimate of \$3.7 million compares with total levies paid in 2010-11 of \$2.5 million, as is shown in Figure 2 (and in Tables A.1 and A.2 in Appendix A). This was up from \$0.74 million in 2000-2001 (Wynen 2003).¹

Since the levy rates are stable, the difference in levies paid between the years reflects the growth in organic inputs used, production, or receipts.

¹ Details of different levies for all products included in this paper can be found in Appendix A.

Figure 2: Total levies on agricultural sectors in 2010-11

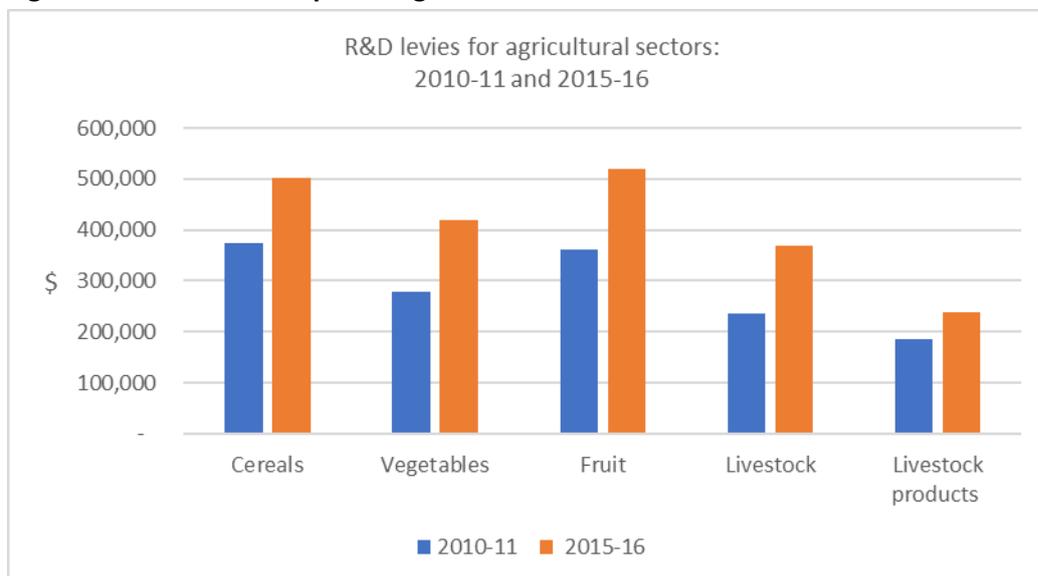


Source: author’s estimates derived from ABS (2016) and ABS (2018).

2.2 Research and Development levies by commodity

Total levies raised for R&D in 2015-16 was \$2.0 million, an increase from \$1.4 million in 2010-11. The breakdown for the different sectors can be found in Figure 3.

Figure 3: R&D levies for specific agricultural sectors: 2010-11 and 2015-16



Source: author’s estimates derived from ABS (2016) and ABS (2018).

The largest contributor to R&D in 2015-16 was the fruit sector at \$519 thousand, even though only half of its total levies go to R&D – with slightly less than half to marketing, as mentioned above. Cereals are in second place, and vegetables not far behind. Livestock’s increase in levies since 2010-11 are a bit deceptive, as levies for lambs went down, hiding the considerable increase in levies for R&D from beef.

This growth is, of course, a reflection in growth of organic agriculture in Australia over the years. Note, however, that due to different basis of payment in the different sectors, growth in levies does not necessarily reflect growth in the value of the commodities. For example, the value of beef between the two years changed from \$81 million to \$479 million, an almost six-fold increase in value. The total number of cattle on organic farms in that time changed from \$340 thousand to \$803 thousand, less than 2.5 times as much as in the earlier year. As the levies for this sector are partly calculated per head sold, the increase in levies will therefore be more in line with the lower figure of extra numbers produced than with the higher returns due to rate of growth in prices. This was the other way around for wheat, where levies are based on sales value. While the quantity produced for this product declined by more than half between the two years, its value increased by 21 per cent as compared with 2010-11, and hence the levies also increased between the two years.

The details of the different commodities are discussed in the following sections.

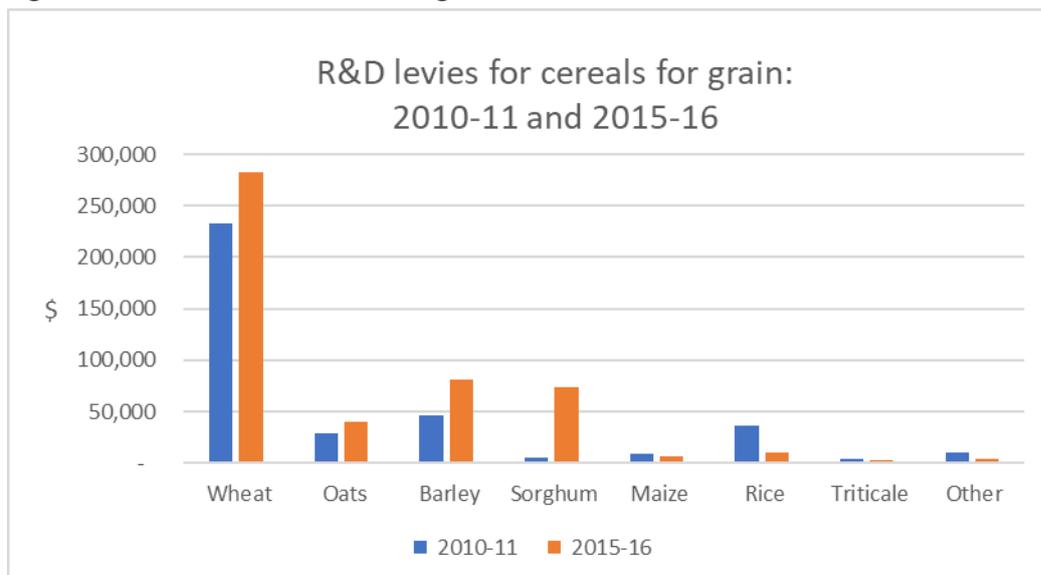
2.2.1 Cereals for grain

Some 97 per cent of the levies collected on grains are used for R&D. This totalled just over half a million in 2015-16, up from \$375 thousand in 2010-11. This increase was due to increases in prices of grains between the two years, as the quantity harvested of wheat decreased in that time.

As shown in a previous report (Wynen 2019) many different grains are grown organically. By far the most important is wheat, being between about half to two thirds of the total, depending on the year.

It is therefore not surprising that levies paid in the grain sector (see Figure 4, and Tables A.3 and A.4) are paid mainly for wheat – especially in 2010-11. All three of the main grains (wheat, barley, oats) increased their contributions to R&D levies between the two years under consideration. The decrease in levies paid for rice may (partly) explain the increase in the production of sorghum.

Figure 4: R&D levies for cereals for grain: 2010-11 and 2015-16

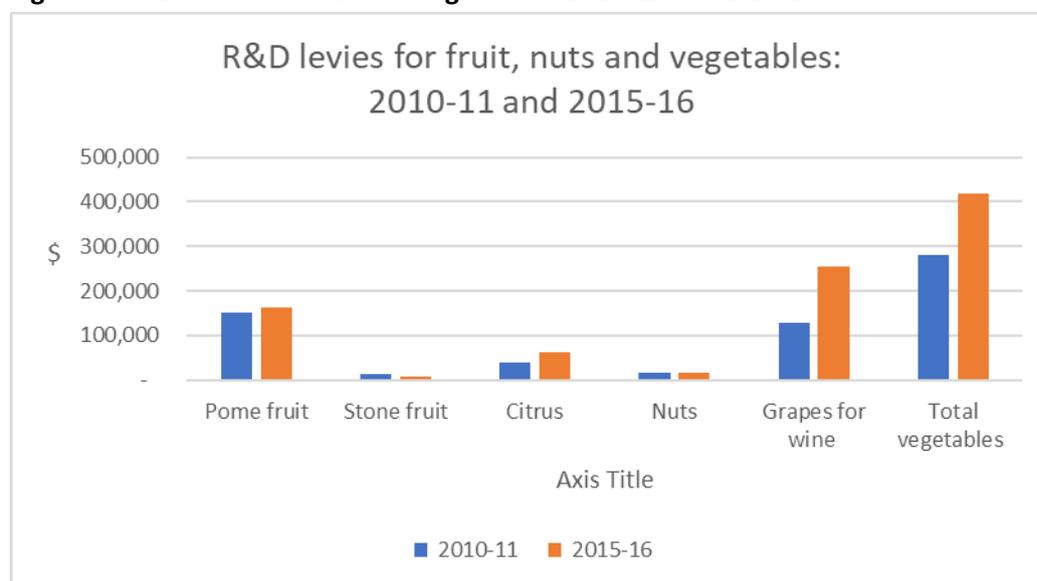


Source: author's estimates derived from ABS (2016) and ABS (2018).

2.2.2 Fruit, nuts and vegetables

With an estimated payment in R&D levies of almost \$1 million paid by fruit and vegetable growers in 2015-16 (see Figure 5 and Table A.5), this sector makes up almost half of total levies paid by all commodities in that year.

Figure 5: R&D levies for fruit and vegetables: 2010-11 and 2015-16



Source: author's estimates derived from ABS (2016) and ABS (2018).

Most – if not all – of the fruit is levied by weight. Each fruit is levied differently. Only the most important fruits are therefore included here, that is, pome fruit, stone fruit, citrus, nuts and grapes for wine. Levies for other commodities could be obtained relatively easily.

For vegetables, the levy rates are charged per sales value – the same for all categories, and therefore most of the levies would have been received for beans and peas. Potatoes are charged per weight and are included under 'vegetables'.

2.2.3 Livestock and livestock products

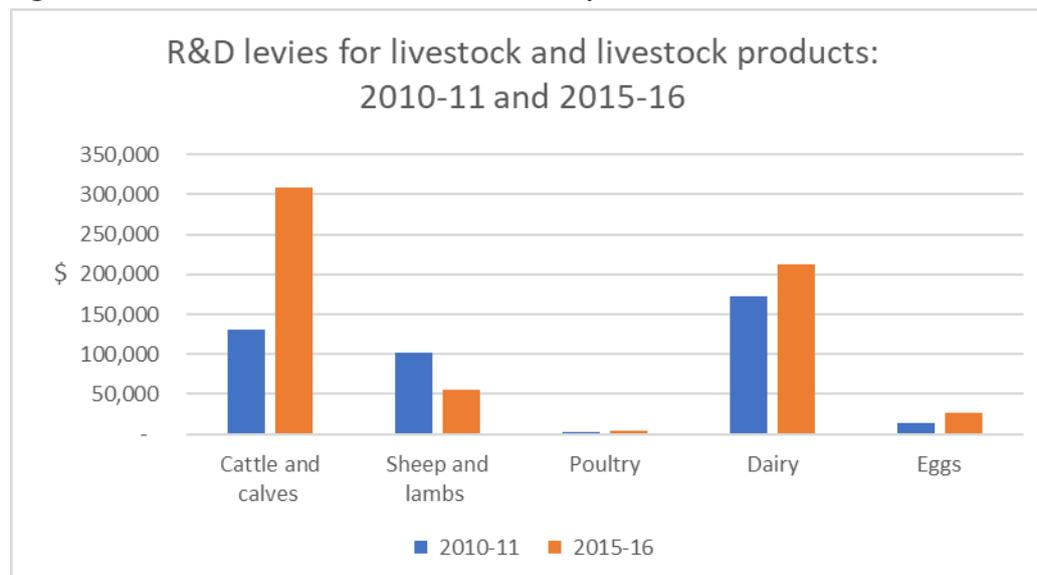
With the quantity of organic beef sold more than doubling in 2015-16, the growth in levies for beef is a prominent feature of the organic market. However, as R&D levies for beef are paid on sales quantity (as mentioned above), levies did not increase with the value of production (see Figure 6).

There are two different levies charged on livestock producers, but they have been combined into one figure in Figure 6, and in Appendix Tables A.7 and A.8. Levies are charged both for processing (approximately \$200 thousand in 2015-16 - for marketing and R&D) and for transactions (around \$1 million in that same year). This includes - apart from levies for marketing and R&D – also animal health and residue testing.

The levies paid for organic lambs has almost halved since 2010-11, as 2015-16 was a drought year, and numbers of organic lambs decreased over time. Only about half of organically grown lambs were marketed as 'organic' in both years, but levies are calculated on all stock that was reared as organic.

The poultry market is rather insignificant as compared with the beef and sheep market.

Figure 6: R&D levies for livestock and livestock products: 2010-11 and 2015-16



Source: author's estimates derived from ABS (2016) and ABS (2018).

Regarding livestock products – milk and eggs – levies on milk are considerably higher than on eggs. The R&D levies for milk were estimated \$212 thousand in 2015-16 (see Figure 8 and Table A.7), and \$173 thousand in 2010-11 (see Table A.8), an increase of 23 per cent over the 5 years. This is a rather modest expansion compared to some other commodities, such as beef. However, as R&D levies are paid on sales quantity of milk fat and protein, levies did not increase with the value of production.

For eggs, around two thirds of the levies go to marketing, and less than a third to R&D, totalling just over \$26 thousand in 2015-16. This was still almost double that paid in R&D levies in 2010-11 (see Figure 6 and Tables A.7 and A.8).

2.3 Conclusions

In 2015-16, organic farmers paid an estimated \$3.7 million in levies for their product, of which \$2 million was levied for the purposes of R&D. This means that, with government's matching contributions approximately doubling this amount for R&D purposes, the organic industry could have \$4 million available for R&D purposes in the organic industry – and more if more industries were to be included.

In the past – from 1996 to 2011 – the then Rural Industries Research and Development Corporation (RIRDC) administered the research effort in the area of organic agriculture – to the tune of \$275,000 annually. However, this has long since been abandoned – on the grounds that organic industry now is a 'mature industry'. No official public research funding is set aside for allocation to organic agriculture specifically.

It is often argued that research carried out for conventional agriculture is also of use for organic farming. However, much is not – such as research into the use of pesticides and fertilisers. In addition, other research more relevant for organic farmers – such as optimal planting dates to avoid pest or diseases, or crop varieties with relatively abundant vegetative growth in the early stages to crowd out weeds, may also be of relevance for conventional farmers.

3 List of references

ABS (2016) Customised report.

ABS (2018) Customised report.

Wynen, E. (2003), 'Organic farming in Australia - research levies and expenditure'. RIRDC Project No:WYN-3A, RIRDC Publication No 03/002 (available on <http://www.elspl.com.au/OrgAg/4-OA-Pubs/4-OA-Publications/Pub-D-ResPol/OA-Res-D6-RIRDC-levies-03-002.pdf>).

Wynen, E. (2016), 'Improving the measurement of the value of organic production in Australia', OTARE Policy Paper No 1601 (available on: http://www.elspl.com.au/OrgAg/4-OA-Pubs/4-OA-Publications/Pub-A-FP/OA-FP-A26-OTARE-Policy%20Paper_No_1601-July2016.pdf).

Wynen, E. (2019), 'Organic agricultural production in Australia: 2010-11 and 2015-16 OTARE Research Paper No.1901 (available on: http://www.organictrustaustralia.org.au/sites/default/files/RP-ABS-2010-11_2015-16.pdf).

Appendix A: Levies on organic agriculture

Table A.1: Levies on organic production: summary: 2015-16 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
Cereals	2,535	-	5,070	7,605	-	501,930	517,140
Vegetables	9,260	-	12,995	-	-	419,071	441,326
Fruit	12,625	-	10,763	18,785	431,117	519,298	992,589
Livestock	731	44,575	-	68,315	932,859	368,854	1,415,334
Livestock products	-	526	-	779	67,533	238,256	283,691
Total	25,151	45,101	28,829	95,484	1,431,509	2,047,409	3,650,079

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.2: Levies on organic production: summary: 2010-11 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
Cereals	1,895	-	3,790	5,685	-	375,210	386,580
Vegetables	6,243	-	8,672	-	-	279,495	294,410
Fruit	11,717	-	8,541	17,501	351,099	361,649	750,508
Livestock	297	44,254	-	42,476	558,417	235,062	880,506
Livestock products	-	271	-	402	36,119	186,427	211,142
Total	20,152	44,526	21,002	66,064	945,636	1,437,844	2,523,146

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.3: Levies on organic production: cereals for grain: 2015-16 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
- Wheat	1,425	-	2,850	4,275	-	282,150	290,700
- Oats	200	-	400	600	-	39,600	40,800
- Barley	410	-	820	1,230	-	81,180	83,640
- Sorghum	370	-	740	1,110	-	73,260	75,480
- Maize	50	-	70	150	-	6,930	7,200
- Rice	50	-	100	150	-	9,900	10,200
- Triticale	13	-	25	38	-	2,475	2,550
- Other	20	-	40	60	-	3,960	4,080
Total	2,535	-	5,070	7,605	-	501,930	517,140

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.4: Levies on organic production: cereals for grain: 2010-11 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
- Wheat	1,175	-	2,350	3,525	-	232,650	239,700
- Oats	145	-	290	435	-	28,710	29,580
- Barley	235	-	470	705	-	46,530	47,940
- Sorghum	25	-	50	75	-	4,950	5,100
- Maize	65	-	91	195	-	9,009	9,360
- Rice	180	-	360	540	-	35,640	36,720
- Triticale	18	-	35	53	-	3,465	3,570
- Other	50	-	100	150	-	9,900	10,200
Total cereals for grain	1,895	-	3,790	5,685	-	375,210	386,580

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.5: Levies on organic production: fruit and vegetables: 2015-16 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
Pome fruit	11,238	-	4,162	16,856	235,145	162,738	430,138
Stone fruit	-	-	133	-	4,729	6,014	10,875
Citrus	-	-	5,805	-	13,298	61,923	81,026
Nuts	694	-	-	964	24,500	16,994	43,152
Grapes for wine	-	-	664	-	128,945	254,637	384,246
Total fruit and nuts - incl.grapes for wine	12,625	-	10,763	18,785	431,117	519,298	992,589
Total vegetables	9,260	-	12,995	-	-	419,071	441,326
Total fruit, nuts and vegetables	21,885	-	23,759	18,785	431,117	938,369	1,433,915

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.6: Levies on organic production: fruit and vegetables: 2010-11 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
Pome fruit	10,550	-	4,124	15,824	218,372	152,177	401,047
Stone fruit	-	-	371	-	9,695	12,048	22,114
Citrus	-	-	3,711	-	8,973	39,587	52,271
Nuts	584	-	-	839	21,309	14,582	37,313
Grapes for wine	-	-	335	-	71,440	128,674	200,450
Total fruit and nuts - incl.grapes for wine	11,133	-	8,541	16,663	329,790	347,068	713,195
Total vegetables	6,243	-	8,672	-	-	279,495	294,410
Total fruit and vegetables	17,377	-	17,212	16,663	329,790	626,563	1,007,605

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.7: Levies on organic production: livestock and livestock products: 2015-16 (\$)

	Emergency Plant Pest/ Animal	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
Cattle and calves	-	26,102	-	58,228	817,179	308,181	1,209,689
Sheep and lambs	-	18,000	-	9,600	115,680	55,920	199,200
Poultry	731	473	-	487	-	4,753	6,444
Total livestock	731	44,575	-	68,315	932,859	368,854	1,415,334
Dairy	-	-	-	-	4,229	211,961	216,190
Eggs	-	526	-	779	63,303	26,295	67,500
Total livestock product	-	526	-	779	67,533	238,256	283,691
Total livestock and livestock products	731	45,101	-	69,094	1,000,392	607,110	1,699,024

Source: author's estimates derived from ABS (2016) and ABS (2018).

Table A.8: Levies on organic production: livestock and livestock products: 2010-11 (\$)

	Emergency Plant Pest/ Animal Disease Response	Animal Health Australia	Plant Health Australia	National Residue Testing	Marketing	Research and Development	Total
Cattle and calves	-	11,063	-	24,678	346,337	130,613	512,691
Sheep and lambs	-	33,000	-	17,600	212,080	102,520	365,200
Poultry	297	192	-	198	-	1,929	2,615
Total livestock	297	44,254	-	42,476	558,417	235,062	880,506
Dairy	-	-	-	-	3,449	172,857	176,306
Eggs	-	271	-	402	32,670	13,571	34,836
Total livestock product	-	271	-	402	36,119	186,427	211,142
Total livestock and livestock products	297	44,526	-	42,878	594,536	421,489	1,091,648

Source: author's estimates derived from ABS (2016) and ABS (2018).