

Analytic Hierarchy Process

Prioritized Pest List

For FY 2010

Overview The Analytic Hierarchy Process (AHP) Prioritized Pest List for 2010 is a ranked list of 58 pests that are expected to cause damage to agricultural and/or natural resources if introduced into the United States. The prioritized pest list includes arthropods, pathogens, weeds, mollusks, and nematodes. We obtained pests from various sources (see worksheet *FY10 AHP PPL*).

Due to major revisions to the AHP model, the pest list was reduced to include only the top 50 pests from FY09 (minus one pest that was removed because it no longer met the constraints for the pest list (see below)) and five new pests. Over the next year, the AHP Core Team will expand the current abbreviated list by running the remaining FY09 pests through the AHP prioritization process.

Subject matter experts in biology and economics evaluated each pest against a weighted set of criteria. We grouped the criteria into the categories *economic impact* and *environmental impact*. By combining the extent to which a pest fulfilled the set of criteria (determined by subject matter experts) with the criteria weights (determined by decision makers representing the CAPS community), each pest received a score. The result is the prioritized pest list shown on the worksheet *FY10 AHP PPL*. The full set of criteria is shown on the worksheet *AHP Criteria*.

Model Validation Two "known" pests (established in the United States and presumably at the limit of their potential distribution in the conterminous U.S.) were prioritized using the FY10 AHP model. The results of this analysis are shown on the worksheet *FY10 Decision Comparison*.

Pest List Constraints To be included in the AHP Prioritized Pest List, a pest:

- Cannot be established in the conterminous United States (even if the distribution is limited)
- Cannot be considered non-reportable by PPQ
- Cannot be a program pest with funding for national survey

2010 Contributors

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For Additional Information Please visit the pest prioritization website (<http://ceris.purdue.edu/caps/pestprioritization/Index.htm>) or contact Gary Cave (Gary.L.Cave@aphis.usda.gov; 919-855-7505).

AHP Prioritized Pest List for FY10

Rank	Scientific Name	Common Name	Taxonomic Group	Pest Source
1	<i>Agrilus biguttatus</i>	Oak splendor beetle	Arthropod	NAFC-ExFor Pest
1	<i>Platypus quercivorus</i>	Oak ambrosia beetle	Arthropod	NAFC-ExFor Pest
2	<i>Cronartium flaccidum</i>	Scots pine blister rust	Fungus	NPDRS
3	<i>Helicoverpa armigera</i>	Old World bollworm	Arthropod	OPIS A List
4	<i>Thaumetopoea processionea</i>	Oak processionary moth	Arthropod	EPICA
5	<i>Tomicus destruens</i>	Pine shoot beetle	Arthropod	NAFC-ExFor Pest
6	<i>Dendrolimus superans</i>	Siberian moth	Arthropod	Western Region 2004 Exotic Pest List/NAFC-ExFor Pest
7	<i>Spodoptera litura</i>	Cotton cutworm	Arthropod	EPPO A1 List
8	<i>Otiorhynchus dieckmanni</i>	Wingless weevil	Arthropod	NPAG
9	<i>Ceroplastes japonicus</i>	Japanese wax scale	Arthropod	OPIS A List
10	<i>Unaspis yanonensis</i>	Arrowhead scale	Arthropod	OPIS A List
11	<i>Phytophthora alni</i>	Alder root rot	Fungus	Western Region 2004 Exotic Pest List/NAFC-ExFor Pest
12	<i>Ralstonia solanacearum</i> race 3 biovar 2	Bacterial wilt	Bacterium	OPIS A List
13	<i>Achatina fulica</i>	Giant African snail	Mollusk	OPIS A List
14	<i>Lymantria mathura</i>	Rosy moth	Arthropod	Western Region 2004 Exotic Pest List/NAFC-ExFor Pest
15	<i>Leucoptera malifoliella</i>	Pear leaf blister moth	Arthropod	Western Region 2004 Exotic Pest List
16	<i>Ditylenchus angustus</i>	Rice stem nematode	Nematode	Western Region 2004 Exotic Pest List
17	<i>Ceroplastes destructor</i>	Soft wax scale	Arthropod	OPIS A List
18	<i>Chilo suppressalis</i>	Asiatic rice borer	Arthropod	Western Region 2004 Exotic Pest List
19	Veronicellidae spp.		Mollusk	Mollusk Team
20	<i>Dendrolimus pini</i>	Pine-tree lappet	Arthropod	NAFC-ExFor Pest
21	<i>Spodoptera littoralis</i>	Egyptian cottonworm	Arthropod	OPIS A List
22	<i>Chalara fraxinea</i>	Ash dieback	Fungus	NPAG
23	<i>Monochamus sutor</i>	Small white-marmorated longhorned beetle	Arthropod	NAFC-ExFor Pest
24	<i>Planococcus minor</i>	Passionvine mealybug	Arthropod	OPIS A List
25	<i>Tuta absoluta</i>	Tomato leaf miner	Arthropod	NPAG
26	<i>Nysius huttoni</i>	Wheat bug	Arthropod	NPAG
27	<i>Candidatus</i> Phytoplasma australiense	Phytoplasma yellows	Phytoplasma	NPAG
28	<i>Meloidogyne indica</i>	Citrus root-knot nematode	Nematode	OPIS A List
29	<i>Raffaelea quercivora</i>	Japanese oak wilt	Fungus	CAPS Oak Commodity Survey
30	<i>Monacha</i> spp.		Mollusk	Mollusk Team
31	<i>Oxycarenus hyalinipennis</i>	Cotton seed bug	Arthropod	National CAPS Committee Pest Prioritization Subgroup
32	<i>Eudocima fullonia</i>	Fruit piercing moth	Arthropod	Western Region 2004 Exotic Pest List
33	<i>Thaumatotibia leucotreta</i>	False codling moth	Arthropod	OPIS A List
34	<i>Phytoplasma</i> AP-MLO	Apple proliferation	Phytoplasma	EPPO A2 list
35	<i>Monochamus saltuarius</i>	Sakhalin pine sawyer	Arthropod	NAFC-ExFor Pest
36	<i>Mycosphaerella gibsonii</i>	Needle blight of pine	Fungus	EPPO A1 List
37	<i>Onopordum acaulon</i>	Horse thistle	Plant	APHIS Weed Team
38	<i>Diabrotica speciosa</i>	Cucurbit beetle	Arthropod	EPPO A1 list
38	<i>Harpophora maydis</i>	Late wilt of corn	Fungus	NPDRS
38	<i>Xanthomonas oryzae</i>	Bacterial leaf streak, bacterial blight	Bacterium	OPIS A List
39	<i>Adoxophyes orana</i>	Summer fruit tortrix moth	Arthropod	Western Region 2004 Exotic Pest List
40	<i>Archips xylosteanus</i>	Variegated golden tortrix	Arthropod	National CAPS Committee Pest Prioritization Subgroup

AHP Prioritized Pest List for FY10

Rank	Scientific Name	Common Name	Taxonomic Group	Pest Source
41	<i>Meloidogyne fujianensis</i>	Citrus root-knot nematode	Nematode	OPIS A List
41	<i>Meloidogyne jianyangensis</i>	Citrus root-knot nematode	Nematode	OPIS A List
41	<i>Meloidogyne mingnanica</i>	Citrus root-knot nematode	Nematode	OPIS A List
42	<i>Meloidogyne paranaensis</i>	Parana coffee root-knot nematode	Nematode	OPIS A List
43	<i>Meloidogyne citri</i>	Citrus root-knot nematode	Nematode	OPIS A List
44	<i>Candidatus Phytoplasma prunorum</i>	European stone fruit yellows	Phytoplasma	QUADS
45	<i>Cernuella</i> spp.	Exotic species	Mollusk	OPIS A List
46	<i>Cochlicella</i> spp.	Exotic species	Mollusk	OPIS A List
47	<i>Meloidogyne artiellia</i>	British root-knot nematode	Nematode	OPIS A List
48	<i>Heterodera latipons</i>	Mediterranean cereal cyst nematode	Nematode	OPIS A List
49	<i>Meloidogyne donghaiensis</i>	Citrus root-knot nematode	Nematode	OPIS A List
50	<i>Heterodera cajani</i>	Pigeonpea cyst nematode	Nematode	OPIS A List
50	<i>Heterodera sacchari</i>	Sugar cane cyst nematode	Nematode	OPIS A List
51	<i>Meloidogyne fallax</i>	False Columbia root-knot nematode	Nematode	OPIS A List
52	<i>Rhynchophorus ferrugineus</i>	Red palm weevil	Arthropod	NPAG

Shading denotes a rank value shared by two or more pests; pests with the same rank received identical AHP Scores.

Impact to CAPS Program

Impact to CAPS Program

Pests were prioritized separately based on feasibility of survey and identification. The results from that analysis are shown here. Survey and identification, considered separately, included an estimation of cost and availability of efficient methods. Survey and identification of pests ranked high on this list can be accomplished using efficient methods without incurring above average expenses.

Rank	Scientific Name	Common Name	Taxonomic Group
1	<i>Achatina fulica</i>	Giant African snail	Mollusk
1	<i>Dendrolimus superans</i>	Siberian moth	Arthropod
1	<i>Onopordum acaulon</i>	Horse thistle	Plant
1	<i>Tomicus destruens</i>	Pine shoot beetle	Arthropod
1	<i>Tuta absoluta</i>	Tomato leaf miner	Arthropod
2	<i>Dendrolimus pini</i>	Pine-tree lappet	Arthropod
3	<i>Diabrotica speciosa</i>	Cucurbit beetle	Arthropod
3	<i>Eudocima fullonia</i>	Fruit piercing moth	Arthropod
4	<i>Cronartium flaccidum</i>	Scots pine blister rust	Fungus
4	<i>Heterodera latipons</i>	Mediterranean cereal cyst nematode	Nematode
4	<i>Leucoptera malifoliella</i>	Pear leaf blister moth	Arthropod
4	<i>Spodoptera littoralis</i>	Egyptian cottonworm	Arthropod
4	<i>Thaumetopoea processionea</i>	Oak processionary moth	Arthropod
5	<i>Monochamus saltuarius</i>	Sakhalin pine sawyer	Arthropod
5	<i>Monochamus sutor</i>	Small white-marmorated longhorned beetle	Arthropod
5	<i>Platypus quercivorus</i>	Oak ambrosia beetle	Arthropod
5	<i>Raffaelea quercivora</i>	Japanese oak wilt	Fungus
6	<i>Helicoverpa armigera</i>	Old World bollworm	Arthropod
7	<i>Ceroplastes destructor</i>	Soft wax scale	Arthropod
7	<i>Harpophora maydis</i>	Late wilt of corn	Fungus
7	<i>Lymantria mathura</i>	Rosy moth	Arthropod
7	<i>Mycosphaerella gibsonii</i>	Needle blight of pine	Fungus
8	<i>Thaumatotibia leucotreta</i>	False codling moth	Arthropod
9	<i>Oxycarenus hyalinipennis</i>	Cotton seed bug	Arthropod
10	<i>Adoxophyes orana</i>	Summer fruit tortrix moth	Arthropod
10	<i>Archips xylosteanus</i>	Variegated golden tortrix	Arthropod
10	<i>Rhynchophorus ferrugineus</i>	Red palm weevil	Arthropod
10	<i>Spodoptera litura</i>	Cotton cutworm	Arthropod
11	<i>Otiorhynchus dieckmanni</i>	Wingless weevil	Arthropod
12	<i>Agrilus biguttatus</i>	Oak splendor beetle	Arthropod
13	<i>Phytoplasma</i> AP-MLO	Apple proliferation	Phytoplasma
14	<i>Cernuella</i> spp.	Exotic species	Mollusk
14	<i>Ceroplastes japonicus</i>	Japanese wax scale	Arthropod
14	<i>Chalara fraxinea</i>	Ash dieback	Fungus
14	<i>Cochlicella</i> spp.	Exotic species	Mollusk
14	<i>Ditylenchus angustus</i>	Rice stem nematode	Nematode
14	<i>Heterodera cajani</i>	Pigeonpea cyst nematode	Nematode
14	<i>Heterodera sacchari</i>	Sugar cane cyst nematode	Nematode
14	<i>Meloidogyne citri</i>	Citrus root-knot nematode	Nematode
14	<i>Meloidogyne donghaiensis</i>	Citrus root-knot nematode	Nematode

Impact to CAPS Program

Rank	Scientific Name	Common Name	Taxonomic Group
14	<i>Meloidogyne fujianensis</i>	Citrus root-knot nematode	Nematode
14	<i>Meloidogyne mingnanica</i>	Citrus root-knot nematode	Nematode
14	<i>Meloidogyne paranaensis</i>	Parana coffee root-knot nematode	Nematode
14	<i>Monacha</i> spp.		Mollusk
15	Veronicellidae spp.		Mollusk
16	<i>Candidatus</i> Phytoplasma prunorum	European stone fruit yellows	Phytoplasma
17	<i>Candidatus</i> Phytoplasma australiense	Phytoplasma yellows	Phytoplasma
17	<i>Chilo suppressalis</i>	Asiatic rice borer	Arthropod
17	<i>Xanthomonas oryzae</i>	Bacterial leaf streak, bacterial blight	Bacterium
18	<i>Meloidogyne artiellia</i>	British root-knot nematode	Nematode
18	<i>Meloidogyne fallax</i>	False Columbia root-knot nematode	Nematode
18	<i>Meloidogyne indica</i>	Citrus root-knot nematode	Nematode
18	<i>Meloidogyne jianyangensis</i>	Citrus root-knot nematode	Nematode
18	<i>Nysius huttoni</i>	Wheat bug	Arthropod
18	<i>Phytophthora alni</i>	Alder root rot	Fungus
18	<i>Planococcus minor</i>	Passionvine mealybug	Arthropod
18	<i>Ralstonia solanacearum</i> race 3 biovar 2	Bacterial wilt	Bacterium
18	<i>Unaspis yanonensis</i>	Arrowhead scale	Arthropod

FY10 Commodity Matrix

Scientific Name	Common Name	Almonds (<i>Prunus dulcis</i>)	Apples (<i>Malus</i> spp.)	Asparagus (<i>Asparagus</i> spp.)	Barley (<i>Hordeum</i> spp.)	Beans (<i>Phaseolus</i> spp.)	Broccoli (<i>Brassica oleracea</i>)	Cantaloupes (<i>Cucumis</i> spp.)	Carrots (<i>Daucus carota</i>)	Celery (<i>Apium graveolens</i>)	Citrus (<i>Citrus</i> spp.)	Corn (<i>Zea</i> spp.)	Cotton (<i>Gossypium</i> spp.)	Cucumbers (<i>Cucumis</i> spp.)	Grapes (<i>Vitis</i> spp.)	Lettuce (<i>Lactuca</i> spp.)	Oats (<i>Avena</i> spp.)	Onions (<i>Allium</i> spp.)	Peaches (<i>Prunus persica</i>)	Peanuts (<i>Arachis</i> spp.)	Pears (<i>Pyrus</i> spp.)	Potatoes (<i>Solanum tuberosum</i>)	Rice (<i>Oryza</i> spp.)	Sorghum (<i>Sorghum</i> spp.)	Soybeans (<i>Glycine</i> spp.)	Strawberries (<i>Fragaria</i> spp.)	Sunflower (<i>Helianthus</i> spp.)	Tomatoes (<i>Solanum lycopersicum</i>)	Wheat (<i>Triticum</i> spp.)	Pine (<i>Pinus</i> spp.)	Other Softwood Trees*	Soft Hardwood Trees*	Hardwood Trees*	Pest Commodity Total			
<i>Achatina fulica</i>	Giant African snail	■				■	▲	▲													▲	▲														21	
<i>Adoxophyes orana</i>	Summer fruit tortrix moth		▲								■		■							▲	▲	▲														11	
<i>Agrilus biguttatus</i>	Oak splendor beetle																																			2	
<i>Archips xylosteanus</i>	Variegated golden tortrix		■								■											■														7	
<i>Candidatus Phytoplasma australiense</i>	Phytoplasma yellows															▲											▲									8	
<i>Candidatus Phytoplasma prunorum</i>	European stone fruit yellows	■	■																	▲																5	
<i>Cerutuella</i> spp.						■	■																													10	
<i>Ceroplastes destructor</i>	Soft wax scale		■								▲											■														5	
<i>Ceroplastes japonicus</i>	Japanese wax scale		■								▲																									7	
<i>Chalara fraxinea</i>	Ash dieback																																				1
<i>Chilo suppressalis</i>	Asiatic rice borer						■					▲												▲	▲											6	
<i>Cochlicella</i> spp.						■				■																										6	
<i>Cronartium flaccidum</i>	Scots pine blister rust																																				1
<i>Dendrolimus pini</i>	Pine-tree lappet																																				2
<i>Dendrolimus superans</i>	Siberian moth																																				4
<i>Diabrotica speciosa</i>	Cucurbit beetle	■	■			■	■	■	■	■	■	▲	■	■	■	■	■	■	■	■	▲		▲	■	■	▲	■	■	■	■	■	▲					26
<i>Ditylenchus angustus</i>	Rice stem nematode																							▲													1
<i>Eudocima fullonia</i>	Fruit piercing moth											▲																		▲							11
<i>Harpophora maydis</i>	Late wilt of corn											■																									1
<i>Helicoverpa armigera</i>	Old World bollworm		■		▲	▲	■	■	■	■	■	▲	▲	■	■	■	■	■	■	■	▲		▲	■	▲	▲	▲	▲	▲	▲	▲	▲	■	■			27
<i>Heterodera cajani</i>	Pigeonpea cyst nematode					▲																															1
<i>Heterodera latipons</i>	Mediterranean cereal cyst nematode					▲				■								▲			■										▲					5	
<i>Heterodera sacchari</i>	Sugar cane cyst nematode											■												▲	■												3
<i>Leucoptera malifoliella</i>	Pear leaf blister moth		▲																			▲															5
<i>Lymantria mathura</i>	Rosy moth		■																																		6
<i>Meloidogyne artiellia</i>	British root-knot nematode					■	■	■			■							■								■											8
<i>Meloidogyne citri</i>	Citrus root-knot nematode											■																									2
<i>Meloidogyne donghaiensis</i>	Citrus root-knot nematode											■																									1
<i>Meloidogyne fallax</i>	False Columbia root-knot nematode			■			■		▲			■												▲													9
<i>Meloidogyne fujianensis</i>	Citrus root-knot nematode											■																									1
<i>Meloidogyne indica</i>	Citrus root-knot nematode											■																									1
<i>Meloidogyne jianyangensis</i>	Citrus root-knot nematode											■																									1
<i>Meloidogyne minghamica</i>	Citrus root-knot nematode											■																									

FY10 Commodity Matrix

Scientific Name	Common Name	Almonds (<i>Prunus dulcis</i>)	Apples (<i>Malus</i> spp.)	Asparagus (<i>Asparagus</i> spp.)	Barley (<i>Hordeum</i> spp.)	Beans (<i>Phaseolus</i> spp.)	Broccoli (<i>Brassica oleracea</i>)	Cantaloupes (<i>Cucumis</i> spp.)	Carrots (<i>Daucus carota</i>)	Celery (<i>Apium graveolens</i>)	Citrus (<i>Citrus</i> spp.)	Corn (<i>Zea</i> spp.)	Cotton (<i>Gossypium</i> spp.)	Cucumbers (<i>Cucumis</i> spp.)	Grapes (<i>Vitis</i> spp.)	Lettuce (<i>Lactuca</i> spp.)	Oats (<i>Avena</i> spp.)	Onions (<i>Allium</i> spp.)	Peaches (<i>Prunus persica</i>)	Peanuts (<i>Arachis</i> spp.)	Pears (<i>Pyrus</i> spp.)	Potatoes (<i>Solanum tuberosum</i>)	Rice (<i>Oryza</i> spp.)	Sorghum (<i>Sorghum</i> spp.)	Soybeans (<i>Glycine</i> spp.)	Strawberries (<i>Fragaria</i> spp.)	Sunflower (<i>Helianthus</i> spp.)	Tomatoes (<i>Solanum lycopersicum</i>)	Wheat (<i>Triticum</i> spp.)	Pine (<i>Pinus</i> spp.)	Other Softwood Trees*	Soft Hardwood Trees*	Hardwood Trees*	Pest Commodity Total			
<i>Spodoptera littoralis</i>	Egyptian cottonworm		■	■		▲	■	▲	▲	■	▲	▲	▲	▲	▲	▲		▲		▲	■	■	▲	▲	▲	▲	▲	▲	▲	■	■	■	■	■	■	28	
<i>Spodoptera litura</i>	Cotton cutworm		▲	■							▲	▲	▲	▲	■	■	■		■		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	■	■	■	■	■	■	28
<i>Thaumatotibia leucotreta</i>	False codling moth					■					▲	▲	▲		■					▲										■			■	▲	■	10	
<i>Thaumetopoea processionea</i>	Oak processionary moth																																▲		■	■	3
<i>Tomicus destruens</i>	Pine shoot beetle																																■				1
<i>Tuta absoluta</i>	Tomato leaf miner											▲											■							▲							2
<i>Unaspis yanonensis</i>	Arrowhead scale										▲																										1
Veronicellidae spp.						■	■	■	■		■		■			■					■									■							9
<i>Xanthomonas oryzae</i>	Bacterial leaf streak, bacterial blight																						▲														1
Total Pests Per Commodity:		1	16	5	6	14	10	9	9	5	21	12	10	9	12	9	5	5	12	11	13	9	10	10	9	10	8	17	10	12	12	25	27				

Legend:

▲ = Primary host

■ = Other host

***Key to Forest Product Categories:**

Other Softwood Trees (Genera: *Abies*, *Casuarina*, *Cupressus*, *Juniperus*, *Larix*, *Picea*, *Pseudotsuga*, *Tsuga*)

Soft Hardwood Trees (Genera: *Acacia*, *Albizia*, *Alnus*, *Asimina*, *Castanea*, *Catalpa*, *Celtis*, *Elaeagnus*, *Fraxinus*, *Liquidambar*, *Magnolia*, *Melaleuca*, *Persea*, *Platanus*, *Populus*, *Paulownia*, *Sabal*, *Salix*, *Tamarix*, *Tilia*, *Ulmus*)

Hardwood Trees (Genera: *Acer*, *Aleurites*, *Amelanchier*, *Betula*, *Carpinus*, *Carya*, *Castanopsis*, *Cornus*, *Crataegus*, *Diospyros*, *Eucalyptus*, *Fagus*, *Ilex*, *Juglans*, *Lithocarpus*, *Malus*, *Melia*, *Morus*, *Prunus*, *Quercus*, *Sapium*, *Sorbus*, *Vaccinium*)

Commodities in Decreasing Order of Value:**

Corn (*Zea* spp.), Soybeans (*Glycine* spp.), Wheat (*Triticum* spp.), Cotton (*Gossypium* spp.), Tomatoes (*Lycopersicon* spp.), Grapes (*Vitis* spp.), Potatoes (*Solanum* spp.), Apples (*Malus* spp.), Citrus (*Citrus* spp.), Peanuts (*Arachis* spp.), Lettuce (*Lactuca* spp.), Rice (*Oryza* spp.), Sorghum (*Sorghum* spp.), Barley (*Hordeum* spp.), Strawberries (*Fragaria* spp.), Almonds (*Prunus dulcis*), Onions (*Allium* spp.), Peaches (*Prunus persica*), Carrots (*Daucus carota*), Cucumbers (*Cucumis* spp.), Beans (*Phaseolus* spp.), Sunflower (*Helianthus* spp.), Pears (*Pyrus* spp.), Celery (*Apium graveolens*), Broccoli (*Brassica oleracea*), Cantaloupes (*Cucumis* spp.), Oats (*Avena* spp.), Asparagus (*Asparagus* spp.). **Not included in the ranking by value:** Pine (*Pinus* spp.), Other Softwood trees, Soft Hardwood trees, Hardwood Trees.

****** NASS. 2008. Agricultural Prices 2007 Summary. Agricultural Statistics Board, National Agricultural Statistics Service, United States Department of Agriculture.

FY10 Decision Comparison

Rank from AHP Criteria Weights Determined by CAPS Community (FY10 AHP PPL)	Scientific Name	Rank from AHP Criteria Weights Determined by CPHST Team	Scientific Name
1	<i>Agrilus biguttatus</i>	1	<i>Helicoverpa armigera</i>
1	<i>Platypus quercivorus</i>	2	<i>Agrilus biguttatus</i>
2	<i>Cronartium flaccidum</i>	2	<i>Platypus quercivorus</i>
3	<i>Helicoverpa armigera</i>	3	<i>Tomicus destruens</i>
4	<i>Thaumetopoea processionea</i>	4	<i>Unaspis yanonensis</i>
5	<i>Tomicus destruens</i>		<i>Phytophthora infestans</i>
6	<i>Dendrolimus superans</i>	5	<i>Spodoptera litura</i>
7	<i>Spodoptera litura</i>	6	<i>Ceroplastes japonicus</i>
8	<i>Otiorhynchus dieckmanni</i>	7	<i>Thaumetopoea processionea</i>
9	<i>Ceroplastes japonicus</i>	8	<i>Cronartium flaccidum</i>
10	<i>Unaspis yanonensis</i>	9	<i>Leucoptera malifoliella</i>
	<i>Phytophthora infestans</i>	10	<i>Dendrolimus superans</i>
11	<i>Phytophthora alni</i>	11	<i>Planococcus minor</i>
12	<i>Ralstonia solanacearum</i> race 3 biovar 2	12	<i>Otiorhynchus dieckmanni</i>
13	<i>Achatina fulica</i>	13	<i>Chalara fraxinea</i>
14	<i>Lymantria mathura</i>	14	<i>Ditylenchus angustus</i>
15	<i>Leucoptera malifoliella</i>	15	<i>Lymantria mathura</i>
16	<i>Ditylenchus angustus</i>	16	<i>Ralstonia solanacearum</i> race 3 biovar 2
17	<i>Ceroplastes destructor</i>	17	<i>Phytophthora alni</i>
18	<i>Chilo suppressalis</i>	18	<i>Achatina fulica</i>
19	<i>Veronicellidae</i> spp.	19	<i>Ceroplastes destructor</i>
20	<i>Dendrolimus pini</i>	20	<i>Chilo suppressalis</i>
21	<i>Spodoptera littoralis</i>	21	<i>Tuta absoluta</i>
22	<i>Chalara fraxinea</i>	22	<i>Phytoplasma</i> AP-MLO
23	<i>Monochamus sutor</i>	23	<i>Dendrolimus pini</i>
24	<i>Planococcus minor</i>	24	<i>Adoxophyes orana</i>
25	<i>Tuta absoluta</i>	25	<i>Monochamus sutor</i>
26	<i>Nysius huttoni</i>	26	<i>Veronicellidae</i> spp.
27	<i>Candidatus</i> <i>Phytoplasma australiense</i>	27	<i>Onopordum acaulon</i>
28	<i>Meloidogyne indica</i>	28	<i>Nysius huttoni</i>
29	<i>Raffaelea quercivora</i>	29	<i>Candidatus</i> <i>Phytoplasma australiense</i>
30	<i>Monacha</i> spp.	30	<i>Spodoptera littoralis</i>
31	<i>Oxycarenus hyalinipennis</i>	31	<i>Eudocima fullonia</i>
32	<i>Eudocima fullonia</i>	32	<i>Oxycarenus hyalinipennis</i>
33	<i>Thaumatotibia leucotreta</i>	33	<i>Thaumatotibia leucotreta</i>
34	<i>Phytoplasma</i> AP-MLO	34	<i>Mycosphaerella gibsonii</i>
35	<i>Monochamus saltuarius</i>	35	<i>Diabrotica speciosa</i>

FY10 Decision Comparison

Rank from AHP Criteria Weights Determined by CAPS Community (FY10 AHP PPL)	Scientific Name	Rank from AHP Criteria Weights Determined by CPHST Team	Scientific Name
36	<i>Mycosphaerella gibsonii</i>	35	<i>Harpophora maydis</i>
37	<i>Onopordum acaulon</i>	35	<i>Xanthomonas oryzae</i>
38	<i>Diabrotica speciosa</i>	36	<i>Candidatus Phytoplasma prunorum</i>
38	<i>Harpophora maydis</i>	37	<i>Meloidogyne indica</i>
38	<i>Xanthomonas oryzae</i>		<i>Arctium minus</i>
39	<i>Adoxophyes orana</i>	38	<i>Monacha spp.</i>
40	<i>Archips xylosteanus</i>	39	<i>Meloidogyne fujianensis</i>
41	<i>Meloidogyne fujianensis</i>	39	<i>Meloidogyne jianyangensis</i>
41	<i>Meloidogyne jianyangensis</i>	39	<i>Meloidogyne mingnanica</i>
41	<i>Meloidogyne mingnanica</i>	40	<i>Archips xylosteanus</i>
42	<i>Meloidogyne paranaensis</i>	41	<i>Meloidogyne citri</i>
43	<i>Meloidogyne citri</i>	42	<i>Raffaelea quercivora</i>
44	<i>Candidatus Phytoplasma prunorum</i>	43	<i>Cochlicella spp.</i>
45	<i>Cernuella spp.</i>	44	<i>Meloidogyne donghaiensis</i>
46	<i>Cochlicella spp.</i>	45	<i>Monochamus saltuarius</i>
	<i>Arctium minus</i>	46	<i>Cernuella spp.</i>
47	<i>Meloidogyne artiellia</i>	47	<i>Meloidogyne fallax</i>
48	<i>Heterodera latipons</i>	48	<i>Meloidogyne paranaensis</i>
49	<i>Meloidogyne donghaiensis</i>	49	<i>Meloidogyne artiellia</i>
50	<i>Heterodera cajani</i>	50	<i>Heterodera latipons</i>
50	<i>Heterodera sacchari</i>	51	<i>Heterodera cajani</i>
51	<i>Meloidogyne fallax</i>	51	<i>Heterodera sacchari</i>
52	<i>Rhynchophorus ferrugineus</i>	52	<i>Rhynchophorus ferrugineus</i>

Key:

Top ten pests in FY10 AHP PPL
Next ten pests in FY10 AHP PPL
Pests included for model validation

Note on model
validation:

Two "known" pests (established in the United States and presumably at the limits of their potential distribution in the conterminous U.S.) were prioritized using the FY10 AHP model. *Phytophthora infestans* (late blight) was expected to receive a high rank, and *Arctium minus* (common burdock) was expected to rank low. These two species are included only in the two lists shown above.

FY10 Compared to FY09

FY09 Rank	Scientific Name	FY10 Rank	Scientific Name
1	<i>Helicoverpa armigera</i>	1	<i>Agrilus biguttatus</i>
2	<i>Planococcus minor</i>	1	<i>Platypus quercivorus</i>
3	<i>Nysius huttoni</i>	2	<i>Cronartium flaccidum</i>
4	<i>Dendrolimus superans</i>	3	<i>Helicoverpa armigera</i>
5	<i>Ceroplastes destructor</i>	4	<i>Thaumetopoea proccessionea</i>*
6	<i>Spodoptera litura</i>	5	<i>Tomicus destruens</i>
7	<i>Ralstonia solanacearum</i> race 3 biovar 2	6	<i>Dendrolimus superans</i>
8	<i>Achatina fulica</i>	7	<i>Spodoptera litura</i>
9	<i>Unaspis yanonensis</i>	8	<i>Otiorhynchus dieckmanni</i>*
10	<i>Eudocima fullonia</i>	9	<i>Ceroplastes japonicus</i>
11	<i>Mycosphaerella gibsonii</i>	10	<i>Unaspis yanonensis</i>
12	<i>Adoxophyes orana</i>	11	<i>Phytophthora alni</i>
13	<i>Ceroplastes japonicus</i>	12	<i>Ralstonia solanacearum</i> race 3 biovar 2
14	<i>Oxycarenus hyalinipennis</i>	13	<i>Achatina fulica</i>
15	<i>Agrilus biguttatus</i>	14	<i>Lymantria mathura</i>
16	<i>Platypus quercivorus</i>	15	<i>Leucoptera malifoliella</i>
17	<i>Meloidogyne fallax</i>	16	<i>Ditylenchus angustus</i>
18	<i>Meloidogyne artiellia</i>	17	<i>Ceroplastes destructor</i>
19	<i>Ditylenchus angustus</i>	18	<i>Chilo suppressalis</i>
20	<i>Heterodera latipons</i>	19	Veronicellidae spp.
21	<i>Cronartium flaccidum</i>	20	<i>Dendrolimus pini</i>
22	<i>Phytophthora quercina</i>	21	<i>Spodoptera littoralis</i>
23	<i>Lymantria mathura</i>	22	<i>Chalara fraxinea</i>*
24	<i>Cochlicella</i> spp.	23	<i>Monochamus sutor</i>
25	<i>Monacha</i> spp. (<i>M. cantiana</i> , <i>M. syriaca</i>)	24	<i>Planococcus minor</i>
26	<i>Onopordum acaulon</i>	25	<i>Tuta absoluta</i>*
27	<i>Tomicus destruens</i>	26	<i>Nysius huttoni</i>
28	<i>Thaumatotibia leucotreta</i>	27	<i>Candidatus Phytoplasma australiense</i>
29	<i>Dendrolimus pini</i>	28	<i>Meloidogyne indica</i>
30	<i>Chilo suppressalis</i>	29	<i>Raffaelea quercivora</i>
31	<i>Leucoptera malifoliella</i>	30	<i>Monacha</i> spp.
32	<i>Monochamus sutor</i>	31	<i>Oxycarenus hyalinipennis</i>
33	<i>Candidatus Phytoplasma australiense</i>	32	<i>Eudocima fullonia</i>
34	<i>Heterodera cajani</i>	33	<i>Thaumatotibia leucotreta</i>
35	<i>Ophiostoma longicollum</i>	34	<i>Phytoplasma</i> AP-MLO*
36	<i>Monochamus saltuarius</i>	35	<i>Monochamus saltuarius</i>
37	<i>Spodoptera littoralis</i>	36	<i>Mycosphaerella gibsonii</i>

FY10 Compared to FY09

FY09 Rank	Scientific Name	FY10 Rank	Scientific Name
38	<i>Xanthomonas oryzae</i>	37	<i>Onopordum acaulon</i>
39	<i>Archips xylosteanus</i>	38	<i>Diabrotica speciosa*</i>
40	<i>Heterodera sacchari</i>	38	<i>Harpophora maydis</i>
41	<i>Cernuella</i> spp.	38	<i>Xanthomonas oryzae</i>
42	<i>Meloidogyne paranaensis</i>	39	<i>Adoxophyes orana</i>
43	<i>Harpophora maydis</i>	40	<i>Archips xylosteanus</i>
44	<i>Meloidogyne mingnanica</i>	41	<i>Meloidogyne fujianensis</i>
45	<i>Meloidogyne fujianensis</i>	41	<i>Meloidogyne jianyangensis</i>
46	<i>Phytophthora alni</i>	41	<i>Meloidogyne mingnanica</i>
47	<i>Meloidogyne indica</i>	42	<i>Meloidogyne paranaensis</i>
48	<i>Meloidogyne citri</i>	43	<i>Meloidogyne citri</i>
49	<i>Meloidogyne donghaiensis</i>	44	<i>Candidatus Phytoplasma prunorum*</i>
50	<i>Meloidogyne jianyangensis</i>	45	<i>Cernuella</i> spp.
51	<i>Meloidogyne kongi</i>	46	<i>Cochlicella</i> spp.
52	<i>Protopulvinaria longivalvata</i>	47	<i>Meloidogyne artiellia</i>
53	<i>Dendroctonus micans</i>	48	<i>Heterodera latipons</i>
54	<i>Pulvinaria polygonata</i>	49	<i>Meloidogyne donghaiensis</i>
55	Torradovirus	50	<i>Heterodera cajani</i>
56	<i>Ostrinia furnacalis</i>	50	<i>Heterodera sacchari</i>
57	<i>Scolytus intricatus</i>	51	<i>Meloidogyne fallax</i>
58	<i>Hylobius abietis</i>	52	<i>Rhynchophorus ferrugineus*</i>
59	<i>Tropilaelaps clareae</i>		
60	<i>Rathayibacter toxicus</i>		
61	<i>Pomacea</i> spp.		
62	<i>Monochamus alternatus</i>		
63	<i>Cecidophyopsis ribis</i>		
64	<i>Crocidolomia binotalis</i>		
65	<i>Chilecomadia valdiviana</i>		
66	<i>Autographa gamma</i>		
67	<i>Phellinus noxius</i>		
68	<i>Stenchaetothrips biformis</i>		
69	<i>Planococcus lilacinus</i>		
70	<i>Rhabdoscelus obscurus</i>		
71	<i>Eutetranychus orientalis</i>		
72	<i>Synanthedon myopaeformis</i>		
73	<i>Hygromia cinctella</i>		
74	<i>Chlorophorus strobilicola</i>		

FY10 Compared to FY09

FY09 Rank	Scientific Name	FY10 Rank	Scientific Name
75	<i>Elsinoe batatas</i>		
76	<i>Gymnocoronis spilanthoides</i>		
77	<i>Aleurocanthus spiniferus</i>		
78	<i>Phoma tracheiphila</i>		
79	<i>Pericyma cruegeri</i>		
80	<i>Ageratina riparia</i>		
81	<i>Actinoscirpus grossus</i>		
82	<i>Rhynchophorus palmarum</i>		
83	<i>Arion vulgaris</i> (<i>Arion lusitanicus</i>)		
84	<i>Copitarsia</i> spp.		
85	<i>Metamasius</i> spp.		
86	<i>Philephedra broadwayi</i>		
87	<i>Coconut cadang-cadang viroid</i>		
88	<i>Acroceras zizanioides</i>		
89	<i>Rubus alceifolius</i>		
90	<i>Toxoptera odinae</i>		
91	<i>Peronosclerospora maydis</i>		
92	<i>Peronosclerospora philippinensis</i>		
93	<i>Cataenococcus hispidus</i>		
94	<i>Pinus roxburghii</i>		
95	<i>Heterodera ciceri</i>		
96	<i>Darna pallivitta</i>		
97	<i>Heteronychus arator</i>		
98	<i>Lobesia botrana</i>		
99	Colocasia bobone disease virus		
100	<i>Juncus prismatocarpus</i>		
101	<i>Cydia funebrana</i>		
102	<i>Sclerophthora rayssiae</i> var. <i>zeae</i>		
103	<i>Withania somnifera</i>		
104	<i>Synchytrium endobioticum</i>		
105	<i>Meloidogyne mali</i>		
106	Taro bacilliform virus		
107	<i>Meloidogyne coffeicola</i>		
108	<i>Bursaphelenchus cocophilus</i>		

Key: Top ten pests in FY09 AHP PPL
Next ten pests in FY09 AHP PPL
*New pest addition for FY10 (5 total)

FY10 AHP Model Criteria

Analytic Hierarchy Process Model Criteria	
Strategic Objective: Identify high-risk pests for CAPS early detection surveys	
ECONOMIC IMPACT	Foreign trade Production costs and domestic trade Public costs
ENVIRONMENTAL IMPACT	Human health Health of native flora and fauna Health of livestock and pets Health of plants with aesthetic value
IMPACT TO CAPS PROGRAM*	Survey feasibility Identification feasibility

*This set of criteria was not used to create AHP Prioritized Pest List. Pests were ranked separately using these criteria (see worksheet *Impact to CAPS Program*), and this information is intended to highlight needs for research and methods development and to be used in combination with the AHP PPL to select high priority targets that are not excessively difficult or expensive to survey and identify.