



National Residue Survey 2016–17

Apples and pears



The National Residue Survey (NRS) is an operational unit within the Australian Government Department of Agriculture and Water Resources, and since 1992 has been funded by industries through levies or contracted by direct funding.

The NRS is an essential part of Australia's pesticide and veterinary medicine residue management framework providing verification of good agricultural practice in support of chemical control-of-use legislation and guidelines.

NRS residue monitoring programs monitor the levels of, and associated risks from, pesticides and veterinary medicine residues in Australian food products. The programs help to facilitate and encourage ongoing access to domestic and export markets. NRS supports Australia's primary producers and food processors who provide quality animal, grain and horticulture products which meet both Australian and relevant international standards.

Pome Fruit program

Since 1998, the pome fruit program has been funded by the NRS component of the statutory levy on apple and pear production.

Key points

- National Residue Survey is certified to ISO 9001 Quality Management System
- In 2016–17, the overall compliance rate against Australian standards was 98 percent
- Australian primary producers continue to demonstrate a high degree of good agricultural practice

The program involves the collection of 350 to 400 pome fruit samples from pack-houses and markets throughout Australia and tested for a range of pesticides and environmental contaminants. The program supports quality assurance and requirements for access to domestic and international markets.

Analytical screens

Analytical screens covering pesticides, veterinary medicines and environmental contaminants are developed in consultation with industry and take into account Australian registered chemicals, chemical residue profiles and overseas market requirements.

Apple and pear samples are screened for a range of chemicals, as outlined in Table 1

Results

In 2016–17, a total of 347 samples were collected and analysed. The results were compared with the relevant Australian standards and where appropriate relevant international standards.

The results over the past 11 years provided in Table 2 highlight Australia's excellent compliance status against Australian standards and helps maintain the reputation and integrity of Australian pome fruit in international and domestic markets.

TABLE 1 Horticulture program chemical screens

Chemical screen	Chemical group	Analyte
Multi-residue pesticide screen	Insecticides	88 analytes including abamectin, bifenthrin, carbaryl, chlorpyrifos, cypermethrin, deltamethrin, fipronil, imidacloprid, spinosad and sulfoxaflor
	Fungicides	55 analytes including azoxystrobin, boscalid, captan dithianon, dithiocarbamates, thiabendazole and propiconazole
	Herbicides	56 analytes including atrazine, bromacil, clopyralid, 2,4-D, MCPA, oxyfluorfen, pendamethalin and simazine
	Organochlorines	aldrin, chlordane, DDT, dieldrin, endosulfan, endrin, HCB, heptachlor, lindane and mirex
	Scald inhibitor	diphenylamine

TABLE 2 Compliance rates for the past eleven years

Year	Apple program		Pear program	
	Samples collected	Compliance rates (%)	Samples collected	Compliance rates (%)
2006–07	455	98	91	98.9
2007–08	469	99.6	141	100
2008–09	471	100	136	100
2009–10	479	98.1	144	99.3
2010–11	420	100	150	98.7
2011–12	346	98.3	142	97.2
2012–13	299	100	108	98.2
2013–14	314	98.1	110	100
2014–15	294	95.9	92	97.8
2015–16	282	97.9	94	95.7
2016–17	248	98.0	99	98.0

Laboratory Selection and Performance

The NRS contracts laboratories to analyse animal and plant product samples for pesticide/veterinary medicine residues and environmental contaminants.

Laboratories are selected through the Australian Government tendering process on the basis of their proficiency, accreditation against international standards (ISO/IEC 17025) and value for money.

Contracted laboratories are proficiency tested by the NRS to ensure the validity of their analytical results and technical competence.

The NRS has been accredited by the National Association of Testing Authorities as a proficiency test provider since July 2005.

International export markets

The NRS maintains a database of international maximum residue limits (MRLs) for countries that are major export markets for Australian animal and plant products.

All results are checked for compliance with Australian standards and relevant international MRLs. The database can be accessed at apps.agriculture.gov.au/NRSMRLExternal/Public/Disclaimer.aspx.



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MRL database
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