

◆ EPPO Standards ◆

**EPPO A1 AND A2 LISTS OF PESTS RECOMMENDED FOR
REGULATION AS QUARANTINE PESTS**

PM 1/2(30) English



European and Mediterranean Plant Protection Organization
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APPROVAL

EPPO Standard PM 1/2 was first approved by EPPO Council in September 1975. This version was approved by EPPO Council in September 2021. In the terms of Article II of the IPPC, it is a Regional Standard for EPPO Member Government Countries¹.

REVIEW

EPPO Standards are subject to periodic review and amendment. This standard is usually reviewed every year.

AMENDMENT RECORD

Amendments will be issued as necessary, numbered and dated.

DISTRIBUTION

At the difference with other EPPO Standards, the EPPO A1 and A2 lists are not published in the EPPO Bulletin but are available only from the EPPO website and the EPPO Global Database.

https://www.eppo.int/ACTIVITIES/plant_quarantine/A1_list

https://www.eppo.int/ACTIVITIES/plant_quarantine/A2_list

<https://gd.eppo.int/standards/PM1/>

SCOPE

This standard presents and explains the EPPO A1 and A2 Lists of pest recommended for regulation as quarantine pests.

REFERENCES

IPPC (1997) New revised text of the International Plant Protection Convention. IPPC Secretariat, FAO, Rome (IT).

IPPC (2019) *Glossary of phytosanitary terms*. ISPM No. 5 in *International Standards for Phytosanitary Measures*, 35 pp. IPPC Secretariat, FAO, Rome (IT).

OEPP/EPPO (1992) *EPPO Standard PM 5/1(1)*. Check-list of information required for pest risk analysis (PRA). *Bulletin OEPP/EPPO Bulletin* **23**, 191-198.

OEPP/EPPO (2011) *EPPO Standard PM 5/3(5)*. *Decision-support scheme for quarantine pests* from https://www.eppo.int/RESOURCES/eppo_standards/pm5_pra.

OEPP/EPPO (2012) *EPPO Standard PM 5/5(1)*. Decision-support scheme for an Express Pest Risk Analysis. *Bulletin OEPP/EPPO Bulletin* **42**(3), 457-462.

OEPP/EPPO (2018) *EPPO Alert List* from: https://www.eppo.int/ACTIVITIES/plant_quarantine/alert_list

OEPP/EPPO (2019) Review of EPPO's approach to Pest Risk Analysis (PRA). EPPO Technical Document (https://www.eppo.int/media/uploaded_images/RESOURCES/eppo_publications/DT1079_PRA_review_2019.pdf).

DEFINITIONS

Quarantine pest (ISPM 5)	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled.
EPPO A1 pest	A pest recommended by EPPO to member countries, for regulation as a quarantine pest, and which is not present in the EPPO region.
EPPO A2 pest	A pest recommended by EPPO to member countries, for regulation as a quarantine pest and which is present in the EPPO region.
Regional Plant Protection Organization	An intergovernmental organization with the functions laid down by Article IX of the IPPC.

¹ Referred to in the EPPO Convention as Member Governments.

OUTLINE OF REQUIREMENTS

The EPPO A1 and A2 Lists include the pests which EPPO recommends to be regulated as quarantine pests, in the national phytosanitary regulations of EPPO Member Countries. These recommendations are based on appropriate documentation, and since the 2000s on Pest Risk Analyses (PRAs). This document presents the EPPO A1 and A2 Lists and gives details on their background, development and use.

REQUIREMENTS

General description

The EPPO Convention lays down that one of the aims of EPPO is "*to pursue and develop, by cooperation between the Member Governments, the protection of plants and plant products against pests and the prevention of their international spread and especially their introduction into endangered areas*". EPPO Council has consequently decided to draw up lists of pests whose regulation is relevant for the whole of, or large parts of, the EPPO region. The first List is of A1 pests, not present in the EPPO region. The second List is of A2 pests, present in the EPPO region but not widely distributed (i.e. absent from or not widely distributed in endangered areas in certain countries).

Notwithstanding the above, it is accepted that certain pests appearing in the A1 and A2 Lists, though of concern to some Member Countries, may not be of concern to all the countries from which they are absent or not widely distributed, and in particular that it may not be necessary or useful for all countries to take measures contributing to the protection of those countries which are at risk from these pests. Therefore, the Pest Risk Analysis (PRA) process aims to identify the part of the EPPO region which is endangered.

Establishment and maintenance of the A1 and A2 Lists of pests recommended for regulation as quarantine pests

Addition of pests to the A1 or A2 Lists

EPPO started to elaborate A1 and A2 Lists in the early 1970s and the first Lists were approved in 1975. Additions of pests to the A1 or A2 List were proposed by Member Countries and made on the basis of scientific documentation and expert judgement. From 2000 to 2006, the addition of a pest to the A1 or A2 List was based on the proposal of a Member Country which provided a Pest Risk Analysis (PRA) conforming to EPPO Standard PM 5/3 *Decision support scheme for quarantine pests*, and supported by compilation of data according to EPPO Standard PM 5/1 *Check-list of information required for Pest Risk Analysis*.

Since 2006, a new system has been established and special expert groups have been created to conduct PRAs, called Expert Working Groups (EWG) for PRA. More details about the composition and procedures followed by these EWGs are described in the EPPO Technical Document no. 1079 (2019). PRAs are carried out on pests either proposed by an EPPO Member Country or by the Panel on Phytosanitary Measures (in this case, pests are mainly selected from the EPPO Alert List) or other relevant Panels such as the Panel on Invasive Alien Plants or the Panel on Quarantine Pests for Forestry. The Working Party on Phytosanitary Regulations decides on priorities for PRA, but there is flexibility to ensure that a PRA can be conducted on a new emerging pest even if it is not on the priority list. Pest Risk Analyses on pests are performed by the Expert Working Groups for PRA, following ISPM 11 and EPPO Standards PM 5/3 *Decision-support scheme for quarantine pests* or PM 5/5 *Express Pest Risk Analysis (mainly since 2015)*. The resulting PRA documents are presented to the Panel on Phytosanitary Measures (or to the Panel on Invasive Alien Plants in the case of a PRA on a plant) which makes appropriate recommendations to the EPPO Working Party on Phytosanitary Regulations on the listing and relevant phytosanitary measures to be adopted. The Working Party on Phytosanitary Regulations decides, after due consideration, whether to recommend to EPPO Council the addition of a given pest to one of the Lists. A pest will be added to the A1 List if it is absent from the EPPO region and to the A2 List if it is present in part of the EPPO region.

Deletion of pests from the A1 or A2 List

When new information concerning a pest is reviewed by the Panel on Phytosanitary Measures (or the relevant Panels) and leads to the conclusion that the phytosanitary risk has changed and its management as a quarantine pest is no longer justified, the Panel on Phytosanitary Measures recommends to the Working Party that the pest should be deleted from the A1 or A2 List. The EPPO Working Party on Phytosanitary Regulations decides, after due consideration, whether to recommend to EPPO Council the deletion of a given pest from the List. The pests removed from the EPPO A1 and A2 Lists are noted as "formerly" listed (see Appendix 1, Pests in numerical order).

Transfer of pests from the A1 to the A2 List

The transfer of a pest from the A1 to the A2 List, or vice versa, is decided by the Working Party on the basis of adequate documentation justifying the change in status. To consider a pest to be present in the EPPO region and consequently transfer this pest to the EPPO A2 List, the following elements should be taken into account: the life cycle of the pest, the measures being implemented in the country where the pest was detected, the aim of the measures and the prospects of successful eradication. The EPPO Working Party on Phytosanitary Regulations decides, after due consideration, whether to recommend to EPPO Council the transfer of a given pest. The date when a pest was transferred from A1 to A2 List is indicated in EPPO Global Database.

Changes in taxonomy and consequences for the EPPO Lists

When the preferred name of a pest is changed after its addition to the EPPO A1 and A2 Lists, it is updated accordingly at the next revision of the lists. If the taxonomic revision of a listed species results in splitting it into different species or merging it with others, the categorization of all species concerned is reconsidered by the Panel on Phytosanitary Measures and the Working Party on Phytosanitary Regulations. Whenever possible, the former name of the species is kept as a synonym in EPPO Global Database, so that searches can still be made on that name.

EPPO A1 and A2 Lists

The detailed contents of the EPPO A1 and A2 Lists are presented in Appendix 1.

PREVIOUS VERSIONS OF THIS STANDARD

Several previous versions of the EPPO A1 and A2 Lists have already been approved and published, and are hereby established as the original versions of this standard. They are:

PM 1/2(1) EPPO recommendations on new quarantine measures. *Bulletin OEPP/EPPO Bulletin 5* (special supplement, 1975).

PM 1/2(2) EPPO recommendations on new quarantine measures (2nd edition). *Bulletin OEPP/EPPO Bulletin 12* (special supplement, 1982).

PM 1/2(3) EPPO lists of A1 and A2 quarantine organisms. *EPPO Publications Series B*, no. 92 (1988).

PM 1/2(4) Note on the A1 and A2 lists. In Specific Quarantine Requirements. *EPPO Technical Documents*, no. 1008 (1990).

Versions PM 1/2(5 to current one), corresponding to the modifications decided by EPPO Council since 1991, have been published electronically on EPPO website and the EPPO Global Database.

APPENDIX 1 (2021-09)

EPPO A1 LIST OF PESTS RECOMMENDED FOR REGULATION AS QUARANTINE PESTS

BACTERIA AND PHYTOPLASMAS

Acidovorax citrulli A1/379
'*Candidatus* Liberibacter africanus' & 'Ca. L. asiaticus'¹ A1/151
'*Candidatus* Liberibacter solanacearum' (Solanaceae haplotypes) A1/365
'*Candidatus* Phytoplasma americanum' (Potato purple-top wilt) A1/128
'*Candidatus* Phytoplasma phoenicium' (Almond witches' broom) A1/399
'*Candidatus* Phytoplasma pruni' (Western X-disease) A1/140
'*Candidatus* Phytoplasma ulmi' (Elm phloem necrosis) A1/26
Coconut lethal yellowing phytoplasma (Palm lethal yellowing) A1/159
Peach rosette phytoplasma A1/138
Peach yellows phytoplasma A1/139
Ralstonia syzygii A1/400
Xanthomonas citri subsp. *aurantifolii* A1/397
Xanthomonas citri subsp. *citri* A1/1
Xanthomonas euvesicatoria pv. *allii* A1/353
Xanthomonas oryzae pv. *oryzae* A1/2
Xanthomonas oryzae pv. *oryzicola* A1/3

FUNGI

Alternaria mali A1/277
Anisogramma anomala A1/201
Apiosporina morbosa A1/10
Atropellis pinicola A1/5
Atropellis piniphila A1/280
Bretziella fagacearum and its vectors A1/6
 Pseudopityophthorus minutissimus
 Pseudopityophthorus pruinus
Cronartium coleosporioides A1/248
Cronartium comandrae A1/249
Cronartium comptoniae A1/250
Cronartium himalayense A1/251
Cronartium quercuum A1/252
Gymnosporangium clavipes A1/253
Gymnosporangium globosum A1/254
Gymnosporangium juniperi-virginianae A1/255
Gymnosporangium yamadae A1/257
Ophiognomonium clavignenti-juglandacearum A1/329
Ophiostoma wagneri A1/179
Phyllosticta citricarpa A1/194
Pseudocercospora angolensis A1/298

Pseudocercospora pini-densiflorae (= *Mycosphaerella gibsonii*) A1/7
Puccinia pittieriana A1/155
Septoria malagutii A1/142
Stagonosporopsis andigena A1/141
Stagonosporopsis crystalliniformis A1/435
Stegophora ulmea A1/315
Melampsora farlowii A1/15
Mycodiella (= *Mycosphaerella*) *laricis-leptolepidis* A1/16
Sphaerulina musiva (*Davidiella populorum*) A1/17
Coniferiporia (*Phellinus*) *weirii* A1/19
Phyllosticta solitaria A1/20
Phymatotrichopsis omnivora A1/21
Tilletia indica A1/23
Thecaphora solani A1/4
Chrysomyxa arctostaphyli A1/8
Cronartium fusiforme A1/9
Cronartium harknessii A1/11

VIRUSES AND VIRUS-LIKE ORGANISMS

American plum line pattern virus (*Ilarvirus*) A1/28
Andean potato latent virus (*Tymovirus*) A1/244
Andean potato mild mosaic virus (*Tymovirus*) A1/384
Andean potato mottle virus (*Comovirus*) A1/245
Bean golden mosaic virus (*Begomovirus*) A1/204
Blueberry leaf mottle virus (*Nepovirus*) A1/198
Cherry rasp leaf virus (*Cheravirus*) A1/127
Chrysanthemum stem necrosis virus (*Orthospovirus*) A1/313
Citrus blight disease A1/278
Citrus leprosis virus A1/284
Citrus yellow mosaic virus (*Badnavirus*) A1/285
Coconut cadang-cadang viroid (*Cocadviroid*) A1/192
Lettuce infectious yellows virus (*Crinivirus*) A1/212
Peach mosaic virus (*Trichovirus*) A1/27
Peach rosette mosaic virus (*Nepovirus*) A1/219
Potato black ringspot virus (*Nepovirus*) A1/246
Potato virus T A1/247
Potato yellow dwarf virus nucleorhabdovirus A1/29
Potato yellow vein virus (*Crinivirus*) A1/30
Potato yellowing virus A1/220
Raspberry leaf curl virus (*Nepovirus*) A1/31
Rose rosette emaravirus A1/415
Strawberry latent C virus A1/129
Tomato mottle virus (*Begomovirus* - and other American Geminiviridae of capsicum and tomato) A1/225
Watermelon silver mottle virus (*Orthospovirus*) A1/294

¹ A third species, '*Candidatus* Liberibacter americanum' has been found in association with huanglongbing

INSECTS AND MITES

- Acleris gloverana* A1/281
Acleris variana A1/32
Agrilus anxius A1/362
Aleurocanthus woglumi A1/103
Anastrepha fraterculus A1/229
Anastrepha ludens A1/230
Anastrepha obliqua A1/231
Anastrepha suspensa A1/200
Anthonomus bisignifer A1/189
Anthonomus eugenii A1/202
Anthonomus grandis A1/34
Anthonomus signatus A1/164
Apriona cinerea A1/373
Apriona germari A1/371
Apriona rugicollis A1/372
Bactericera cockerelli A1/366
Bactrocera dorsalis A1/233
Bactrocera latifrons A1/404
Bactrocera minax A1/234
Bactrocera tryoni A1/235
Bactrocera tsuneonis A1/236
Blitopertha orientalis A1/33
Ceratitidis rosa A1/237
Ceratothripoides brunneus A1/405
Ceratothripoides claratris A1/406
Choristoneura conflictana A1/205
Choristoneura freemani (= *C. occidentalis* Freeman) A1/207
Choristoneura fumiferana A1/206
Choristoneura rosaceana A1/208
Chrysobothris femorata A1/439
Chrysobothris mali A1/440
Dendroctonus brevicomis A1/263
Dendroctonus frontalis A1/264
Conotrachelus nenuphar A1/35
Dendroctonus adjunctus A1/43
Dendroctonus ponderosae A1/265
Dendroctonus pseudotsugae A1/266
Dendroctonus rufipennis A1/267
Diabrotica barberi A1/210
Diabrotica speciosa A1/303
Diabrotica undecimpunctata A1/292
Diabrotica virgifera zea A1/199
Diaphorina citri A1/37
Dryocoetes confusus A1/268
Epitrix subcrinita A1/358
Epitrix tuberis A1/165
Euphranta canadensis A1/41
Euphranta japonica A1/41
Gnathotrichus sulcatus A1/269
Gonipterus gibberus A1/301
Grapholita (Cydia) packardi A1/209
Grapholita (Cydia) prunivora A1/36
Gymnandrosoma aurantianum A1/433
Helicoverpa zea A1/195
Heteronychus arator A1/297
Homalodisca vitripennis A1/336
Ips calligraphus A1/270
Ips confusus A1/271
Ips grandicollis A1/272
Ips lecontei A1/273
Ips pini A1/274
Ips plastographus A1/275
Keiferia lycopersicella A1/367
Leucinodes africensis A1/385
Leucinodes orbonalis A1/368
Leucinodes pseudorbonalis A1/386
Leucinodes rimavallis A1/387
Listronotus bonariensis A1/168
Lycorma delicatula A1/396
Malacosoma americanum A1/276
Malacosoma disstria A1/213
Margarodes prieskaensis A1/214
Margarodes vitis A1/215
Margarodes vredendalensis A1/216
Massicus raddei A1/414
Melanotus communis A1/305
Metamasius hemipterus A1/356
Naupactus leucoloma A1/293
Naupactus xanthographus A1/434
Nemorimyza maculosa A1/152
Neoleucinodes elegantalis A1/381
Oemona hirta A1/374
Oligonychus perditus A1/217
Orgyia leucostigma A1/441
Orgyia pseudotsugata A1/218
Pheletes (Limonius) californicus A1/304
Phyllocoptes fructiphilus (vector of *Rose rosette emaravirus*) A1/416
Pissodes nemorensis A1/44
Pissodes strobi A1/258
Pissodes terminalis A1/259
Premnotrypes latithorax, *P. suturicallus* & *P. vorax* A1/143
Prodiplosis longifila A1/407
Rhagoletis fausta A1/241
Rhagoletis indifferens A1/242
Rhagoletis mendax A1/243
Rhagoletis pomonella A1/41
Rhynchophorus palmarum A1/332
Ripersiella hibisci A1/300
Saperda candida A1/359
Scirtothrips aurantii A1/221
Scirtothrips citri A1/222
Spodoptera eridania A1/196
Spodoptera litura A1/42

Sternochetus mangiferae A1/286
Thrips palmi A1/175
Unaspis citri A1/226
Zeugodacus (Bactrocera) cucumis A1/203
Zeugodacus (Bactrocera) cucurbitae A1/232

NEMATODES

Nacobbus aberrans A1/144
Radopholus similis (attacking citrus, formerly *R. citrophilus*) A1/161
Xiphinema americanum sensu stricto A1/150
Xiphinema bricolense A1/260
Xiphinema californicum A1/261

GASTROPODA

Pomacea canaliculata A1/418

PARASITIC AND INVASIVE PLANTS

Arceuthobium spp. (non-European) A1/24
Arceuthobium abietinum
Arceuthobium americanum
Arceuthobium campylopodum
Arceuthobium douglasii
Arceuthobium laricis
Arceuthobium minutissimum
Arceuthobium occidentale
Arceuthobium pusillum
Arceuthobium tsugense
Arceuthobium vaginatum
Cortaderia jubata A1/422
Lespedeza cuneata A1/426
Lygodium japonicum A1/427
Triadica sebifera A1/429

EPPO A2 LIST OF PESTS RECOMMENDED FOR REGULATION AS QUARANTINE PESTS

BACTERIA AND PHYTOPLASMAS

Paraburkholderia caryophylli A2/55
'*Candidatus* Phytoplasma mali' (Apple proliferation) A2/87
'*Candidatus* Phytoplasma pyri' (Pear decline) A2/95
'*Candidatus* Phytoplasma solani' (Stolbur) A2/100
Clavibacter insidiosus A2/49
Clavibacter michiganensis subsp. *michiganensis* A2/50
Clavibacter sepedonicus A2/51
Curtobacterium flaccumfaciens pv. *flaccumfaciens* A2/48
Dickeya dianthicola (*Erwinia chrysanthemi* pv. *dianthicola*) A2/53
Erwinia amylovora A2/52
Grapevine flavescence dorée phytoplasma A2/94
Pantoea stewartii subsp. *stewartii* A2/54
Pseudomonas syringae pv. *actinidiae* A2/370
Pseudomonas syringae pv. *persicae* A2/145
Ralstonia pseudosolanacearum A2/401
Ralstonia solanacearum A2/58
Xanthomonas arboricola pv. *corylina* A2/134
Xanthomonas arboricola pv. *pruni* A2/62
Xanthomonas axonopodis pv. *poinsettiicola* A2/350
Xanthomonas citri pv. *fuscans* A2/61
Xanthomonas cynarae pv. *gardneri* A2/391
Xanthomonas euvesicatoria pv. *euvesicatoria* A2/390
Xanthomonas euvesicatoria pv. *perforans* A2/392
Xanthomonas fragariae A2/135
Xanthomonas phaseoli pv. *dieffenbachiae* A2/417
Xanthomonas phaseoli pv. *phaseoli* A2/60
Xanthomonas translucens pv. *translucens* A2/183
Xanthomonas vesicatoria A2/157
Xylella fastidiosa A2/166
Xylophilus ampelinus A2/133

FUNGI

Botryosphaeria loricina A2/12
Ceratocystis platani A2/136
Ciborinia camelliae A2/190
Cronartium kamschaticum A2/18
Cryphonectria parasitica A2/69
Diaporthe vaccinii A2/211
Fusarium circinatum A2/306
Fusarium foetens A2/345
Fusarium oxysporum f.sp. *albedinis* A2/70
Geosmithia morbida & *Pityophthorus juglandis* A2/388
Glomerella gossypii A2/71
Gymnosporangium asiaticum A2/13
Heterobasidion irregulare A2/389
Lecanosticta acicola A2/22

Melampsora medusae A2/74
Monilinia fructicola A2/153
Phialophora cinerescens A2/77
Phytophthora fragariae & *Phytophthora rubi* A2/79
Phytophthora kernoviae A2/375
Phytophthora lateralis A2/337
Phytophthora ramorum A2/376
Plenodomus tracheiphilus A2/287
Puccinia hemerocallidis A2/346
Puccinia horiana A2/80
Stagonosporopsis chrysanthemi A2/66
Stenocarpella macrospora A2/67
Stenocarpella maydis A2/68
Synchytrium endobioticum A2/82
Thekopsora minima A2/402
Verticillium dahliae & *Verticillium nonalfalfae* (hop-infecting strains) A2/85

VIRUSES AND VIRUS-LIKE ORGANISMS

Beet leaf curl virus A2/90
Beet necrotic yellow vein virus (*Benyvirus*) A2/160
Blueberry scorch virus (*Carlavirus*) A2/347
Chrysanthemum stunt viroid (*Pospiviroid*) A2/92
Citrus bark cracking viroid (*Cocadviroid*) A2/403
Citrus tristeza virus (*Closterovirus*) A2/93
Cucumber vein yellowing virus (*Ipomovirus*) A2/316
Cucurbit yellow stunting disorder virus (*Crinivirus*) A2/324
Impatiens necrotic spot virus (*Orthospovirus*) A2/291
Pepino mosaic virus (*Potexvirus*) A2/369
Plum pox virus (*Potyvirus*) A2/96
Potato spindle tuber viroid (*Pospiviroid*) A2/97
Raspberry ringspot virus (*Nepovirus*) A2/98
Satsuma dwarf virus (*Sadwavirus*) A2/279
Squash leaf curl virus (*Begomovirus*) A2/224
Strawberry vein banding virus (*Caulimovirus*) A2/101
Tobacco ringspot virus (*Nepovirus*) A2/228
Tomato brown rugose fruit virus (*Tobamovirus*) A2/438
Tomato chlorosis virus (*Crinivirus*) A2/323
Tomato infectious chlorosis virus (*Crinivirus*) A2/348
Tomato ringspot virus (*Nepovirus*) A2/102
Tomato spotted wilt virus (*Orthospovirus*) A2/290
Tomato yellow leaf curl virus (*Begomovirus*) and related viruses A2/182

INSECTS AND MITES

Acrobasis pirivorella (= *Numonia pirivorella*) A2/184
Aculops fuchsiae A2/185
Agrilus bilineatus A2/430
Agrilus fleischeri A2/431

Agrilus planipennis A2/322
Aleurocanthus spiniferus A2/186
Anoplophora chinensis A2/187
Anoplophora glabripennis A2/296
Aromia bungii A2/380
Bactrocera zonata A2/302
Bemisia tabaci A2/178
Aphis (Toxoptera) citricidus A2/45
Cacoecimorpha pronubana A2/104
Cacyreus marshalli A2/181
Carposina sasakii A2/163
Ceratitis capitata A2/105
Comstockasis perniciosus (= *Quadraspidiotus perniciosus*) A2/117
Dacus ciliatus A2/238
Daktulosphaira vitifoliae A2/106
Dendrolimus sibiricus A2/308
Dendrolimus superans A2/330
*Diabrotica virgifera virgifera*¹ A2/199
Drosophila suzukii A2/363
Dryocosmus kuriphilus A2/317
Epitrix cucumeris A2/299
Epitrix papa A2/360
Eutetranychus orientalis A2/288
Euwallacea fornicatus sensu lato & *Neocosmospora (Fusarium) euwallaceae* A2/398
Frankliniella occidentalis A2/177
Garella (= *Erschoviella*) *musculana* A2/318
Gonipterus scutellatus A2/38
Grapholita (Cydia) inopinata A2/193
Helicoverpa armigera A2/110
Ips hauseri A2/326
Ips subelongatus A2/325
Lepidosaphes ussuriensis A2/319
Leptinotarsa decemlineata A2/113
Liriomyza huidobrensis A2/283
Liriomyza sativae A2/282
Liriomyza trifolii A2/131
Lopholeucaspis japonica A2/289
Lymantria mathura A2/331
Maconellicoccus hirsutus A2/314
Malacosoma parallela A2/320
Megaplatypus mutatus A2/344
Opogona sacchari A2/154
Paysandisia archon A2/338
Platynota stultana A2/408
Polygraphus proximus A2/382
Popillia japonica A2/40
Rhagoletis cingulata A2/239
Rhynchophorus ferrugineus A2/339
Scirtothrips dorsalis A2/223

Scolytus morawitzi A2/309
Sirex ermak A2/327
Spodoptera frugiperda A2/197
Spodoptera littoralis A2/120
Strobilomyia viaria A2/333
Tecia solanivora A2/310
Tetranychus evansi A2/349
Tetropium gracilicorne A2/311
Thaumatotibia leucotreta A2/377
Trichoferus campestris A2/343
Trioza erytrae A2/46
Trirachys sartus (= *Aeolesthes sarta*) A2/307
Trogoderma granarium A2/121
Turanoclytus (= *Xylotrechus*) *namanganensis* A2/328
Tuta absoluta A2/321
Xylotrechus altaicus A2/312

NEMATODES

Aphelenchoides besseyi A2/122
*Bursaphelenchus xylophilus*² A2/158
Ditylenchus dipsaci A2/174
Globodera pallida A2/124
Globodera rostochiensis A2/125
Heterodera glycines A2/167
Meloidogyne chitwoodi A2/227
Meloidogyne enterolobii A2/361
Meloidogyne fallax A2/295
Meloidogyne mali A2/409
Radopholus similis (not attacking citrus) A2/126
Xiphinema rivesi A2/262

INVASIVE PLANTS

Alternanthera philoxeroides A2/393
Amaranthus palmeri A2/436
Amaranthus tuberculatus A2/437
Ambrosia confertiflora A2/420
Ambrosia trifida A2/432
Andropogon virginicus A2/421
Baccharis halimifolia A2/378
Cardiospermum grandiflorum A2/410
Celastrus orbiculatus A2/442
Crassula helmsii A2/340
Ehrharta calycina A2/423
Gymnocoronis spilanthoides A2/411
Hakea sericea A2/424
Heracleum persicum A2/354
Heracleum sosnowskyi A2/355
Humulus scandens A2/425
Hydrocotyle ranunculoides A2/334
Ludwigia peploides & *L. grandiflora* A2/364

¹ *Diabrotica virgifera zea* remains on the EPPO A1 List

² Its non-European vectors in the genus *Monochamus* remain on the EPPO A1 List.

Microstegium vimineum A2/394
Myriophyllum heterophyllum A2/395
Parthenium hysterophorus A2/383
Pistia stratiotes A2/412
Polygonum perfoliatum A2/352
Pontederia (=Eichhornia *crassipes*) A2/351
Prosopis juliflora A2/428
Pueraria montana var. *lobata* A2/341
Salvinia molesta A2/413
Solanum elaeagnifolium A2/342

GASTROPODA

Pomacea maculata A1/419

EPPO A1 AND A2 PESTS IN ALPHABETICAL ORDER [WITH EPPO CODE]

Acidovorax citrulli A1/379 **PSDMAC**
Acleris gloverana A1/281 **ACLRLG**
Acleris variana A1/32 **ACLRVA**
Acrobasis pirivorella A2/184 **NUMOPI**
Aculops fuchsiae A2/185 **ACUPFU**
Agrilus anxius A1/362 **AGRLAX**
Agrilus bilineatus A2/430 **AGRLBL**
Agrilus fleischeri A2/431 **AGRLFL**
Agrilus planipennis A2/322 **AGRLPL**
Aleurocanthus spiniferus A2/186 **ALECSN**
Aleurocanthus woglumi A1/103 **ALECWO**
Alternanthera philoxeroides A2/393 **ALRPH**
Alternaria mali A1/277 **ALTEMA**
Amaranthus palmeri A2/436 **AMAPA**
Amaranthus tuberculatus A2/437 **AMATU**
Ambrosia confertiflora A2/420 **FRSCO**
Ambrosia trifida A2/432 **AMBTR**
American plum line pattern virus A1/28 **APLPV0**
Anastrepha fraterculus A1/229 **ANSTFR**
Anastrepha ludens A1/230 **ANSTLU**
Anastrepha obliqua A1/231 **ANSTOB**
Anastrepha suspensa A1/200 **ANSTSU**
Andean potato latent virus A1/244 **APLV00**
Andean potato mild mosaic virus A1/384 **APMMV0**
Andean potato mottle virus A1/245 **APMOV0**
Andropogon virginicus A2/421 **ANOVI**
Anisogramma anomala A1/201 **CRSPAN**
Anoplophora chinensis A2/187 **ANOLCN**
Anoplophora glabripennis A2/296 **ANOLGL**
Anthonomus bisignifer A1/189 **ANTHBI**
Anthonomus eugenii A1/202 **ANTHEU**
Anthonomus grandis A1/34 **ANTHGR**
Anthonomus signatus A1/164 **ANTHSI**
Aphelenchoides besseyi A2/122 **APLOBE**
Aphis (Toxoptera) citricidus A2/45 **TOXOCI**
Apiosporina morbosa A1/10 **DIBOMO**
Apriona cinerea A1/373 **APRICI**
Apriona germari A1/371 **APRIGE**
Apriona rugicollis A1/372 **APRIJA**
Arceuthobium spp. (non-European) A1/24 **IAREG**
Aromia bungii A2/380 **AROMBU**
Atropellis pinicola A1/5 **ATRPPC**
Atropellis piniphila A1/280 **ATRPPP**
Baccharis halimifolia A2/378 **BACHA**
Bactericera cockerelli A1/366 **PARZCO**
Bactrocera dorsalis A1/233 **DACUDO**
Bactrocera latifrons A1/404 **DACULA**
Bactrocera minax A1/234 **DACUCT**
Bactrocera tryoni A1/235 **DACUTR**
Bactrocera tsuneonis A1/236 **DACUTS**

Bactrocera zonata A2/302 **DACUZO**
Bean golden mosaic virus A1/204 **BGMV00**
Beet leaf curl virus A2/90 **BLCV00**
Beet necrotic yellow vein virus A2/160 **BNYVV0**
Bemisia tabaci A2/178 **BEMITA**
Blitopertha orientalis A1/33 **ANMLOR**
Blueberry leaf mottle virus A1/198 **BLMOV0**
Blueberry scorch virus A2/347 **BLSCV0**
Botryosphaeria loricata A2/12 **GUIGLA**
Bretziella fagacearum and its vectors A1/6 **CERAFA**
Bursaphelenchus xylophilus A2/158 **BURSXY**
Cacoecimorpha pronubana A2/104 **TORTPR**
Cacyreus marshalli A2/181 **CACYMA**
‘*Candidatus Liberibacter africanus*’ A1/151 **LIBEAF**
‘*Candidatus Liberibacter asiaticus*’ A1/151 **LIBEAS**
‘*Candidatus Liberibacter solanacearum*’ (Solanaceae haplotypes) A1/365 **LIBEPS**
‘*Candidatus Phytoplasma americanum*’ A1/128 **PHYPAE**
‘*Candidatus Phytoplasma pruni*’ A1/140 **PHYPPN**
‘*Candidatus Phytoplasma mali*’ A2/87 **PHYPPMA**
‘*Candidatus Phytoplasma phoenicium*’ A1/399 **PHYPPH**
‘*Candidatus Phytoplasma pyri*’ A2/95 **PHYPPY**
‘*Candidatus Phytoplasma solani*’ A2/100 **PHYPSO**
‘*Candidatus Phytoplasma ulmi*’ A1/26 **PHYFUL**
Cardiospermum grandiflorum A2/410 **CRIGR**
Carposina sasakii A2/163 **CARSSA**
Celastrus orbiculatus A2/442 **CELOR**
Ceratitidis capitata A2/105 **CERTCA**
Ceratitidis rosa A1/237 **CERTRO**
Ceratocystis platani A2/136 **CERAFP**
Ceratothripoides brunneus A1/405 **CRTZBR**
Ceratothripoides claratris A1/406 **CRTZCL**
Cherry rasp leaf virus A1/127 **CRLV00**
Choristoneura conflictana A1/205 **ARCHCO**
Choristoneura freemani (= *C. occidentalis* Freeman) A1/207 **ARCHOC**
Choristoneura fumiferana A1/206 **CHONFU**
Choristoneura rosaceana A1/208 **CHONRO**
Chrysanthemum stem necrosis virus A1/313 **CSNV00**
Chrysanthemum stunt viroid A2/92 **CSVD00**
Chrysobothris femorata A1/439 **CHRBFE**
Chrysobothris mali A1/440 **CHRBMA**
Chrysomyxa arctostaphyli A1/8 **CHMYAR**
Ciborinia camelliae A2/190 **SCLECA**
Citrus bark cracking viroid A2/403 **CBCVD0**
Citrus blight disease A1/278 **CSB000**
Citrus leprosis virus A1/284 **CILV00**
Citrus tristeza virus A2/93 **CTV000**
Citrus yellow mosaic virus A1/285 **CMBV00**

Clavibacter insidiosus A2/49 **CORBIN**
Clavibacter michiganensis subsp. *michiganensis* A2/50 **CORBMI**
Clavibacter sepedonicus A2/51 **CORBSE**
Coconut cadang-cadang viroid A1/192 **CCCVD0**
Coconut lethal yellowing phytoplasma A1/159 **PHYP56**
Comstockaspis perniciosus A2/117 **QUADPE**
Coniferiporia weirii A1/19 **INONWE**
Conotrachelus nenuphar A1/35 **CONHNE**
Cortaderia jubata A1/422 **CDTJU**
Crassula helmsii A2/340 **CSBHE**
Cronartium coleosporioides A1/248 **CRONCL**
Cronartium comandrae A1/249 **CRONCO**
Cronartium comptoniae A1/250 **CRONCP**
Cronartium fusiforme A1/9 **CRONFU**
Cronartium harknessii A1/11 **ENDCHA**
Cronartium himalayense A1/251 **CRONHI**
Cronartium kamschaticum A2/18 **CRONKA**
Cronartium quercuum A1/252 **CRONQU**
Cryphonectria parasitica A2/69 **ENDOPA**
Cucumber vein yellowing virus A2/316 **CVYV00**
Cucurbit yellow stunting disorder virus A2/324 **CYSDV0**
Curtobacterium flaccumfaciens pv. *flaccumfaciens* A2/48 **CORBFL**
Dacus ciliatus A2/238 **DACUCI**
Daktulosphaira vitifoliae A2/106 **VITEVI**
Dendroctonus adjunctus A1/43 **DENCAD**
Dendroctonus brevicomis A1/263 **DENCBR**
Dendroctonus frontalis A1/264 **DENCFR**
Dendroctonus ponderosae A1/265 **DENCPO**
Dendroctonus pseudotsugae A1/266 **DENCPS**
Dendroctonus rufipennis A1/267 **DENCRU**
Dendrolimus sibiricus A2/308 **DENDSI**
Dendrolimus superans A2/330 **DENDSU**
Diabrotica barberi A1/210 **DIABLO**
Diabrotica speciosa A1/303 **DIABSC**
Diabrotica undecimpunctata A1/292 **DIABUN**
Diabrotica virgifera virgifera A2/199 **DIABVI**
Diabrotica virgifera zea A1/199 **DIABVZ**
Diaphorina citri A1/37 **DIAACI**
Diaporthe vaccinii A2/211 **DIAPVA**
Dickeya chrysanthemi A2/53 **ERWICH**
Ditylenchus dipsaci A2/174 **DITYDI**
Drosophila suzukii A2/363 **DROSSU**
Dryocoetes confusus A1/268 **DRYOCN**
Dryocosmus kuriphilus A2/317 **DRYCKU**
Ehrharta calycina A2/423 **EHRCA**
Epitrix cucumeris A2/299 **EPIXCU**
Epitrix papa A2/360 **EPIXPP**
Epitrix subcrinita A1/358 **EPIXSU**
Epitrix tuberis A1/165 **EPIXTU**
Erwinia amylovora A2/52 **ERWIAM**
Euphranta canadensis A1/41 **EPOCCA**
Euphranta japonica A1/41 **RHACJA**
Eutetranychus orientalis A2/288 **EUTEOR**
Euwallacea fornicatus sensu lato A2/398 **XYLBFO**
Frankliniella occidentalis A2/177 **FRANOC**
Fusarium circinatum A2/306 **GIBBCI**
Fusarium foetens A2/345 **FUSAFO**
Fusarium oxysporum f. sp. *albedinis* A2/70 **FUSAAL**
Garella musculana A2/318 **ERSHMU**
Geosmithia morbida A2/388 **GEOHMO**
Globodera pallida A2/124 **HETDPA**
Globodera rostochiensis A2/125 **HETDRO**
Glomerella gossypii A2/71 **GLOMGO**
Gnathotrichus sulcatus A1/269 **GNAHSU**
Gonipterus gibberus A1/301 **GONPGI**
Gonipterus scutellatus A2/38 **GONPST**
Grapevine flavescence dorée phytoplasma A2/94 **PHYP64**
Grapholita inopinata A2/193 **CYDIIN**
Grapholita packardi A1/209 **LASPPA**
Grapholita prunivora A1/36 **LASPPR**
Gymnandrosoma aurantianum A1/433 **ECDYAU**
Gymnocoronis spilanthoides A2/411 **GYNSP**
Gymnosporangium asiaticum A2/13 **GYMNAS**
Gymnosporangium clavipes A1/253 **GYMNCL**
Gymnosporangium globosum A1/254 **GYMNGL**
Gymnosporangium juniperi-virginianae A1/255 **GYMNJV**
Gymnosporangium yamadae A1/257 **GYMNYA**
Hakea sericea A2/424 **HKASE**
Helicoverpa armigera A2/110 **HELIAR**
Helicoverpa zea A1/195 **HELIZE**
Heracleum persicum A2/354 **HERPE**
Heracleum sosnowskyi A2/355 **HERSO**
Heterobasidium irregulare A2/389 **HETEIR**
Heterodera glycines A2/167 **HETDGL**
Heteronychus arator A1/297 **HETRAR**
Homalodisca vitripennis A1/336 **HOMLTR**
Humulus scandens A2/425 **HUMJA**
Hydrocotyle ranunculoides A2/334 **HYDRA**
Impatiens necrotic spot virus A2/291 **INSV00**
Ips calligraphus A1/270 **IP SXCA**
Ips confusus A1/271 **IP SXCO**
Ips grandicollis A1/272 **IP SXGR**
Ips hauseri A2/326 **IP SXHA**
Ips lecontei A1/273 **IP SXLE**
Ips pini A1/274 **IP SXPI**
Ips plastographus A1/275 **IP SXPL**
Ips subelongatus A2/325 **IP SXFA**
Keiferia lycopersicella A1/367 **GNORLY**
Lecanosticta acicola A2/22 **SCIRAC**
Lepidosaphes ussuriensis A2/319 **LEPSUS**
Leptinotarsa decemlineata A2/113 **LPTNDE**

Lespedeza cuneata A1/426 **LESCU**
Lettuce infectious yellows virus A1/212 **LIYV00**
Leucinodes africensis A1/385 **LEUIAF**
Leucinodes orbonalis A1/368 **LEUIOR**
Leucinodes pseudorbonalis A1/386 **LEUIPS**
Leucinodes rimavallis A1/387 **LEUIRI**
Liriomyza huidobrensis A2/283 **LIRIHU**
Liriomyza sativae A2/282 **LIRISA**
Liriomyza trifolii A2/131 **LIRITR**
Listronotus bonariensis A1/168 **HYROBO**
Lopholeucaspis japonica A2/289 **LOPLJA**
Ludwigia grandiflora A2/364 **LUDUR**
Ludwigia peploides A2/364 **LUDPE**
Lycorma delicatula A1/396 **LYCMDE**
Lygodium japonicum A1/427 **LYFJA**
Lymantria mathura A2/331 **LYMAMA**
Maconellicoccus hirsutus A2/314 **PHENHI**
Malacosoma americanum A1/276 **MALAAM**
Malacosoma disstria A1/213 **MALADI**
Malacosoma parallela A2/320 **MALAPA**
Margarodes prieskaensis A1/214 **MARGPR**
Margarodes vitis A1/215 **MARGVI**
Margarodes vredendalensis A1/216 **MARGVR**
Massicus raddei A1/414 **MALLRA**
Megaplatypus mutatus A2/344 **PLTPMU**
Melampsora farlowii A1/15 **MELMFA**
Melampsora medusae A2/74 **MELMME**
Melanotus communis A1/305 **MELNCO**
Meloidogyne chitwoodii A2/227 **MELGCH**
Meloidogyne enterolobii A2/361 **MELGMY**
Meloidogyne fallax A2/295 **MELGFA**
Meloidogyne mali A2/409 **MELGMA**
Metamasius hemipterus A1/356 **METAHE**
Microstegium vimineum A2/394 **MCGVI**
Monilinia fructicola A2/153 **MONIFC**
Mycodiella laricis-leptolepidis A1/16 **MYCOLL**
Myriophyllum heterophyllum A2/395 **MYPHE**
Nacobbus aberrans A1/144 **NACOB**
Naupactus leucoloma A1/293 **GRAGLE**
Naupactus xanthographus A1/434 **NAUPXA**
Nemorimyza maculosa A1/152 **AMAZMA**
Neocosmospora euwallaceae A2/398 **FUSAEW**
Neoleucinodes elegantalis A1/381 **NEOLEL**
Oeonia hirta A1/374 **OEMOHI**
Oligonychus perditus A1/217 **OLIGPD**
Ophiognomonina clavignenti-juglandacearum A1/329 **SIROCJ**
Ophiostoma wagneri A1/179 **LEPGWA**
Opogona sacchari A2/154 **OPOGSC**
Orgyia leucostigma A1/441 **HEMELE**
Orgyia pseudotsugata A1/218 **ORGYPS**
Pantoea stewartii subsp. *stewartii* A2/54 **ERWIST**
Paraburkholderia caryophylli A2/55 **PSDMCA**
Parthenium hysterophorus A2/383 **PTNHY**
Paysandisia archon A2/338 **PAYSAR**
Peach mosaic virus A1/27 **PCMV00**
Peach rosette mosaic virus A1/219 **PRMV00**
Peach rosette phytoplasma A1/138 **PHYP30**
Peach yellows phytoplasma A1/139 **PHYP29**
Pepino mosaic virus (Potexvirus) A2/369 **PEPMV0**
Pheletes californicus A1/304 **LIMOCF**
Phialophora cinerescens A2/77 **PHIACI**
Phyllocoptes fructiphilus A1/416 **PHYCFR**
Phyllosticta citricarpa A1/194 **GUIGCI**
Phyllosticta solitaria A1/20 **PHYSSL**
Phymatotrichopsis omnivora A1/21 **PHMPOM**
Phytophthora fragariae A2/79 **PHYTFR**
Phytophthora kernoviae A2/375 **PHYTKE**
Phytophthora lateralis A2/337 **PHYTLA**
Phytophthora ramorum A2/376 **PHYTRA**
Phytophthora rubi A2/79 **PHYTFU**
Pissodes nemorensis A1/44 **PISONE**
Pissodes strobi A1/258 **PISOST**
Pissodes terminalis A1/259 **PISOTE**
Pistia stratiotes A2/412 **PIIST**
Pityophthorus juglandis A2/388 **PITOUJ**
Platynota stultana A2/408 **PLAAST**
Plenodomus tracheiphilus A2/287 **DEUTTR**
Plum pox virus A2/96 **PPV000**
Polygonum perfoliatum A2/352 **POLPF**
Polygraphus proximus A2/382 **POLGPR**
Pomacea canaliculata A1/418 **POMACA**
Pomacea maculata A2/419 **POMAIN**
Pontederia crassipes A2/351 **EICCR**
Popillia japonica A2/40 **POPIJA**
Potato black ringspot virus A1/246 **PBRSV0**
Potato spindle tuber viroid A2/97 **PSTVD0**
Potato virus T A1/247 **PVT000**
Potato yellow dwarf virus nucleorhabdovirus A1/29 **PYDV00**
Potato yellow vein virus A1/30 **PYVV00**
Potato yellowing virus A1/220 **PYV000**
Premnotrypes latithorax A1/143 **PREMLA**
Premnotrypes suturicallus A1/143 **PREMSU**
Premnotrypes vorax A1/143 **PREMVO**
Prodiplosis longifila A1/407 **PRDILO**
Prosopis juliflora A2/428 **PRCJU**
Pseudocercospora angolensis A1/298 **CERCAN**
Pseudocercospora pini-densiflorae A1/7 **CERSPD**
Pseudomonas syringae pv. *actinidiae* A2/370 **PSDMAK**
Pseudomonas syringae pv. *persicae* A2/145 **PSDMPE**
Puccinia hemerocallidis A2/346 **PUCCHM**
Puccinia horiana A2/80 **PUCCHN**
Puccinia pittieriana A1/155 **PUCcpt**
Pueraria montana var. *lobata* A2/341 **PUELO**

Radopholus similis (attacking citrus, formerly *R. citrophilus*) A1/161 **RADOSI**
Radopholus similis (not attacking citrus) A2/126 **RADOSI**
Ralstonia pseudosolanacearum A2/401 **RALSPS**
Ralstonia solanacearum A2/58 **RALSSL**
Ralstonia syzygii A1/400 **RALSSY**
Raspberry leaf curl virus A1/31 **RLCV00**
Raspberry ringspot virus A2/98 **RPRSV0**
Rhagoletis cingulata A2/239 **RHAGCI**
Rhagoletis fausta A1/241 **RHAGFA**
Rhagoletis indifferens A1/242 **RHAGIN**
Rhagoletis mendax A1/243 **RHAGME**
Rhagoletis pomonella A1/41 **RHAGPO**
Rhynchophorus ferrugineus A2/339 **RHYCFE**
Rhynchophorus palmarum A1/332 **RHYCPA**
Ripersiella hibisci A1/300 **RHIOHI**
Rose rosette emaravirus A1/415 **RRV000**
Salvinia molesta A2/413 **SAVMO**
Saperda candida A1/ 359 **SAPECN**
Satsuma dwarf virus A2/279 **SDV000**
Scirtothrips aurantii A1/221 **SCITAU**
Scirtothrips citri A1/222 **SCITCI**
Scirtothrips dorsalis A2/223 **SCITDO**
Scolytus morawitzi A2/309 **SCOLMO**
Septoria malagutii A1/142 **SEPTLM**
Sirex ermak A2/327 **SIRXER**
Solanum elaeagnifolium A2/342 **SOLEL**
Sphaerulina musiva A1/17 **MYCOPP**
Spodoptera eridania A1/196 **PRODER**
Spodoptera frugiperda A2/197 **LAPHFR**
Spodoptera littoralis A2/120 **SPODLI**
Spodoptera litura A1/42 **PRODLI**
Squash leaf curl virus A2/224 **SLCV00**
Stagonosporopsis andigena A1/141 **PHOMAN**
Stagonosporopsis chrysanthemi A2/66 **MYCOLG**
Stagonosporopsis crystalliniformis A1/435 **STGSCR**
Stegophora ulmea A1/315 **GNOMUL**
Stenocarpella macrospora A2/67 **DIPDMC**
Stenocarpella maydis A2/68 **DIPDMA**
Sternochetus mangiferae A1/286 **CRYPMA**
Strawberry latent C virus A1/129 **STLVCV0**
Strawberry vein banding virus A2/101 **SVBV00**
Strobilomyia viaria A2/333 **STRMVI**
Synchytrium endobioticum A2/82 **SYNCEN**
Tecia solanivora A2/310 **TECASO**
Tetranychus evansi A2/349 **TETREV**
Tetropium gracilicorne A2/311 **TETOGR**
Thaumatotibia leucotreta A2/377 **ARGPLE**
Thecaphora solani A1/4 **THPHSO**
Thekopsora minima A2/402 **THEKMI**
Thrips palmi A1/175 **THRIPL**
Tilletia indica A1/23 **NEOVIN**
Tobacco ringspot virus A2/228 **TRSV00**
Tomato brown rugose fruit virus A2/438 **TOBRFV**
Tomato chlorosis virus A2/323 **TOCV00**
Tomato infectious chlorosis virus A2/348 **TICV00**
Tomato mottle virus [and other American Geminiviridae of capsicum and tomato] A1/225 **TOMOV0**
Tomato ringspot virus A2/102 **TORSV0**
Tomato spotted wilt virus A2/290 **TSWV00**
Tomato yellow leaf curl virus [and related viruses] A2/182 **TYLCV0**
Triadica sebifera A1/429 **SAQSE**
Trichoferus campestris A2/343 **HESOCA**
Trioza erytreae A2/46 **TRIZER**
Trirachys sartus A2/307 **AELSSA**
Trogoderma granarium A2/121 **TROGGA**
Turanoclytus namanganensis A2/328 **XYLONM**
Tuta absoluta A2/321 **GNORAB**
Unaspis citri A1/226 **UNASCI**
Verticillium dahliae (hop-infecting strains) A2/85 **VERTDA**
Verticillium nonalfalfae (hop-infecting strains) A2/85 **VERTNO**
Watermelon silver mottle virus A1/294 **WMSMOV**
Xanthomonas arboricola pv. *corylina* A2/134 **XANTCY**
Xanthomonas arboricola pv. *pruni* A2/62 **XANTPR**
Xanthomonas axonopodis pv. *poinsettiicola* A2/350 **XANTPN**
Xanthomonas citri pv. *fuscans* A2/61 **XANTFF**
Xanthomonas citri subsp. *aurantifolii* A1/397 **XANTAU**
Xanthomonas citri subsp. *citri* A1/1 **XANTCI**
Xanthomonas cynarae pv. *gardneri* A2/391 **XANTGA**
Xanthomonas euvesicatoria pv. *allii* A1/353 **XANTAA**
Xanthomonas euvesicatoria pv. *euvesicatoria* A2/390 **XANTEU**
Xanthomonas euvesicatoria pv. *perforans* A2/392 **XANTPF**
Xanthomonas fragariae A2/135 **XANTFR**
Xanthomonas oryzae pv. *oryzae* A1/2 **XANTOR**
Xanthomonas oryzae pv. *oryzicola* A1/3 **XANTTO**
Xanthomonas phaseoli pv. *dieffenbachiae* A2/417 **XANTPD**
Xanthomonas phaseoli pv. *phaseoli* A2/60 **XANTPH**
Xanthomonas translucens pv. *translucens* A2/183 **XANTTR**
Xanthomonas vesicatoria A2/157 **XANTVE**
Xiphinema americanum sensu stricto A1/150 **XIPHAA**
Xiphinema bricolense A1/260 **XIPHBC**
Xiphinema californicum A1/261 **XIPHCA**
Xiphinema rivesi A2/262 **XIPHRI**
Xylella fastidiosa A2/166 **XYLEFA**
Xylophilus ampelinus A2/133 **XANTAM**
Xylotrechus altaicus A2/312 **XYLOAL**
Zeugodacus cucumis A1/203 **DACUCM**
Zeugodacus cucurbitae A1/232 **DACUCU**

EPPO A1 AND A2 PESTS IN NUMERICAL ORDER

- | | | | | |
|----|--|--|----|--|
| 1 | <i>Xanthomonas citri</i> subsp. <i>citri</i> | | 45 | <i>Aphis</i> (<i>Toxoptera</i>) <i>citricidus</i> |
| 2 | <i>Xanthomonas oryzae</i> pv. <i>oryzae</i> | | 46 | <i>Trioza erytrae</i> |
| 3 | <i>Xanthomonas oryzae</i> pv. <i>oryzicola</i> | | 47 | formerly <i>Xanthomonas populi</i> |
| 4 | <i>Thecaphora solani</i> | | 48 | <i>Curtobacterium flaccumfaciens</i> pv. <i>flaccumfaciens</i> |
| 5 | <i>Atropellis pinicola</i> | | 49 | <i>Clavibacter insidiosus</i> |
| 6 | <i>Bretziella fagacearum</i> and its vectors | | 50 | <i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i> |
| 7 | <i>Pseudocercospora pini-densiflorae</i>
(= <i>Mycosphaerella gibsonii</i>) | | 51 | <i>Clavibacter sepedonicus</i> |
| 8 | <i>Chrysomyxa arctostaphyli</i> | | 52 | <i>Erwinia amylovora</i> |
| 9 | <i>Cronartium fusiforme</i> | | 53 | <i>Dickeya dianthicola</i> (<i>Erwinia chrysanthemi</i> pv. <i>dianthicola</i>) |
| 10 | <i>Apiosporina morbosa</i> | | 54 | <i>Pantoea stewartii</i> subsp. <i>stewartii</i> |
| 11 | <i>Cronartium harknessii</i> | | 55 | <i>Paraburkholderia caryophylli</i> |
| 12 | <i>Botryosphaeria laricina</i> | | 56 | formerly <i>Pseudomonas syringae</i> pv. <i>glycinea</i> |
| 13 | <i>Gymnosporangium asiaticum</i> | | 57 | formerly <i>Pseudomonas syringae</i> pv. <i>psi</i> |
| 14 | formerly <i>Hamasporea longissima</i> | | 58 | <i>Ralstonia solanacearum</i> |
| 15 | <i>Melampsora farlowii</i> | | 59 | formerly <i>Xanthomonas campestris</i> pv. <i>hyacinthi</i> |
| 16 | <i>Mycodiella</i> (= <i>Mycosphaerella</i>) <i>laricis-leptolepidis</i> | | 60 | <i>Xanthomonas phaseoli</i> pv. <i>phaseoli</i> |
| 17 | <i>Sphaerulina musiva</i> (<i>Davidiella populorum</i>) | | 61 | <i>Xanthomonas citri</i> pv. <i>fuscans</i> (= <i>Xanthomonas phaseoli</i> var. <i>fuscans</i>) |
| 18 | <i>Cronartium kamschaticum</i> | | 62 | <i>Xanthomonas arboricola</i> pv. <i>pruni</i> |
| 19 | <i>Coniferiporia</i> (<i>Phellinus</i>) <i>weirii</i> | | 63 | formerly <i>Ophiostoma ulmi</i> |
| 20 | <i>Phyllosticta solitaria</i> | | 64 | formerly <i>Cochliobolus carbonum</i> |
| 21 | <i>Phymatotrichopsis omnivora</i> | | 65 | formerly <i>Cochliobolus heterostrophus</i> |
| 22 | <i>Lecanosticta acicola</i> | | 66 | <i>Stagonosporopsis chrysanthemi</i> |
| 23 | <i>Tilletia indica</i> | | 67 | <i>Stenocarpella macrospora</i> |
| 24 | <i>Arceuthobium</i> spp. (non-European) | | 68 | <i>Stenocarpella maydis</i> |
| 25 | formerly Blackberry dwarf | | 69 | <i>Cryphonectria parasitica</i> |
| 26 | ' <i>Candidatus Phytoplasma ulmi</i> ' (Elm phloem necrosis) | | 70 | <i>Fusarium oxysporum</i> f.sp. <i>albedinis</i> |
| 27 | Peach American mosaic virus* | | 71 | <i>Glomerella gossypii</i> |
| 28 | <i>American plum line pattern virus</i> (<i>Ilarvirus</i>) | | 72 | formerly <i>Hypoxyylon mammatum</i> |
| 29 | <i>Potato yellow dwarf virus nucleorhabdovirus</i> | | 73 | formerly <i>Phaeoisariopsis griseola</i> |
| 30 | <i>Potato yellow vein virus</i> (<i>Crinivirus</i>) | | 74 | <i>Melampsora medusae</i> |
| 31 | <i>Raspberry leaf curl virus</i> (<i>Nepovirus</i>) | | 75 | formerly <i>Mycosphaerella linicola</i> |
| 32 | <i>Acleris variana</i> | | 76 | formerly <i>Ophiostoma roboris</i> |
| 33 | <i>Blitopertha orientalis</i> | | 77 | <i>Phialophora cinerescens</i> |
| 34 | <i>Anthonomus grandis</i> | | 78 | formerly <i>Phoma exigua</i> var. <i>foveata</i> |
| 35 | <i>Conotrachelus nenuphar</i> | | 79 | <i>Phytophthora fragariae</i> & <i>Phytophthora rubi</i> |
| 36 | <i>Grapholita</i> (<i>Cydia</i>) <i>prunivora</i> | | 80 | <i>Puccinia horiana</i> |
| 37 | <i>Diaphorina citri</i> | | 81 | formerly <i>Puccinia pelargonii-zonalis</i> |
| 38 | <i>Gonipterus scutellatus</i> | | 82 | <i>Synchytrium endobioticum</i> |
| 39 | formerly <i>Hylurgopinus rufipes</i> | | 83 | formerly <i>Tilletia controversa</i> |
| 40 | <i>Popillia japonica</i> | | 84 | formerly <i>Uromyces transversalis</i> |
| 41 | <i>Rhagoletis pomonella</i> , <i>Euphranta canadensis</i> ,
<i>Euphranta japonica</i> | | 85 | <i>Verticillium nonalfalfae</i> & <i>V. dahliae</i> (hop-infecting strains) |
| 42 | <i>Spodoptera litura</i> | | 86 | formerly Apple chat fruit |
| 43 | <i>Dendroctonus adjunctus</i> | | 87 | ' <i>Candidatus Phytoplasma mali</i> ' (Apple proliferation) |
| 44 | <i>Pissodes nemorensis</i> | | 88 | formerly Barley stripe mosaic hordeivirus |
| | | | 89 | formerly Beet curly top virus |
| | | | 90 | Beet leaf curl virus |
| | | | 91 | formerly Cherry necrotic rusty mottle disease |

* *Peach mosaic virus* (*Trichovirus*) was referred to for some years as peach latent mosaic viroid. The two names have now been shown to concern different organisms. Peach latent mosaic viroid no longer appears in the lists.

- 92 *Chrysanthemum stunt viroid* (Pospiviroid)
93 *Citrus tristeza virus* (Closterovirus)
94 Grapevine flavescence dorée phytoplasma
95 ‘*Candidatus Phytoplasma pyri*’ (Pear decline)
96 *Plum pox virus* (Potyvirus)
97 *Potato spindle tuber viroid* (Pospiviroid)
98 *Raspberry ringspot virus* (Nepovirus)
99 formerly Rose wilt
100 ‘*Candidatus Phytoplasma solani*’ (Stolbur)
101 *Strawberry vein banding virus* (Caulimovirus)
102 *Tomato ringspot virus* (Nepovirus)
103 *Aleurocanthus woglumi*
104 *Cacoecimorpha pronubana*
105 *Ceratitis capitata*
106 *Daktulosphaira vitifoliae*
107 formerly *Rhopalomyia chrysanthemi*
108 formerly *Epichoristodes acerbella*
109 formerly *Eriosoma lanigerum*
110 *Helicoverpa armigera*
111 formerly *Hyphantria cunea*
112 formerly *Ips amitinus*
113 *Leptinotarsa decemlineata*
114 formerly *Phoracantha semipunctata*
115 formerly *Phthorimaea operculella*
116 formerly *Pseudococcus comstocki*
117 *Comstockaspis perniciosus* (= *Quadraspidotus perniciosus*)
118 formerly *Scolytus multistriatus*
119 formerly *Scolytus scolytus*
120 *Spodoptera littoralis*
121 *Trogoderma granarium*
122 *Aphelenchoides besseyi*
123 formerly *Ditylenchus destructor*
124 *Globodera pallida*
125 *Globodera rostochiensis*
126 *Radopholus similis* (not attacking citrus)
127 *Cherry rasp leaf virus* (Cheravirus)
128 ‘*Candidatus Phytoplasma americanum*’ (Potato purple-top wilt)
129 Strawberry latent C virus
130 formerly Strawberry witches' broom phytoplasma
131 *Liriomyza trifolii*
132 formerly *Agrobacterium rhizogenes*
133 *Xylophilus ampelinus*
134 *Xanthomonas arboricola* pv. *corylina*
135 *Xanthomonas fragariae*
136 *Ceratocystis platani*
137 formerly peach phony bacterium, now = no. 166
138 Peach rosette phytoplasma
139 Peach yellows phytoplasma
140 ‘*Candidatus Phytoplasma pruni*’ (Western X-disease)
141 *Stagonosporopsis andigena*
142 *Septoria malagutii*
143 *Premnotrypes latithorax*, *P. suturicallus* & *P vorax*
144 *Nacobbus aberrans*
145 *Pseudomonas syringae* pv. *persicae*
146 formerly Apricot chlorotic leafroll phytoplasma
147 formerly *Black raspberry latent ilarvirus*
148 formerly *Cherry leaf roll nepovirus* (in *Rubus*)
149 formerly *Apple mosaic ilarvirus* (in *Rubus*)
150 *Xiphinema americanum sensu stricto*
151 ‘*Candidatus Liberibacter africanus*’ & ‘*Ca. L. asiaticus*’
152 *Nemorimyza maculosa*
153 *Monilinia fructicola*
154 *Opogona sacchari*
155 *Puccinia pittieriana*
156 formerly *Phytophthora infestans* mating type A2
157 *Xanthomonas vesicatoria*
158 *Bursaphelenchus xylophilus*
159 Coconut lethal yellowing phytoplasma (Palm lethal yellowing)
160 *Beet necrotic yellow vein virus* (Benyvirus)
161 *Radopholus similis* (attacking citrus, formerly *R. citrophilus*)
162 formerly *Parabemisia myricae*
163 *Carposina sasakii*
164 *Anthonomus signatus*
165 *Epitrix tuberis*
166 *Xylella fastidiosa*
167 *Heterodera glycines*
168 *Listronotus bonariensis*
169 formerly *Phialophora gregata*
170 formerly *Phytophthora megasperma* f.sp. *glycines*
171 formerly *Diaporthe phaseolorum*
172 formerly *Anarsia lineatella*
173 formerly *Grapholita molesta*
174 *Ditylenchus dipsaci*
175 *Thrips palmi*
176 formerly *Unaspis yanonensis*
177 *Frankliniella occidentalis*
178 *Bemisia tabaci*
179 *Ophiostoma wagneri*
180 formerly *Xanthomonas axonopodis* pv. *dieffenbachiae* (deleted and replaced by *X. phaseoli* pv. *dieffenbachiae*)
181 *Cacyreus marshalli*
182 *Tomato yellow leaf curl virus* (Begomovirus) and related viruses
183 *Xanthomonas translucens* pv. *translucens*
184 *Acrobasis pirivorella* (= *Numonia pyrivorella*)
185 *Aculops fuchsiae*
186 *Aleurocanthus spiniferus*
187 *Anoplophora chinensis*
188 *Anoplophora malasiaca* (now considered as a synonym of *A. chinensis*)

- 189 *Anthonomus bisignifer*
190 *Ciborinia camelliae*
191 formerly Citrus tatter leaf virus (*Capillovirus*)
192 *Coconut cadang-cadang viroid (Cocadviroid)*
193 *Grapholita (Cydia) inopinata*
194 *Phyllosticta citricarpa*
195 *Helicoverpa zea*
196 *Spodoptera eridania*
197 *Spodoptera frugiperda*
198 *Blueberry leaf mottle virus (Nepovirus)*
199 *Diabrotica virgifera virgifera* & *Diabrotica virgifera zea*
200 *Anastrepha suspensa*
201 *Anisogramma anomala*
202 *Anthonomus eugenii*
203 *Zeugodacus (Bactrocera) cucumis*
204 *Bean golden mosaic virus (Begomovirus)*
205 *Choristoneura conflictana*
206 *Choristoneura fumiferana*
207 *Choristoneura freemani* (= *C. occidentalis* Freeman)
208 *Choristoneura rosaceana*
209 *Grapholita (Cydia) packardii*
210 *Diabrotica barberi*
211 *Diaporthe vaccinii*
212 *Lettuce infectious yellows virus (Crinivirus)*
213 *Malacosoma disstria*
214 *Margarodes prieskaensis*
215 *Margarodes vitis*
216 *Margarodes vredendalensis*
217 *Oligonychus perditus*
218 *Orgyia pseudotsugata*
219 *Peach rosette mosaic virus (Nepovirus)*
220 *Potato yellowing virus*
221 *Scirtothrips aurantii*
222 *Scirtothrips citri*
223 *Scirtothrips dorsalis*
224 *Squash leaf curl virus (Begomovirus)*
225 *Tomato mottle virus (Begomovirus)* (and other American Geminiviridae of capsicum and tomato)
226 *Unaspis citri*
227 *Meloidogyne chitwoodi*
228 *Tobacco ringspot virus (Nepovirus)*
229 *Anastrepha fraterculus*
230 *Anastrepha ludens*
231 *Anastrepha obliqua*
232 *Zeugodacus (Bactrocera) cucurbitae*
233 *Bactrocera dorsalis*
234 *Bactrocera minax*
235 *Bactrocera tryoni*
236 *Bactrocera tsuneonis*
237 *Ceratitis rosa*
238 *Dacus ciliatus*
239 *Rhagoletis cingulata*
240 formerly *Rhagoletis completa*
241 *Rhagoletis fausta*
242 *Rhagoletis indifferens*
243 *Rhagoletis mendax*
244 *Andean potato latent virus (Tymovirus)*
245 *Andean potato mottle virus (Comovirus)*
246 *Potato black ringspot virus (Nepovirus)*
247 *Potato virus T*
248 *Cronartium coleosporioides*
249 *Cronartium comandrae*
250 *Cronartium comptoniae*
251 *Cronartium himalayense*
252 *Cronartium quercuum*
253 *Gymnosporangium clavipes*
254 *Gymnosporangium globosum*
255 *Gymnosporangium juniperi-virginianae*
256 formerly *Gymnosporangium shiraianum*
257 *Gymnosporangium yamadae*
258 *Pissodes strobi*
259 *Pissodes terminalis*
260 *Xiphinema bricolense*
261 *Xiphinema californicum*
262 *Xiphinema rivesi*
263 *Dendroctonus brevicomis*
264 *Dendroctonus frontalis*
265 *Dendroctonus ponderosae*
266 *Dendroctonus pseudotsugae*
267 *Dendroctonus rufipennis*
268 *Dryocoetes confusus*
269 *Gnathotrichus sulcatus*
270 *Ips calligraphus*
271 *Ips confusus*
272 *Ips grandicollis*
273 *Ips lecontei*
274 *Ips pini*
275 *Ips plastographus*
276 *Malacosoma americanum*
277 *Alternaria mali*
278 *Citrus blight disease*
279 *Satsuma dwarf virus (Sadwavirus)*
280 *Atropellis piniphila*
281 *Acleris gloverana*
282 *Liriomyza sativae*
283 *Liriomyza huidobrensis*
284 *Citrus leprosis virus*
285 *Citrus yellow mosaic virus (Badnavirus)*
286 *Sternochetus mangiferae*
287 *Plenodomus tracheiphilus*
288 *Eutetranychus orientalis*
289 *Lopholeucaspis japonica*
290 *Tomato spotted wilt virus (Orthotospovirus)*
291 *Impatiens necrotic spot virus (Orthotospovirus)*
292 *Diabrotica undecimpunctata*

- 293 *Naupactus leucoloma*
294 *Watermelon silver mottle virus (Orthotospovirus)*
295 *Meloidogyne fallax*
296 *Anoplophora glabripennis*
297 *Heteronychus arator*
298 *Pseudocercospora angolensis*
299 *Epitrix cucumeris*
300 *Ripersiella hibisci*
301 *Gonipterus gibberus*
302 *Bactrocera zonata*
303 *Diabrotica speciosa*
304 *Pheletes (Limonius) californicus*
305 *Melanotus communis*
306 *Fusarium circinatum*
307 *Trirachys sartus (=Aeolesthes sarta)*
308 *Dendrolimus sibiricus*
309 *Scolytus morawitzi*
310 *Tecia solanivora*
311 *Tetropium gracilicorne*
312 *Xylotrechus altaicus*
313 *Chrysanthemum stem necrosis virus (Orthotospovirus)*
314 *Maconellicoccus hirsutus*
315 *Stegophora ulmea*
316 *Cucumber vein yellowing virus (Ipomovirus)*
317 *Dryocosmus kuriphilus*
318 *Garella (=Erschoviella) musculana*
319 *Lepidosaphes ussuriensis*
320 *Malacosoma parallela*
321 *Tuta absoluta*
322 *Agrilus planipennis*
323 *Tomato chlorosis virus (Crinivirus)*
324 *Cucurbit yellow stunting disorder virus (Crinivirus)*
325 *Ips subelongatus*
326 *Ips hauseri*
327 *Sirex ermak*
328 *Turanoclytus (=Xylotrechus) namanganensis*
329 *Ophiognomonina clavignenti-juglandacearum*
330 *Dendrolimus superans*
331 *Lymantria mathura*
332 *Rhynchophorus palmarum*
333 *Strobilomyia viaria*
334 *Hydrocotyle ranunculoides*
335 formerly *Lysichiton americanus*
336 *Homalodisca vitripennis*
337 *Phytophthora lateralis*
338 *Paysandisia archon*
339 *Rhynchophorus ferrugineus*
340 *Crassula helmsii*
341 *Pueraria montana var. lobata*
342 *Solanum elaeagnifolium*
343 *Trichoferus campestris*
344 *Megaplatypus mutatus*
345 *Fusarium foetens*
346 *Puccinia hemerocallidis*
347 *Blueberry scorch virus (Carlavirus)*
348 *Tomato infectious chlorosis virus (Crinivirus)*
349 *Tetranychus evansi*
350 *Xanthomonas axonopodis pv. poinsettiicola*
351 *Pontederia (=Eichhornia) crassipes*
352 *Polygonum perfoliatum*
353 *Xanthomonas euvesicatoria pv. allii*
354 *Heracleum persicum*
355 *Heracleum sosnowskyi*
356 *Metamasius hemipterus*
357 *Bactrocera invadens* (deleted, now a synonym of *B. dorsalis*)
358 *Epitrix subcrinita*
359 *Saperda candida*
360 *Epitrix papa*
361 *Meloidogyne enterolobii*
362 *Agrilus anxius*
363 *Drosophila suzukii*
364 *Ludwigia peploides & L. grandiflora*
365 ‘*Candidatus Liberibacter solanacearum*’ (Solanaceae haplotypes)
366 *Bactericera cockerelli*
367 *Keiferia lycopersicella*
368 *Leucinodes orbonalis*
369 *Pepino mosaic virus (Potexvirus)*
370 *Pseudomonas syringae pv. actinidiae*
371 *Apriona germari*
372 *Apriona rugicollis*
373 *Apriona cinerea*
374 *Oemona hirta*
375 *Phytophthora kernoviae*
376 *Phytophthora ramorum*
377 *Thaumatotibia leucotreta*
378 *Baccharis halimifolia*
379 *Acidovorax citrulli*
380 *Aromia bungii*
381 *Neoleucinodes elegantalis*
382 *Polygraphus proximus*
383 *Parthenium hysterophorus*
384 *Andean potato mild mosaic virus (Tymovirus)*
385 *Leucinodes africensis*
386 *Leucinodes pseudorbonalis*
387 *Leucinodes rimavallis*
388 *Geosmithia morbida & Pityophthorus juglandis*
389 *Heterobasidion irregulare*
390 *Xanthomonas euvesicatoria pv. euvesicatoria*
391 *Xanthomonas cynarae pv. gardneri*
392 *Xanthomonas euvesicatoria pv. perforans*
393 *Alternanthera philoxeroides*
394 *Microstegium vimineum*

- 395 *Myriophyllum heterophyllum*
396 *Lycorma delicatula*
397 *Xanthomonas citri* subsp. *aurantifolii*
398 *Euwallacea fornicatus sensu lato* & *Fusarium Neocosmospora (Fusarium) euwallaceae*
399 'Candidatus *Phytoplasma phoenicium*'
400 *Ralstonia syzygii*
401 *Ralstonia pseudosolanacearum*
402 *Thekopsora minima*
403 *Citrus bark cracking viroid (Cocadviroid)*
404 *Bactrocera latifrons*
405 *Ceratothripoides brunneus*
406 *Ceratothripoides claratris*
407 *Prodiplosis longifila*
408 *Platynota stultana*
409 *Meloidogyne mali*
410 *Cardiospermum grandiflorum*
411 *Gymnocoronis spilanthoides*
412 *Pistia stratiotes*
413 *Salvinia molesta*
414 *Massicus raddei*
415 *Rose rosette emaravirus*
416 *Phyllocoptes fructiphilus* (vector of *Rose rosette emaravirus*)
417 *Xanthomonas phaseoli* pv. *dieffenbachiae*
418 *Pomacea canaliculata*
419 *Pomacea maculata*
420 *Ambrosia confertiflora*
421 *Andropogon virginicus*
422 *Cortaderia jubata*
423 *Ehrharta calycina*
424 *Hakea sericea*
425 *Humulus scandens*
426 *Lespedeza cuneata*
427 *Lygodium japonicum*
428 *Prosopis juliflora*
429 *Triadica sebifera*
430 *Agrilus bilineatus*
431 *Agrilus fleischeri*
432 *Ambrosia trifida*
433 *Gymnandrosoma aurantianum*
434 *Naupactus xanthographus*
435 *Stagonosporopsis crystalliniformis*
436 *Amaranthus palmeri*
437 *Amaranthus tuberculatus*
438 tomato brown rugose fruit virus
439 *Chrysobothris femorata*
440 *Chrysobothris mali*
441 *Orgyia leucostigma*
442 *Celastrus orbiculatus*