



PESTICIDE DETECTIVES

A national assessment of pesticides in
waterways

Pesticide Use in Australian Homes and
Gardens Survey Results 2020
www.pesticidedetectives.com.au

Background

The Pesticide Use in Australian Homes and Gardens Survey is an anonymous survey investigating the types, purposes and frequencies of pesticide use in Australia as well as respondent attitudes towards pesticides. 37 individuals participated in the first round of the survey.

Objectives

The main objectives were to use the responses to:

- Understand types, purposes and frequencies of pesticide use in Australian homes and gardens
- Inform the public of the brand names of pesticides used in Australian homes and gardens
- Understand knowledge about and attitudes towards pesticides
- Understand disposal in and around homes

Summary of Findings:

Use of Products Inside Homes

The majority of respondents (63%) used sprays or aerosols and products to remove or prevent mould and or fungus (40%) inside their homes in the last 12 months. Of the respondents, prior to completing the survey:

-8% did not know that **Paint to prevent mould/fungus** contained pesticides.

-10% did not know that **Paint to prevent mould/fungus + mould cleaning products** - contained pesticides.

-14% of respondents did not know that **Paint to prevent mould/fungus + mould cleaning products + wood preservatives** - contained pesticides.

Pesticide Use at Work

16 % of respondents (and/or members of their households) used pesticides at work in the last 12 months.

Use of Products Outside Homes

Sixty percent (60%) of respondents used weedkillers outside their homes, in their gardens and allotments in the last 12 months. Respondents did not know that:

- **Wood preservatives** - **11% of respondents** did not know that wood preservatives for outdoor use contained pesticides prior to completing the survey.

- **Mould cleaning products + wood preservatives** - **6% of respondents** did not know that paint to prevent mould/fungus, mould cleaning products and wood preservatives contained pesticides prior to completing the survey.



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- **Mould/algae cleaning products for pools + outdoor furniture + weed killers + fungal treatments for plants + wood preservatives - 4% of respondents** did not know that mould/algae cleaning products for pools and outdoor furniture, weed killers, fungal treatments for plants and wood preservatives contained pesticides prior to completing the survey.

Products applied on humans

Insect repellent is the most common product applied with **70% of respondents** reporting the use of insect repellent products on themselves and on their children in the last 12 months. Respondents did not know:

- **Anti-fungal products - 21% of respondents** did not know that anti-fungal products contained pesticides prior to completing the survey.

- **Anti-fungal + anti-parasitic products** - 7% of respondents did not know that anti-fungal and anti-parasitic products contained pesticides prior to completing the survey.

- **Anti-fungal, anti-parasitic + insect repellent products** - 7% of respondents did not know that anti-fungal, anti-parasitic and insect repellent products contained pesticides prior to completing the survey.

- **Insect repellent** - 3% of respondents did not know that insect repellent contained pesticides prior to completing the survey.

Products applied on pets and animals

Worming treatments are the most common products applied by 44% of respondents on animals they own or their pets over a 12-month period.

Attitudes and behaviours towards pesticides

Buying behaviours

The majority of respondents (up to 78%) purchased their products for indoor, outdoor and human use from supermarkets, chemists and general stores.

Where do respondents store their products

The majority of respondents stored their **products for indoor use on high shelves, in cupboards, kitchens and, utility room**. The majority of respondents stored their **products for outdoor use on high shelves, in cupboards, and garden sheds and garages**. The majority of respondents stored their **products for use on themselves and their children on high shelves, in cupboards, and in bathrooms and** the majority of respondents stored **their products for use on animals and pets on high shelves, in cupboards, and in kitchens**.



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Where do respondents dispose of their excess products?

Up to **52% of respondents** disposed of their excess products with their **domestic rubbish**. **22% of respondents** stored their excess products for outdoor use and 18% of respondents disposed of their products for indoor use at their local councils. Some respondent used all of their products. Some respondents did not know where to dispose small quantities of excess products and stockpiled it in their garages. Excess products for use on animals were returned to pharmacies, stores and/or vets. Some disposed of their products at the EPA chemical collection centre while others kept them without disposal.

When applying indoor products:

56% of respondents read instructions, **69%** follow instructions, **67%** wash hands after application, **69%** cover unprotected food and drinks, **65%** ventilate the area, **41%** never use gloves or masks or other personal protective equipment, **70%** keep children away during application and **65%** keep pets away during application.

When applying outdoor products:

83% of respondents read instructions, **84%** follow instructions, **86%** wash hands after application, **46%** use gloves or masks or other personal protective equipment, **80%** keep children away during application and **81%** keep pets away during application.

When applying products to animals and pets:

82% of respondents read instructions, **85%** follow instructions, **84%** wash hands after application, **52%** never use gloves or masks or other personal protective equipment, **54%** keep children away during application and **44%** keep treated pets off beds.

When reading pesticide labels:

93% of respondents always follow the label when the product is unfamiliar, **69%** always follow the label exactly, **64%** understand all contents of the label, and only **32%** often feel that the label provides all the information that is needed.

General attitude to treating pest problems:

43% of respondents prefer to use non-chemical methods first before applying products, **44%** apply products for outdoor use and **42%** apply products on themselves when the problem becomes unmanageable. **31%** use products on animals and pets preventatively before the problem occurs.

38% of respondents disagreed that pesticides that are available for use by the public are more dangerous than other household/gardening chemicals. **45% of respondents** agreed that exposure is to be expected if you use pesticides in the home or garden. **34% and 14% of respondents strongly agreed and agreed respectively** that when using pesticides, accidents have occurred. **51% strongly disagreed** that pesticides that can harm human health are not available for use by the public. **64% strongly disagreed** that pesticides available for use to the public are safe to use, even if the guidelines are not adhered to.



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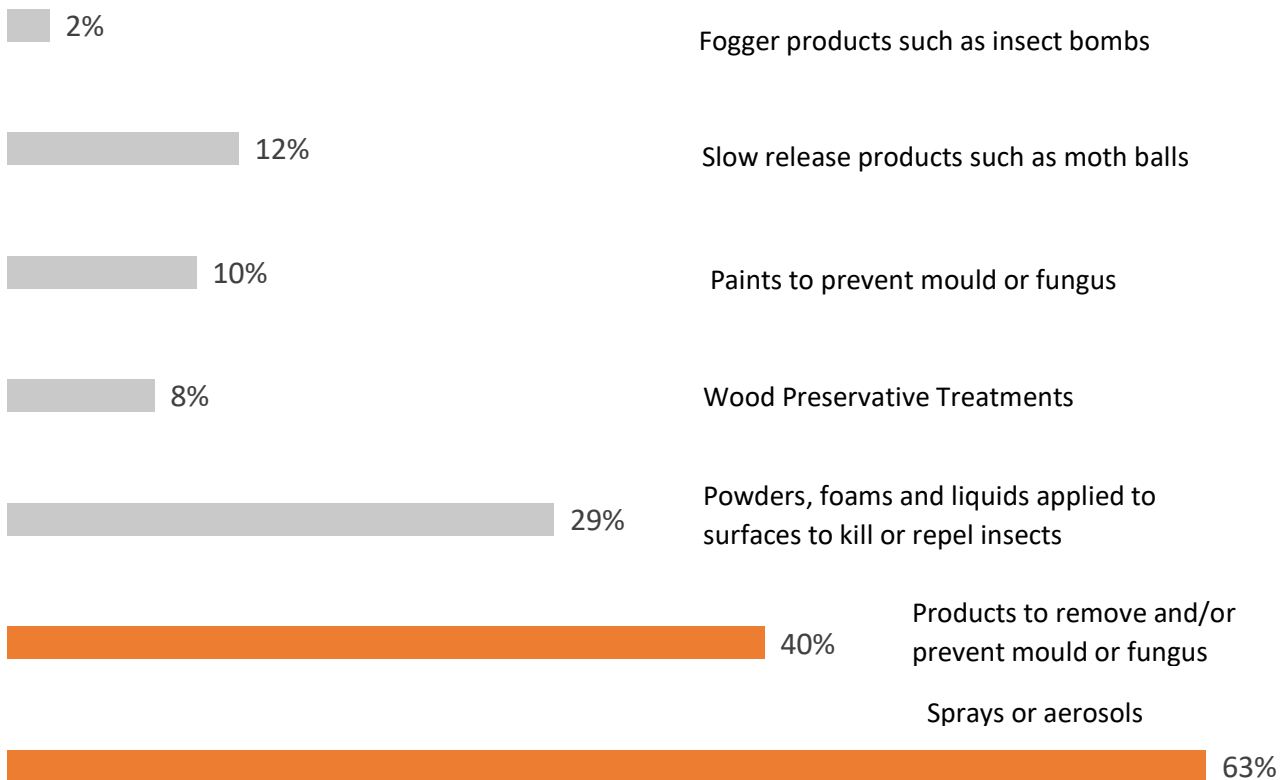
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1. PESTICIDE USE INSIDE HOMES (NOT APPLIED TO A PERSON OR PET) IN THE LAST 12 MONTHS

Sprays or aerosols and products to remove and or prevent mould and/or fungus were the top 2 types of products used in the homes of 91 respondents (%) in the last 12 months (not applied to a person or pet).

Total no of respondents = 91



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63% of respondents used sprays or aerosols in their houses over a 12-month period. [Mortein Insect Spray](#) was most commonly used, followed by [RAID Insect Spray](#). Majority of respondents used up to 2 to 11 applications of sprays and aerosols over a 12-month period. Other products used include, [Atlas Fast Knockdown Flying Insect Spray](#), [Baygon Flying Insect](#), [Coles Multi Insect Killer](#), [Defender Home Defence Barrier Spray](#) and [Baygon Crawling Insect Spray](#).

Types of products and frequency of use selected by respondents include:

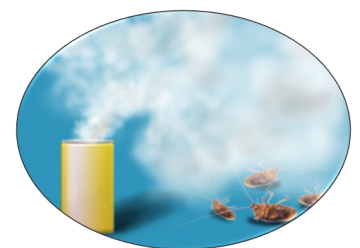
SPRAYS/AEROSOLS	1 application	2 - 11 applications	12 or more applications
Mortein Insect Spray	16	21	4
RAID Insect Spray	6	13	1
ALDI Atlas High Performance Surface and Cockroach Spray	3	4	0
Black & Gold Fly Insect Spray	2	3	0
First Force Insect Spray	0	2	0
HOVEX Vapourguard Insect Spray	2	1	0
Pea Beu Insect Killer	0	5	0
Others	16	16	2



2% of respondents applied fogger products inside their houses in a 12-month period.

Types of products and frequency of use selected by respondents include:

BOMBS/FOGGERS	1 application
Mortein Kill and Protect Control Bomb	1
Raid Exterminator Flea and Cockroach Bomb PESTxpert Pro-Fogger Cockroach and Flea Bomb	1
Mortein Powerguard Flea and Crawling Insect Control Bomb	1
Others	1



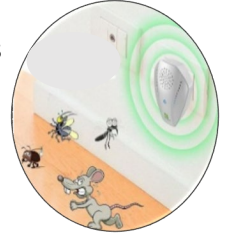
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12% of respondents used slow release products over a 12-month period. Hovex Moth products were commonly used. Other products used include Naphthalene balls, Hovex Camphor Balls, [Hovex Pantry Moth Balls](#), Thurlby herb clothes protectors and [Orphea strips](#).



Types of products and frequency of use selected by respondents include:

SLOW RELEASE PRODUCTS	1 application	2 - 11 applications	12 or more applications
Hovex Vapor Guard Moth Killer Clothing	1	2	0
Hovex Insect Control Moth Balls	1	4	0
Raid Max Fly & Mosquito Protection Plug-In	1	0	0
Mortein Peaceful Nights Mosquito & Fly Automatic Plug	0	0	1
Other	5	6	1

29% of respondents used powders, foams and liquids on surfaces to kill or repel insects in their houses over a 12-month period. None of the respondents applied their products 12 times or more. Other products used include [Ant-Rid Indoor Ant Liquid](#), [First Force Antkiller Powder](#), and [Atlas Permethrin Ant Killer Powder](#).

Types of products and frequency of use selected by respondents include:

POWDERS, FOAMS AND LIQUIDS	1 application	2 - 11 applications
Hovex Ant & Wasp Dust Killer	3	3
Mortein Kill and Protect Cockroach Baits	2	6
Hovex Cockroach Gel	1	0
Other	7	5



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10% of respondents used paints to prevent mould/fungus in their houses over a 12-month period. None of the respondents applied their products 12 times or more.

Types of products and frequency of use selected by respondents include:

PAINTS TO PREVENT MOULD.FUNGUS	1 application	2 - 11 applications
Dulux Precision 1L White Stain and Mould Blocker	1	0
Dulux White Ceiling +PLUS		
Kitchen and Bathroom Paint	4	1
Zinsser 1L Bulls Eye 1-2-3		
Undercoat Primer Sealer Stain Blocker	1	0
Other	4	0



40% of respondents used products to remove and/or prevent mould and/or fungus. A wide range of products were listed as being used in houses.

Other products used include:

[White King tablets](#), [Plain brand bleach](#), [White King bleach](#), [clove oil](#), [white vinegar](#), [Easy Off BAM soap scum and shine](#), [Simply Clean Simply No Mould](#), [Exit Mould](#), [Pinoclean](#), [Domestos products](#).

Types of products and frequency of use selected by respondents include:

PRODUCTS TO REMOVE/OR PREVENT MOULD/FUNGUS	1 application	2 - 11 applications	12 or more applications
Selleys Rapid Mould Killer	1	7	0
Ajax Professional Mould Power Cleaner	0	3	0
Dettol Glen 20 Disinfectant Spray	1	8	1
White King Multipurpose Bathroom Power Gel	4	8	1
Other Products	17	22	0



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8% of respondents used wood preservative treatments inside their homes.

Other products used include:

Teak oil, [Gripset WB2](#) and [Osmo](#) products.

Types of products and frequency of use selected by respondents include:

WOOD PRESERVATIVE TREATMENTS	1 application
Intergrain TSS Mould Preventer	1
No Rot Gel	1
Other	2

OTHER TYPES OF PESTICIDES USED INSIDE HOMES

25% of respondents reported using other types of pesticides inside their homes in the last 12 months.

These included Camphor wood containers, rat poison baits, Mortein [Powerguard Cockroach Baits](#), [Raid ant baits](#), [Ratsak 50 g box](#) (2 – 12 applications per year) , and other types of mouse and rat baits such as [Talon Rat and Mouse Killer](#) and anti-coagulant rodenticide baits.

PROFESSIONAL APPLICATION OF PRODUCTS INSIDE HOMES

8% of respondents reported using a professional to apply pesticide products inside their houses in the last 12 months. This included paint applications, treatments for ants, cockroaches, carpet beetles, spiders and other insects, and rat baits in the roof.



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Awareness of pesticides in products used inside homes.

42% of respondents were aware that the products that were listed in the survey contained pesticides prior to completing the survey. Of those that were not aware:

Paints to prevent mould, mould
cleaning products and wood
preservatives

14% of respondents did not know that paint to prevent
mould/fungus, mould cleaning products and wood
preservatives contained pesticides prior to completing the
survey.

Paints to prevent mould/fungus

8% did not know that paint to prevent mould/fungus
contained pesticides prior to completing the survey.

Paints to prevent mould and
mould cleaning products

10% did not know that paint to prevent mould/fungus
and mould cleaning products contained pesticides prior to
completing the survey.

Wood preservative products

9% did not know that paint to prevent mould/fungus and
mould cleaning products contained pesticides prior to
completing the survey.

Total no. of respondents: 91

In addition, 5% of respondents did not know that mould cleaning products contained pesticides, 1% of respondents did not know that insect repellent contained pesticides, 1% of respondents did not know that insect repellent, paint to prevent mould, mould cleaning products and wood preservatives contained pesticides. 1% of respondents did not know that insect repellent and slow release insect repellent contained pesticides. 1% of respondents did not know that slow release products, paint to prevent mould, mould cleaning products and wood preservatives contained pesticides and another 3% of respondents did not know that paint to prevent mould and wood preservatives contained pesticides prior to completing the survey.



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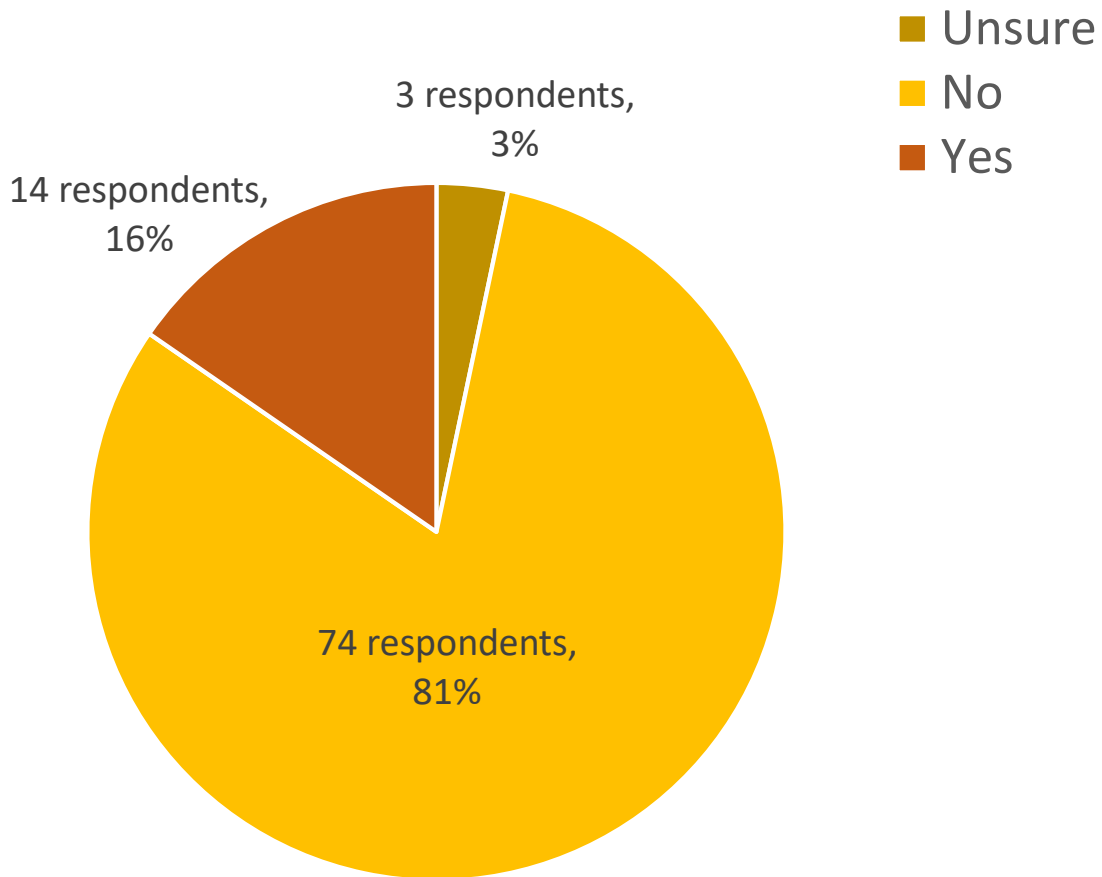
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Pesticide Use at Work

16 % of respondents (and/or members of their households) used pesticides at work.

No. of respondents: 91





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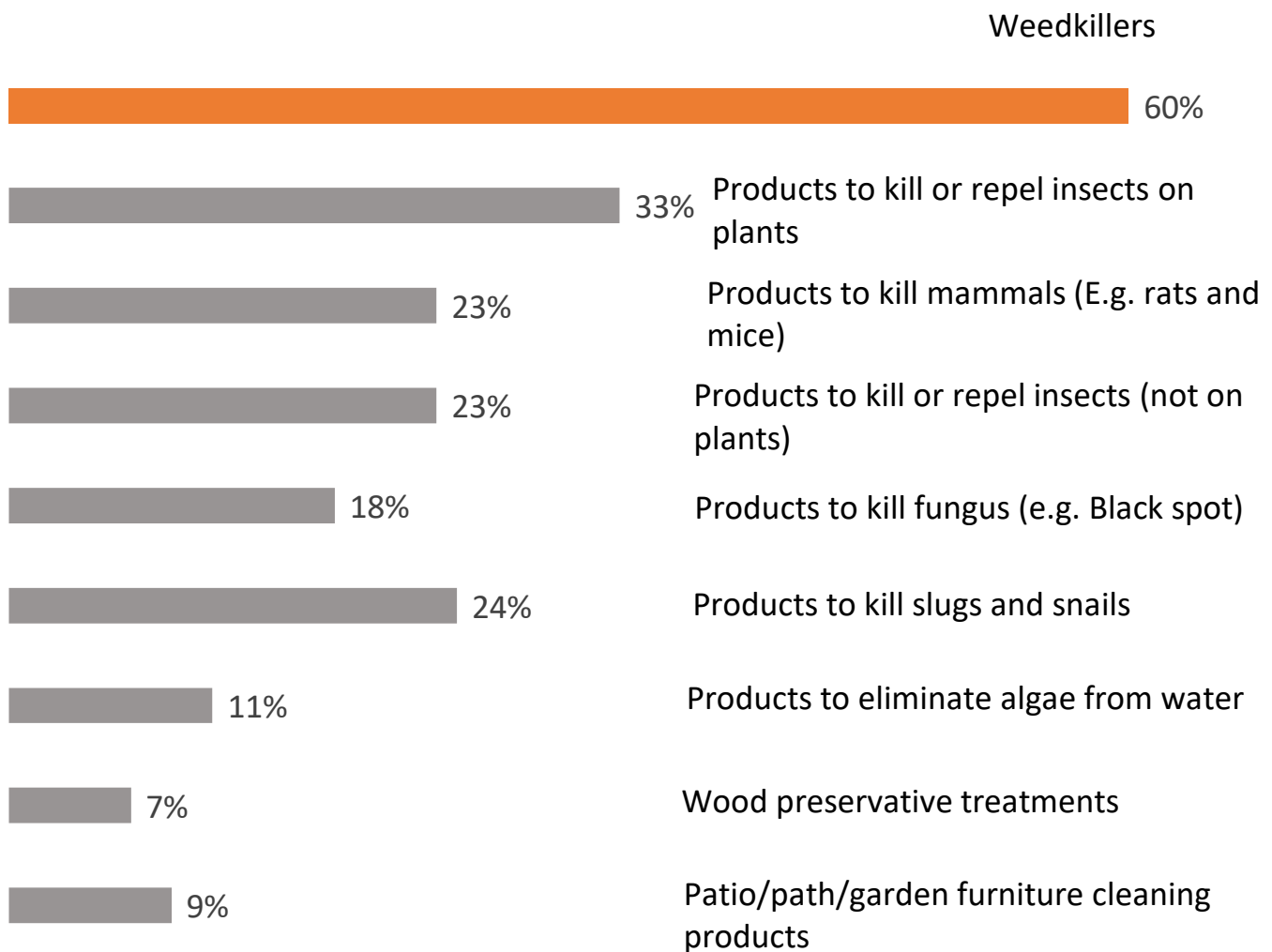
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2. Pesticide Use Outside Homes (In gardens and allotments)

Weedkillers were the most common products used outside homes by **60%** of respondents.

Total no. of respondents: 91



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Products to kill or repel insects on plants

33% of respondents used products to kill or repel insects on plants. Of these, the most common product was [Yates Pyrethrum Insect Pest Killer](#) which was applied 2-11 times by 16 respondents over 12 months outside homes. Other products used include Yates Natures Way Organic Pesticide, [Yates Natures Way Caterpillar Killer](#), [Dipel Bio-Insecticide](#), [Neem Oil](#), [White oil/pest oil](#), Homemade chilli and garlic spray, [Eco oil](#), Mortein sprayed locally on vine moth, and products containing [Carbaryl](#).

Types of products and frequency of use selected by respondents include:

PRODUCTS TO KILL OR REPEL INSECTS ON PLANTS	1 application	2-11 applications	12 or more applications
Yates Pyrethrum Insect Pest Killer	7	7	2
Hortico Insect Killer Ready To Spray Tomatoes & Vegetables	1	2	1
Yates Tomato and Vegetable Dust	2	2	1
Sharp Shooter Complete Bug and Insect Spray	1	0	1
Yates Baythroid	2	0	1
David Grays Malathion Garden Spray	3	0	1
Other Products	15	10	3

23% of respondents used products to kill or repel insects (not on plants). A variety of products were used.

These include [Mortein/Raid Surface Spray for Ant Control](#), [Atlas Permethrin Ant Killer Powder](#), [Bayer Ant and Wasp Dust](#), First Force Ant Killer Powder, [Bayer Ant & Wasp Dust](#), [Garden Pro Ant Killer](#), [Blitzem Wasp Killer](#),

Types of products and frequency of use selected by respondents include:

PRODUCTS TO KILL OR REPEL INSECTS (NOT ON PLANTS)	1 application	2-11 applications	12 or more applications
Antex Granules (Ant Killer Sand)	4	1	2
David Grays Ant and Termite Spray	0	0	1
BinKill Wheelie Bin Insecticide & Deodorizer	0	2	1
Hovex Vaporguard Bin Insect Killer	0	0	1
MSA Wasp Killer	2	0	1
Other Products	8	3	4

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24% of respondents used products to kill slugs and snails. [Hortico Snail and Slug Pellets](#) were most commonly used.

Types of products and frequency of use selected by respondents include:

PRODUCTS TO KILL SLUGS AND SNAILS

	1 application	2-11 applications	12 or more applications
Eradicate Snail and Slug Bait	2	0	0
Baysol Snail and Slug Bait	5	2	0
Hortico Snail And Slug Pellets	5	10	1
Other Products	1	2	0

60% of respondents used weedkillers. Most commonly used product was [ROUNDUP Weedkiller](#). Other products used include Generic Glyphosate Bindii, [Grow choice Glymount 450](#), [Weedmaster Duo](#), [Apparent Double Down 700](#), [Metsulfuron](#), [Yates Weed & Feed](#), [SAFEpine Oil](#), [Starane Advanced Brush Off](#), and [Apparent Glyphosate 360 Bio](#), [Slasher Organic Weed Killer](#), [Starane Advanced Herbicide](#), [Fusilade Forte Herbicide](#), [Affray 300](#) and [MCPA Herbicide](#).

Types of products and frequency of use selected by respondents include:

WEEDKILLERS

	1 application	2-11 applications	12 or more applications
ROUNDUP Herbicide By Monsanto	5	12	0
ROUNDUP Weedkiller	8	13	1
Brunnings 1 hour Fast Action Weed Kill	1	1	0
HORTICO Weed Killer 360	0	6	1
Other Products	6	11	0

WEEDKILLERS CONTAINING OTHER PESTICIDES

	1 application	2-11 applications	12 or more applications
Yates Buffalo Pro Lawn Weedkiller	1	1	0
Yates Tree & Blackberry Killer	2	1	0
ACCESS Herbicide	1	0	0
Other Products	6	9	0



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18% of respondents used products to kill fungus on plants. Products include [Eco Organic Eco-Fungicide](#).

Types of products and frequency of use selected by respondents include:

PRODUCTS TO KILL FUNGUS (E.G. BLACK SPOT) ON PLANTS	1 application	2-11 applications	12 or more applications
Richgro Mancozeb plus Sulphur Fungicide	1	2	0
Hortico Insect & Disease Control Ready to Spray	0	2	0
Other Products	3	4	0

7% of respondents used wood preservative treatments. These include [Osmo](#) mould resistant wood lacquer, [Linseed Oil with Beeswax](#), [Diggers Eco In-Ground Timber Protecta](#) and Teak Oil.

Types of products and frequency of use selected by respondents include:

WOOD PRESERVATIVE TREATMENTS (OUTDOORS)	1 application	2-11 applications	12 or more applications
Other Products	3	0	1

9% of respondents used cleaning products on their patios, paths, and garden furniture. Products used include [Koh household cleaner](#) and [White King bleach](#).

Types of products and frequency of use selected by respondents include:

PATIO/PATH/GARDEN FURNITURE CLEANING PRODUCTS	1 application	2-11 applications	12 or more applications
Wet and Forget Moss and Mould Remover	2	1	0
Other Products	3	1	0



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11% of respondents used products to eliminate algae from water. Products used include [Calcium Hypochlorite](#) and [Splosht](#).

Types of products and frequency of use selected by respondents include:

PRODUCTS TO ELIMINATE ALGAE FROM WATER	1 application	2-11 applications	12 or more applications
AQUAPRO Pond Algae Block	1	1	0
AQUAPRO Bionatural Barley Straw Solution	1	0	0
Pool Drops Liquid Algicide Plus	0	1	0
Hy-Chlor Green Blaster High Strength Algaecide	0	1	0
Other Products	0	1	0

23% of respondents used products to kill animals such as rats and mice. Products used include [Pindone](#).

Types of products and frequency of use selected by respondents include:

PRODUCTS TO KILL ANIMALS SUCH AS RATS AND MICE	1 application	2-11 applications	12 or more applications
RATSAK Fast Action Bait Stations	5	7	0
The Big Cheese Rat & Mouse Killer Bait	4	4	0
Mortein Kills Rats and Mice	2	0	0
Other products	1	4	0

OTHER TYPES OF PESTICIDES USED OUTSIDE HOMES

19% of respondents reported using other types of pesticides outside their homes in the last 12 months.

These include [Dipel](#), [lime sulphur](#), [copper oxychloride](#), [White oil](#), Yeast autolysate with [Lorsban](#), Borax and [Bayer Ant and wasp dust](#).

PROFESSIONAL APPLICATION OF PRODUCTS OUTSIDE HOMES

Only **9%** of respondents reported using a professional to apply pesticide products outside their houses in the last 12 months. This included an application to kill rats, barrier spray for all insects and spiders, termite treatment, weed treatment, ant treatment and treating an elm tree with Imidacloprid.



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Awareness of pesticides in products used outside homes and gardens.

55% of respondents (44 out of 80 respondents) were aware that the types of products for use outside homes contained pesticides prior to completing the survey. Of those that were not aware:

1 type of product

Wood preservative treatments for
outdoor use

11% of respondents did not know that wood preservatives for outdoor use contained pesticides prior to completing the survey.

2 types of products

Mould/algae cleaning products, and
wood preservative treatments

6% of respondents did not know that mould/algae cleaning products for pools and outdoor furniture, and wood preservatives contained pesticides prior to completing the survey.

4 types of products

Mould/algae cleaning products,
fungal treatments for plants, weed
killers, and wood preservative
treatments

4% of respondents did not know mould/algae cleaning products for pools and outdoor furniture, fungal treatments for plants, weed killers and wood preservatives contained pesticides prior to completing the survey.

Total no. of respondents: 80

In addition, the remaining 24% of respondents who did not know about pesticides in their products prior to the survey include products for:

Mould/algae, wood preservatives, rat/mouse killers, fungal treatments for plants, weed killers, and insect repellents.