

Recommended Codes for Pest Organisms in Cereal and Vegetable Crops

January 2010
Subject to regular review

Adopted by the Working Group established by the ISF Vegetable & Ornamental and Cereal Crops Sections

Crops

- [*Abelmoschus esculentus*](#) (Okra)
- [*Allium ampeloprasum*](#) and [*A. cepa*](#) (Leek and Onion)
- [*Apium graveolens*](#) (Celery and Celeriac)
- [*Avena sativa*](#) (Oats)
- [*Benincasa hispida*](#) (Wax gourd)
- [*Beta vulgaris*](#) (Table beet and Swiss chard)
- [*Brassicacae*](#) (Cabbage, Broccoli, Cauliflower, Chinese cabbage...)
- [*Capsicum annuum*](#) (Pepper)
- [*Citrullus lanatus*](#) (Watermelon)
- [*Cucumis melo*](#) (Melon)
- [*Cucumis sativus*](#) (Cucumber)
- [*Cucurbita pepo*](#), [*C. maxima*](#), [*C. moschata*](#) (Squash and pumpkin)
- [*Daucus carota*](#) var. [*sativa*](#) (Carrot)
- [*Hordeum vulgare*](#) (Barley)
- [*Lactuca sativa*](#) (Lettuce)
- [*Lagenaria siceraria*](#) (Bottle gourd)
- [*Lycopersicon esculentum*](#) (Tomato)
- [*Phaseolus vulgaris*](#) (Dwarf and climbing French bean)
- [*Pisum sativum*](#) (Garden pea)
- [*Raphanus sativus*](#) (Radish)
- [*Secale cereale*](#) (Rye)
- [*Solanum melongena*](#) (Eggplant/Aubergine)
- [*Spinacia oleracea*](#) (Spinach)
- [*Triticum spp.*](#) (Wheat)
- [*Valerianella locusta*](#) (Corn salad)
- [*Zea mays*](#) (Sweet corn)

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1. *Abelmoschus esculentus* (Okra)

Scientific name	English common name	Code
Viruses:		
<i>Okra yellow vein mosaic virus</i>	Okra yellow vein mosaic	OYVMV
Insects		
<i>Amarasca biguttula</i>	Leaf hopper	Ab

2. *Alliums* - *A. ampeloprasum* and *A. cepa* (Leek and Onion)

Scientific name	English common name	Code
Viruses:		
<i>Leek yellow stripe virus</i>	Leek yellow stripe	LYSV
Bacteria		
<i>Pseudomonas syringae</i> pv. <i>porri</i>	Pseudomonas leek blight	Psp
Fungi:		
<i>Alternaria porri</i>	Purple blotch	Ap
<i>Botrytis allii</i>	Botrytis neck rot	Ba
<i>Botrytis squamosa</i>	Botrytis leaf blight	Bs
<i>Colletotrichum gloeosporioides</i>	Twister	Cg
<i>Fusarium oxysporum</i> f.sp. <i>cepae</i>	Basal rot	Foc
<i>Peronospora destructor</i>	Downy mildew	Pd
<i>Phytophthora porri</i>	White tip of leek	Pp
<i>Puccinia allii</i>	Rust	Pa
<i>Pyrenochaeta terrestris</i>	Pink root	Pt
<i>Sclerotium cepivorum</i>	White rot	Sc
Insects		
<i>Thrips tabaci</i>	Onion thrips	Tt
Nematodes		
<i>Ditylenchus dipsaci</i>	Stem and bulb nematode	Dd

3. *Apium graveolens* (Celery and Celeriac)

Scientific name	English common name	Code
Viruses:		
<i>Celery mosaic virus</i>	Celery mosaic	CeMV
Bacteria:		
<i>Pseudomonas syringae</i> pv. <i>apii</i>	Bacterial leaf spot	Psa
Fungi:		
<i>Fusarium oxysporum</i> f.sp. <i>apii</i>	Fusarium yellows and wilt	Foa
<i>Septoria apiicola</i>	Late blight	Sa

4. *Avena sativa* (Oats)

Scientific name	English common name(s)	Code
Viruses:		
<i>Barley yellow dwarf virus</i>	Barley yellow dwarf virus	BYDV
<i>Oat golden stripe virus</i>	Oat chlorotic stripe virus, oat tubular virus, soil-borne oat stripe virus	OGSV
<i>Oat mosaic virus</i>	Soil-borne oat mosaic virus	OMV

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Fungi:		
<i>Bipolaris victoriae</i> (teleomorph <i>Cochliobolus victoriae</i>)	Victoria blight	Bv
<i>Blumeria graminis</i> f. sp. <i>avenae</i> (anamorph: <i>Oidium monilioides</i>)	Powdery mildew	Bga
<i>Drechslera avenae</i>	Helminthosporium leaf spot, Helminthosporium leaf blotch, Drechslera leaf spot	Da
<i>Puccinia coronata</i>	Crown rust	Pc
<i>Puccinia graminis</i> f. sp. <i>avenae</i>	Stem rust	Pga
<i>Stagonospora avenae</i> f. sp. <i>avenaria</i> (teleomorph <i>Phaeosphaeria avenaria</i> f. sp. <i>avenaria</i>)	Speckled blotch, Septoria leaf blotch, Septoria black stem	Saa
<i>Ustilago avenae</i>	Loose smut	Ua
<i>Ustilago segetum</i>	Covered smut	Ug

Nematodes:		
<i>Ditylenchus dipsaci</i>	Stem nematode, Stem eelworm, Stem and bulb nematode	Dd
<i>Heterodera avenae</i>	Cereal cyst nematode	Ha

5. Benincasa hispida (Wax gourd)

Scientific name	English common name	Code
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Fungi:

<i>Fusarium oxysporum</i> f.sp. <i>lagenariae</i>	Fusarium wilt	Fol
<i>Fusarium oxysporum</i> f.sp. <i>niveum</i>	Fusarium wilt	Fon

6. Beta vulgaris (Table beet and Swiss chard)

Scientific name	English common name	Code
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Viruses:

<i>Beet curly top virus</i>	Beet curly top	BCTV
<i>Beet necrotic yellow vein virus</i>	Rhizomania	BNYVV

Bacteria:

<i>Pseudomonas syringae</i> pv. <i>aptata</i>	Bacterial blight	Psa
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Fungi:

<i>Cercospora beticola</i>	Leaf spot	Cb
<i>Fusarium oxysporum</i> f.sp. <i>betae</i>	Fusarium yellows	Fob
<i>Pythium aphanidermatum</i>	Pythium root rot	Pa
<i>Phoma betae</i>	Phoma root rot	Pb
<i>Peronospora farinosa</i> f.sp. <i>betae</i>	Downy mildew	Pfb
<i>Ramularia beticola</i>	Ramularia leaf spot	Ra
<i>Rhizoctonia solani</i>	Rhizoctonia root and crown rot	Rs
<i>Verticillium albo-atrum</i>	Verticillium wilt	Va
<i>Verticillium dahliae</i>	Verticillium wilt	Vd

7. Brassicas (Cabbage, Broccoli, Cauliflower, Chinese cabbage...)

Scientific name	English common name	Code
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Viruses:

<i>Cauliflower mosaic virus</i>	Cauliflower mosaic	CaMV
<i>Turnip mosaic virus</i>	Turnip mosaic	TuMV

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Bacteria:		
<i>Pseudomonas syringae</i> pv. <i>maculicola</i>	Bacterial leaf spot, Peppery leaf spot	Psm
<i>Xanthomonas campestris</i> pv. <i>armoraciae</i>	Leaf spot	Xca
<i>Xanthomonas campestris</i> pv. <i>campestris</i>	Black rot	Xcc
Fungi:		
<i>Albugo candida</i>	White rust	Ac
<i>Albugo macrospora</i>	White rust	Am
<i>Alternaria brassicae</i>	Black spot	Abe
<i>Alternaria brassicicola</i>	Black spot	Aba
<i>Alternaria japonica</i>	Black spot	Aj
<i>Erysiphe cruciferarum</i>	Powdery mildew	Ec
<i>Fusarium oxysporum</i> f.sp. <i>conglutinans</i>	Fusarium yellows	Foc
<i>Mycosphaerella brassicicola</i>	Ring spot	Mb
<i>Leptosphaeria maculans</i> (anamorph: <i>Phoma lingam</i>)	Black leg	Lm
<i>Peronospora parasitica</i>	Downy mildew	Pp
<i>Plasmodiophora brassicae</i>	Clubroot	Pb
<i>Verticillium albo-atrum</i>	Verticillium wilt	Va
<i>Verticillium dahliae</i>	Verticillium wilt	Vd
<i>Verticillium longisporum</i>	Verticillium wilt	VI
Insects:		
<i>Brevicoryne brassicae</i>	Cabbage aphid	Bb
<i>Plutella xylostella</i>	Diamond back moth	Px
<i>Thrips tabaci</i>	Thrips	Tt

8. *Capsicum annuum* (Pepper)

Scientific name	English common name	Code
Viruses:		
<i>Chilli veinial mosaic virus</i>	Chilli veinial mosaic	ChiVMV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Paprika mild mottle virus</i>	Paprika mild mottle	PaMMV
<i>Pepper mild mottle virus</i>	Pepper mild mottle	PMMoV
<i>Pepper mottle virus</i>	Pepper mottle	PepMoV
<i>Pepper yellow mosaic virus</i>	Pepper yellow mosaic	PepYMV
<i>Potato Y virus</i>	Potato Y	PVY
<i>Tobacco etch virus</i>	Tobacco etch	TEV
<i>Tobacco mild green mosaic virus</i>	Tobacco mild green mosaic	TMGMV
<i>Tobacco mosaic virus</i>	Tobacco mosaic	TMV
<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV
<i>Tomato spotted wilt virus</i>	Tomato spotted wilt	TSWV
Bacteria:		
<i>Ralstonia solanacearum</i>	Bacterial wilt	Rs
<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i>	Bacterial spot	Xcv
Fungi:		
<i>Colletotrichum acutatum</i>	Anthraxnose	Ca
<i>Colletotrichum capsici</i>	Anthraxnose	Cc
<i>Colletotrichum gloeosporioides</i>	Anthraxnose	Cg
<i>Fusarium oxysporum</i> f.sp. <i>capsici</i>	Fusarium wilt	Foc
<i>Leveillula taurica</i> (anamorph: <i>Oidiopsis sicula</i>)	Powdery mildew	Lt

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<i>Phytophthora capsici</i>	Buckeye fruit and root rot	Pc
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Nematodes:

<i>Meloidogyne arenaria</i>	Root-knot	Ma
<i>Meloidogyne incognita</i>	Root-knot	Mi
<i>Meloidogyne javanica</i>	Root-knot	Mj

9. *Citrullus lanatus* (Watermelon)

Scientific name	English common name	Code
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Viruses:

<i>Cucumber green mottle mosaic virus</i>	Cucumber green mottle mosaic	CGMMV
<i>Cucumber vein yellowing virus</i>	Cucumber vein yellowing	CVYV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV
<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV
<i>Zucchini yellow mosaic virus</i>	Zucchini yellow mosaic	ZYMV

Bacteria:

¹ <i>Acidovorax avenae</i> subsp. <i>citrulli</i> (now <i>A. citrulli</i>)	Bacterial fruit blotch	Aac (now Ac)
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Fungi:

<i>Colletotrichum orbiculare</i>	Anthracnose	Co
<i>Didymella bryoniae</i>	Gummy stem blight	Db
<i>Fusarium oxysporum</i> f.sp. <i>niveum</i>	Fusarium wilt	Fon
<i>Podosphaera xanthii</i> (ex <i>Sphaerotheca fuliginea</i>)	Powdery mildew	Px (ex Sf)

10. *Cucumis melo* (Melon)

Scientific name	English common name	Code
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Viruses:

<i>Cucumber green mottle mosaic virus</i>	Cucumber green mottle	CGMMV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Cucumber vein yellowing virus</i>	Cucumber vein yellowing	CVYV
<i>Cucurbit yellow stunting disorder virus</i>	Cucurbit yellow stunting disorder	CYSDV
<i>Melon necrotic spot virus</i>	Melon necrotic spot	MNSV
<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV
<i>Squash mosaic virus</i>	Squash mosaic comovirus	SqMV
<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV
<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV

Bacteria:

¹ <i>Acidovorax avenae</i> subsp. <i>citrulli</i> (now <i>A. citrulli</i>)	Bacterial fruit blotch	Aac (now Ac)
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Fungi:

<i>Didymella bryoniae</i>	Gummy stem blight	Db
<i>Golovinomyces cichoracearum</i> (ex <i>Erysiphe cichoracearum</i>)	Powdery mildew	Gc (ex Ec)
<i>Fusarium oxysporum</i> f.sp. <i>melonis</i>	Fusarium wilt	Fom
<i>Pseudoperonospora cubensis</i>	Downy mildew	Pcu
<i>Podosphaera xanthii</i> (ex <i>Sphaerotheca fuliginea</i>)	Powdery mildew	Px (ex Sf)

¹ Anonymous (2009) Validation List no. 127 - List of new names and new combinations previously effectively, but not validly, published. *International Journal of Systematic and Evolutionary Microbiology* 59, 923–925.

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Insects:		
<i>Aphis gossypii</i>	Cotton aphid	Ag
11. Cucumis sativus (Cucumber)		
Scientific name	English common name	Code
Viruses:		
<i>Beet pseudo yellowing virus</i>	Beet pseudo yellows virus	BPYV
<i>Cucumber green mottle mosaic virus</i>	Cucumber green mottle	CGMMV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Cucumber vein yellowing virus</i>	Cucumber vein yellowing	CVYV
<i>Cucurbit yellow stunting disorder virus</i>	Cucurbit yellow stunting disorder	CYSDV
<i>Kyuri green mottle mosaic virus</i>	Cucumber green mottle	KGMMV
<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV
<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV
<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV
Bacteria:		
<i>Erwinia tracheiphila</i>	Bacterial wilt	Et
<i>Pseudomonas syringae</i> pv. <i>lachrymans</i>	Angular leaf spot	Psl
Fungi:		
<i>Cladosporium cucumerinum</i>	Scab and gummosis	Ccu
<i>Colletotrichum orbiculare</i>	Anthracnose	Co
<i>Corynespora cassiicola</i>	Corynespora blight and target spot	Cca
<i>Didymella bryoniae</i>	Gummy stem blight	Db
<i>Golovinomyces cichoracearum</i> (ex <i>Erysiphe cichoracearum</i>)	Powdery mildew	Gc (ex Ec)
<i>Fusarium oxysporum</i> f.sp. <i>cucumerinum</i>	Fusarium wilt	Foc
<i>Fusarium oxysporum</i> f.sp. <i>radicis-cucumerinum</i>	Fusarium crown and root rot	For
<i>Fusarium solani</i> f.sp. <i>cucurbitae</i>	Crown and root rot	Fsc
<i>Pseudoperonospora cubensis</i>	Downy mildew	Pcu
<i>Podosphaera xanthii</i> (ex <i>Sphaerotheca fuliginea</i>)	Powdery mildew	Px (ex Sf)
12. Cucurbita pepo, C. maxima, C. moschata (Squash and pumpkin)		
Scientific name	English common name	Code
Viruses:		
<i>Cucumber green mottle mosaic virus</i>	Cucumber green mottle mosaic	CGMMV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Luffa yellow mosaic virus</i>	Luffa yellow mosaic	LYMV
<i>Papaya ringspot virus</i>	Papaya ringspot	PRSV
<i>Squash mosaic virus</i>	Squash mosaic	SqMV
<i>Watermelon mosaic virus</i>	Watermelon mosaic	WMV
<i>Watermelon moroccan mosaic virus</i>	Moroccan watermelon mosaic	MWMV
<i>Zucchini yellow mosaic virus</i>	Zucchini yellows	ZYMV
Bacteria:		
<i>Acidovorax avenae</i> subsp. <i>citrulli</i> (now <i>A. citrulli</i>)	Bacterial fruit blotch	Aac (now Ac)

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Fungi:		
<i>Didymella bryoniae</i>	Gummy sten blight	Db
<i>Golovinomyces cichoracearum</i> (ex <i>Erysiphe cichoracearum</i>)	Powdery mildew	Gc (ex Ec)
<i>Fusarium oxysporum</i> f.sp. <i>cucumerinum</i>	Fusarium wilt	Foc
<i>Fusarium oxysporum</i> f.sp. <i>lagenariae</i>	Fusarium wilt	Fol
<i>Fusarium oxysporum</i> f.sp. <i>melonis</i>	Fusarium wilt	Fom
<i>Fusarium oxysporum</i> f.sp. <i>niveum</i>	Fusarium wilt	Fon
<i>Fusarium solani</i> f.sp. <i>cucurbitae</i>	Crown and root rot	Fsc
<i>Phomopsis sclerotoides</i>	Black root rot	Ps
<i>Pythium aphanidermatum</i>	Damping off , Pythium fruit rot (cottony leak)	Pa
<i>Phytophthora capsici</i>	Phytophthora crown and root rot	Pc
<i>Pseudoperonospora cubensis</i>	Downy mildew	Pcu
<i>Podosphaera xanthii</i> (ex <i>Sphaerotheca fuliginea</i>)	Powdery mildew	Px (ex Sf)

13. *Daucus carota* var. *sativa* (Carrot)

Scientific name	English common name	Code
Bacteria:		
<i>Xanthomonas hortorum</i> pv. <i>carotae</i> (ex <i>X. campestris</i> pv. <i>carotae</i>)	Bacterial leaf blight	Xhc (ex Xcc)
Fungi:		
<i>Alternaria dauci</i>	Alternaria leaf blight	Ad
<i>Alternaria radicina</i>	Black rot	Ar
<i>Cercospora carotae</i>	Cercospora leaf blight	Cc
<i>Erysiphe heraclei</i>	Powdery mildew	Eh
<i>Pythium sulcatum</i>	Cavity spot	Ps
<i>Pythium ultimum</i>	Cavity spot	Pu
<i>Pythium violae</i>	Cavity spot	Pv
Insects:		
<i>Psila rosae</i>	Carrot fly	Pr
Nematodes:		
<i>Meloidogyne incognita</i>	Root-knot	Mi
<i>Meloidogyne javanica</i>	Root-knot	Mj

14. *Hordeum vulgare* (Barley)

Scientific name	English common name(s)	Code
Viruses:		
<i>Barley mild mosaic virus</i>	Barley mild mosaic	BaMMV
<i>Barley yellow dwarf virus</i>	Barley yellow dwarf	BYDV
<i>Barley yellow mosaic virus</i>	Barley yellow mosaic	BaYMV
Bacteria:		
<i>Pseudomonas syringae</i> pv. <i>atrofaciens</i>	Basal glume rot	Psa
<i>Pseudomonas syringae</i> pv. <i>syringae</i>	Bacterial leaf blight	Pss
Fungi:		
<i>Bipolaris sorokiniana</i> (teleomorph <i>Cochliobolus sativus</i>)	Common root rot	Bs
<i>Blumeria graminis</i> f. sp. <i>hordei</i>	Powdery mildew	Bgh

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<i>Drechslera graminea</i> (teleomorph: <i>Pyrenophora graminea</i>)	Leaf stripe, Barley stripe	Dg
<i>Drechslera teres</i> f. sp. <i>maculata</i>	Net blotch ('spot' form), Spot-type net blotch, Spotted net blotch (SNB)	Dtm
<i>Drechslera teres</i> f. sp. <i>teres</i> (teleomorph: <i>Pyrenophora teres</i>)	Net blotch ('net' form), Net-type net blotch, Netted net blotch (NNB)	Dtt
<i>Fusarium avenaceum</i> (teleomorph: <i>Gibberella avenacea</i>)	Fusarium head blight, Scab	Fa
<i>Fusarium culmorum</i>	Fusarium head blight, Scab	Fc
<i>Fusarium graminearum</i> (teleomorph: <i>Gibberella zeae</i>)	Fusarium head blight, Scab	Fg
<i>Fusarium pseudograminearum</i>	Crown rot	Fp
<i>Gaeumannomyces graminis</i>	Take-all	Gg
<i>Microdochium nivale</i> var. <i>majus</i>	Snow mould, Pink snow mold	Mnm
<i>Oculimacula acuformis</i> (anamorph: <i>Helgardia acuformis</i>)	Eyespot, Strawbreaker	Oa
<i>Oculimacula yallundae</i> (anamorph <i>Helgardia yallundae</i>)	Eyespot, Strawbreaker	Oy
<i>Puccinia graminis</i> f. sp. <i>tritici</i>	Stem rust	Pgt
<i>Puccinia hordei</i>	Leaf rust, Brown rust	Ph
<i>Puccinia striiformis</i> f. sp. <i>hordei</i>	Stripe rust, Yellow rust, BSR	Psh
<i>Pseudoseptoria donacis</i>	Halo spot	Pd
<i>Ramularia collo-cygni</i>	Ramularia, RCC	Rc
<i>Rhizoctonia solani</i>	Rhizoctonia bare patch, Rhizoctonia root rot	Rso
<i>Rhynchosporium secalis</i>	Rhynchosporium, Leaf blotch, Scald	Rhs
<i>Septoria passerinii</i>	Speckled leaf blotch, Septoria speckled leaf blotch (SSLB)	Sp
<i>Stagonospora avenae</i> f. sp. <i>triticea</i> (teleomorph: <i>Phaeosphaeria avenaria</i> f. sp. <i>triticea</i>)	Speckled leaf blotch, Septoria speckled leaf blotch (SSLB)	Sat
<i>Typhula idahoensis</i>	Speckled snow mold	Tid
<i>Typhula incarnata</i>	Snow rot, Gray snow mold, Typhula blight	Tin
<i>Ustilago hordei</i>	Covered smut	Uh
<i>Ustilago tritici</i>	Loose smut, True loose smut	Ut
Insects:		
<i>Schizaphis graminum</i>	Greenbug	Sg
Nematodes:		
<i>Heterodera avenae</i>	Cereal cyst nematode	Ha
15. <i>Lactuca sativa</i> (Lettuce)		
Scientific name	English common name	Code
Viruses:		
<i>Beet western yellows virus</i>	Yellows	BWYV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Lettuce necrotic stunt virus</i>	Lettuce die-back	LNSV
<i>Lettuce mosaic virus</i>	Lettuce mosaic	LMV
<i>Mirafiori lettuce big-vein virus</i>	Lettuce big vein	MLBVV
<i>Tomato bushy stunt virus</i>	Lettuce die-back	TBSV
<i>Tomato spotted wilt virus</i>	Spotted wilt	TSWV
Bacteria:		
<i>Pseudomonas cichorii</i>	Bacterial rot	Pc

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<i>Sphingomonas suberifaciens</i> (ex <i>Rhizomonas suberifaciens</i>)	Corky root	Ss (ex Rs)
<i>Xanthomonas campestris</i> pv. <i>vitiens</i>	Bacterial spot	Xcv
Fungi:		
<i>Bremia lactucae</i>	Downy mildew	Bl
<i>Fusarium oxysporum</i> f.sp. <i>lactucae</i>	Fusarium wilt	Fol
<i>Microdochium panattonianum</i>	Anthraxnose	Mpa
Insects:		
<i>Macrosiphum euphorbiae</i>	Potato aphid	Me
<i>Myzus persicae</i>	Green peach aphid	Mpe
<i>Nasonovia ribisnigri</i>	Lettuce leaf aphid	Nr
<i>Pemphigus bursarius</i>	Lettuce root aphid	Pb

16. *Lagenaria siceraria* (Bottle gourd)

Scientific name	English common name	Code
Viruses:		
<i>Cucumber green mottle mosaic virus</i>	Cucumber green mottle	CGMMV
Fungi:		
<i>Fusarium oxysporum</i> f.sp. <i>lagenariae</i>	Fusarium wilt	Fol
<i>Fusarium oxysporum</i> f.sp. <i>niveum</i>	Fusarium wilt	Fon

17. *Lycopersicon esculentum* (Tomato)

Scientific name	English common name	Code
Viruses:		
<i>Beet curly top virus</i>	Curly top	BCTV
<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
<i>Pepino mosaic virus</i>	Pepino mosaic	PepMV
<i>Tobacco mosaic virus</i>	Tobacco mosaic	TMV
<i>Tomato apex necrotic virus</i>	Tomato apex necrotic	ToANV
<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV
<i>Tomato torrado virus</i>	Tomato torrado	ToTV
<i>Tomato spotted wilt virus</i>	Tomato spotted wilt	TSWV
<i>Tomato yellow leaf curl virus</i>	Tomato yellow leaf curl	TYLCV
Bacteria:		
<i>Clavibacter michiganensis</i> subsp. <i>michiganensis</i>	Bacterial canker	Cmm
<i>Pseudomonas corrugata</i>	Pith necrosis	Pc
<i>Pseudomonas syringae</i> pv. <i>tomato</i>	Bacterial speck	Pst
<i>Ralstonia solanacearum</i>	Bacterial wilt	Rs
<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i>	Bacterial spot	Xcv
Fungi:		
<i>Alternaria alternata</i> f.sp. <i>lycopersici</i>	Alternaria stem canker	Aal
<i>Alternaria solani</i>	Early blight	As
<i>Corynespora cassiicola</i>	Target spot	Cc
<i>Fulvia fulva</i> (ex <i>Cladosporium fulvum</i>)	Leaf mold	Ff (ex Cf)
<i>Fusarium oxysporum</i> f.sp. <i>lycopersici</i>	Fusarium wilt	Fol
<i>Fusarium oxysporum</i> f.sp. <i>radicis-lycopersici</i>	Fusarium crown and root rot	For
<i>Leveillula taurica</i> (anamorph: <i>Oidiopsis sicula</i>)	Powdery mildew	Lt

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<i>Oidium neolycopersici</i> (ex <i>Oidium lycopersicum</i>)	Powdery mildew	On (ex OI)
<i>Phytophthora infestans</i>	Late blight	Pi
<i>Phytophthora parasitica</i>	Buckeye fruit and root rot	Pp
<i>Pyrenochaeta lycopersici</i>	Corky root rot	PI
<i>Stemphylium botryosum</i> f.sp. <i>lycopersici</i>	Gray leaf spot	Sbl
<i>Stemphylium lycopersici</i>	Gray leaf spot	SI
<i>Stemphylium solani</i>	Gray leaf spot	Ss
<i>Verticillium albo-atrum</i>	Verticillium wilt	Va
<i>Verticillium dahliae</i>	Verticillium wilt	Vd
Nematodes:		
<i>Meloidogyne arenaria</i>	Root-knot	Ma
<i>Meloidogyne incognita</i>	Root-knot	Mi
<i>Meloidogyne javanica</i>	Root-knot	Mj

18. Phaseolus vulgaris (Dwarf and climbing French bean)

Scientific name	English common name	Code
Viruses:		
<i>Bean common mosaic virus</i>	Bean common mosaic	BCMV
<i>Bean common mosaic necrosis virus</i>	Bean common mosaic necrosis	BCMNV
<i>Beet curly top virus</i>	Beet curly top	BCTV
<i>Bean golden mosaic virus</i>	Bean golden mosaic	BGMV
<i>Bean golden yellow mosaic virus</i>	Bean golden yellow mosaic	BGYMV
<i>Beet mild curly top virus</i>	Mild curly top	BMCTV
<i>Beet severe curly top virus</i>	Severe curly top	BSCTV
<i>Bean yellow disorder virus</i>	Bean yellow disorder virus	BnYDV
<i>Bean yellow mosaic virus</i>	Bean yellow mosaic	BYMV
<i>Southern bean mosaic virus</i>	Bean southern virus	SBMV
<i>Cucumber mosaic virus</i>	Cucumber virus	CMV
Bacteria:		
<i>Pseudomonas savastanoi</i> pv. <i>phaseolicola</i>	Halo blight	Psp
<i>Pseudomonas syringae</i> pv. <i>syringae</i>	Bacterial brown spot	Pss
<i>Xanthomonas axonopodis</i> pv. <i>phaseoli</i>	Common or fuscous blight	Xap
Fungi:		
<i>Aphanomyces euteiches</i>	Root rot	Ae
<i>Colletotrichum lindemuthianum</i>	Anthraxnose	CI
<i>Fusarium oxysporum</i> f.sp. <i>phaseoli</i>	Fusarium wilt	Fop
<i>Fusarium solani</i> f.sp. <i>phaseoli</i>	Fusarium root rot	Fsp
<i>Sclerotinia sclerotiorum</i>	White mold	Ss
<i>Uromyces appendiculatus</i>	Rust	Ua

19. Pisum sativum (Garden pea)

Scientific name	English common name	Code
Viruses:		
<i>Bean leaf roll virus</i>	Pea leaf roll, pea top yellows	BLRV
<i>Bean yellow mosaic virus</i>	Bean yellow mosaic	BYMV
<i>Pea enation mosaic virus</i>	Pea enation mosaic	PEMV
<i>Pea seed-borne mosaic virus</i>	Pea seed-borne mosaic	PSbMV

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Bacteria:		
<i>Pseudomonas syringae</i> pv. <i>pisii</i>	Bacterial blight	Psp
Fungi:		
<i>Aphanomyces euteiches</i>	Aphanomyces root rot	Ae
<i>Ascochyta pisi</i>	Ascochyta leaf and pod spot	Aps
<i>Ascochyta pinodella</i>	Leaf spot and foot rot	Apn
<i>Botrytis cinerea</i>	Grey mold	Bc
<i>Erysiphe pisi</i>	Powdery mildew	Ep
<i>Fusarium oxysporum</i> f.sp. <i>pisii</i>	Near wilt	Fop
<i>Fusarium solani</i>	Fusarium root rot	Fs
<i>Mycosphaerella pinodes</i>	Ascochyta blight	Mp
<i>Peronospora viciae</i>	Downy mildew	Pv
20. <i>Raphanus sativus</i> (Radish)		
Scientific name	English common name	Code
Viruses:		
<i>Turnip mosaic virus</i>	Turnip mosaic	TuMV
Bacteria:		
<i>Pseudomonas syringae</i> pv. <i>maculicola</i>	Bacterial leaf spot, Peppery leaf spot	Psm
<i>Xanthomonas campestris</i> pv. <i>campestris</i>	Black rot	Xcc
Fungi:		
<i>Alternaria brassicae</i>	Black spot	Abe
<i>Alternaria brassicicola</i>	Black spot	Aba
<i>Alternaria japonica</i>	Black spot	Aj
<i>Aphanomyces raphani</i>	Black root	Ar
<i>Fusarium oxysporum</i> f.sp. <i>raphani</i>	Yellows	For
<i>Peronospora parasitica</i>	Downy mildew	Pp
<i>Plasmiodiophora brassicae</i>	Clubroot	Pb
<i>Rhizoctonia solani</i>	Rhizoctonia scurf	Rs
21. <i>Secale cereale</i> (Rye)		
Scientific name	English common name(s)	Code
Viruses:		
<i>Barley yellow dwarf virus</i>	Barley yellow dwarf virus	BYDV
<i>Wheat soil-borne mosaic virus</i>	Soil-borne wheat green mosaic virus, Wheat mosaic virus	SBWMV
Fungi:		
<i>Bipolaris sorokiniana</i> (teleomorph: <i>Cochliobolus sativus</i>)	Spot blotch, Leaf blotch	Bs
<i>Blumeria graminis</i> f. sp. <i>secalis</i> (anamorph: <i>Oidium monilioides</i>)	Powdery mildew	Bgs
<i>Claviceps purpurea</i> (anamorph: <i>Sphacelia segetum</i>)	Ergot	Cp
<i>Gaeumannomyces graminis</i>	Take-all	Gg
<i>Oculimacula acuformis</i> (anamorph: <i>Helgardia acuformis</i>)	Eyespot, Strawbreaker	Oa
<i>Oculimacula yallundae</i> (anamorph: <i>Helgardia yallundae</i>)	Eyespot, Strawbreaker	Oy
<i>Phaeosphaeria nodorum</i> (anamorph: <i>Stagonospora nodorum</i>)	Septoria nodorum, Stagonospora blotch, Glume blotch	Pn
<i>Puccinia recondita</i> (anamorph: <i>Aecidium clematidis</i>)	Leaf rust, Brown rust	Pr

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<i>Rhynchosporium secalis</i>	Rhynchosporium Leaf blotch, Scald	Rs
<i>Urocystis occulta</i>	Stem smut, Stalk smut, Stripe smut	Uo
<i>Ustilago tritici</i>	Loose smut	Ut

Nematodes:

<i>Heterodera avenae</i>	Cereal cyst nematode, CCN	Ha
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22. *Solanum melongena* (Eggplant/Aubergine)

Scientific name	English common name	Code
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Viruses:

<i>Tomato mosaic virus</i>	Tomato mosaic	ToMV
<i>Tomato spotted wilt virus</i>	Tomato spotted wilt	TSWV

Bacteria:

<i>Ralstonia solanacearum</i>	Bacterial wilt	Rs
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Fungi:

<i>Fusarium oxysporum</i> f.sp. <i>melongenae</i>	Fusarium wilt	Fom
<i>Verticillium albo-atrum</i>	Verticillium wilt	Va
<i>Verticillium dahliae</i>	Verticillium wilt	Vd

Nematodes:

<i>Meloidogyne incognita</i>	Root-knot	Mi
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23. *Spinacia oleracea* (Spinach)

Scientific name	English common name	Code
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Viruses:

<i>Cucumber mosaic virus</i>	Cucumber mosaic	CMV
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Fungi:

<i>Albugo occidentalis</i>	White rust	Ao
<i>Cladosporium variabile</i>	Leaf spot	Cv
<i>Fusarium oxysporum</i> f.sp. <i>spinaciae</i>	Fusarium wilt	Fos
<i>Peronospora farinosa</i> f.sp. <i>spinaciae</i>	Downy mildew	Pfs

24. *Triticum* spp. (Wheat)

Scientific name	English common name(s)	Code
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Viruses:

<i>Barley yellow dwarf virus</i>	Barley yellow dwarf	BYDV
<i>Wheat soil-borne mosaic virus</i>	Soil-borne wheat green mosaic virus, Wheat mosaic virus	SBWMV
<i>Wheat dwarf virus</i>	Wheat dwarf virus	WDV
<i>Wheat streak mosaic virus</i>	Wheat streak mosaic virus	WSMV
<i>Wheat spindle streak mosaic virus</i>	Wheat spindle streak mosaic virus	WSSMV

Bacteria:

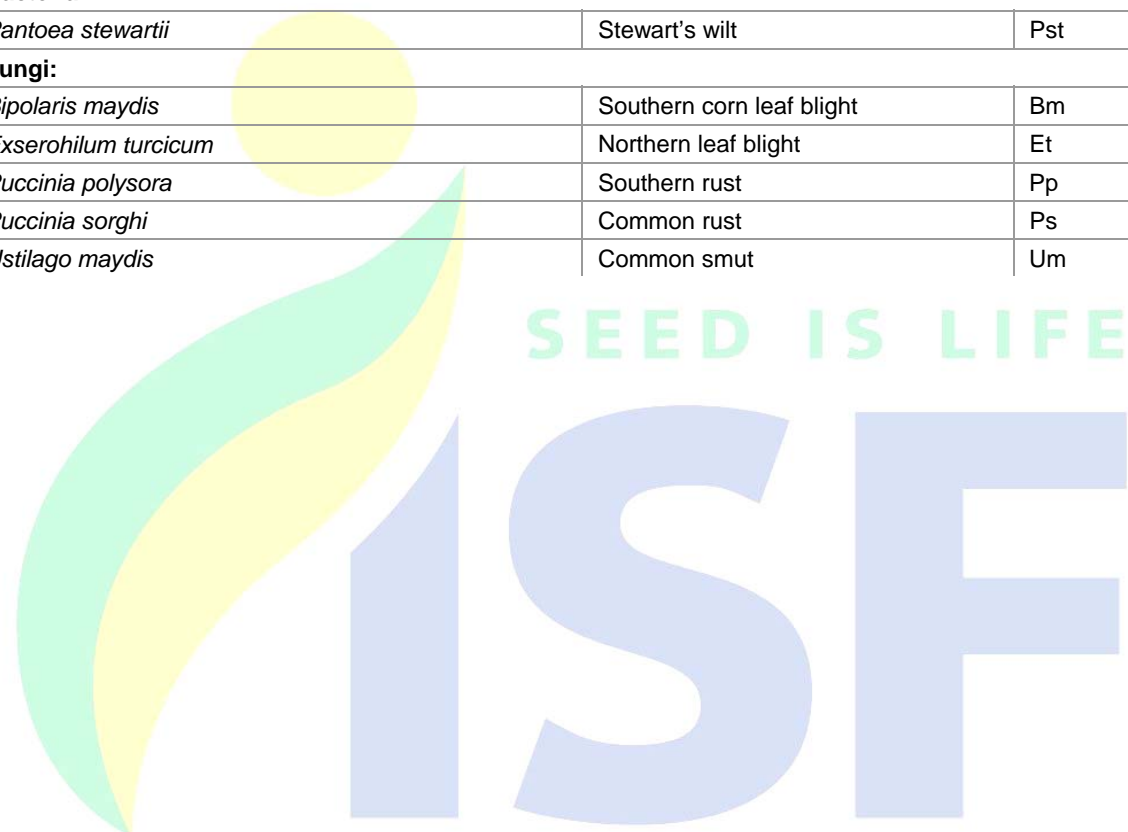
<i>Pseudomonas syringae</i> pv. <i>atrocians</i>	Basal glume rot	Psa
<i>Pseudomonas syringae</i> pv. <i>syringae</i>	Bacterial leaf blight	Pss
<i>Xanthomonas campestris</i> pv. <i>translucens</i>	Bacterial leaf streak, Black chaff, Bacterial stripe	Xct
<i>Xanthomonas translucens</i> pv. <i>undulosa</i>	Bacterial leaf streak, BLS, Black chaff, Bacterial stripe	Xtu

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Fungi:		
<i>Alternaria alternata</i>	Sooty moulds, Black head molds	Aa
<i>Alternaria infectoria</i>	Sooty moulds, Black head molds	Ai
<i>Alternaria triticina</i>	Sooty moulds, Black head molds	At
<i>Bipolaris sorokiniana</i> (teleomorph: <i>Cochliobolus sativus</i>)	Common root rot, CRR, Cochliobolus root rot	Bs
<i>Blumeria graminis</i> f. sp. <i>tritici</i> (anamorph: <i>Oidium monilioides</i>)	Powdery mildew	Bgt
<i>Cladosporium herbarum</i> (teleomorph: <i>Mycosphaerella tassiana</i>)	Sooty moulds, Black head molds	Ch
<i>Claviceps purpurea</i> (anamorph: <i>Sphacelia segetum</i>)	Ergot	Cp
<i>Fusarium avenaceum</i> (teleomorph: <i>Gibberella avenacea</i>)	Brown foot rot, Fusarium foot rot, Fusarium head blight (FHB), Scab, Fusarium ear blight, Seedling blight	Fa
<i>Fusarium culmorum</i>	Brown foot rot, Fusarium foot rot, Fusarium head blight (FHB), Scab, Fusarium ear blight, Dryland root rot	Fc
<i>Fusarium graminearum</i> (teleomorph: <i>Gibberella zeae</i>)	Brown foot rot, Fusarium foot rot, Fusarium head blight (FHB), Scab, Fusarium ear blight, Dryland foot rot	Fg
<i>Fusarium langsethiae</i>	Fusarium head blight (FHB), Scab, Fusarium ear blight	Fl
<i>Fusarium poae</i>	Fusarium head blight (FHB), Scab, Fusarium ear blight	Fpo
<i>Fusarium pseudograminearum</i>	Foot rot	Fps
<i>Gaeumannomyces graminis</i>	Take-all	Gg
<i>Hymenula cerealis</i>	Cephalosporium stripe	Hc
<i>Microdochium nivale</i> var. <i>majus</i> (teleomorph: <i>Monographella nivalis</i>)	Brown foot rot, Fusarium foot rot, Fusarium head blight (FHB), Scab, Fusarium ear blight, Fusarium seedling blight	Mnm
<i>Microdochium nivale</i> var. <i>nivale</i> (teleomorph: <i>Monographella nivalis</i>)	Brown foot rot, Fusarium foot rot, Fusarium head blight (FHB), Scab, Fusarium ear blight, Fusarium seedling blight	Mnn
<i>Mycosphaerella graminicola</i> (anamorph: <i>Septoria tritici</i>)	Septoria tritici, Septoria tritici leaf blotch, Septoria blotch, STB	Mg
<i>Oculimacula acuformis</i> (anamorph: <i>Helgardia acuformis</i>)	Eyespot, Strawbreaker	Oa
<i>Oculimacula yallundae</i> (anamorph: <i>Helgardia yallundae</i>)	Eyespot, Strawbreaker	Oy
<i>Phaeosphaeria nodorum</i> (anamorph: <i>Stagonospora nodorum</i>)	Septoria nodorum, Stagonospora blotch, Glume blotch	Pn
<i>Puccinia graminis</i> f. sp. <i>tritici</i>	Black rust, Stem rust	Pgt
<i>Puccinia striiformis</i> f. sp. <i>tritici</i>	Stripe rust, Yellow rust	Pst
<i>Puccinia triticina</i>	Leaf rust, Brown rust	Pt
<i>Pyrenophora tritici-repentis</i> (anamorph: <i>Drechslera tritici-repentis</i>)	Tan spot, Yellow leaf spot, DTR	Ptr
<i>Rhizoctonia cerealis</i>	Sharp eyespot	Rc
<i>Tilletia caries</i>	Common bunt, Stinking smut	Tca
<i>Tilletia controversa</i>	Dwarf bunt	Tco
<i>Tilletia indica</i>	Karnal bunt	Ti
<i>Tilletia laevis</i>	Common bunt, Stinking smut	Tl
<i>Urocystis agropyri</i>	Flag smut	Ua
<i>Ustilago tritici</i>	Loose smut	Ut

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Nematodes:		
<i>Heterodera avenae</i>	Cereal cyst nematode, CCN	Ha
25. Valerianella locusta (Corn salad)		
Scientific name	English common name	Code
Fungi:		
<i>Peronospora valerianellae</i>	Downy mildew	Pv
<i>Phoma valerianellae</i>	Damping off	Phv
26. Zea mays (Sweet corn)		
Scientific name	English common name	Code
Viruses:		
<i>Maize dwarf mosaic virus</i>	Maize dwarf mosaic	MDMV
<i>Sugarcane mosaic virus</i>	Sugarcane mosaic	SMV
Bacteria:		
<i>Pantoea stewartii</i>	Stewart's wilt	Pst
Fungi:		
<i>Bipolaris maydis</i>	Southern corn leaf blight	Bm
<i>Exserohilum turcicum</i>	Northern leaf blight	Et
<i>Puccinia polysora</i>	Southern rust	Pp
<i>Puccinia sorghi</i>	Common rust	Ps
<i>Ustilago maydis</i>	Common smut	Um



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