






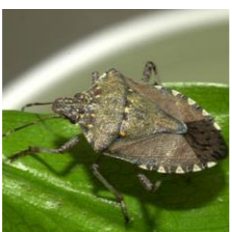

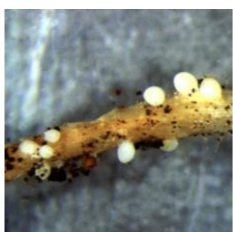

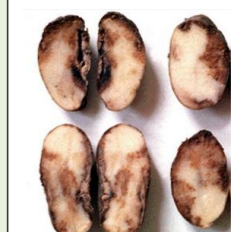

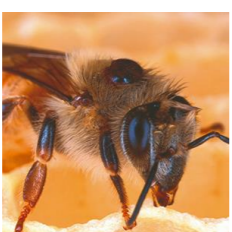
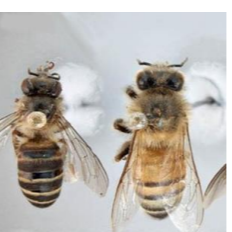



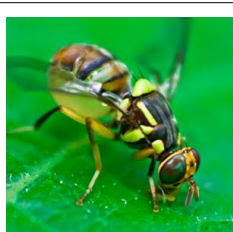

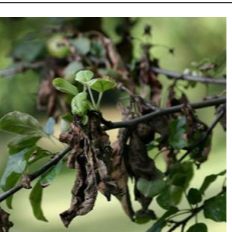




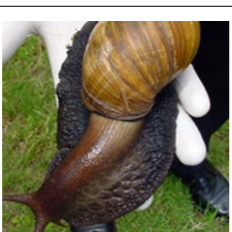

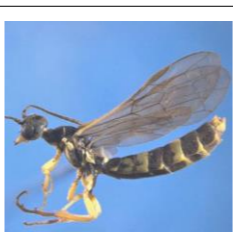
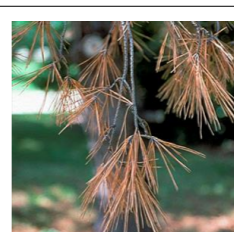

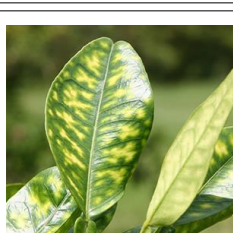



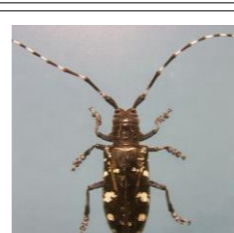









Australia's National Priority Plant Pest (NPPP) List



Australian Government
Department of Agriculture, Fisheries and Forestry

The Plant Health Committee has identified National Priority Plant Pests that are exotic to Australia, under eradication or have limited distribution. These are the focus of government investment and action, including funding through the Priority Pest and Disease Planning and Response. While by no means the only plant pests of biosecurity concern, the National Priority Plant Pests serve to highlight the sort of threats Australia faces.

	<p>1. Xylella (Pierce's disease) Name: <i>Xylella fastidiosa</i> Note: Includes vectors Risks: 350+ species including grapevine, olives, & almonds</p>		<p>8. Gypsy moths Name: <i>Lymantria dispar</i> spp. complex & <i>Lymantria monacha</i> Risks: 1000+ species including eucalypts, pine forests, fruit & nut trees</p>		<p>15. Ug99 (wheat stem rust) Name: <i>Puccinia graminis</i> f. sp. <i>tritici</i> (exotic strains) Risks: Grains (wheat, barley, oats and rye)</p>		<p>22. Panama disease Name: <i>Fusarium oxysporum</i> f. sp. <i>cubense</i> Tropical Race 4 Risks: Bananas</p>		<p>29. Subterranean termites Name: <i>Coptotermes formosanus</i> & <i>Coptotermes gestroi</i> Risks: Infrastructure, forestry</p>		<p>36. Sugarcane and cereal stem borers (exotic species) Name: Multiple genera Note: Includes <i>Chilo</i> spp. and other species Risks: Sugarcane & cereal crops</p>
	<p>2. Khapra beetle Name: <i>Trogoderma granarium</i> Risks: Grains, rice, oilseeds, dried fruits</p>		<p>9. BMSB (brown marmorated stink bug) Name: <i>Halyomorpha halys</i> Risks: 300+ species of plants</p>		<p>16. Citrus canker Name: <i>Xanthomonas citri</i> subsp. <i>citri</i> Risks: Citrus species</p>		<p>23. Cyst nematodes (exotic species) Name: Multiple <i>Heterodera</i> species Risks: Grains, grasses and vegetables</p>		<p>30. Phytoplasma 16SrI group Name: Aster yellows Risks: Wide host range</p>		<p>37. Potato late blight Name: <i>Phytophthora infestans</i> (exotic strains) Risks: Potatoes</p>
	<p>3. Spotted wing drosophila Name: <i>Drosophila suzukii</i> Risks: Fruits (berries, cherries, nectarines, plums and grapes)</p>		<p>10. Mites of bees (internal & external) Name: Multiple genera Note: Includes Varroa, Tropilaelaps & Tracheal mites Risks: Bee industry (pollination & honey)</p>		<p>17. Exotic bees Name: <i>Apis</i> species Note: Includes <i>Apis mellifera</i>, <i>A. dorsata</i>, <i>A. florea</i> & <i>A. cerana</i> Risks: Bee industry (pollination & honey)</p>		<p>24. Plum pox virus (sharka) Name: <i>Plum pox virus</i> Risks: Prunus species (e.g. apricot, peach)</p>		<p>31. Armyworms Name: <i>Spodoptera frugiperda</i> & <i>Spodoptera eridania</i> Risks: Wide host range including alfalfa, maize, & peanut</p>		<p>38. Pine pitch canker Name: <i>Fusarium circinatum</i> Risks: Pine trees</p>
	<p>4. Fruit flies (exotic species) Name: Multiple genera Note: Includes several <i>Bactrocera</i> species Risks: 300+ species including fruit and vegetable trees</p>		<p>11. Guava (myrtle/eucalyptus) rust Name: <i>Austropuccinia psidii</i> (exotic strains) Risks: 100+ species, mainly in the Myrtaceae family</p>		<p>18. Fire blight Name: <i>Erwinia amylovora</i> Risks: Apple and pear</p>		<p>25. Drywood termites Name: <i>Cryptotermes brevis</i>, <i>C. dudleyi</i> & <i>Incisitermes minor</i> Risks: Structural timber</p>		<p>32. Exotic Tobamoviruses Name: Multiple species Note: Includes CGMMV, KGMMV, ToBRFV, ZGMMV & others Risks: Wide host range</p>		<p>39. Grapevine leaf rust Name: <i>Phakopsora euvtis</i> Risks: Grapevines</p>
	<p>5. Karnal bunt Name: <i>Tilletia indica</i> Risks: Wheat, durum wheat, triticale</p>		<p>12. Invasive snails (exotic species) Name: Multiple genera Note: Includes GAS, <i>Achatina fulica</i> Risks: 500+ species</p>		<p>19. Potato cyst nematode (exotic strains) Name: <i>Globodera</i> spp. Risks: Solanaceous crops (potato, tomato & eggplant).</p>		<p>26. Wheat stem sawfly Name: <i>Cephus cinctus</i> & <i>Cephus pygmaeus</i> Risks: Grains</p>		<p>33. Pine wilt nematode & vectors Name: <i>Bursaphelenchus cocophilus</i>, <i>B. xylophilus</i> & <i>Monochamus</i> spp. Risks: Softwoods (pine)</p>		<p>40. Exotic Begomoviruses Name: Multiple species of <i>Begomovirus</i> (exotic) Note: Includes <i>Bemisia tabaci</i> (exotic, vector) Risks: Tomato</p>
	<p>6. Huanglongbing Name: 'Candidatus Liberibacter asiaticus' Note: Includes vectors Risks: Commercial varieties of citrus</p>		<p>13. Zebra chip Name: 'Candidatus Liberibacter solanacearum' complex Note: Includes vectors Risks: Potato, tomato, carrot, capsicum & chillies</p>		<p>20. Leaf miners (exotic species) Name: <i>Liriomyza</i> spp. Risks: Vegetables, melons, onions, grains & cotton</p>		<p>27. Barley stripe rust (exotic strains) Name: <i>Puccinia striiformis</i> f. sp. <i>hordei</i> (exotic strains) Risks: Barley</p>		<p>34. Longhorn beetles Name: <i>Anoplophora chinensis</i>, <i>A. malasiaca</i>, & <i>A. glabripennis</i> Risks: 100+ woody tree species</p>		<p>41. Dutch elm disease Name: <i>Ophiostoma novo-ulmi</i> Risks: Elm trees</p>
	<p>7. Invasive ants (exotic species) Name: Multiple genera Note: Includes RIFA, <i>Solenopsis invicta</i> Risks: Environment, agriculture & human health</p>		<p>14. Phytophthora species (airborne) Name: <i>Phytophthora ramorum</i> & <i>P. kernoviae</i> Risks: Forest species, avocado & chestnut</p>		<p>21. Texas root rot Name: <i>Phymatotrichum omnivorum</i> Risks: 2000+ species of plants</p>		<p>28. Hessian fly Name: <i>Mayetiola destructor</i> & <i>Mayetiola hordei</i> Risks: Cereal crops</p>		<p>35. Grape phylloxera Name: <i>Daktulosphaira vitifoliae</i> Risks: Grapevines</p>		<p>42. Banana phytoplasma disease Name: 'Candidatus Phytoplasma asteris' & 'Ca. Phytoplasma novoguineense' Risks: Bananas</p>

Australia's National Priority Plant Pests (2019)

1. Xylella and exotic vectors	Bacterial pathogens of the <i>Xylella</i> genus (<i>Xylella fastidiosa</i>)	12. Exotic invasive snails	<i>Achatina fulica</i> <i>Monacha</i> spp. <i>Massylaea</i> spp.	<i>Pomacea canaliculata</i> <i>Caracollina lenticula</i>	31. Armyworms	<i>Spodoptera eridania</i> <i>Spodoptera frugiperda</i>		
	Confirmed and unconfirmed exotic vectors: <i>Acrogonia citrina</i> <i>Cicadella viridis</i> <i>Draeculacephala minerva</i> <i>Homalodisca vitripennis</i> <i>Philaenus spumarius</i>	<i>Acrogonia terminalis</i> <i>Dilobopterus costalimai</i> <i>Graphocephala atropunctata</i> <i>Oncometopia fasciata</i> <i>Xyphon fulgidum</i>	13. 'Candidatus Liberibacter solanacearum' complex	'Candidatus Liberibacter solanacearum' haplotypes <i>Bactericera cockerelli</i> (vector of Haplotype A and B), (exotic) <i>Bactericera trigonica</i> (vector of Haplotype D and E) <i>Trioza apicalis</i> (vector of Haplotype C)		32. Exotic Tobamovirus	<i>Cucumber fruit mottle mosaic virus</i> <i>Cucumber green mottle mosaic virus</i> <i>Cucumber mottle virus</i> <i>Kyuri green mottle mosaic virus</i> <i>Potato 14R virus</i> <i>Ribgrass mosaic virus</i> <i>Tobacco mosaic virus</i> — <i>Potato strain</i> <i>Tomato brown rugose fruit virus</i> <i>Tomato mottle mosaic virus</i> <i>Turnip-vein clearing virus</i> <i>Wasabi mottle virus</i> <i>Youcai mosaic virus</i> <i>Zucchini green mottle mosaic virus</i>	
			14. Airborne Phytophthora	<i>Phytophthora kernoviae</i> <i>Phytophthora ramorum</i>				
2. Khapra beetle	<i>Trogoderma granarium</i>	15. Ug99 wheat stem rust	<i>Puccinia graminis</i> f. sp. <i>tritici</i> (exotic strains)					
3. Spotted wing drosophila	<i>Drosophila suzukii</i>	16. Citrus canker	<i>Xanthomonas citri</i> subsp. <i>citri</i>					
4. Fruit flies	High priority <i>Anastrepha ludens</i> <i>Bactrocera carambolae</i> <i>Bactrocera dorsalis</i> <i>Bactrocera trivialis</i> <i>Ceratitis capitata</i> <i>Zeugodacus cucurbitae</i>	Medium priority <i>Bactrocera albistrigata</i> <i>Bactrocera correcta</i> <i>Bactrocera kirki</i> <i>Bactrocera latifrons</i> <i>Bactrocera tsuneonis</i> <i>Bactrocera zonata</i> <i>Zeugodacus tau</i>	17. Exotic bees (<i>Apis</i> spp.)	<i>Apis cerana</i> (exotic) <i>Apis dorsata</i> <i>Apis florea</i>	<i>Apis mellifera capensis</i> <i>Apis mellifera scutellata</i> <i>Apis mellifera scutellata</i> (hybrid)	33. <i>Bursaphelenchus</i> spp. and exotic vectors	<i>Bursaphelenchus cocophilus</i> <i>Monochamus</i> spp. (vector)	<i>Bursaphelenchus xylophilus</i>
			18. Fire blight	<i>Erwinia amylovora</i>		34. Longhorn beetles	<i>Anoplophora chinensis</i> <i>Anoplophora malasiaca</i>	<i>Anoplophora glabripennis</i>
			19. Potato cyst nematode (exotic strains)	<i>Globodera</i> spp. including <i>G. pallida</i> and <i>G. rostochiensis</i> (exotic strains)		35. Grape phylloxera	<i>Daktulosphaira vitifoliae</i>	
			20. Leaf miners	<i>Liriomyza bryoniae</i> <i>Liriomyza huidobrensis</i> <i>Liriomyza trifolii</i>	<i>Liriomyza cicerina</i> <i>Liriomyza sativae</i>	36. Exotic stem borers of sugarcane and cereals	<i>Chilo auricilius</i> <i>Chilo orichalcociliella</i> <i>Chilo polychrysa</i> <i>Chilo terrenellus</i> <i>Eldana saccharina</i> <i>Scirpophaga excerptalis</i>	<i>Chilo infuscatellus</i> <i>Chilo partellus</i> <i>Chilo sacchariphagus</i> <i>Chilo tumidicostalis</i> <i>Sesamia griseascens</i>
5. Karnal bunt	<i>Tilletia indica</i>	21. Texas root rot	<i>Phymatotrichum omnivorum</i>		37. Potato late blight (exotic strains)	<i>Phytophthora infestans</i> (exotic strains)		
6. 'Candidatus Liberibacter asiaticus' (and other strains)	'Candidatus Liberibacter africanus' 'Candidatus Liberibacter americanus' 'Candidatus Liberibacter asiaticus' <i>Diaphorina citri</i> (vector) <i>Trioza erytreae</i> (vector)	22. Panama disease	<i>Fusarium oxysporum</i> f. sp. <i>cubense</i> Tropical Race 4		38. Pine pitch canker	<i>Fusarium circinatum</i>		
7. Exotic invasive ants	<i>Brachyponera chinensis</i> <i>Lepisiota frauenfeldi</i> <i>Nylanderia fulva</i>	<i>Solenopsis invicta</i> <i>Solenopsis richteri</i> <i>Wasmannia auropunctata</i>	23. Cyst nematodes of cereals	<i>Heterodera carotae</i> <i>Heterodera glycines</i> <i>Heterodera sorghi</i>	<i>Heterodera filipjevi</i> <i>Heterodera latipons</i> <i>Heterodera zae</i>	39. Grapevine leaf rust	<i>Phakopsora euvitis</i>	
8. Gypsy moths	<i>Lymantria dispar asiatica</i> <i>Lymantria dispar japonica</i>	<i>Lymantria dispar dispar</i> <i>Lymantria monacha</i>	24. Plum pox virus	<i>Plum pox virus</i>		40. Exotic <i>Begomovirus</i> (and vector)	<i>Begomovirus</i> (exotic)	<i>Bemisia tabaci</i> (exotic, vector)
9. Brown marmorated stink bug (BMSB)	<i>Halyomorpha halys</i>		25. Drywood termites	<i>Cryptotermes brevis</i> <i>Incisitermes minor</i>	<i>Cryptotermes dudleyi</i>	41. Dutch elm disease	<i>Ophiostoma novo-ulmi</i>	
10. Internal and external mites of bees (<i>Apis</i> spp.)	<i>Acarapis woodi</i> <i>Tropilaelaps clareae</i> <i>Tropilaelaps mercedesae</i>	<i>Varroa jacobsoni</i> <i>Varroa destructor</i>	26. Wheat stem sawfly	<i>Cephus cinctus</i>	<i>Cephus pygmaeus</i>	42. Banana phytoplasma diseases	'Candidatus Phytoplasma asteris' 'Candidatus Phytoplasma novoguineense'	
11. Guava (eucalyptus) rust (exotic strains)	<i>Austropuccinia psidii</i> (exotic strains)		27. Barley stripe rust (exotic strains)	<i>Puccinia striiformis</i> f. sp. <i>hordei</i> (exotic strains)		Further information can be found at: https://www.agriculture.gov.au/pests-diseases-weeds/plant/national-priority-plant-pests-2019		
		28. Hessian fly	<i>Mayetiola destructor</i>	<i>Mayetiola hordei</i>				
		29. Subterranean termites	<i>Coptotermes formosanus</i>	<i>Coptotermes gestroi</i>				
		30. Phytoplasma 16Srl group	Phytoplasma 16Srl group (aster yellows group)					

Image credits:

- Xylella fastidiosa – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Khapra beetle – source: Pest and Diseases Image Library, Bugwood.org
- Spotted wing drosophila – source: EPPO Global Database, gd.eppo.int
- Fruit flies – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Karnal bunt – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Huanglongbing – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Invasive ants – source: Scott Bauer, USDA Agricultural Research Service, Bugwood.org
- Gypsy moths – source: Jon Yuschock, Bugwood.org
- BMSB – source: David R. Lance, USDA APHIS PPQ, Bugwood.org
- Mites of bees – source: Scott Bauer, USDA Agricultural Research Service, Bugwood.org
- Guava (myrtle/eucalyptus) rust – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Invasive snails – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Zebra chip – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Phytophthora species – source: Joseph O'Brien, USDA Forest Service, Bugwood.org
- Ug99 – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Citrus canker – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Exotic bees – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Fire blight – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Potato cyst nematode – source: Central Science Laboratory, Harpenden, British Crown, Bugwood.org
- Leaf miners – source: Central Science Laboratory, Harpenden, British Crown, Bugwood.org
- Texas root rot – source: Chris Anderson, NSW DPI, dpi.nsw.gov.au

- Panama disease – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
- Cyst nematodes – source: Christopher Hogger, Swiss Federal Research Station for Agroecology and Agriculture, Bugwood.org
- Plum pox virus – source: John Hammond, USDA Agricultural Research Service, Bugwood.org
- Drywood termites – source: Rudolf H. Scheffrahn, University of Florida, Bugwood.org
- Wheat stem sawfly – source: Pest and Diseases Image Library, Bugwood.org
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- Subterranean termites – source: Nan-Yao Su, University of Florida, entnemdept.ufl.edu
- Phytoplasma 16Srl group – source: Whitney Cranshaw, Colorado State University, Bugwood.org
- Armyworms – source: Russ Ottens, University of Georgia, Bugwood.org
- Exotic Tobamoviruses – source: Salvatore Davino, EPPO, gd.eppo.int
- Pine wilt nematode & vectors – source: USDA Forest Service - North Central Research Station, USDA Forest Service, Bugwood.org
- Longhorn beetles – source: Donald Duerr, USDA Forest Service, Bugwood.org
- Grape phylloxera – source: NSW Department of Primary Industries, dpi.nsw.gov.au
- Sugarcane and cereal stem borers – source: N Sallam, Bureau of Sugar Experiment Stations Limited, dpi.nsw.gov.au
- Potato late blight – source: Department of Agriculture, Water and the Environment, agriculture.gov.au
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- Dutch elm disease – source: R. Scott Cameron, Advanced Forest Protection, Inc., Bugwood.org
- Banana phytoplasma disease – source: Andre Drenth, University of Queensland, abgc.org.au