



# Wheat (semolina) residue testing annual datasets 2014–15

National Residue Survey, Department of Agriculture and Water Resources

## Dataset abbreviations

**LOR** Limit of reporting.

**MRL** Maximum Residue Limit.

**no limit** No Australian Standard applicable for the contaminant. The ‘as low as reasonably achievable’ principle applies. Detections at low levels are allowable.

**not defined** Standards are not defined in inedible matrixes (urine and faeces).

**not set** No Australian Standard has been set for the chemical in the edible matrix and any detection is a contravention of the Australia New Zealand Food Standards Code.

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**Table 1 Fungicides**

| Chemical       | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|----------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| azoxystrobin   | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| benalaxyl      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| bitertanol     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| boscalid       | whole  | 0.01           | 0.5            | 7                           | 0                   | 0     |
| bupirimate     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| captan         | whole  | 0.02           | not set        | 7                           | 0                   | 0     |
| captan         | whole  | 0.02           | not set        | 7                           | 0                   | 0     |
| carbendazim    | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| chlorothalonil | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| cyproconazole  | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| cyprodinil     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| difenoconazole | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |

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| Chemical         | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|------------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| dimethomorph     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| dithianon        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| dodine           | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| epoxiconazole    | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| etridiazole      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenarimol        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenhexamid       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fluazinam        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fludioxonil      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fluquinconazole  | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| flusilazole      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| flutriafol       | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| fluxapyroxad     | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| hexaconazole     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| imazalil         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| ipconazole       | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| iprodione        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| kresoxim-methyl  | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| metalaxyl        | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| myclobutanil     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| oxadixyl         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| penconazole      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| prochloraz       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| procymidone      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| propiconazole    | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| prothioconazole  | whole  | 0.01           | 0.3            | 7                           | 0                   | 0     |
| pyraclostrobin   | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| pyrimethanil     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| spiroxamine      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| tebuconazole     | whole  | 0.01           | 0.2            | 7                           | 0                   | 0     |
| thiabendazole    | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| tolclofos methyl | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| triadimefon      | whole  | 0.01           | 0.5            | 7                           | 0                   | 0     |
| triadimenol      | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| trifloxystrobin  | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| triticonazole    | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| vinclozolin      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |

**Table 2 Herbicides**

| Chemical                             | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|--------------------------------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| 2,2-DPA (2,2-dichloropropionic acid) | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| 2,4-D                                | whole  | 0.01           | 0.2            | 7                           | 0                   | 0     |
| amitrole                             | whole  | 0.01           | 0.01           | 1                           | 0                   | 0     |
| atrazine                             | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| bromacil                             | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| bromoxynil                           | whole  | 0.01           | 0.2            | 7                           | 0                   | 0     |
| carfentrazone-ethyl                  | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| chlorpropham                         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| chlorsulfuron                        | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| chlorthal-dimethyl                   | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| clethodim                            | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| clodinafop-propargyl                 | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| clopyralid                           | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| cyanazine                            | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| dicamba                              | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| dichlobenil                          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| dichlorprop-P                        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| diclofop-methyl                      | whole  | 0.01           | 0.1            | 1                           | 0                   | 0     |
| diflufenican                         | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| diquat                               | whole  | 0.01           | 2              | 1                           | 0                   | 0     |
| diuron                               | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| ethofumesate                         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenoxaprop-ethyl                     | whole  | 0.01           | 0.01           | 1                           | 0                   | 0     |
| flamprop-M-methyl                    | whole  | 0.01           | 0.05           | 1                           | 0                   | 0     |
| fluazifop-p-butyl                    | whole  | 0.01           | not set        | 1                           | 0                   | 0     |
| glufosinate                          | whole  | 0.01           | not set        | 1                           | 0                   | 0     |
| glyphosate                           | whole  | 0.01           | 5              | 1                           | 0                   | 0     |
| haloxyfop                            | whole  | 0.01           | not set        | 1                           | 0                   | 0     |
| imazamox                             | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| imazapic                             | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| imazapyr                             | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| imazaquin                            | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| imazethapyr                          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| iodosulfuron-methyl                  | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| ioxynil                              | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| isoxaben                             | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| linuron                              | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| MCPA                                 | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |

| Chemical             | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|----------------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| methabenthiazuron    | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| metolachlor          | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| metosulam            | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| metribuzin           | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| metsulfuron-methyl   | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| napropamide          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| norflurazon          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| oryzalin             | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| oxyfluorfen          | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| paraquat             | whole  | 0.01           | 0.05           | 1                           | 0                   | 0     |
| pendimethalin        | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| picloram             | whole  | 0.01           | 0.2            | 7                           | 0                   | 0     |
| propachlor           | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| quizalofop-ethyl     | whole  | 0.01           | not set        | 1                           | 0                   | 0     |
| quizalofop-P-tefuryl | whole  | 0.01           | not set        | 1                           | 0                   | 0     |
| sethoxydim           | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| simazine             | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| tralkoxydim          | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| triasulfuron         | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| triclopyr            | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| trifluralin          | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |

**Table 3 Insecticides**

| Chemical        | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|-----------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| abamectin       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| acephate        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| acetamiprid     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| aldicarb        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| amitraz         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| azamethiphos    | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| azinphos-methyl | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| bifenazate      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| bifenthrin      | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| bioresmethrin   | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| buprofezin      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| cadusafos       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| carbaryl        | whole  | 0.01           | 5              | 7                           | 0                   | 0     |
| carbofuran      | whole  | 0.01           | 0.2            | 7                           | 0                   | 0     |

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| Chemical             | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|----------------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| chlorantraniliprole  | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| chlorfenapyr         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| chlorfenvinphos      | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| chlorpyrifos         | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| chlorpyrifos-methyl  | whole  | 0.01           | 10             | 7                           | 0                   | 0     |
| clofentezine         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| clothianidin         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| cyfluthrin           | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| cyhalothrin          | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| cypermethrin         | whole  | 0.01           | 0.2            | 7                           | 0                   | 0     |
| deltamethrin         | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| diafenthiuron        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| diazinon             | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| dichlorvos           | whole  | 0.01           | 5              | 7                           | 0                   | 0     |
| dicofol              | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| diflubenzuron        | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| dimethoate           | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| disulfoton           | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| emamectin            | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| endosulfan           | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| esfenvalerate        | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| ethion               | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| ethoprophos          | whole  | 0.005          | 0.005          | 7                           | 0                   | 0     |
| etoxazole            | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenamiphos           | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenbutatin oxide     | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenitrothion         | whole  | 0.01           | 10             | 7                           | 0                   | 0     |
| fenoxycarb           | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenpyroximate        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenthion             | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| fenvalerate          | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| fipronil             | whole  | 0.005          | not set        | 7                           | 0                   | 0     |
| hexythiazox          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| imidacloprid         | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| indoxacarb           | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| malathion (maldison) | whole  | 0.01           | 8              | 7                           | 0                   | 0     |
| methacrifos          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| methamidophos        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| methidathion         | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |

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| Chemical           | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|--------------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| methiocarb         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| methomyl           | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| methoprene         | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| methoxychlor       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| methoxyfenozide    | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| mevinphos          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| monocrotophos      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| omethoate          | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| parathion          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| parathion-methyl   | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| permethrin         | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| phenothrin         | whole  | 0.01           | 2              | 7                           | 0                   | 0     |
| phorate            | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| phosmet            | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| piperonyl butoxide | whole  | 0.01           | 20             | 7                           | 0                   | 0     |
| pirimicarb         | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| pirimiphos-methyl  | whole  | 0.01           | 10             | 7                           | 0                   | 0     |
| profenofos         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| propargite         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| prothiofos         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| pymetrozine        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| pyrethrins         | whole  | 0.01           | 3              | 7                           | 0                   | 0     |
| pyriproxyfen       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| spinetoram         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| spinosad           | whole  | 0.01           | 1              | 7                           | 0                   | 0     |
| spirotetramat      | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| sulfoxaflor        | whole  | 0.01           | 0.01           | 5                           | 0                   | 0     |
| tau-fluvalinate    | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| tebufenozide       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| tebufenpyrad       | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| terbufos           | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| tetradifon         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| thiacloprid        | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| thiamethoxam       | whole  | 0.01           | 0.01           | 7                           | 0                   | 0     |
| thiodicarb         | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| triazofos          | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| trichlorfon        | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| triflumuron        | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |

**Table 4 Contaminants**

| Chemical                           | Matrix | LOR<br>(mg/kg) | MRL<br>(mg/kg) | No. of<br>samples<br>tested | > ½ MRL<br>to ≤ MRL | > MRL |
|------------------------------------|--------|----------------|----------------|-----------------------------|---------------------|-------|
| aldrin and dieldrin<br>(HHDN+HEOD) | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| chlordane                          | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| DDT                                | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| endrin                             | whole  | 0.01           | not set        | 7                           | 0                   | 0     |
| HCB<br>(hexachlorobenzene)         | whole  | 0.01           | 0.05           | 7                           | 0                   | 0     |
| HCH (or BHC)                       | whole  | 0.01           | 0.1            | 7                           | 0                   | 0     |
| heptachlor                         | whole  | 0.01           | 0.02           | 7                           | 0                   | 0     |
| lindane (gamma-HCH)                | whole  | 0.01           | 0.5            | 7                           | 0                   | 0     |
| mirex                              | whole  | 0.01           | not set        | 7                           | 0                   | 0     |